The Keating Joint Venture
211 N. 13th Street, Suite 302
Philadelphia PA 19103

TRANSMITTAL

No. 711.002-00574

PROJECT: Pennsylvania Convention Center-CONTRACT 2

DATE: 03/13/2009

TO: Tishman/Joseph Jingoli & Son, Inc. with Perryman
211 N. 13th Street 2nd Floor
Philadelphia PA 19107

RE: Short Circtui Study, Protective Device Coordination Study, A

ATTN: D. Lucas Landis

JOB: 711.002

WE ARE SENDING:	SUBMITTED FOR:	ACTION TAKEN:
☐ Shop Drawings	☑ Approval	☐ Approved as Submitted
☐ Letter	☐ Your Use	☐ Approved as Noted
☐ Prints	☑ As Requested	☐ Returned After Loan
☐ Change Order	☐ Review and Comment	☐ Resubmit
☐ Plans		☐ Submit
☐ Samples	**SENT VIA:**	☐ Returned
☐ Specifications	☑ Attached ☐ Separate Cover	☐ Returned for Corrections
☐ Other:		☐ Due Date:
		☐ Other:

Line	*Item*	*Package*	*Code*	*Rev.*	*Qty*	*Date*	*Description*	*Status*
1	Submittal	26-0573	26-0573-0001		1	03/13/2009	Short Circtui Study, Protective Device Coordination Study, Arc Flash and Shock Hazard Analysis	Open

Submittal No.: **26-0573-0001**
Submission No.: **rev. 1** Transmittal No.: _____

SUBMITTAL REVIEW STATUS

- ☐ ● REVIEWED
- ☐ ● REVIEWED WITH NOTATIONS
- ☐ ●● REVISE & RESUBMIT
- ☐ ●● REJECTED
- ☐ NO ACTION TAKEN OR REQUIRED

● Fabrication may be undertaken. Action does not authorize changes to Contract Sum.
●● Fabrication may not be undertaken. Revise and resubmit submitted.

Reviewing is only for conformance with the design concept of the Project and compliance with the Information given in the Contract Documents. The Contractor is responsible for dimensions to be confirmed and correlated at the site, for information that pertains solely to the fabrication processes or to the means, methods, techniques, sequences and procedures of construction, and for coordination of the work of all trades.

Date: _____

By: _____

VITETTA

REMARKS:

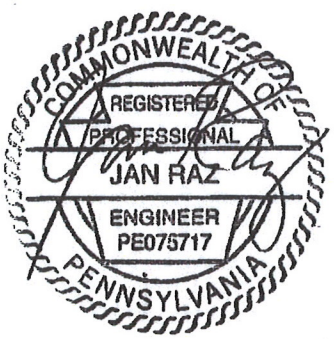
CC:

Signed: _____
Brian Potor

Short Circuit Study,
Protective Device Coordination Study,
Arc Flash and Shock Hazard Analysis

for

Pennsylvania Convention Center
Philadelphia, PA



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CPSI#8159
February 27, 2009

Reviewed by Jan Raz, P.E.

TABLE OF CONTENTS

INTRODUCTION

INTRODUCTION

A short circuit study, protective device coordination study, and an arc-flash and shock hazard analysis have been prepared as called for in the specification for the subject facility. The system reviewed by this study is shown on the one line diagrams on pages 13 to 17 of this report.

SHORT CIRCUIT STUDY

A short circuit study determines the short circuit currents available at various points in the system. This information is required to evaluate the applications of devices and to set protective devices. The calculated short circuit currents and a protective device evaluation are included in the short circuit section of this study.

PROTECTIVE DEVICE COORDINATION STUDY

The protective device coordination study is required to properly select and set the power systems protective devices. This is accomplished by performing a time current coordination among these devices so that maximum circuit protection consistent with service continuity is achieved.

Coordination is generally a compromise between the mutually desirable but somewhat inconsistent goals of maximum protection and maximum service continuity. For this and other reasons, such as established system design, many combinations of device settings may be classified as acceptable. The settings suggested in this study result from an exercise of judgment as to best balance between competing objectives.

Recommended protective device settings are included in the coordination study section of this study. Composite plots of the time current characteristics for these devices are included to show how these recommendations were derived. The manufacturer's published time current curves for the individual devices on this project are included in the appendix at the same scale as the composite curves generated for this report. If it is desired to obtain full scale time current curves, the curves found in this report should be enlarged by 164%.

SOURCES OF DATA

Vitetta
- Contract One Line Diagrams

General Electric Company
- New Equipment Data
  - Switchgear
  - Switchboards
  - Panelboards
  - Motor Control Centers
  - Substation Transformers
  - Small Dry Type Transformers

Gordon Group Electric
- Existing Equipment Data
- Conductor Data
- Chiller Data
- ATS Data
- Generator Data

PECO Energy Company
- Utility Data

WARRANTY

It is the intent of Coordinated Power Systems, Inc. to provide a study which is accurate and based on sound professional judgment. If it is found that any portion of this study does not satisfy this goal, Coordinated Power Systems, Inc. will correct that portion of the study at no charge providing we are notified in writing within one year of submission of the study. The warranty does not include modifications to the study resulting from design changes to the system after the study has been initiated.

LIMITATION OF LIABILITY

The foregoing warranty represents the sole responsibility of the company. Coordinated Power Systems, Inc. shall not be liable for any consequential damages. It does not assume responsibility or liability for loss, injury or damage to equipment that may result from the failure of equipment or the system to operate in accordance of the predictions or recommendations of the study.

SUMMARY

SHORT CIRCUIT STUDY SUMMARY

After the short circuit calculations were performed, the calculated available fault currents were compared to the proposed equipment short circuit (AIC) ratings. This comparison is shown on the equipment evaluation forms in the short circuit study portion of this study.

As a result of this evaluation, all new equipment AIC ratings reviewed for this installation exceed the calculated available fault currents at the respective locations in this system except the following.

The three 208V switchboards in SUB 1.3, SUB 6.2 and SUB 6.4, downstream of the 1500KVA transformers. Consideration should be given to using higher rated equipment for this application.

All of the busducts on this project appear to be proposed with 800A non fused switch mains. These only have a 10,000A withstand rating. While in all probability the 800A 65,000AIC rated upstream SKLA8 (480V) or SKHA8 (208V) circuit breakers will adequately protect these non fused switches, we are not aware of a UL listed rating to confirm this. If it is desired to have these switches qualify for a rating higher than the calculated available fault currents at each busduct, consideration should be given to making the incoming main busduct switches fusible. See pages 35 and 36 for the calculated available fault current at each busduct.

For further discussion, refer to equipment evaluation forms and respective comments.

COORDINATION STUDY SUMMARY

As a result of this coordination study, the following should be noted.

1) 13.2kV Primary Service Entrance Switchgear #1 and #2: Recommended settings for the relays in this equipment are summarized on pages 52 to 56 of this report.

   A copy of this report should be sent to PECO, so they may review and approve these settings.

2) 13.2kV Fuses: Some of the 13.2KV fuses sizes shown on the contract drawings and in the GE shop drawings exceed the maximum EJO-1 fuse size recommended in the attached GE table for these transformer ratings.

   For the 2500KVA transformers we would recommend 150E fuses sizes, rather than 175E or 200E, because this will permit better coordination with the upstream relays, provide better protection for the transformer and still allows for a 140% overload rating.

   In addition to the individual transformer primary fuses, we would recommend the fire pump 13.2KV disconnect switches also have 100E EJO-1 fuses, instead of the 80E fuses shown. (The 100E size is recommended to be higher than the 88LRA of the fire pump @ 13.2KV.)

   A table with the recommended 13.2KV fuse sizes is included on page 9.

3) 4160V Chillers CH-3, CH-4:

   The contract drawing EP305 and EP307 call for the Chiller 3 and 4 transformers to have a delta (ungrounded) secondary, but the one line shows a grounded secondary. The chiller equipment includes ground fault protection but there does not appear to be any provisions for ground detection lights for a 4160V ungrounded system. The GE shop drawings for these transformers show these as delta- delta transformers. In light of the above, it is not clear if the transformers are intended to be delta-wye or delta-delta. This should be reviewed.

   Recommended settings for the relays in the 4160V GE switchgear are summarized on page 54 of this report.

4) 480V and 208V Substations and Switchboards: Recommended settings for the adjustable trip circuit breakers in this equipment are summarized on pages 40 to 51 of this report.

All other circuit breakers which only have an instantaneous adjustment should be set at the highest setting to maximize coordination with downstream devices, unless used for individual motor circuit protection in which case they should be set to provide protection for the motor circuit per NEC article 430.52.

5) The Existing Substation 1 and Generator system, shown on contract drawing EP316, was not accessible for the contractor to gather data on this equipment for this report. Therefore no data on the existing equipment was available, and this portion of the system was not included in our calculations. A review of the one line on this drawing shows the new 480V panel NSDP6 connected via ATS 7 to a 480V Generator and a 208V Substation#1. If existing substation 1 is 208V, a step up transformer would be necessary to provide the 480V needed for the panel NSDP-6 loads. This should be reviewed.

6) EGD-1 and EGD-2, Emergency System Ground Fault Protection: Contract drawings EP314 and EP315 call for ground fault indication per NEC 700.7(D) on the 1000A and 1200A circuit breakers in EGD-1 and EGD-2. The GE shop drawings for this equipment indicate LSIG (ie. ground fault trip) on these circuit breakers. If it is desired to have ground fault indication only, GE should be instructed to make this change to their proposed equipment.

7) The Fire Pump emergency system disconnect should be reviewed. Contract drawing EP315 shows a 2500A circuit breaker labeled as fire pump switch. We could not find any shop drawings for this switch or circuit breaker. This should be reviewed and a clarification should be given on what was intended for this function.

8) Selective coordination on elevator, emergency and legally required systems per NEC 620.62. 700.27 and 701.18: The settings recommended in this report were chosen to maximize selective coordination between the supply side overcurrent protective devices and the downstream branch devices, based on the system design and equipment being proposed for this facility. Whether these requirements of the NEC apply to this project and if the degree of coordination, shown on the time current curves for these systems, is acceptable should be reviewed by the engineer responsible for this facility.

After this report is reviewed and approved, the settings recommended in this report should be made on the respective devices.

For a detailed discussion of system coordination, refer to the time current curves and respective comments.

RECOMMENDED TRANSFORMER PRIMARY FUSE SIZES

Pennsylvania Convention Center

TRANSFORMER IDENTIFICATION	KVA /FAA	PRIMARY		SECONDARY		% Z	SEC FLA	PRI FLA	Proposed Fuse Sizes Contract Dwg & GE	Recommended fuse sizes by CPSI
		KV	CONN	KV	CONN					
SUBSTATION 13.2KV SWITCHES										
SUB 1.1, 3.1, 3.2, 3.3	2500/3333	13.2	Delta	.480	Y	5.75%	3007/4009	109/146	200E	150E EJO-1
SUB CH 3, CH 4	2500	13.2	Delta	4.16	Delta	5.75%	347	109	175E	150E EJO-1
SUB 4.1	2000/2660	13.2	Delta	.480	Y	5.75%	2406/3208	87.5/116	175E	125E EJO-1
SUB 1.3, 6.2, 6.4	1500	13.2	Delta	.208	Y	5.75%	4164	65.6	125E	100E EJO-1
SUB 6.1, 6.3	1500	13.2	Delta	.480	Y	5.75%	1804	65.6	100E	100E EJO-1
SUB 1.4 (Fire Pump)	1500	13.2	Delta	.480	Y	5.75%	1804	65.6	80E	100E EJO-1
SUB 1.2, 4.2, 4.3, 4.4, 4.5, 4.6	500/665	13.2	Delta	.208	Y	5.00%	1388/1846	21.9/29.1	30E	30E EJO-1
REMOTE 13.2KV SWITCHES										
SUB 3.1 FEEDER to CH 3									175E	150E EJO-1
SUB 3.3 FEEDER to CH 4									175E	150E EJO-1
FIRE PUMP DISCONNECT 2 fused disconnects									80E	100E EJO-1

TABLE III
SUGGESTED FUSE CURRENT RATINGS FOR POWER TRANSFORMER APPLICATIONS
9F62 SERIES, TYPE EJO-1 POWER FUSES

SYSTEM PH/PH VOLTAGE		2400V				4160V				4800V			
FUSE VOLTAGE		5.5kV(5)				5.5kV				5.5kV			
(1)	(4)		(2)	(3)	(4)		(2)	(3)	(4)		(2)	(3)	(4)
kVA	%Z	Full Load Crnt Amps	Min. Fuse Rating Amps	Over-Load Rating Amps	Max. Fuse Rating Amps	Full Load Crnt Amps	Min. Fuse Rating Amps	Over-Load Rating Amps	Max. Fuse Rating Amps	Full Load Crnt Amps	Min. Fuse Rating Amps	Over-Load Rating Amps	Max. Fuse Rating Amps
THREE PHASE													
30	2.25	*7.2*	*20E*	*20E*	*40E*	*3.8*	*15E*	*15E*	*20E*	*3.61*	*10E*	*10E*	*20E*
45	2.25	10.8	25E	25E	40E	*6.2*	*15E*	*15E*	*30E*	*5.4*	*15E*	*15E*	*25E*
75	2.25	18.1	30E	30E	80E	10.4	25E	25E	40E	9.02	25E	25E	40E
112.5	2.25	27.1	40E	40E	100E	15.6	30E	30E	65E	13.5	25E	25E	50E
150	3.0	36.1	50E	50E	100E	20.8	40E	40E	65E	18.0	30E	30E	50E
225	3.0	54.1	65E	80E	100E	31.2	50E	50E	65E	27.1	40E	40E	50E
300	5.0	72.2	100E	100E	125E	41.6	50E	65E	80E	36.1	50E	50E	80E
500	5.0	120	150E	175E	175E	69.4	80E	100E	125E	60.1	80E	80E	100E
750	5.75	180	200E	250E	300E	104	125E	150E	150E	90.2	100E	125E	125E
1000	5.75	241	250E	350E	350E	139	150E	200E	200E	120	125E	175E	175E
1500	5.75	361	400E	450E*	450E*	208	250E	300E	300E	180	200E	250E	300E
2000	5.75	—	—	—	—	278	300E	400E	400E	241	250E	350E	350E
2500	5.75	—	—	—	—	347	400E	450E*	450E*	301	350E	450E	450E
3000	5.75	—	—	—	—	406	450E	450E*	450E*	361	400E	450E*	450E*
SINGLE PHASE													
25	2.25	*10.4*	*25E*	*25E*	*40E*	*6.01*	*15E*	*15E*	*30E*	*5.21*	*15E*	*15E*	*25E*
37.5	2.25	15.6	30E	30E	50E	*9.01*	*20E*	*20E*	*50E*	*7.81*	*20E*	*20E*	*25E*
50	2.25	20.8	40E	40E	80E	12	25E	25E	40E	10.4	25E	25E	40E
75	3.0	31.3	50E	50E	100E	18	30E	30E	65E	15.6	30E	30E	50E
100	4.5	41.7	65E	65E	150E	24	40E	40E	80E	20.8	40E	40E	80E
167	5.0	70	100E	100E	200E	40	65E	65E	125E	35	50E	50E	100E
250	5.0	104	125E	150E	300E	60	80E	80E	150E	52.1	65E	80E	150E
333	5.75	139	150E	200E	350E	80	100E	125E	175E	69.5	100E	100E	150E
500	5.75	210	250E	300E	450E	120	125E	175E	300E	104	125E	150E	200E
667	5.75	278	300E	400E	450E	160	175E	250E	400E	139	150E	200E	350E
833	5.75	347	550E	450E*	450E*	200	200E	300E	450E	174	175E	250E	450E
1250	5.75	—	—	—	—	300	300E	400E	450E	260	300E	350E	450E
1667	5.75	—	—	—	—	401	400E	450E*	450E*	347	350E	450E	450E

SYSTEM PH/PH VOLTAGE		6900V				7200V				12,000V			
FUSE VOLTAGE		8.3kV				8.3kV				15.5kV			
(1)	(4)		(2)	(3)	(4)		(2)	(3)	(4)		(2)	(3)	(4)
kVA	%Z	Full Load Crnt Amps	Min. Fuse Rating Amps	Over-Load Rating Amps	Max. Fuse Rating Amps	Full Load Crnt Amps	Min. Fuse Rating Amps	Over-Load Rating Amps	Max. Fuse Rating Amps	Full Load Crnt Amps	Min. Fuse Rating Amps	Over-Load Rating Amps	Max. Fuse Rating Amps
THREE PHASE													
30	2.25	*2.51*	*7E*	*7E*	*10E*	*2.41*	*7E*	*7E*	*10E*	*1.44*	*5E*	*5E*	*10E*
45	2.25	*3.77*	*10E*	*10E*	*20E*	*3.61*	*10E*	*10E*	*20E*	*2.16*	*7E*	*7E*	*15E*
75	2.25	6.28	20E	20E	25E	6.01	20E	20E	20E	*3.6*	*10E*	*10E*	*30E*
112.5	2.25	9.4	20E	20E	40E	9.0	20E	20E	30E	5.4	20E	20E	20E
150	3.0	12.6	20E	20E	40E	12.0	20E	20E	40E	7.2	20E	20E	20E
225	3.0	18.8	25E	25E	40E	18.0	25E	25E	40E	10.8	20E	20E	30E
300	5.0	25.1	40E	40E	50E	24.1	40E	40E	50E	14.4	20E	20E	25E
500	5.0	41.8	50E	65E	80E	40.1	50E	65E	65E	24.1	25E	50E	50E
750	5.75	62.8	65E	80E	80E	60.1	65E	80E	80E	36.1	50E	50E	50E
1000	5.75	83.7	100E	125E	125E	80.2	100E	125E	125E	48.1	50.E	65E	80E
1500	5.75	126	125E	175E	200E	120	125E	175E	200E	72.2	80E	100E	100E
2000	5.75	167	175E	250E	250E	160	175E	250E	250E	96.2	100E	125E	150E
2500	5.75	209	250E	250E*	250E*	200	250E	250E*	250E*	120	125E	175E	175E
3000	5.75	251	250E	250E*	250E*	240	250E	250E*	250E*	144	150E	200E	200E
SINGLE PHASE													
25	2.25	*3.62*	*10E*	*10E*	*20E*	*3.47*	*10E*	*10E*	*20E*	*20.8*	*7E*	*7E*	*10E*
37.5	2.25	*5.43*	*15E*	*15E*	*40E*	*5.2*	*15E*	*15E*	*30E*	*3.13*	*10E*	*10E*	*30E*
50	2.25	7.25	20E	20E	25E	6.9	20E	20E	20E	4.17	20E	20E	20E
75	3.0	10.87	20E	20E	40E	10.4	20E	20E	40E	6.25	20E	20E	30E
100	4.5	14.5	25E	25E	50E	13.9	25E	25E	50E	8.33	20E	20E	30E
167	5.0	24.2	40E	40E	80E	23.2	40E	40E	80E	13.9	25E	25E	50E
250	5.0	36.2	50E	50E	100E	34.7	50E	50E	100E	20.8	30E	30E	65E
333	5.75	48.2	65E	65E	125E	46.2	65E	65E	125E	27.8	50E	50E	65E
500	5.75	72.5	80E	100E	200E	69.4	80E	100E	200E	41.7	50E	65E	100E
667	5.75	96.7	100E	150E	250E	92.6	100E	125E	250E	55.6	65E	80E	125E
833	5.75	120.7	125E	175E	250E	115.7	125E	175E	250E	69.4	80E	100E	175E
1250	5.75	181	200E	250E	250E	173.6	175E	250E	250E	104	125E	150E	200E
1667	5.75	241	250E	250E*	250E*	231	250E	250E*	250E*	138.9	150E	200E	200E

SYSTEM PH/PH VOLTAGE		12,470V				13,200V				13,800V			
FUSE VOLTAGE		15.5kV				15.5kV				15.5kV			
(1)	(4)		(2)	(3)	(4)		(2)	(3)	(4)		(2)	(3)	(4)
kVA	%Z	Full Load Crnt Amps	Min. Fuse Rating Amps	Over-Load Rating Amps	Max. Fuse Rating Amps	Full Load Crnt Amps	Min. Fuse Rating Amps	Over-Load Rating Amps	Max. Fuse Rating Amps	Full Load Crnt Amps	Min. Fuse Rating Amps	Over-Load Rating Amps	Max. Fuse Rating Amps
THREE PHASE													
30	2.25	*1.39*	*5E*	*5E*	*10E*	*1.32*	*5E*	*5E*	*10E*	*1.25*	*5E*	*5E*	*10E*
45	2.25	*2.1*	*7E*	*7E*	*15E*	*1.98*	*7E*	*7E*	*15E*	*1.9*	*7E*	*7E*	*15E*
75	2.25	*3.47*	*10E*	*10E*	*25E*	*3.3*	*10E*	*10E*	*25E*	*3.13*	*10E*	*10E*	*25E*
112.5	2.25	5.2	20E	20E	20E	*4.9*	*15E*	*15E*	*30E*	*4.7*	*15E*	*15E*	*30E*
150	3.0	7.0	20E	20E	20E	*6.6*	*20E*	*20E*	*30E*	*6.3*	*20E*	*20E*	*30E*
225	3.0	10.4	20E	20E	30E	9.8	20E	20E	30E	9.4	20E	20E	30E
300	5.0	13.9	20E	20E	25E	13.1	20E	20E	20E	12.6	20E	20E	20E
500	5.0	23.1	25E	30E	50E	21.9	25E	30E	30E	20.9	25E	30E	30E
750	5.75	34.7	50E	50E	50E	32.8	50E	50E	50E	31.4	50E	50E	50E
1000	5.75	46.3	50E	65E	65E	43.7	50E	65E	65E	41.8	50E	65E	65E
1500	5.75	69.6	80E	100E	100E	65.5	80E	100E	100E	62.8	65E	100E	100E
2000	5.75	92.5	100E	125E	125E	87.5	100E	125E	125E	83.7	100E	125E	125E
2500	5.75	115.5	125E	175E	175E	109	125E	150E	175E	105	125E	150E	150E
3000	5.75	139E	150E	200E	200E	131	150E	200E	200E	126	150E	175E	175E
SINGLE PHASE													
25	2.25	*2.0*	*7E*	*7E*	*10E*	*1.89*	*7E*	*7E*	*10E*	*1.81*	*5E*	*5E*	*10E*
37.5	2.25	*3.01*	*10E*	*10E*	*30E*	*2.84*	*10E*	*10E*	*30E*	*2.72*	*10E*	*10E*	*30E*
50	2.25	4.01	20E	20E	20E	*3.8*	*10E*	*10E*	*40E*	*3.6*	*10E*	*10E*	*40E*
75	3.0	6.01	20E	20E	25E	5.7	20E	20E	30E	5.4	20E	20E	30E
100	4.5	8.02	20E	20E	25E	7.6	20E	20E	25E	7.25	20E	20E	25E
167	5.0	13.4	25E	25E	50E	12.7	20E	20E	30E	12.1	20E	20E	30E
250	5.0	20.0	30E	30E	65E	19	30E	30E	50E	18.1	30E	30E	50E
333	5.75	26.7	50E	50E	65E	25.2	50E	50E	65E	24.1	50E	50E	65E
500	5.75	40.1	50E	65E	100E	38	50E	65E	100E	36.2	50E	50E	100E
667	5.75	53.5	65E	80E	125E	50	65E	80E	125E	48.3	65E	65E	125E
833	5.75	66.8	80E	100E	175E	63	65E	100E	150E	60.4	65E	80E	150E
1250	5.75	100.2	100E	150E	200E	95	100E	125E	200E	90.6	100E	125E	200E
1667	5.75	133.7	150E	200E	200E	126.3	150E	175E	200E	120.8	125E	175E	200E

* Max fuse size will not permit full transformer overload of 133%/140% see note 3.

Ratings in italics, above heavy line, are 9F60 series fuses.

NOTES:

1. Transformer kVAs are based on their self cooled rating.

2. The minimum fuse rating shown is the smallest fuse which will withstand transformer inrush. For transformers rated 0-300kVA and 2500-3000kVA inrush is taken to be 12 times full load current for 0.1 seconds and 25 times full load current for 0.01 seconds. For transformers rated 500kVA-2000kVA, inrush is taken as 8 times full load current for 0.1 seconds and 20 times full load current for 0.01 seconds.

3. The overload fuse size shown will permit transformer overloading to at least 133% of its self cooled rating (140% for 2500kVA and above) unless otherwise indicated by *. All overload fuse sizes meet the 12 times/25 times inrush criteria for all transformer kVAs.

4. The maximum fuse size is the largest fuse rating which will meet the two second "ANSI Point" to protect for through faults, phase to ground on a delta-wye three phase transformer or line to line on a single phase transformer, of the quoted, or lower impedance. All maximum fuse sizes meet the 12 times/25 times inrush criteria for all tranformer kVAs. For dry type transformers, categories II and III, if system impedance is significant, a smaller fuse may have to be chosen to meet the two second "ANSI Point".

5. Fuses rated 5.5kV maximum with ratings of 80E and higher do not meet the ANSI permitted arc voltage requirement for 2.8kV fuses, when used at 2.4kV. For the actual arc voltage see arc voltage table.

(GE GET 6779)

SHORT CIRCUIT STUDY

SHORT CIRCUIT CALCULATIONS

Short circuit calculations were performed on the system as defined on the accompanying one line diagram and the corresponding system data. The electrical system was modeled in the Power Tools for Windows (PTW) software program (Version 6.5) which was developed by SKM Systems Analysis, Inc.

Utility Source: Two 13.2kV PECO Energy services will provide power to each side of the customer's 13.2kV Primary Service Entrance Switchgear #1 and #2. Per PECO Energy Blue Book, Table 7.01, the maximum fault current for a 13.2kV PECO service is 6,300A. A maximum utility available fault current of 6,300A at the 13.2kV PECO services was therefore used for these calculations.

Since the actual transformer impedances have not been defined at this time, to define the worst case fault currents the low end (-7.5%) of the nominal impedances were used for the short circuit calculations.

The GE shop drawings for the customer's 13.2kV main switchgear indicate only open transition transfers are allowed for all automatic transfer operations between the two 13.2kV sources. The switchgear does have the capability for closed transition transfers under manual operation. Typically this capability is used infrequently during maintenance operations to restore dual line power to the facility without a momentary interruption of service. Since this is only a rarely used temporary condition, it is not reflected in the short circuit calculations.

Generator Source: The Cummins generator submittal indicates two 1750kW generators are being provided for this project as called for on contract drawing EP313 and EP315. However the alternator data sheet from the Cummins submittal (see appendix) provides per unit reactance values based on the 1840kW alternator rating. Therefore, short circuit calculations are based on the 1840kW alternator rating (with the associated per unit reactances).

The automatic transfer switches are designed to provide an open transition transfer between the utility and generator sources so the calculations are based on them never being connected in parallel.

Motor Contribution: All motors shown on the one line diagrams were assumed to be running at the time of fault and their contribution was factored into the calculations.

The calculations were performed using the Power*Tools for Windows computer program (Version 6.5 with DAPPER for Windows) which was developed by SKM Systems Analysis, Inc. The program accepts system data, converts it to per unit impedances, and simulates a fault at each node to determine the equivalent impedance to the point of fault and the resultant fault current generated by the driving voltage at that point.

At the time this report was prepared, the busduct layout were not yet available and the distances between each bus plug were not defined. For the calculations shown in this report, all busplugs are connected at the beginning of the bus except the last plug, which is connected at the end of the bus. This provides the worst case fault currents at this equipment.

The calculated fault currents are listed in the 'DAPPER Unbalanced Fault Reports' and in the equipment evaluation portion of this report.

The detailed information (input data) which was used to create the PTW computer model for the short circuit calculations is shown in the attached 'Input Report'. This information is included for your verification and to serve as a record for this electrical system.

Because of the volume of computer printouts on this project, these reports are included in the appendix of this report.

NOTE: ALL CONDUCTORS ARE
COPPER IN NON-MAGNETIC CONDUIT
UNLESS OTHERWISE NOTED

One Line Diagram 1
Switchgear 1 and 2

Pennsylvania Convention Center, Philadelphia, PA

Date - 2/27/09 CPSI#8159

Coordinated Power Systems, Inc
10120 W.Forest Home Ave-Hales Corners, WI 53130

PECO LINE 1
3P Isc = 6300 Amps
Voltage = 13200 V

PECO LINE 2
3P Isc = 6300 Amps
Voltage = 13200 V

PRIMARY SERVICE ENTRANCE SWITCHGEAR #1

PRIMARY SERVICE ENTRANCE SWITCHGEAR #2

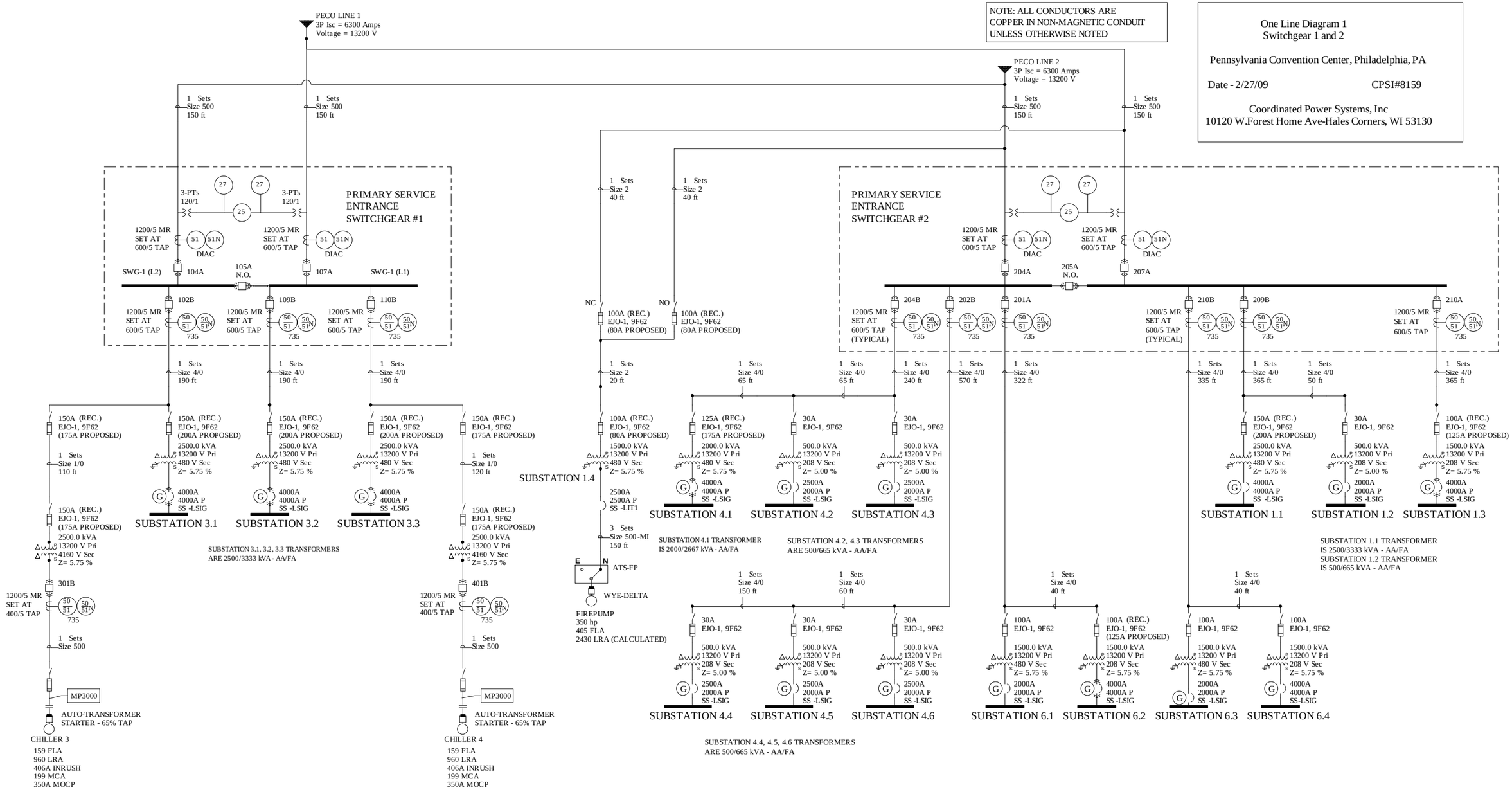
SUBSTATION 3.1, 3.2, 3.3 TRANSFORMERS
ARE 2500/3333 kVA - AA/FA

SUBSTATION 4.1 TRANSFORMER
IS 2000/2667 kVA - AA/FA

SUBSTATION 4.2, 4.3 TRANSFORMERS
ARE 500/665 kVA - AA/FA

SUBSTATION 4.4, 4.5, 4.6 TRANSFORMERS
ARE 500/665 kVA - AA/FA

SUBSTATION 1.1 TRANSFORMER
IS 2500/3333 kVA - AA/FA
SUBSTATION 1.2 TRANSFORMER
IS 500/665 kVA - AA/FA



NOTE: ALL CONDUCTORS ARE COPPER IN MAGNETIC CONDUIT UNLESS OTHERWISE NOTED

One Line Diagram 2
Substations 1.1, 1.2, 1.3 and Existing Substation 1

Pennsylvania Convention Center, Philadelphia, PA

Date - 2/27/09 CPSI#8159

Coordinated Power Systems, Inc
10120 W.Forest Home Ave-Hales Corners, WI 53130

SUBSTATION 1.1

2500.0 kVA
13200 V Pri
480 V Sec
Z= 5.75 %

SUBSTATION 1.1 TRANSFORMER
IS 2500/3333 kVA - AA/FA

4000A
4000A P
SS -LSIG

4000A BUS
480Y/277 V, 3PH, 4W

1200A SKLA12 — 3 Sets Size 600 40 ft

1600A 1600A P SS -LSIG — 4 Sets Size 600 300 ft

800A SKLA8 — 2 Sets Size 600 418 ft

100A FBH — 1 Sets Size 2 50 ft — 125A MLO — L1.3

225A SFLA — 1 Sets Size 4/0 225 ft — 225A MLO — L1.4

100A FBH — 1 Sets Size 2 55 ft — 125A MLO — L1.6

100A FBH — 1 Sets Size 2 200 ft — DIM BRD 'DB1F' 1ST FLR SE

100A FBH — 1 Sets Size 2 19 ft — DIM BRD 'DB1H' 1ST FLR SW

800A SKLA8 — 2 Sets Size 600 600 ft

100A FBH — 1 Sets Size 2 140 ft — 100A SFHA — M1.1

100A FBH — 1 Sets Size 2 40 ft — 100A SFHA — M1.2

800A Cu BUS DUCT HMB1 190'

800A

100A SELA — 1 Sets Size 2 55 ft — 100A TRS — AT COLUMN D-10

100A SELA — 1 Sets Size 2 55 ft — 100A TRS — AT COLUMN D-10

100A SELA — 1 Sets Size 2 55 ft — 100A TRS — AT COLUMN D-12

100A SELA — 1 Sets Size 2 55 ft — 100A TRS — AT COLUMN D-12

100A SELA — 1 Sets Size 2 55 ft — 100A TRS — AT COLUMN D-14

800A Cu BUS DUCT HMB2 190'

800A

100A SELA — 1 Sets Size 2 55 ft — 100A TRS — AT COLUMN B-10

100A SELA — 1 Sets Size 2 55 ft — 100A TRS — AT COLUMN B-11

100A SELA — 1 Sets Size 2 55 ft — 100A TRS — AT COLUMN B-12

100A SELA — 1 Sets Size 2 55 ft — 100A TRS — AT COLUMN B-14

SUBSTATION 1.3

1500.0 kVA
13200 V Pri
208 V Sec
Z= 5.75 %

4000A
4000A P
SS -LSIG

4000A BUS
208Y/120 V, 3PH, 4W

400A SGDA4 — 1 Sets Size 600 45 ft — 400A SGHA4 — R1.9

400A SGDA4 — 1 Sets Size 600 45 ft — 400A SGHA4 — R1.10

400A SGDA4 — 1 Sets Size 600 45 ft — 400A SGHA4 — R1.11

400A SGDA4 — 1 Sets Size 600 45 ft — 400A SGHA4 — R1.12

400A SGDA4 — 1 Sets Size 600 47 ft — 400A SGHA4 — R1.13

400A SGDA4 — 1 Sets Size 600 45 ft — 400A SGHA4 — R1.14

225A SFHA — 1 Sets Size 4/0 47 ft — 225A THQD — R1.15

400A SGDA4 — 1 Sets Size 600 250 ft — 400A SGHA4 — R1.16

400A SGDA4 — 1 Sets Size 600 250 ft — 400A SGHA4 — R1.17

400A SGDA4 — 1 Sets Size 600 250 ft — 400A SGHA4 — R1.18

400A SGDA4 — 1 Sets Size 600 250 ft — 400A SGHA4 — R1.19

225A SFHA — 1 Sets Size 4/0 250 ft — 225A THQD — R1.20

2000A 2000A P SS -LSIG — 5 Sets Size 600 300 ft

225A SFHA — 1 Sets Size 4/0 45 ft — DIM BRD 'DB1E' 1ST FLR SE

225A SFHA — 1 Sets Size 4/0 47 ft — DIM BRD 'DB1G' 1ST FLR SW

200A SFHA — 1 Sets Size 4/0 400 ft — 200A CO SW 1ST FLR LOAD DOCK

200A SFHA — 1 Sets Size 4/0 400 ft — 200A CO SW 1ST FLR LOAD DOCK

MDP 1.3

2000A
2000A P
SS -LSIG

225A SFHA — 1 Sets Size 4/0 6 ft — 225A THQD — R1.1

225A SGLA4 — 1 Sets Size 600 8 ft — 400A SGHA4 — R1.2

400A SGLA4 — 1 Sets Size 600 10 ft — 400A SGHA4 — R1.3

400A SGLA4 — 1 Sets Size 600 12 ft — 400A SGHA4 — R1.4

400A SGLA4 — 1 Sets Size 600 250 ft — 400A SGHA4 — R1.5

400A SGLA4 — 1 Sets Size 600 250 ft — 400A SGHA4 — R1.6

400A SGLA4 — 1 Sets Size 600 250 ft — 400A SGHA4 — R1.7

225A SFHA — 1 Sets Size 4/0 250 ft — 225A THQD — R1.8

225A SFHA — 1 Sets Size 4/0 225 ft — 225A THQD — R1.21

100A TEY — 1 Sets Size 2 225 ft — DIM BRD 'DB1A' 1ST FLR NE

100A TEY — 1 Sets Size 2 200 ft — DIM BRD 'DB1C' 1ST FLR NW

SUBSTATION 1.2

500.0 kVA
13200 V Pri
208 V Sec
Z= 5.00 %

SUBSTATION 1.2 TRANSFORMER
1S 500/665 kVA - AA/FA

2000A
2000A P
SS -LSIG

2500A BUS, 208Y/120 V, 3PH, 4W

800A SKHA8 — 2 Sets Size 600 410 ft

800A SKHA8 — 2 Sets Size 600 430 ft

800A SKHA8 — 2 Sets Size 600 345 ft

800A Cu BUS DUCT HMB5 160'

800A

100A SEHA — 1 Sets Size 2 65 ft — 100A TRS — AT COLUMN D-14

100A SEHA — 1 Sets Size 2 65 ft — 100A TRS — AT COLUMN B-14

800A Cu BUS DUCT HMB4 160'

800A

100A SEHA — 1 Sets Size 2 65 ft — 100A TRS — AT COLUMN B-11

100A SEHA — 1 Sets Size 2 65 ft — 100A TRS — AT COLUMN B-12

100A SEHA — 1 Sets Size 2 65 ft — 100A TRS — AT COLUMN D-12

100A SEHA — 1 Sets Size 2 65 ft — 100A TRS — AT COLUMN D-12

400A SGHA4 — 1 Sets Size 600 65 ft — 400A SGHA4 — RH1.6

400A SGHA4 — 1 Sets Size 600 65 ft — 400A SGHA4 — RH1.5

400A SGHA4 — 1 Sets Size 600 65 ft — 400A SGHA4 — RH1.2

400A SGHA4 — 1 Sets Size 600 65 ft — 400A SGHA4 — RH1.1

800A Cu BUS DUCT HMB3 160'

800A

400A SGHA4 — 1 Sets Size 600 65 ft — 400A SGHA4 — RH1.3

400A SGHA4 — 1 Sets Size 600 65 ft — 400A SGHA4 — RH1.4

400A SGHA4 — 1 Sets Size 600 65 ft — 400A SGHA4 — RH1.7

400A SGHA4 — 1 Sets Size 600 65 ft — 400A SGHA4 — RH1.8

100A SEHA — 1 Sets Size 2 65 ft — 100A TRS — AT COLUMN D-10

100A SEHA — 1 Sets Size 2 65 ft — 100A TRS — AT COLUMN D-10

100A SEHA — 1 Sets Size 2 65 ft — 100A TRS — AT COLUMN B-10

MDP 1.1

1600A
1600A P
SS -LSIG

100A FBH — 1 Sets Size 2 180 ft — 125A MLO — L1.1

225A SFLA — 1 Sets Size 4/0 380 ft — 225A MLO — L1.2

100A FBH — 1 Sets Size 2 210 ft — 125A MLO — L1.5

225A SFLA — 1 Sets Size 4/0 450 ft — 225A MLO — L1.7

60A FCH — 1 Sets Size 6 170 ft — DIM BRD 'DB1B' 1ST FLR NE

60A FCH — 1 Sets Size 6 200 ft — DIM BRD 'DB1D' 1ST FLR NW

200A SFLA — 1 Sets Size 3/0 190 ft — 200A — AHU-4 SUPPLY 100 hp

100A FBH — 1 Sets Size 2 190 ft — 100A — AHU-4 RETURN 50 hp

125A SELA — 1 Sets Size 1 180 ft — 200A — AHU-5 SUPPLY 75 hp

90A FBH — 1 Sets Size 2 180 ft — 100A — AHU-5 RETURN 40 hp

MDP 1.2

1200A SKLA12

40A FCH — 1 Sets Size 8 600 ft — 40A TRS — TYPICAL FOR ESCALATORS A,C,D 15 hp

125A SELA — 1 Sets Size 1 100 ft — 200A — AHU-6 SUPPLY 75 hp

90A FBH — 1 Sets Size 2 100 ft — 100A — AHU-6 RETURN 40 hp

EXISTING

500/665 kVA
13200 V Pri
208 V Sec

SUBSTATION 1

2000A

208Y/120 V, 3PH, 4W

100A — 1 Sets Size 2 50 ft — 225A THQD — RP1.1

100A — 1 Sets Size 2 50 ft — 225A THQD — RP1.2

300A — 1 Sets Size 600 100 ft

460 kW
575 kVA
480 V

GEN

EMERGENCY DISTRIBUTION PANEL 'EDP-A'

1000A BUS, 480Y/277 V, 3PH, 4W

300A — 1 Sets Size 600 15 ft

208 V ?

480 V ?

N E

ATS-7
400A

1 Sets Size 600 10 ft

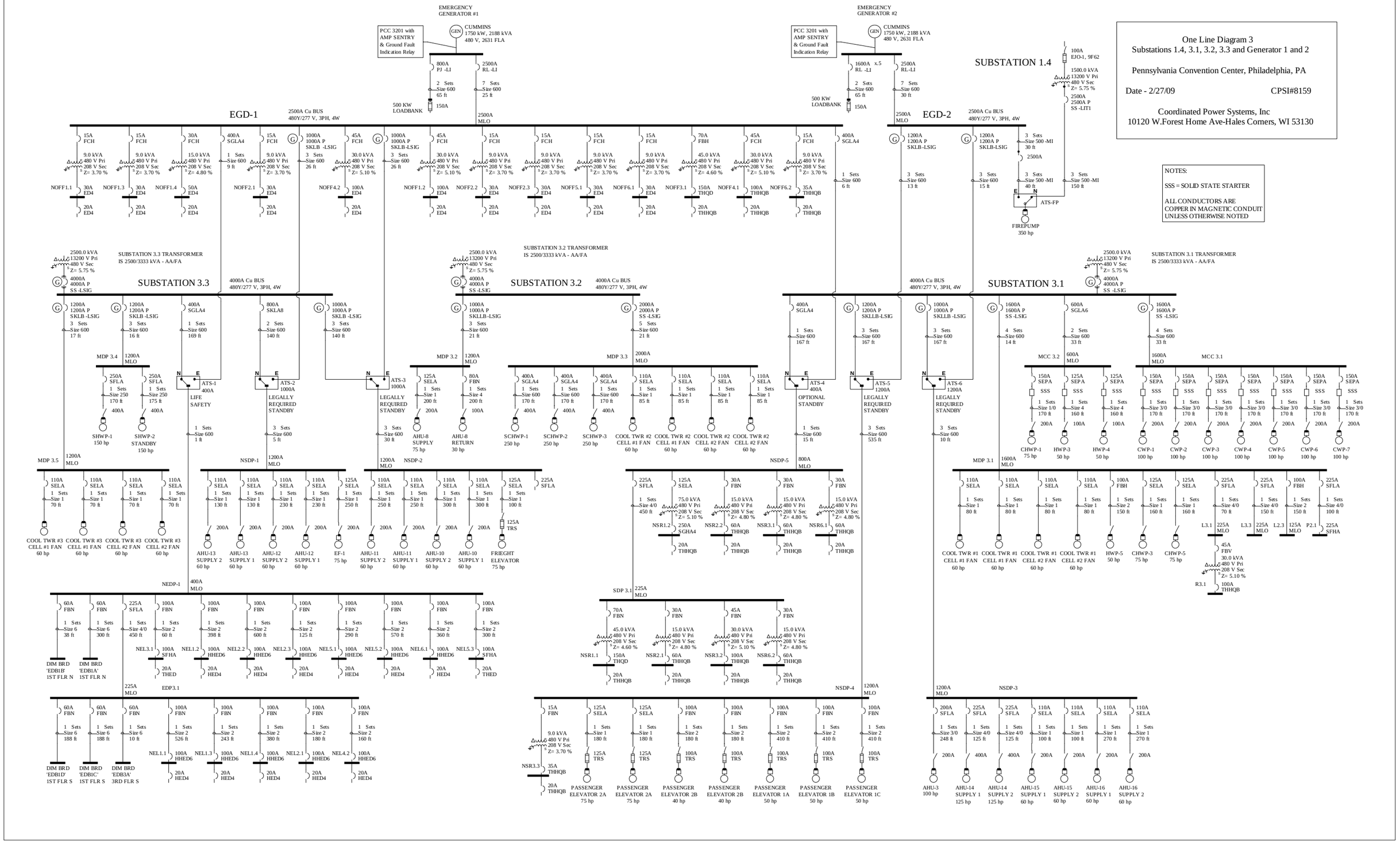
NSDP-6
400A MLO

15A — 9.0 kVA 480 V Pri 208 V Sec Z= 3.70 % — 30A — 125A MLO — NOFF1.6

125A SELA — 1 Sets Size 1 75 ft — 125A TRS — PASSENGER ELEVATOR 4A 75 hp

110A SELA — 1 Sets Size 1 75 ft — 110A TRS — FRIEGHT ELEVATOR 4B 60 hp

30A FBN — 15.0 kVA 480 V Pri 208 V Sec Z= 4.80 % — 50A — NSRP1 125A MLO — 20A THHQB


One Line Diagram 3
Substations 1.4, 3.1, 3.2, 3.3 and Generator 1 and 2
Pennsylvania Convention Center, Philadelphia, PA
Date - 2/27/09
CPSI#8159
Coordinated Power Systems, Inc
10120 W.Forest Home Ave-Hales Corners, WI 53130
NOTES:
SSS = SOLID STATE STARTER
ALL CONDUCTORS ARE COPPER IN MAGNETIC CONDUIT UNLESS OTHERWISE NOTED
EMERGENCY GENERATOR #1
PCC 3201 with AMP SENTRY & Ground Fault Indication Relay
CUMMINS 1750 kW, 2188 kVA 480 V, 2631 FLA
500 KW LOADBANK
EMERGENCY GENERATOR #2
EGD-1
EGD-2
2500A Cu BUS 480Y/277 V, 3PH, 4W
SUBSTATION 1.4
SUBSTATION 3.3
SUBSTATION 3.2
SUBSTATION 3.1
SUBSTATION 3.3 TRANSFORMER IS 2500/3333 kVA - AA/FA
SUBSTATION 3.2 TRANSFORMER IS 2500/3333 kVA - AA/FA
SUBSTATION 3.1 TRANSFORMER IS 2500/3333 kVA - AA/FA
4000A Cu BUS 480Y/277 V, 3PH, 4W
FIREPUMP 350 hp
ATS-FP
MDP 3.4
MDP 3.5
MDP 3.2
MDP 3.3
MDP 3.1
MCC 3.2
MCC 3.1
NSDP-1
NSDP-2
NSDP-3
NSDP-4
NSDP-5
NEDP-1
EDP3.1
SDP 3.1
ATS-1 400A LIFE SAFETY
ATS-2 1000A LEGALLY REQUIRED STANDBY
ATS-3 1000A LEGALLY REQUIRED STANDBY
ATS-4 400A OPTIONAL STANDBY
ATS-5 1200A LEGALLY REQUIRED STANDBY
ATS-6 1200A LEGALLY REQUIRED STANDBY
SHWP-1 150 hp
SHWP-2 STANDBY 150 hp
AHU-8 SUPPLY 75 hp
AHU-8 RETURN 30 hp
SCHWP-1 250 hp
SCHWP-2 250 hp
SCHWP-3 250 hp
CHWP-1 75 hp
HWP-3 50 hp
HWP-4 50 hp
CHWP-2 100 hp
CHWP-3 100 hp
CHWP-4 100 hp
CHWP-5 75 hp
CHWP-6 100 hp
CHWP-7 100 hp
HWP-5 50 hp
FREIGHT ELEVATOR 75 hp
PASSENGER ELEVATOR 2A 75 hp
PASSENGER ELEVATOR 2B 40 hp
PASSENGER ELEVATOR 1A 50 hp
PASSENGER ELEVATOR 1B 50 hp
PASSENGER ELEVATOR 1C 50 hp
AHU-3 100 hp
AHU-14 SUPPLY 1 125 hp
AHU-14 SUPPLY 2 125 hp
AHU-15 SUPPLY 1 60 hp
AHU-15 SUPPLY 2 60 hp
AHU-16 SUPPLY 1 60 hp
AHU-16 SUPPLY 2 60 hp
COOL TWR #3 CELL #1 FAN 60 hp
COOL TWR #3 CELL #1 FAN 60 hp
COOL TWR #3 CELL #2 FAN 60 hp
COOL TWR #3 CELL #2 FAN 60 hp
COOL TWR #2 CELL #1 FAN 60 hp
COOL TWR #2 CELL #1 FAN 60 hp
COOL TWR #2 CELL #2 FAN 60 hp
COOL TWR #2 CELL #2 FAN 60 hp
COOL TWR #1 CELL #1 FAN 60 hp
COOL TWR #1 CELL #1 FAN 60 hp
COOL TWR #1 CELL #2 FAN 60 hp
COOL TWR #1 CELL #2 FAN 60 hp
AHU-13 SUPPLY 2 60 hp
AHU-13 SUPPLY 1 60 hp
AHU-12 SUPPLY 2 60 hp
AHU-12 SUPPLY 1 60 hp
EF-1 75 hp
AHU-11 SUPPLY 2 60 hp
AHU-11 SUPPLY 1 60 hp
AHU-10 SUPPLY 2 60 hp
AHU-10 SUPPLY 1 60 hp
DIM BRD 'EDB1B' 1ST FLR N
DIM BRD 'EDB1A' 1ST FLR N
DIM BRD 'EDB1D' 1ST FLR S
DIM BRD 'EDB1C' 1ST FLR S
DIM BRD 'EDB3A' 3RD FLR S

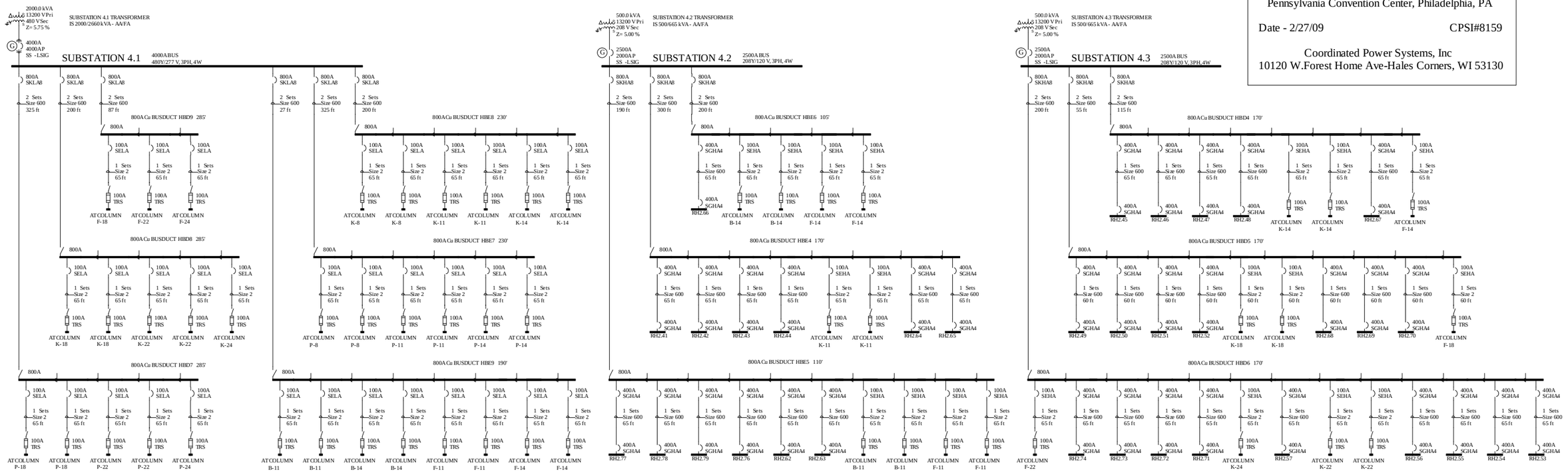
NOTE: ALL CONDUCTORS ARE COPPER IN MAGNETIC CONDUIT UNLESS OTHERWISE NOTED

One Line Diagram 4
Substations 4.1, 4.2, 4.3, 4.4, 4.5, and 4.6

Pennsylvania Convention Center, Philadelphia, PA

Date - 2/27/09 CPSI#8159

Coordinated Power Systems, Inc
10120 W.Forest Home Ave-Hales Corners, WI 53130



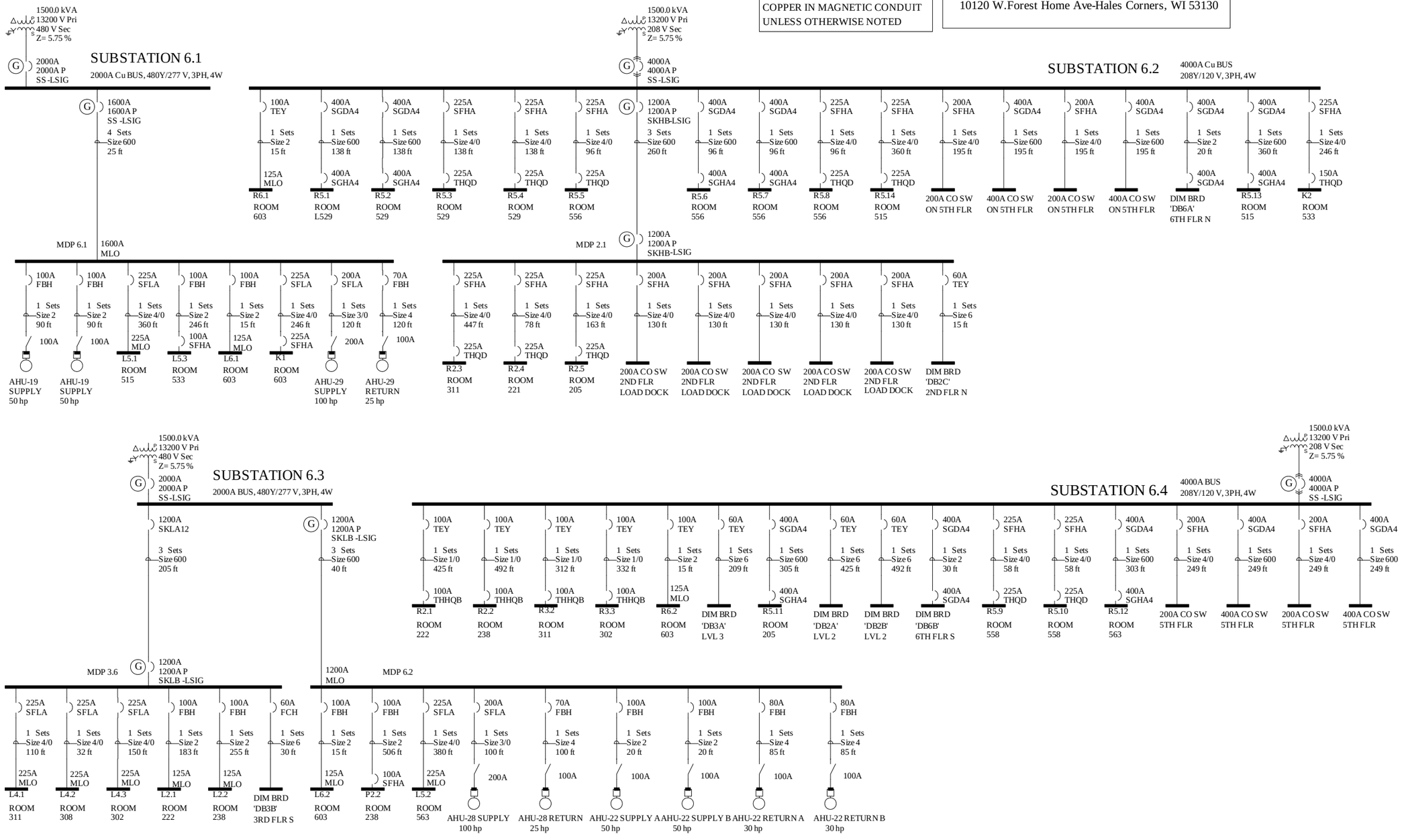
One Line Diagram 5
Substations 6.1, 6.2, 6.3 and 6.4

Pennsylvania Convention Center, Philadelphia, PA

Date - 2/27/09 CPSI#8159

Coordinated Power Systems, Inc
10120 W.Forest Home Ave-Hales Corners, WI 53130

NOTE: ALL CONDUCTORS ARE
COPPER IN MAGNETIC CONDUIT
UNLESS OTHERWISE NOTED



EQUIPMENT EVALUATION

Pennsylvania Convention Center

*RMS Symmetrical Amperes (unless otherwise noted)

MFR.	ITEM NO.	EQUIPMENT DESIGNATION	KV	AIC RATING*	SYSTEM CALC. FAULT CURRENT*	X/R	COMMENTS
GE		SWITCHGEAR 1 500MVA	13.2	20,455 Interrupting	7,160	13.19	5 cycle symmetrical
				37,000 Close & Latch	10,632	13.19	½ cycle asymmetrical
GE		SWITCHGEAR 2 500MVA	13.2	20,455 Interrupting	7,151	13.10	5 cycle symmetrical
				37,000 Close & Latch	10,339	13.10	½ cycle asymmetrical
GE		SUB 1.1 DISC	13.2	50,000	6,972	10.39	
|		SUB 1.2 DISC	|	|	6,956	10.10	
|		SUB 1.3 DISC	|	|	6,970	10.35	
|		SUB 1.4 DISC	|	|	7,065	11.46	
|		SUB 3.1 DISC	|	|	6,849	12.07	
|		SUB 3.2 DISC	|	|	7,040	11.66	
|		SUB 3.3 DISC	|	|	7,045	11.76	
|		SUB 4.1 DISC	|	|	6,775	10.55	
|		SUB 4.2 DISC	|	|	6,795	10.96	
|		SUB 4.3 DISC	|	|	6,816	11.39	
|		SUB 4.4 DISC	|	|	6,646	8.61	
|		SUB 4.5 DISC	|	|	6,693	9.22	
V		SUB 4.6 DISC	V	V	6,712	7.50	

EQUIPMENT EVALUATION

Pennsylvania Convention Center

*RMS Symmetrical Amperes (unless otherwise noted)

MFR.	ITEM NO.	EQUIPMENT DESIGNATION	KV	AIC RATING*	SYSTEM CALC. FAULT CURRENT*	X/R	COMMENTS
GE		SUB 6.1 DISC	13.2	50,000	6,791	10.87	
|		SUB 6.2 DISC	|	|	6,778	10.62	
|		SUB 6.3 DISC	|	|	6,982	10.56	
V		SUB 6.4 DISC	V	V	6,968	10.32	
GE		CHILLER 3 DISC	13.2	50,000	6,811	10.02	
GE		CHILLER 4 DISC	13.2	50,000	7,002	10.23	
GE		CHILLER 3 SWGR 250MVA	4.16	33,183	5,926	10.43	5 cycle symmetrical
				58,000	8,556	10.43	½ cycle asymmetrical
GE		CHILLER 4 SWGR 250MVA	4.16	33,183	5,959	10.35	5 cycle symmetrical
				58,000	8,594	10.35	½ cycle asymmetrical

EQUIPMENT EVALUATION

Pennsylvania Convention Center

*RMS Symmetrical Amperes

MFR.	ITEM NO.	EQUIPMENT			SYSTEM		COMMENTS
		DESIGNATION	KV	AIC RATING*	CALC. FAULT CURRENT*	X/R	
GE	5	SUB 1.1	.480	65,000	45,411	10.23	
|	8	SUB 1.2	.208	|	28,108	4.86	
|	11	SUB 1.3	.208	|	66,510	6.93	3
|	14	SUB 3.1	.480	|	54,023	9.91	
|	17	SUB 3.2	|	|	50,294	10.30	
|	20	SUB 3.3	|	|	49,933	10.16	
|	23	SUB 4.1	V	|	36,392	7.76	
|	26	SUB 4.2	.208	|	28,068	4.88	
|	29	SUB 4.3	|	|	28,074	4.88	
|	32	SUB 4.4	|	|	28,022	4.84	
|	35	SUB 4.5	|	|	28,037	4.85	
|	38	SUB 4.6	V	|	28,042	4.86	
|	41	SUB 6.1	.480	|	29,753	7.02	
|	44	SUB 6.2	.208	|	66,230	6.95	3
|	47	SUB 6.3	.480	|	30,153	6.98	
V	50	SUB 6.4	.480	V	66,507	6.92	3

EQUIPMENT EVALUATION

Pennsylvania Convention Center

*RMS Symmetrical Amperes

MFR.	ITEM NO.	EQUIPMENT			SYSTEM		COMMENTS
		DESIGNATION	KV	AIC RATING*	CALC. FAULT CURRENT*	X/R	
GE	53	SUB 1.4	.480	65,000	29,701	7.05	
|	71	MDP 1.1	.480	|	28,546	4.05	
|	72	MDP 1.2	.480	|	41,011	7.29	
|	73	MDP 1.3	.208	|	24,080	2.65	
|	74	MDP 3.1	.480	|	52,374	8.83	
|	75	MDP 3.2	|	|	47,328	8.26	
|	76	MDP 3.3	|	|	48,902	9.21	
|	77	MDP 3.4	|	|	47,813	8.64	
|	78	MDP 3.5	|	|	47,606	8.53	
|	79	MDP 6.1	V	|	28,835	6.52	
|	80	MDP 2.1	.208	|	18,678	2.46	
|	81	MDP 3.6	.480	|	21,754	4.11	
|	82	MDP 6.2	|	|	28,246	6.03	
|	83	EGD-1	|	|	19,492	17.96	
|	84	EGD-2	|	|	19,443	17.60	
V	85	NEDP-1	V	V	19,114	2.85	

EQUIPMENT EVALUATION

Pennsylvania Convention Center

*RMS Symmetrical Amperes

MFR.	ITEM NO.	EQUIPMENT			SYSTEM		COMMENTS
		DESIGNATION	KV	AIC RATING*	CALC. FAULT CURRENT*	X/R	
GE	86	EDP 3.1	.480	65,000	5,610	1.11	
|	87	NSDP-1	|	|	31,031	4.01	
|	88	NSDP-2	|	|	33,651	4.36	
|	89	NSDP-3	|	|	35,651	4.27	
|	90	NSDP-4	|	|	17,531	2.79	
|	91	NSDP-5	|	|	18,804	2.73	
|	92	NSDP-6	|	|			Fed from EX system
|	93	SDP 3.1	|	V	5,576	1.10	
|	94	L1.1	|	35,000	6,432	0.51	
|	95	L1.2	|	|	7,109	1.10	
|	96	L1.3	|	|	20,007	0.84	
|	97	L1.4	|	|	12,082	1.19	
|	98	L1.5	|	|	5,630	0.48	
|	99	L1.6	|	|	18,717	0.79	
|	100	L1.7	|	|	6,214	1.06	
V	101	L2.1	V	V	6,063	0.58	

EQUIPMENT EVALUATION

Pennsylvania Convention Center

*RMS Symmetrical Amperes

MFR.	ITEM NO.	EQUIPMENT			SYSTEM		COMMENTS
		DESIGNATION	KV	AIC RATING*	CALC. FAULT CURRENT*	X/R	
GE	102	L2.2	.480	35,000	4,592	0.50	
|	103	L2.3	|	|	8,256	0.45	
|	104	L3.1	|	|	27,308	1.76	
|	105	L3.2	|	|			Not on contract dwgs
|	106	L3.3	|	|	16,943	1.28	
|	107	L4.1	|	|	13,484	1.81	
|	108	L4.2	|	|	18,618	2.79	
|	109	L4.3	|	|	11,748	1.61	
|	110	L5.1	|	|	7,518	1.15	
|	111	L5.2	|	|	7,163	1.14	
|	112	L5.3	|	|	4,962	0.46	
|	113	L6.1	|	|	24,582	2.32	
|	114	L6.2	V	V	24,105	2.29	
|	115	R1.1	.208	22,000	22,188	2.33	
|	116	R1.2	|	|	22,168	2.58	
V	117	R1.3	V	V	21,736	2.56	

EQUIPMENT EVALUATION

Pennsylvania Convention Center

*RMS Symmetrical Amperes

MFR.	ITEM NO.	EQUIPMENT			SYSTEM		COMMENTS
		DESIGNATION	KV	AIC RATING*	CALC. FAULT CURRENT*	X/R	
GE	118	R1.4	.208	22,000	21,321	2.55	
|	119	R1.5	|	|	6,494	2.08	
|	120	R1.6	|	|	|	|	
|	121	R1.7	|	|	V	V	
|	122	R1.8	|	V	4,863	0.91	
|	123	R1.9	|	22/65,000 2	28,713	2.85	
|	124	R1.10	|	|	|	|	
|	125	R1.11	|	|	|	|	
|	126	R1.12	|	|	V	V	
|	127	R1.13	|	|	27,996	2.82	
|	128	R1.14	|	|	28,713	2.85	
|	129	R1.15	|	V	22,748	1.30	
|	130	R1.16	|	22,000	7,877	2.12	
|	131	R1.17	|	|	|	|	
|	132	R1.18	|	|	|	|	
V	133	R1.19	V	V	V	V	

EQUIPMENT EVALUATION

Pennsylvania Convention Center

*RMS Symmetrical Amperes

MFR.	ITEM NO.	EQUIPMENT			SYSTEM		COMMENTS
		DESIGNATION	KV	AIC RATING*	CALC. FAULT CURRENT*	X/R	
GE	134	R1.20	.208	22,000	5,554	0.91	
|	135	R1.21	|	|	5,295	1.01	
|	136	R2.1	|	|	2,103	0.49	
|	137	R2.2	|	|	1,821	0.49	
|	138	R2.3	|	|	2,861	0.94	
|	139	R2.4	|	|	9,724	1.35	
|	140	R2.5	|	|	6,288	1.12	
|	141	R3.1	|	|	<4,100 1		
|	142	R3.2	|	|	2,846	0.50	
|	143	R3.3	|	|	2,679	0.50	
|	144	R5.1	|	|	13,054	2.27	
|	145	R5.2	|	|	13,054	2.27	
|	146	R5.3	|	|	9,549	0.99	
|	147	R5.4	|	|	9,549	0.99	
|	148	R5.5	|	|	13,061	1.06	
V	149	R5.6	V	V	17,322	2.41	

EQUIPMENT EVALUATION

Pennsylvania Convention Center

*RMS Symmetrical Amperes

MFR.	ITEM NO.	EQUIPMENT			SYSTEM		COMMENTS
		DESIGNATION	KV	AIC RATING*	CALC. FAULT CURRENT*	X/R	
GE	150	R5.7	.208	22,000	17,322	2.41	
|	151	R5.8	|	|	13,001	1.06	
|	152	R5.9	|	|	19,527	1.21	
|	153	R5.10	|	|	19,527	1.21	
|	154	R5.11	|	|	6,591	2.08	
|	155	R5.12	|	|	6,630	2.08	
|	156	R5.13	|	|	5,664	2.06	
|	157	R5.14	|	V	3,933	0.88	
|	158	R6.1	|	22/65,000 2	28,596	0.81	
|	159	R6.2	V	22/65,000 2	28,628	0.81	
|	160	P2.1	.480	35,000	22,272	1.50	
|	161	P2.2	|	|	2,524	0.37	
|	162	K1	|	|	9,964	1.30	
|	163	K2	|	|	5,637	0.91	
|	164	M1.1	|	|	8,698	0.49	
V	165	M1.2	V	V	23,123	0.97	

EQUIPMENT EVALUATION

Pennsylvania Convention Center

*RMS Symmetrical Amperes

MFR.	ITEM NO.	EQUIPMENT DESIGNATION	KV	AIC RATING*	SYSTEM CALC. FAULT CURRENT*	X/R	COMMENTS
GE	166	RH1.1	.208	22,000	6,402	2.25	
|	167	RH1.2	|	|	6,401	2.25	
|	168	RH1.3	|	|	6,223	2.24	
|	169	RH1.4	|	|	6,222	2.24	
|	170	RH1.5	|	|	6,401	2.25	
|	171	RH1.6	|	|	6,400	2.25	
|	172	RH1.7	|	|	6,222	2.24	
|	173	RH1.8	|	|	6,221	2.24	
|	174	RH2.2	|	|	10,445	2.52	
|	175	RH2.3	|	|	10,454	2.52	
|	176	RH2.4	|	|	10,452	2.52	
|	177	RH2.5	|	|	6,050	2.23	
|	178	RH2.6	|	|	6,049	2.23	
|	179	RH2.7	|	|	6,049	2.23	
|	180	RH2.8	|	|	9,166	2.43	
V	181	RH2.9	V	V	9,165	2.43	

EQUIPMENT EVALUATION

Pennsylvania Convention Center

*RMS Symmetrical Amperes

MFR.	ITEM NO.	EQUIPMENT			SYSTEM		COMMENTS
		DESIGNATION	KV	AIC RATING*	CALC. FAULT CURRENT*	X/R	
GE	182	RH2.10	.208	22,000	9,164	2.43	
|	183	RH2.11	|	|	9,152	2.43	
|	184	RH2.12	|	|	6,600	1.83	
|	185	RH2.13	|	|	8,000	2.35	
|	186	RH2.14	|	|	8,001	2.35	
|	187	RH2.15	|	|	12,501	2.67	
|	188	RH2.16	|	|	12,499	2.67	
|	189	RH2.17	|	|	12,497	2.67	
|	190	RH2.18	|	|	12,494	2.67	
|	191	RH2.19	|	|	10,447	2.51	
|	192	RH2.20	|	|	10,445	2.51	
|	193	RH2.21	|	|	10,444	2.51	
|	194	RH2.22	|	|	10,442	2.51	
|	195	RH2.23	|	|	6,047	2.23	
|	196	RH2.24	|	|	6,047	2.23	
V	197	RH2.25	V	V	6,046	2.23	

EQUIPMENT EVALUATION

Pennsylvania Convention Center

*RMS Symmetrical Amperes

MFR.	ITEM NO.	EQUIPMENT			SYSTEM		COMMENTS
		DESIGNATION	KV	AIC RATING*	CALC. FAULT CURRENT*	X/R	
GE	198	RH2.26	.208	22,000	6,045	2.23	
|	199	RH2.27	|	|	9,159	2.43	
|	200	RH2.28	|	|	9,157	2.42	
|	201	RH2.29	|	|	9,156	2.42	
|	202	RH2.30	|	|	9,155	2.42	
|	203	RH2.31	|	|	8,006	2.35	
|	204	RH2.32	|	|	8,007	2.35	
|	205	RH2.33	|	|	8,008	2.35	
|	206	RH2.34	|	|	8,009	2.35	
|	207	RH2.35	|	|	8,010	2.35	
|	208	RH2.36	|	|	8,011	2.35	
|	209	RH2.38	|	|	7,868	2.34	
|	210	RH2.39	|	|	7,867	2.34	
|	211	RH2.40	|	|	7,867	2.34	
|	212	RH2.41	|	|	7,604	2.33	
V	213	RH2.42	V	V	7,603	2.33	

EQUIPMENT EVALUATION

Pennsylvania Convention Center

*RMS Symmetrical Amperes

MFR.	ITEM NO.	EQUIPMENT			SYSTEM		COMMENTS
		DESIGNATION	KV	AIC RATING*	CALC. FAULT CURRENT*	X/R	
GE	214	RH2.43	.208	22,000	7,602	2.33	
|	215	RH2.44	|	|	7,601	2.33	
|	216	RH2.45	|	|	11,112	2.57	
|	217	RH2.46	|	|	11,110	2.57	
|	218	RH2.47	|	|	11,109	2.57	
|	219	RH2.48	|	|	11,107	2.57	
|	220	RH2.49	|	|	13,453	2.76	
|	221	RH2.50	|	|	13,451	2.75	
|	222	RH2.51	|	|	13,448	2.75	
|	223	RH2.52	|	|	13,445	2.75	
|	224	RH2.53	|	|	7,370	1.82	
|	225	RH2.54	|	|	9,156	2.42	
|	226	RH2.55	|	|	9,157	2.42	
|	227	RH2.56	|	|	9,159	2.43	
|	228	RH2.57	|	|	9,162	2.43	
V	229	RH2.58	V	V	7,866	2.34	

EQUIPMENT EVALUATION

Pennsylvania Convention Center

*RMS Symmetrical Amperes

MFR.	ITEM NO.	EQUIPMENT			SYSTEM		COMMENTS
		DESIGNATION	KV	AIC RATING*	CALC. FAULT CURRENT*	X/R	
GE	230	RH2.59	.208	22,000	7,865	2.34	
|	231	RH2.62	|	|	9,357	2.44	
|	232	RH2.63	|	|	9,355	2.44	
|	233	RH2.64	|	|	7,598	2.33	
|	234	RH2.65	|	|	6,323	1.84	
|	235	RH2.66	|	|	9,169	2.43	
|	236	RH2.67	|	|	11,101	2.56	
|	237	RH2.68	|	|	13,437	2.75	
|	238	RH2.69	|	|	13,435	2.75	
|	239	RH2.70	|	|	13,432	2.75	
|	240	RH2.71	|	|	9,165	2.43	
|	241	RH2.72	|	|	9,166	2.43	
|	242	RH2.73	|	|	9,168	2.43	
|	243	RH2.74	|	|	9,169	2.43	
|	244	RH2.76	|	|	9,358	2.44	
V	245	RH2.77	V	V	9,362	2.44	

EQUIPMENT EVALUATION

Pennsylvania Convention Center

*RMS Symmetrical Amperes

MFR.	ITEM NO.	EQUIPMENT DESIGNATION	KV	AIC RATING*	SYSTEM CALC. FAULT CURRENT*	X/R	COMMENTS
GE	246	RH2.78	.208	22,000	9,361	2.44	
|	247	RH2.79	|	|	9,359	2.44	
|	248	NSR1.1	|	|	<4,100 1		
|	249	NSRP1	|	|	|		
|	250	NSR1.2	|	|	|		
|	251	NSR2.1	|	|	|		
|	252	NSR2.2	|	|	|		
|	253	NSR3.1	|	|	|		
|	254	NSR3.2	|	|	|		
|	255	NSR3.3	|	|	|		
|	256	NSR6.1	|	|	|		
|	257	NSR6.2	|	|	V		
|	258	RP1.1	|	|			Fed from Ex system
|	259	RP1.2	V	|			Fed from Ex system
|	261	NOFF1.6	.208	|	<4,100 1		
V	262	NOFF3.1	.208	V	<4,100 1		

EQUIPMENT EVALUATION

Pennsylvania Convention Center

*RMS Symmetrical Amperes

MFR.	ITEM NO.	EQUIPMENT DESIGNATION	KV	AIC RATING*	SYSTEM CALC. FAULT CURRENT*	X/R	COMMENTS
	263	NEL3.1	.480	35,000	11,562	1.02	
	264	NEL5.3	.480	35,000	3,863	0.48	
	265	NOFF4.1	.208	22,000	<4,100 1		
	266	NOFF6.2	.208	22,000	<4,100 1		
ASCO		ATS-1 (400A)	.480	50,000	19,185	2.86	4ATSA3400N5XC
|		ATS-2 (1000A)	|	|	31,305	4.04	4ATSA31000N5XC
|		ATS-3 (1000A)	|	|	35,676	4.69	4ATSA31000N5XC
|		ATS-4 (400A)	|	|	19,890	2.80	4ATSA3400N5XC
|		ATS-5 (1200A)	|	|	35,691	4.22	4ATSA31200N5XC
|		ATS-6 (1200A)	|	|	36,340	4.35	4ATSA31200N5XC
V		ATS-7 (400A)	V	V	Fed from existing system		4ATSA3400N5XC

EQUIPMENT EVALUATION

Pennsylvania Convention Center

*RMS Symmetrical Amperes

MFR.	ITEM NO.	EQUIPMENT			SYSTEM		COMMENTS
		DESIGNATION	KV	AIC RATING*	CALC. FAULT CURRENT*	X/R	
PENN PNL		NEL1.1	.480	35,000	1,805	0.48	
|		NEL1.2	|	|	3,016	0.43	
|		NEL1.3	|	|	2,884	0.62	
|		NEL1.4	|	|	2,240	0.53	
|		NEL2.1	|	|	3,317	0.68	
|		NEL2.2	|	|	2,073	0.38	
|		NEL2.3	|	|	7,626	0.70	
|		NEL4.2	|	|	11,562	0.48	
|		NEL5.1	|	|	3,977	0.48	
|		NEL5.2	|	|	2,174	0.39	
|		NEL6.1	V	|	3,297	0.48	
V		NOFF1.1 to 6.1	.208	V	<4,100 1		

EQUIPMENT EVALUATION

Pennsylvania Convention Center

*RMS Symmetrical Amperes

MFR.	ITEM NO.	EQUIPMENT DESIGNATION	KV	AIC RATING*	SYSTEM CALC. FAULT CURRENT*	X/R	COMMENTS
BUSPLUGS for the following busducts							
GE		HMB1	.480	65,000	16,183	2.77	
|		HMB2	.480	|	12,588	2.53	
|		HMB3	.208	|	7,606	2.33	
|		HMB4	|	|	7,875	2.34	
|		HMB5	|	|	8,898	2.41	
|		HBD1	|	|	7,350	2.31	
|		HBD2	|	|	12,506	2.67	
|		HBD3	|	|	10,456	2.52	
|		HBD4	|	|	16,406	3.03	
|		HBD5	|	|	20,982	3.57	
|		HBD6	V	|	12,513	2.68	
|		HBD7	.480	|	17,152	3.05	
|		HBD8	|	|	21,597	3.56	
|		HBD9	V	|	28,111	4.68	
|		HBE1	.208	|	18,027	3.19	
V		HBE2	.208	V	14,534	2.85	

EQUIPMENT EVALUATION

Pennsylvania Convention Center

*RMS Symmetrical Amperes

MFR.	ITEM NO.	EQUIPMENT DESIGNATION	KV	AIC RATING*	SYSTEM CALC. FAULT CURRENT*	X/R	COMMENTS
BUSPLUGS IN THE FOLLOWING BUSDUCTS							
GE		HBE3	.208	65,000	9,985	2.48	
|		HBE4	|	|	9,772	2.47	
|		HBE5	|	|	12,871	2.71	
|		HBE6	V	|	12,511	2.68	
|		HBE7	.480	|	17,152	3.05	
|		HBE8	|	|	21,597	3.56	
V		HBE9	V	V	33,307	6.26	

EQUIPMENT EVALUATION COMMENTS

The following comments refer to the respective notes on the equipment evaluation forms.

1) Based on the specific impedances proposed for the dry-type transformers on this project, the maximum available fault current at the 208V side of a 75kVA transformer is less than 4,100A. Since the standard 208V panelboards are rated at 10,000 AIC, all panels fed by dry-type transformers75kVA or less are adequately rated.

2)) Based on the presence of the upstream TEY, SFHA or SGDA circuit breaker, the circuit breakers in this equipment qualify for a UL listed series connected short circuit rating of 65,000 AIC. See attached DET-008B.

3) The short circuit rating of this equipment is less than the calculated available fault current at this location in the system. Consideration should be given to utilizing equipment with a higher short circuit rating for this application.

240 Volts, 65,000 Amperes IC

Main		Branch		
Type	Max Amp	Type	Poles	Amp Range
TEY	100	THQL	1, 2, 3	15–100 ①
SEH	150	THQL	1, 2, 3	15–100 ①
		THQL-GF	1, 2	15–30
		TXQL	1, 2	15–30
		THQP	1, 2	15–30
		TEY	1, 2, 3	15–100
		TQD	2, 3	125–150
		TEB/TED	1, 2, 3	15–100
		TED	3	110–150
SEL	150	THQL	1, 2, 3	15–100 ①
THFK	225	TED	1	15–30
		TED	2, 3	110–150
		SED	2, 3	15–150
SFH	250	THQL	1, 2, 3	15–100 ①
		THQL-GF	1, 2	15–30
		THQP	1, 2	15–30
		TQD	2, 3	125–225
		TEY/TED	1, 2, 3	15–100
		TFJ	2	70–225
		TED	2, 3	110–150
		SED	2, 3	15–150
THJK	600	TED	3	110–150
		TFJ	2, 3	70–225
		TJJ	2, 3	125–400
		TJ4V	3	150–600
		TJK4	2, 3	125–400
		TJK6	2, 3	250–600
		TJD	2, 3	250–400
		SED	2, 3	15–150
SGD/SGH	400	TED	2, 3	15–150
		TEY	2, 3	15–100
		TFJ	2, 3	70–225
		TJJ	2, 3	125–400
		SED, SEH	2, 3	15–150
		SFH	2, 3	70–250
SGD/SGH	600	THQL	1, 2, 3	15–100 ①
		THQL-GF	1, 2	15–30
		TEB/TED	1	15–30
		TED	3	110–150
		TEY	2, 3	15–100
		TFJ	2, 3	70–225
		TJJ	2, 3	125–600
		TQD	2, 3	125–225
		SED	2, 3	15–150
T Fuse	600	THHQL	1	15–70
		THHQL	2	15–125
T, R, J Fuses	600	TFJ	2, 3	70–225
		TJJ	2, 3	125–400
		TJ4V	3	150–600
		TJK4	2, 3	125–400
		TJK6	2, 3	250–600
J Fuse	600	TKM	2, 3	300–1200
		TK4V	3	400–1200
THKM	600	THHQL	1	15–70
		THHQL	2	15–125
THKM	1200	TED	3	110–150
		TFJ	2, 3	70–225
		TJJ	2, 3	125–400
		TJK4	2, 3	125–400
		TJD	2, 3	250–400
		TJK6	2, 3	250–600
		TJ4V	3	150–600
		TKM	2, 3	300–1200
		TK4V	3	400–1200
		SED	2, 3	15–150

① THQL 1-pole rating is 70 A maximum. Maximum system voltage is 120/240 Vac. THQL 2-pole 110–125 A ratings are also series rated on 120/240 Vac maximum services.

③ When equipped with TB3F05 limiter only.

240 Volts, 65,000 Amperes IC (continued)

Main		Branch		
Type	Max Amp	Type	Poles	Amp Range
SKH	1200	SED	2, 3	15–150
		TED	3	110–150
		TFJ	2, 3	70–225
		TJJ	2, 3	125–400
		TJD	2, 3	250–400
		TJK4, 6	2, 3	125–600
		TJ4V	3	150–600
		TKM	2, 3	300–1200
		TK4V	3	400–1200
L Fuse	3000	TFJ	2, 3	70–225
		TJ4V	3	150–600
		TJK4	2, 3	125–400
		TJK6	2, 3	250–600
		TK4V	3	400–1200
		TKM	2, 3	300–1200
TPV or SS/SH (PB II)	3000	TFC	2, 3	225
		TFJ/TFK	2, 3	70–225
		TJJ	2, 3	125–400
		TJ4V	3	150–600
		TJK4	2, 3	125–400
		TJK6	2, 3	250–600
		TJC	2, 3	400–600
		TKM	2, 3	300–1200
		TK4V	3	400–1200
		TKC	2, 3	800–1200
SS (PB II)	4000	SED	2, 3	15–150
TLC4V	600	SED	2, 3	15–150
		TEB	1	15–100
		TED	1	15–30

240 Volts, 85,000 Amperes IC

Main		Branch		
Type	Max Amp	Type	Poles	Amp Range
SEL	150	TEB	1, 2, 3	15–100
		TED	1, 2, 3	15–100
		TED	3	150
TLB1/2	225	TED	1	15–30
		THED	1	15–30
TB4 ③	250	TQD	2	100
TLB4 or SGL	400	THQL	1, 2, 3	15–100 ①
		THQL-GF	1, 2	15–30
		TQD	2, 3	125–225
		TEB	1, 2, 3	15–100
		TED	2, 3	15–150
		TFJ	2, 3	70–225
		TFC	2, 3	225
		TJD	2, 3	250–400
		TEY	1, 2, 3	15–100
		SED/SEH	2, 3	15–150
		SFH	2, 3	70–250
TLC4V	600	TQD	2, 3	125–225
		THQD	2, 3	125–225
		TED6	2, 3	15–150
		THED6	2, 3	15–150
		TFJ	2, 3	70–225
		TFC	3	225
		TJD	2, 3	250–400
		TJJ	2, 3	125–400
		TJK	2, 3	125–600
		THJK	2, 3	125–600
		TJV	3	150–600
		THJV	3	150–600
		TJC	2, 3	400–600
SGL	600	THQL	1, 2,3	15–100 ①
		TFJ	2, 3	70–225
		TFC	2, 3	70–225
		TJD	2, 3	250–400
SS (PB II)	1600/2000	SED/SEH	2, 3	15–150
		SFH	2, 3	70–250
		SGD/SGH	2, 3	150–600

COORDINATION STUDY

This section includes

Recommended setting tables

Coordination Comments

Time Current Curves demonstrating
how the recommended settings were derived.

RECOMMENDED SETTINGS OF LOW VOLTAGE PROTECTIVE DEVICES

Pennsylvania Convention Center
Philadelphia, PA

		PROTECTIVE DEVICE				ADJUSTMENTS				SETTINGS								
	IDENTIFICATION	MFG	TYPE & TRIP UNIT	SENSOR SIZE	PLUG RAT.	LT RANGE	ST RANGE	INST RANGE	GF RANGE	LT P.U.	LT DELAY	ST P.U.	ST DELAY	INST P.U.	GF P.U.	GF DELAY	TCCS NO.	NOTES
480V SUBSTATION 1.1																		
	MAIN	GE | V	SS MVT+ LSIG	4000	4000	.5-1.0	1.5-9	1.5-9	.2-.3	1.0	1	3	1 (min) IN *	9	.3	2 (int) IN *	N1.1 A-D	
	800A Cu BUSDUCT HMB1	| V	SKLA8	800	800	–	–	MIN-MAX	–	–	–	–	–	MAX	–	–	N1.1A	
	800A Cu BUSDUCT HMB2	| V	SKLA8	800	800	–	–	MIN-MAX	–	–	–	–	–	MAX	–	–	N1.1A	
	MDP 1.1	| V	SS MVT+ LSIG	1600	1600	.5-1.0	1.5-9	1.5-15	.2-.6	1.0	1	2	1 (min) OUT *	15	.5	1 (min) IN *	N1.1C N1.1D	
	MDP 1.2	| V	SKLA12	1200	1200	–	–	MIN-MAX	–	–	–	–	–	MAX	–	–	N1.1B	
	L1.3	| V	FBH	100	100	–	–	–	–	–	–	–	–	–	–	–		
	L1.4	| V	SFLA	250	225	–	–	MIN-MAX	–	–	–	–	–	MAX	–	–		
	L1.6	| V	FBH	100	100	–	–	–	–	–	–	–	–	–	–	–		
	M1.1	| V	FBH	100	100	–	–	–	–	–	–	–	–	–	–	–		
	M1.2	| V	FBH	100	100	–	–	–	–	–	–	–	–	–	–	–		
	DIM BOARD DB1F	| V	FBH	100	100	–	–	–	–	–	–	–	–	–	–	–		
	DIM BOARD DB1H	| V	FBH	100	100	–	–	–	–	–	–	–	–	–	–	–		

* Time Delay I2t Setting: OUT (OFF) = I2t function is not used ; IN (ON) = I2t function is used.

RECOMMENDED SETTINGS OF LOW VOLTAGE PROTECTIVE DEVICES

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		PROTECTIVE DEVICE				ADJUSTMENTS				SETTINGS								
	IDENTIFICATION	MFG	TYPE & TRIP UNIT	SENSOR SIZE	PLUG RAT.	LT RANGE	ST RANGE	INST RANGE	GF RANGE	LT P.U.	LT DELAY	ST P.U.	ST DELAY	INST P.U.	GF P.U.	GF DELAY	TCCS NO.	NOTES
208V SUBSTATION 1.2																		
	MAIN	GE | V	SS MVT+ LSIG	2000	2000	.5-1.0	1.5-9	1.5-15	.2-.6	1.0	1	6.5	1 (min) OUT *	15	.6	1 (min) IN *	N1.2	
	800A Cu BUSDUCT HMB3	| |	SKHA8	800	800	–	–	MIN-MAX	–	–	–	–	–	MAX	–	–	N1.2	
	800A Cu BUSDUCT HMB4	| |	SKHA8	800	800	–	–	MIN-MAX	–	–	–	–	–	MAX	–	–	N1.2	
	800A Cu BUSDUCT HMB5	| V	SKHA8	800	800	–	–	MIN-MAX	–	–	–	–	–	MAX	–	–	N1.2	
208V SUBSTATION 1.3																		
	MAIN	GE | V	SS MVT+ LSIG	4000	4000	.5-1.0	1.5-9	1.5-9	.2-.3	1.0	1	2	2 (int) OUT *	9	.3	2 (int) IN *	N1.3A N1.3B	
	MDP 1.3	| |	SS MVT+ LSIG	2000	2000	.5-1.0	1.5-9	1.5-15	.2-.6	1.0	1	3	1 (min) OUT *	15	.4	1 (min) IN *	N1.3A N1.3B	
	TYPICAL SGDA4 FEEDER	| |	SGDA4	400	400	–	–	MIN-MAX	–	–	–	–	–	MAX	–	–		
	TYPICAL SFHA FEEDER	| V	SFHA	250	225-200	–	–	MIN-MAX	–	–	–	–	–	MAX	–	–		

* Time Delay I2t Setting: OUT (OFF) = I2t function is not used ; IN (ON) = I2t function is used.

RECOMMENDED SETTINGS OF LOW VOLTAGE PROTECTIVE DEVICES

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		PROTECTIVE DEVICE				ADJUSTMENTS				SETTINGS								
	IDENTIFICATION	MFG	TYPE & TRIP UNIT	SENSOR SIZE	PLUG RAT.	LT RANGE	ST RANGE	INST RANGE	GF RANGE	LT P.U.	LT DELAY	ST P.U.	ST DELAY	INST P.U.	GF P.U.	GF DELAY	TCCS NO.	NOTES
480V SUBSTATION 1.4																		
	MAIN (FIRE PUMP)	GE	SS POWER+ LIT1	2500	2500	.5-1.0	–	1.5-10	–	1.0	1	–	–	1.5	–	–	N1.4	
480V SUBSTATION 3.1																		
	MAIN	GE |	SS MVT+ LSIG	4000	4000	.5-1.0	1.5-9	1.5-9	.2-.3	1.0	1	2.5	2 (int) OUT *	9	.3	2 (int) IN *	N3.1 A-H	
	MDP 3.1	| |	SS MVT+ LSIG	1600	1600	.5-1.0	1.5-9	1.5-15	.2-.6	1.0	1	3	1 (min) OUT *	15	.5	1 (min) IN *	N3.1G N3.1H	
	MCC 3.1	| |	SS MVT+ LSIG	1600	1600	.5-1.0	1.5-9	1.5-15	.2-.6	1.0	1	3	1 (min) OUT *	15	.5	1 (min) IN *	N3.1F N3.1H	
	MCC 3.2	| |	SGLA6	600	600	–	–	MIN-MAX	–	–	–	–	–	MAX	–	–	N3.1B	
	NSDP-3 VIA ATS-6 (N)	| |	SKLLB10 MVT+ LSIG	1000 #	1000	.5-1.0	1.5-9	1.5-10	.2-1.0	1.0	1	5	1 OUT *	10	.7	1 IN *	N3.1C N3.1H	# 1200A GF sensor
	NSDP-4 VIA ATS-5 (N)	| |	SKLLB12 MVT+ LSIG	1200	1200	.5-1.0	1.5-9	1.5-10	.2-1.0	1.0	1	3	1 OUT *	10	.7	1 IN *	N3.1 D_3E,H	
	NSDP-5 VIA ATS-4 (N)	| V	SGLA4	400	400	–	–	MIN-MAX	–	–	–	–	–	MAX	–	–	N3.1A	

* Time Delay I2t Setting: OUT (OFF) = I2t function is not used ; IN (ON) = I2t function is used.

RECOMMENDED SETTINGS OF LOW VOLTAGE PROTECTIVE DEVICES

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		PROTECTIVE DEVICE				ADJUSTMENTS				SETTINGS								
	IDENTIFICATION	MFG	TYPE & TRIP UNIT	SENSOR SIZE	PLUG RAT.	LT RANGE	ST RANGE	INST RANGE	GF RANGE	LT P.U.	LT DELAY	ST P.U.	ST DELAY	INST P.U.	GF P.U.	GF DELAY	TCCS NO.	NOTES
480V SUBSTATION 3.2																		
	MAIN	GE | V	SS MVT+ LSIG	4000	4000	.5-1.0	1.5-9	1.5-9	.2-.3	1.0	1	3	2 (int) OUT *	9	.3	2 (int) IN *	N3.2 A,B,C	
	MDP3.2	| |	SKLLB10 MVT+ LSIG	1000 #	1000	.5-1.0	1.5-9	1.5-10	.2-1.0	1.0	1	2.5	1 OUT *	10	.7	1 IN *	N3.2A N3.2C	# 1200A GF sensor
	MDP3.3	| V	SS MVT+ LSIG	2000	2000	.5-1.0	1.5-9	1.5-15	.2-.6	1.0	1	4	1 (min) OUT	15	.4	1 (min) IN	N3.2B N3.2C	
480V SUBSTATION 3.3																		
	MAIN	GE | V	SS MVT+ LSIG	4000	4000	.5-1.0	1.5-9	1.5-9	.2-.3	1.0	1	3	1 (min) IN *	9	.3	2 (int) IN *	N3.3 A-E	
	MDP3.4	| |	SKLB12 MVT+ LSIG	1200	1200	.5-1.0	1.5-9	1.5-10	.2-1.0	1.0	1	3	1 OUT *	10	.7	1 IN *	N3.3D N3.3E	
	MDP3.5	| |	SKLB12 MVT+ LSIG	1200	1200	.5-1.0	1.5-9	1.5-10	.2-1.0	1.0	1	3	1 OUT *	10	.7	1 IN *	N3.3D N3.3E	
	NSDP-1 VIA ATS-2 (N)	| |	SKLA8	800	800	–	–	MIN-MAX	–	–	–	–	–	MAX	–	–	N3.3B	
	NSDP-2 VIA ATS-3 (N)	| |	SKLB10 MVT+ LSIG	1000 #	1000	.5-1.0	1.5-9	1.5-10	.2-1.0	1.0	1	4	1 OUT *	10	.7	1 IN *	N3.3C N3.3E	# 1200A GF sensor
	NEDP-1 VIA ATS-1 (N)	| V	SGLA4	400	400	–	–	MIN-MAX	–	–	–	–	–	MAX	–	–	N3.3A	

* Time Delay I2t Setting: OUT (OFF) = I2t function is not used ; IN (ON) = I2t function is used.

RECOMMENDED SETTINGS OF LOW VOLTAGE PROTECTIVE DEVICES

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	IDENTIFICATION	PROTECTIVE DEVICE				ADJUSTMENTS				SETTINGS							TCCS NO.	NOTES
		MFG	TYPE & TRIP UNIT	SENSOR SIZE	PLUG RAT.	LT RANGE	ST RANGE	INST RANGE	GF RANGE	LT P.U.	LT DELAY	ST P.U.	ST DELAY	INST P.U.	GF P.U.	GF DELAY		
480V SUBSTATION 4.1																		
	MAIN	GE | V	SS MVT+ LSIG	4000	4000	.5-1.0	1.5-9	1.5-9	.2-.3	1.0	1	3	1 (min) OUT *	9	.3	1 (min) IN *	N4.1	
	TYPICAL SKLA FEEDER FOR 800A Cu BUSDUCT	| V	SKLA8	800	800	–	–	MIN-MAX	–	–	–	–	–	MAX	–	–	N4.1	
208V SUBSTATION 4.2																		
	MAIN	GE | V	SS MVT+ LSIG	2500	2000	.5-1.0	1.5-9	1.5-13	.2-.37	1.0	1	6	1 (min) OUT *	13	.37	1 (min) IN *	N4.2	
	TYPICAL SKLA FEEDER FOR 800A Cu BUSDUCT	| V	SKLA8	800	800	–	–	MIN-MAX	–	–	–	–	–	MAX	–	–	N4.2	
208V SUBSTATION 4.3																		
	MAIN	GE | V	SS MVT+ LSIG	2500	2000	.5-1.0	1.5-9	1.5-13	.2-.37	1.0	1	6	1 (min) OUT *	13	.37	1 (min) IN *	N4.3	
	TYPICAL SKLA FEEDER FOR 800A Cu BUSDUCT	| V	SKLA8	800	800	–	–	MIN-MAX	–	–	–	–	–	MAX	–	–	N4.3	

* Time Delay I2t Setting: OUT (OFF) = I2t function is not used ; IN (ON) = I2t function is used.

RECOMMENDED SETTINGS OF LOW VOLTAGE PROTECTIVE DEVICES

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	IDENTIFICATION	PROTECTIVE DEVICE				ADJUSTMENTS				SETTINGS							TCCS NO.	NOTES
		MFG	TYPE & TRIP UNIT	SENSOR SIZE	PLUG RAT.	LT RANGE	ST RANGE	INST RANGE	GF RANGE	LT P.U.	LT DELAY	ST P.U.	ST DELAY	INST P.U.	GF P.U.	GF DELAY		
208V SUBSTATION 4.4																		
	MAIN	GE | V	SS MVT+ LSIG	2500	2000	.5-1.0	1.5-9	1.5-13	.2-.37	1.0	1	6	1 (min) OUT *	13	.37	1 (min) IN *	N4.4	
	TYPICAL SKLA FEEDER FOR 800A Cu BUSDUCT	| V	SKLA8	800	800	–	–	MIN-MAX	–	–	–	–	–	MAX	–	–	N4.4	
208V SUBSTATION 4.5																		
	MAIN	GE | V	SS MVT+ LSIG	2500	2000	.5-1.0	1.5-9	1.5-13	.2-.37	1.0	1	6	1 (min) OUT *	13	.37	1 (min) IN *	N4.5	
	TYPICAL SKLA FEEDER FOR 800A Cu BUSDUCT	| V	SKLA8	800	800	–	–	MIN-MAX	–	–	–	–	–	MAX	–	–	N4.5	
208V SUBSTATION 4.6																		
	MAIN	GE | V	SS MVT+ LSIG	2500	2000	.5-1.0	1.5-9	1.5-13	.2-.37	1.0	1	6	1 (min) OUT *	13	.37	1 (min) IN *	N4.6	
	TYPICAL SKLA FEEDER FOR 800A Cu BUSDUCT	| V	SKLA8	800	800	–	–	MIN-MAX	–	–	–	–	–	MAX	–	–	N4.6	

* Time Delay I2t Setting: OUT (OFF) = I2t function is not used ; IN (ON) = I2t function is used.

RECOMMENDED SETTINGS OF LOW VOLTAGE PROTECTIVE DEVICES

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		PROTECTIVE DEVICE				ADJUSTMENTS				SETTINGS								
	IDENTIFICATION	MFG	TYPE & TRIP UNIT	SENSOR SIZE	PLUG RAT.	LT RANGE	ST RANGE	INST RANGE	GF RANGE	LT P.U.	LT DELAY	ST P.U.	ST DELAY	INST P.U.	GF P.U.	GF DELAY	TCCS NO.	NOTES
480V SUBSTATION 6.1																		
	MAIN	GE | V	SS MVT+ LSIG	2000	2000	.5-1.0	1.5-9	1.5-15	.2-.6	1.0	2	2.5	2 (int) OUT *	15	.6	2 (int) IN *	N6.1A N6.1B	
	MDP6.1	| V	SS MVT+ LSIG	1600	1600	.5-1.0	1.5-9	1.5-15	.2-.6	1.0	1	2	1 (min) OUT *	15	.5	1 (min) IN *	N6.1A N6.1B	
208V SUBSTATION 6.2																		
	MAIN	GE | V	SS MVT+ LSIG	4000	4000	.5-1.0	1.5-9	1.5-9	.2-.3	1.0	1	1.5	2 (int) OUT *	9	.3	2 (int) IN *	N6.2 A-C	
	MDP 2.1	| |	SKHB12 MVT+ LSIG	1200	1200	.5-1.0	1.5-9	1.5-10	.2-1.0	1.0	1	3	1 OUT *	10	.7	1 IN *	N6.2B N6.2C	
	TYPICAL SFHA FEEDER	| |	SFHA	250	225-200	–	–	MIN-MAX	–	–	–	–	–	MAX	–	–		
	TYPICAL SGDA FEEDER	| |	SGDA	400	400	–	–	MIN-MAX	–	–	–	–	–	MAX	–	–	N6.2A	
	TYPICAL TEY FEEDER	| V	TEY	100	100	–	–	–	–	–	–	–	–	–	–	–		

* Time Delay I2t Setting: OUT (OFF) = I2t function is not used ; IN (ON) = I2t function is used.

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		PROTECTIVE DEVICE				ADJUSTMENTS				SETTINGS								
	IDENTIFICATION	MFG	TYPE & TRIP UNIT	SENSOR SIZE	PLUG RAT.	LT RANGE	ST RANGE	INST RANGE	GF RANGE	LT P.U.	LT DELAY	ST P.U.	ST DELAY	INST P.U.	GF P.U.	GF DELAY	TCCS NO.	NOTES
480V SUBSTATION 6.3																		
	MAIN	GE | V	SS MVT+ LSIG	2000	2000	.5-1.0	1.5-9	1.5-15	.2-.6	1.0	3	8.5	1 (min) OUT *	15	.6	2 (int) IN *	N6.3 A-C	
	MDP 3.6	| |	SKLA12	1200	1200	–	–	MIN-MAX	–	–	–	–	–	MAX	–	–	N6.3A	
	MDP 6.2	| V	SKLB12 MVT+ LSIG	1200	1200	.5-1.0	1.5-9	1.5-10	.2-1.0	1.0	1	3	1 OUT *	10	.7	1 IN *	N6.3B N6.3C	
208V SUBSTATION 6.4																		
	MAIN	GE | V	SS MVT+ LSIG	4000	4000	.5-1.0	1.5-9	1.5-9	.2-.3	1.0	1	1.5	1 (min) OUT *	9	.3	1 (min) IN *	N6.4	
	TYPICAL SFHA FEEDER	| |	SFHA	250	225-200	–	–	MIN-MAX	–	–	–	–	–	MAX	–	–		
	TYPICAL SGDA4 FEEDER	| |	SGDA	400	400	–	–	MIN-MAX	–	–	–	–	–	MAX	–	–	N6.4	
	TYPICAL TEY FEEDER	| V	TEY	100	100	–	–	–	–	–	–	–	–	–	–	–		

* Time Delay I2t Setting: OUT (OFF) = I2t function is not used ; IN (ON) = I2t function is used.

RECOMMENDED SETTINGS OF LOW VOLTAGE PROTECTIVE DEVICES

Pennsylvania Convention Center
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		PROTECTIVE DEVICE				ADJUSTMENTS				SETTINGS								
	IDENTIFICATION	MFG	TYPE & TRIP UNIT	SENSOR SIZE	PLUG RAT.	LT RANGE	ST RANGE	INST RANGE	GF RANGE	LT P.U.	LT DELAY	ST P.U.	ST DELAY	INST P.U.	GF P.U.	GF DELAY	TCCS NO.	NOTES
480V SWITCHBOARD MDP 1.1																		
	MAIN	GE | V	SS MVT+ LSIG	1600	1600	.5-1.0	1.5-9	1.5-15	.2-.6	1.0	1	2	1 (min) OUT *	15	.5	1 (min) IN *	N1.1C N1.1D	
	TYPICAL SFLA FEEDER	| |	SFLA	250	225-200	–	–	MIN-MAX	–	–	–	–	–	MAX	–	–	N1.1C	
	TYPICAL SELA FEEDER	| |	SELA	150	125	–	–	MIN-MAX	–	–	–	–	–	MAX	–	–		
	TYPICAL FBH FEEDER	| |	FBH	100	100	–	–	–	–	–	–	–	–	–	–	–		
	TYPICAL FCH FEEDER	| V	FCH	60	60	–	–	–	–	–	–	–	–	–	–	–		
208V SWITCHBOARD MDP 1.3																		
	MAIN	GE | V	SS MVT+ LSIG	2000	2000	.5-1.0	1.5-9	1.5-15	.2-.6	1.0	1	3	1 (min) OUT *	15	.4	1 (min) IN *	N1.3A N1.3B	
	TYPICAL SFHA FEEDER	| |	SFHA	250	225	–	–	MIN-MAX	–	–	–	–	–	MAX	–	–		
	TYPICAL SGLA FEEDER	| |	SGLA	400	400	–	–	MIN-MAX	–	–	–	–	–	MAX	–	–	N1.3A	
	TYPICAL TEY FEEDER	| V	TEY	100	100	–	–	MIN-MAX	–	–	–	–	–	–	–	–		

* Time Delay I2t Setting: OUT (OFF) = I2t function is not used ; IN (ON) = I2t function is used.

RECOMMENDED SETTINGS OF LOW VOLTAGE PROTECTIVE DEVICES

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		PROTECTIVE DEVICE				ADJUSTMENTS				SETTINGS								
	IDENTIFICATION	MFG	TYPE & TRIP UNIT	SENSOR SIZE	PLUG RAT.	LT RANGE	ST RANGE	INST RANGE	GF RANGE	LT P.U.	LT DELAY	ST P.U.	ST DELAY	INST P.U.	GF P.U.	GF DELAY	TCCS NO.	NOTES
208V SWITCHBOARD MDP 2.1																		
	MAIN	GE | V	SKHB12 MVT+ LSIG	1200	1200	.5-1.0	1.5-9	1.5-10	.2-1.0	1.0	1	3	1 OUT *	10	.7	1 IN *	N6.2B N6.2C	
	TYPICAL SFHA FEEDER	| |	SFHA	250	225-200	–	–	MIN-MAX	–	–	–	–	–	MAX	–	–	N6.2B	
	TYPICAL TEY FEEDER	| V	TEY	60	60	–	–	–	–	–	–	–	–	–	–	–		
480V SWITCHBOARD MDP 3.6																		
	MAIN	GE | V	SKLB12 MVT+ LSIG	1200	1200	.5-1.0	1.5-9	1.5-10	.2-1.0	1.0	1	3	1 OUT *	10	.7	1 IN *	N6.3A N6.3C	
	TYPICAL SFLA FEEDER	| |	SFHA	250	225-200	–	–	MIN-MAX	–	–	–	–	–	MAX	–	–	N6.3A	
	TYPICAL FBH FEEDER	| |	FBH	100	60	–	–	–	–	–	–	–	–	–	–	–		
	TYPICAL FCH FEEDER	| V	FCH	60	60	–	–	–	–	–	–	–	–	–	–	–		

* Time Delay I2t Setting: OUT (OFF) = I2t function is not used ; IN (ON) = I2t function is used.

RECOMMENDED SETTINGS OF LOW VOLTAGE PROTECTIVE DEVICES

Pennsylvania Convention Center
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		PROTECTIVE DEVICE				ADJUSTMENTS				SETTINGS								
	IDENTIFICATION	MFG	TYPE & TRIP UNIT	SENSOR SIZE	PLUG RAT.	LT RANGE	ST RANGE	INST RANGE	GF RANGE	LT P.U.	LT DELAY	ST P.U.	ST DELAY	INST P.U.	GF P.U.	GF DELAY	TCCS NO.	NOTES
480V SWITCHBOARD EGD-1																		
	NSDP-1 VIA ATS-2 (E)	GE |	SKLB10 MVT+ LSIG	1000 #	1000	.5-1.0	1.5-9	1.5-10	.2-1.0	1.0	1	3	1 OUT *	10	1.0	1 IN *	E3.3B	# 1200A GF sensor
	NSDP-2 VIA ATS-3 (E)	| |	SKLB10 MVT+ LSIG	1000 #	1000	.5-1.0	1.5-9	1.5-10	.2-1.0	1.0	1	4	1 OUT *	10	1.0	1 IN *	E3.3C	# 1200A GF sensor
	NEDP-1 VIA ATS-1 (E)	| |	SGLA	400	400	–	–	MIN- MAX	–	–	–	–	–	MAX	–	–	E3.3A	
	NSDP-5 VIA ATS-4 (E)	| |	SGLA	400	400	–	–	MIN- MAX	–	–	–	–	–	MAX	–	–	E3.1A	
	TYPICAL FCH FEEDER	| V	FCH	60	60	–	–	–	–	–	–	–	–	–	–	–		
480V SWITCHBOARD EGD-2																		
	NSDP-3 VIA ATS-5 (E)	GE |	SKLB12 MVT+ LSIG	1200	1200	.5-1.0	1.5-9	1.5-10	.2-1.0	1.0	1	3	1 OUT *	10	1.0	1 IN *	E3.1D E3.1E	
	NSDP-4 VIA ATS-6 (E)	| V	SKLB12 MVT+ LSIG	1200	1200	.5-1.0	1.5-9	1.5-10	.2-1.0	1.0	1	4.5	1 OUT *	10	1.0	1 IN *	E3.1C	

* Time Delay I2t Setting: OUT (OFF) = I2t function is not used ; IN (ON) = I2t function is used.

RECOMMENDED SETTINGS OF LOW VOLTAGE PROTECTIVE DEVICES

Pennsylvania Convention Center
Philadelphia, PA

		PROTECTIVE DEVICE				ADJUSTMENTS				SETTINGS								
	IDENTIFICATION	MFG	TYPE & TRIP UNIT	SENSOR SIZE	PLUG RAT.	LT RANGE	ST RANGE	INST RANGE	GF RANGE	LT P.U.	LT DELAY	ST P.U.	ST DELAY	INST P.U.	GF P.U.	GF DELAY	TCCS NO.	NOTES
480V GENERATOR #1																		
	EGD-1	SQ-D | V	RL LI Micrologic 3.0	2500	type A *	.4-1.0	-	1.5-12	-	1.0	2 sec	-	-	12	-	-	E3.1A E3.3A,B,C	
	500KW LOAD BANK		PJ LI Micrologic 3.0	800	type A *	.4-1.0	-	1.5-12	-	1.0	0.5 sec	-	-	6	-	-	E-LB1	
480V GENERATOR #2																		
	EGD-2	SQ-D | V	RL LI Micrologic 3.0	2500	type A *	.4-1.0	-	1.5-12	-	1.0	2 sec	-	-	12	-	-	E1.4, E3.1C,D,E	
	500KW LOAD BANK		RL LI Micrologic 3.0	1600	type A *	.4-1.0	-	1.5-12	-	.5	0.5 sec	-	-	3	-	-	E-LB2	

* assumed standard type ‘A’ rating plug

RECOMMENDED PROTECTIVE RELAY SETTINGS

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Philadelphia, PA

DESIGNATION	FUNC-TION	CT or PT RATIO	RELAY TYPE	RANGE TOC PICKUP	RANGE IOC PICKUP	SETTINGS TOC - Time Over Current PICKUP	CURVE	T.D.	SETTINGS IOC - Inst Over Current PICKUP	DELAY	TCC
13.2kV Switchgear 1							* 12 = IEEE Very Inverse Curve				
INCOMING MAIN BREAKERS (2)	50/51	1200/5 MR SET AT	GE - DIAC (3)	0.5-15.9	1-159, OFF	4.5 (540A)	12 *	1.5	0 (OFF)	0	SWG-1A,B,C
UNITS 104A, 107A	50/51N	600/5 TAP	GE - DIAC (1)	0.5-15.9	1-159, OFF	2.3 (276A)	12 *	2.5	0 (OFF)	0	SWG-1D
	25	3-PT's 120/1	BE1-25M	See page	55 for	settings					Page 55
	27		NGV11A11A	See page	56 for	settings					Page 56

DESIGNATION	FUNC-TION	CT RATIO	RELAY TYPE	RANGE PICKUP	RANGE INST	SETTINGS PICKUP	CURVE	TIME	INST	O/C Shift	TCC
SUBS 3.1, CH-3	50/51	1200/5 MR	GE/Multilin	20-220% CT	4-20 x CT	80% (480A)	EI - LO	1	6 (3600A)	0.8 (SW2) +	SWG-1A
UNIT 102B	50/51N	SET AT 600/5 TAP	SR-735	15-100% CT	0.1-16 x CT	40% (240A)	EI - LO	2	8 (4800A)	0.8 (SW4) +	SWG-1D
SUB 3.2	50/51	1200/5 MR	GE/Multilin	20-220% CT	4-20 x CT	80% (480A)	EI - LO	1	6 (3600A)	0.8 (SW2) +	SWG-1A
UNIT 109B	50/51N	SET AT 600/5 TAP	SR-735	15-100% CT	0.1-16 x CT	15% (90A)	EI - LO	1	8 (4800A)	1.0 +	SWG-1D
SUBS 3.3, CH-4	50/51	1200/5 MR	GE/Multilin	20-220% CT	4-20 x CT	80% (480A)	EI - LO	1	6 (3600A)	0.8 (SW2) +	SWG-1A
UNIT 110B	50/51N	SET AT 600/5 TAP	SR-735	15-100% CT	0.1-16 x CT	40% (240A)	EI - LO	2	8 (4800A)	0.8 (SW4) +	SWG-1D

+ The O/C Shift Multiplier settings (second last column) are made via option switches located on the side of the SR-735 relay. A setting of 1.0 does not require any switches to be turned on. Where a switch is required to be turned on to achieve the desired O/C Shift, it is noted in parenthesis.

RECOMMENDED PROTECTIVE RELAY SETTINGS

Pennsylvania Convention Center
Philadelphia, PA

DESIGNATION	FUNC-TION	CT RATIO	RELAY TYPE	RANGE TOC PICKUP	RANGE IOC PICKUP	SETTINGS TOC - Time Over Current PICKUP	CURVE	T.D.	SETTINGS IOC - Inst Over Current PICKUP	DELAY	TCC
13.2kV Switchgear 2 **(page 1 of 2)**						* 12 = IEEE Very Inverse Curve					
INCOMING MAIN BREAKERS (2)	50/51	1200/5 MR SET AT	GE - DIAC (3)	0.5-15.9	1-159, OFF	4.5 (540A)	12 *	1.5	0 (OFF)	0	SWG-2A-2D
UNITS 204A, 207A	50/51N	600/5 TAP	GE - DIAC (1)	0.5-15.9	1-159, OFF	2.3 (276A)	12 *	2.5	0 (OFF)	0	SWG-1D
	25	3-PT's 120/1	BE1-25M	See page	55 for	settings					Page 55
	27		NGV11A11A	See page	56 for	settings					Page 56

DESIGNATION	FUNC-TION	CT RATIO	RELAY TYPE	RANGE PICKUP	RANGE INST	SETTINGS PICKUP	CURVE	TIME	INST	O/C Shift	TCC
SUBS 6.1, 6.2	50/51	1200/5 MR	GE/Multilin	20-220% CT	4-20 x CT	80% (480A)	EI - LO	1	6 (3600A)	0.8 (SW2) +	SWG-2B
UNIT 201A	50/51N	SET AT 600/5 TAP	SR-735	15-100% CT	0.1-16 x CT	40% (240A)	EI - LO	2	8 (4800A)	0.8 (SW4) +	SWG-2B
SUBS 4.4, 4.5, 4.6	50/51	1200/5 MR	GE/Multilin	20-220% CT	4-20 x CT	30% (180A)	EI - LO	1	6 (3600A)	1.0 +	SWG-2A
UNIT 202B	50/51N	SET AT 600/5 TAP	SR-735	15-100% CT	0.1-16 x CT	25% (150A)	EI - LO	1	4 (2400A)	1.0 +	SWG-2A
SUBS 4.1, 4.2, 4.3	50/51	1200/5 MR	GE/Multilin	20-220% CT	4-20 x CT	80% (480A)	EI - LO	1	6 (3600A)	0.8 (SW2) +	SWG-2C
UNIT 204B	50/51N	SET AT 600/5 TAP	SR-735	15-100% CT	0.1-16 x CT	40% (240A)	EI - LO	2	8 (4800A)	0.8 (SW4) +	SWG-2C

+ The O/C Shift Multiplier settings (second last column) are made via option switches located on the side of the SR-735 relay. A setting of 1.0 does not require any switches to be turned on. Where a switch is required to be turned on to achieve the desired O/C Shift, it is noted in parenthesis.

RECOMMENDED PROTECTIVE RELAY SETTINGS

Pennsylvania Convention Center
Philadelphia, PA

DESIGNATION	FUNC-TION	CT RATIO	RELAY TYPE	RANGE		SETTINGS					TCC
				PICKUP	INST	PICKUP	CURVE	TIME	INST	O/C Shift	
13.2kV Switchgear 2 **(page 2 of 2)**											
SUBS 1.1, 1.2 UNIT 209B	50/51 50/51N	1200/5 MR SET AT 600/5 TAP	GE/Multilin SR-735	20-220% CT 15-100% CT	4-20 x CT 0.1-16 x CT	80% (480A) 40% (240A)	EI - LO EI - LO	1 2	6 (3600A) 8 (4800A)	0.8 (SW2) + 0.8 (SW2) +	SWG-2D SWG-2D
SUB 1.3 UNIT 210A	50/51 50/51N	1200/5 MR SET AT 600/5 TAP	GE/Multilin SR-735	20-220% CT 15-100% CT	4-20 x CT 0.1-16 x CT	80% (480A) 15% (90A)	EI - LO EI - LO	1 1	6 (3600A) 8 (4800A)	0.8 (SW2) + 1.0 +	SWG-2B SWG-1D
SUBS 6.3, 6.4 UNIT 210B	50/51 50/51N	1200/5 MR SET AT 600/5 TAP	GE/Multilin SR-735	20-220% CT 15-100% CT	4-20 x CT 0.1-16 x CT	80% (480A) 40% (240A)	EI - LO EI - LO	1 2	6 (3600A) 8 (4800A)	0.8 (SW2) + 0.8 (SW2) +	SWG-2B SWG-2B
4160V Switchgear CH-3 and CH-4											
CHILLER 3 UNIT 301B	50/51 50/51N	1200/5 MR SET AT 400/5 TAP	GE/Multilin SR-735	20-220% CT 15-100% CT	4-20 x CT 0.1-16 x CT	80% (320A) 15% (60A)	NI - LO EI - LO	7 1	4 (1600A) 4 (1600A)	1.0 + 1.0 +	SWG-1A SWG-1A
CHILLER 4 UNIT 401B	50/51 50/51N	1200/5 MR SET AT 400/5 TAP	GE/Multilin SR-735	20-220% CT 15-100% CT	4-20 x CT 0.1-16 x CT	80% (320A) 15% (60A)	NI - LO EI - LO	7 1	4 (1600A) 4 (1600A)	1.0 + 1.0 +	SWG-1A SWG-1A

\+ The O/C Shift Multiplier settings (second last column) are made via option switches located on the side of the SR-735 relay. A setting of 1.0 does not require any switches to be turned on. Where a switch is required to be turned on to achieve the desired O/C Shift, it is noted in parenthesis.

13.2kV Synch Check Relays

Device 25 : Synch-Check Relays

Purpose: Monitors voltage on each of the two 13.2kV utility incoming lines. This relay is being used as a permissive to allow all three circuit breakers (Main-Tie-Main) to close at the same time. The line/bus voltage monitor is used to allow a close without a synch check under the desired scenario(s).

Basler Cat# BE1-25

The specific relay Cat# is not shown in the GE shop drawings, but we assume the relay will be equipped with the following adjustments:

Adjustments: 1-99 degrees phase angle, 0.1-99 seconds
Line/Bus Voltage Monitor Functions: 10-135V

Transformer ratios: 3-PT's: 120/1 (110V nominal)

Settings:

Phase Angle:	**10**	(+/- 10 degrees yields a 20 degree window)
Time Delay:	**01**	(1 second)
Multiplier:	**1.0**	
Live Line:	**99V**	(90% of nominal)
DL/(Not OV):	**10V**	(minimum)
Live Bus:	**99V**	(90% of nominal)
DB/(Not OV):	**10V**	(minimum)

Mode Switches:

SW1: Up (Normal mode) - bus
SW2: Up (Normal mode) - line

Condition Switches:

SW1: Off (Up) - Disable Not-OV
SW2: Off (Up) - Live Line / Live Bus
SW3: On (Down) - Dead Line / Live Bus
SW4: On (Down) - Live Line / Dead Bus
SW5: On (Down) - Dead Line / Dead Bus

Since the customer does not have any control over the two utility lines, a relatively wide phase angle setting (+/-10 degrees) was chosen to help ensure the voltage window is wide enough for the relay to signal a sync. condition.

The voltage level settings define a live line or bus as anything above 99V and a dead line or bus as anything below 10V. Condition switches SW3, SW4, SW5 are turned on to allow a close when one side is live and one side is dead, or when both lines are dead as indicated in the GE shop drawing sequence of operations.

13.2kV Undervoltage Relays

Device 27 : Undervoltage Relays

Purpose: These relays monitor the voltage on the line side of the respective main circuit breaker and send a signal to the PLC when a loss of line voltage is detected.

GE cat# NGV11A11A (3-phase, 120V relay)
Adjustments: Dropout: 70-100V
Transformer ratio: 3-PT's: 120/1 (110V nominal secondary)

Setting: **Dropout = 70V** (64% of nominal)

A minimum setting was chosen to avoid nuisance operation for transient conditions.

COORDINATION COMMENTS

The time current curves were generated using the Power*Tools for Windows computer program (Version 6.5 with CAPTOR for Windows) which was developed by SKM Systems Analysis, Inc. This program comes equipped with a large user defined library of protective device curves. In some cases, the standard library devices have been modified by Coordinated Power Systems, Inc. to more accurately reflect the manufacturer's published time current curves which are included in the appendix of this report.

The time current curves have been organized as follows:

N1.1-1.4, 3.1-3.3, 4.1-4.6, 6.1-6.4 Normal service feeders
SWG-1A,B,C,D, SWG-2A,B,C,D 13.2kV & 4160V circuits
E1.4, 3.1, 3.3 Emergency feeders - fed by Generator 1 or Generator 2

When multiple TCCs were for the same feeder, an A, B, C, D, etc suffix was added. The applicable TCC for each feeder circuit breaker is shown on the one line diagram.

The following comments refer to the respective time current curves. The settings of the adjustable devices were chosen to maximize the protection and coordination achieved based on the equipment which is being installed at this facility. Recommended setting tables follow the time current curves.

General Comments:

The settings of all branch and feeder circuit breakers were chosen to provide protection for the ampacity of the conductor per NEC article 240.4, and to maximize coordination with downstream branch devices.

Coordination between the feeder circuit breaker and the downstream main circuit breaker was not strived for or achieved since if either device acts to open the circuit the downstream equipment will lose power. The downstream main circuit breaker is treated primarily as a local disconnect.

The settings of the main circuit breakers were chosen to maximize coordination with all feeder circuit breakers.

13.2kV PRIMARY FUSE SIZES:

We reviewed the 13.2KV fuses sizes shown in the GE shop drawings and find some of them exceed the maximum fuse size recommended in the attached GE table for these transformer ratings.

We would therefore recommend the following fuse sizes be used in lieu of

those shown in your drawings.

2500KVA	150E EJO-1	(shown as 175E and 200E in GE shop dwgs)
2000KVA	125E EJO-1	(shown as 175E in GE shop drawings)
1500KVA	100E EJO-1	(shown as 80E,100E,125E in GE shop dwgs)
500KVA	30E EJO-1	(shown as 30E in GE shop drawings)

For the 2500KVA transformers we recommend the 150E fuses, rather than 175E or 200E (see TCC# N1.1C, N3.1G, N3.2B, N3.3D, SWG-1A), to permit better coordination with the upstream relays, to provide better protection for the transformer and still allow for a 140% overload rating. For the 2000KVA transformer we recommend the 125E fuses sizes, rather than 175E (see TCC# N4.1). For the 1500KVA transformers we recommend the 100E fuses, rather than 125E (see TCC#N1.3A, N6.2A, N6.2B).

In addition to the individual transformer primary fuses, we would recommend the fire pump 13.2KV disconnect switches also have 100E EJO-1 fuses, instead of the 80E fuses shown (See TCC#N1.4). (The 100E size is recommended to be higher than the 88LRA of the fire pump @ 13.2KV.)

480V AND 208V GROUND FAULT PROTECTION:

MAIN BREAKER ONLY: For substations where only the main circuit breaker is equipped with ground fault protection., a maximum ground fault pickup setting (with I2t IN) was chosen for the main circuit breaker to give downstream circuit breakers a greater chance to clear a line to ground fault without tripping the main circuit breaker. A minimum (1) time delay is recommended for the main circuit breaker since this provides better protection for the system while still allowing sufficient time to coordinate with the instantaneous trips of the downstream circuit breakers.

MULTIPLE LEVELS OF GROUND FAULT PROTECTION: For substations where the main breaker and at least one feeder breaker (and/or downstream panel main breaker) are equipped with ground fault protection, the ground fault pickup settings of the feeder circuit breakers (and/or downstream panel main breaker) were set as high as possible (with I2t IN) while still maintaining coordination with the ground fault pickup setting of the main breaker, to give downstream breakers a greater chance to clear a line to ground fault without tripping the respective feeder breaker.

A minimum (1) time delay is recommended for all feeder circuit breakers since this provides better protection for the downstream circuit while still

allowing sufficient time to coordinate with the instantaneous trips of the downstream breakers.

The ground fault pickup and time delay settings of the main circuit breaker were chosen to maximize coordination with the ground fault pickup and time delay settings of all feeder circuit breakers.

Specific comments:

TCC#N1.1B, N3.1D, N3.1E

MORE THAN ONE ELEVATOR (or escalator) ON FEEDER:

Selective coordination on elevator, emergency and legally required systems per NEC 620.62: Full selective coordination could not be achieved with the system design and devices proposed for this system. The settings recommended in this report were chosen to maximize selective coordination between the supply side overcurrent protective devices and the downstream branch devices, based on the system design and equipment proposed for this facility. Whether these requirements of the NEC apply to this project and if the degree of coordination, shown on the time current curves for these systems, is acceptable should be reviewed by the engineer responsible for this facility.

TCC #N1.4 FIRE PUMP (normal source): The fire pump circuit breaker is adequately sized to carry indefinitely the locked rotor current of the fire pump per NEC article 695.4(B)(1).

TCC #N3.1C-G, N3.2A-B

The short time pickup setting on the feeder circuit breakers which feed multiple motors were chosen to carry a worst case block start of all connected motors shown on the one line diagram.

TCC #SWG-1A

4160V CHILLER FEEDER: The 4160V York chillers shop drawings indicate the chillers are equipped with auto-transformer starters with a 65% tap. The motor starting curve shown is based on the FLA, starter type, and inrush amps shown in the shop drawings.

The specific motor fuses used in the York starter were not shown in the shop

drawings. York typically uses Eaton/C-H starters with CLS, R-rated motor fuses. Therefore fuses based on the chiller FLA rating (12R = 230A) are shown on the TCC. These fuses provide good coordination with the upstream recommended 150E primary fuses.

The York shop drawings also indicate the chiller starter is equipped with an MP3000 motor protection relay with ground fault protection. Settings of this equipment is outside the scope of this report, as they are typically provided by the chiller supplier.

The phase settings of the feeder circuit breaker were chosen to be less than to the 350A Maximum Over Current Protection (MOCP) value shown in the chiller shop drawings, and to carry the expected chiller starting currents.

The ground (neutral) settings of the feeder circuit breaker were chosen to provide sensitive protection for the chiller circuit. However this function will only operate if the 4160V system is grounded (see below).

The contract drawing EP305 and 307 call for the Chiller 3 and 4 transformers to have a delta (ungrounded) secondary, but the one line shows a grounded secondary. The chiller equipment includes ground fault protection but there does not appear to be any provisions for ground detection lights for a 4160V ungrounded system. The GE shop drawings for these transformers show these as delta-delta transformers. In light of the above, it is not clear if the transformers are intended to be delta-wye or delta-delta. This should be reviewed.

TCC #SWG-1A-C and SWG-2A-D

The phase settings of the 13.2kV feeder relays were chosen carry the capacity of the connected transformers and to maximize coordination with the 13.2kV fuses while maintaining coordination with the 13.2kV main relays.

Complete coordination between the 13.2kV feeder relays and 13.2kV fuses cannot be achieved without sacrificing coordination upstream. However good coordination is achieved with all overcurrent devices in the respective secondary systems.

The phase pickup setting (540A) shown for the 13.2kV main relays is the highest setting we believe will be allowed by PECO Energy for a 13.2kV service. PECO's normal limit is 360A, but for larger customer's they have allowed up to a 540A pickup setting. This limit is to maintain coordination with PECO's typical upstream substation feeder relay pickup setting of 600A. The phase time delay settings of the 13.2kV main relays were chosen

to maintain a minimum level of coordination between the customer's 13.2kV main and feeder relays. These settings should be forwarded to PECO Energy for their review and approval.

TCC #SWG-1D

The ground (neutral) settings of the 13.2kV feeder relays which feed individual transformers (Unit#109B to Sub 3.2 and Unit#210A to Sub 1.3) were chosen to provide sensitive protection for line to ground faults in the transformer primary circuit while avoiding nuisance tripping for transient conditions.

The ground (neutral) settings of the 13.2kV main relays were chosen to pickup at about 50% of the respective phase setting with approximately the same time delay (as the phase settings) at the higher fault currents. These settings should be forwarded to PECO Energy for their review and approval.

TCC #SWG-2A

The ground (neutral) settings of the 13.2kV feeder relay (Unit#202B) to SUBS 4.4, 4.5, 4.6 were chosen to be slightly less than the phase settings while still maintaining coordination with the 30E fuses.

TCC #SWG-1D and SWG-2B-D

The ground (neutral) settings of all other 13.2kV feeder relays were chosen to pickup at about 50% of the respective phase setting with approximately the same time delay (as the phase settings) at the higher fault currents.

TCC #E1.4 FIRE PUMP (emergency source): Contract drawing EP315 shows a 2500A circuit breaker labeled as fire pump switch. We could not find any shop drawings for this switch or circuit breaker, so none is shown on here. The 2500A generator main circuit breaker is adequately sized to carry indefinitely the locked rotor current of the fire pump per NEC article 695.4(B)(1).

TCC #E1.4, E3.1, E3.3

GENERATOR: The generator decrement curve with field forcing applied is shown as device GEN 1 (or GEN 2). This forces the generator fault current output to 300% of the generator full load ampere rating for 10 seconds.

The Cummins generator is equipped with a PCC 3201 controller, which has an over-current trip function (Amp Sentry) that is designed to shut down the

generator before the generator thermal limit is exceeded. The time overcurrent curve for this device is shown here to demonstrate the potential level of coordination between the generator overcurrent protection and downstream circuit breakers.

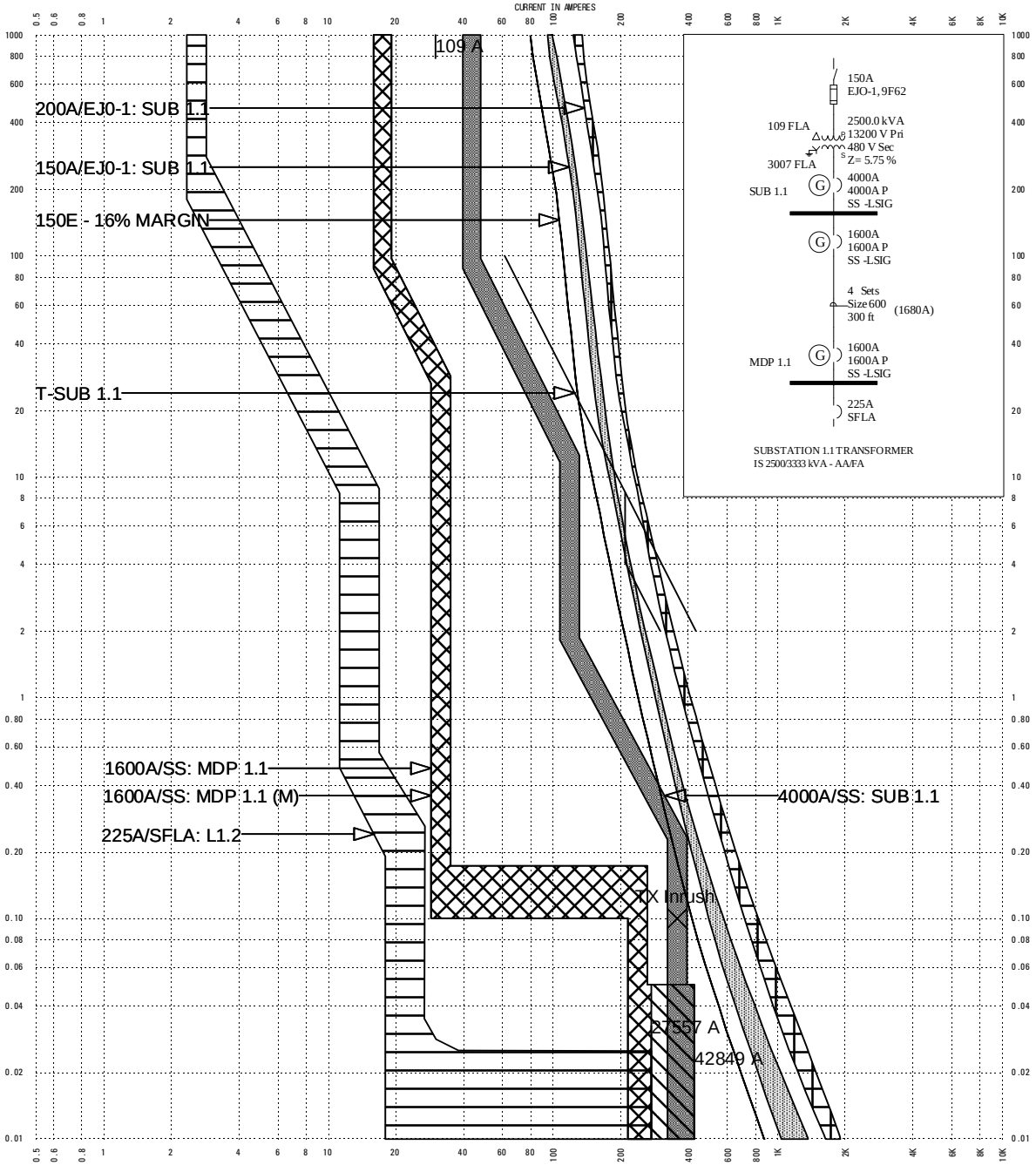
The settings of the generator main circuit breaker were chosen to provide protection for the ampacity of the conductor per NEC article 240.4, and to maximize coordination with downstream branch devices.

Contract drawings EP314 and EP315 call for ground fault indication per NEC 700.7(D) on the 1000A and 1200A circuit breakers in EGD-1 and EGD-2. The GE shop drawings for this equipment indicate LSIG (ie. ground fault trip) on these circuit breakers. If it is desired to have ground fault indication only, GE should be instructed to make this change to their proposed equipment.

Selective coordination on elevator, emergency and legally required systems per NEC 620.62, 700.27 and 701.18: Full selective coordination could not be achieved with the system design and devices proposed for this system. The settings recommended in this report were chosen to maximize selective coordination between the supply side overcurrent protective devices and the downstream branch devices, based on the system design and equipment proposed for this facility. Whether these requirements of the NEC apply to this project and if the degree of coordination, shown on the time current curves for these systems, is acceptable should be reviewed by the engineer responsible for this facility.

TCC #E-LB1, E-LB2

The settings of the load bank circuit breakers were chosen to provide protection for the ampacity of the load bank conductors per NEC article 240.4, and to coordinate with the largest branch fuses (150A) in the load bank equipment.



DWG#: tccN1.1C
February 27, 2009

VOLTAGE: 480
PA Convention CenterPhiladelphia, PA

CURRENT SCALE: x 100
CPSI#8159

Device Name: 200A/EJ0-1: SUB 1.1 — TCC Name: tccN1.1C.tcc
Bus Name: — Bus Voltage: 13200.0V
Function Name: Phase
Manufacturer: GE
Description: 20E-300E
Type: 9F62 EJ0-1, 15.5kV E-Rated +
AIC Rating: 50kA — Fault Duty: 6947.0A
Cartridge: EJO-1, 9F62 15500V 200A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Size: 200A

Device Name: 150A/EJ0-1: SUB 1.1 — TCC Name: tccN1.1C.tcc
Bus Name: T-SUB 1.1 PRI — Bus Voltage: 13200.0V
Function Name: Phase
Manufacturer: GE
Description: 20E-300E
Type: 9F62 EJ0-1, 15.5kV E-Rated +
AIC Rating: 50kA — Fault Duty: 6966.0A
Cartridge: EJO-1, 9F62 15500V 150A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Size: 150A

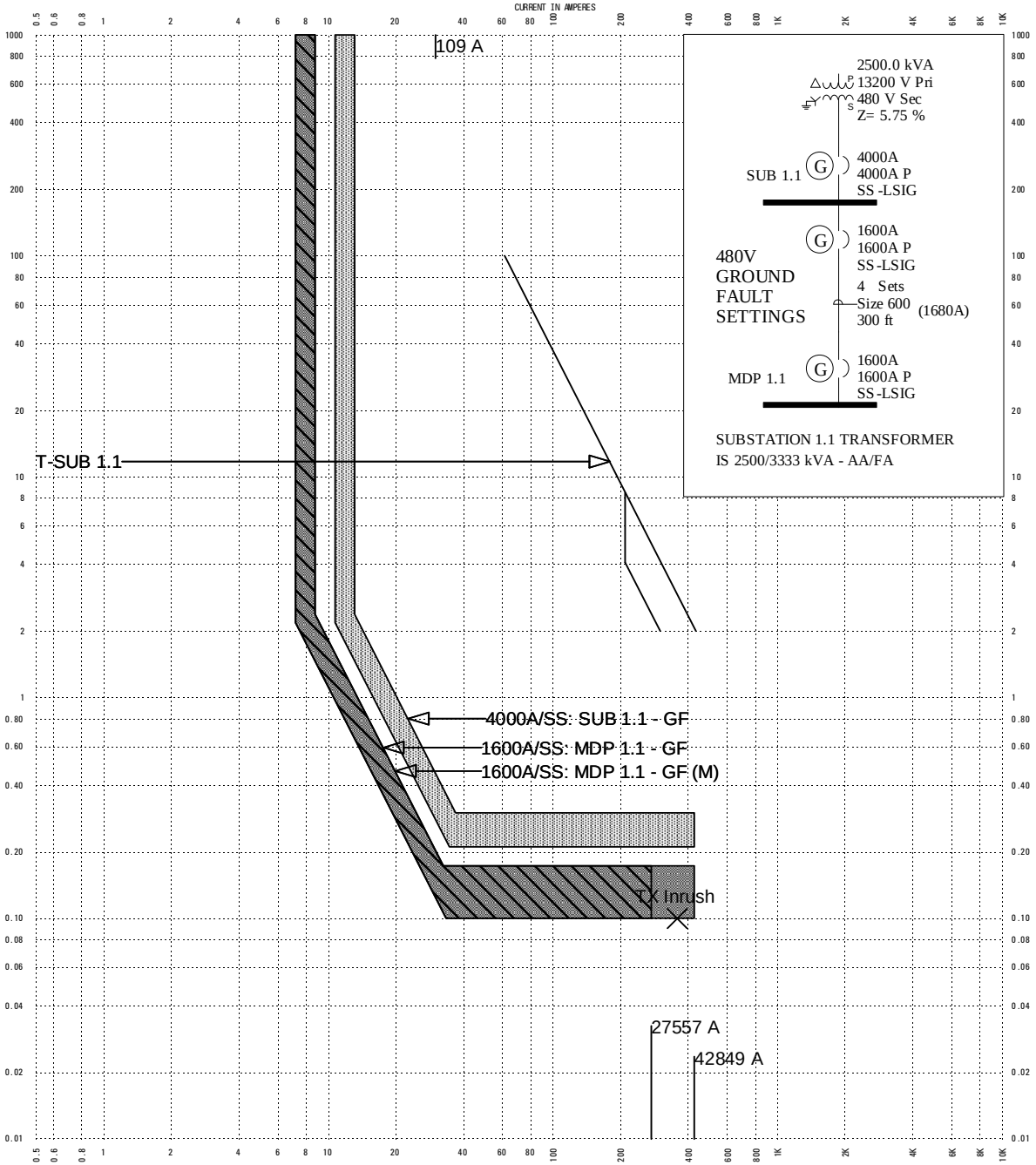
Device Name: 4000A/SS: SUB 1.1 — TCC Name: tccN1.1C.tcc
Bus Name: SUB 1.1 — Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: GE
Description: LSI, 4000AS
Type: SS, SH PowerBreak II, MVT Plus/PM
AIC Rating: 100kA ShortTime:42 — Fault Duty: 42848.6A
Frame: SS 480V 4000A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Sensor: 4000A
Plug: 4000A
Setting: 1) LTPU (0.5-1.0 x P) 1 (4000A)
2) LTD (1-4) 1
3) STPU (1.5-9 x LTPU) 3 (12000A)
4) STD (Min-Max) Min I^2 t In
5) INST (1.5-9 x P) 9 (36000A)

Device Name: 1600A/SS: MDP 1.1 — TCC Name: tccN1.1C.tcc
Bus Name: SUB 1.1 — Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: GE
Description: LSI, 200-2000AS
Type: SS, SH PowerBreak II, MVT Plus/PM
AIC Rating: 65kA ShortTime:40 — Fault Duty: 42848.6A
Frame: SS 480V 1600A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Sensor: 1600A
Plug: 1600A
Setting: 1) LTPU (0.5-1.0 x P) 1 (1600A)
2) LTD (1-4) 1
3) STPU (1.5-9 x LTPU) 2 (3200A)
4) STD (Min-Max) Min I^2 t Out
5) INST (1.5-15 x P) 15 (24000A)

Device Name: 1600A/SS: MDP 1.1 (M) — TCC Name: tccN1.1C.tcc
Bus Name: MDP 1.1 — Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: GE
Description: LSI, 200-2000AS
Type: SS, SH PowerBreak II, MVT Plus/PM
AIC Rating: 65kA ShortTime:40 — Fault Duty: 27556.8A
Frame: SS 480V 1600A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Sensor: 1600A
Plug: 1600A
Setting: 1) LTPU (0.5-1.0 x P) 1 (1600A)
2) LTD (1-4) 1
3) STPU (1.5-9 x LTPU) 2 (3200A)
4) STD (Min-Max) Min I^2 t Out
5) INST (1.5-15 x P) 15 (24000A)

Device Name: 225A/SFLA: L1.2 — TCC Name: tccN1.1C.tcc
Bus Name: MDP 1.1 — Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: GE
Description: 70-250A
Type: SFLA, Spectra RMS
AIC Rating: 65kA — Fault Duty: 27556.8A
Frame: SFLA 480V 250A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Trip: 225A
Setting: 1) MAX

Device Name: T-SUB 1.1 — TCC Name: tccN1.1C.tcc
Bus Name: T-SUB 1.1 PRI — Bus Voltage: 13200V / 480V
Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Description: 2-Winding Transformer Damage Curve — Rated Volts: 13200 LL/480 LL
Nominal Size: 2500.0kVA



Device Name: 4000A/SS: SUB 1.1 - GF
Bus Name: SUB 1.1
Function Name: Ground
Manufacturer: GE
Description: GF, 4000AS
Type: SS, SH PowerBreak II, MVT Plus/PM
AIC Rating: 100kA ShortTime:42
Frame: SS 480V 4000A
Time Multiplier: 1
Sensor: 4000A
Plug: 4000A
Setting: 1) GFPU (0.2-0.3 x S) 0.3 (1200A)
2) GFD (Min-Max) Int I^2 t In

TCC Name: tccN1.1D.tcc
Bus Voltage: 480.0V
Fault Duty: 42848.6A
Curve Multiplier: 1
Time Adder: 0

Device Name: 1600A/SS: MDP 1.1 - GF
Bus Name: SUB 1.1
Function Name: Ground
Manufacturer: GE
Description: GF, 200-2000AS
Type: SS, SH PowerBreak II, MVT Plus/PM
AIC Rating: 65kA ShortTime:40
Frame: SS 480V 1600A
Time Multiplier: 1
Sensor: 1600A
Plug: 1600A
Setting: 1) GFPU (0.2-0.6 x S) 0.5 (800A)
2) GFD (Min-Max) Min I^2 t In

TCC Name: tccN1.1D.tcc
Bus Voltage: 480.0V
Fault Duty: 42848.6A
Curve Multiplier: 1
Time Adder: 0

Device Name: 1600A/SS: MDP 1.1 - GF (M)
Bus Name: MDP 1.1
Function Name: Ground
Manufacturer: GE
Description: GF, 200-2000AS
Type: SS, SH PowerBreak II, MVT Plus/PM
AIC Rating: 65kA ShortTime:40
Frame: SS 480V 1600A
Time Multiplier: 1
Sensor: 1600A
Plug: 1600A
Setting: 1) GFPU (0.2-0.6 x S) 0.5 (800A)
2) GFD (Min-Max) Min I^2 t In

TCC Name: tccN1.1D.tcc
Bus Voltage: 480.0V
Fault Duty: 27556.8A
Curve Multiplier: 1
Time Adder: 0

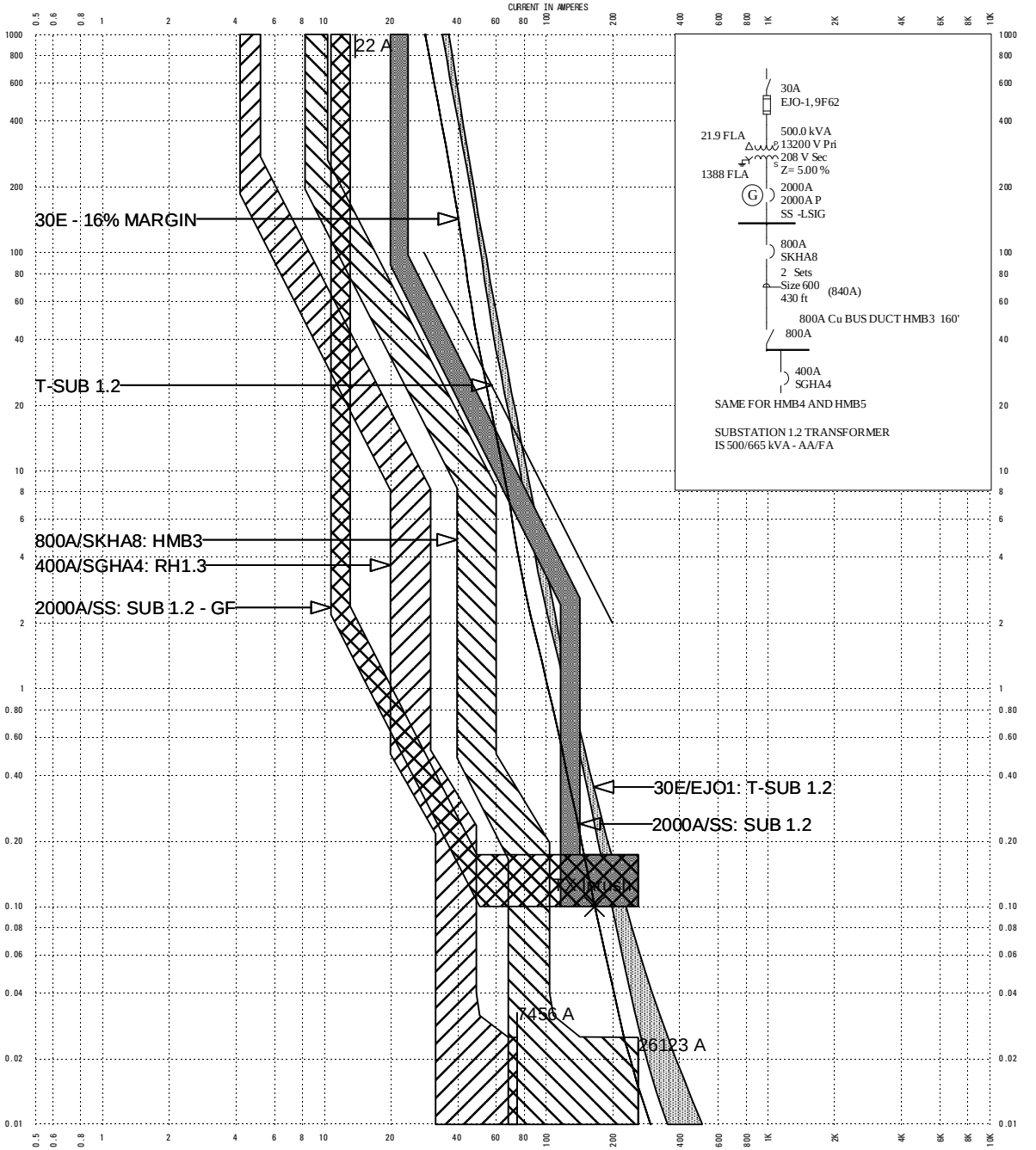
Device Name: T-SUB 1.1
Bus Name: T-SUB 1.1 PRI
Time Multiplier: 1
Description: 2-Winding Transformer Damage Curve
Nominal Size: 2500.0kVA
Impedance (%Z): 5.7500
Inrush Factor: 12.0x

TCC Name: tccN1.1D.tcc
Bus Voltage: 13200V / 480V
Curve Multiplier: 1
Time Adder: 0
Rated Volts: 13200 LL/480 LL
Pri Connection: Delta
Sec Connection: Wye-Ground

DWG#: tccN1.1D
February 27, 2009

VOLTAGE: 480
PA Convention CenterPhiladelphia, PA

CURRENT SCALE: x 100
CPSI#8159



Device Name: 30E/EJO1: T-SUB 1.2 — TCC Name: tccN1.2.tcc
Bus Name: T-SUB 1.2 PRI — Bus Voltage: 13200.0V
Function Name: Phase
Manufacturer: GE
Description: 20E-300E
Type: 9F62 EJ0-1, 15.5kV E-Rated +
AIC Rating: 50kA — Fault Duty: 6949.3A
Cartridge: EJO-1, 9F62 15500V 30A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Size: 30A

Device Name: 2000A/SS: SUB 1.2 — TCC Name: tccN1.2.tcc
Bus Name: SUB 1.2 — Bus Voltage: 208.0V
Function Name: Phase
Manufacturer: GE
Description: LSI, 200-2000AS
Type: SS, SH PowerBreak II, MVT Plus/PM
AIC Rating: 85kA ShortTime:40 — Fault Duty: 26122.6A
Frame: SS 240V 2000A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Sensor: 2000A
Plug: 2000A
Setting: 1) LTPU (0.5-1.0 x P) 1 (2000A)
2) LTD (1-4) 1
3) STPU (1.5-9 x LTPU) 6.5 (13000A)
4) STD (Min-Max) Min I^2 t Out
5) INST (1.5-15 x P) 15 (30000A)

Device Name: 800A/SKHA8: HMB3 — TCC Name: tccN1.2.tcc
Bus Name: SUB 1.2 — Bus Voltage: 208.0V
Function Name: Phase
Manufacturer: GE
Description: 300-1200A
Type: SKHA, Spectra RMS +
AIC Rating: 65kA — Fault Duty: 26122.6A
Frame: SKHA8 240V 800A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Trip: 800A
Setting: 1) MAX

Device Name: 400A/SGHA4: RH1.3 — TCC Name: tccN1.2.tcc
Bus Name: HMB3 BUSWY01 — Bus Voltage: 208.0V
Function Name: Phase
Manufacturer: GE
Description: 125-600A
Type: SGHA, Spectra RMS +
AIC Rating: 65kA — Fault Duty: 7455.7A
Frame: SGHA4 240V 400A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Trip: 400A
Setting: 1) MAX

Device Name: T-SUB 1.2 — TCC Name: tccN1.2.tcc
Bus Name: T-SUB 1.2 PRI — Bus Voltage: 13200V / 208V
Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Description: 2-Winding Transformer Damage Curve — Rated Volts: 13200 LL/208 LL
Nominal Size: 500.0kVA
Impedance (%Z): 5.0000 — Pri Connection: Delta
Inrush Factor: 12.0x — Sec Connection: Wye-Ground

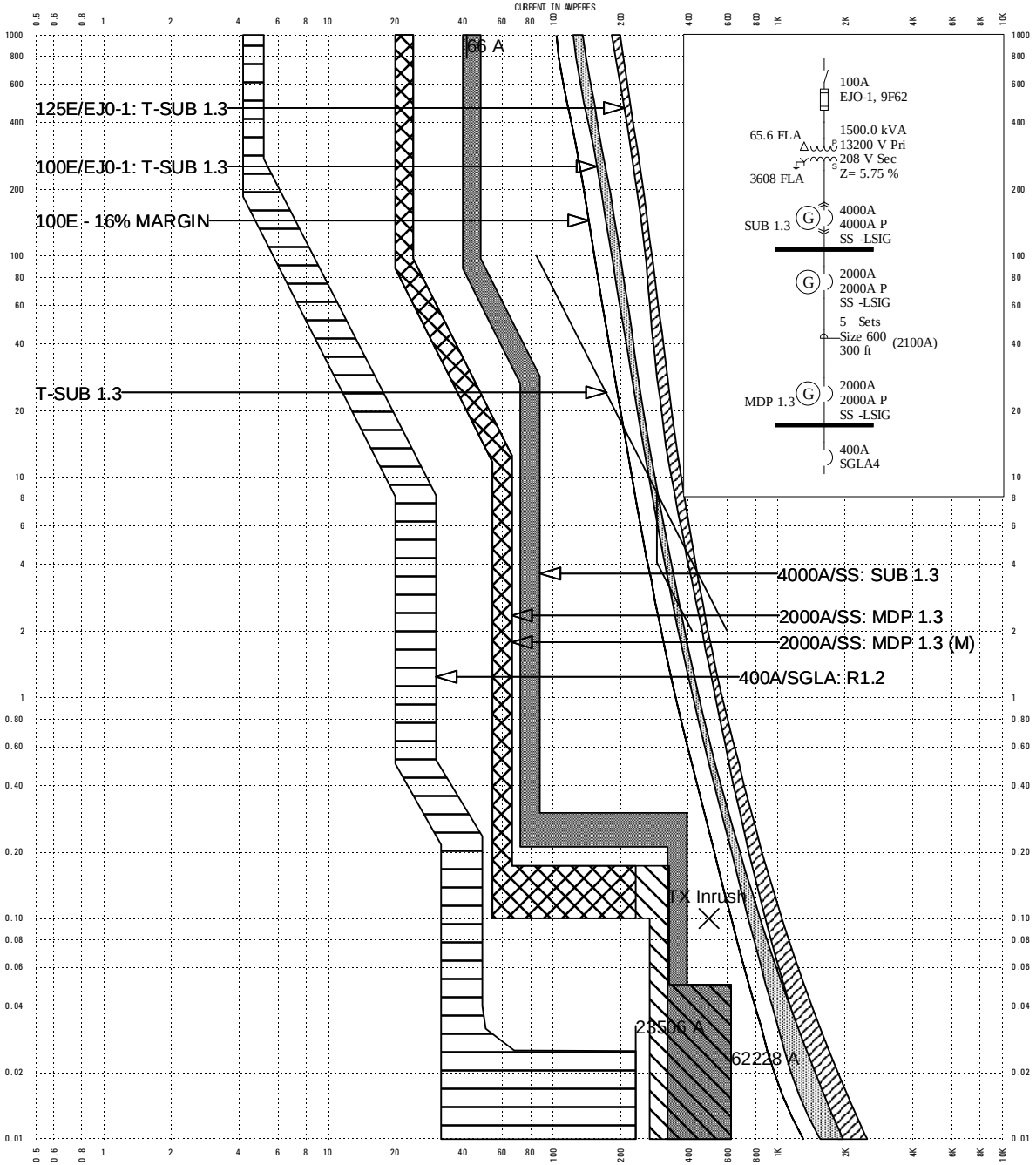
Device Name: 2000A/SS: SUB 1.2 - GF — TCC Name: tccN1.2.tcc
Bus Name: SUB 1.2 — Bus Voltage: 208.0V
Function Name: Phase
Manufacturer: GE
Description: GF, 200-2000AS
Type: SS, SH PowerBreak II, MVT Plus/PM
AIC Rating: 85kA ShortTime:40 — Fault Duty: 26122.6A
Frame: SS 240V 2000A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Sensor: 2000A
Plug: 2000A
Setting: 1) GFPU (0.2-0.6 x S) 0.6 (1200A)
2) GFD (Min-Max) Min I^2 t In

Device Name: 30E - 16% MARGIN — TCC Name: tccN1.2.tcc
Bus Name: — Bus Voltage: 13200.0V
Function Name: Phase
Manufacturer: GE
Description: 20E-300E
Type: 9F62 EJ0-1, 15.5kV 16% MARGIN +
AIC Rating: 50kA — Fault Duty: 6949.0A
Cartridge: EJO-1, 30E 15500V 30A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Size: 30A

DWG#: tccN1.2
February 27, 2009

VOLTAGE: 208
PA Convention CenterPhiladelphia, PA

CURRENT SCALE: x 100
CPSI#8159



DWG#: tccN1.3A
February 27, 2009

VOLTAGE: 208
PA Convention CenterPhiladelphia, PA

CURRENT SCALE: x 100
CPSI#8159

Device Name:	125E/EJ0-1: T-SUB 1.3	TCC Name:	tccN1.3A.tcc
Bus Name:		Bus Voltage:	13200.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	20E-300E		
Type:	9F62 EJ0-1, 15.5kV E-Rated +		
AIC Rating:	50kA	Fault Duty:	200000.0A
Cartridge:	EJO-1, 9F62 15500V 125A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Size:	125A		

Device Name:	100E/EJ0-1: T-SUB 1.3	TCC Name:	tccN1.3A.tcc
Bus Name:	T-SUB 1.3 PRI	Bus Voltage:	13200.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	20E-300E		
Type:	9F62 EJ0-1, 15.5kV E-Rated +		
AIC Rating:	50kA	Fault Duty:	6963.6A
Cartridge:	EJO-1, 9F62 15500V 100A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Size:	100A		

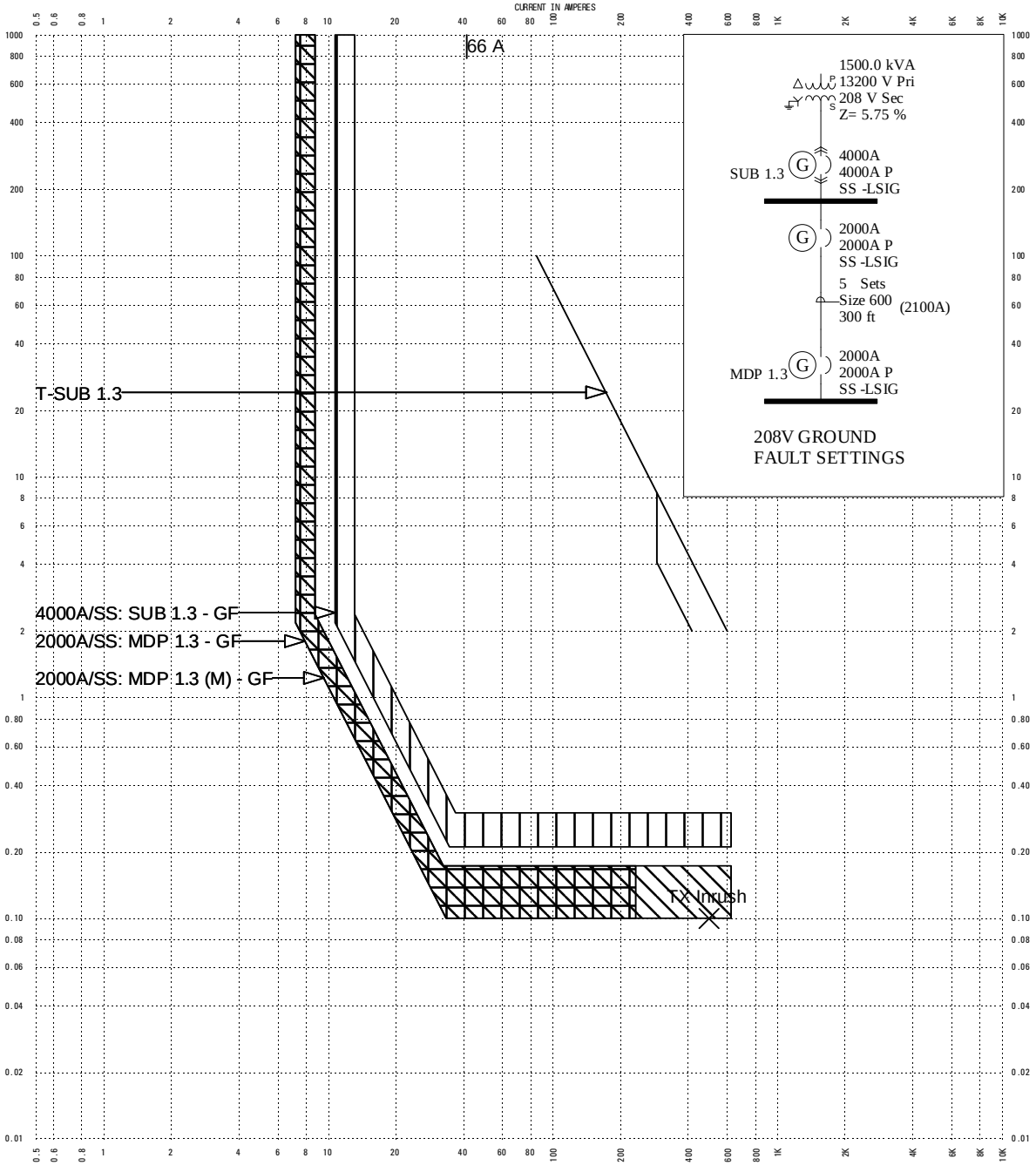
Device Name:	4000A/SS: SUB 1.3	TCC Name:	tccN1.3A.tcc
Bus Name:	SUB 1.3	Bus Voltage:	208.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	LSI, 4000AS		
Type:	SS, SH PowerBreak II, MVT Plus/PM		
AIC Rating:	100kA ShortTime:42	Fault Duty:	62227.9A
Frame:	SS 240V 4000A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Sensor:	4000A		
Plug:	4000A		
Setting: 1) LTPU (0.5-1.0 x P)	1	(4000A)	
2) LTD (1-4)	1		
3) STPU (1.5-9 x LTPU)	2	(8000A)	
4) STD (Min-Max)	Int	I^2 t Out	
5) INST (1.5-9 x P)	9	(36000A)	

Device Name:	2000A/SS: MDP 1.3	TCC Name:	tccN1.3A.tcc
Bus Name:	SUB 1.3	Bus Voltage:	208.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	LSI, 200-2000AS		
Type:	SS, SH PowerBreak II, MVT Plus/PM		
AIC Rating:	85kA ShortTime:40	Fault Duty:	62227.9A
Frame:	SS 240V 2000A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Sensor:	2000A		
Plug:	2000A		
Setting: 1) LTPU (0.5-1.0 x P)	1	(2000A)	
2) LTD (1-4)	1		
3) STPU (1.5-9 x LTPU)	3	(6000A)	
4) STD (Min-Max)	Min	I^2 t Out	
5) INST (1.5-15 x P)	15	(30000A)	

Device Name:	2000A/SS: MDP 1.3 (M)	TCC Name:	tccN1.3A.tcc
Bus Name:	MDP 1.3	Bus Voltage:	208.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	LSI, 200-2000AS		
Type:	SS, SH PowerBreak II, MVT Plus/PM		
AIC Rating:	85kA ShortTime:40	Fault Duty:	23506.3A
Frame:	SS 240V 2000A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Sensor:	2000A		
Plug:	2000A		
Setting: 1) LTPU (0.5-1.0 x P)	1	(2000A)	
2) LTD (1-4)	1		
3) STPU (1.5-9 x LTPU)	3	(6000A)	
4) STD (Min-Max)	Min	I^2 t Out	
5) INST (1.5-15 x P)	15	(30000A)	

Device Name:	400A/SGLA: R1.2	TCC Name:	tccN1.3A.tcc
Bus Name:	MDP 1.3	Bus Voltage:	208.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	125-600A		
Type:	SGLA, Spectra RMS +		
AIC Rating:	100kA	Fault Duty:	23506.3A
Frame:	SGLA4 240V 400A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Trip:	400A		
Setting: 1) MAX			

Device Name:	T-SUB 1.3	TCC Name:	tccN1.3A.tcc
Bus Name:	T-SUB 1.3 PRI	Bus Voltage:	13200V / 208V
		Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Description:	2-Winding Transformer Damage Curve	Rated Volts:	13200 LL/208 LL
Nominal Size:	1500.0kVA		



Device Name:	T-SUB 1.3	TCC Name:	tccN1.3B.tcc
Bus Name:	T-SUB 1.3 PRI	Bus Voltage:	13200V / 208V
		Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Description:	2-Winding Transformer Damage Curve	Rated Volts:	13200 LL/208 LL
Nominal Size:	1500.0kVA		
Impedance (%Z):	5.7500	Pri Connection:	Delta
Inrush Factor:	12.0x	Sec Connection:	Wye-Ground

Device Name:	4000A/SS: SUB 1.3 - GF	TCC Name:	tccN1.3B.tcc
Bus Name:	SUB 1.3	Bus Voltage:	208.0V
Function Name:	Ground		
Manufacturer:	GE		
Description:	GF, 4000AS		
Type:	SS, SH PowerBreak II, MVT Plus/PM		
AIC Rating:	100kA ShortTime:42	Fault Duty:	62227.9A
Frame:	SS 240V 4000A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Sensor:	4000A		
Plug:	4000A		
Setting: 1) GFPU (0.2-0.3 x S)	0.3 (1200A)		
2) GFD (Min-Max)	Int I^2 t In		

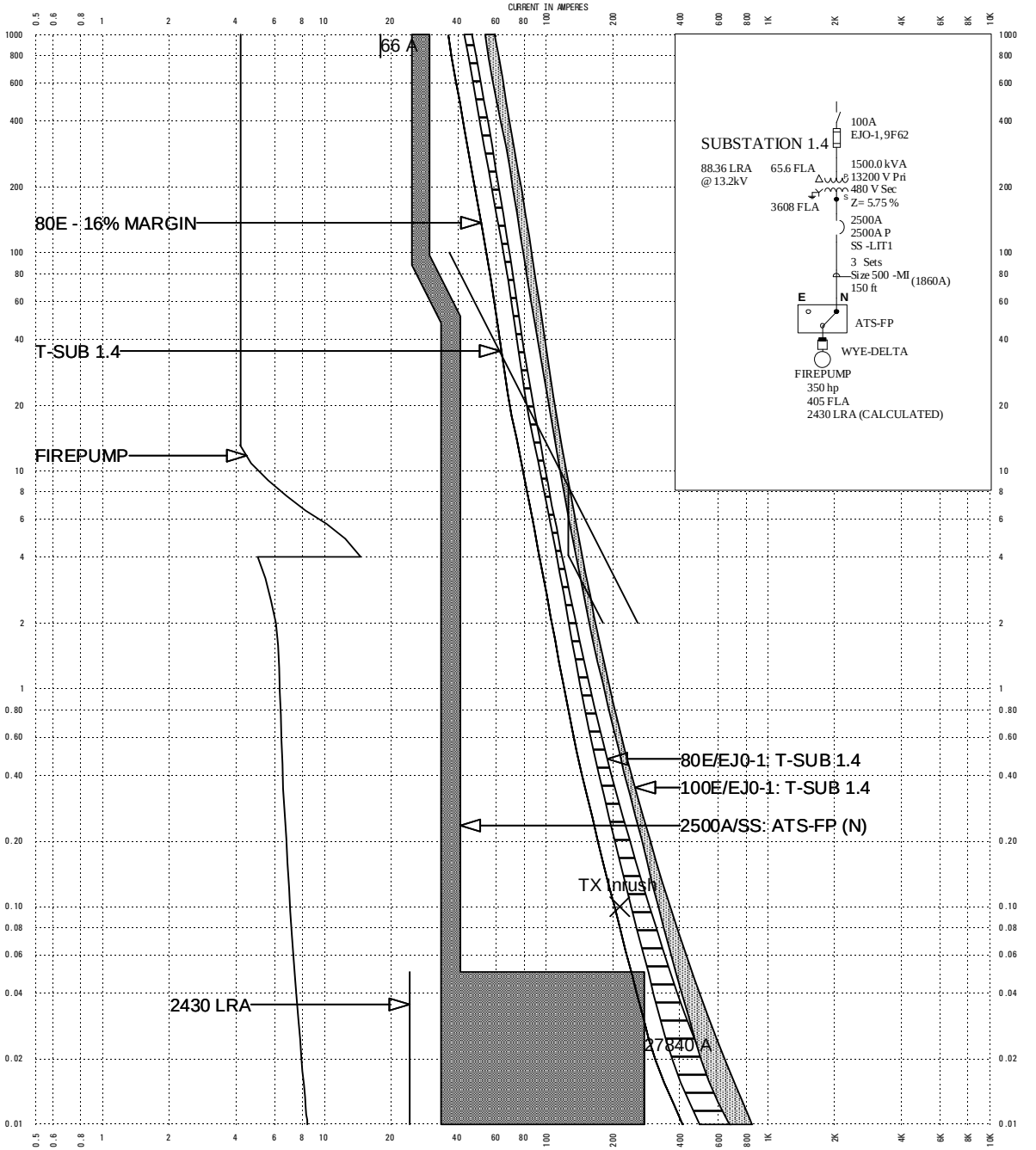
Device Name:	2000A/SS: MDP 1.3 - GF	TCC Name:	tccN1.3B.tcc
Bus Name:	SUB 1.3	Bus Voltage:	208.0V
Function Name:	Ground		
Manufacturer:	GE		
Description:	GF, 200-2000AS		
Type:	SS, SH PowerBreak II, MVT Plus/PM		
AIC Rating:	85kA ShortTime:40	Fault Duty:	62227.9A
Frame:	SS 240V 2000A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Sensor:	2000A		
Plug:	2000A		
Setting: 1) GFPU (0.2-0.6 x S)	0.4 (800A)		
2) GFD (Min-Max)	Min I^2 t In		

Device Name:	2000A/SS: MDP 1.3 (M) - GF	TCC Name:	tccN1.3B.tcc
Bus Name:	MDP 1.3	Bus Voltage:	208.0V
Function Name:	Ground		
Manufacturer:	GE		
Description:	GF, 200-2000AS		
Type:	SS, SH PowerBreak II, MVT Plus/PM		
AIC Rating:	85kA ShortTime:40	Fault Duty:	23506.3A
Frame:	SS 240V 2000A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Sensor:	2000A		
Plug:	2000A		
Setting: 1) GFPU (0.2-0.6 x S)	0.4 (800A)		
2) GFD (Min-Max)	Min I^2 t In		

DWG#: tccN1.3B
February 27, 2009

VOLTAGE: 208
PA Convention CenterPhiladelphia, PA

CURRENT SCALE: x 100
CPSI#8159



Device Name: 80E/EJ0-1: T-SUB 1.4 — TCC Name: tccN1.4.tcc
Bus Name: — Bus Voltage: 13200.0V
Function Name: Phase
Manufacturer: GE
Description: 20E-300E
Type: 9F62 EJ0-1, 15.5kV E-Rated +
AIC Rating: 50kA — Fault Duty: 7085.0A
Cartridge: EJO-1, 9F62 15500V 80A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Size: 80A

Device Name: 100E/EJ0-1: T-SUB 1.4 — TCC Name: tccN1.4.tcc
Bus Name: T-SUB 1.4 PRI — Bus Voltage: 13200.0V
Function Name: Phase
Manufacturer: GE
Description: 20E-300E
Type: 9F62 EJ0-1, 15.5kV E-Rated +
AIC Rating: 50kA — Fault Duty: 7058.8A
Cartridge: EJO-1, 9F62 15500V 100A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Size: 100A

Device Name: 2500A/SS: ATS-FP (N) — TCC Name: tccN1.4.tcc
Bus Name: SUB 1.4 — Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: GE
Description: LI, 200-3000A Sensors
Type: SS, SH PowerBreak II, Power+
AIC Rating: 100kA ShortTime:42 — Fault Duty: 27839.8A
Frame: SS 480V 2500A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Sensor: 2500A
Plug: 2500A
Setting: 1) LTPU (0.5-1.0 x P) 1 (2500A)
2) LTD (1-4) 1
3) INST (1.5-10 x P) 1.5 (3750A)

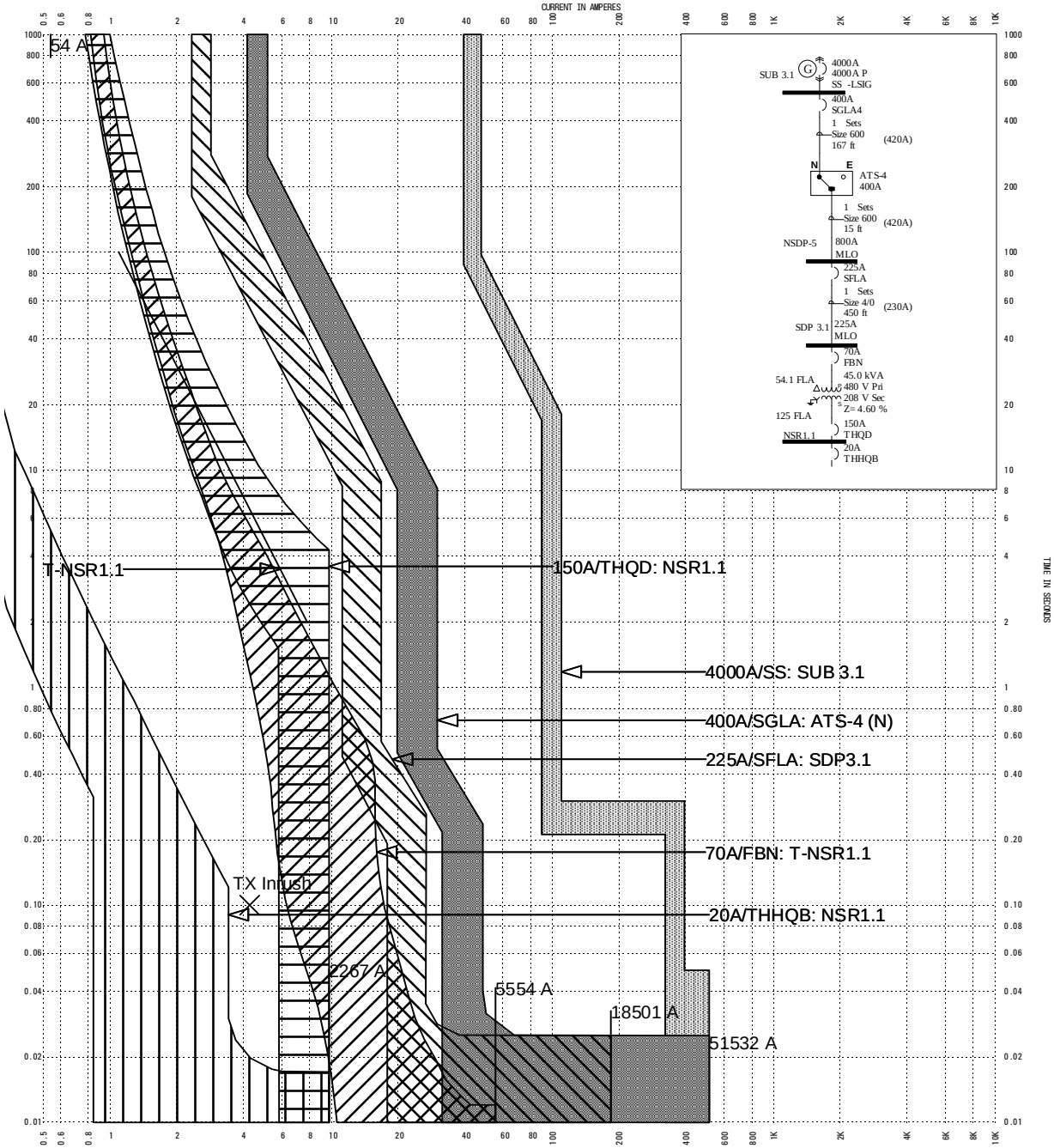
Device Name: T-SUB 1.4 — TCC Name: tccN1.4.tcc
Bus Name: T-SUB 1.4 PRI — Bus Voltage: 13200V / 480V
Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Description: 2-Winding Transformer Damage Curve — Rated Volts: 13200 LL/480 LL
Nominal Size: 1500.0kVA
Impedance (%Z): 5.7500 — Pri Connection: Delta
Inrush Factor: 12.0x — Sec Connection: Wye-Ground

Device Name: FIREPUMP — TCC Name: tccN1.4.tcc
Bus Name: FP CONTROLLER — Bus Voltage: 480V
Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Description: Motor Starting Curve — Inrush: 2.0 (844.2A)
Rated Size: 350HP (1 of 1 Plotted) — FLA+Load Adder: 422.1A + 0.0A
Power Factor: 0.800 — Starting Time: 10.00s
Efficiency: 0.93 — Star Delta

Device Name: 2430 LRA — TCC Name: tccN1.4.tcc
Bus Name: — Bus Voltage: 480V
Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Description: Motor Starting Curve — Inrush: 1.0 (2430.0A)
Rated Size: 0HP (1 of 1 Plotted) — FLA+Load Adder: 2430.0A + 0.0A
Power Factor: 0.800 — Starting Time: 0.05s
Efficiency: 0.93 — Full Voltage

Device Name: 80E - 16% MARGIN — TCC Name: tccN1.4.tcc
Bus Name: — Bus Voltage: 13200.0V
Function Name: Phase
Manufacturer: GE
Description: 20E-300E
Type: 9F62 EJ0-1, 15.5kV 16% MARGIN +
AIC Rating: 50kA — Fault Duty: 7085.0A
Cartridge: EJO-1, 80E 15500V 80A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Size: 80A

DWG#: tccN1.4 — VOLTAGE: 480 — CURRENT SCALE: x 100
February 27, 2009 — PA Convention CenterPhiladelphia, PA — CPSI#8159



Device Name: 4000A/SS: SUB 3.1 — TCC Name: tccN3.1A.tcc
Bus Name: SUB 3.1 — Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: GE
Description: LSI, 4000AS
Type: SS, SH PowerBreak II, MVT Plus/PM
AIC Rating: 100kA ShortTime:42 — Fault Duty: 51532.2A
Frame: SS 480V 4000A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Sensor: 4000A
Plug: 4000A
Setting: 1) LTPU (0.5-1.0 x P) 1 (4000A)
2) LTD (1-4) 1
3) STPU (1.5-9 x LTPU) 2.5 (10000A)
4) STD (Min-Max) Int I^2 t Out
5) INST (1.5-9 x P) 9 (36000A)

Device Name: 400A/SGLA: ATS-4 (N) — TCC Name: tccN3.1A.tcc
Bus Name: SUB 3.1 — Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: GE
Description: 125-600A
Type: SGLA, Spectra RMS +
AIC Rating: 65kA — Fault Duty: 51532.2A
Frame: SGLA4 480V 400A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Trip: 400A
Setting: 1) MAX

Device Name: 225A/SFLA: SDP3.1 — TCC Name: tccN3.1A.tcc
Bus Name: NSDP-5 — Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: GE
Description: 70-250A
Type: SFLA, Spectra RMS
AIC Rating: 65kA — Fault Duty: 18501.4A
Frame: SFLA 480V 250A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Trip: 225A
Setting: 1) MAX

Device Name: 70A/FBN: T-NSR1.1 — TCC Name: tccN3.1A.tcc
Bus Name: SDP 3.1 — Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: GE
Description: 15-100A
Type: FB, 2 & 3-Pole 480V
AIC Rating: 65kA — Fault Duty: 5553.5A
Frame: FBN 480V 70A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Trip: 70A
Setting: 1) Fixed

Device Name: T-NSR1.1 — TCC Name: tccN3.1A.tcc
Bus Name: SDP 3.1 — Bus Voltage: 480V / 208V
Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Description: 2-Winding Transformer Damage Curve — Rated Volts: 480 LL/208 LL
Nominal Size: 45.0kVA
Impedance (%Z): 4.6000 — Pri Connection: Delta
Inrush Factor: 8.0x — Sec Connection: Wye-Ground

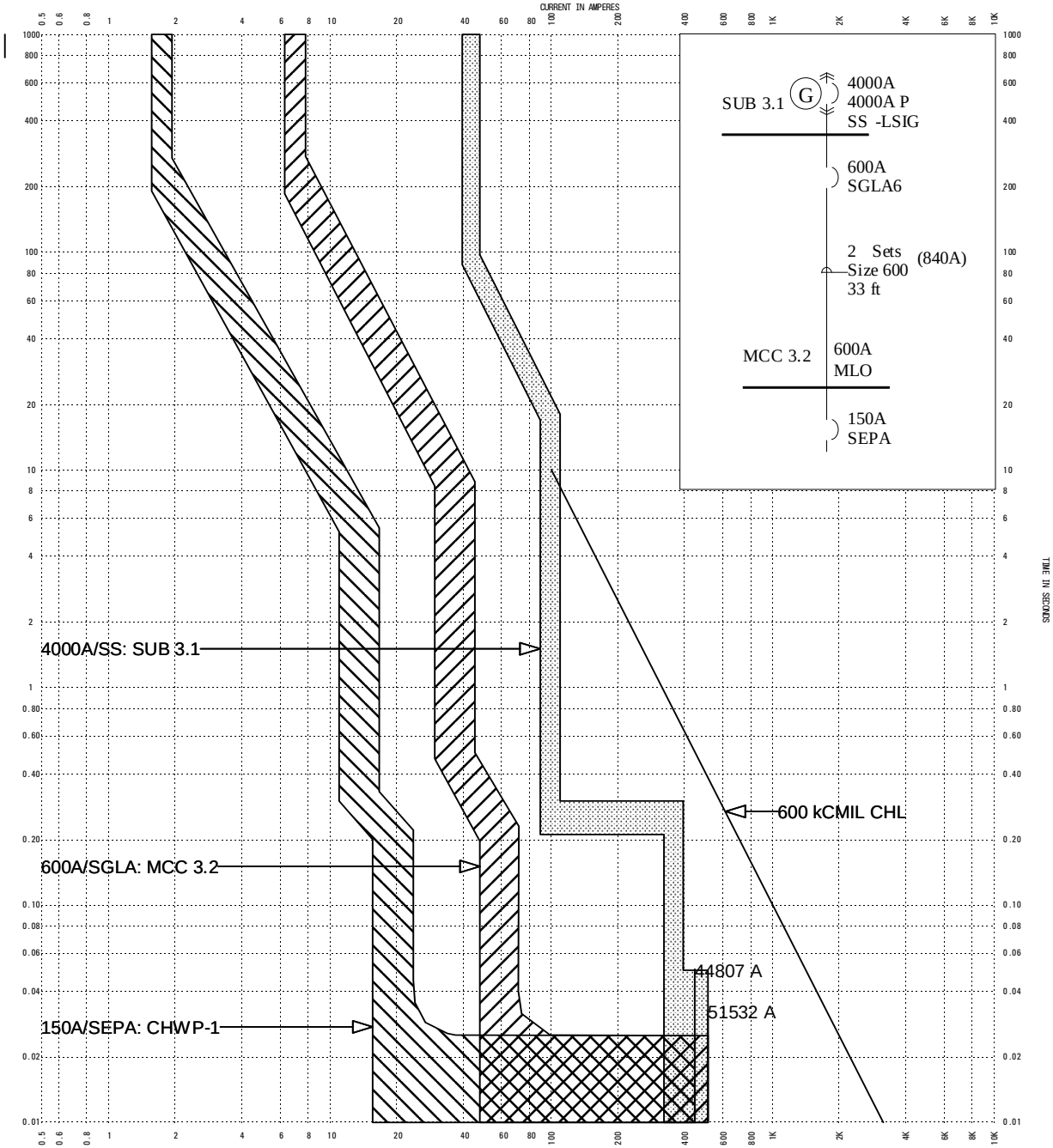
Device Name: 150A/THQD: NSR1.1 — TCC Name: tccN3.1A.tcc
Bus Name: NSR1.1 — Bus Voltage: 208.0V
Function Name: Phase
Manufacturer: GE
Description: 100-225A
Type: THQD
AIC Rating: 22kA — Fault Duty: 2266.9A
Frame: THQD 240V 225A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Trip: 150A
Setting: 1) Fixed

Device Name: 20A/THHQB: NSR1.1 — TCC Name: tccN3.1A.tcc
Bus Name: NSR1.1 — Bus Voltage: 208.0V
Function Name: Phase
Manufacturer: GE
Description: 15-100A
Type: THHQB
AIC Rating: 22kA — Fault Duty: 2266.9A
Frame: THHQB 240V 20A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Trip: 20A
Setting: 1) Fixed

DWG#: tccN3.1A
February 27, 2009

VOLTAGE: 480
PA Convention CenterPhiladelphia, PA

CURRENT SCALE: x 100
CPSI#8159



Device Name:	4000A/SS: SUB 3.1	TCC Name:	tccN3.1B.tcc
Bus Name:	SUB 3.1	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	LSI, 4000AS		
Type:	SS, SH PowerBreak II, MVT Plus/PM		
AIC Rating:	100kA ShortTime:42	Fault Duty:	51532.2A
Frame:	SS 480V 4000A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Sensor:	4000A		
Plug:	4000A		
Setting: 1) LTPU (0.5-1.0 x P)	1 (4000A)		
2) LTD (1-4)	1		
3) STPU (1.5-9 x LTPU)	2.5 (10000A)		
4) STD (Min-Max)	Int I^2 t Out		
5) INST (1.5-9 x P)	9 (36000A)		

Device Name:	600A/SGLA: MCC 3.2	TCC Name:	tccN3.1B.tcc
Bus Name:	SUB 3.1	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	125-600A		
Type:	SGLA, Spectra RMS +		
AIC Rating:	65kA	Fault Duty:	51532.2A
Frame:	SGLA6 480V 600A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Trip:	600A		
Setting: 1) MAX			

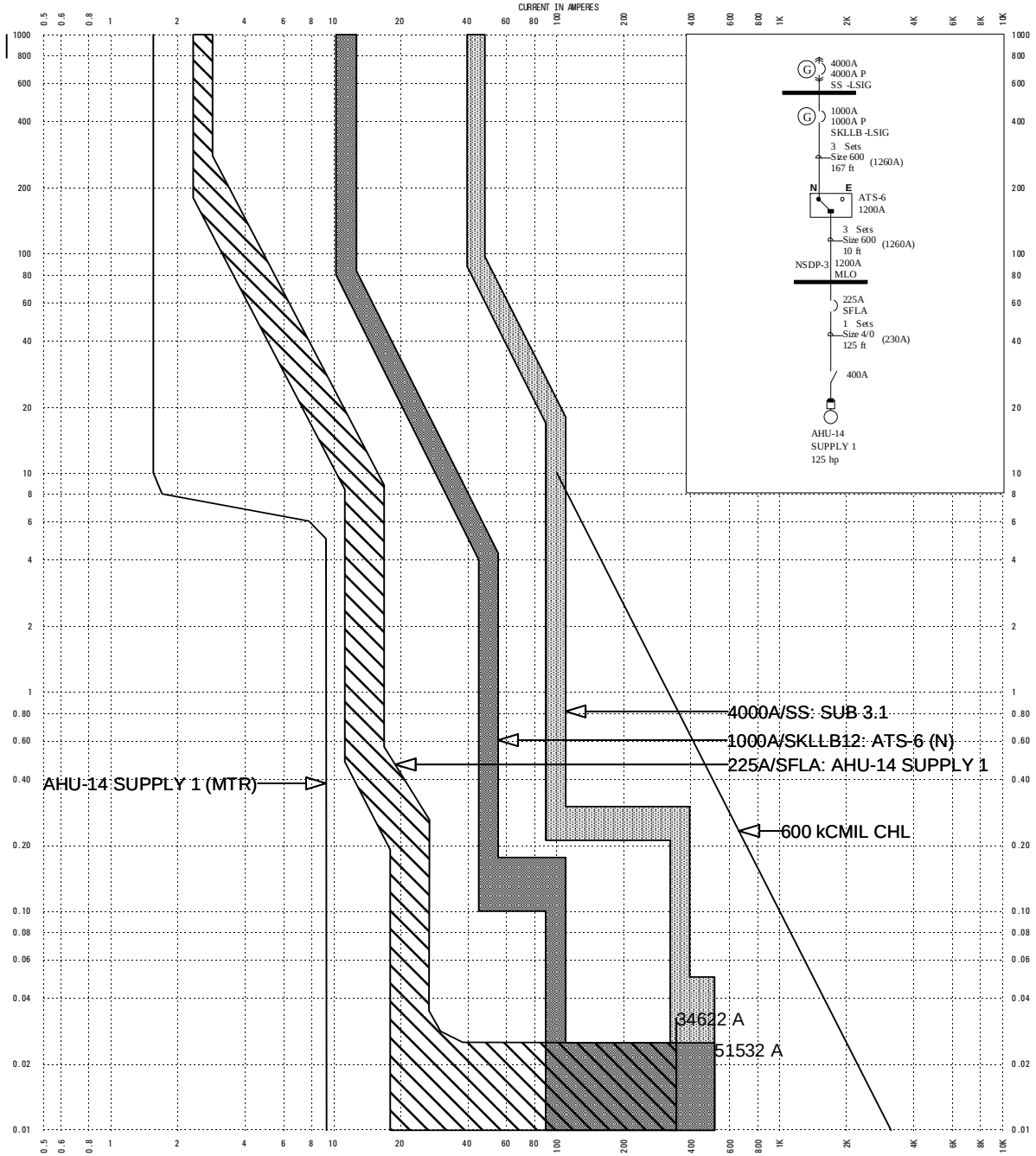
Device Name:	150A/SEPA: CHWP-1	TCC Name:	tccN3.1B.tcc
Bus Name:	MCC 3.2	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	15-150A		
Type:	SEPA, Spectra RMS		
AIC Rating:	100kA	Fault Duty:	44807.5A
Frame:	SEPA 480V 150A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Trip:	150A		
Setting: 1) MAX			

Device Name:	600 kCMIL CHL	TCC Name:	tccN3.1B.tcc
Bus Name:		Bus Voltage:	480V
		Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Description:	Cable Damage Curve	Qty/Ph:	1
Size:	600	Cont. Temp:	75 deg C.
Material:	Copper	Damage Temp:	150 deg C.

DWG#: tccN3.1B
February 27, 2009

VOLTAGE: 480
PA Convention CenterPhiladelphia, PA

CURRENT SCALE: x 100
CPSI#8159



Device Name:	4000A/SS: SUB 3.1	TCC Name:	tccN3.1C.tcc
Bus Name:	SUB 3.1	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	LSI, 4000AS		
Type:	SS, SH PowerBreak II, MVT Plus/PM		
AIC Rating:	100kA ShortTime:42	Fault Duty:	51532.2A
Frame:	SS 480V 4000A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Sensor:	4000A		
Plug:	4000A		
Setting: 1) LTPU (0.5-1.0 x P)	1 (4000A)		
2) LTD (1-4)	1		
3) STPU (1.5-9 x LTPU)	2.5 (10000A)		
4) STD (Min-Max)	Int I^2 t Out		
5) INST (1.5-9 x P)	9 (36000A)		

Device Name:	1000A/SKLLB12: ATS-6 (N)	TCC Name:	tccN3.1C.tcc
Bus Name:	SUB 3.1	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	LSI, 300-1200A		
Type:	SK, MVT Plus/PM +		
AIC Rating:	65kA	Fault Duty:	51532.2A
Frame:	SKLLB 480V 1200A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Sensor:	1000A		
Plug:	1000A		
Setting: 1) LTPU (0.5-1.0 x P)	1 (1000A)		
2) LTD (1-4)	1		
3) STPU (1.5-9 x LTPU)	5 (5000A)		
4) STD (1-4)	1 I^2 t Out		
5) INST (1.5-10 x P)	10 (10000A)		

Device Name:	225A/SFLA: AHU-14 SUPPLY 1	TCC Name:	tccN3.1C.tcc
Bus Name:	NSDP-3	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	70-250A		
Type:	SFLA, Spectra RMS		
AIC Rating:	65kA	Fault Duty:	34622.3A
Frame:	SFLA 480V 250A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Trip:	225A		
Setting: 1) MAX			

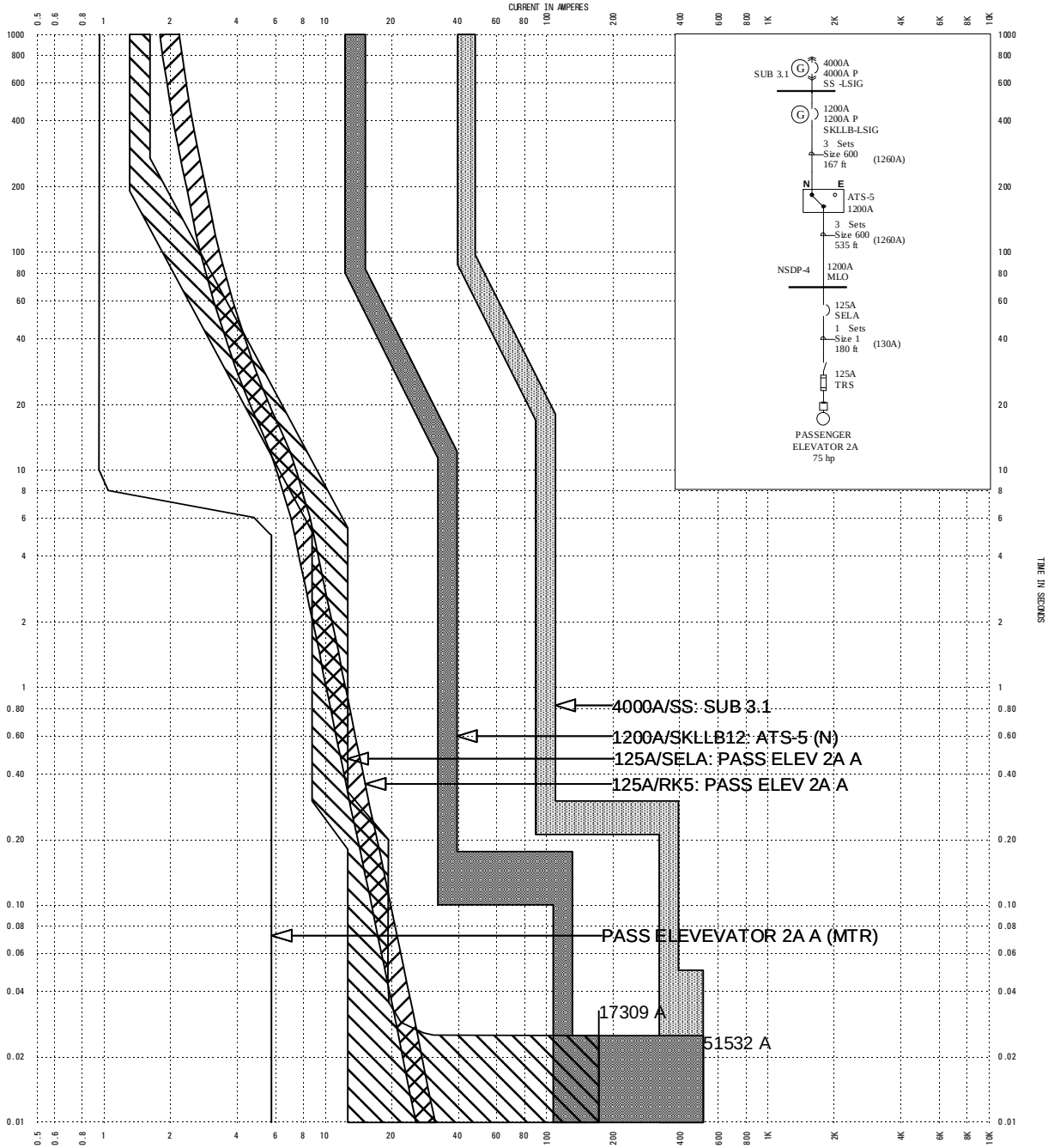
Device Name:	AHU-14 SUPPLY 1 (MTR)	TCC Name:	tccN3.1C.tcc
Bus Name:	AHU-14 SUPPLY 1	Bus Voltage:	480V
		Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Description:	Motor Starting Curve	Inrush:	6.0 (936.0A)
Rated Size:	125HP (1 of 1 Plotted)	FLA+Load Adder:	156.0A + 0.0A
Power Factor:	0.800	Starting Time:	10.00s
Efficiency:	0.90	Full Voltage (Square Transient)	

Device Name:	600 kCMIL CHL	TCC Name:	tccN3.1C.tcc
Bus Name:		Bus Voltage:	480V
		Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Description:	Cable Damage Curve	Qty/Ph:	1
Size:	600	Cont. Temp:	75 deg C.
Material:	Copper	Damage Temp:	150 deg C.

DWG#: tccN3.1C
February 27, 2009

VOLTAGE: 480
PA Convention CenterPhiladelphia, PA

CURRENT SCALE: x 100
CPSI#8159



Device Name: 4000A/SS: SUB 3.1 — TCC Name: tccN3.1D.tcc
Bus Name: SUB 3.1 — Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: GE
Description: LSI, 4000AS
Type: SS, SH PowerBreak II, MVT Plus/PM
AIC Rating: 100kA ShortTime:42 — Fault Duty: 51532.2A
Frame: SS 480V 4000A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Sensor: 4000A
Plug: 4000A

Setting:			
1)	LTPU (0.5-1.0 x P)	1	(4000A)
2)	LTD (1-4)	1	
3)	STPU (1.5-9 x LTPU)	2.5	(10000A)
4)	STD (Min-Max)	Int	I^2 t Out
5)	INST (1.5-9 x P)	9	(36000A)

Device Name: 1200A/SKLLB12: ATS-5 (N) — TCC Name: tccN3.1D.tcc
Bus Name: SUB 3.1 — Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: GE
Description: LSI, 300-1200A
Type: SK, MVT Plus/PM +
AIC Rating: 65kA — Fault Duty: 51532.2A
Frame: SKLLB 480V 1200A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Sensor: 1200A
Plug: 1200A

Setting:			
1)	LTPU (0.5-1.0 x P)	1	(1200A)
2)	LTD (1-4)	1	
3)	STPU (1.5-9 x LTPU)	3	(3600A)
4)	STD (1-4)	1	I^2 t Out
5)	INST (1.5-10 x P)	10	(12000A)

Device Name: 125A/SELA: PASS ELEV 2A A — TCC Name: tccN3.1D.tcc
Bus Name: NSDP-4 — Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: GE
Description: 15-150A
Type: SELA, Spectra RMS
AIC Rating: 65kA — Fault Duty: 17309.1A
Frame: SELA 480V 125A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Trip: 125A
Setting: 1) MAX

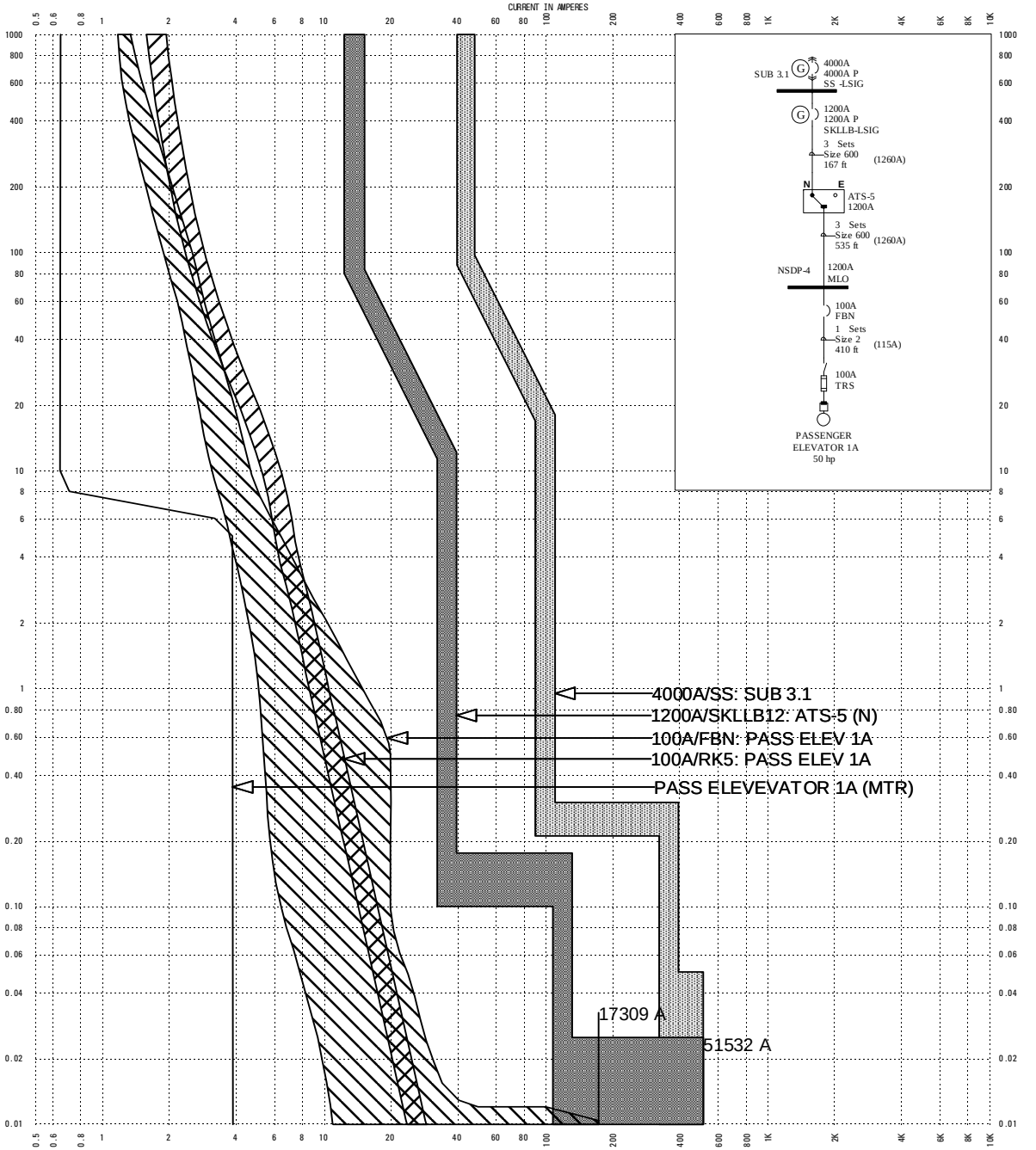
Device Name: 125A/RK5: PASS ELEV 2A A — TCC Name: tccN3.1D.tcc
Bus Name: PASS ELEV 2A A — Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: GOULD SHAWMUT
Description: 15-600A
Type: TRS, 600V Class RK5
AIC Rating: 200kA — Fault Duty: 6729.9A
Cartridge: TRS 600V 200A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Size: 125A

Device Name: PASS ELEVEVATOR 2A A (MTR) — TCC Name: tccN3.1D.tcc
Bus Name: PASS ELEV 2A A — Bus Voltage: 480V
Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Description: Motor Starting Curve — Inrush: 6.0 (576.0A)
Rated Size: 75HP (1 of 1 Plotted) — FLA+Load Adder: 96.0A + 0.0A
Power Factor: 0.800 — Starting Time: 10.00s
Efficiency: 0.88 — Full Voltage (Square Transient)

DWG#: tccN3.1D
February 27, 2009

VOLTAGE: 480
PA Convention CenterPhiladelphia, PA

CURRENT SCALE: x 100
CPSI#8159



Device Name:	4000A/SS: SUB 3.1	TCC Name:	tccN3.1E.tcc
Bus Name:	SUB 3.1	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	LSI, 4000AS		
Type:	SS, SH PowerBreak II, MVT Plus/PM		
AIC Rating:	100kA ShortTime:42	Fault Duty:	51532.2A
Frame:	SS 480V 4000A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Sensor:	4000A		
Plug:	4000A		
Setting: 1) LTPU (0.5-1.0 x P)	1 (4000A)		
2) LTD (1-4)	1		
3) STPU (1.5-9 x LTPU)	2.5 (10000A)		
4) STD (Min-Max)	Int I^2 t Out		
5) INST (1.5-9 x P)	9 (36000A)		

Device Name:	1200A/SKLLB12: ATS-5 (N)	TCC Name:	tccN3.1E.tcc
Bus Name:	SUB 3.1	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	LSI, 300-1200A		
Type:	SK, MVT Plus/PM +		
AIC Rating:	65kA	Fault Duty:	51532.2A
Frame:	SKLLB 480V 1200A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Sensor:	1200A		
Plug:	1200A		
Setting: 1) LTPU (0.5-1.0 x P)	1 (1200A)		
2) LTD (1-4)	1		
3) STPU (1.5-9 x LTPU)	3 (3600A)		
4) STD (1-4)	1 I^2 t Out		
5) INST (1.5-10 x P)	10 (12000A)		

Device Name:	100A/FBN: PASS ELEV 1A	TCC Name:	tccN3.1E.tcc
Bus Name:	NSDP-4	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	15-100A		
Type:	FB, 2 & 3-Pole 480V		
AIC Rating:	65kA	Fault Duty:	17309.1A
Frame:	FBN 480V 100A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Trip:	100A		
Setting: 1) Fixed			

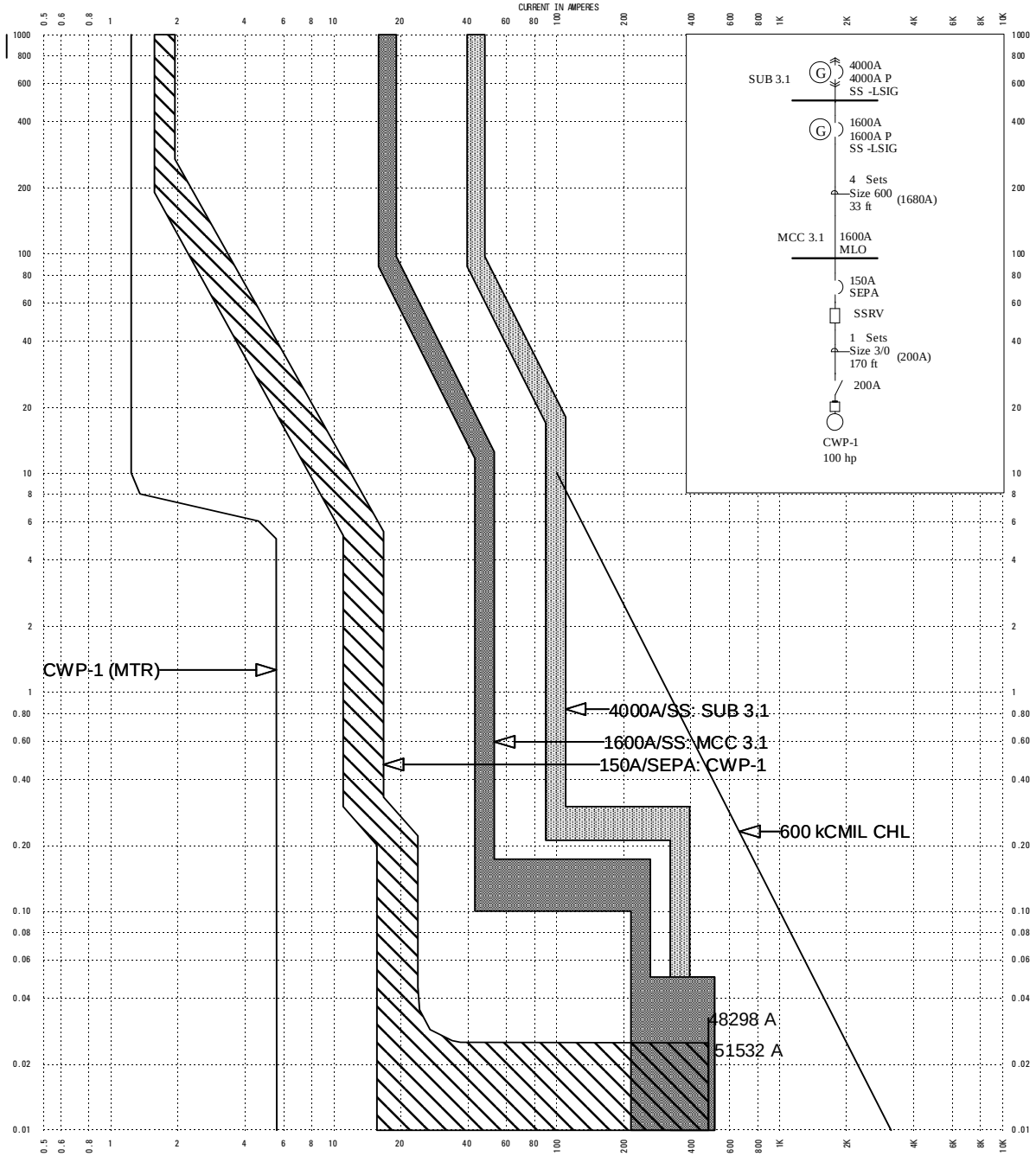
Device Name:	100A/RK5: PASS ELEV 1A	TCC Name:	tccN3.1E.tcc
Bus Name:	PASS ELEV 1A	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	GOULD SHAWMUT		
Description:	15-600A		
Type:	TRS, 600V Class RK5		
AIC Rating:	200kA	Fault Duty:	3033.9A
Cartridge:	TRS 600V 100A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Size:	100A		

Device Name:	PASS ELEVEVATOR 1A (MTR)	TCC Name:	tccN3.1E.tcc
Bus Name:	PASS ELEV 1A	Bus Voltage:	480V
		Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Description:	Motor Starting Curve	Inrush:	6.0 (390.0A)
Rated Size:	50HP (1 of 1 Plotted)	FLA+Load Adder:	65.0A + 0.0A
Power Factor:	0.800	Starting Time:	10.00s
Efficiency:	0.86	Full Voltage (Square Transient)	

DWG#: tccN3.1E
February 27, 2009

VOLTAGE: 480
PA Convention CenterPhiladelphia, PA

CURRENT SCALE: x 100
CPSI#8159



Device Name:	4000A/SS: SUB 3.1	TCC Name:	tccN3.1F.tcc
Bus Name:	SUB 3.1	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	LSI, 4000AS		
Type:	SS, SH PowerBreak II, MVT Plus/PM		
AIC Rating:	100kA ShortTime:42	Fault Duty:	51532.2A
Frame:	SS 480V 4000A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Sensor:	4000A		
Plug:	4000A		
Setting: 1) LTPU (0.5-1.0 x P)	1 (4000A)		
2) LTD (1-4)	1		
3) STPU (1.5-9 x LTPU)	2.5 (10000A)		
4) STD (Min-Max)	Int I^2 t Out		
5) INST (1.5-9 x P)	9 (36000A)		

Device Name:	1600A/SS: MCC 3.1	TCC Name:	tccN3.1F.tcc
Bus Name:	SUB 3.1	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	LSI, 200-2000AS		
Type:	SS, SH PowerBreak II, MVT Plus/PM		
AIC Rating:	65kA ShortTime:40	Fault Duty:	51532.2A
Frame:	SS 480V 1600A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Sensor:	1600A		
Plug:	1600A		
Setting: 1) LTPU (0.5-1.0 x P)	1 (1600A)		
2) LTD (1-4)	1		
3) STPU (1.5-9 x LTPU)	3 (4800A)		
4) STD (Min-Max)	Min I^2 t Out		
5) INST (1.5-15 x P)	15 (24000A)		

Device Name:	150A/SEPA: CWP-1	TCC Name:	tccN3.1F.tcc
Bus Name:	MCC 3.1	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	15-150A		
Type:	SEPA, Spectra RMS		
AIC Rating:	100kA	Fault Duty:	48298.1A
Frame:	SEPA 480V 150A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Trip:	150A		
Setting: 1) MAX			

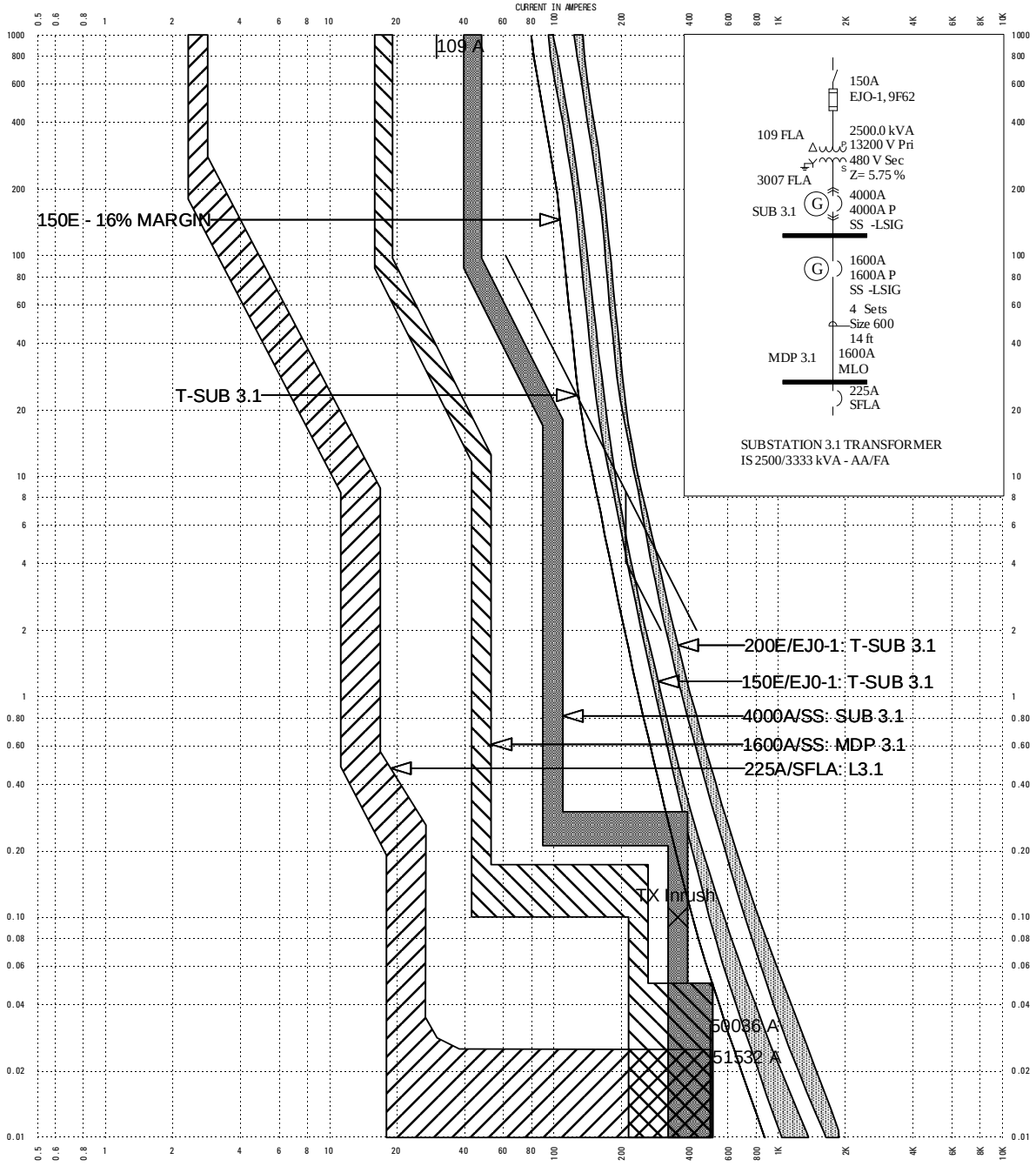
Device Name:	CWP-1 (MTR)	TCC Name:	tccN3.1F.tcc
Bus Name:	CWP-1	Bus Voltage:	480V
		Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Description:	Motor Starting Curve	Inrush:	4.5 (558.0A)
Rated Size:	100HP (1 of 1 Plotted)	FLA+Load Adder:	124.0A + 0.0A
Power Factor:	0.800	Starting Time:	10.00s
Efficiency:	0.90	Full Voltage (Square Transient)	

Device Name:	600 kCMIL CHL	TCC Name:	tccN3.1F.tcc
Bus Name:		Bus Voltage:	480V
		Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Description:	Cable Damage Curve	Qty/Ph:	1
Size:	600	Cont. Temp:	75 deg C.
Material:	Copper	Damage Temp:	150 deg C.

DWG#: tccN3.1F
February 27, 2009

VOLTAGE: 480
PA Convention CenterPhiladelphia, PA

CURRENT SCALE: x 100
CPSI#8159



Device Name: 200E/EJ0-1: T-SUB 3.1 — TCC Name: tccN3.1G.tcc
Bus Name: — Bus Voltage: 13200.0V
Function Name: Phase
Manufacturer: GE
Description: 20E-300E
Type: 9F62 EJ0-1, 15.5kV E-Rated +
AIC Rating: 50kA — Fault Duty: 6836.0A
Cartridge: EJO-1, 9F62 15500V 200A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Size: 200A

Device Name: 150E/EJ0-1: T-SUB 3.1 — TCC Name: tccN3.1G.tcc
Bus Name: T-SUB 3.1 PRI — Bus Voltage: 13200.0V
Function Name: Phase
Manufacturer: GE
Description: 20E-300E
Type: 9F62 EJ0-1, 15.5kV E-Rated +
AIC Rating: 50kA — Fault Duty: 6842.4A
Cartridge: EJO-1, 9F62 15500V 150A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Size: 150A

Device Name: 4000A/SS: SUB 3.1 — TCC Name: tccN3.1G.tcc
Bus Name: SUB 3.1 — Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: GE
Description: LSI, 4000AS
Type: SS, SH PowerBreak II, MVT Plus/PM
AIC Rating: 100kA ShortTime:42 — Fault Duty: 51532.2A
Frame: SS 480V 4000A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Sensor: 4000A
Plug: 4000A
Setting: 1) LTPU (0.5-1.0 x P) 1 (4000A)
2) LTD (1-4) 1
3) STPU (1.5-9 x LTPU) 2.5 (10000A)
4) STD (Min-Max) Int I^2 t Out
5) INST (1.5-9 x P) 9 (36000A)

Device Name: 1600A/SS: MDP 3.1 — TCC Name: tccN3.1G.tcc
Bus Name: SUB 3.1 — Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: GE
Description: LSI, 200-2000AS
Type: SS, SH PowerBreak II, MVT Plus/PM
AIC Rating: 65kA ShortTime:40 — Fault Duty: 51532.2A
Frame: SS 480V 1600A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Sensor: 1600A
Plug: 1600A
Setting: 1) LTPU (0.5-1.0 x P) 1 (1600A)
2) LTD (1-4) 1
3) STPU (1.5-9 x LTPU) 3 (4800A)
4) STD (Min-Max) Min I^2 t Out
5) INST (1.5-15 x P) 15 (24000A)

Device Name: 225A/SFLA: L3.1 — TCC Name: tccN3.1G.tcc
Bus Name: MDP 3.1 — Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: GE
Description: 70-250A
Type: SFLA, Spectra RMS
AIC Rating: 65kA — Fault Duty: 50035.7A
Frame: SFLA 480V 250A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Trip: 225A
Setting: 1) MAX

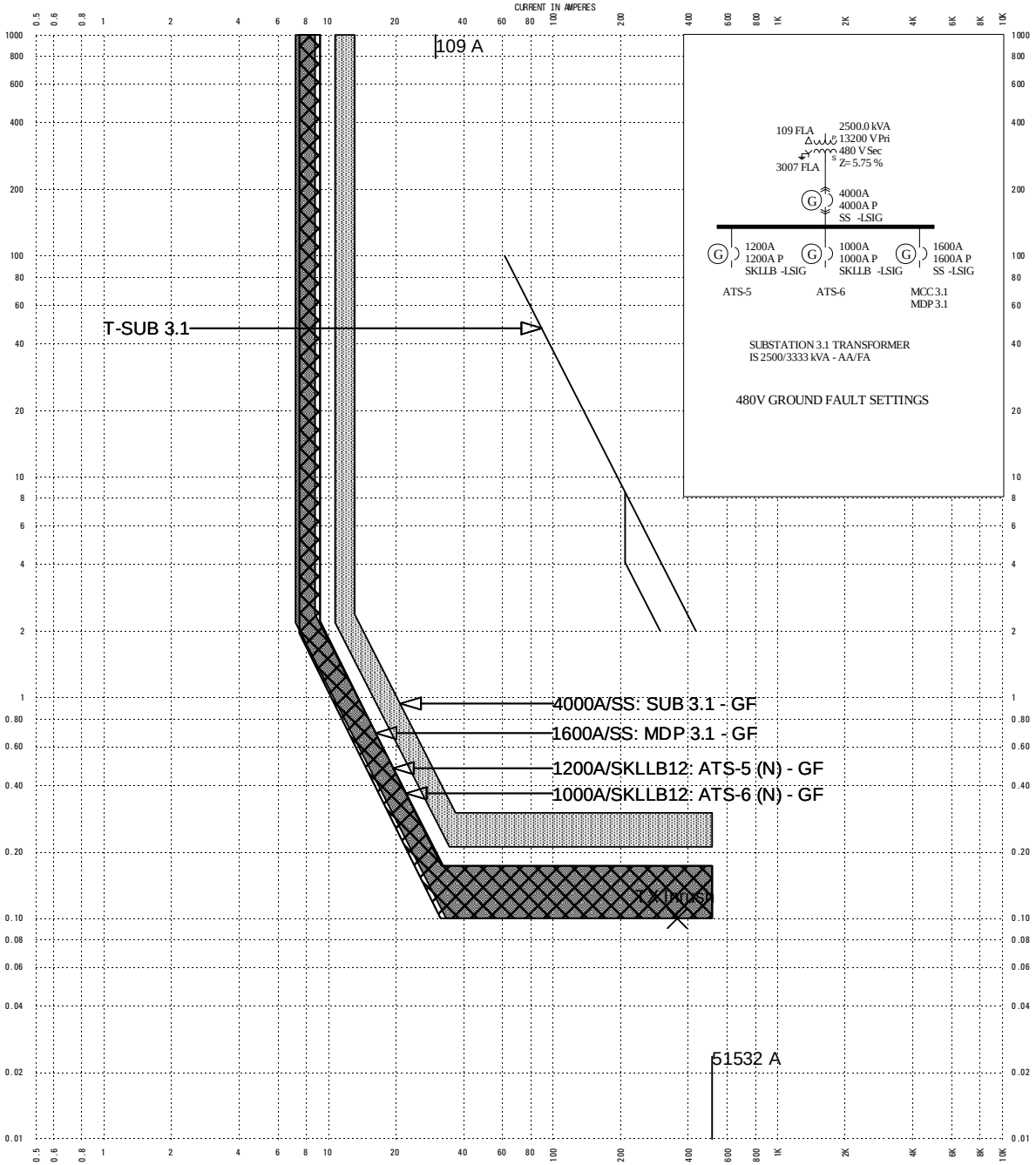
Device Name: T-SUB 3.1 — TCC Name: tccN3.1G.tcc
Bus Name: T-SUB 3.1 PRI — Bus Voltage: 13200V / 480V
Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Description: 2-Winding Transformer Damage Curve — Rated Volts: 13200 LL/480 LL
Nominal Size: 2500.0kVA
Impedance (%Z): 5.7500 — Pri Connection: Delta
Inrush Factor: 12.0x — Sec Connection: Wye-Ground

Device Name: 150E - 16% MARGIN — TCC Name: tccN3.1G.tcc
Bus Name: — Bus Voltage: 13200.0V
Function Name: Phase
Manufacturer: GE
Description: 20E-300E
Type: 9F62 EJ0-1, 15.5kV 16% MARGIN +
AIC Rating: 50kA — Fault Duty: 200000.0A
Cartridge: EJO-1, 150E 15500V 150A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Size: 150A

DWG#: tccN3.1G
February 27, 2009

VOLTAGE: 480
PA Convention CenterPhiladelphia, PA

CURRENT SCALE: x 100
CPSI#8159



Device Name: 4000A/SS: SUB 3.1 - GF
Bus Name: SUB 3.1
Function Name: Ground
Manufacturer: GE
Description: GF, 4000AS
Type: SS, SH PowerBreak II, MVT Plus/PM
AIC Rating: 100kA ShortTime:42
Frame: SS 480V 4000A
Time Multiplier: 1
Sensor: 4000A
Plug: 4000A
Setting: 1) GFPU (0.2-0.3 x S) 0.3 (1200A)
2) GFD (Min-Max) Int I^2 t In

TCC Name: tccN3.1H.tcc
Bus Voltage: 480.0V
Fault Duty: 51532.2A
Curve Multiplier: 1
Time Adder: 0

Device Name: 1600A/SS: MDP 3.1 - GF
Bus Name: SUB 3.1
Function Name: Ground
Manufacturer: GE
Description: GF, 200-2000AS
Type: SS, SH PowerBreak II, MVT Plus/PM
AIC Rating: 65kA ShortTime:40
Frame: SS 480V 1600A
Time Multiplier: 1
Sensor: 1600A
Plug: 1600A
Setting: 1) GFPU (0.2-0.6 x S) 0.5 (800A)
2) GFD (Min-Max) Min I^2 t In

TCC Name: tccN3.1H.tcc
Bus Voltage: 480.0V
Fault Duty: 51532.2A
Curve Multiplier: 1
Time Adder: 0

Device Name: 1200A/SKLLB12: ATS-5 (N) - GF
Bus Name: SUB 3.1
Function Name: Ground
Manufacturer: GE
Description: GF, 800-1200A Sensors
Type: SK, MVT Plus/PM
AIC Rating: 65kA
Frame: SKL 480V 1200A
Time Multiplier: 1
Sensor: 1200A
Plug: 1200A
Setting: 1) GFPU (0.2-1.0 x S) 0.7 (840A)
2) GFD (1-4) 1 I^2 t In

TCC Name: tccN3.1H.tcc
Bus Voltage: 480.0V
Fault Duty: 51532.2A
Curve Multiplier: 1
Time Adder: 0

Device Name: 1000A/SKLLB12: ATS-6 (N) - GF
Bus Name: SUB 3.1
Function Name: Ground
Manufacturer: GE
Description: GF, 800-1200A Sensors
Type: SK, MVT Plus/PM
AIC Rating: 65kA
Frame: SKL 480V 1200A
Time Multiplier: 1
Sensor: 1200A
Plug: 1200A
Setting: 1) GFPU (0.2-1.0 x S) 0.7 (840A)
2) GFD (1-4) 1 I^2 t In

TCC Name: tccN3.1H.tcc
Bus Voltage: 480.0V
Fault Duty: 51532.2A
Curve Multiplier: 1
Time Adder: 0

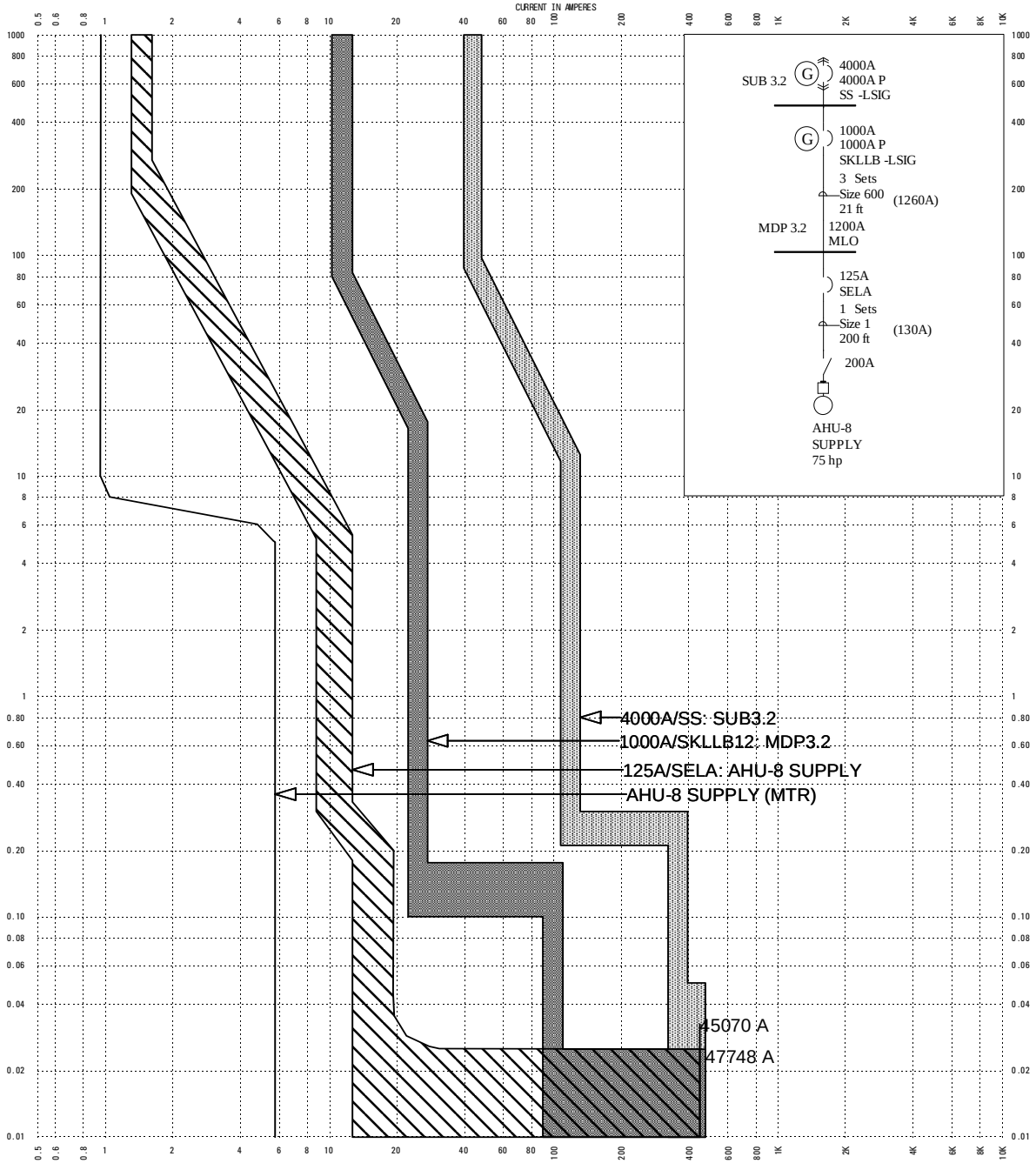
Device Name: T-SUB 3.1
Bus Name: T-SUB 3.1 PRI
Time Multiplier: 1
Description: 2-Winding Transformer Damage Curve
Nominal Size: 2500.0kVA
Impedance (%Z): 5.7500
Inrush Factor: 12.0x

TCC Name: tccN3.1H.tcc
Bus Voltage: 13200V / 480V
Curve Multiplier: 1
Time Adder: 0
Rated Volts: 13200 LL/480 LL
Pri Connection: Delta
Sec Connection: Wye-Ground

DWG#: tccN3.1H
February 27, 2009

VOLTAGE: 480
PA Convention CenterPhiladelphia, PA

CURRENT SCALE: x 100
CPSI#8159



Device Name:	4000A/SS: SUB3.2	TCC Name:	tccN3.2A.tcc
Bus Name:	SUB 3.2	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	LSI, 4000AS		
Type:	SS, SH PowerBreak II, MVT Plus/PM		
AIC Rating:	100kA ShortTime:42	Fault Duty:	47747.8A
Frame:	SS 480V 4000A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Sensor:	4000A		
Plug:	4000A		
Setting: 1) LTPU (0.5-1.0 x P)	1 (4000A)		
2) LTD (1-4)	1		
3) STPU (1.5-9 x LTPU)	3 (12000A)		
4) STD (Min-Max)	Int I^2 t Out		
5) INST (1.5-9 x P)	9 (36000A)		

Device Name:	1000A/SKLLB12: MDP3.2	TCC Name:	tccN3.2A.tcc
Bus Name:	SUB 3.2	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	LSI, 300-1200A		
Type:	SK, MVT Plus/PM +		
AIC Rating:	65kA	Fault Duty:	47747.8A
Frame:	SKLLB 480V 1200A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Sensor:	1000A		
Plug:	1000A		
Setting: 1) LTPU (0.5-1.0 x P)	1 (1000A)		
2) LTD (1-4)	1		
3) STPU (1.5-9 x LTPU)	2.5 (2500A)		
4) STD (1-4)	1 I^2 t Out		
5) INST (1.5-10 x P)	10 (10000A)		

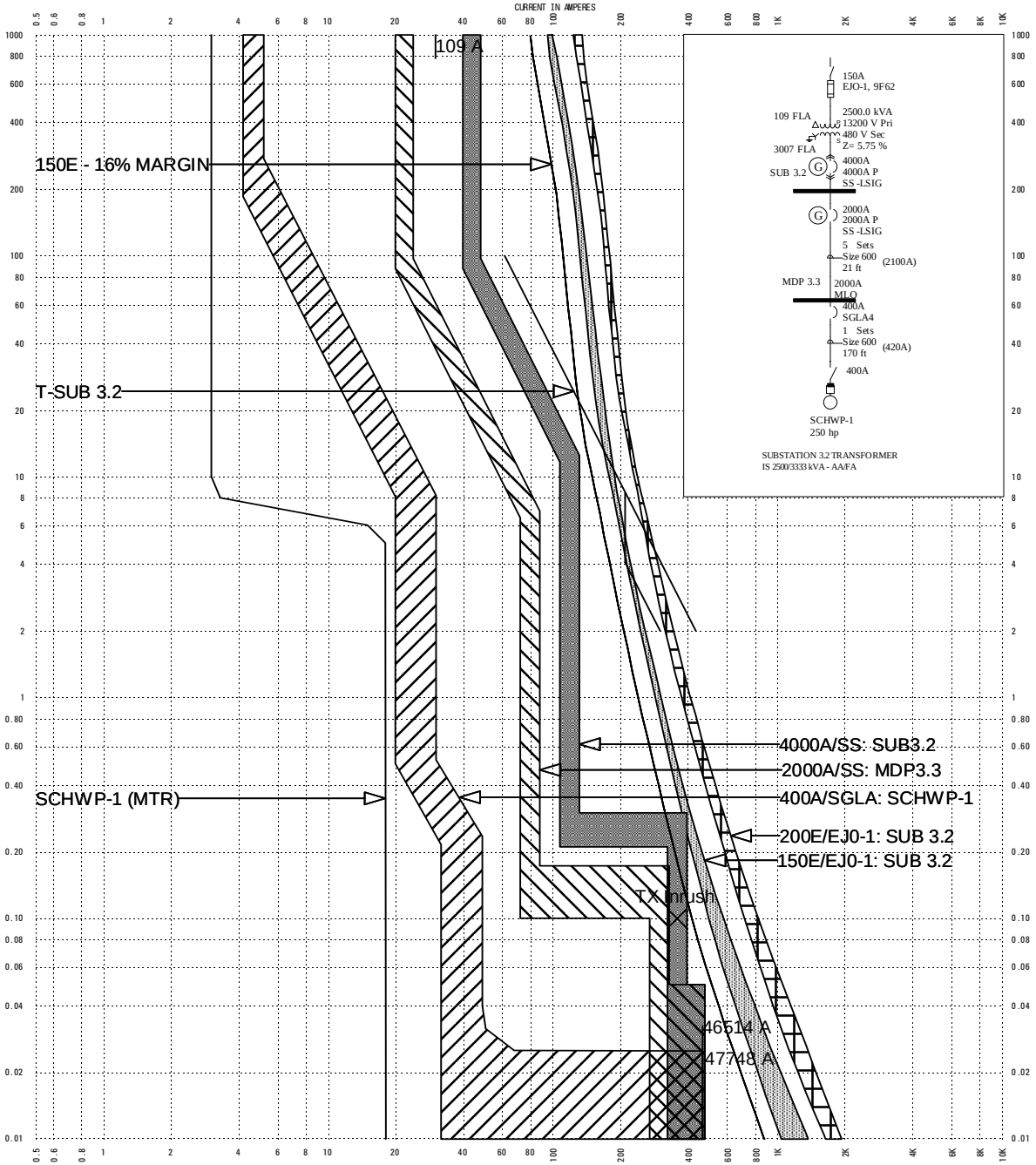
Device Name:	125A/SELA: AHU-8 SUPPLY	TCC Name:	tccN3.2A.tcc
Bus Name:	MDP 3.2	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	15-150A		
Type:	SELA, Spectra RMS		
AIC Rating:	65kA	Fault Duty:	45070.3A
Frame:	SELA 480V 125A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Trip:	125A		
Setting: 1) MAX			

Device Name:	AHU-8 SUPPLY (MTR)	TCC Name:	tccN3.2A.tcc
Bus Name:	AHU-8 SUPPLY	Bus Voltage:	480V
		Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Description:	Motor Starting Curve	Inrush:	6.0 (576.0A)
Rated Size:	75HP (1 of 1 Plotted)	FLA+Load Adder:	96.0A + 0.0A
Power Factor:	0.800	Starting Time:	10.00s
Efficiency:	0.88	Full Voltage (Square Transient)	

DWG#: tccN3.2A
February 27, 2009

VOLTAGE: 480
PA Convention CenterPhiladelphia, PA

CURRENT SCALE: x 100
CPSI#8159



DWG#: tccN3.2B
February 27, 2009

VOLTAGE: 480
PA Convention CenterPhiladelphia, PA

CURRENT SCALE: x 100
CPSI#8159

Device Name: 200E/EJ0-1: SUB 3.2 — TCC Name: tccN3.2B.tcc
Bus Name: — Bus Voltage: 13200.0V
Function Name: Phase
Manufacturer: GE
Description: 20E-300E
Type: 9F62 EJ0-1, 15.5kV E-Rated +
AIC Rating: 50kA — Fault Duty: 7026.0A
Cartridge: EJO-1, 9F62 15500V 200A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Size: 200A

Device Name: 150E/EJ0-1: SUB 3.2 — TCC Name: tccN3.2B.tcc
Bus Name: T-SUB 3.2 PRI — Bus Voltage: 13200.0V
Function Name: Phase
Manufacturer: GE
Description: 20E-300E
Type: 9F62 EJ0-1, 15.5kV E-Rated +
AIC Rating: 50kA — Fault Duty: 7033.3A
Cartridge: EJO-1, 9F62 15500V 150A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Size: 150A

Device Name: 4000A/SS: SUB3.2 — TCC Name: tccN3.2B.tcc
Bus Name: SUB 3.2 — Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: GE
Description: LSI, 4000AS
Type: SS, SH PowerBreak II, MVT Plus/PM
AIC Rating: 100kA ShortTime:42 — Fault Duty: 47747.8A
Frame: SS 480V 4000A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Sensor: 4000A
Plug: 4000A
Setting: 1) LTPU (0.5-1.0 x P) 1 (4000A)
2) LTD (1-4) 1
3) STPU (1.5-9 x LTPU) 3 (12000A)
4) STD (Min-Max) Int I^2 t Out
5) INST (1.5-9 x P) 9 (36000A)

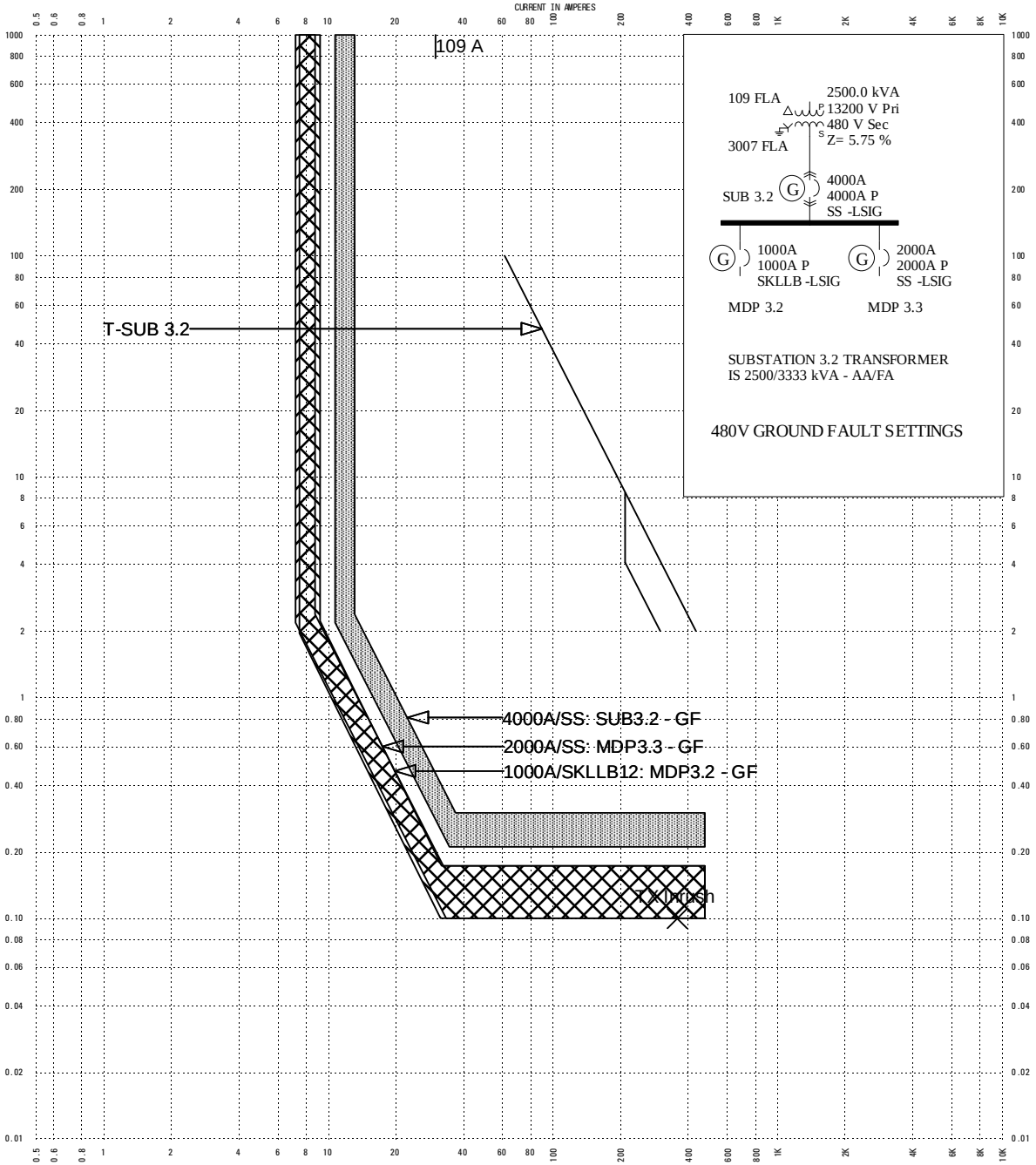
Device Name: 2000A/SS: MDP3.3 — TCC Name: tccN3.2B.tcc
Bus Name: SUB 3.2 — Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: GE
Description: LSI, 200-2000AS
Type: SS, SH PowerBreak II, MVT Plus/PM
AIC Rating: 65kA ShortTime:40 — Fault Duty: 47747.8A
Frame: SS 480V 2000A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Sensor: 2000A
Plug: 2000A
Setting: 1) LTPU (0.5-1.0 x P) 1 (2000A)
2) LTD (1-4) 1
3) STPU (1.5-9 x LTPU) 4 (8000A)
4) STD (Min-Max) Min I^2 t Out
5) INST (1.5-15 x P) 15 (30000A)

Device Name: 400A/SGLA: SCHWP-1 — TCC Name: tccN3.2B.tcc
Bus Name: MDP 3.3 — Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: GE
Description: 125-600A
Type: SGLA, Spectra RMS +
AIC Rating: 65kA — Fault Duty: 46514.1A
Frame: SGLA4 480V 400A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Trip: 400A
Setting: 1) MAX

Device Name: SCHWP-1 (MTR) — TCC Name: tccN3.2B.tcc
Bus Name: SCHWP-1 — Bus Voltage: 480V
Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Description: Motor Starting Curve — Inrush: 6.0 (1812.0A)
Rated Size: 250HP (1 of 1 Plotted) — FLA+Load Adder: 302.0A + 0.0A
Power Factor: 0.800 — Starting Time: 10.00s
Efficiency: 0.93 — Full Voltage (Square Transient)

Device Name: T-SUB 3.2 — TCC Name: tccN3.2B.tcc
Bus Name: T-SUB 3.2 PRI — Bus Voltage: 13200V / 480V
Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Description: 2-Winding Transformer Damage Curve — Rated Volts: 13200 LL/480 LL
Nominal Size: 2500.0kVA
Impedance (%Z): 5.7500 — Pri Connection: Delta
Inrush Factor: 12.0x — Sec Connection: Wye-Ground

Device Name: 150E - 16% MARGIN — TCC Name: tccN3.2B.tcc
Bus Name: — Bus Voltage: 13200.0V
Function Name: Phase
Manufacturer: GE
Description: 20E-300E
Type: 9F62 EJ0-1, 15.5kV 16% MARGIN +



Device Name: 4000A/SS: SUB3.2 - GF
Bus Name: SUB 3.2
Function Name: Ground
Manufacturer: GE
Description: GF, 4000AS
Type: SS, SH PowerBreak II, Power+
AIC Rating: 150kA ShortTime:42
Frame: SH 480V 4000A
Time Multiplier: 1
Sensor: 4000A
Plug: 4000A
Setting: 1) GFPU (0.2-0.3 x S) 0.3 (1200A)
2) GFD (Min-Max) Int I^2 t In

TCC Name: tccN3.2C.tcc
Bus Voltage: 480.0V
Fault Duty: 47747.8A
Curve Multiplier: 1
Time Adder: 0

Device Name: 2000A/SS: MDP3.3 - GF
Bus Name: SUB 3.2
Function Name: Ground
Manufacturer: GE
Description: GF, 200-2000AS
Type: SS, SH PowerBreak II, MVT Plus/PM
AIC Rating: 65kA ShortTime:40
Frame: SS 480V 2000A
Time Multiplier: 1
Sensor: 2000A
Plug: 2000A
Setting: 1) GFPU (0.2-0.6 x S) 0.4 (800A)
2) GFD (Min-Max) Min I^2 t In

TCC Name: tccN3.2C.tcc
Bus Voltage: 480.0V
Fault Duty: 47747.8A
Curve Multiplier: 1
Time Adder: 0

Device Name: 1000A/SKLLB12: MDP3.2 - GF
Bus Name: SUB 3.2
Function Name: Ground
Manufacturer: GE
Description: GF, 800-1200A Sensors
Type: SK, MVT Plus/PM
AIC Rating: 50kA
Frame: SKH 480V 1200A
Time Multiplier: 1
Sensor: 1200A
Plug: 1000A
Setting: 1) GFPU (0.2-1.0 x S) 0.7 (840A)
2) GFD (1-4) 1 I^2 t In

TCC Name: tccN3.2C.tcc
Bus Voltage: 480.0V
Fault Duty: 47747.8A
Curve Multiplier: 1
Time Adder: 0

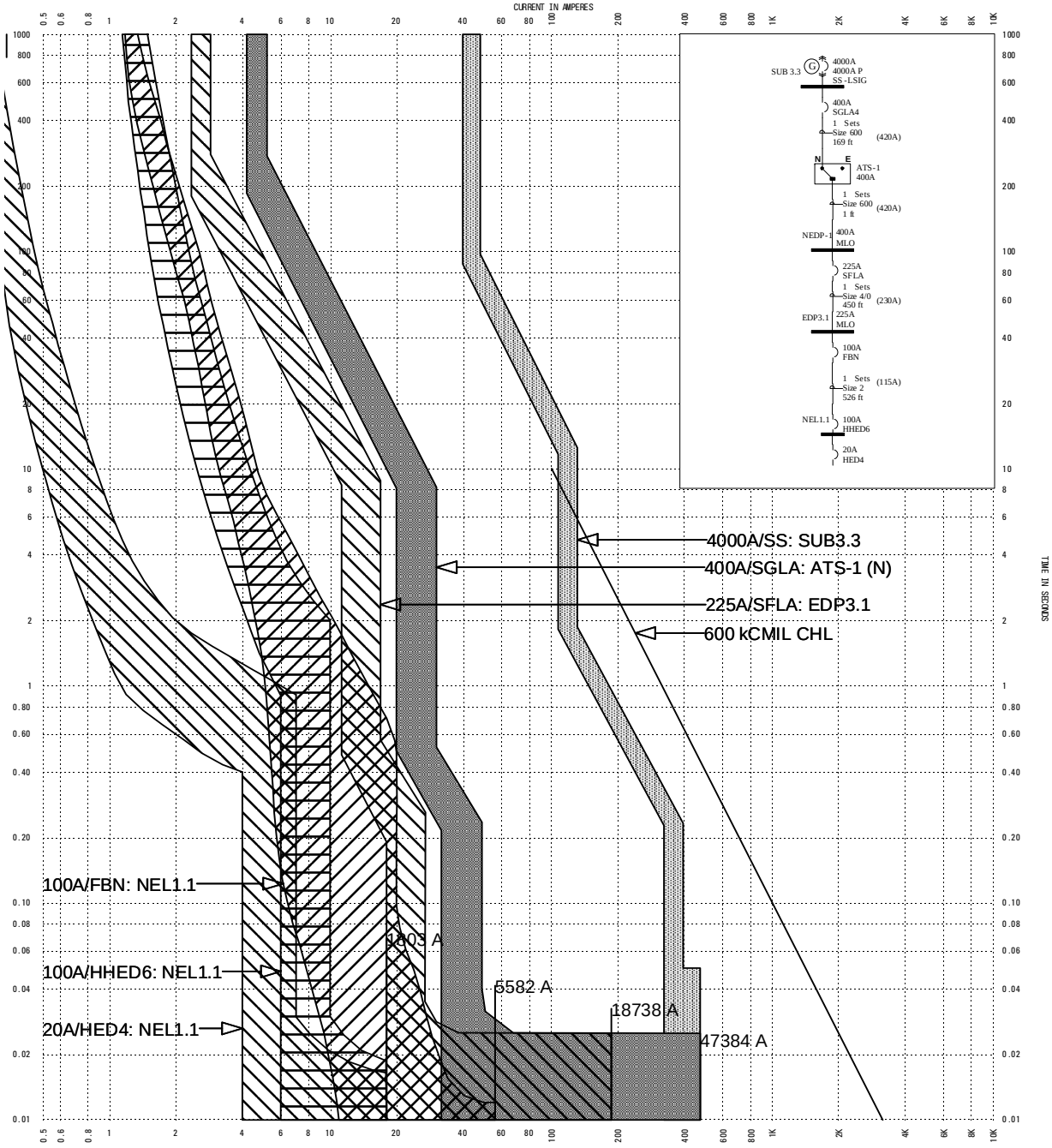
Device Name: T-SUB 3.2
Bus Name: T-SUB 3.2 PRI
Time Multiplier: 1
Description: 2-Winding Transformer Damage Curve
Nominal Size: 2500.0kVA
Impedance (%Z): 5.7500
Inrush Factor: 12.0x

TCC Name: tccN3.2C.tcc
Bus Voltage: 13200V / 480V
Curve Multiplier: 1
Time Adder: 0
Rated Volts: 13200 LL/480 LL
Pri Connection: Delta
Sec Connection: Wye-Ground

DWG#: tccN3.2C
February 27, 2009

VOLTAGE: 480
PA Convention CenterPhiladelphia, PA

CURRENT SCALE: x 100
CPSI#8159



Device Name: 4000A/SS: SUB3.3 — TCC Name: tccN3.3A.tcc
Bus Name: SUB 3.3 — Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: GE
Description: LSI, 4000AS
Type: SS, SH PowerBreak II, MVT Plus/PM
AIC Rating: 100kA ShortTime:42 — Fault Duty: 47384.3A
Frame: SS 480V 4000A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Sensor: 4000A
Plug: 4000A
Setting: 1) LTPU (0.5-1.0 x P) 1 (4000A)
2) LTD (1-4) 1
3) STPU (1.5-9 x LTPU) 3 (12000A)
4) STD (Min-Max) Min I^2 t In
5) INST (1.5-9 x P) 9 (36000A)

Device Name: 400A/SGLA: ATS-1 (N) — TCC Name: tccN3.3A.tcc
Bus Name: SUB 3.3 — Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: GE
Description: 125-600A
Type: SGLA, Spectra RMS +
AIC Rating: 65kA — Fault Duty: 47384.3A
Frame: SGLA4 480V 400A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Trip: 400A
Setting: 1) MAX

Device Name: 225A/SFLA: EDP3.1 — TCC Name: tccN3.3A.tcc
Bus Name: NEDP-1 — Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: GE
Description: 70-250A
Type: SFLA, Spectra RMS
AIC Rating: 65kA — Fault Duty: 18738.2A
Frame: SFLA 480V 250A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Trip: 225A
Setting: 1) MAX

Device Name: 100A/FBN: NEL1.1 — TCC Name: tccN3.3A.tcc
Bus Name: EDP3.1 — Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: GE
Description: 15-100A
Type: FB, 2 & 3-Pole 480V
AIC Rating: 65kA — Fault Duty: 5582.4A
Frame: FBN 480V 100A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Trip: 100A
Setting: 1) Fixed

Device Name: 100A/HHED6: NEL1.1 — TCC Name: tccN3.3A.tcc
Bus Name: NEL1.1 — Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: SIEMENS
Description: 15-125A
Type: HHED6 Sentron
AIC Rating: 65kA — Fault Duty: 1803.0A
Frame: HHED6 480V 125A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Trip: 100A
Setting: 1) Thermal Curve (Fixed
2) INST Fixed (800A)

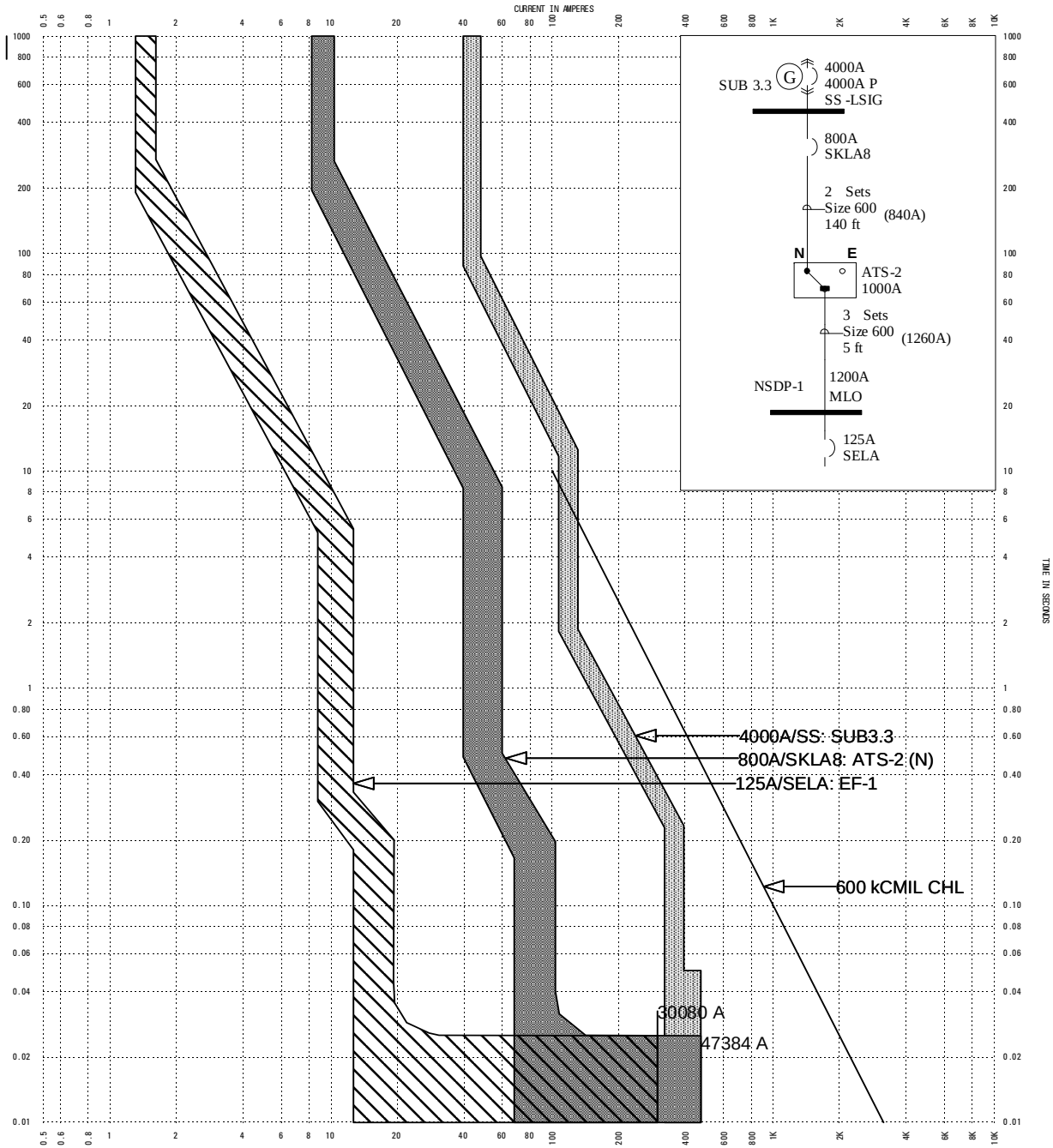
Device Name: 20A/HED4: NEL1.1 — TCC Name: tccN3.3A.tcc
Bus Name: NEL1.1 — Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: SIEMENS
Description: 15-100A
Type: HED4 Sentron, 1-Pole
AIC Rating: 65kA — Fault Duty: 1803.0A
Frame: HED4 277V 25A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Trip: 20A
Setting: 1) Thermal Curve (Fixed
2) INST Fixed (550A)

Device Name: 600 kCMIL CHL — TCC Name: tccN3.3A.tcc
Bus Name: — Bus Voltage: 480V
Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Description: Cable Damage Curve — Qty/Ph: 1
Size: 600 — Cont. Temp: 75 deg C.
Material: Copper — Damage Temp: 150 deg C.

DWG#: tccN3.3A
February 27, 2009

VOLTAGE: 480
PA Convention CenterPhiladelphia, PA

CURRENT SCALE: x 100
CPSI#8159



Device Name:	4000A/SS: SUB3.3	TCC Name:	tccN3.3B.tcc
Bus Name:	SUB 3.3	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	LSI, 4000AS		
Type:	SS, SH PowerBreak II, MVT Plus/PM		
AIC Rating:	100kA ShortTime:42	Fault Duty:	47384.3A
Frame:	SS 480V 4000A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Sensor:	4000A		
Plug:	4000A		
Setting: 1) LTPU (0.5-1.0 x P)	1 (4000A)		
2) LTD (1-4)	1		
3) STPU (1.5-9 x LTPU)	3 (12000A)		
4) STD (Min-Max)	Min I^2 t In		
5) INST (1.5-9 x P)	9 (36000A)		

Device Name:	800A/SKLA8: ATS-2 (N)	TCC Name:	tccN3.3B.tcc
Bus Name:	SUB 3.3	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	300-1200A		
Type:	SKLA, Spectra RMS +		
AIC Rating:	65kA	Fault Duty:	47384.3A
Frame:	SKLA8 480V 800A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Trip:	800A		
Setting: 1) MAX			

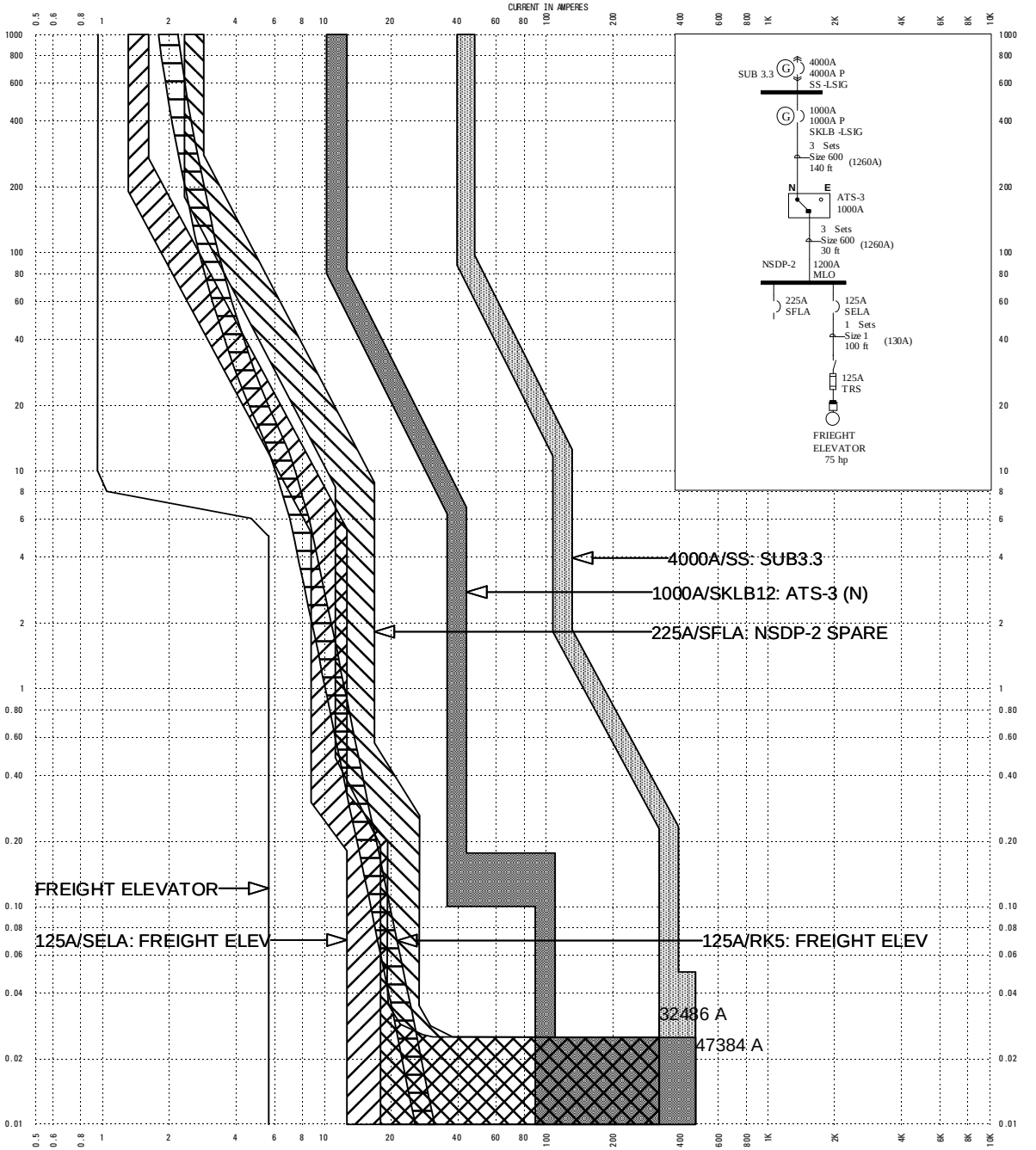
Device Name:	125A/SELA: EF-1	TCC Name:	tccN3.3B.tcc
Bus Name:	NSDP-1	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	15-150A		
Type:	SELA, Spectra RMS		
AIC Rating:	65kA	Fault Duty:	30080.4A
Frame:	SELA 480V 125A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Trip:	125A		
Setting: 1) MAX			

Device Name:	600 kCMIL CHL	TCC Name:	tccN3.3B.tcc
Bus Name:		Bus Voltage:	480V
		Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Description:	Cable Damage Curve	Qty/Ph:	1
Size:	600	Cont. Temp:	75 deg C.
Material:	Copper	Damage Temp:	150 deg C.

DWG#: tccN3.3B
February 27, 2009

VOLTAGE: 480
PA Convention CenterPhiladelphia, PA

CURRENT SCALE: x 100
CPSI#8159



Device Name:	4000A/SS: SUB3.3	TCC Name:	tccN3.3C.tcc
Bus Name:	SUB 3.3	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	LSI, 4000AS		
Type:	SS, SH PowerBreak II, MVT Plus/PM		
AIC Rating:	100kA ShortTime:42	Fault Duty:	47384.3A
Frame:	SS 480V 4000A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Sensor:	4000A		
Plug:	4000A		
Setting: 1) LTPU (0.5-1.0 x P)	1 (4000A)		
2) LTD (1-4)	1		
3) STPU (1.5-9 x LTPU)	3 (12000A)		
4) STD (Min-Max)	Min I^2 t In		
5) INST (1.5-9 x P)	9 (36000A)		

Device Name:	1000A/SKLB12: ATS-3 (N)	TCC Name:	tccN3.3C.tcc
Bus Name:	SUB 3.3	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	LSI, 300-1200A		
Type:	SK, MVT Plus/PM +		
AIC Rating:	65kA	Fault Duty:	47384.3A
Frame:	SKLB 480V 1200A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Sensor:	1000A		
Plug:	1000A		
Setting: 1) LTPU (0.5-1.0 x P)	1 (1000A)		
2) LTD (1-4)	1		
3) STPU (1.5-9 x LTPU)	4 (4000A)		
4) STD (1-4)	1 I^2 t Out		
5) INST (1.5-10 x P)	10 (10000A)		

Device Name:	225A/SFLA: NSDP-2 SPARE	TCC Name:	tccN3.3C.tcc
Bus Name:	NSDP-2	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	70-250A		
Type:	SFLA, Spectra RMS		
AIC Rating:	65kA	Fault Duty:	32485.7A
Frame:	SFLA 480V 250A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Trip:	225A		
Setting: 1) MAX			

Device Name:	125A/SELA: FREIGHT ELEV	TCC Name:	tccN3.3C.tcc
Bus Name:	NSDP-2	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	15-150A		
Type:	SELA, Spectra RMS		
AIC Rating:	65kA	Fault Duty:	32485.7A
Frame:	SELA 480V 125A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Trip:	125A		
Setting: 1) MAX			

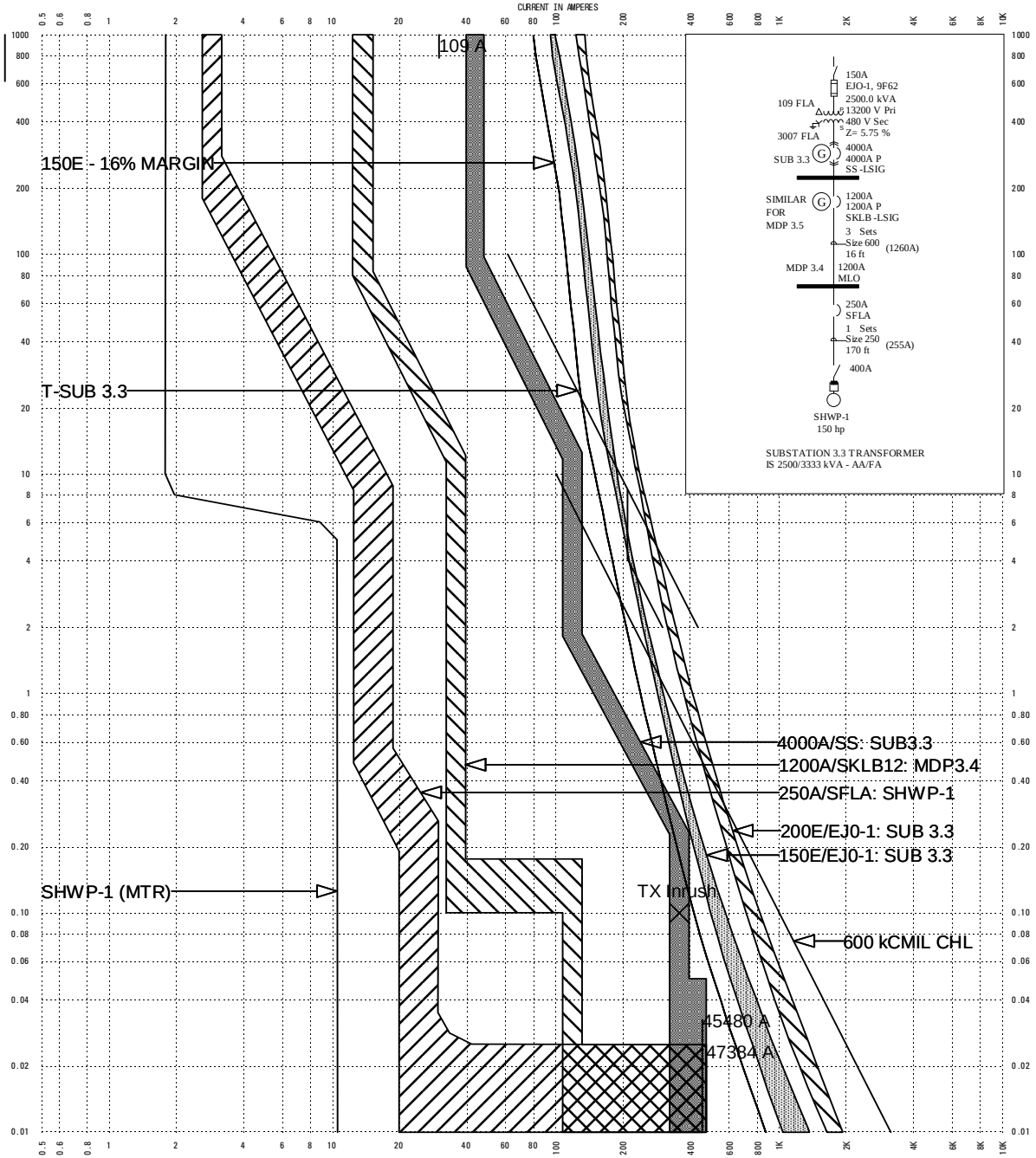
Device Name:	125A/RK5: FREIGHT ELEV	TCC Name:	tccN3.3C.tcc
Bus Name:	FREIGHT ELEV	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	GOULD SHAWMUT		
Description:	15-600A		
Type:	TRS, 600V Class RK5		
AIC Rating:	200kA	Fault Duty:	12423.2A
Cartridge:	TRS 600V 200A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Size:	125A		

Device Name:	FREIGHT ELEVATOR	TCC Name:	tccN3.3C.tcc
Bus Name:	FREIGHT ELEV	Bus Voltage:	480V
		Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Description:	Motor Starting Curve	Inrush:	5.9 (566.4A)
Rated Size:	75HP (1 of 1 Plotted)	FLA+Load Adder:	96.0A + 0.0A
Power Factor:	0.800	Starting Time:	10.00s
Efficiency:	0.88	Full Voltage (Square Transient)	

DWG#: tccN3.3C
February 27, 2009

VOLTAGE: 480
PA Convention CenterPhiladelphia, PA

CURRENT SCALE: x 100
CPSI#8159



DWG#: tccN3.3D
February 27, 2009

VOLTAGE: 480
PA Convention CenterPhiladelphia, PA

CURRENT SCALE: x 100
CPSI#8159

Device Name: 200E/EJ0-1: SUB 3.3 — TCC Name: tccN3.3D.tcc
Bus Name: — Bus Voltage: 13200.0V
Function Name: Phase
Manufacturer: GE
Description: 20E-300E
Type: 9F62 EJ0-1, 15.5kV E-Rated +
AIC Rating: 50kA — Fault Duty: 7032.0A
Cartridge: EJO-1, 9F62 15500V 200A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Size: 200A

Device Name: 150E/EJ0-1: SUB 3.3 — TCC Name: tccN3.3D.tcc
Bus Name: T-SUB 3.3 PRI — Bus Voltage: 13200.0V
Function Name: Phase
Manufacturer: GE
Description: 20E-300E
Type: 9F62 EJ0-1, 15.5kV E-Rated +
AIC Rating: 50kA — Fault Duty: 7038.0A
Cartridge: EJO-1, 9F62 15500V 150A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Size: 150A

Device Name: 4000A/SS: SUB3.3 — TCC Name: tccN3.3D.tcc
Bus Name: SUB 3.3 — Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: GE
Description: LSI, 4000AS
Type: SS, SH PowerBreak II, MVT Plus/PM
AIC Rating: 100kA ShortTime:42 — Fault Duty: 47384.3A
Frame: SS 480V 4000A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Sensor: 4000A
Plug: 4000A
Setting: 1) LTPU (0.5-1.0 x P) 1 (4000A)
2) LTD (1-4) 1
3) STPU (1.5-9 x LTPU) 3 (12000A)
4) STD (Min-Max) Min I^2 t In
5) INST (1.5-9 x P) 9 (36000A)

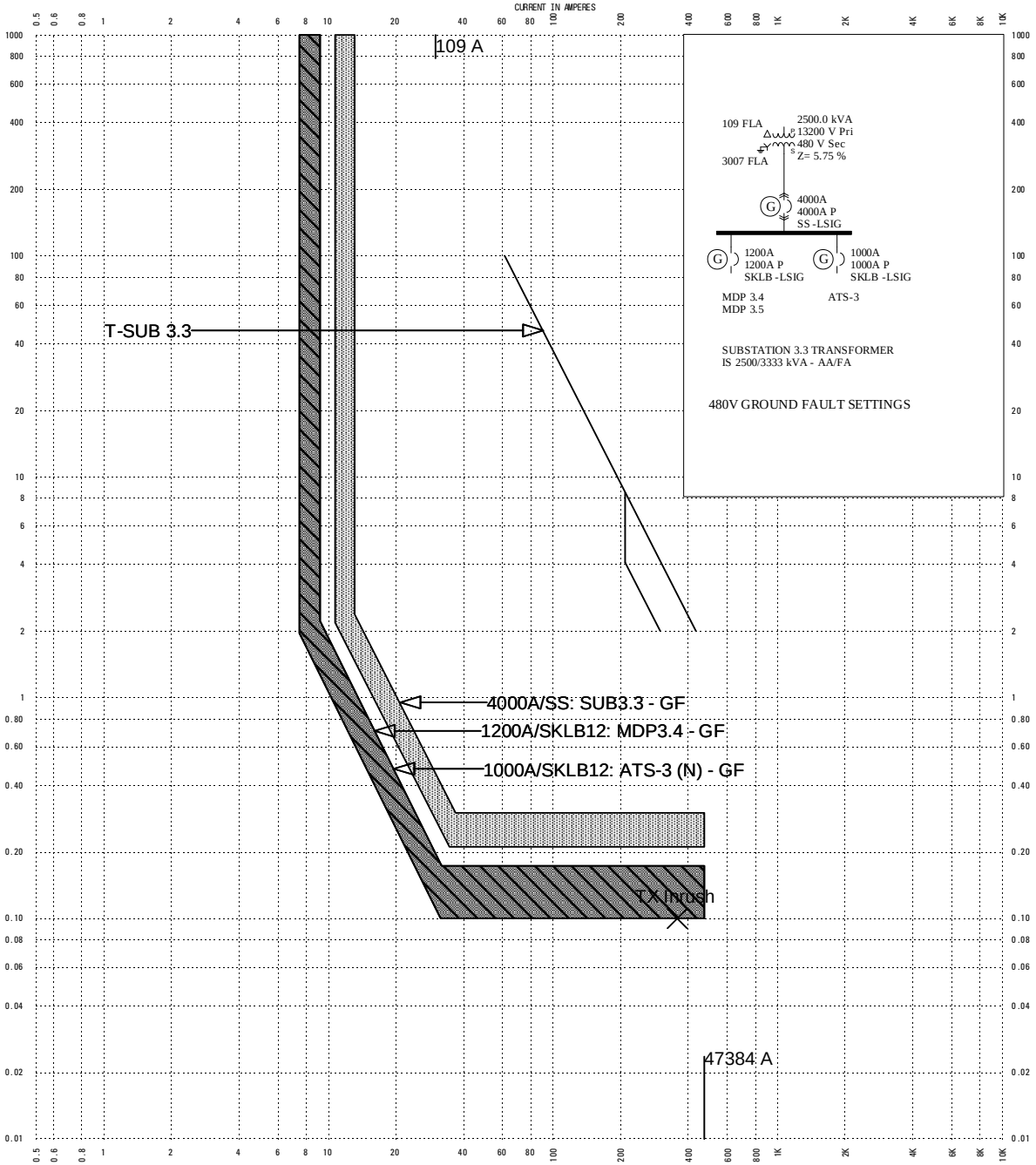
Device Name: 1200A/SKLB12: MDP3.4 — TCC Name: tccN3.3D.tcc
Bus Name: SUB 3.3 — Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: GE
Description: LSI, 300-1200A
Type: SK, MVT Plus/PM +
AIC Rating: 65kA — Fault Duty: 47384.3A
Frame: SKLB 480V 1200A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Sensor: 1200A
Plug: 1200A
Setting: 1) LTPU (0.5-1.0 x P) 1 (1200A)
2) LTD (1-4) 1
3) STPU (1.5-9 x LTPU) 3 (3600A)
4) STD (1-4) 1 I^2 t Out
5) INST (1.5-10 x P) 10 (12000A)

Device Name: 250A/SFLA: SHWP-1 — TCC Name: tccN3.3D.tcc
Bus Name: MDP 3.4 — Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: GE
Description: 70-250A
Type: SFLA, Spectra RMS
AIC Rating: 65kA — Fault Duty: 45479.7A
Frame: SFLA 480V 250A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Trip: 250A
Setting: 1) MAX

Device Name: SHWP-1 (MTR) — TCC Name: tccN3.3D.tcc
Bus Name: SHWP-1 — Bus Voltage: 480V
Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Description: Motor Starting Curve — Inrush: 5.9 (1062.0A)
Rated Size: 150HP (1 of 1 Plotted) — FLA+Load Adder: 180.0A + 0.0A
Power Factor: 0.800 — Starting Time: 10.00s
Efficiency: 0.93 — Full Voltage (Square Transient)

Device Name: T-SUB 3.3 — TCC Name: tccN3.3D.tcc
Bus Name: T-SUB 3.3 PRI — Bus Voltage: 13200V / 480V
Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Description: 2-Winding Transformer Damage Curve — Rated Volts: 13200 LL/480 LL
Nominal Size: 2500.0kVA
Impedance (%Z): 5.7500 — Pri Connection: Delta
Inrush Factor: 12.0x — Sec Connection: Wye-Ground

Device Name: 600 kCMIL CHL — TCC Name: tccN3.3D.tcc
Bus Name: — Bus Voltage: 480V
Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Description: Cable Damage Curve — Qty/Ph: 1
Size: 600 — Cont. Temp: 75 deg C.



Device Name: 4000A/SS: SUB3.3 - GF
Bus Name: SUB 3.3
Function Name: Ground
Manufacturer: GE
Description: GF, 4000AS
Type: SS, SH PowerBreak II, MVT Plus/PM
AIC Rating: 100kA ShortTime:42
Frame: SS 480V 4000A
Time Multiplier: 1
Sensor: 4000A
Plug: 4000A
Setting: 1) GFPU (0.2-0.3 x S) 0.3 (1200A)
2) GFD (Min-Max) Int I^2 t In

TCC Name: tccN3.3E.tcc
Bus Voltage: 480.0V
Fault Duty: 47384.3A
Curve Multiplier: 1
Time Adder: 0

Device Name: 1200A/SKLB12: MDP3.4 - GF
Bus Name: SUB 3.3
Function Name: Ground
Manufacturer: GE
Description: GF, 800-1200A Sensors
Type: SK, MVT Plus/PM
AIC Rating: 65kA
Frame: SKL 480V 1200A
Time Multiplier: 1
Sensor: 1200A
Plug: 1200A
Setting: 1) GFPU (0.2-1.0 x S) 0.7 (840A)
2) GFD (1-4) 1 I^2 t In

TCC Name: tccN3.3E.tcc
Bus Voltage: 480.0V
Fault Duty: 47384.3A
Curve Multiplier: 1
Time Adder: 0

Device Name: 1000A/SKLB12: ATS-3 (N) - GF
Bus Name: SUB 3.3
Function Name: Ground
Manufacturer: GE
Description: GF, 800-1200A Sensors
Type: SK, MVT Plus/PM
AIC Rating: 65kA
Frame: SKL 480V 1200A
Time Multiplier: 1
Sensor: 1200A
Plug: 1000A
Setting: 1) GFPU (0.2-1.0 x S) 0.7 (840A)
2) GFD (1-4) 1 I^2 t In

TCC Name: tccN3.3E.tcc
Bus Voltage: 480.0V
Fault Duty: 47384.3A
Curve Multiplier: 1
Time Adder: 0

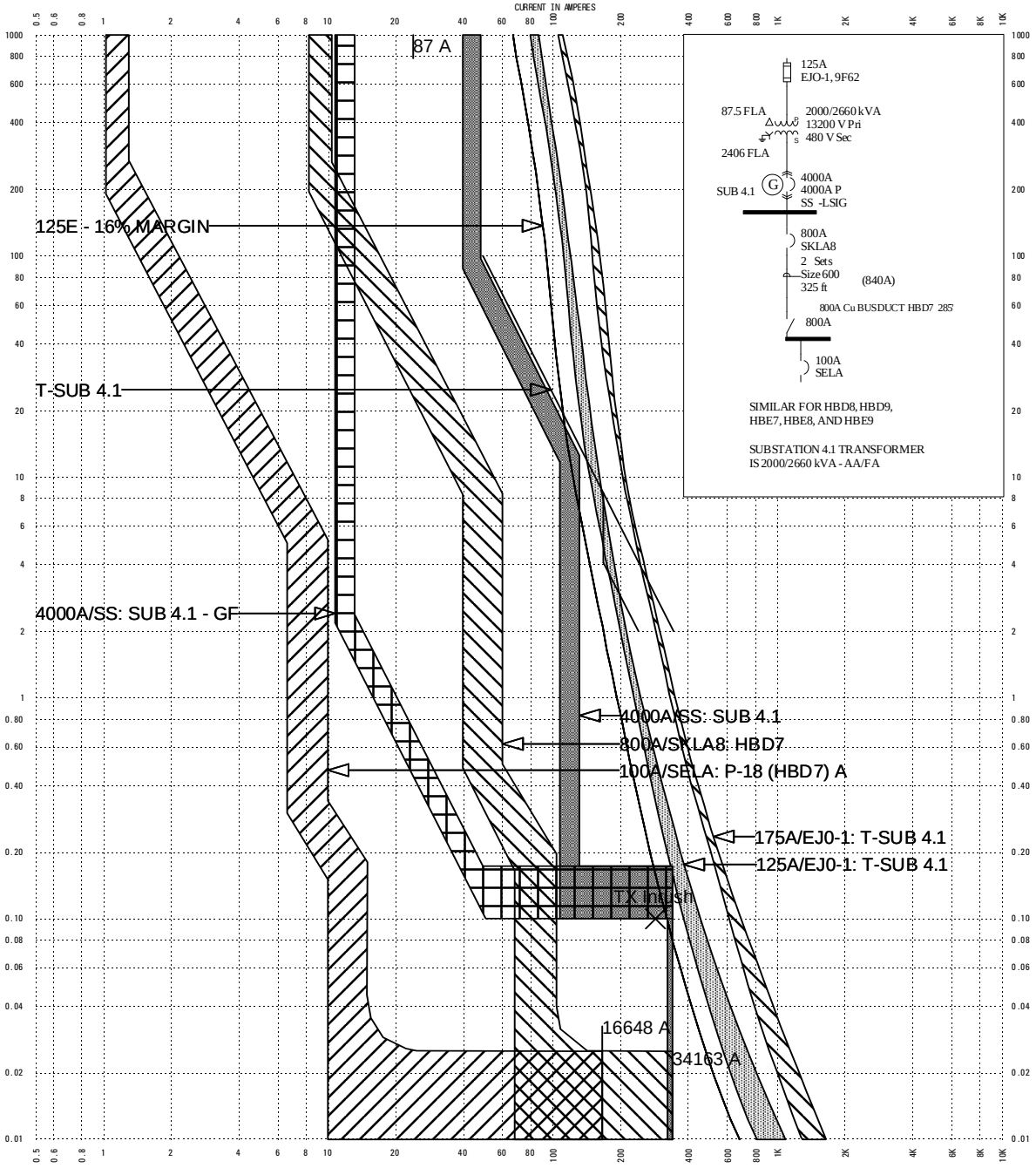
Device Name: T-SUB 3.3
Bus Name: T-SUB 3.3 PRI
Time Multiplier: 1
Description: 2-Winding Transformer Damage Curve
Nominal Size: 2500.0kVA
Impedance (%Z): 5.7500
Inrush Factor: 12.0x

TCC Name: tccN3.3E.tcc
Bus Voltage: 13200V / 480V
Curve Multiplier: 1
Time Adder: 0
Rated Volts: 13200 LL/480 LL
Pri Connection: Delta
Sec Connection: Wye-Ground

DWG#: tccN3.3E
February 27, 2009

VOLTAGE: 480
PA Convention CenterPhiladelphia, PA

CURRENT SCALE: x 100
CPSI#8159



Device Name: 175A/EJ0-1: T-SUB 4.1 | TCC Name: tccN4.1.tcc
Bus Name: | Bus Voltage: 13200.0V
Function Name: Phase
Manufacturer: GE
Description: 20E-300E
Type: 9F62 EJ0-1, 15.5kV E-Rated +
AIC Rating: 50kA | Fault Duty: 6748.0A
Cartridge: EJO-1, 9F62 15500V 175A | Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Size: 175A

Device Name: 125A/EJ0-1: T-SUB 4.1 | TCC Name: tccN4.1.tcc
Bus Name: T-SUB 4.1 PRI | Bus Voltage: 13200.0V
Function Name: Phase
Manufacturer: GE
Description: 20E-300E
Type: 9F62 EJ0-1, 15.5kV E-Rated +
AIC Rating: 50kA | Fault Duty: 6767.9A
Cartridge: EJO-1, 9F62 15500V 125A | Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Size: 125A

Device Name: 4000A/SS: SUB 4.1 | TCC Name: tccN4.1.tcc
Bus Name: SUB 4.1 | Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: GE
Description: LSI, 4000AS
Type: SS, SH PowerBreak II, MVT Plus/PM
AIC Rating: 100kA ShortTime:42 | Fault Duty: 34162.9A
Frame: SS 480V 4000A | Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Sensor: 4000A
Plug: 4000A
Setting: 1) LTPU (0.5-1.0 x P) 1 (4000A)
2) LTD (1-4) 1
3) STPU (1.5-9 x LTPU) 3 (12000A)
4) STD (Min-Max) Min I^2 t Out
5) INST (1.5-9 x P) 9 (36000A)

Device Name: 800A/SKLA8: HBD7 | TCC Name: tccN4.1.tcc
Bus Name: SUB 4.1 | Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: GE
Description: 300-1200A
Type: SKLA, Spectra RMS +
AIC Rating: 65kA | Fault Duty: 34162.9A
Frame: SKLA8 480V 800A | Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Trip: 800A
Setting: 1) MAX

Device Name: 100A/SELA: P-18 (HBD7) A | TCC Name: tccN4.1.tcc
Bus Name: HBD7 BUSWAY01 | Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: GE
Description: 15-150A
Type: SELA, Spectra RMS
AIC Rating: 65kA | Fault Duty: 16647.9A
Frame: SELA 480V 100A | Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Trip: 100A
Setting: 1) MAX

Device Name: T-SUB 4.1 | TCC Name: tccN4.1.tcc
Bus Name: T-SUB 4.1 PRI | Bus Voltage: 13200V / 480V
Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Description: 2-Winding Transformer Damage Curve | Rated Volts: 13200 LL/480 LL
Nominal Size: 2000.0kVA
Impedance (%Z): 5.7500 | Pri Connection: Delta
Inrush Factor: 12.0x | Sec Connection: Wye-Ground

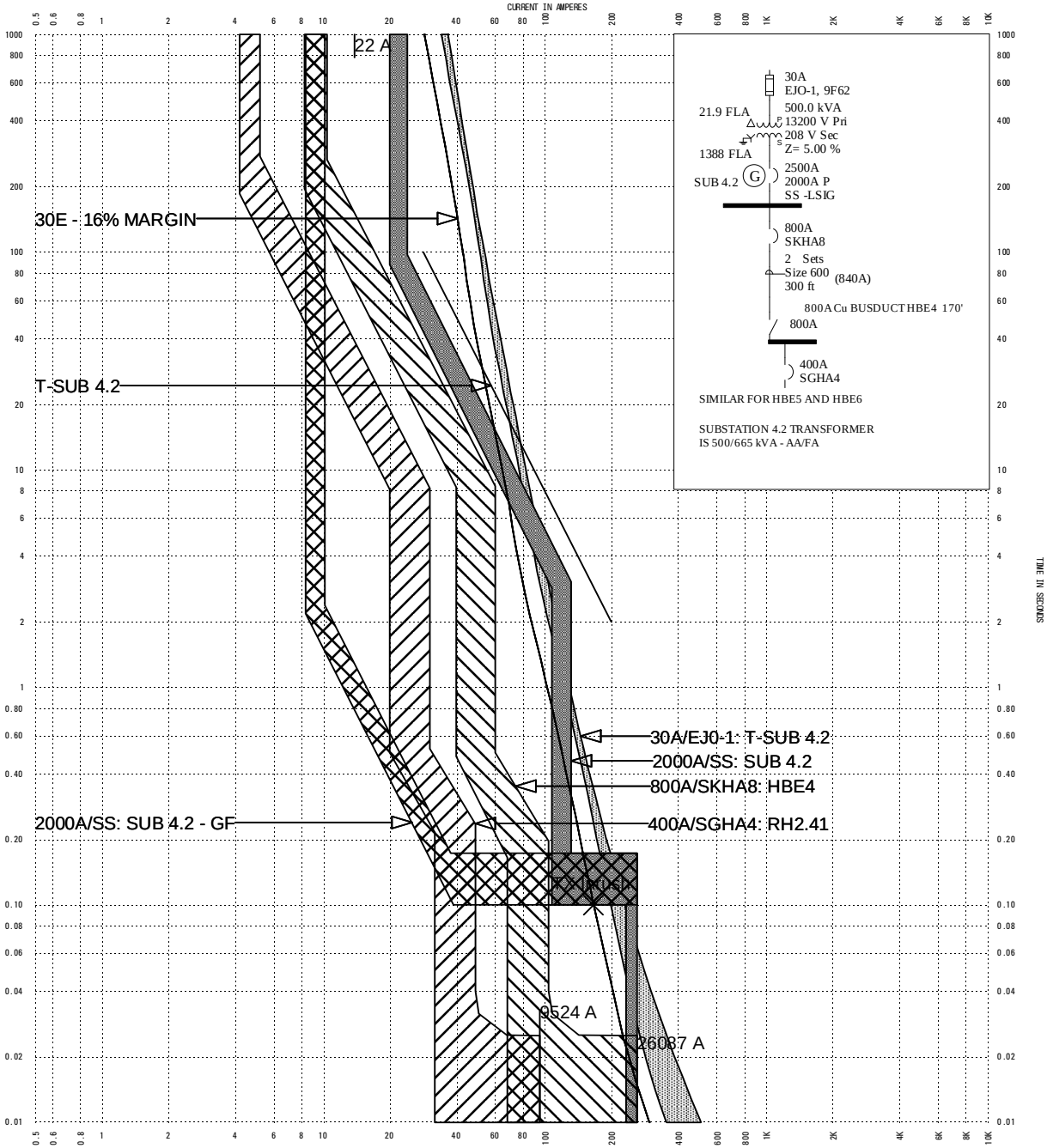
Device Name: 4000A/SS: SUB 4.1 - GF | TCC Name: tccN4.1.tcc
Bus Name: SUB 4.1 | Bus Voltage: 480.0V
Function Name: Ground
Manufacturer: GE
Description: GF, 4000AS
Type: SS, SH PowerBreak II, MVT Plus/PM
AIC Rating: 100kA ShortTime:42 | Fault Duty: 34162.9A
Frame: SS 480V 4000A | Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Sensor: 4000A
Plug: 4000A
Setting: 1) GFPU (0.2-0.3 x S) 0.3 (1200A)
2) GFD (Min-Max) Min I^2 t In

Device Name: 125E - 16% MARGIN | TCC Name: tccN4.1.tcc
Bus Name: | Bus Voltage: 13200.0V
Function Name: Phase
Manufacturer: GE
Description: 20E-300E

DWG#: tccN4.1
February 27, 2009

VOLTAGE: 480
PA Convention CenterPhiladelphia, PA

CURRENT SCALE: x 100
CPSI#8159



Device Name: 30A/EJ0-1: T-SUB 4.2 — TCC Name: tccN4.2.tcc
Bus Name: T-SUB 4.2 PRI — Bus Voltage: 13200.0V
Function Name: Phase
Manufacturer: GE
Description: 20E-300E
Type: 9F62 EJ0-1, 15.5kV E-Rated +
AIC Rating: 50kA — Fault Duty: 6788.4A
Cartridge: EJO-1, 9F62 15500V 30A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Size: 30A

Device Name: 2000A/SS: SUB 4.2 — TCC Name: tccN4.2.tcc
Bus Name: SUB 4.2 — Bus Voltage: 208.0V
Function Name: Phase
Manufacturer: GE
Description: LSI, 2500-3000AS
Type: SS, SH PowerBreak II, MVT Plus/PM
AIC Rating: 100kA ShortTime:42 — Fault Duty: 26087.4A
Frame: SS 240V 2500A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Sensor: 2500A
Plug: 2000A
Setting: 1) LTPU (0.5-1.0 x P) 1 (2000A)
2) LTD (1-4) 1
3) STPU (1.5-9 x LTPU) 6 (12000A)
4) STD (Min-Max) Min I^2 t Out
5) INST (1.5-13 x P) 13 (26000A)

Device Name: 800A/SKHA8: HBE4 — TCC Name: tccN4.2.tcc
Bus Name: SUB 4.2 — Bus Voltage: 208.0V
Function Name: Phase
Manufacturer: GE
Description: 300-1200A
Type: SKHA, Spectra RMS +
AIC Rating: 65kA — Fault Duty: 26087.4A
Frame: SKHA8 240V 800A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Trip: 800A
Setting: 1) MAX

Device Name: 400A/SGHA4: RH2.41 — TCC Name: tccN4.2.tcc
Bus Name: HBE4 BUSWAY01 — Bus Voltage: 208.0V
Function Name: Phase
Manufacturer: GE
Description: 125-600A
Type: SGHA, Spectra RMS +
AIC Rating: 65kA — Fault Duty: 9524.4A
Frame: SGHA4 240V 400A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Trip: 400A
Setting: 1) MAX

Device Name: T-SUB 4.2 — TCC Name: tccN4.2.tcc
Bus Name: T-SUB 4.2 PRI — Bus Voltage: 13200V / 208V
Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Description: 2-Winding Transformer Damage Curve — Rated Volts: 13200 LL/208 LL
Nominal Size: 500.0kVA
Impedance (%Z): 5.0000 — Pri Connection: Delta
Inrush Factor: 12.0x — Sec Connection: Wye-Ground

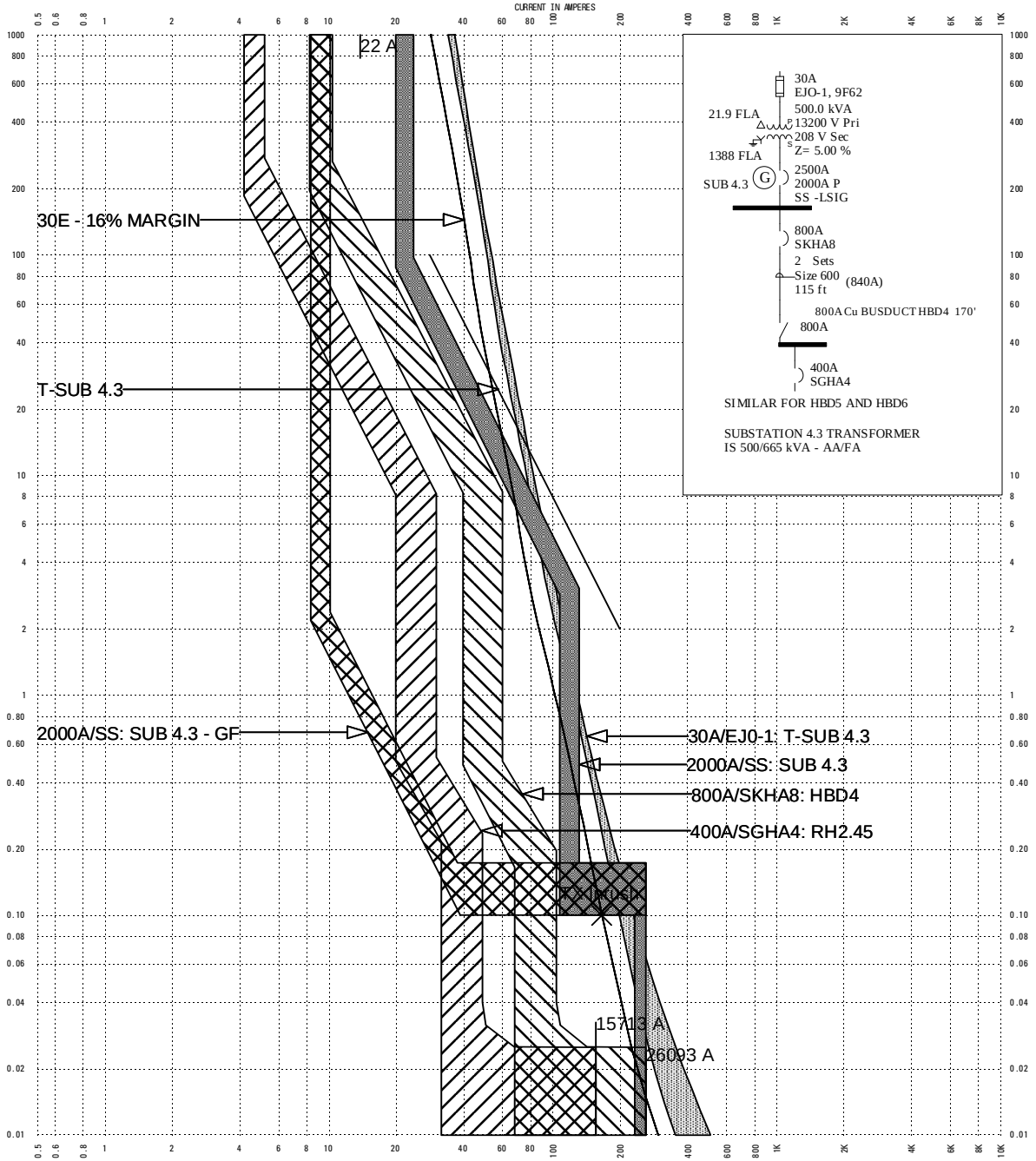
Device Name: 2000A/SS: SUB 4.2 - GF — TCC Name: tccN4.2.tcc
Bus Name: SUB 4.2 — Bus Voltage: 208.0V
Function Name: Ground
Manufacturer: GE
Description: GF, 2500-3000AS
Type: SS, SH PowerBreak II, MVT Plus/PM
AIC Rating: 100kA ShortTime:42 — Fault Duty: 26087.4A
Frame: SS 240V 2500A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Sensor: 2500A
Plug: 2000A
Setting: 1) GFPU (0.2-0.37 x S) 0.37 (925A)
2) GFD (Min-Max) Min I^2 t In

Device Name: 30E - 16% MARGIN — TCC Name: tccN4.2.tcc
Bus Name: — Bus Voltage: 13200.0V
Function Name: Phase
Manufacturer: GE
Description: 20E-300E
Type: 9F62 EJ0-1, 15.5kV 16% MARGIN +
AIC Rating: 50kA — Fault Duty: 200000.0A
Cartridge: EJO-1, 30E 15500V 30A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Size: 30A

DWG#: tccN4.2
February 27, 2009

VOLTAGE: 208
PA Convention CenterPhiladelphia, PA

CURRENT SCALE: x 100
CPSI#8159



Device Name: 30A/EJ0-1: T-SUB 4.3 — TCC Name: tccN4.3.tcc
Bus Name: T-SUB 4.3 PRI — Bus Voltage: 13200.0V
Function Name: Phase
Manufacturer: GE
Description: 20E-300E
Type: 9F62 EJ0-1, 15.5kV E-Rated +
AIC Rating: 50kA — Fault Duty: 6809.0A
Cartridge: EJO-1, 9F62 15500V 30A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Size: 30A

Device Name: 2000A/SS: SUB 4.3 — TCC Name: tccN4.3.tcc
Bus Name: SUB 4.3 — Bus Voltage: 208.0V
Function Name: Phase
Manufacturer: GE
Description: LSI, 2500-3000AS
Type: SS, SH PowerBreak II, MVT Plus/PM
AIC Rating: 100kA ShortTime:42 — Fault Duty: 26092.8A
Frame: SS 240V 2500A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Sensor: 2500A
Plug: 2000A
Setting: 1) LTPU (0.5-1.0 x P) 1 (2000A)
2) LTD (1-4) 1
3) STPU (1.5-9 x LTPU) 6 (12000A)
4) STD (Min-Max) Min I^2 t Out
5) INST (1.5-13 x P) 13 (26000A)

Device Name: 800A/SKHA8: HBD4 — TCC Name: tccN4.3.tcc
Bus Name: SUB 4.3 — Bus Voltage: 208.0V
Function Name: Phase
Manufacturer: GE
Description: 300-1200A
Type: SKHA, Spectra RMS +
AIC Rating: 65kA — Fault Duty: 26092.8A
Frame: SKHA8 240V 800A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Trip: 800A
Setting: 1) MAX

Device Name: 400A/SGHA4: RH2.45 — TCC Name: tccN4.3.tcc
Bus Name: HBD4 BUSWAY01 — Bus Voltage: 208.0V
Function Name: Phase
Manufacturer: GE
Description: 125-600A
Type: SGHA, Spectra RMS +
AIC Rating: 65kA — Fault Duty: 15712.6A
Frame: SGHA4 240V 400A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Trip: 400A
Setting: 1) MAX

Device Name: T-SUB 4.3 — TCC Name: tccN4.3.tcc
Bus Name: T-SUB 4.3 PRI — Bus Voltage: 13200V / 208V
Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Description: 2-Winding Transformer Damage Curve — Rated Volts: 13200 LL/208 LL
Nominal Size: 500.0kVA
Impedance (%Z): 5.0000 — Pri Connection: Delta
Inrush Factor: 12.0x — Sec Connection: Wye-Ground

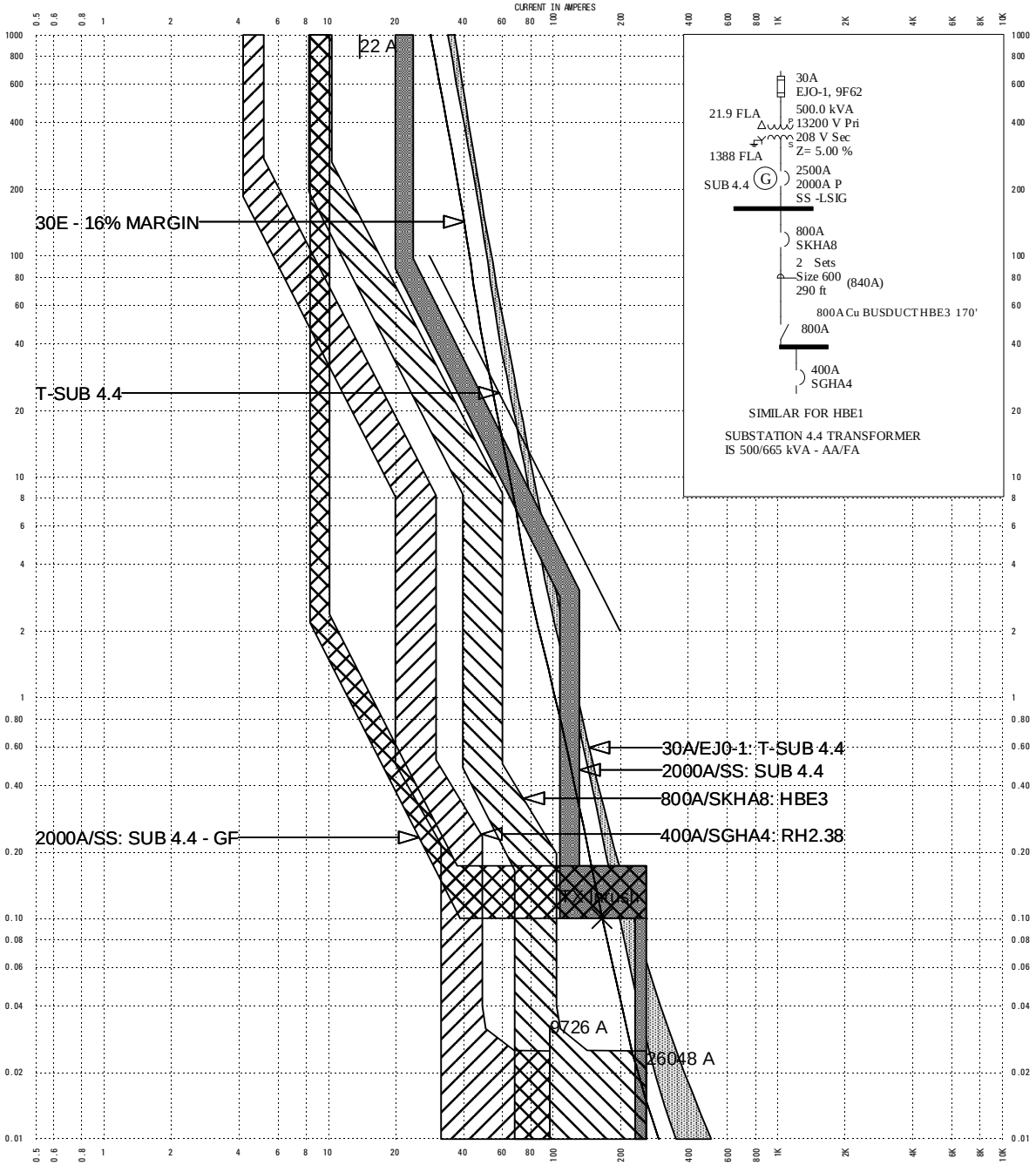
Device Name: 2000A/SS: SUB 4.3 - GF — TCC Name: tccN4.3.tcc
Bus Name: SUB 4.3 — Bus Voltage: 208.0V
Function Name: Ground
Manufacturer: GE
Description: GF, 2500-3000AS
Type: SS, SH PowerBreak II, MVT Plus/PM
AIC Rating: 100kA ShortTime:42 — Fault Duty: 26092.8A
Frame: SS 240V 2500A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Sensor: 2500A
Plug: 2000A
Setting: 1) GFPU (0.2-0.37 x S) 0.37 (925A)
2) GFD (Min-Max) Min I^2 t In

Device Name: 30E - 16% MARGIN — TCC Name: tccN4.3.tcc
Bus Name: — Bus Voltage: 13200.0V
Function Name: Phase
Manufacturer: GE
Description: 20E-300E
Type: 9F62 EJ0-1, 15.5kV 16% MARGIN +
AIC Rating: 50kA — Fault Duty: 200000.0A
Cartridge: EJO-1, 30E 15500V 30A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Size: 30A

DWG#: tccN4.3
February 27, 2009

VOLTAGE: 208
PA Convention CenterPhiladelphia, PA

CURRENT SCALE: x 100
CPSI#8159



Device Name: 30A/EJ0-1: T-SUB 4.4 — TCC Name: tccN4.4.tcc
Bus Name: T-SUB 4.4 PRI — Bus Voltage: 13200.0V
Function Name: Phase
Manufacturer: GE
Description: 20E-300E
Type: 9F62 EJ0-1, 15.5kV E-Rated +
AIC Rating: 50kA — Fault Duty: 6639.7A
Cartridge: EJO-1, 9F62 15500V 30A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Size: 30A

Device Name: 2000A/SS: SUB 4.4 — TCC Name: tccN4.4.tcc
Bus Name: SUB 4.4 — Bus Voltage: 208.0V
Function Name: Phase
Manufacturer: GE
Description: LSI, 2500-3000AS
Type: SS, SH PowerBreak II, MVT Plus/PM
AIC Rating: 100kA ShortTime:42 — Fault Duty: 26048.4A
Frame: SS 240V 2500A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Sensor: 2500A
Plug: 2000A
Setting: 1) LTPU (0.5-1.0 x P) 1 (2000A)
2) LTD (1-4) 1
3) STPU (1.5-9 x LTPU) 6 (12000A)
4) STD (Min-Max) Min I^2 t Out
5) INST (1.5-13 x P) 13 (26000A)

Device Name: 800A/SKHA8: HBE3 — TCC Name: tccN4.4.tcc
Bus Name: SUB 4.4 — Bus Voltage: 208.0V
Function Name: Phase
Manufacturer: GE
Description: 300-1200A
Type: SKHA, Spectra RMS +
AIC Rating: 65kA — Fault Duty: 26048.4A
Frame: SKHA8 240V 800A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Trip: 800A
Setting: 1) MAX

Device Name: 400A/SGHA4: RH2.38 — TCC Name: tccN4.4.tcc
Bus Name: HBE3 BUSWAY01 — Bus Voltage: 208.0V
Function Name: Phase
Manufacturer: GE
Description: 125-600A
Type: SGHA, Spectra RMS +
AIC Rating: 65kA — Fault Duty: 9726.0A
Frame: SGHA4 240V 400A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Trip: 400A
Setting: 1) MAX

Device Name: T-SUB 4.4 — TCC Name: tccN4.4.tcc
Bus Name: T-SUB 4.4 PRI — Bus Voltage: 13200V / 208V
Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Description: 2-Winding Transformer Damage Curve — Rated Volts: 13200 LL/208 LL
Nominal Size: 500.0kVA
Impedance (%Z): 5.0000 — Pri Connection: Delta
Inrush Factor: 12.0x — Sec Connection: Wye-Ground

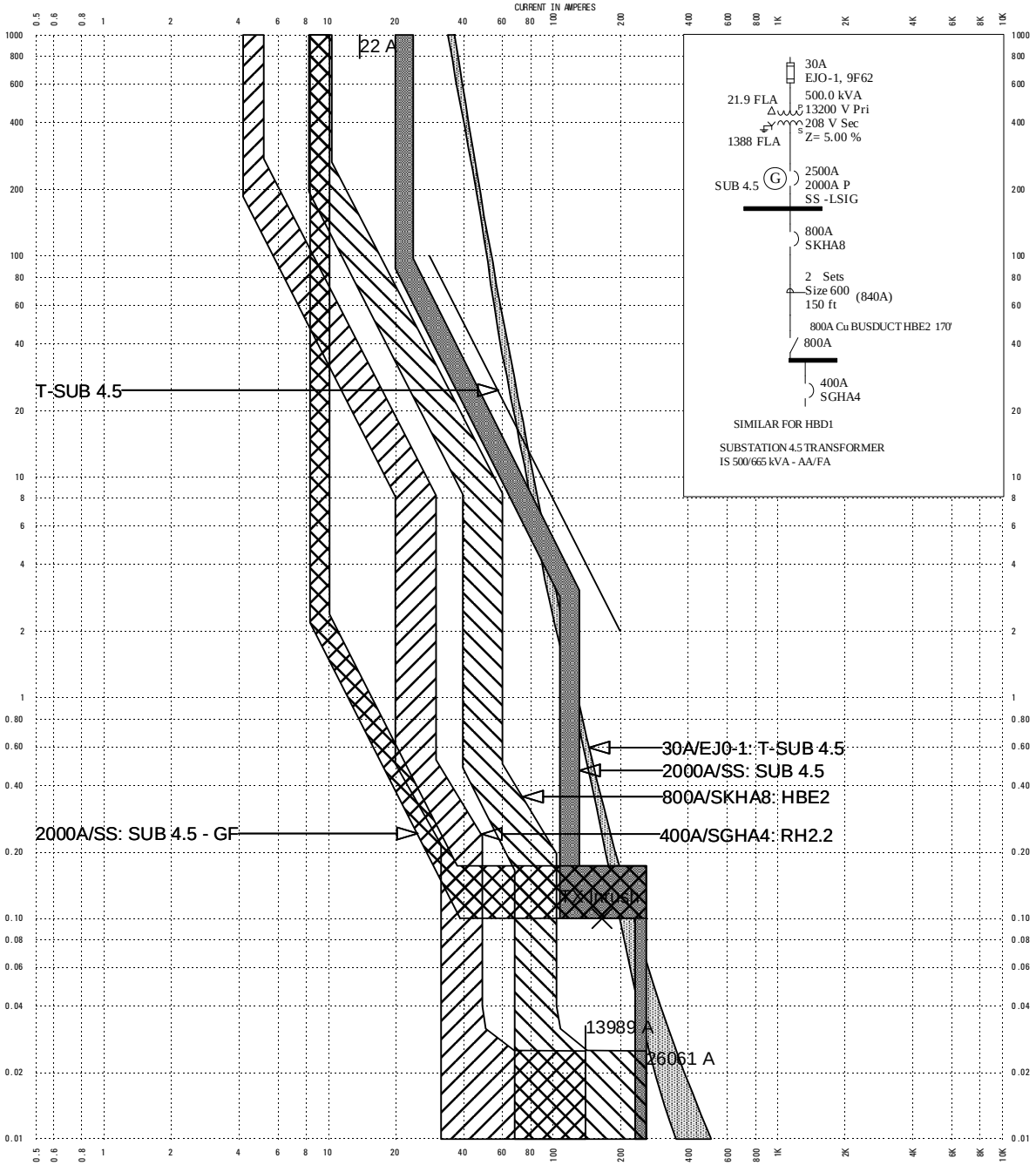
Device Name: 2000A/SS: SUB 4.4 - GF — TCC Name: tccN4.4.tcc
Bus Name: SUB 4.4 — Bus Voltage: 208.0V
Function Name: Ground
Manufacturer: GE
Description: GF, 2500-3000AS
Type: SS, SH PowerBreak II, MVT Plus/PM
AIC Rating: 100kA ShortTime:42 — Fault Duty: 26048.4A
Frame: SS 240V 2500A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Sensor: 2500A
Plug: 2000A
Setting: 1) GFPU (0.2-0.37 x S) 0.37 (925A)
2) GFD (Min-Max) Min I^2 t In

Device Name: 30E - 16% MARGIN — TCC Name: tccN4.4.tcc
Bus Name: — Bus Voltage: 13200.0V
Function Name: Phase
Manufacturer: GE
Description: 20E-300E
Type: 9F62 EJ0-1, 15.5kV 16% MARGIN +
AIC Rating: 50kA — Fault Duty: 200000.0A
Cartridge: EJO-1, 30E 15500V 30A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Size: 30A

DWG#: tccN4.4
February 27, 2009

VOLTAGE: 208
PA Convention CenterPhiladelphia, PA

CURRENT SCALE: x 100
CPSI#8159



Device Name: 30A/EJ0-1: T-SUB 4.5 | TCC Name: tccN4.5.tcc
Bus Name: T-SUB 4.5 PRI | Bus Voltage: 13200.0V
Function Name: Phase
Manufacturer: GE
Description: 20E-300E
Type: 9F62 EJ0-1, 15.5kV E-Rated +
AIC Rating: 50kA | Fault Duty: 6686.4A
Cartridge: EJO-1, 9F62 15500V 30A | Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Size: 30A

Device Name: 2000A/SS: SUB 4.5 | TCC Name: tccN4.5.tcc
Bus Name: SUB 4.5 | Bus Voltage: 208.0V
Function Name: Phase
Manufacturer: GE
Description: LSI, 2500-3000AS
Type: SS, SH PowerBreak II, MVT Plus/PM
AIC Rating: 100kA ShortTime:42 | Fault Duty: 26060.7A
Frame: SS 240V 2500A | Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Sensor: 2500A
Plug: 2000A
Setting: 1) LTPU (0.5-1.0 x P) 1 (2000A)
2) LTD (1-4) 1
3) STPU (1.5-9 x LTPU) 6 (12000A)
4) STD (Min-Max) Min I^2 t Out
5) INST (1.5-13 x P) 13 (26000A)

Device Name: 800A/SKHA8: HBE2 | TCC Name: tccN4.5.tcc
Bus Name: SUB 4.5 | Bus Voltage: 208.0V
Function Name: Phase
Manufacturer: GE
Description: 300-1200A
Type: SKHA, Spectra RMS +
AIC Rating: 65kA | Fault Duty: 26060.7A
Frame: SKHA8 240V 800A | Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Trip: 800A
Setting: 1) MAX

Device Name: 400A/SGHA4: RH2.2 | TCC Name: tccN4.5.tcc
Bus Name: HBE2 BUSWAY01 | Bus Voltage: 208.0V
Function Name: Phase
Manufacturer: GE
Description: 125-600A
Type: SGHA, Spectra RMS +
AIC Rating: 65kA | Fault Duty: 13988.8A
Frame: SGHA4 240V 400A | Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Trip: 400A
Setting: 1) MAX

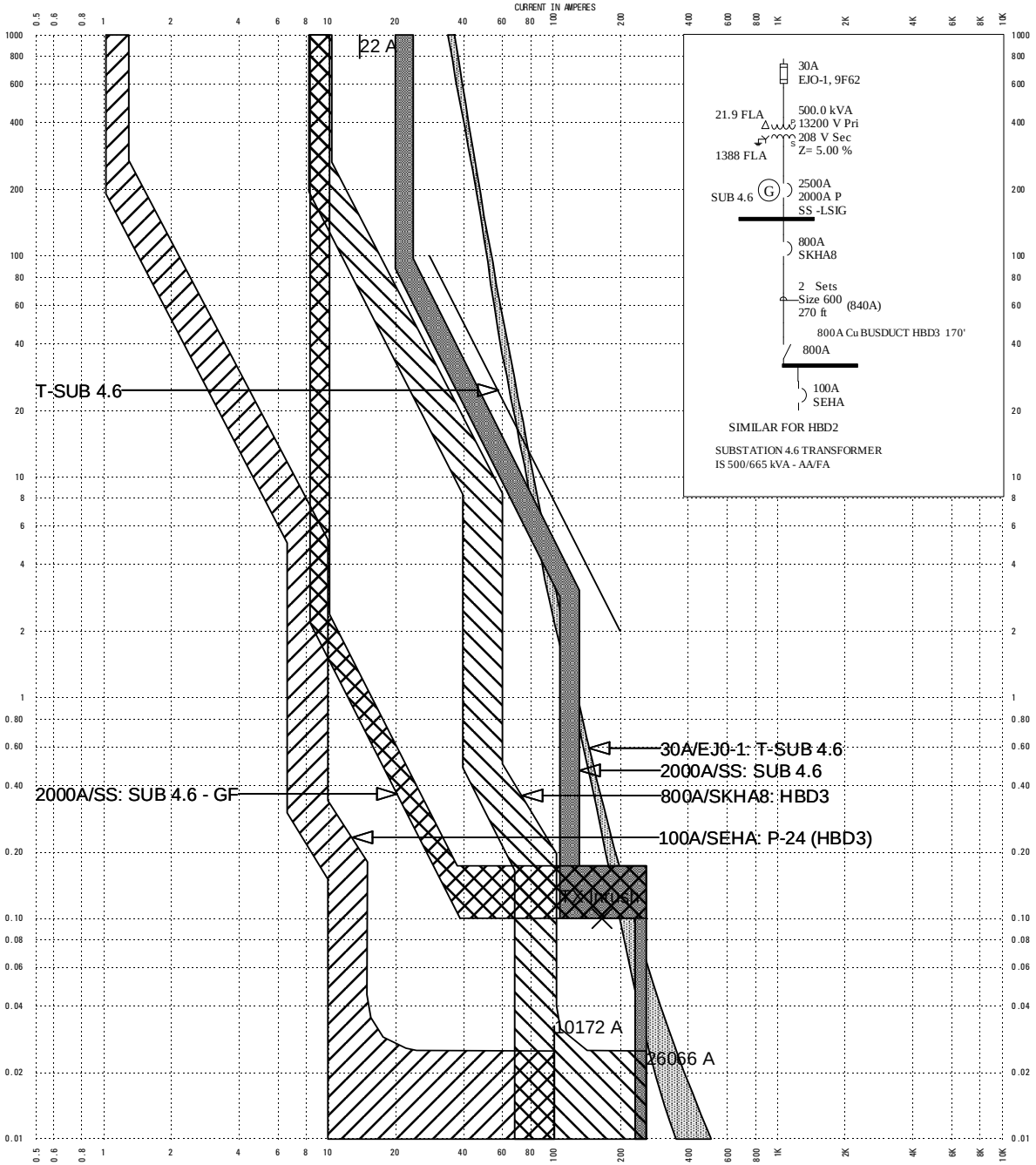
Device Name: T-SUB 4.5 | TCC Name: tccN4.5.tcc
Bus Name: T-SUB 4.5 PRI | Bus Voltage: 13200V / 208V
Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Description: 2-Winding Transformer Damage Curve | Rated Volts: 13200 LL/208 LL
Nominal Size: 500.0kVA
Impedance (%Z): 5.0000 | Pri Connection: Delta
Inrush Factor: 12.0x | Sec Connection: Wye-Ground

Device Name: 2000A/SS: SUB 4.5 - GF | TCC Name: tccN4.5.tcc
Bus Name: SUB 4.5 | Bus Voltage: 208.0V
Function Name: Ground
Manufacturer: GE
Description: GF, 2500-3000AS
Type: SS, SH PowerBreak II, MVT Plus/PM
AIC Rating: 100kA ShortTime:42 | Fault Duty: 26060.7A
Frame: SS 240V 2500A | Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Sensor: 2500A
Plug: 2000A
Setting: 1) GFPU (0.2-0.37 x S) 0.37 (925A)
2) GFD (Min-Max) Min I^2 t In

DWG#: tccN4.5
February 27, 2009

VOLTAGE: 208
PA Convention CenterPhiladelphia, PA

CURRENT SCALE: x 100
CPSI#8159



Device Name: 30A/EJ0-1: T-SUB 4.6 | TCC Name: tccN4.6.tcc
Bus Name: T-SUB 4.6 PRI | Bus Voltage: 13200.0V
Function Name: Phase
Manufacturer: GE
Description: 20E-300E
Type: 9F62 EJ0-1, 15.5kV E-Rated +
AIC Rating: 50kA | Fault Duty: 6705.1A
Cartridge: EJO-1, 9F62 15500V 30A | Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Size: 30A

Device Name: 2000A/SS: SUB 4.6 | TCC Name: tccN4.6.tcc
Bus Name: SUB 4.6 | Bus Voltage: 208.0V
Function Name: Phase
Manufacturer: GE
Description: LSI, 2500-3000AS
Type: SS, SH PowerBreak II, MVT Plus/PM
AIC Rating: 100kA ShortTime:42 | Fault Duty: 26065.6A
Frame: SS 240V 2500A | Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Sensor: 2500A
Plug: 2000A
Setting: 1) LTPU (0.5-1.0 x P) 1 (2000A)
2) LTD (1-4) 1
3) STPU (1.5-9 x LTPU) 6 (12000A)
4) STD (Min-Max) Min I^2 t Out
5) INST (1.5-13 x P) 13 (26000A)

Device Name: 800A/SKHA8: HBD3 | TCC Name: tccN4.6.tcc
Bus Name: SUB 4.6 | Bus Voltage: 208.0V
Function Name: Phase
Manufacturer: GE
Description: 300-1200A
Type: SKHA, Spectra RMS +
AIC Rating: 65kA | Fault Duty: 26065.6A
Frame: SKHA8 240V 800A | Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Trip: 800A
Setting: 1) MAX

Device Name: 100A/SEHA: P-24 (HBD3) | TCC Name: tccN4.6.tcc
Bus Name: HBD3 BUSWAY01 | Bus Voltage: 208.0V
Function Name: Phase
Manufacturer: GE
Description: 15-150A
Type: SEHA, Spectra RMS
AIC Rating: 65kA | Fault Duty: 10172.3A
Frame: SEHA 240V 100A | Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Trip: 100A
Setting: 1) MAX

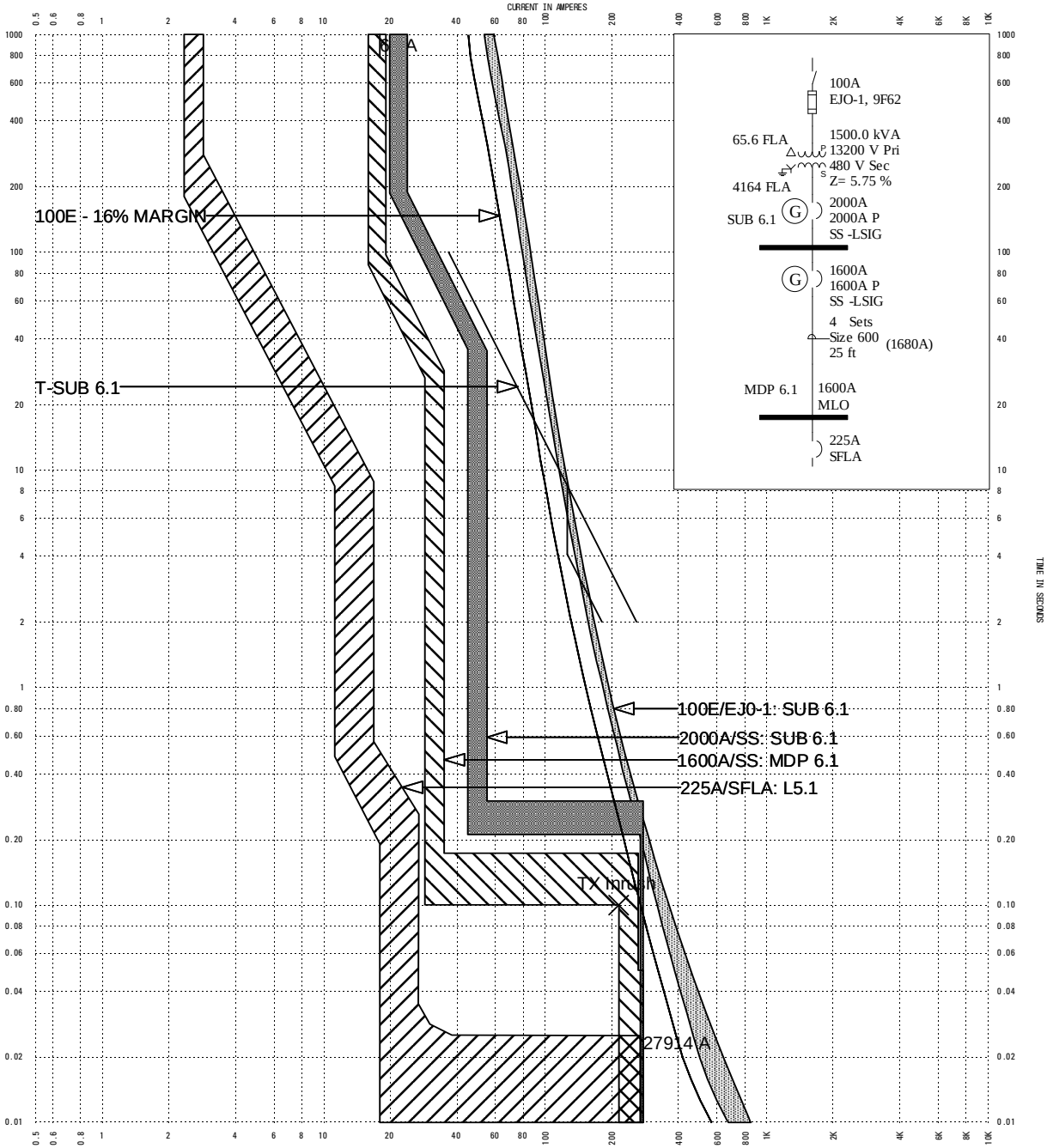
Device Name: T-SUB 4.6 | TCC Name: tccN4.6.tcc
Bus Name: T-SUB 4.6 PRI | Bus Voltage: 13200V / 208V
Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Description: 2-Winding Transformer Damage Curve | Rated Volts: 13200 LL/208 LL
Nominal Size: 500.0kVA
Impedance (%Z): 5.0000 | Pri Connection: Delta
Inrush Factor: 12.0x | Sec Connection: Wye-Ground

Device Name: 2000A/SS: SUB 4.6 - GF | TCC Name: tccN4.6.tcc
Bus Name: SUB 4.6 | Bus Voltage: 208.0V
Function Name: Ground
Manufacturer: GE
Description: GF, 2500-3000AS
Type: SS, SH PowerBreak II, MVT Plus/PM
AIC Rating: 100kA ShortTime:42 | Fault Duty: 26065.6A
Frame: SS 240V 2500A | Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Sensor: 2500A
Plug: 2000A
Setting: 1) GFPU (0.2-0.37 x S) 0.37 (925A)
2) GFD (Min-Max) Min I^2 t In

DWG#: tccN4.6
February 27, 2009

VOLTAGE: 208
PA Convention CenterPhiladelphia, PA

CURRENT SCALE: x 100
CPSI#8159



Device Name: 100E/EJ0-1: SUB 6.1 | TCC Name: tccN6.1A.tcc
Bus Name: T-SUB 6.1 PRI | Bus Voltage: 13200.0V
Function Name: Phase
Manufacturer: GE
Description: 20E-300E
Type: 9F62 EJ0-1, 15.5kV E-Rated +
AIC Rating: 50kA | Fault Duty: 6784.2A
Cartridge: EJO-1, 9F62 15500V 100A | Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Size: 100A

Device Name: T-SUB 6.1 | TCC Name: tccN6.1A.tcc
Bus Name: T-SUB 6.1 PRI | Bus Voltage: 13200V / 480V
Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Description: 2-Winding Transformer Damage Curve | Rated Volts: 13200 LL/480 LL
Nominal Size: 1500.0kVA
Impedance (%Z): 5.7500 | Pri Connection: Delta
Inrush Factor: 12.0x | Sec Connection: Wye-Ground

Device Name: 2000A/SS: SUB 6.1 | TCC Name: tccN6.1A.tcc
Bus Name: SUB 6.1 | Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: GE
Description: LSI, 200-2000AS
Type: SS, SH PowerBreak II, MVT Plus/PM
AIC Rating: 65kA ShortTime:40 | Fault Duty: 27913.8A
Frame: SS 480V 2000A | Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Sensor: 2000A
Plug: 2000A
Setting: 1) LTPU (0.5-1.0 x P) 1 (2000A)
2) LTD (1-4) 2
3) STPU (1.5-9 x LTPU) 2.5 (5000A)
4) STD (Min-Max) Int I^2 t Out
5) INST (1.5-15 x P) 15 (30000A)

Device Name: 1600A/SS: MDP 6.1 | TCC Name: tccN6.1A.tcc
Bus Name: SUB 6.1 | Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: GE
Description: LSI, 200-2000AS
Type: SS, SH PowerBreak II, MVT Plus/PM
AIC Rating: 65kA ShortTime:40 | Fault Duty: 27913.8A
Frame: SS 480V 1600A | Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Sensor: 1600A
Plug: 1600A
Setting: 1) LTPU (0.5-1.0 x P) 1 (1600A)
2) LTD (1-4) 1
3) STPU (1.5-9 x LTPU) 2 (3200A)
4) STD (Min-Max) Min I^2 t Out
5) INST (1.5-15 x P) 15 (24000A)

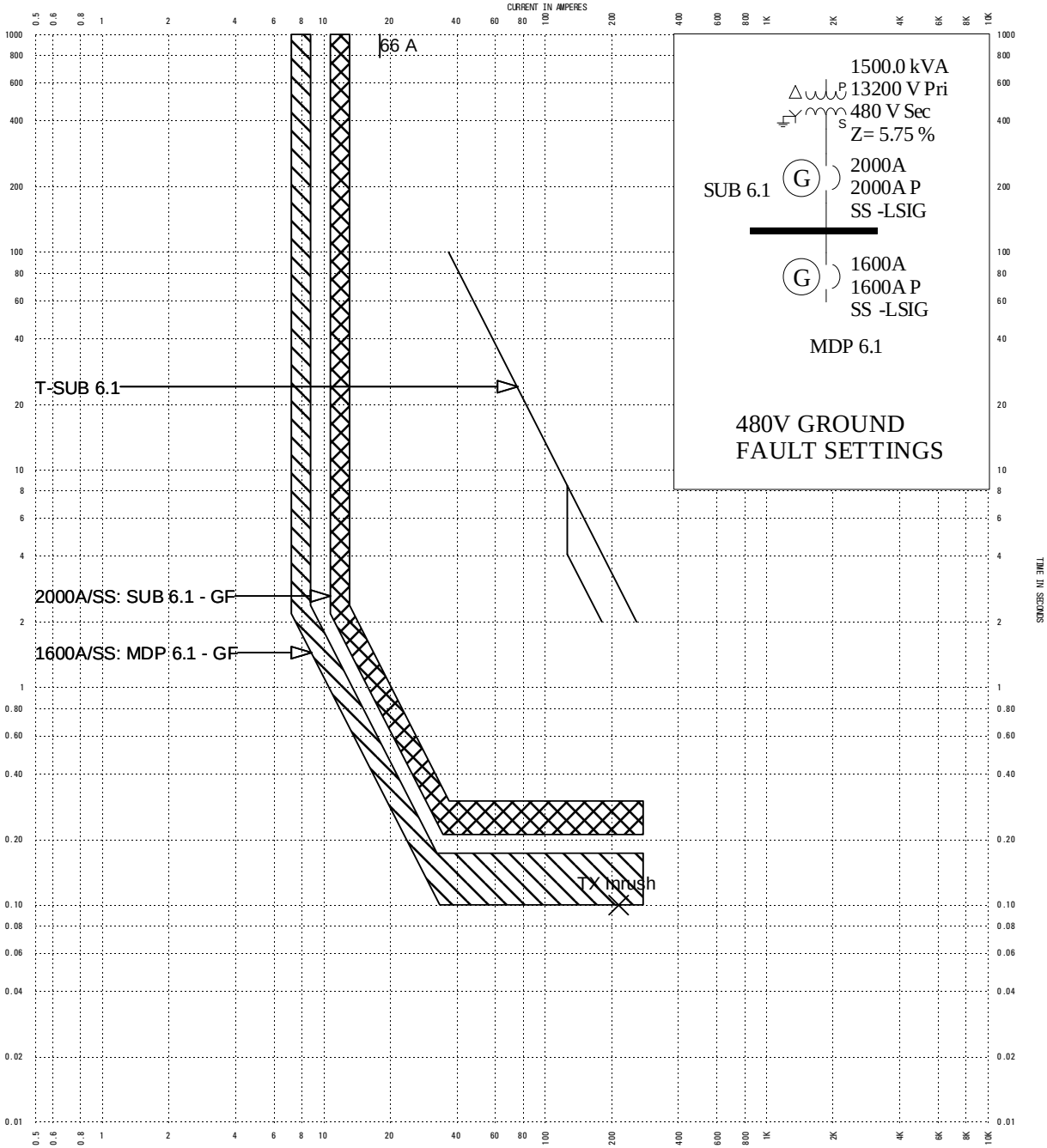
Device Name: 225A/SFLA: L5.1 | TCC Name: tccN6.1A.tcc
Bus Name: MDP 6.1 | Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: GE
Description: 70-250A
Type: SFLA, Spectra RMS
AIC Rating: 65kA | Fault Duty: 27108.1A
Frame: SFLA 480V 250A | Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Trip: 225A
Setting: 1) MAX

Device Name: 100E - 16% MARGIN | TCC Name: tccN6.1A.tcc
Bus Name: | Bus Voltage: 13200.0V
Function Name: Phase
Manufacturer: GE
Description: 20E-300E
Type: 9F62 EJ0-1, 15.5kV 16% MARGIN +
AIC Rating: 50kA | Fault Duty: 200000.0A
Cartridge: EJO-1, 100E 15500V 100A | Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Size: 100A

DWG#: tccN6.1A
February 27, 2009

VOLTAGE: 480
PA Convention CenterPhiladelphia, PA

CURRENT SCALE: x 100
CPSI#8159



Device Name:	T-SUB 6.1	TCC Name:	tccN6.1B.tcc
Bus Name:	T-SUB 6.1 PRI	Bus Voltage:	13200V / 480V
		Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Description:	2-Winding Transformer Damage Curve	Rated Volts:	13200 LL/480 LL
Nominal Size:	1500.0kVA		
Impedance (%Z):	5.7500	Pri Connection:	Delta
Inrush Factor:	12.0x	Sec Connection:	Wye-Ground

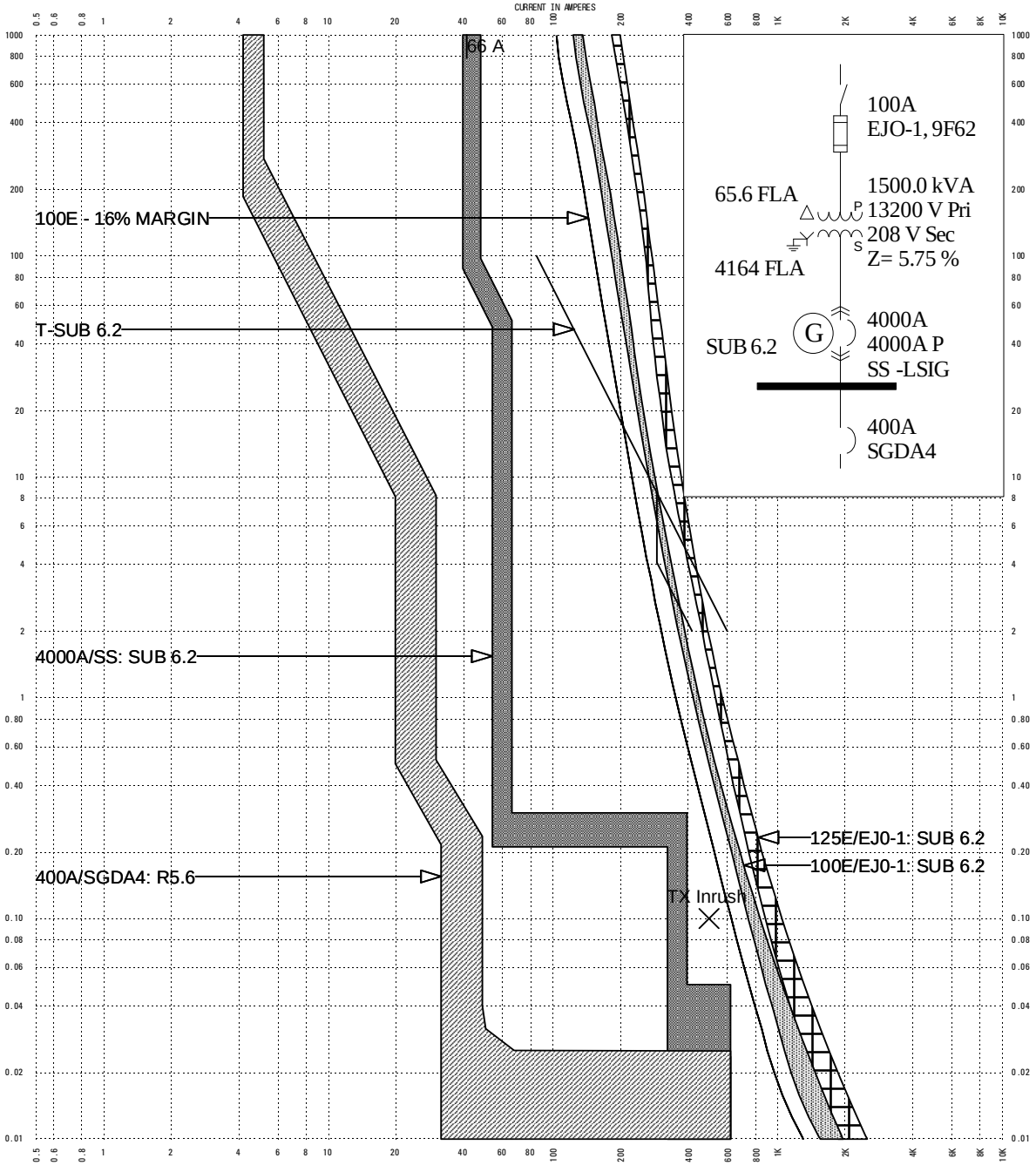
Device Name:	2000A/SS: SUB 6.1 - GF	TCC Name:	tccN6.1B.tcc
Bus Name:	SUB 6.1	Bus Voltage:	480.0V
Function Name:	Ground		
Manufacturer:	GE		
Description:	GF, 200-2000AS		
Type:	SS, SH PowerBreak II, MVT Plus/PM		
AIC Rating:	65kA ShortTime:40	Fault Duty:	27913.8A
Frame:	SS 480V 2000A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Sensor:	2000A		
Plug:	2000A		
Setting: 1) GFPU (0.2-0.6 x S)	0.6 (1200A)		
2) GFD (Min-Max)	Int I^2 t In		

Device Name:	1600A/SS: MDP 6.1 - GF	TCC Name:	tccN6.1B.tcc
Bus Name:		Bus Voltage:	480.0V
Function Name:	Ground		
Manufacturer:	GE		
Description:	GF, 200-2000AS		
Type:	SS, SH PowerBreak II, MVT Plus/PM		
AIC Rating:	65kA ShortTime:40	Fault Duty:	27914.0A
Frame:	SS 480V 1600A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Sensor:	1600A		
Plug:	1600A		
Setting: 1) GFPU (0.2-0.6 x S)	0.5 (800A)		
2) GFD (Min-Max)	Min I^2 t In		

DWG#: tccN6.1B
February 27, 2009

VOLTAGE: 480
PA Convention CenterPhiladelphia, PA

CURRENT SCALE: x 100
CPSI#8159



Device Name: 125E/EJ0-1: SUB 6.2 — TCC Name: tccN6.2A.tcc
Bus Name: — Bus Voltage: 13200.0V
Function Name: Phase
Manufacturer: GE
Description: 20E-300E
Type: 9F62 EJ0-1, 15.5kV E-Rated +
AIC Rating: 50kA — Fault Duty: 6753.0A
Cartridge: EJO-1, 9F62 15500V 125A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Size: 125A

Device Name: 100E/EJ0-1: SUB 6.2 — TCC Name: tccN6.2A.tcc
Bus Name: T-SUB 6.2 PRI — Bus Voltage: 13200.0V
Function Name: Phase
Manufacturer: GE
Description: 20E-300E
Type: 9F62 EJ0-1, 15.5kV E-Rated +
AIC Rating: 50kA — Fault Duty: 6771.6A
Cartridge: EJO-1, 9F62 15500V 100A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Size: 100A

Device Name: 4000A/SS: SUB 6.2 — TCC Name: tccN6.2A.tcc
Bus Name: SUB 6.2 — Bus Voltage: 208.0V
Function Name: Phase
Manufacturer: GE
Description: LSI, 4000AS
Type: SS, SH PowerBreak II, MVT Plus/PM
AIC Rating: 100kA ShortTime:42 — Fault Duty: 61981.7A
Frame: SS 240V 4000A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Sensor: 4000A
Plug: 4000A
Setting: 1) LTPU (0.5-1.0 x P) 1 (4000A)
2) LTD (1-4) 1
3) STPU (1.5-9 x LTPU) 1.5 (6000A)
4) STD (Min-Max) Int I^2 t Out
5) INST (1.5-9 x P) 9 (36000A)

Device Name: 400A/SGDA4: R5.6 — TCC Name: tccN6.2A.tcc
Bus Name: SUB 6.2 — Bus Voltage: 208.0V
Function Name: Phase
Manufacturer: GE
Description: 125-400A
Type: SGDA, Spectra RMS +
AIC Rating: 65kA — Fault Duty: 61981.7A
Frame: SGDA4 240V 400A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Trip: 400A
Setting: 1) MAX

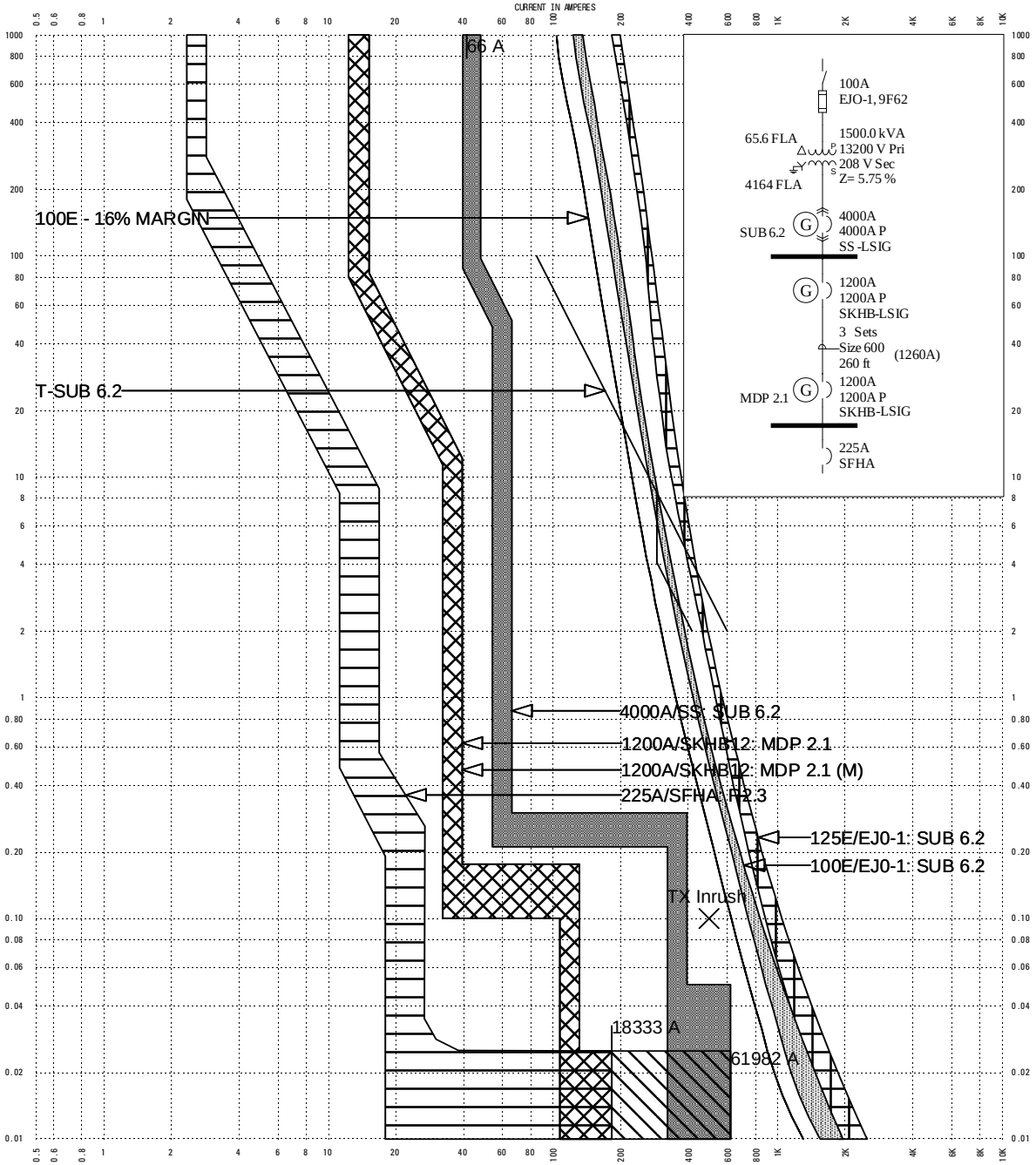
Device Name: T-SUB 6.2 — TCC Name: tccN6.2A.tcc
Bus Name: T-SUB 6.2 PRI — Bus Voltage: 13200V / 208V
Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Description: 2-Winding Transformer Damage Curve — Rated Volts: 13200 LL/208 LL
Nominal Size: 1500.0kVA
Impedance (%Z): 5.7500 — Pri Connection: Delta
Inrush Factor: 12.0x — Sec Connection: Wye-Ground

Device Name: 100E - 16% MARGIN — TCC Name: tccN6.2A.tcc
Bus Name: — Bus Voltage: 13200.0V
Function Name: Phase
Manufacturer: GE
Description: 20E-300E
Type: 9F62 EJ0-1, 15.5kV 16% MARGIN +
AIC Rating: 50kA — Fault Duty: 200000.0A
Cartridge: EJO-1, 100E 15500V 100A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Size: 100A

DWG#: tccN6.2A
February 27, 2009

VOLTAGE: 208
PA Convention CenterPhiladelphia, PA

CURRENT SCALE: x 100
CPSI#8159



DWG#: tccN6.2B
February 27, 2009

VOLTAGE: 208
PA Convention CenterPhiladelphia, PA

CURRENT SCALE: x 100
CPSI#8159

Device Name:	125E/EJ0-1: SUB 6.2	TCC Name:	tccN6.2B.tcc
Bus Name:		Bus Voltage:	13200.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	20E-300E		
Type:	9F62 EJ0-1, 15.5kV E-Rated +		
AIC Rating:	50kA	Fault Duty:	6753.0A
Cartridge:	EJO-1, 9F62 15500V 125A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Size:	125A		

Device Name:	100E/EJ0-1: SUB 6.2	TCC Name:	tccN6.2B.tcc
Bus Name:	T-SUB 6.2 PRI	Bus Voltage:	13200.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	20E-300E		
Type:	9F62 EJ0-1, 15.5kV E-Rated +		
AIC Rating:	50kA	Fault Duty:	6771.6A
Cartridge:	EJO-1, 9F62 15500V 100A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Size:	100A		

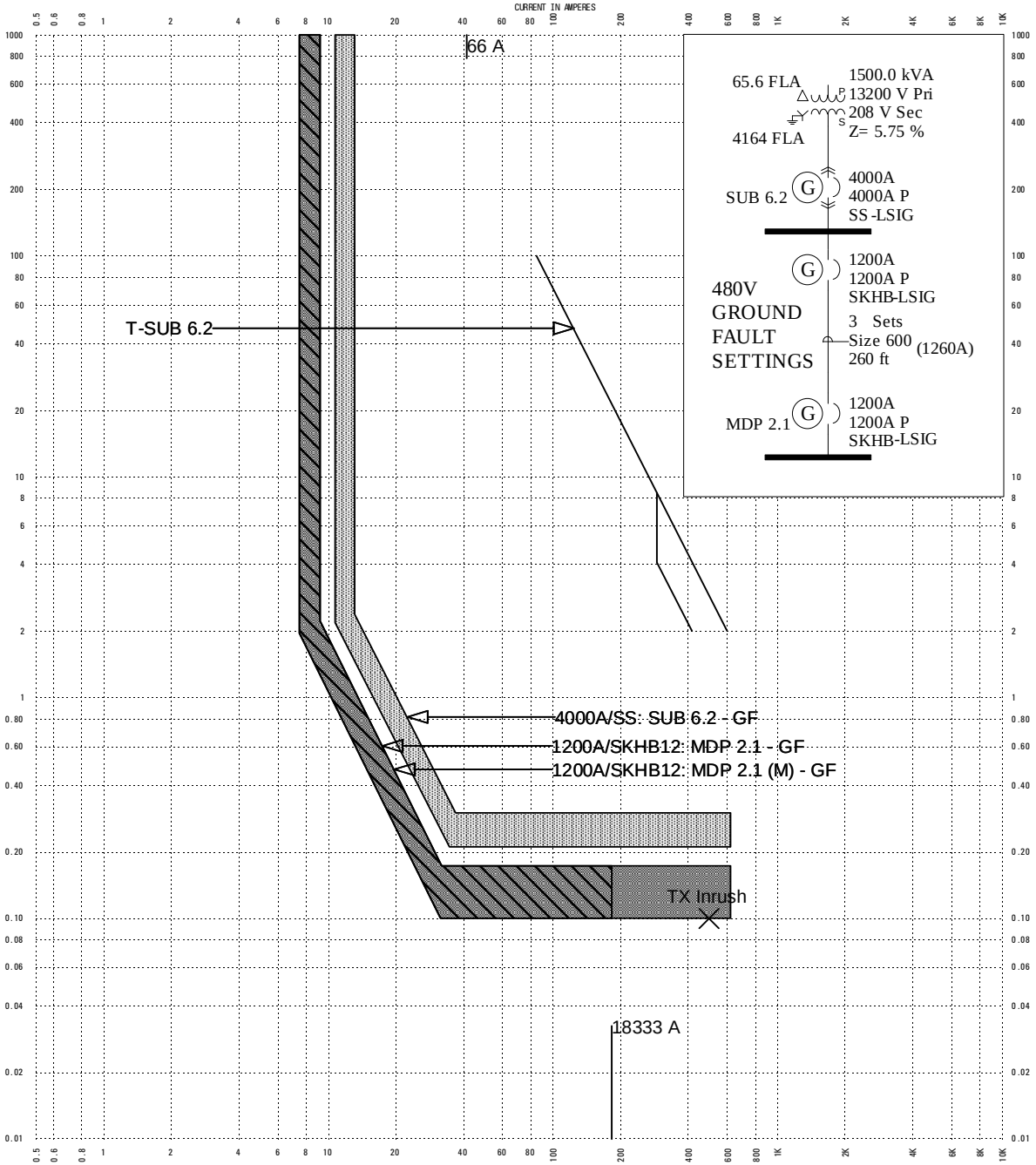
Device Name:	4000A/SS: SUB 6.2	TCC Name:	tccN6.2B.tcc
Bus Name:	SUB 6.2	Bus Voltage:	208.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	LSI, 4000AS		
Type:	SS, SH PowerBreak II, MVT Plus/PM		
AIC Rating:	100kA ShortTime:42	Fault Duty:	61981.7A
Frame:	SS 240V 4000A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Sensor:	4000A		
Plug:	4000A		
Setting: 1) LTPU (0.5-1.0 x P)	1	(4000A)	
2) LTD (1-4)	1		
3) STPU (1.5-9 x LTPU)	1.5	(6000A)	
4) STD (Min-Max)	Int	I^2 t Out	
5) INST (1.5-9 x P)	9	(36000A)	

Device Name:	1200A/SKHB12: MDP 2.1	TCC Name:	tccN6.2B.tcc
Bus Name:	SUB 6.2	Bus Voltage:	208.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	LSI, 300-1200A		
Type:	SK, MVT Plus/PM +		
AIC Rating:	65kA	Fault Duty:	61981.7A
Frame:	SKHB 240V 1200A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Sensor:	1200A		
Plug:	1200A		
Setting: 1) LTPU (0.5-1.0 x P)	1	(1200A)	
2) LTD (1-4)	1		
3) STPU (1.5-9 x LTPU)	3	(3600A)	
4) STD (1-4)	1	I^2 t Out	
5) INST (1.5-10 x P)	10	(12000A)	

Device Name:	1200A/SKHB12: MDP 2.1 (M)	TCC Name:	tccN6.2B.tcc
Bus Name:	MDP 2.1	Bus Voltage:	208.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	LSI, 300-1200A		
Type:	SK, MVT Plus/PM +		
AIC Rating:	65kA	Fault Duty:	18333.0A
Frame:	SKHB 240V 1200A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Sensor:	1200A		
Plug:	1200A		
Setting: 1) LTPU (0.5-1.0 x P)	1	(1200A)	
2) LTD (1-4)	1		
3) STPU (1.5-9 x LTPU)	3	(3600A)	
4) STD (1-4)	1	I^2 t Out	
5) INST (1.5-10 x P)	10	(12000A)	

Device Name:	225A/SFHA: R2.3	TCC Name:	tccN6.2B.tcc
Bus Name:	MDP 2.1	Bus Voltage:	208.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	70-250A		
Type:	SFHA, Spectra RMS		
AIC Rating:	65kA	Fault Duty:	18333.0A
Frame:	SFHA 240V 250A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Trip:	225A		
Setting: 1) MAX			

Device Name:	T-SUB 6.2	TCC Name:	tccN6.2B.tcc
Bus Name:	T-SUB 6.2 PRI	Bus Voltage:	13200V / 208V
		Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Description:	2-Winding Transformer Damage Curve	Rated Volts:	13200 LL/208 LL
Nominal Size:	1500.0kVA		



Device Name: 4000A/SS: SUB 6.2 - GF
Bus Name: SUB 6.2
Function Name: Ground
Manufacturer: GE
Description: GF, 4000AS
Type: SS, SH PowerBreak II, Power+
AIC Rating: 100kA ShortTime:42
Frame: SS 240V 4000A
Time Multiplier: 1
Sensor: 4000A
Plug: 4000A
Setting: 1) GFPU (0.2-0.3 x S) 0.3 (1200A)
2) GFD (Min-Max) Int I^2 t In

TCC Name: tccN6.2C.tcc
Bus Voltage: 208.0V
Fault Duty: 61981.7A
Curve Multiplier: 1
Time Adder: 0

Device Name: 1200A/SKHB12: MDP 2.1 - GF
Bus Name: SUB 6.2
Function Name: Ground
Manufacturer: GE
Description: GF, 800-1200A Sensors
Type: SK, MVT Plus/PM
AIC Rating: 65kA
Frame: SKH 240V 1200A
Time Multiplier: 1
Sensor: 1200A
Plug: 1200A
Setting: 1) GFPU (0.2-1.0 x S) 0.7 (840A)
2) GFD (1-4) 1 I^2 t In

TCC Name: tccN6.2C.tcc
Bus Voltage: 208.0V
Fault Duty: 61981.7A
Curve Multiplier: 1
Time Adder: 0

Device Name: 1200A/SKHB12: MDP 2.1 (M) - GF
Bus Name: MDP 2.1
Function Name: Ground
Manufacturer: GE
Description: GF, 800-1200A Sensors
Type: SK, MVT Plus/PM
AIC Rating: 65kA
Frame: SKH 240V 1200A
Time Multiplier: 1
Sensor: 1200A
Plug: 1200A
Setting: 1) GFPU (0.2-1.0 x S) 0.7 (840A)
2) GFD (1-4) 1 I^2 t In

TCC Name: tccN6.2C.tcc
Bus Voltage: 208.0V
Fault Duty: 18333.0A
Curve Multiplier: 1
Time Adder: 0

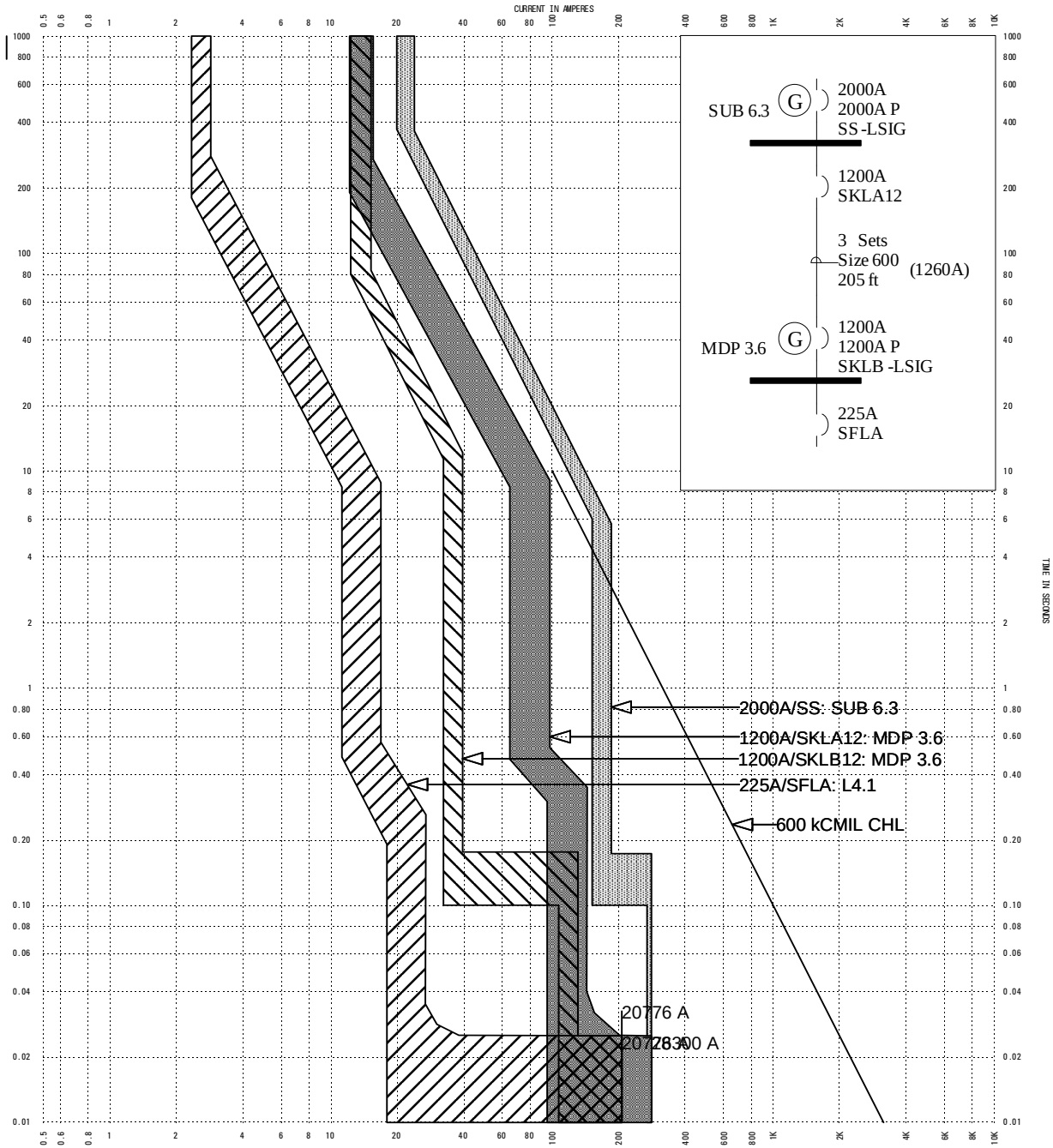
Device Name: T-SUB 6.2
Bus Name: T-SUB 6.2 PRI
Time Multiplier: 1
Description: 2-Winding Transformer Damage Curve
Nominal Size: 1500.0kVA
Impedance (%Z): 5.7500
Inrush Factor: 12.0x

TCC Name: tccN6.2C.tcc
Bus Voltage: 13200V / 208V
Curve Multiplier: 1
Time Adder: 0
Rated Volts: 13200 LL/208 LL
Pri Connection: Delta
Sec Connection: Wye-Ground

DWG#: tccN6.2C
February 27, 2009

VOLTAGE: 208
PA Convention CenterPhiladelphia, PA

CURRENT SCALE: x 100
CPSI#8159



Device Name:	2000A/SS: SUB 6.3	TCC Name:	tccN6.3A.tcc
Bus Name:	SUB 6.3	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	LSI, 200-2000AS		
Type:	SS, SH PowerBreak II, MVT Plus/PM		
AIC Rating:	65kA ShortTime:40	Fault Duty:	28299.8A
Frame:	SS 480V 2000A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Sensor:	2000A		
Plug:	2000A		

Setting: 1) LTPU (0.5-1.0 x P)	1	(2000A)	
2) LTD (1-4)	3		
3) STPU (1.5-9 x LTPU)	8.5	(17000A)	
4) STD (Min-Max)	Min	I^2 t Out	
5) INST (1.5-15 x P)	15	(30000A)	

Device Name:	1200A/SKLA12: MDP 3.6	TCC Name:	tccN6.3A.tcc
Bus Name:	SUB 6.3	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	300-1200A		
Type:	SKLA, Spectra RMS +		
AIC Rating:	65kA	Fault Duty:	28299.8A
Frame:	SKLA12 480V 1200A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Trip:	1200A		
Setting: 1) MAX			

Device Name:	1200A/SKLB12: MDP 3.6	TCC Name:	tccN6.3A.tcc
Bus Name:	MDP 3.6	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	LSI, 300-1200A		
Type:	SK, MVT Plus/PM +		
AIC Rating:	65kA	Fault Duty:	20776.4A
Frame:	SKLB 480V 1200A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Sensor:	1200A		
Plug:	1200A		

Setting: 1) LTPU (0.5-1.0 x P)	1	(1200A)	
2) LTD (1-4)	1		
3) STPU (1.5-9 x LTPU)	3	(3600A)	
4) STD (1-4)	1	I^2 t Out	
5) INST (1.5-10 x P)	10	(12000A)	

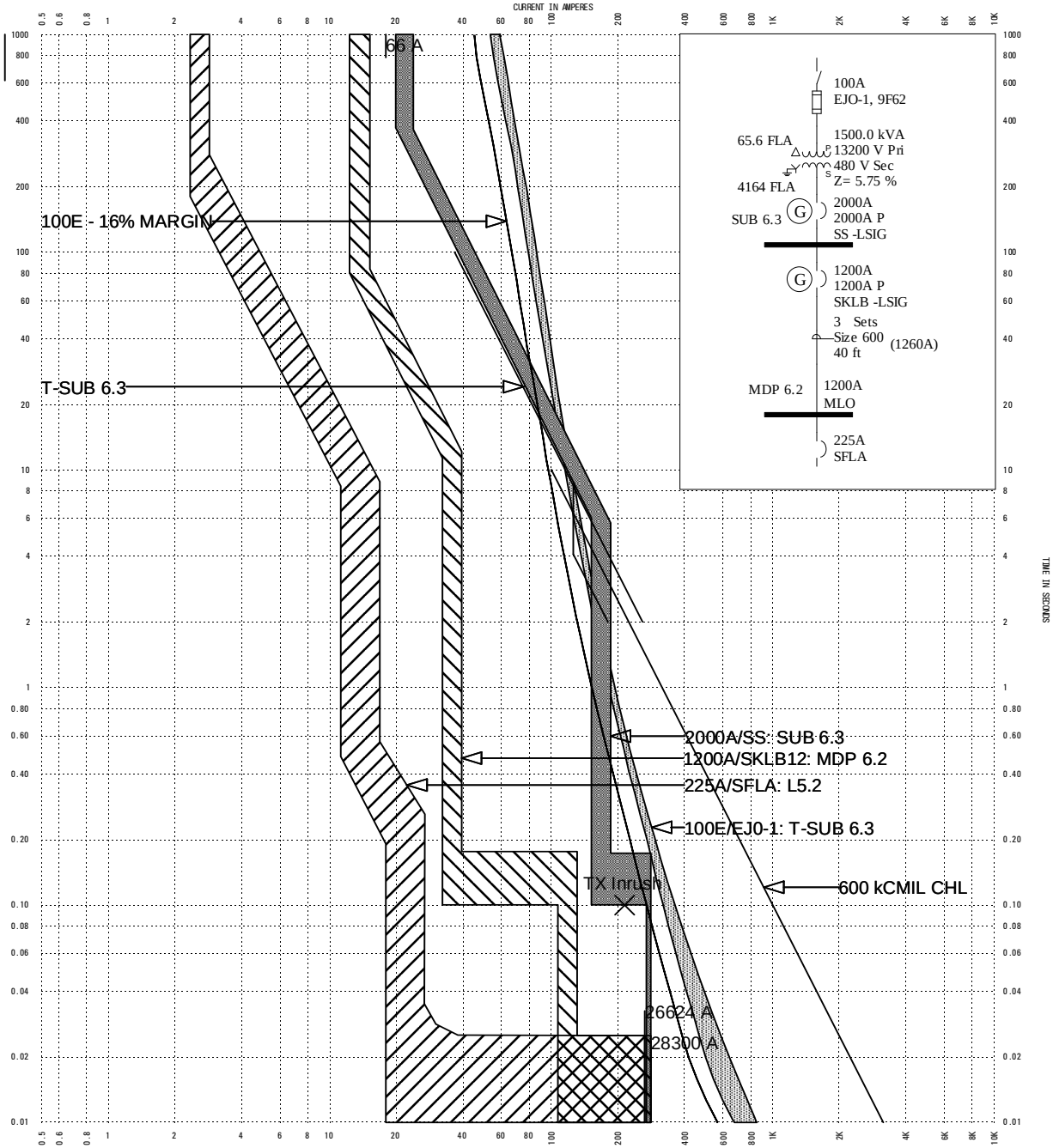
Device Name:	225A/SFLA: L4.1	TCC Name:	tccN6.3A.tcc
Bus Name:	MDP 3.6	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	70-250A		
Type:	SFLA, Spectra RMS		
AIC Rating:	65kA	Fault Duty:	20776.4A
Frame:	SFLA 480V 250A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Trip:	225A		
Setting: 1) MAX			

Device Name:	600 kCMIL CHL	TCC Name:	tccN6.3A.tcc
Bus Name:		Bus Voltage:	480V
		Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Description:	Cable Damage Curve	Qty/Ph:	1
Size:	600	Cont. Temp:	75 deg C.
Material:	Copper	Damage Temp:	150 deg C.

DWG#: tccN6.3A
February 27, 2009

VOLTAGE: 480
PA Convention CenterPhiladelphia, PA

CURRENT SCALE: x 100
CPSI#8159



Device Name: 100E/EJ0-1: T-SUB 6.3 — TCC Name: tccN6.3B.tcc
Bus Name: T-SUB 6.3 PRI — Bus Voltage: 13200.0V
Function Name: Phase
Manufacturer: GE
Description: 20E-300E
Type: 9F62 EJ0-1, 15.5kV E-Rated +
AIC Rating: 50kA — Fault Duty: 6975.2A
Cartridge: EJO-1, 9F62 15500V 100A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Size: 100A

Device Name: 2000A/SS: SUB 6.3 — TCC Name: tccN6.3B.tcc
Bus Name: SUB 6.3 — Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: GE
Description: LSI, 200-2000AS
Type: SS, SH PowerBreak II, MVT Plus/PM
AIC Rating: 65kA ShortTime:40 — Fault Duty: 28299.8A
Frame: SS 480V 2000A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Sensor: 2000A
Plug: 2000A

Setting:			
1) LTPU (0.5-1.0 x P)	1	(2000A)	
2) LTD (1-4)	3		
3) STPU (1.5-9 x LTPU)	8.5	(17000A)	
4) STD (Min-Max)	Min	I^2 t Out	
5) INST (1.5-15 x P)	15	(30000A)	

Device Name: 1200A/SKLB12: MDP 6.2 — TCC Name: tccN6.3B.tcc
Bus Name: SUB 6.3 — Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: GE
Description: LSI, 300-1200A
Type: SK, MVT Plus/PM +
AIC Rating: 65kA — Fault Duty: 28299.8A
Frame: SKLB 480V 1200A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Sensor: 1200A
Plug: 1200A

Setting:			
1) LTPU (0.5-1.0 x P)	1	(1200A)	
2) LTD (1-4)	1		
3) STPU (1.5-9 x LTPU)	3	(3600A)	
4) STD (1-4)	1	I^2 t Out	
5) INST (1.5-10 x P)	10	(12000A)	

Device Name: 225A/SFLA: L5.2 — TCC Name: tccN6.3B.tcc
Bus Name: MDP 6.2 — Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: GE
Description: 70-250A
Type: SFLA, Spectra RMS
AIC Rating: 65kA — Fault Duty: 26623.8A
Frame: SFLA 480V 250A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Trip: 225A
Setting: 1) MAX

Device Name: T-SUB 6.3 — TCC Name: tccN6.3B.tcc
Bus Name: T-SUB 6.3 PRI — Bus Voltage: 13200V / 480V
Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Description: 2-Winding Transformer Damage Curve — Rated Volts: 13200 LL/480 LL
Nominal Size: 1500.0kVA
Impedance (%Z): 5.7500 — Pri Connection: Delta
Inrush Factor: 12.0x — Sec Connection: Wye-Ground

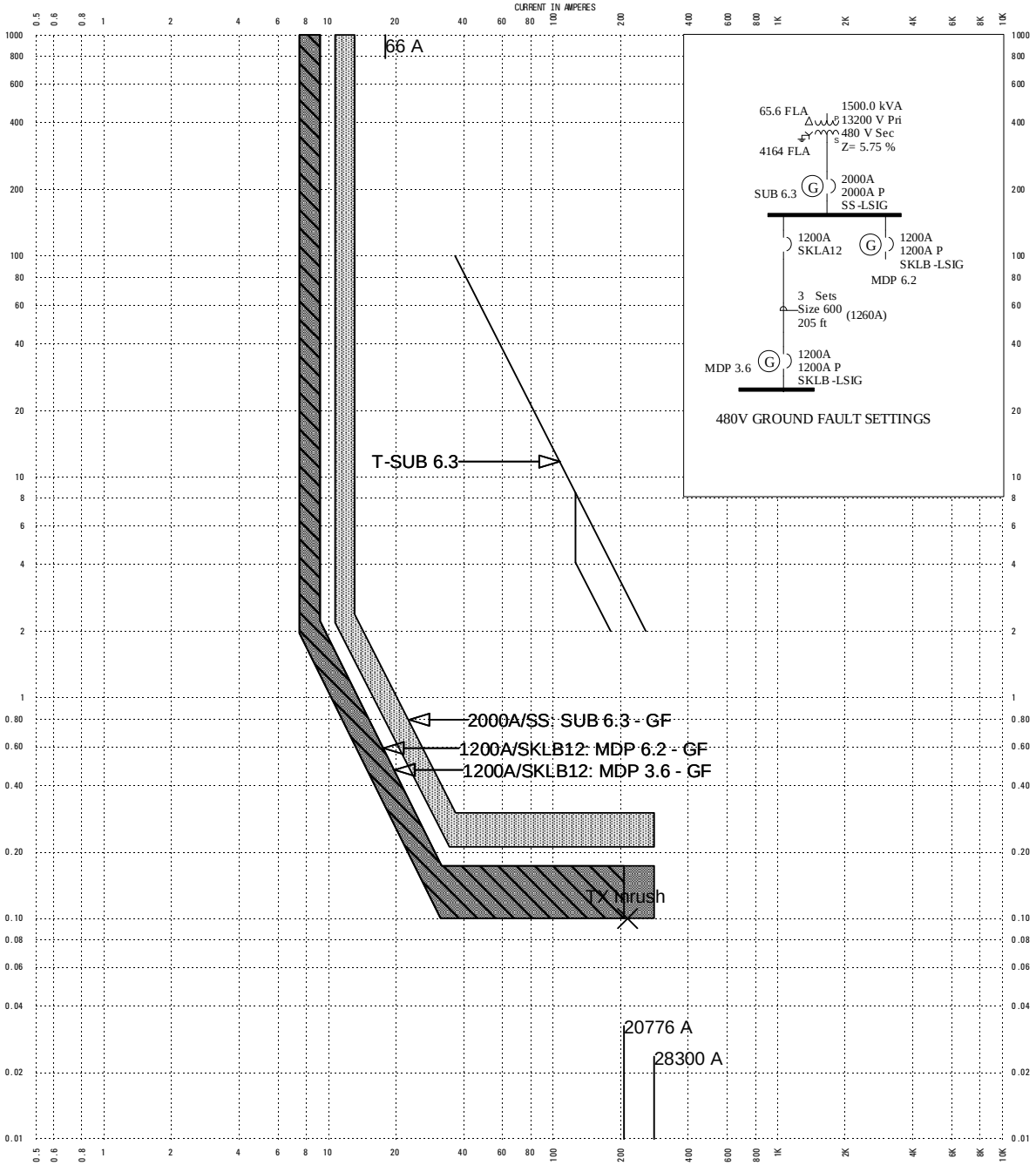
Device Name: 600 kCMIL CHL — TCC Name: tccN6.3B.tcc
Bus Name: — Bus Voltage: 480V
Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Description: Cable Damage Curve — Qty/Ph: 1
Size: 600 — Cont. Temp: 75 deg C.
Material: Copper — Damage Temp: 150 deg C.

Device Name: 100E - 16% MARGIN — TCC Name: tccN6.3B.tcc
Bus Name: — Bus Voltage: 13200.0V
Function Name: Phase
Manufacturer: GE
Description: 20E-300E
Type: 9F62 EJ0-1, 15.5kV 16% MARGIN +
AIC Rating: 50kA — Fault Duty: 200000.0A
Cartridge: EJO-1, 100E 15500V 100A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Size: 100A

DWG#: tccN6.3B
February 27, 2009

VOLTAGE: 480
PA Convention CenterPhiladelphia, PA

CURRENT SCALE: x 100
CPSI#8159



Device Name:	2000A/SS: SUB 6.3 - GF	TCC Name:	tccN6.3C.tcc
Bus Name:	SUB 6.3	Bus Voltage:	480.0V
Function Name:	Ground		
Manufacturer:	GE		
Description:	GF, 200-2000AS		
Type:	SS, SH PowerBreak II, MVT Plus/PM		
AIC Rating:	65kA ShortTime:40	Fault Duty:	28299.8A
Frame:	SS 480V 2000A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Sensor:	2000A		
Plug:	2000A		
Setting: 1) GFPU (0.2-0.6 x S)	0.6 (1200A)		
2) GFD (Min-Max)	Int I^2 t In		

Device Name:	1200A/SKLB12: MDP 6.2 - GF	TCC Name:	tccN6.3C.tcc
Bus Name:	SUB 6.3	Bus Voltage:	480.0V
Function Name:	Ground		
Manufacturer:	GE		
Description:	GF, 800-1200A Sensors		
Type:	SK, MVT Plus/PM		
AIC Rating:	65kA	Fault Duty:	28299.8A
Frame:	SKL 480V 1200A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Sensor:	1200A		
Plug:	1200A		
Setting: 1) GFPU (0.2-1.0 x S)	0.7 (840A)		
2) GFD (1-4)	1 I^2 t In		

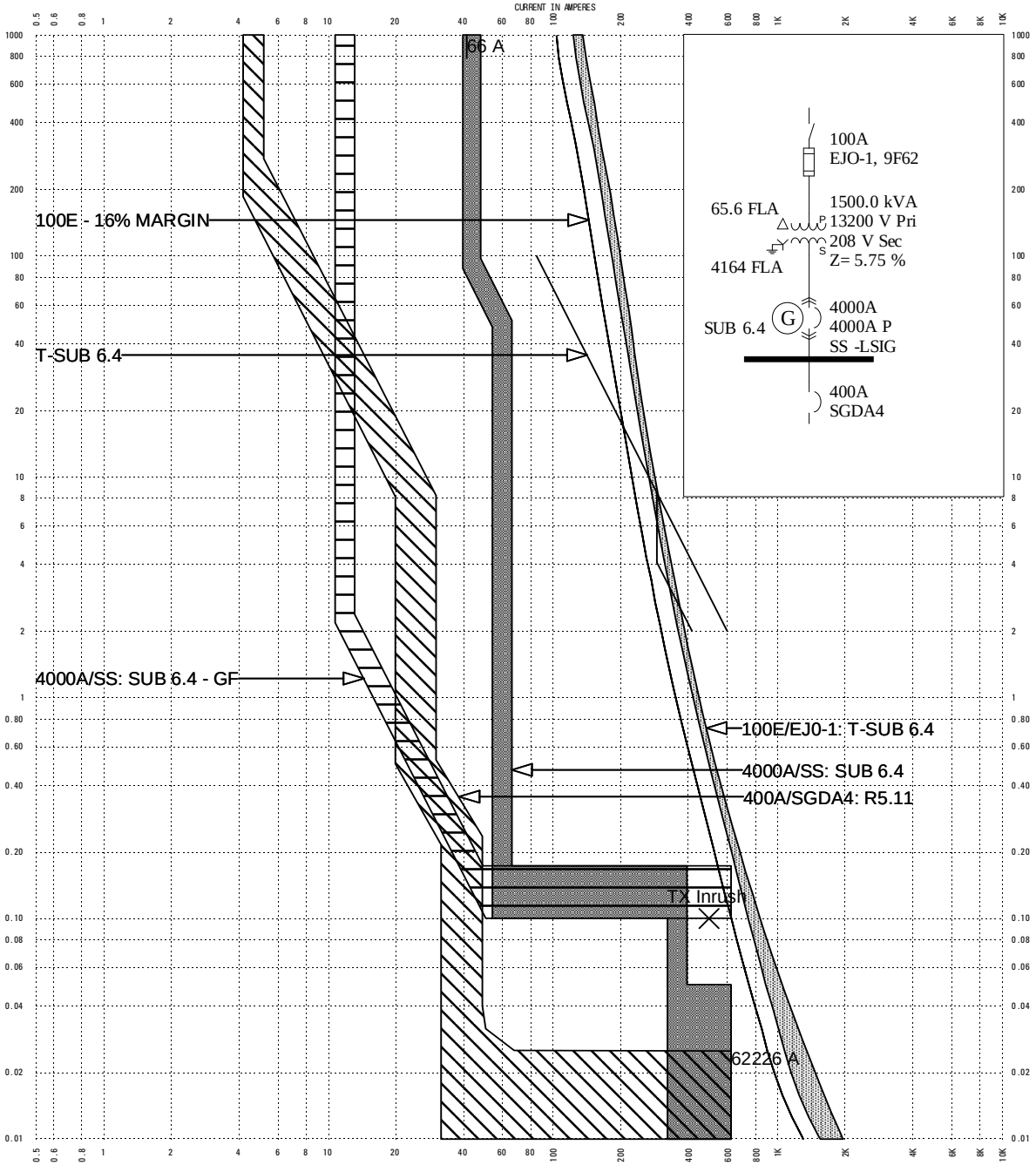
Device Name:	1200A/SKLB12: MDP 3.6 - GF	TCC Name:	tccN6.3C.tcc
Bus Name:	MDP 3.6	Bus Voltage:	480.0V
Function Name:	Ground		
Manufacturer:	GE		
Description:	GF, 800-1200A Sensors		
Type:	SK, MVT Plus/PM		
AIC Rating:	65kA	Fault Duty:	20776.4A
Frame:	SKL 480V 1200A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Sensor:	1200A		
Plug:	1200A		
Setting: 1) GFPU (0.2-1.0 x S)	0.7 (840A)		
2) GFD (1-4)	1 I^2 t In		

Device Name:	T-SUB 6.3	TCC Name:	tccN6.3C.tcc
Bus Name:	T-SUB 6.3 PRI	Bus Voltage:	13200V / 480V
		Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Description:	2-Winding Transformer Damage Curve	Rated Volts:	13200 LL/480 LL
Nominal Size:	1500.0kVA		
Impedance (%Z):	5.7500	Pri Connection:	Delta
Inrush Factor:	12.0x	Sec Connection:	Wye-Ground

DWG#: tccN6.3C
February 27, 2009

VOLTAGE: 480
PA Convention CenterPhiladelphia, PA

CURRENT SCALE: x 100
CPSI#8159



Device Name: 100E/EJ0-1: T-SUB 6.4
Bus Name: T-SUB 6.4 PRI
Function Name: Phase
Manufacturer: GE
Description: 20E-300E
Type: 9F62 EJ0-1, 15.5kV E-Rated +
AIC Rating: 50kA
Cartridge: EJO-1, 9F62 15500V 100A
Time Multiplier: 1
Size: 100A
TCC Name: tccN6.4.tcc
Bus Voltage: 13200.0V
Fault Duty: 6961.8A
Curve Multiplier: 1
Time Adder: 0

Device Name: 4000A/SS: SUB 6.4
Bus Name: SUB 6.4
Function Name: Phase
Manufacturer: GE
Description: LSI, 4000AS
Type: SS, SH PowerBreak II, MVT Plus/PM
AIC Rating: 100kA ShortTime:42
Frame: SS 480V 4000A
Time Multiplier: 1
Sensor: 4000A
Plug: 4000A
Setting: 1) LTPU (0.5-1.0 x P) 1 (4000A)
2) LTD (1-4) 1
3) STPU (1.5-9 x LTPU) 1.5 (6000A)
4) STD (Min-Max) Min I^2 t Out
5) INST (1.5-9 x P) 9 (36000A)
TCC Name: tccN6.4.tcc
Bus Voltage: 208.0V
Fault Duty: 62225.5A
Curve Multiplier: 1
Time Adder: 0

Device Name: 400A/SGDA4: R5.11
Bus Name: SUB 6.4
Function Name: Phase
Manufacturer: GE
Description: 125-400A
Type: SGDA, Spectra RMS +
AIC Rating: 65kA
Frame: SGDA4 240V 400A
Time Multiplier: 1
Trip: 400A
Setting: 1) MAX
TCC Name: tccN6.4.tcc
Bus Voltage: 208.0V
Fault Duty: 62225.5A
Curve Multiplier: 1
Time Adder: 0

Device Name: T-SUB 6.4
Bus Name: T-SUB 6.4 PRI
Time Multiplier: 1
Description: 2-Winding Transformer Damage Curve
Nominal Size: 1500.0kVA
Impedance (%Z): 5.7500
Inrush Factor: 12.0x
TCC Name: tccN6.4.tcc
Bus Voltage: 13200V / 208V
Curve Multiplier: 1
Time Adder: 0
Rated Volts: 13200 LL/208 LL
Pri Connection: Delta
Sec Connection: Wye-Ground

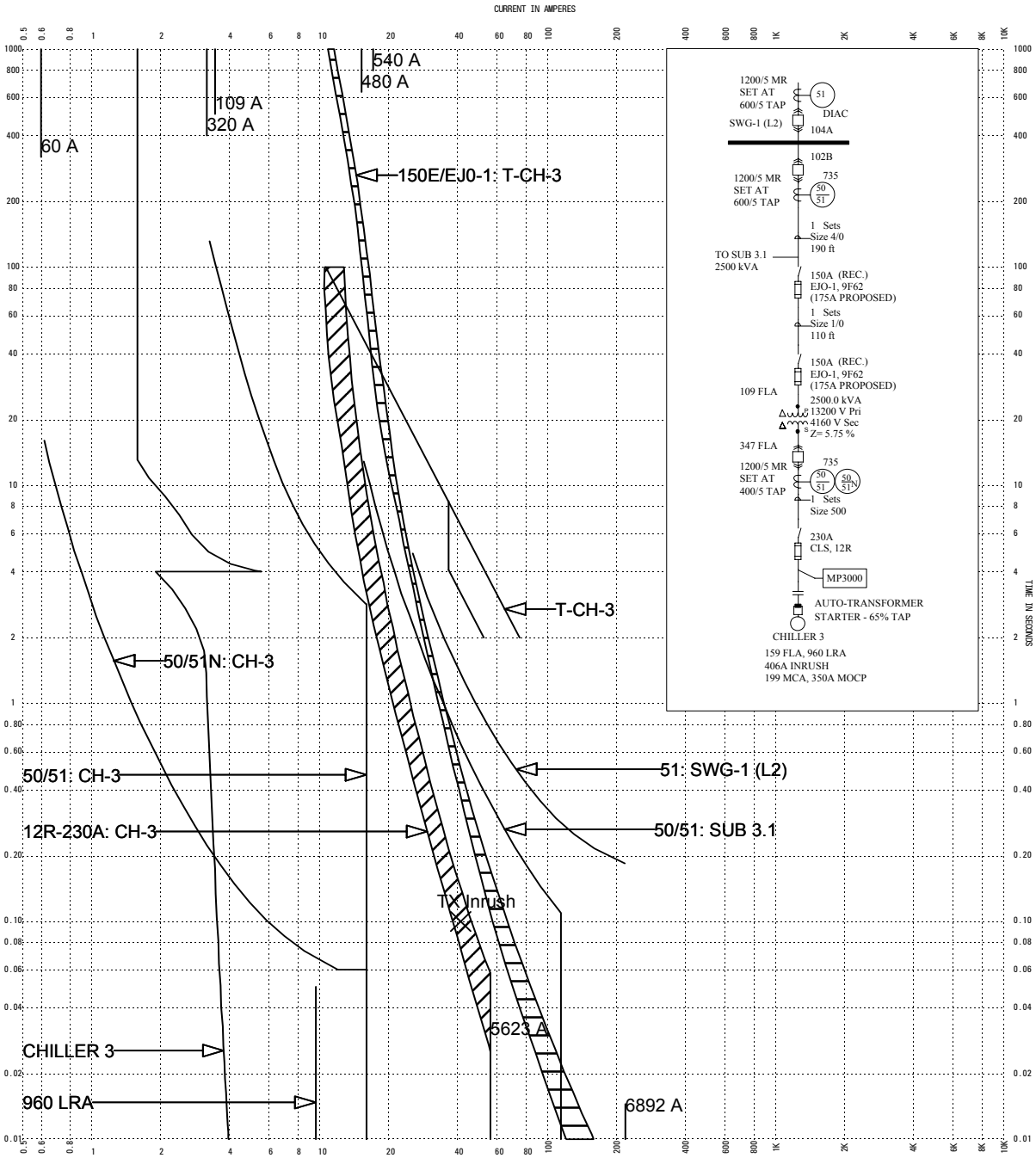
Device Name: 4000A/SS: SUB 6.4 - GF
Bus Name: SUB 6.4
Function Name: Ground
Manufacturer: GE
Description: GF, 4000AS
Type: SS, SH PowerBreak II, MVT Plus/PM
AIC Rating: 100kA ShortTime:42
Frame: SS 240V 4000A
Time Multiplier: 1
Sensor: 4000A
Plug: 4000A
Setting: 1) GFPU (0.2-0.3 x S) 0.3 (1200A)
2) GFD (Min-Max) Min I^2 t In
TCC Name: tccN6.4.tcc
Bus Voltage: 208.0V
Fault Duty: 62225.5A
Curve Multiplier: 1
Time Adder: 0

Device Name: 100E - 16% MARGIN
Bus Name:
Function Name: Phase
Manufacturer: GE
Description: 20E-300E
Type: 9F62 EJ0-1, 15.5kV 16% MARGIN +
AIC Rating: 50kA
Cartridge: EJO-1, 100E 15500V 100A
Time Multiplier: 1
Size: 100A
TCC Name: tccN6.4.tcc
Bus Voltage: 13200.0V
Fault Duty: 200000.0A
Curve Multiplier: 1
Time Adder: 0

DWG#: tccN6.4
February 27, 2009

VOLTAGE: 208
PA Convention CenterPhiladelphia, PA

CURRENT SCALE: x 100
CPSI#8159



Device Name: 51: SWG-1 (L2) | TCC Name: tccSWG-1A.tcc
Bus Name: SWG-1 (L2) | Bus Voltage: 13200.0V
Function Name: Phase
Manufacturer: GE
Description: Digital O/C
Type: DIAC/DIFC/DSFC + | Class Desc: DIAC
AIC Rating: N/A | Fault Duty: 6892.0A
Current Rating: 600A / 5A | Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Setting: 1) Pickup 4.5 (540A) | Test Points: @2.0X, 2.108s
2) 12 - IEEE Very Inver 1.5 | @5.0X, 0.392s
@10.0X, 0.207s

Device Name: 50/51: SUB 3.1 | TCC Name: tccSWG-1A.tcc
Bus Name: SWG-1 (L2) | Bus Voltage: 13200.0V
Function Name: Phase
Manufacturer: GE MULTILIN
Description: 50/51
Type: 735 | Class Desc: 735
AIC Rating: N/A | Fault Duty: 6892.0A
Current Rating: 600A / 5A | Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Setting: 1) Pickup(Lo) 80 % (480A) | Test Points: @2.0X, 1.395s
2) ANSI Ext Inverse 0.8 1 | @5.0X, 0.198s
3) Instantaneous 6.0 (3600A) | @10.0X, 0.079s

Device Name: 150E/EJ0-1: T-CH-3 | TCC Name: tccSWG-1A.tcc
Bus Name: T-SUB 3.1 PRI | Bus Voltage: 13200.0V
Function Name: Phase
Manufacturer: GE
Description: 20E-300E
Type: 9F62 EJ0-1, 15.5kV E-Rated +
AIC Rating: 50kA | Fault Duty: 6842.4A
Cartridge: EJO-1, 9F62 15500V 150A | Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Size: 150A

Device Name: T-CH-3 | TCC Name: tccSWG-1A.tcc
Bus Name: T-CH-3 PRI | Bus Voltage: 13200V / 4160V
Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Description: 2-Winding Transformer Damage Curve | Rated Volts: 13200 LL/4160 LL
Nominal Size: 2500.0kVA
Impedance (%Z): 5.7500 | Pri Connection: Delta
Inrush Factor: 12.0x | Sec Connection: Delta

Device Name: 50/51: CH-3 | TCC Name: tccSWG-1A.tcc
Bus Name: T-CH-3 SEC | Bus Voltage: 4160.0V
Function Name: Phase
Manufacturer: GE MULTILIN
Description: 50/51
Type: 735 | Class Desc: 735
AIC Rating: N/A | Fault Duty: 5623.2A
Current Rating: 400A / 5A | Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Setting: 1) Pickup(Lo) 80 % (320A) | Test Points: @2.0X, 12.359s
2) ANSI Norm Inverse 1 7 | @5.0X, 2.848s
3) Instantaneous 4.0 (1600A) | @10.0X, 1.582s

Device Name: 50/51N: CH-3 | TCC Name: tccSWG-1A.tcc
Bus Name: | Bus Voltage: 4160.0V
Function Name: Ground
Manufacturer: GE MULTILIN
Description: 50N/51N
Type: 735 | Class Desc: 735
AIC Rating: N/A | Fault Duty: 5623.0A
Current Rating: 400A / 5A | Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Setting: 1) Pickup(Lo) 15 % (60A) | Test Points: @2.0X, 1.744s
2) ANSI Ext Inverse 1 1 | @5.0X, 0.247s
3) Instantaneous 4.0 (1600A) | @10.0X, 0.098s

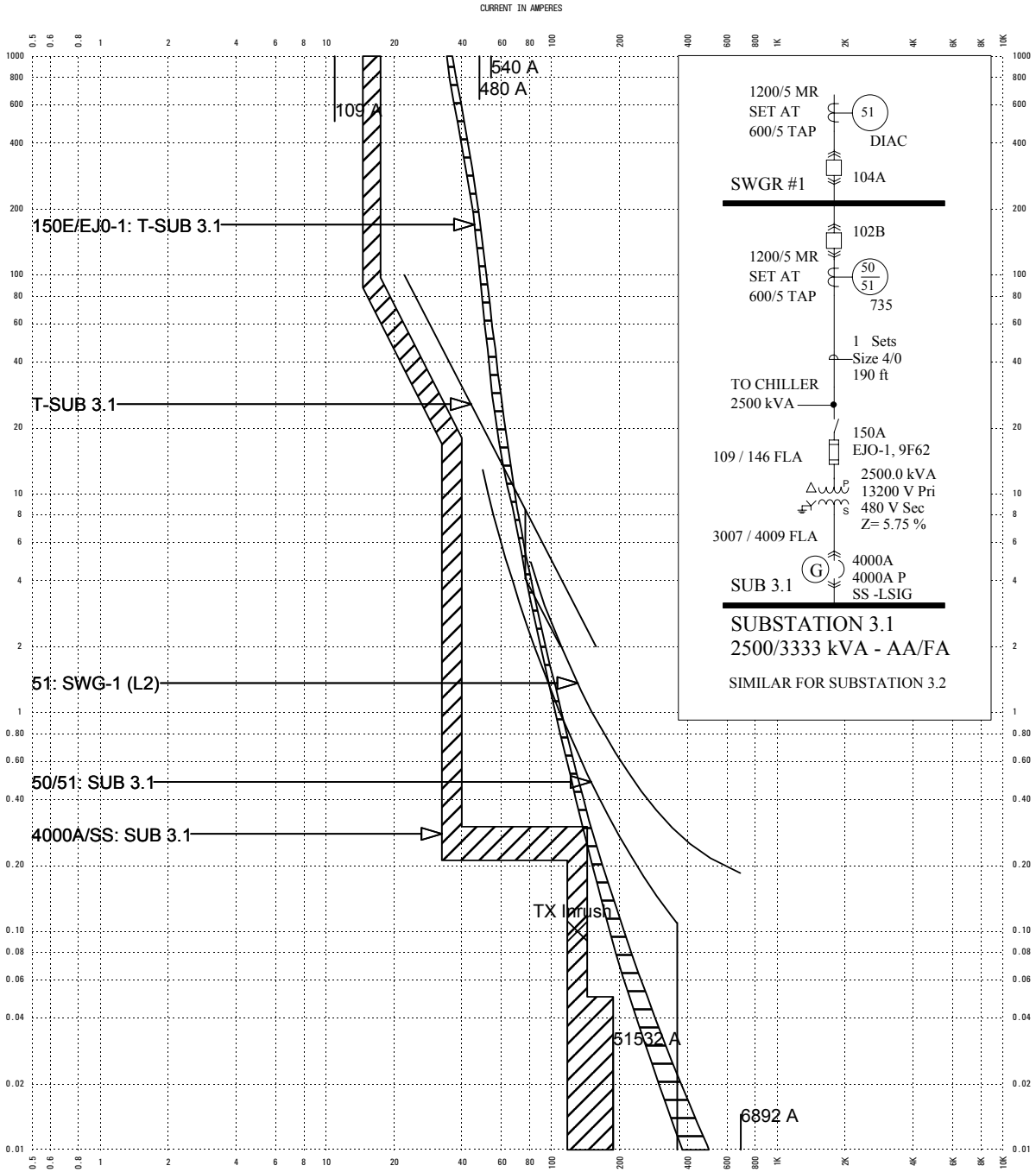
Device Name: 12R-230A: CH-3 | TCC Name: tccSWG-1A.tcc
Bus Name: CH-3 | Bus Voltage: 4160.0V
Function Name: Phase
Manufacturer: CUTLER-HAMMER
Description: 2R-26R
Type: CLS-1, -2, -22, 2.8-5.08kV R-Rated
AIC Rating: 50kA | Fault Duty: 5623.1A
Cartridge: CLS, 12R 5080V 230A | Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Size: 230A

Device Name: CHILLER 3 | TCC Name: tccSWG-1A.tcc
Bus Name: CH-3 | Bus Voltage: 4160V
Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Description: Motor Starting Curve | Inrush: 2.5 (397.5A)
Rated Size: 1146KVA (1 of 1 Plotted) | FLA+Load Adder: 159.0A + 0.0A
Power Factor: 0.800 | Starting Time: 10.00s
Efficiency: 0.93 | Auto Transformer

DWG#: tccSWG-1A
March 11, 2009

VOLTAGE: 4160
PA Convention Center Philadelphia, PA

CURRENT SCALE: x 100
CPSI#8159



Device Name: 51: SWG-1 (L2)
Bus Name: SWG-1 (L2)
Function Name: Phase
Manufacturer: GE
Description: Digital O/C
Type: DIAC/DIFC/DSFC +
AIC Rating: N/A
Current Rating: 600A / 5A
Time Multiplier: 1
Setting: 1) Pickup 4.5 (540A)
2) 12 - IEEE Very Inver 1.5

TCC Name: tccSWG-1B.tcc
Bus Voltage: 13200.0V
Class Desc: DIAC
Fault Duty: 6892.0A
Curve Multiplier: 1
Time Adder: 0
Test Points: @2.0X, 2.108s
@5.0X, 0.392s
@10.0X, 0.207s

Device Name: 50/51: SUB 3.1
Bus Name: SWG-1 (L2)
Function Name: Phase
Manufacturer: GE MULTILIN
Description: 50/51
Type: 735
AIC Rating: N/A
Current Rating: 600A / 5A
Time Multiplier: 1
Setting: 1) Pickup(Lo) 80 % (480A)
2) ANSI Ext Inverse 0.8 1
3) Instantaneous 6.0 (3600A)

TCC Name: tccSWG-1B.tcc
Bus Voltage: 13200.0V
Class Desc: 735
Fault Duty: 6892.0A
Curve Multiplier: 1
Time Adder: 0
Test Points: @2.0X, 1.395s
@5.0X, 0.198s
@10.0X, 0.079s

Device Name: 150E/EJ0-1: T-SUB 3.1
Bus Name: T-SUB 3.1 PRI
Function Name: Phase
Manufacturer: GE
Description: 20E-300E
Type: 9F62 EJ0-1, 15.5kV E-Rated +
AIC Rating: 50kA
Cartridge: EJO-1, 9F62 15500V 150A
Time Multiplier: 1
Size: 150A

TCC Name: tccSWG-1B.tcc
Bus Voltage: 13200.0V
Fault Duty: 6842.4A
Curve Multiplier: 1
Time Adder: 0

Device Name: T-SUB 3.1
Bus Name: T-SUB 3.1 PRI

Time Multiplier: 1
Description: 2-Winding Transformer Damage Curve
Nominal Size: 2500.0kVA
Impedance (%Z): 5.7500
Inrush Factor: 12.0x

TCC Name: tccSWG-1B.tcc
Bus Voltage: 13200V / 480V
Curve Multiplier: 1
Time Adder: 0
Rated Volts: 13200 LL/480 LL
Pri Connection: Delta
Sec Connection: Wye-Ground

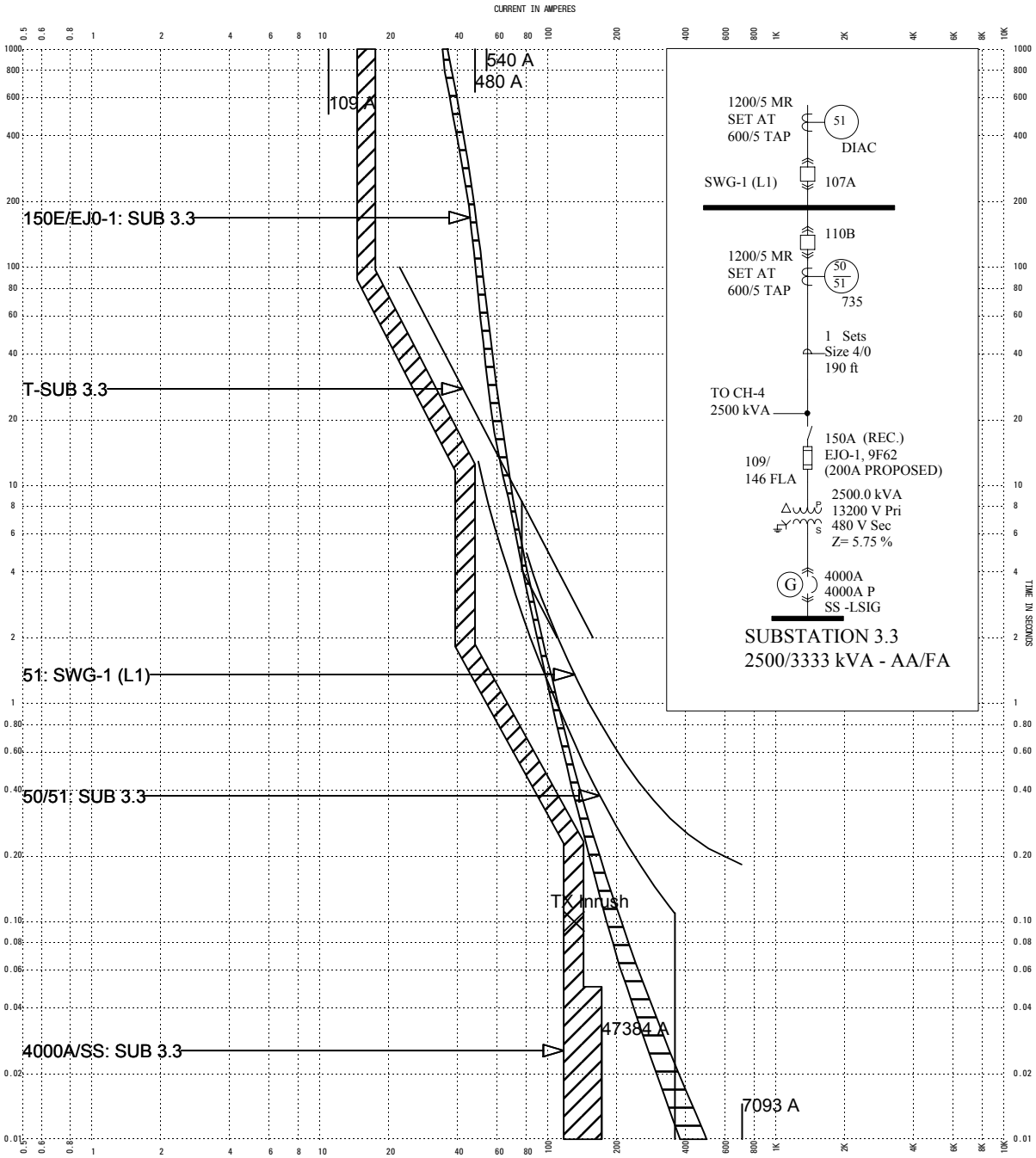
Device Name: 4000A/SS: SUB 3.1
Bus Name: SUB 3.1
Function Name: Phase
Manufacturer: GE
Description: LSI, 4000AS
Type: SS, SH PowerBreak II, MVT Plus/PM
AIC Rating: 100kA ShortTime:42
Frame: SS 480V 4000A
Time Multiplier: 1
Sensor: 4000A
Plug: 4000A
Setting: 1) LTPU (0.5-1.0 x P) 1 (4000A)
2) LTD (1-4) 1
3) STPU (1.5-9 x LTPU) 2.5 (10000A)
4) STD (Min-Max) Int I^2 t Out
5) INST (1.5-9 x P) 9 (36000A)

TCC Name: tccSWG-1B.tcc
Bus Voltage: 480.0V
Fault Duty: 51532.2A
Curve Multiplier: 1
Time Adder: 0

DWG#: tccSWG-1B
March 11, 2009

VOLTAGE: 13200
PA Convention Center Philadelphia, PA

CURRENT SCALE: x 10
CPSI#8159



Device Name:	51: SWG-1 (L1)			TCC Name:	tccSWG-1C.tcc
Bus Name:	SWG-1 (L1)			Bus Voltage:	13200.0V
Function Name:	Phase				
Manufacturer:	GE				
Description:	Digital O/C				
Type:	DIAC/DIFC/DSFC +			Class Desc:	DIAC
AIC Rating:	N/A			Fault Duty:	7093.3A
Current Rating:	600A / 5A			Curve Multiplier:	1
Time Multiplier:	1			Time Adder:	0
Setting: 1) Pickup		4.5	(540A)	Test Points:	@2.0X, 2.108s
2) 12 - IEEE Very Inver		1.5			@5.0X, 0.392s
					@10.0X, 0.207s

Device Name:	50/51: SUB 3.3			TCC Name:	tccSWG-1C.tcc
Bus Name:	SWG-1 (L1)			Bus Voltage:	13200.0V
Function Name:	Phase				
Manufacturer:	GE MULTILIN				
Description:	50/51				
Type:	735			Class Desc:	735
AIC Rating:	N/A			Fault Duty:	7093.3A
Current Rating:	600A / 5A			Curve Multiplier:	1
Time Multiplier:	1			Time Adder:	0
Setting: 1) Pickup(Lo)		80 %	(480A)	Test Points:	@2.0X, 1.395s
2) ANSI Ext Inverse		0.8	1		@5.0X, 0.198s
3) Instantaneous		6.0	(3600A)		@10.0X, 0.079s

Device Name:	150E/EJ0-1: SUB 3.3			TCC Name:	tccSWG-1C.tcc
Bus Name:	T-SUB 3.3 PRI			Bus Voltage:	13200.0V
Function Name:	Phase				
Manufacturer:	GE				
Description:	20E-300E				
Type:	9F62 EJO-1, 15.5kV E-Rated +				
AIC Rating:	50kA			Fault Duty:	7038.0A
Cartridge:	EJO-1, 9F62 15500V 150A			Curve Multiplier:	1
Time Multiplier:	1			Time Adder:	0
Size:	150A				

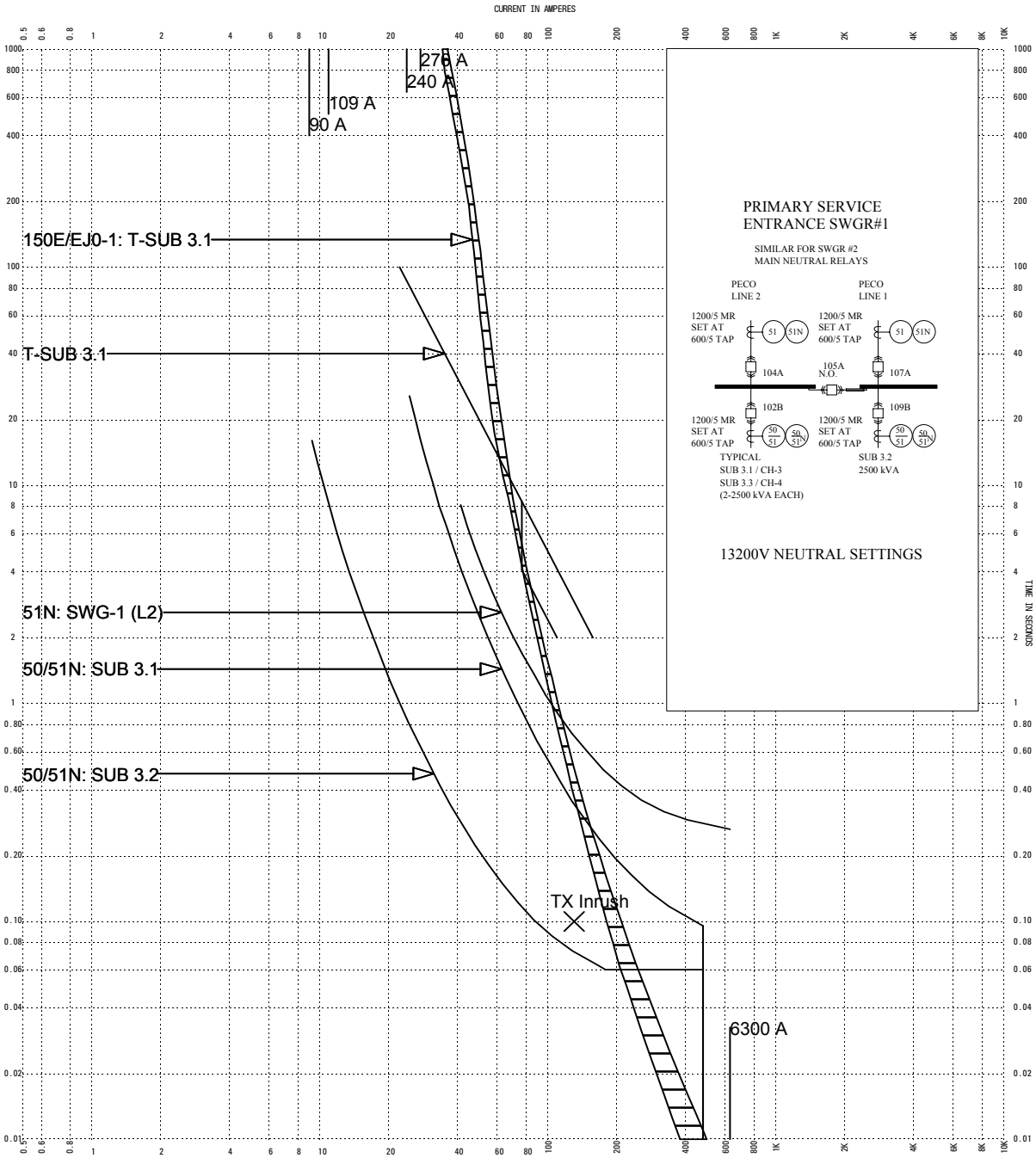
Device Name:	T-SUB 3.3			TCC Name:	tccSWG-1C.tcc
Bus Name:	T-SUB 3.3 PRI			Bus Voltage:	13200V / 480V
				Curve Multiplier:	1
Time Multiplier:	1			Time Adder:	0
Description:	2-Winding Transformer Damage Curve			Rated Volts:	13200 LL/480 LL
Nominal Size:	2500.0kVA				
Impedance (%Z):	5.7500			Pri Connection:	Delta
Inrush Factor:	12.0x			Sec Connection:	Wye-Ground

Device Name:	4000A/SS: SUB3.3			TCC Name:	tccSWG-1C.tcc
Bus Name:	SUB 3.3			Bus Voltage:	480.0V
Function Name:	Phase				
Manufacturer:	GE				
Description:	LSI, 4000AS				
Type:	SS, SH PowerBreak II, MVT Plus/PM				
AIC Rating:	100kA ShortTime:42			Fault Duty:	47384.3A
Frame:	SS 480V 4000A			Curve Multiplier:	1
Time Multiplier:	1			Time Adder:	0
Sensor:	4000A				
Plug:	4000A				
Setting: 1) LTPU (0.5-1.0 x P)		1	(4000A)		
2) LTD (1-4)		1			
3) STPU (1.5-9 x LTPU)		3	(12000A)		
4) STD (Min-Max)		Min	I^2 t In		
5) INST (1.5-9 x P)		9	(36000A)		

DWG#: tccSWG-1C
March 11, 2009

VOLTAGE: 13200
PA Convention Center Philadelphia, PA

CURRENT SCALE: x 10
CPSI#8159



Device Name: 51N: SWG-1 (L2) — TCC Name: tccSWG-1D.tcc
Bus Name: — Bus Voltage: 13200.0V
Function Name: Neutral
Manufacturer: GE
Description: Digital O/C
Type: DIAC/DIFC/DSFC + — Class Desc: DIAC
AIC Rating: N/A — Fault Duty: 6300.0A
Current Rating: 600A / 5A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Setting: 1) Pickup 2.3 (276A) — Test Points: @2.0X, 3.514s
2) 12 - IEEE Very Inver 2.5 @5.0X, 0.654s
@10.0X, 0.345s

Device Name: 50/51N: SUB 3.1 — TCC Name: tccSWG-1D.tcc
Bus Name: — Bus Voltage: 13200.0V
Function Name: Neutral
Manufacturer: GE MULTILIN
Description: 50N/51N
Type: 735 — Class Desc: 735
AIC Rating: N/A — Fault Duty: 6300.0A
Current Rating: 600A / 5A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Setting: 1) Pickup(Lo) 40 % (240A) — Test Points: @2.0X, 2.791s
2) ANSI Ext Inverse 0.8 2 @5.0X, 0.396s
3) Instantaneous 8.0 (4800A) @10.0X, 0.157s

Device Name: 50/51N: SUB 3.2 — TCC Name: tccSWG-1D.tcc
Bus Name: — Bus Voltage: 13200.0V
Function Name: Neutral
Manufacturer: GE MULTILIN
Description: 50N/51N
Type: 735 — Class Desc: 735
AIC Rating: N/A — Fault Duty: 6300.0A
Current Rating: 600A / 5A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Setting: 1) Pickup(Lo) 15 % (90A) — Test Points: @2.0X, 1.744s
2) ANSI Ext Inverse 1 1 @5.0X, 0.247s
3) Instantaneous 8.0 (4800A) @10.0X, 0.098s

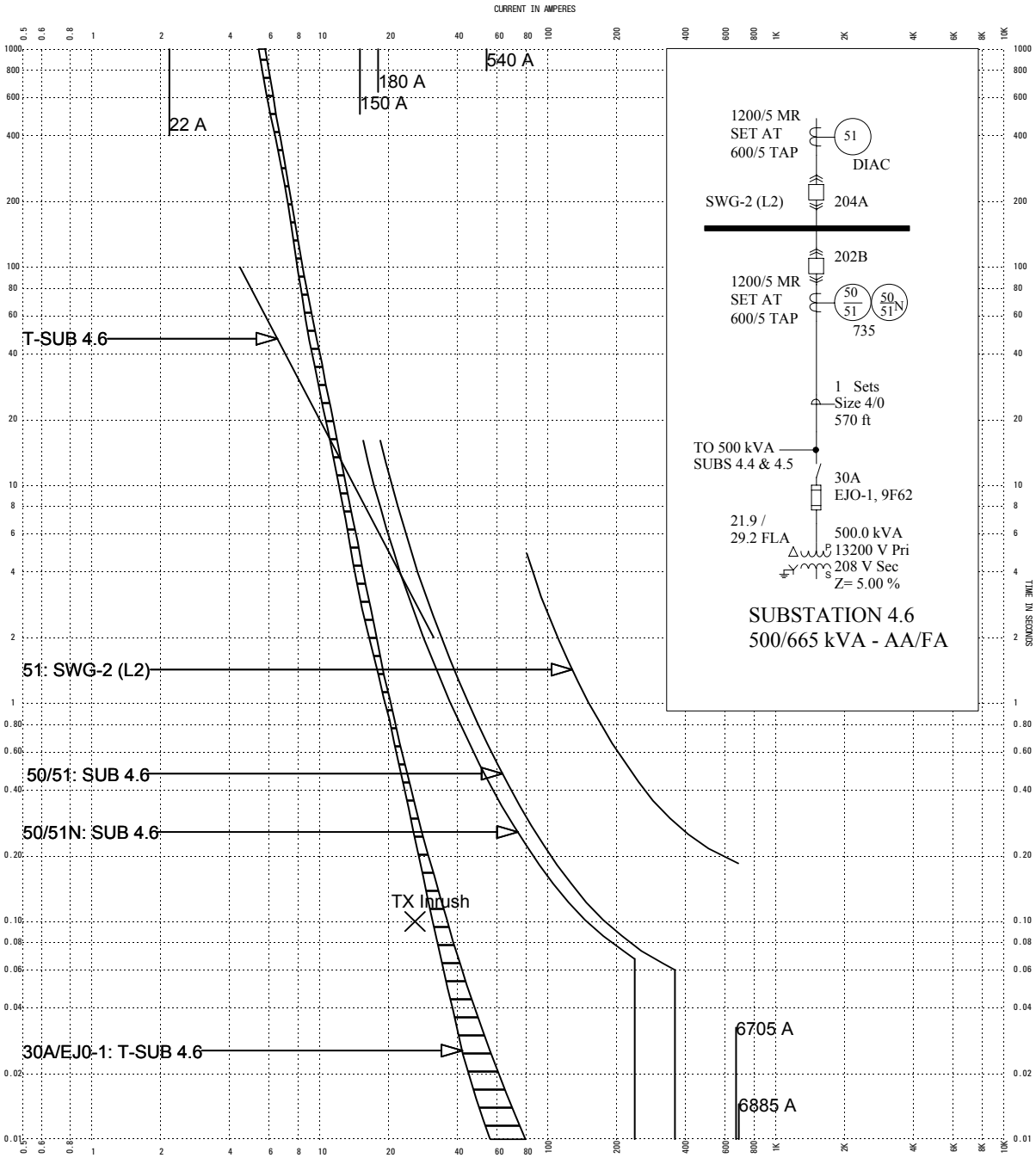
Device Name: 150E/EJ0-1: T-SUB 3.1 — TCC Name: tccSWG-1D.tcc
Bus Name: T-SUB 3.1 PRI — Bus Voltage: 13200.0V
Function Name: Phase
Manufacturer: GE
Description: 20E-300E
Type: 9F62 EJ0-1, 15.5kV E-Rated +
AIC Rating: 50kA — Fault Duty: 6842.4A
Cartridge: EJO-1, 9F62 15500V 150A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Size: 150A

Device Name: T-SUB 3.1 — TCC Name: tccSWG-1D.tcc
Bus Name: T-SUB 3.1 PRI — Bus Voltage: 13200V / 480V
Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Description: 2-Winding Transformer Damage Curve — Rated Volts: 13200 LL/480 LL
Nominal Size: 2500.0kVA
Impedance (%Z): 5.7500 — Pri Connection: Delta
Inrush Factor: 12.0x — Sec Connection: Wye-Ground

DWG#: tccSWG-1D
March 11, 2009

VOLTAGE: 13200
PA Convention Center Philadelphia, PA

CURRENT SCALE: x 10
CPSI#8159



Device Name: 51: SWG-2 (L2) | TCC Name: tccSWG-2A.tcc
Bus Name: SWG-2 (L2) | Bus Voltage: 13200.0V
Function Name: Phase
Manufacturer: GE
Description: Digital O/C
Type: DIAC/DIFC/DSFC + | Class Desc: DIAC
AIC Rating: N/A | Fault Duty: 6885.2A
Current Rating: 600A / 5A | Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Setting: 1) Pickup 4.5 (540A) | Test Points: @2.0X, 2.108s
2) 12 - IEEE Very Inver 1.5 | @5.0X, 0.392s
@10.0X, 0.207s

Device Name: 50/51: SUB 4.6 | TCC Name: tccSWG-2A.tcc
Bus Name: SWG-2 (L2) | Bus Voltage: 13200.0V
Function Name: Phase
Manufacturer: GE MULTILIN
Description: 50/51
Type: 735 | Class Desc: 735
AIC Rating: N/A | Fault Duty: 6885.2A
Current Rating: 600A / 5A | Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Setting: 1) Pickup(Lo) 30 % (180A) | Test Points: @2.0X, 1.744s
2) ANSI Ext Inverse 1 1 | @5.0X, 0.247s
3) Instantaneous 6.0 (3600A) | @10.0X, 0.098s

Device Name: 50/51N: SUB 4.6 | TCC Name: tccSWG-2A.tcc
Bus Name: | Bus Voltage: 13200.0V
Function Name: Neutral
Manufacturer: GE MULTILIN
Description: 50N/51N
Type: 735 | Class Desc: 735
AIC Rating: N/A | Fault Duty: 6885.0A
Current Rating: 600A / 5A | Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Setting: 1) Pickup(Lo) 25 % (150A) | Test Points: @2.0X, 1.744s
2) ANSI Ext Inverse 1 1 | @5.0X, 0.247s
3) Instantaneous 4.0 (2400A) | @10.0X, 0.098s

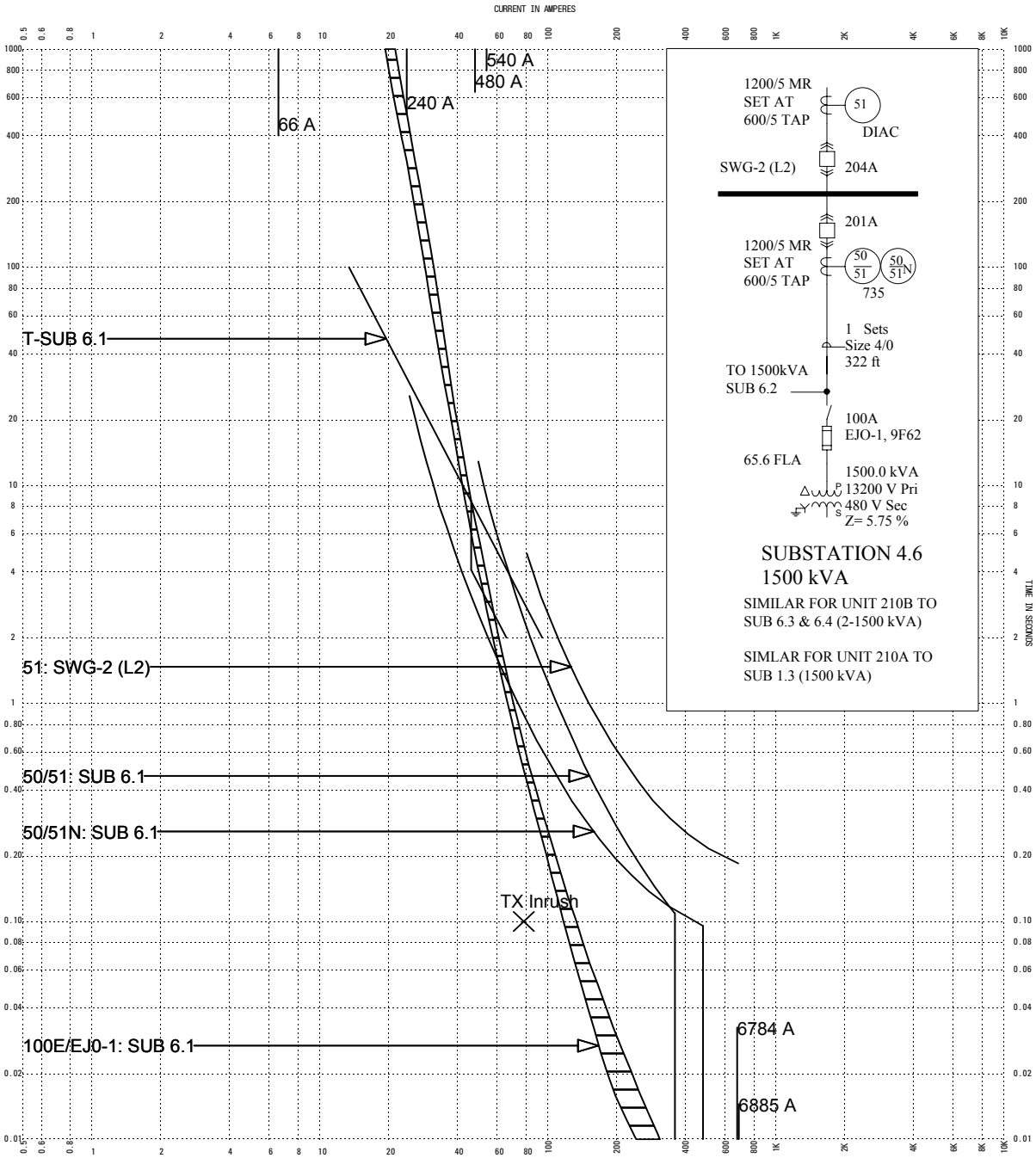
Device Name: 30A/EJ0-1: T-SUB 4.6 | TCC Name: tccSWG-2A.tcc
Bus Name: T-SUB 4.6 PRI | Bus Voltage: 13200.0V
Function Name: Phase
Manufacturer: GE
Description: 20E-300E
Type: 9F62 EJ0-1, 15.5kV E-Rated +
AIC Rating: 50kA | Fault Duty: 6705.1A
Cartridge: EJO-1, 9F62 15500V 30A | Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Size: 30A

Device Name: T-SUB 4.6 | TCC Name: tccSWG-2A.tcc
Bus Name: T-SUB 4.6 PRI | Bus Voltage: 13200V / 208V
Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Description: 2-Winding Transformer Damage Curve | Rated Volts: 13200 LL/208 LL
Nominal Size: 500.0kVA
Impedance (%Z): 5.0000 | Pri Connection: Delta
Inrush Factor: 12.0x | Sec Connection: Wye-Ground

DWG#: tccSWG-2A
March 11, 2009

VOLTAGE: 13200
PA Convention Center Philadelphia, PA

CURRENT SCALE: x 10
CPSI#8159



Device Name:	51: SWG-2 (L2)			TCC Name:	tccSWG-2B.tcc
Bus Name:	SWG-2 (L2)			Bus Voltage:	13200.0V
Function Name:	Phase				
Manufacturer:	GE				
Description:	Digital O/C				
Type:	DIAC/DIFC/DSFC +			Class Desc:	DIAC
AIC Rating:	N/A			Fault Duty:	6885.2A
Current Rating:	600A / 5A			Curve Multiplier:	1
Time Multiplier:	1			Time Adder:	0
Setting: 1) Pickup		4.5	(540A)	Test Points:	@2.0X, 2.108s
2) 12 - IEEE Very Inver		1.5			@5.0X, 0.392s
					@10.0X, 0.207s

Device Name:	50/51: SUB 6.1			TCC Name:	tccSWG-2B.tcc
Bus Name:	SWG-2 (L2)			Bus Voltage:	13200.0V
Function Name:	Phase				
Manufacturer:	GE MULTILIN				
Description:	50/51				
Type:	735			Class Desc:	735
AIC Rating:	N/A			Fault Duty:	6885.2A
Current Rating:	600A / 5A			Curve Multiplier:	1
Time Multiplier:	1			Time Adder:	0
Setting: 1) Pickup(Lo)		80 %	(480A)	Test Points:	@2.0X, 1.395s
2) ANSI Ext Inverse		0.8	1		@5.0X, 0.198s
3) Instantaneous		6.0	(3600A)		@10.0X, 0.079s

Device Name:	50/51N: SUB 6.1			TCC Name:	tccSWG-2B.tcc
Bus Name:				Bus Voltage:	13200.0V
Function Name:	Neutral				
Manufacturer:	GE MULTILIN				
Description:	50N/51N				
Type:	735			Class Desc:	735
AIC Rating:	N/A			Fault Duty:	6885.0A
Current Rating:	600A / 5A			Curve Multiplier:	1
Time Multiplier:	1			Time Adder:	0
Setting: 1) Pickup(Lo)		40 %	(240A)	Test Points:	@2.0X, 2.791s
2) ANSI Ext Inverse		0.8	2		@5.0X, 0.396s
3) Instantaneous		8.0	(4800A)		@10.0X, 0.157s

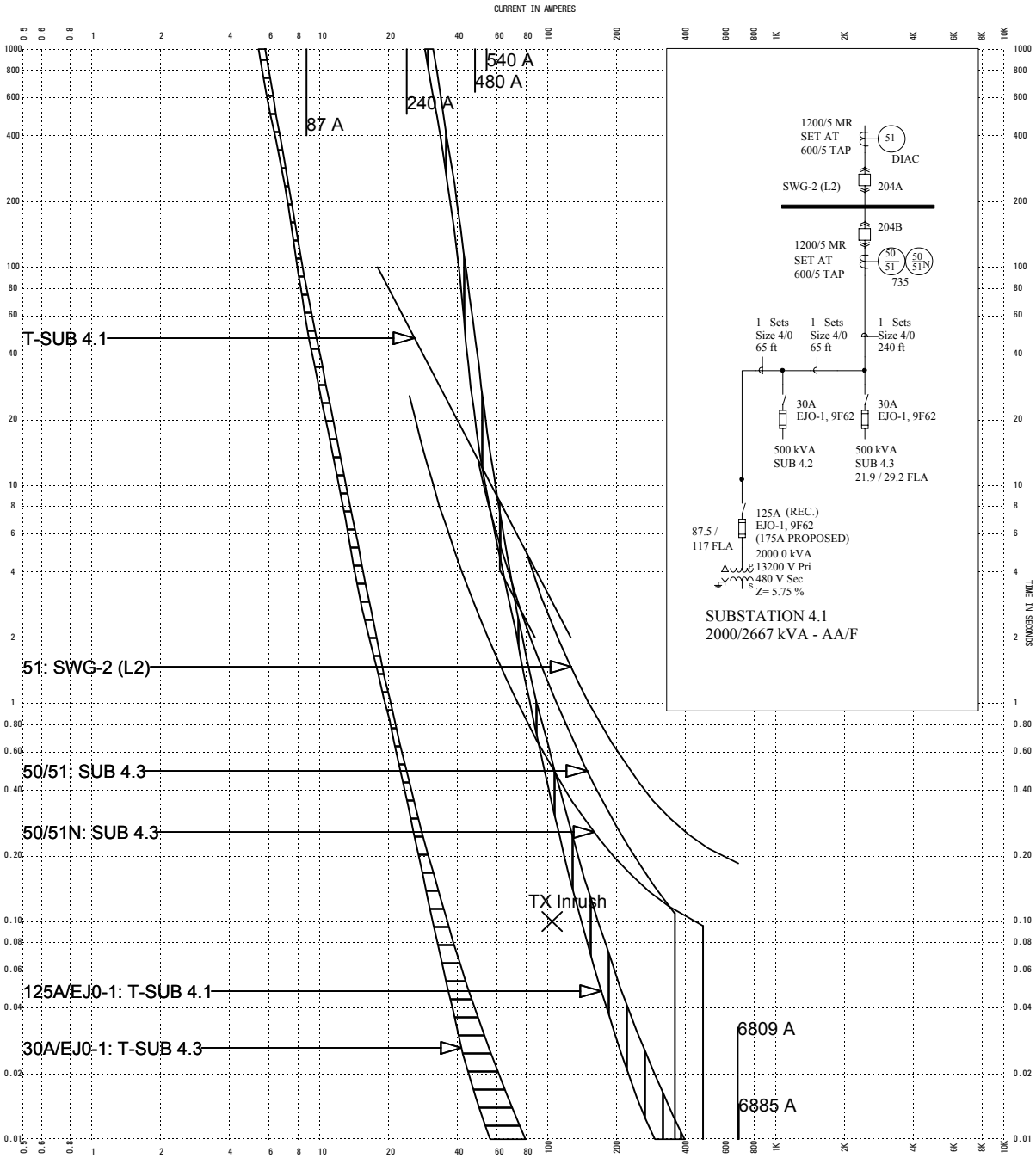
Device Name:	100E/EJ0-1: SUB 6.1	TCC Name:	tccSWG-2B.tcc
Bus Name:	T-SUB 6.1 PRI	Bus Voltage:	13200.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	20E-300E		
Type:	9F62 EJ0-1, 15.5kV E-Rated +		
AIC Rating:	50kA	Fault Duty:	6784.2A
Cartridge:	EJO-1, 9F62 15500V 100A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Size:	100A		

Device Name:	T-SUB 6.1	TCC Name:	tccSWG-2B.tcc
Bus Name:	T-SUB 6.1 PRI	Bus Voltage:	13200V / 480V
		Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Description:	2-Winding Transformer Damage Curve	Rated Volts:	13200 LL/480 LL
Nominal Size:	1500.0kVA		
Impedance (%Z):	5.7500	Pri Connection:	Delta
Inrush Factor:	12.0x	Sec Connection:	Wye-Ground

DWG#: tccSWG-2B
March 11, 2009

VOLTAGE: 13200
PA Convention Center Philadelphia, PA

CURRENT SCALE: x 10
CPSI#8159



Device Name: 51: SWG-2 (L2)
Bus Name: SWG-2 (L2)
Function Name: Phase
Manufacturer: GE
Description: Digital O/C
Type: DIAC/DIFC/DSFC +
AIC Rating: N/A
Current Rating: 600A / 5A
Time Multiplier: 1
Setting: 1) Pickup 4.5 (540A)
2) 12 - IEEE Very Inver 1.5

TCC Name: tccSWG-2C.tcc
Bus Voltage: 13200.0V
Class Desc: DIAC
Fault Duty: 6885.2A
Curve Multiplier: 1
Time Adder: 0
Test Points: @2.0X, 2.108s
@5.0X, 0.392s
@10.0X, 0.207s

Device Name: 50/51: SUB 4.3
Bus Name: SWG-2 (L2)
Function Name: Phase
Manufacturer: GE MULTILIN
Description: 50/51
Type: 735
AIC Rating: N/A
Current Rating: 600A / 5A
Time Multiplier: 1
Setting: 1) Pickup (Lo) 80 % (480A)
2) ANSI Ext Inverse 0.8 1
3) Instantaneous 6.0 (3600A)

TCC Name: tccSWG-2C.tcc
Bus Voltage: 13200.0V
Class Desc: 735
Fault Duty: 6885.2A
Curve Multiplier: 1
Time Adder: 0
Test Points: @2.0X, 1.395s
@5.0X, 0.198s
@10.0X, 0.079s

Device Name: 50/51N: SUB 4.3
Bus Name:
Function Name: Neutral
Manufacturer: GE MULTILIN
Description: 50N/51N
Type: 735
AIC Rating: N/A
Current Rating: 600A / 5A
Time Multiplier: 1
Setting: 1) Pickup (Lo) 40 % (240A)
2) ANSI Ext Inverse 0.8 2
3) Instantaneous 8.0 (4800A)

TCC Name: tccSWG-2C.tcc
Bus Voltage: 13200.0V
Class Desc: 735
Fault Duty: 200000.0A
Curve Multiplier: 1
Time Adder: 0
Test Points: @2.0X, 2.791s
@5.0X, 0.396s
@10.0X, 0.157s

Device Name: 30A/EJ0-1: T-SUB 4.3
Bus Name: T-SUB 4.3 PRI
Function Name: Phase
Manufacturer: GE
Description: 20E-300E
Type: 9F62 EJ0-1, 15.5kV E-Rated +
AIC Rating: 50kA
Cartridge: EJO-1, 9F62 15500V 30A
Time Multiplier: 1
Size: 30A

TCC Name: tccSWG-2C.tcc
Bus Voltage: 13200.0V
Fault Duty: 6809.0A
Curve Multiplier: 1
Time Adder: 0

Device Name: 125A/EJ0-1: T-SUB 4.1
Bus Name: T-SUB 4.1 PRI
Function Name: Phase
Manufacturer: GE
Description: 20E-300E
Type: 9F62 EJ0-1, 15.5kV E-Rated +
AIC Rating: 50kA
Cartridge: EJO-1, 9F62 15500V 125A
Time Multiplier: 1
Size: 125A

TCC Name: tccSWG-2C.tcc
Bus Voltage: 13200.0V
Fault Duty: 6767.9A
Curve Multiplier: 1
Time Adder: 0

Device Name: T-SUB 4.1
Bus Name: T-SUB 4.1 PRI

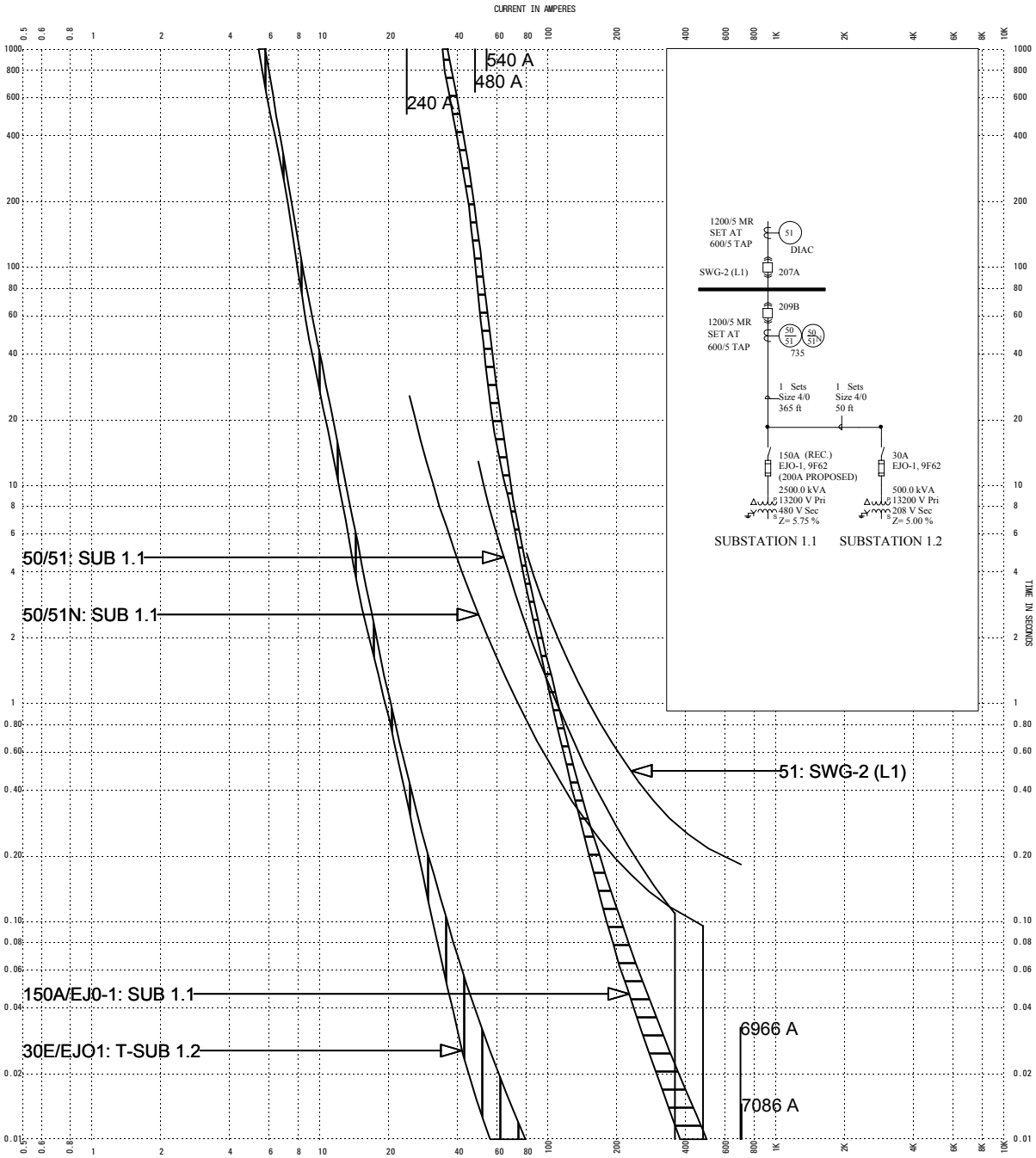
Time Multiplier: 1
Description: 2-Winding Transformer Damage Curve
Nominal Size: 2000.0kVA
Impedance (%Z): 5.7500
Inrush Factor: 12.0x

TCC Name: tccSWG-2C.tcc
Bus Voltage: 13200V / 480V
Curve Multiplier: 1
Time Adder: 0
Rated Volts: 13200 LL/480 LL
Pri Connection: Delta
Sec Connection: Wye-Ground

DWG#: tccSWG-2C
March 11, 2009

VOLTAGE: 13200
PA Convention Center Philadelphia, PA

CURRENT SCALE: x 10
CPSI#8159



Device Name: 51: SWG-2 (L1) | TCC Name: tccSWG-2D.tcc
Bus Name: SWG-2 (L1) | Bus Voltage: 13200.0V
Function Name: Phase
Manufacturer: GE
Description: Digital O/C
Type: DIAC/DIFC/DSFC + | Class Desc: DIAC
AIC Rating: N/A | Fault Duty: 7086.4A
Current Rating: 600A / 5A | Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Setting: 1) Pickup 4.5 (540A) | Test Points: @2.0X, 2.108s
2) 12 - IEEE Very Inver 1.5 | @5.0X, 0.392s
@10.0X, 0.207s

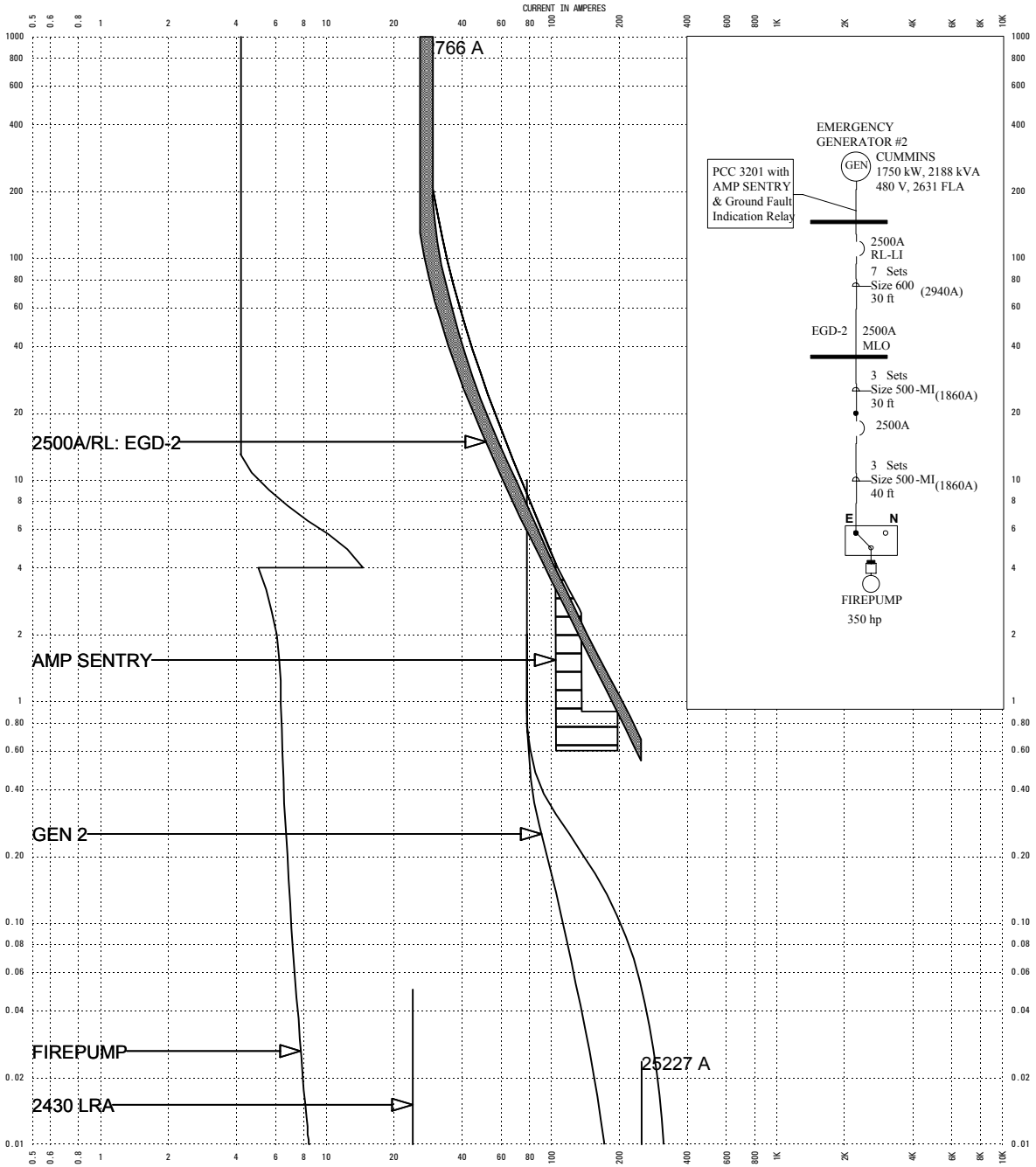
Device Name: 50/51: SUB 1.1 | TCC Name: tccSWG-2D.tcc
Bus Name: SWG-2 (L1) | Bus Voltage: 13200.0V
Function Name: Phase
Manufacturer: GE MULTILIN
Description: 50/51
Type: 735 | Class Desc: 735
AIC Rating: N/A | Fault Duty: 7086.4A
Current Rating: 600A / 5A | Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Setting: 1) Pickup(Lo) 80 % (480A) | Test Points: @2.0X, 1.395s
2) ANSI Ext Inverse 0.8 1 | @5.0X, 0.198s
3) Instantaneous 6.0 (3600A) | @10.0X, 0.079s

Device Name: 50/51N: SUB 1.1 | TCC Name: tccSWG-2D.tcc
Bus Name: | Bus Voltage: 13200.0V
Function Name: Neutral
Manufacturer: GE MULTILIN
Description: 50N/51N
Type: 735 | Class Desc: 735
AIC Rating: N/A | Fault Duty: 6885.0A
Current Rating: 600A / 5A | Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Setting: 1) Pickup(Lo) 40 % (240A) | Test Points: @2.0X, 2.791s
2) ANSI Ext Inverse 0.8 2 | @5.0X, 0.396s
3) Instantaneous 8.0 (4800A) | @10.0X, 0.157s

Device Name: 150A/EJ0-1: SUB 1.1 | TCC Name: tccSWG-2D.tcc
Bus Name: T-SUB 1.1 PRI | Bus Voltage: 13200.0V
Function Name: Phase
Manufacturer: GE
Description: 20E-300E
Type: 9F62 EJ0-1, 15.5kV E-Rated +
AIC Rating: 50kA | Fault Duty: 6966.0A
Cartridge: EJO-1, 9F62 15500V 150A | Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Size: 150A

Device Name: 30E/EJO1: T-SUB 1.2 | TCC Name: tccSWG-2D.tcc
Bus Name: T-SUB 1.2 PRI | Bus Voltage: 13200.0V
Function Name: Phase
Manufacturer: GE
Description: 20E-300E
Type: 9F62 EJ0-1, 15.5kV E-Rated +
AIC Rating: 50kA | Fault Duty: 6949.3A
Cartridge: EJO-1, 9F62 15500V 30A | Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Size: 30A

DWG#: tccSWG-2D | VOLTAGE: 13200 | CURRENT SCALE: x 10
March 11, 2009 | PA Convention Center Philadelphia, PA | CPSI#8159



Device Name: GEN 2 — TCC Name: tccE1.4.tcc
Bus Name: GENERATOR 2 — Bus Voltage: 480V
Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Description: Generator Decrement Curve — Size: 2300.0KVA
Xd": 0.1400 — Td": 0.0200 — Power Factor: 0.800 Lag
Xd': 0.1900 — Td': 0.1490 — Ifg: 1.0000
Xd: 3.21 — Ta: 0.2000 — If: 9.1000

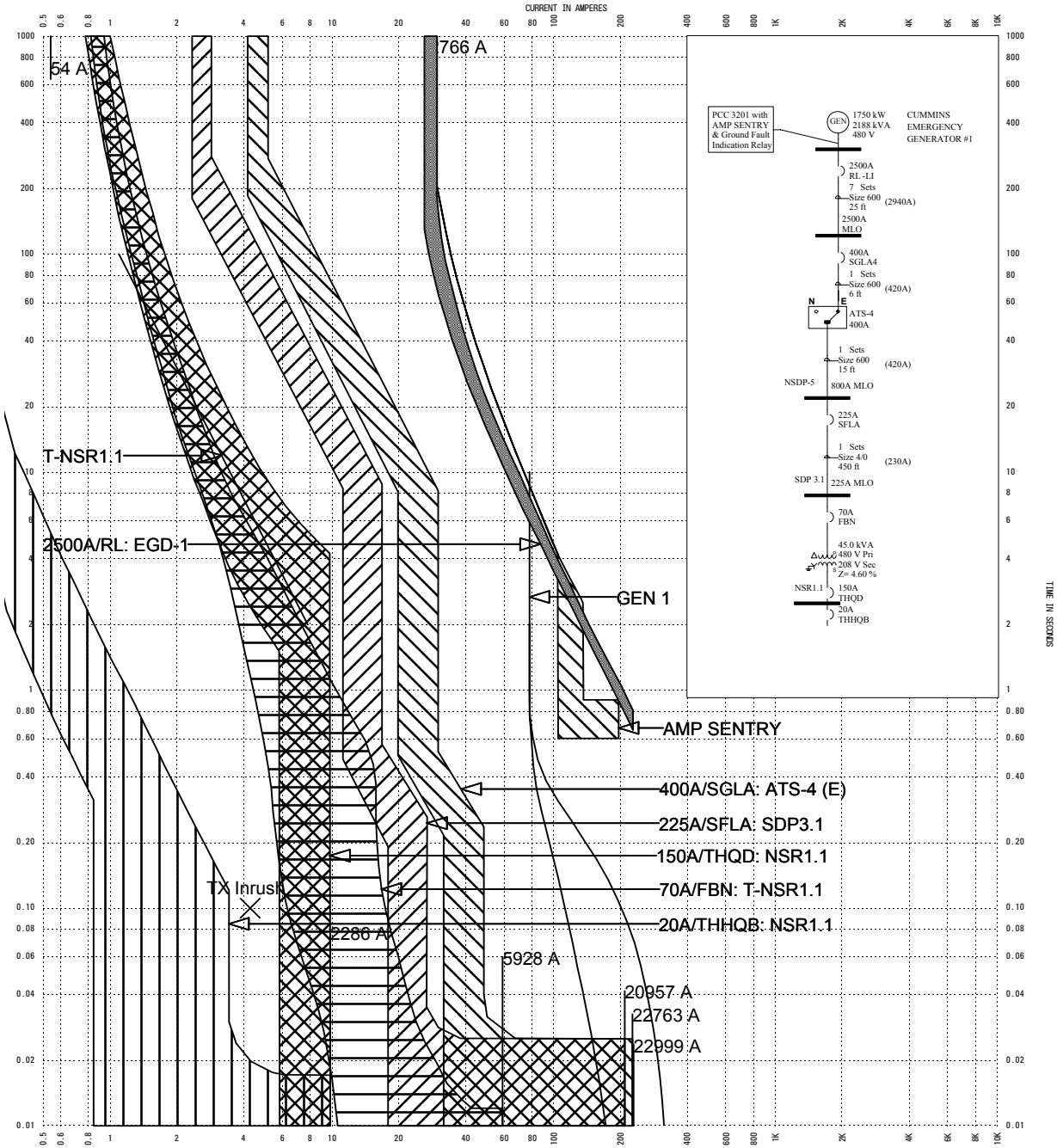
Device Name: AMP SENTRY — TCC Name: tccE1.4.tcc
Bus Name: — Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: Cummins
Description: Control Amp Sentry
Type: PowerCommand + — Class Desc:
AIC Rating: N/A — Fault Duty: 19736.0A
Motor FLA: 2631.00A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Overload Factor: 1.00
Setting: 1) Gen Overload

Device Name: 2500A/RL: EGD-2 — TCC Name: tccE1.4.tcc
Bus Name: GENERATOR 2 — Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: SQUARE D
Description: LI, 600-2500A, UL
Type: Powerpact R-Frame, 3.0 & 3.0A
AIC Rating: 100kA — Fault Duty: 25227.2A
Frame: RL 480V 2500A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Sensor: 2500A
Plug:
Setting: 1) LTPU/LTD (A 0.4-1.0 1 (2500A) 2
2) INST RG (1.5-12 x S) 12 (30000A)

Device Name: FIREPUMP — TCC Name: tccE1.4.tcc
Bus Name: FP CONTROLLER — Bus Voltage: 480V
Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Description: Motor Starting Curve — Inrush: 2.0 (844.2A)
Rated Size: 350HP (1 of 1 Plotted) — FLA+Load Adder: 422.1A + 0.0A
Power Factor: 0.800 — Starting Time: 10.00s
Efficiency: 0.93 — Star Delta

Device Name: 2430 LRA — TCC Name: tccE1.4.tcc
Bus Name: — Bus Voltage: 480V
Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Description: Motor Starting Curve — Inrush: 1.0 (2430.0A)
Rated Size: 0HP (1 of 1 Plotted) — FLA+Load Adder: 2430.0A + 0.0A
Power Factor: 0.800 — Starting Time: 0.05s
Efficiency: 0.93 — Full Voltage

DWG#: tccE1.4 — VOLTAGE: 480 — CURRENT SCALE: x 100
February 27, 2009 — PA Convention Center Philadelphia, PA — CPSI#8159



DWG#: tccE3.1A
February 27, 2009

VOLTAGE: 480
PA Convention Center Philadelphia, PA

CURRENT SCALE: x 100
CPSI#8159

Device Name:	GEN 1	TCC Name:	tccE3.1A.tcc
Bus Name:	GENERATOR 1	Bus Voltage:	480V
		Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Description:	Generator Decrement Curve	Size:	2300.0KVA
Xd": 0.1400	Td": 0.0200	Power Factor:	0.800 Lag
Xd': 0.1900	Td': 0.1490	Ifg:	1.0000
Xd: 3.21	Ta: 0.2000	If:	9.1000

Device Name:	AMP SENTRY	TCC Name:	tccE3.1A.tcc
Bus Name:		Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	Cummins		
Description:	Control Amp Sentry		
Type:	PowerCommand +	Class Desc:	
AIC Rating:	N/A	Fault Duty:	19736.0A
Motor FLA:	2631.00A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Overload Factor:	1.00		
Setting: 1) Gen Overload			

Device Name:	2500A/RL: EGD-1	TCC Name:	tccE3.1A.tcc
Bus Name:	GENERATOR 1	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	SQUARE D		
Description:	LI, 600-2500A, UL		
Type:	Powerpact R-Frame, 3.0 & 3.0A		
AIC Rating:	100kA	Fault Duty:	22999.0A
Frame:	RL 480V 2500A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Sensor:	2500A		
Plug:			
Setting: 1) LTPU/LTD (A 0.4-1.0	1 (2500A) 2		
2) INST RJ/RL (1.5-12 x	12 (30000A)		

Device Name:	400A/SGLA: ATS-4 (E)	TCC Name:	tccE3.1A.tcc
Bus Name:	EGD-1	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	125-600A		
Type:	SGLA, Spectra RMS +		
AIC Rating:	65kA	Fault Duty:	22763.5A
Frame:	SGLA4 480V 400A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Trip:	400A		
Setting: 1) MAX			

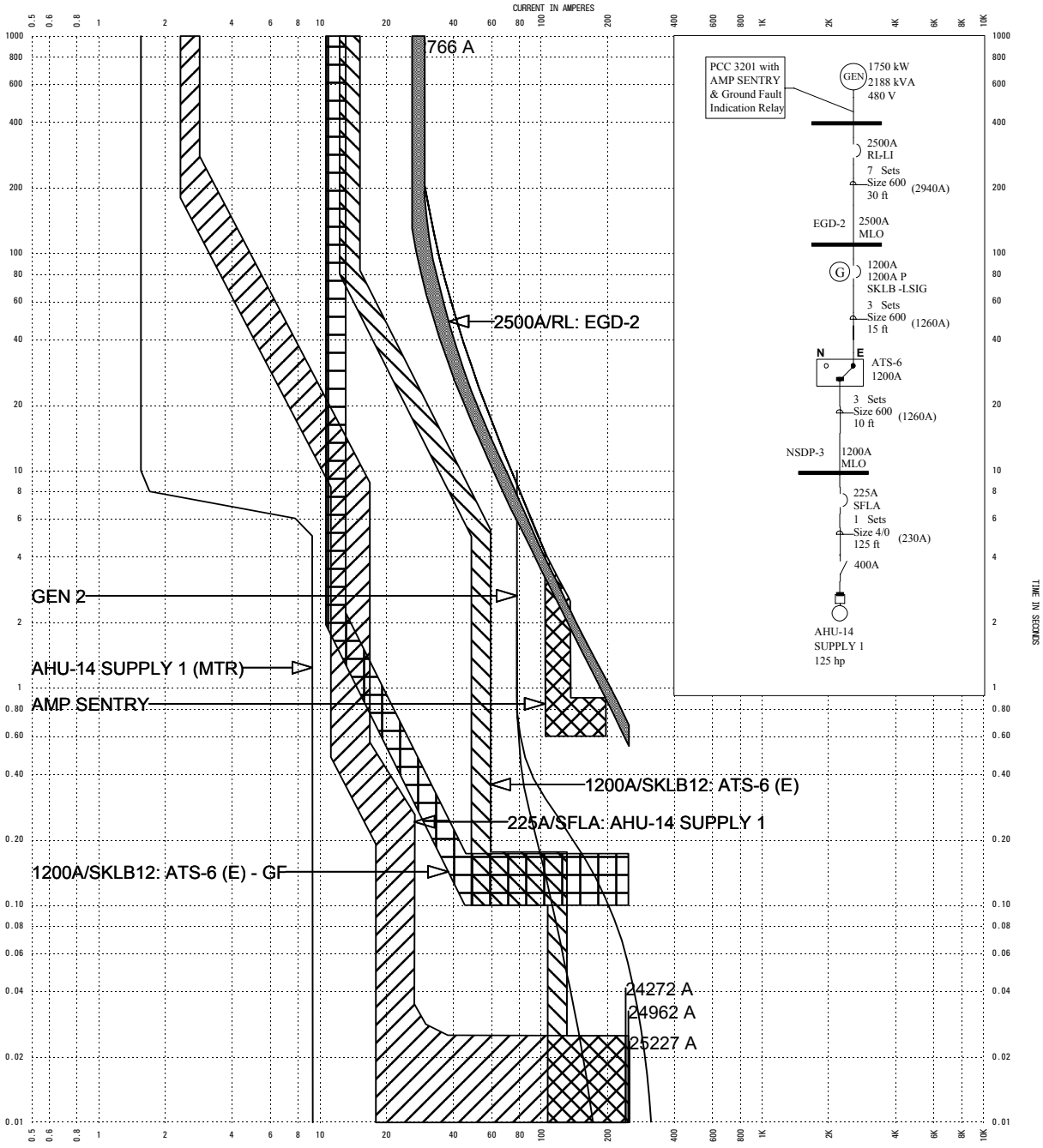
Device Name:	225A/SFLA: SDP3.1	TCC Name:	tccE3.1A.tcc
Bus Name:	NSDP-5	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	70-250A		
Type:	SFLA, Spectra RMS		
AIC Rating:	65kA	Fault Duty:	20957.3A
Frame:	SFLA 480V 250A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Trip:	225A		
Setting: 1) MAX			

Device Name:	70A/FBN: T-NSR1.1	TCC Name:	tccE3.1A.tcc
Bus Name:	SDP 3.1	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	15-100A		
Type:	FB, 2 & 3-Pole 480V		
AIC Rating:	65kA	Fault Duty:	5927.6A
Frame:	FBN 480V 70A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Trip:	70A		
Setting: 1) Fixed			

Device Name:	T-NSR1.1	TCC Name:	tccE3.1A.tcc
Bus Name:	SDP 3.1	Bus Voltage:	480V / 208V
		Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Description:	2-Winding Transformer Damage Curve	Rated Volts:	480 LL/208 LL
Nominal Size:	45.0kVA		
Impedance (%Z):	4.6000	Pri Connection:	Delta
Inrush Factor:	8.0x	Sec Connection:	Wye-Ground

Device Name:	150A/THQD: NSR1.1	TCC Name:	tccE3.1A.tcc
Bus Name:	NSR1.1	Bus Voltage:	208.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	100-225A		
Type:	THQD		
AIC Rating:	22kA	Fault Duty:	2285.6A
Frame:	THQD 240V 225A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Trip:	150A		
Setting: 1) Fixed			

Device Name:	20A/THHQB: NSR1.1	TCC Name:	tccE3.1A.tcc
Bus Name:	NSR1.1	Bus Voltage:	208.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	15-100A		



Device Name: GEN 2
Bus Name: GENERATOR 2
Time Multiplier: 1
Description: Generator Decrement Curve
Xd": 0.1400 Td": 0.0200
Xd': 0.1900 Td': 0.1490
Xd: 3.21 Ta: 0.2000
TCC Name: tccE3.1C.tcc
Bus Voltage: 480V
Curve Multiplier: 1
Time Adder: 0
Size: 2300.0KVA
Power Factor: 0.800 Lag
Ifg: 1.0000
If: 9.1000

Device Name: AMP SENTRY
Bus Name:
Function Name: Phase
Manufacturer: Cummins
Description: Control Amp Sentry
Type: PowerCommand +
AIC Rating: N/A
Motor FLA: 2631.00A
Time Multiplier: 1
Overload Factor: 1.00
Setting: 1) Gen Overload
TCC Name: tccE3.1C.tcc
Bus Voltage: 480.0V
Class Desc:
Fault Duty: 19736.0A
Curve Multiplier: 1
Time Adder: 0

Device Name: 2500A/RL: EGD-2
Bus Name: GENERATOR 2
Function Name: Phase
Manufacturer: SQUARE D
Description: LI, 600-2500A, UL
Type: Powerpact R-Frame, 3.0 & 3.0A
AIC Rating: 100kA
Frame: RL 480V 2500A
Time Multiplier: 1
Sensor: 2500A
Plug:
Setting: 1) LTPU/LTD (A 0.4-1.0 1 (2500A) 2
2) INST RG (1.5-12 x S) 12 (30000A)
TCC Name: tccE3.1C.tcc
Bus Voltage: 480.0V
Fault Duty: 25227.2A
Curve Multiplier: 1
Time Adder: 0

Device Name: 1200A/SKLB12: ATS-6 (E)
Bus Name: EGD-2
Function Name: Phase
Manufacturer: GE
Description: LSI, 300-1200A
Type: SK, MVT Plus/PM +
AIC Rating: 65kA
Frame: SKLB 480V 1200A
Time Multiplier: 1
Sensor: 1200A
Plug: 1200A
Setting: 1) LTPU (0.5-1.0 x P) 1 (1200A)
2) LTD (1-4) 1
3) STPU (1.5-9 x LTPU) 4.5 (5400A)
4) STD (1-4) 1 I^2 t Out
5) INST (1.5-10 x P) 10 (12000A)
TCC Name: tccE3.1C.tcc
Bus Voltage: 480.0V
Fault Duty: 24961.8A
Curve Multiplier: 1
Time Adder: 0

Device Name: 1200A/SKLB12: ATS-6 (E) - GF
Bus Name: EGD-2
Function Name: Ground
Manufacturer: GE
Description: GF, 800-1200A Sensors
Type: SK, MVT Plus/PM
AIC Rating: 65kA
Frame: SKL 480V 1200A
Time Multiplier: 1
Sensor: 1200A
Plug: 1200A
Setting: 1) GFPU (0.2-1.0 x S) 1 (1200A)
2) GFD (1-4) 1 I^2 t In
TCC Name: tccE3.1C.tcc
Bus Voltage: 480.0V
Fault Duty: 24961.8A
Curve Multiplier: 1
Time Adder: 0

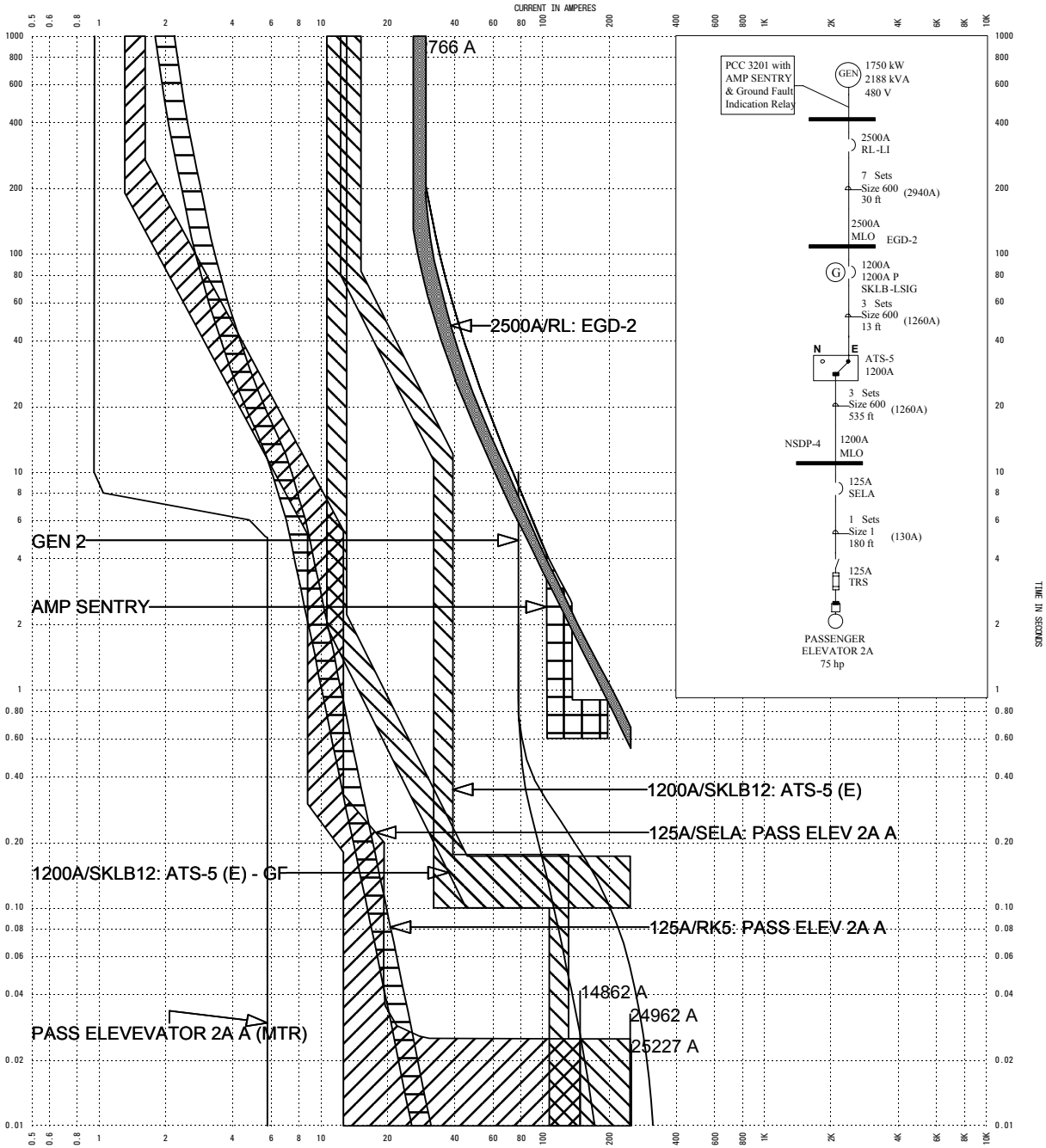
Device Name: 225A/SFLA: AHU-14 SUPPLY 1
Bus Name: NSDP-3
Function Name: Phase
Manufacturer: GE
Description: 70-250A
Type: SFLA, Spectra RMS
AIC Rating: 65kA
Frame: SFLA 480V 250A
Time Multiplier: 1
Trip: 225A
Setting: 1) MAX
TCC Name: tccE3.1C.tcc
Bus Voltage: 480.0V
Fault Duty: 24271.6A
Curve Multiplier: 1
Time Adder: 0

Device Name: AHU-14 SUPPLY 1 (MTR)
Bus Name: AHU-14 SUPPLY 1
Time Multiplier: 1
Description: Motor Starting Curve
Rated Size: 125HP (1 of 1 Plotted)
Power Factor: 0.800
Efficiency: 0.90
TCC Name: tccE3.1C.tcc
Bus Voltage: 480V
Curve Multiplier: 1
Time Adder: 0
Inrush: 6.0 (936.0A)
FLA+Load Adder: 156.0A + 0.0A
Starting Time: 10.00s
Full Voltage (Square Transient)

DWG#: tccE3.1C
February 27, 2009

VOLTAGE: 480
PA Convention Center Philadelphia, PA

CURRENT SCALE: x 100
CPSI#8159



DWG#: tccE3.1D
February 27, 2009

VOLTAGE: 480
PA Convention Center Philadelphia, PA

CURRENT SCALE: x 100
CPSI#8159

Device Name:	GEN 2	TCC Name:	tccE3.1D.tcc
Bus Name:	GENERATOR 2	Bus Voltage:	480V
		Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Description:	Generator Decrement Curve	Size:	2300.0KVA
Xd": 0.1400	Td": 0.0200	Power Factor:	0.800 Lag
Xd': 0.1900	Td': 0.1490	Ifg:	1.0000
Xd: 3.21	Ta: 0.2000	If:	9.1000

Device Name:	AMP SENTRY	TCC Name:	tccE3.1D.tcc
Bus Name:		Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	Cummins		
Description:	Control Amp Sentry		
Type:	PowerCommand +	Class Desc:	
AIC Rating:	N/A	Fault Duty:	19736.0A
Motor FLA:	2631.00A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Overload Factor:	1.00		
Setting: 1) Gen Overload			

Device Name:	2500A/RL: EGD-2	TCC Name:	tccE3.1D.tcc
Bus Name:	GENERATOR 2	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	SQUARE D		
Description:	LI, 600-2500A, UL		
Type:	Powerpact R-Frame, 3.0 & 3.0A		
AIC Rating:	100kA	Fault Duty:	25227.2A
Frame:	RL 480V 2500A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Sensor:	2500A		
Plug:			
Setting: 1) LTPU/LTD (A 0.4-1.0	1 (2500A) 2		
2) INST RG (1.5-12 x S)	12 (30000A)		

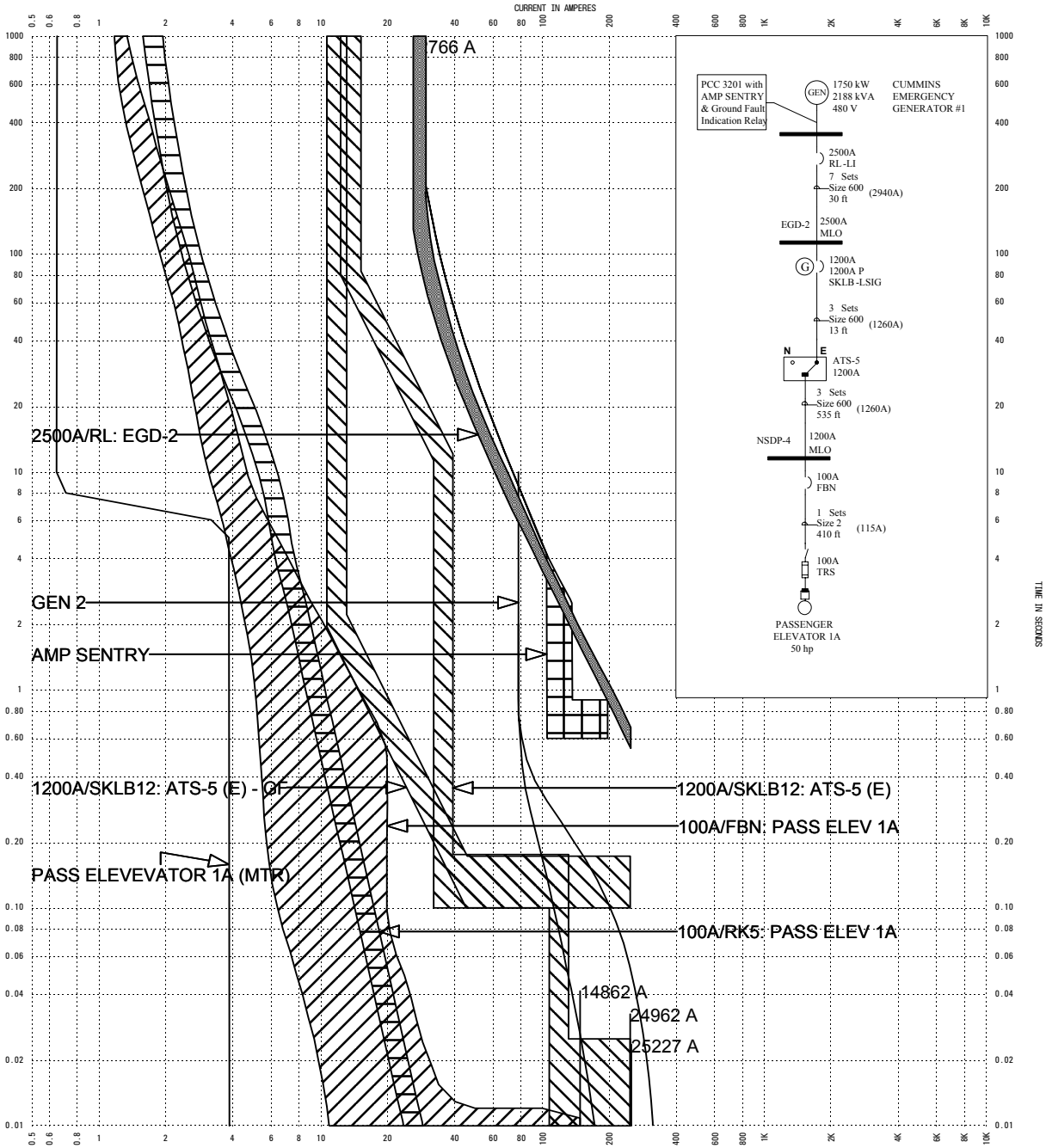
Device Name:	1200A/SKLB12: ATS-5 (E)	TCC Name:	tccE3.1D.tcc
Bus Name:	EGD-2	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	LSI, 300-1200A		
Type:	SK, MVT Plus/PM +		
AIC Rating:	65kA	Fault Duty:	24961.8A
Frame:	SKLB 480V 1200A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Sensor:	1200A		
Plug:	1200A		
Setting: 1) LTPU (0.5-1.0 x P)	1 (1200A)		
2) LTD (1-4)	1		
3) STPU (1.5-9 x LTPU)	3 (3600A)		
4) STD (1-4)	1 I^2 t Out		
5) INST (1.5-10 x P)	10 (12000A)		

Device Name:	1200A/SKLB12: ATS-5 (E) - GF	TCC Name:	tccE3.1D.tcc
Bus Name:	EGD-2	Bus Voltage:	480.0V
Function Name:	Ground		
Manufacturer:	GE		
Description:	GF, 800-1200A Sensors		
Type:	SK, MVT Plus/PM		
AIC Rating:	65kA	Fault Duty:	24961.8A
Frame:	SKL 480V 1200A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Sensor:	1200A		
Plug:	1200A		
Setting: 1) GFPU (0.2-1.0 x S)	1 (1200A)		
2) GFD (1-4)	1 I^2 t In		

Device Name:	125A/SELA: PASS ELEV 2A A	TCC Name:	tccE3.1D.tcc
Bus Name:	NSDP-4	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	15-150A		
Type:	SELA, Spectra RMS		
AIC Rating:	65kA	Fault Duty:	14861.9A
Frame:	SELA 480V 125A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Trip:	125A		
Setting: 1) MAX			

Device Name:	125A/RK5: PASS ELEV 2A A	TCC Name:	tccE3.1D.tcc
Bus Name:	PASS ELEV 2A A	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	GOULD SHAWMUT		
Description:	15-600A		
Type:	TRS, 600V Class RK5		
AIC Rating:	200kA	Fault Duty:	6563.9A
Cartridge:	TRS 600V 200A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Size:	125A		

Device Name:	PASS ELEVEVATOR 2A A (MTR)	TCC Name:	tccE3.1D.tcc
Bus Name:	PASS ELEV 2A A	Bus Voltage:	480V
		Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Description:	Motor Starting Curve	Inrush:	6.0 (576.0A)
Rated Size:	75HP (1 of 1 Plotted)	FLA+Load Adder:	96.0A + 0.0A
Power Factor:	0.800	Starting Time:	10.00s
Efficiency:	0.88	Full Voltage (Square Transient)	



DWG#: tccE3.1E
February 27, 2009

VOLTAGE: 480
PA Convention Center Philadelphia, PA

CURRENT SCALE: x 100
CPSI#8159

Device Name:	GEN 2	TCC Name:	tccE3.1E.tcc
Bus Name:	GENERATOR 2	Bus Voltage:	480V
		Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Description:	Generator Decrement Curve	Size:	2300.0KVA
Xd": 0.1400	Td": 0.0200	Power Factor:	0.800 Lag
Xd': 0.1900	Td': 0.1490	Ifg:	1.0000
Xd: 3.21	Ta: 0.2000	If:	9.1000

Device Name:	AMP SENTRY	TCC Name:	tccE3.1E.tcc
Bus Name:		Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	Cummins		
Description:	Control Amp Sentry		
Type:	PowerCommand +	Class Desc:	
AIC Rating:	N/A	Fault Duty:	19736.0A
Motor FLA:	2631.00A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Overload Factor:	1.00		
Setting: 1) Gen Overload			

Device Name:	2500A/RL: EGD-2	TCC Name:	tccE3.1E.tcc
Bus Name:	GENERATOR 2	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	SQUARE D		
Description:	LI, 600-2500A, UL		
Type:	Powerpact R-Frame, 3.0 & 3.0A		
AIC Rating:	100kA	Fault Duty:	25227.2A
Frame:	RL 480V 2500A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Sensor:	2500A		
Plug:			
Setting: 1) LTPU/LTD (A 0.4-1.0	1 (2500A) 2		
2) INST RG (1.5-12 x S)	12 (30000A)		

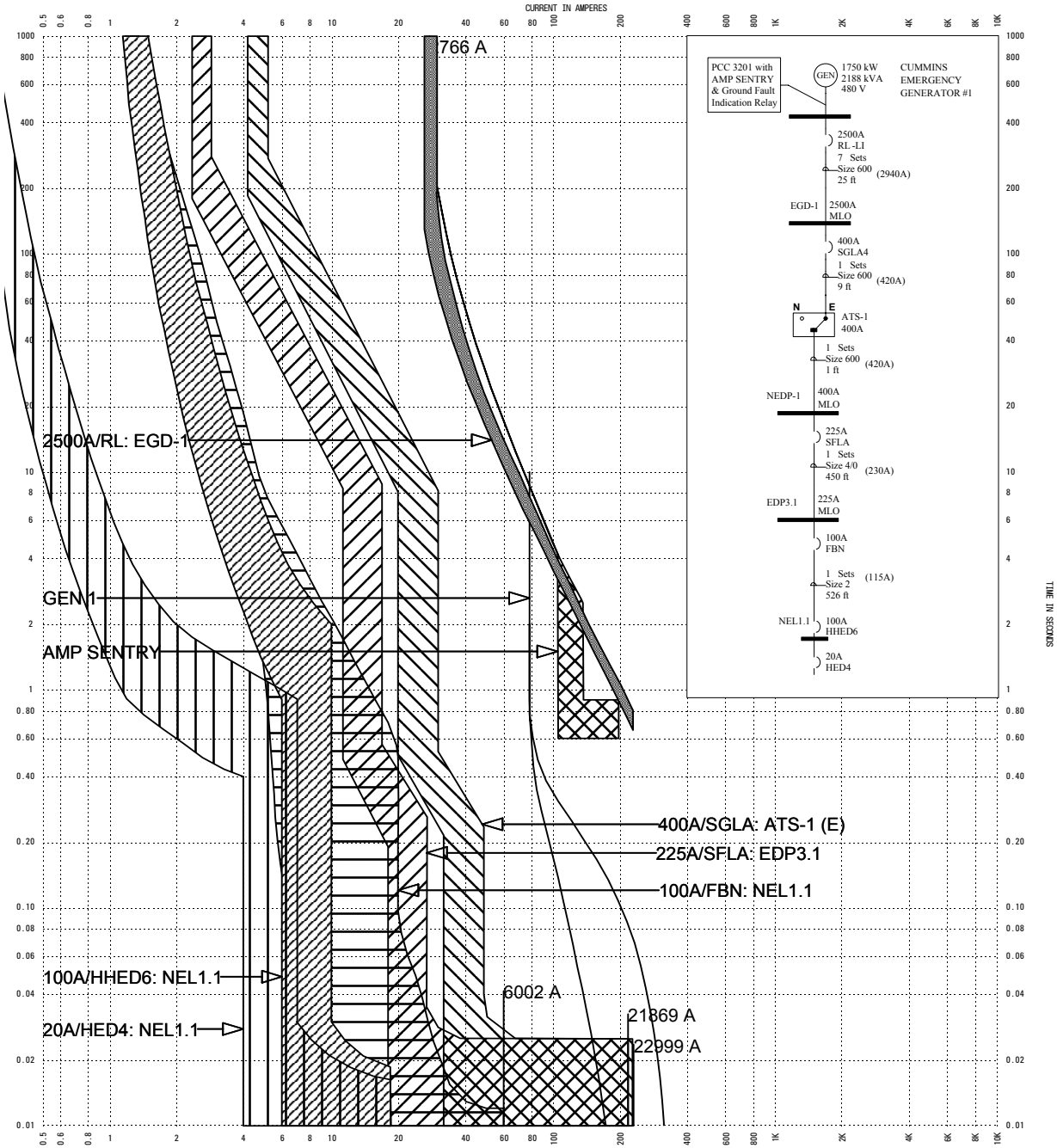
Device Name:	1200A/SKLB12: ATS-5 (E)	TCC Name:	tccE3.1E.tcc
Bus Name:	EGD-2	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	LSI, 300-1200A		
Type:	SK, MVT Plus/PM +		
AIC Rating:	65kA	Fault Duty:	24961.8A
Frame:	SKLB 480V 1200A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Sensor:	1200A		
Plug:	1200A		
Setting: 1) LTPU (0.5-1.0 x P)	1 (1200A)		
2) LTD (1-4)	1		
3) STPU (1.5-9 x LTPU)	3 (3600A)		
4) STD (1-4)	1 I^2 t Out		
5) INST (1.5-10 x P)	10 (12000A)		

Device Name:	1200A/SKLB12: ATS-5 (E) - GF	TCC Name:	tccE3.1E.tcc
Bus Name:	EGD-2	Bus Voltage:	480.0V
Function Name:	Ground		
Manufacturer:	GE		
Description:	GF, 800-1200A Sensors		
Type:	SK, MVT Plus/PM		
AIC Rating:	65kA	Fault Duty:	24961.8A
Frame:	SKL 480V 1200A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Sensor:	1200A		
Plug:	1200A		
Setting: 1) GFPU (0.2-1.0 x S)	1 (1200A)		
2) GFD (1-4)	1 I^2 t In		

Device Name:	100A/FBN: PASS ELEV 1A	TCC Name:	tccE3.1E.tcc
Bus Name:	NSDP-4	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	15-100A		
Type:	FB, 2 & 3-Pole 480V		
AIC Rating:	65kA	Fault Duty:	14861.9A
Frame:	FBN 480V 100A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Trip:	100A		
Setting: 1) Fixed			

Device Name:	100A/RK5: PASS ELEV 1A	TCC Name:	tccE3.1E.tcc
Bus Name:	PASS ELEV 1A	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	GOULD SHAWMUT		
Description:	15-600A		
Type:	TRS, 600V Class RK5		
AIC Rating:	200kA	Fault Duty:	3027.1A
Cartridge:	TRS 600V 100A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Size:	100A		

Device Name:	PASS ELEVEVATOR 1A (MTR)	TCC Name:	tccE3.1E.tcc
Bus Name:	PASS ELEV 1A	Bus Voltage:	480V
		Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Description:	Motor Starting Curve	Inrush:	6.0 (390.0A)
Rated Size:	50HP (1 of 1 Plotted)	FLA+Load Adder:	65.0A + 0.0A
Power Factor:	0.800	Starting Time:	10.00s
Efficiency:	0.86	Full Voltage (Square Transient)	



DWG#: tccE3.3A
February 27, 2009

VOLTAGE: 480
PA Convention Center Philadelphia, PA

CURRENT SCALE: x 100
CPSI#8159

Device Name: GEN 1 — TCC Name: tccE3.3A.tcc
Bus Name: GENERATOR 1 — Bus Voltage: 480V
Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Description: Generator Decrement Curve — Size: 2300.0KVA
Xd": 0.1400 — Td": 0.0200 — Power Factor: 0.800 Lag
Xd': 0.1900 — Td': 0.1490 — Ifg: 1.0000
Xd: 3.21 — Ta: 0.2000 — If: 9.1000

Device Name: AMP SENTRY — TCC Name: tccE3.3A.tcc
Bus Name: — Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: Cummins
Description: Control Amp Sentry
Type: PowerCommand + — Class Desc:
AIC Rating: N/A — Fault Duty: 19736.0A
Motor FLA: 2631.00A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Overload Factor: 1.00
Setting: 1) Gen Overload

Device Name: 2500A/RL: EGD-1 — TCC Name: tccE3.3A.tcc
Bus Name: GENERATOR 1 — Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: SQUARE D
Description: LI, 600-2500A, UL
Type: Powerpact R-Frame, 3.0 & 3.0A
AIC Rating: 100kA — Fault Duty: 22999.0A
Frame: RL 480V 2500A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Sensor: 2500A
Plug:
Setting: 1) LTPU/LTD (A 0.4-1.0 1 (2500A) 2
2) INST RJ/RL (1.5-12 x 12 (30000A)

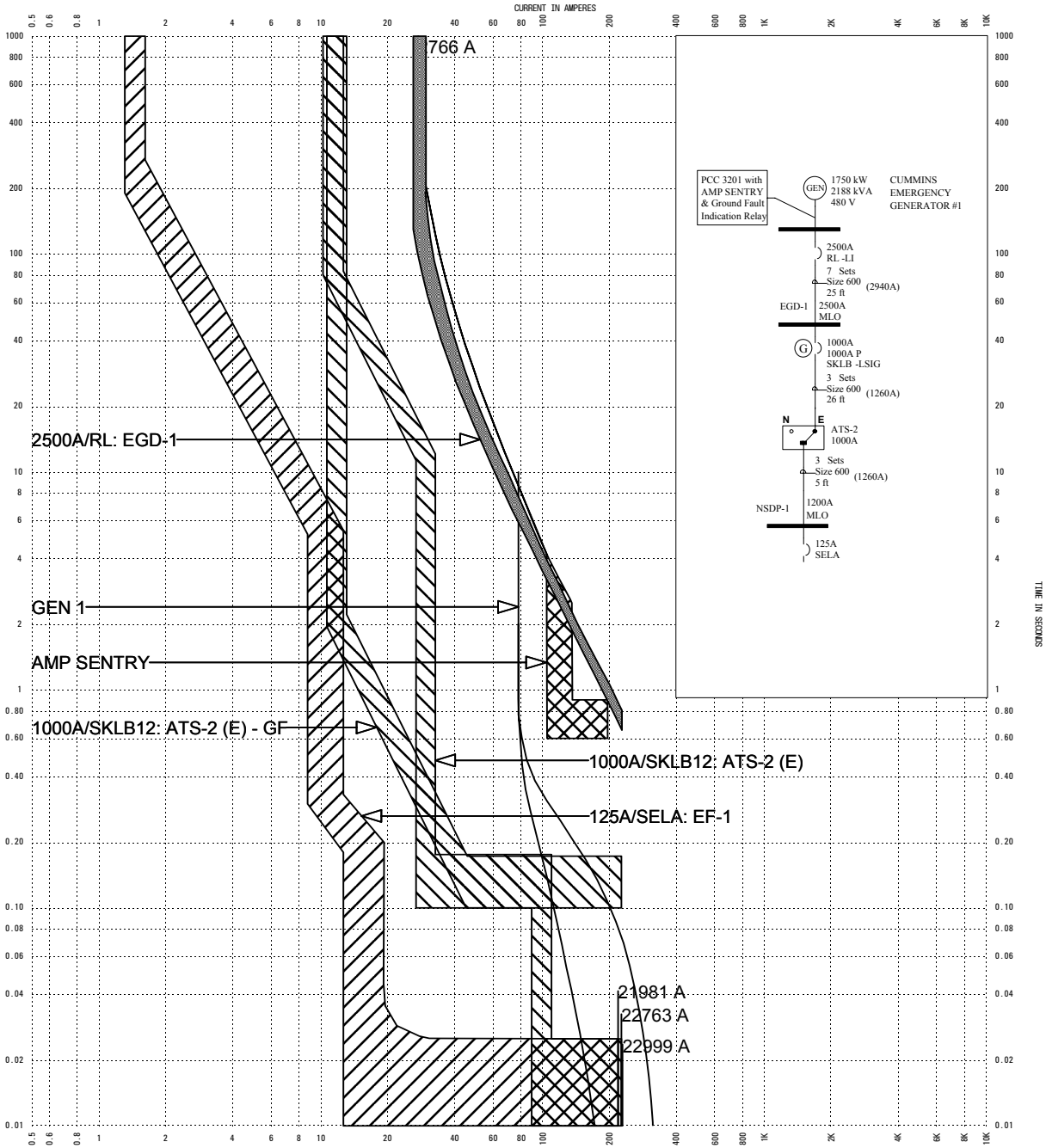
Device Name: 400A/SGLA: ATS-1 (E) — TCC Name: tccE3.3A.tcc
Bus Name: EGD-1 — Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: GE
Description: 125-600A
Type: SGLA, Spectra RMS +
AIC Rating: 65kA — Fault Duty: 22763.5A
Frame: SGLA4 480V 400A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Trip: 400A
Setting: 1) MAX

Device Name: 225A/SFLA: EDP3.1 — TCC Name: tccE3.3A.tcc
Bus Name: NEDP-1 — Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: GE
Description: 70-250A
Type: SFLA, Spectra RMS
AIC Rating: 65kA — Fault Duty: 21869.3A
Frame: SFLA 480V 250A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Trip: 225A
Setting: 1) MAX

Device Name: 100A/FBN: NEL1.1 — TCC Name: tccE3.3A.tcc
Bus Name: EDP3.1 — Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: GE
Description: 15-100A
Type: FB, 2 & 3-Pole 480V
AIC Rating: 65kA — Fault Duty: 6002.3A
Frame: FBN 480V 100A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Trip: 100A
Setting: 1) Fixed

Device Name: 100A/HHED6: NEL1.1 — TCC Name: tccE3.3A.tcc
Bus Name: NEL1.1 — Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: SIEMENS
Description: 15-125A
Type: HHED6 Sentron
AIC Rating: 65kA — Fault Duty: 1850.7A
Frame: HHED6 480V 125A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Trip: 100A
Setting: 1) Thermal Curve (Fixed
2) INST Fixed (800A)

Device Name: 20A/HED4: NEL1.1 — TCC Name: tccE3.3A.tcc
Bus Name: NEL1.1 — Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: SIEMENS
Description: 15-100A
Type: HED4 Sentron, 1-Pole
AIC Rating: 65kA — Fault Duty: 1850.7A
Frame: HED4 277V 25A — Curve Multiplier: 1
Time Multiplier: 1 — Time Adder: 0
Trip: 20A
Setting: 1) Thermal Curve (Fixed
2) INST Fixed (550A)



Device Name: GEN 1 | TCC Name: tccE3.3B.tcc
Bus Name: GENERATOR 1 | Bus Voltage: 480V
Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Description: Generator Decrement Curve | Size: 2300.0KVA
Xd": 0.1400 Td": 0.0200 | Power Factor: 0.800 Lag
Xd': 0.1900 Td': 0.1490 | Ifg: 1.0000
Xd: 3.21 Ta: 0.2000 | If: 9.1000

Device Name: AMP SENTRY | TCC Name: tccE3.3B.tcc
Bus Name: | Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: Cummins
Description: Control Amp Sentry
Type: PowerCommand + | Class Desc:
AIC Rating: N/A | Fault Duty: 19736.0A
Motor FLA: 2631.00A | Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Overload Factor: 1.00
Setting: 1) Gen Overload

Device Name: 2500A/RL: EGD-1 | TCC Name: tccE3.3B.tcc
Bus Name: GENERATOR 1 | Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: SQUARE D
Description: LI, 600-2500A, UL
Type: Powerpact R-Frame, 3.0 & 3.0A
AIC Rating: 100kA | Fault Duty: 22999.0A
Frame: RL 480V 2500A | Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Sensor: 2500A
Plug:
Setting: 1) LTPU/LTD (A 0.4-1.0 1 (2500A) 2
2) INST RJ/RL (1.5-12 x 12 (30000A)

Device Name: 1000A/SKLB12: ATS-2 (E) | TCC Name: tccE3.3B.tcc
Bus Name: EGD-1 | Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: GE
Description: LSI, 300-1200A
Type: SK, MVT Plus/PM +
AIC Rating: 65kA | Fault Duty: 22763.5A
Frame: SKLB 480V 1200A | Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Sensor: 1000A
Plug: 1000A
Setting: 1) LTPU (0.5-1.0 x P) 1 (1000A)
2) LTD (1-4) 1
3) STPU (1.5-9 x LTPU) 3 (3000A)
4) STD (1-4) 1 I^2 t Out
5) INST (1.5-10 x P) 10 (10000A)

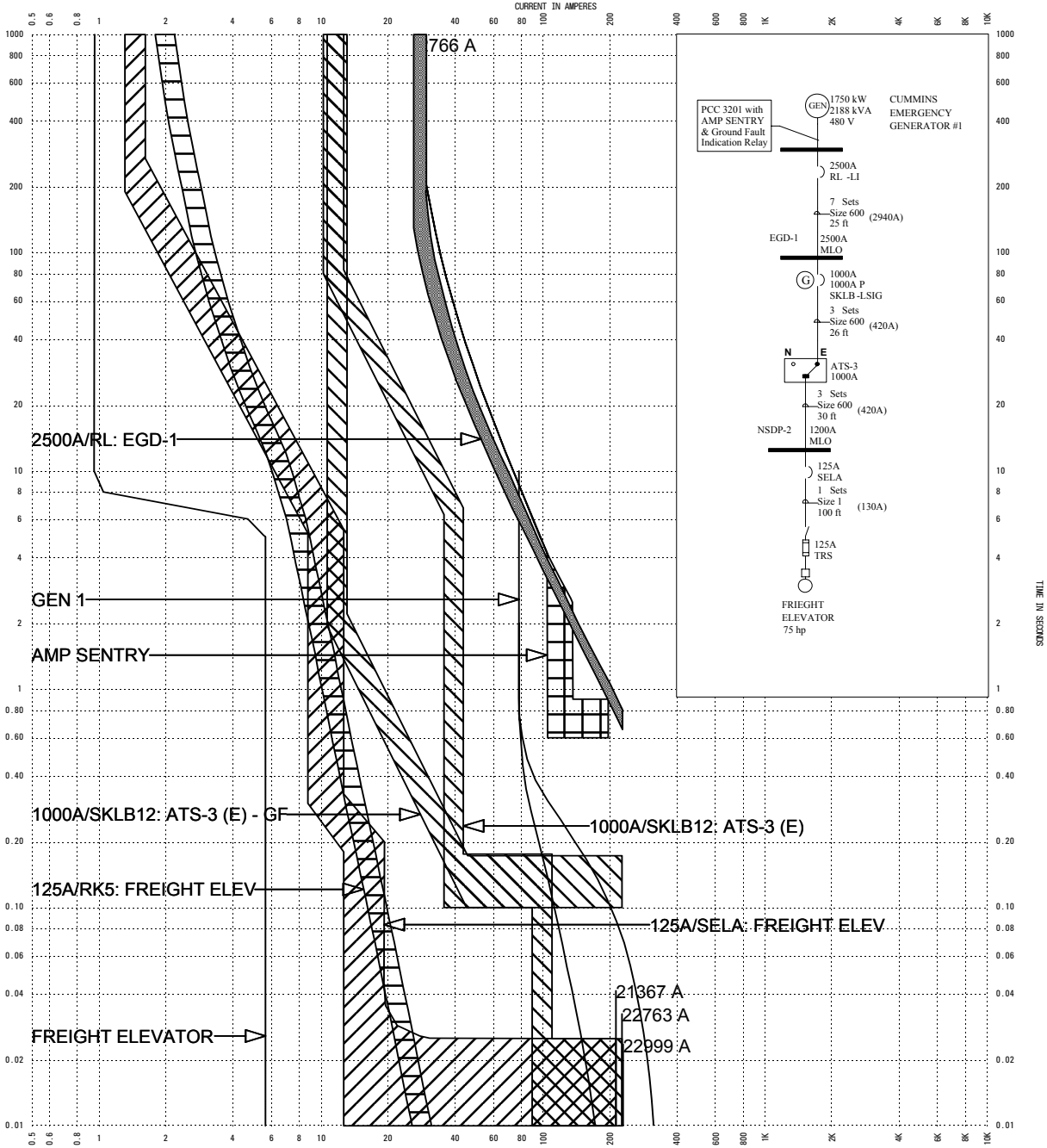
Device Name: 1000A/SKLB12: ATS-2 (E) - GF | TCC Name: tccE3.3B.tcc
Bus Name: EGD-1 | Bus Voltage: 480.0V
Function Name: Ground
Manufacturer: GE
Description: GF, 800-1200A Sensors
Type: SK, MVT Plus/PM
AIC Rating: 65kA | Fault Duty: 22763.5A
Frame: SKL 480V 1200A | Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Sensor: 1200A
Plug: 1000A
Setting: 1) GFPU (0.2-1.0 x S) 1 (1200A)
2) GFD (1-4) 1 I^2 t In

Device Name: 125A/SELA: EF-1 | TCC Name: tccE3.3B.tcc
Bus Name: NSDP-1 | Bus Voltage: 480.0V
Function Name: Phase
Manufacturer: GE
Description: 15-150A
Type: SELA, Spectra RMS
AIC Rating: 65kA | Fault Duty: 21981.4A
Frame: SELA 480V 125A | Curve Multiplier: 1
Time Multiplier: 1 | Time Adder: 0
Trip: 125A
Setting: 1) MAX

DWG#: tccE3.3B
February 27, 2009

VOLTAGE: 480
PA Convention Center Philadelphia, PA

CURRENT SCALE: x 100
CPSI#8159



DWG#: tccE3.3C
February 27, 2009

VOLTAGE: 480
PA Convention Center Philadelphia, PA

CURRENT SCALE: x 100
CPSI#8159

Device Name:	GEN 1	TCC Name:	tccE3.3C.tcc
Bus Name:	GENERATOR 1	Bus Voltage:	480V
		Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Description:	Generator Decrement Curve	Size:	2300.0KVA
Xd": 0.1400	Td": 0.0200	Power Factor:	0.800 Lag
Xd': 0.1900	Td': 0.1490	Ifg:	1.0000
Xd: 3.21	Ta: 0.2000	If:	9.1000

Device Name:	AMP SENTRY	TCC Name:	tccE3.3C.tcc
Bus Name:		Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	Cummins		
Description:	Control Amp Sentry		
Type:	PowerCommand +	Class Desc:	
AIC Rating:	N/A	Fault Duty:	19736.0A
Motor FLA:	2631.00A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Overload Factor:	1.00		
Setting: 1) Gen Overload			

Device Name:	2500A/RL: EGD-1	TCC Name:	tccE3.3C.tcc
Bus Name:	GENERATOR 1	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	SQUARE D		
Description:	LI, 600-2500A, UL		
Type:	Powerpact R-Frame, 3.0 & 3.0A		
AIC Rating:	100kA	Fault Duty:	22999.0A
Frame:	RL 480V 2500A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Sensor:	2500A		
Plug:			
Setting: 1) LTPU/LTD (A 0.4-1.0	1 (2500A) 2		
2) INST RJ/RL (1.5-12 x	12 (30000A)		

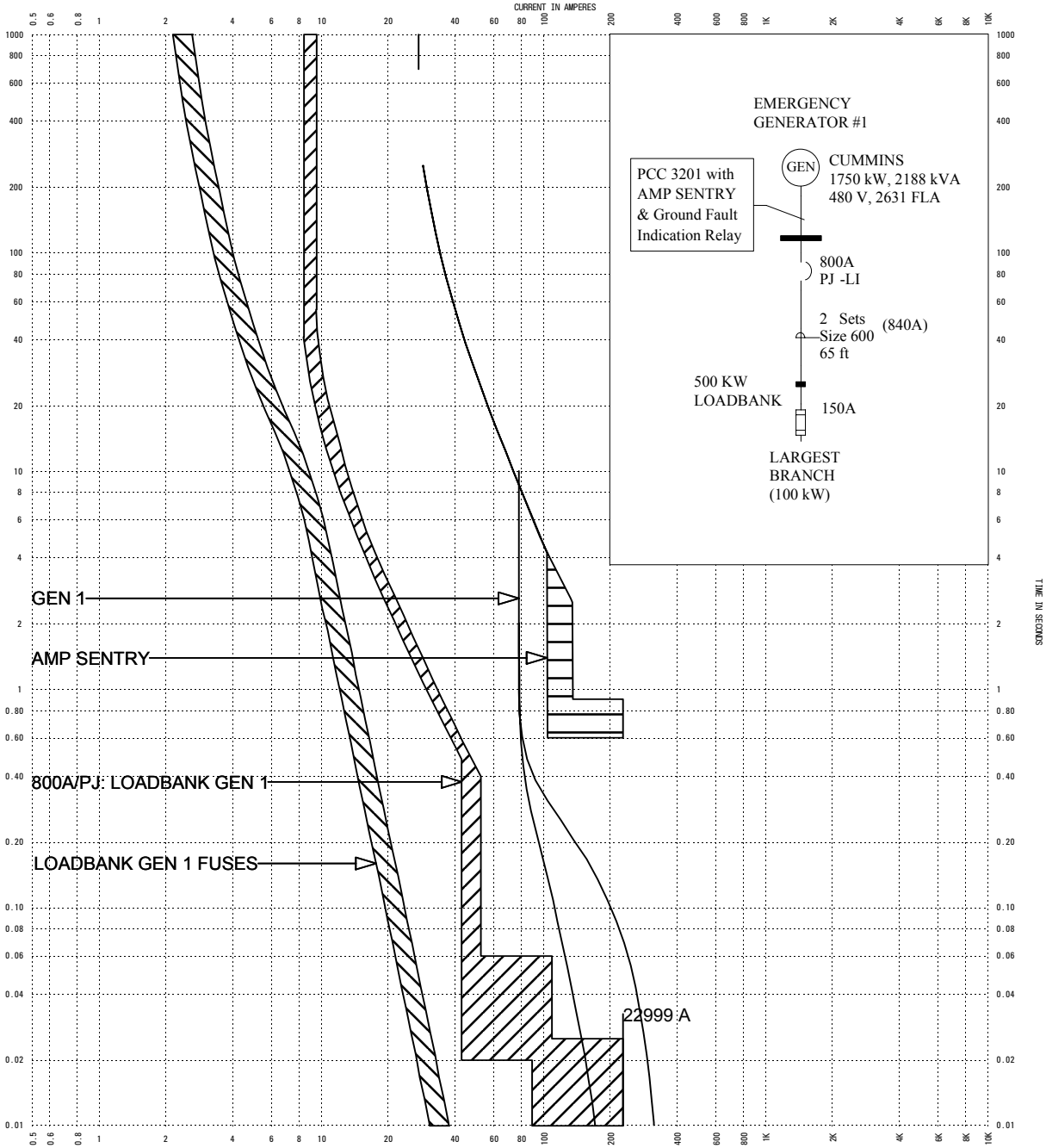
Device Name:	1000A/SKLB12: ATS-3 (E)	TCC Name:	tccE3.3C.tcc
Bus Name:	EGD-1	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	LSI, 300-1200A		
Type:	SK, MVT Plus/PM +		
AIC Rating:	65kA	Fault Duty:	22763.5A
Frame:	SKLB 480V 1200A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Sensor:	1000A		
Plug:	1000A		
Setting: 1) LTPU (0.5-1.0 x P)	1 (1000A)		
2) LTD (1-4)	1		
3) STPU (1.5-9 x LTPU)	4 (4000A)		
4) STD (1-4)	1 I^2 t Out		
5) INST (1.5-10 x P)	10 (10000A)		

Device Name:	1000A/SKLB12: ATS-3 (E) - GF	TCC Name:	tccE3.3C.tcc
Bus Name:	EGD-1	Bus Voltage:	480.0V
Function Name:	Ground		
Manufacturer:	GE		
Description:	GF, 800-1200A Sensors		
Type:	SK, MVT Plus/PM		
AIC Rating:	65kA	Fault Duty:	22763.5A
Frame:	SKL 480V 1200A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Sensor:	1200A		
Plug:	1000A		
Setting: 1) GFPU (0.2-1.0 x S)	1 (1200A)		
2) GFD (1-4)	1 I^2 t In		

Device Name:	125A/SELA: FREIGHT ELEV	TCC Name:	tccE3.3C.tcc
Bus Name:	NSDP-2	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	GE		
Description:	15-150A		
Type:	SELA, Spectra RMS		
AIC Rating:	65kA	Fault Duty:	21367.5A
Frame:	SELA 480V 125A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Trip:	125A		
Setting: 1) MAX			

Device Name:	125A/RK5: FREIGHT ELEV	TCC Name:	tccE3.3C.tcc
Bus Name:	FREIGHT ELEV	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	GOULD SHAWMUT		
Description:	15-600A		
Type:	TRS, 600V Class RK5		
AIC Rating:	200kA	Fault Duty:	11155.5A
Cartridge:	TRS 600V 200A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Size:	125A		

Device Name:	FREIGHT ELEVATOR	TCC Name:	tccE3.3C.tcc
Bus Name:	FREIGHT ELEV	Bus Voltage:	480V
		Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Description:	Motor Starting Curve	Inrush:	5.9 (566.4A)
Rated Size:	75HP (1 of 1 Plotted)	FLA+Load Adder:	96.0A + 0.0A
Power Factor:	0.800	Starting Time:	10.00s
Efficiency:	0.88	Full Voltage (Square Transient)	



Device Name:	GEN 1	TCC Name:	tccE-LB1.tcc
Bus Name:	GENERATOR 1	Bus Voltage:	480V
		Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Description:	Generator Decrement Curve	Size:	2300.0KVA
Xd": 0.1400	Td": 0.0200	Power Factor:	0.800 Lag
Xd': 0.1900	Td': 0.1490	Ifg:	1.0000
Xd: 3.21	Ta: 0.2000	If:	9.1000

Device Name:	AMP SENTRY	TCC Name:	tccE-LB1.tcc
Bus Name:		Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	Cummins		
Description:	Control Amp Sentry		
Type:	PowerCommand +	Class Desc:	
AIC Rating:	N/A	Fault Duty:	22999.0A
Motor FLA:	2631.00A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Overload Factor:	1.00		
Setting: 1) Gen Overload			

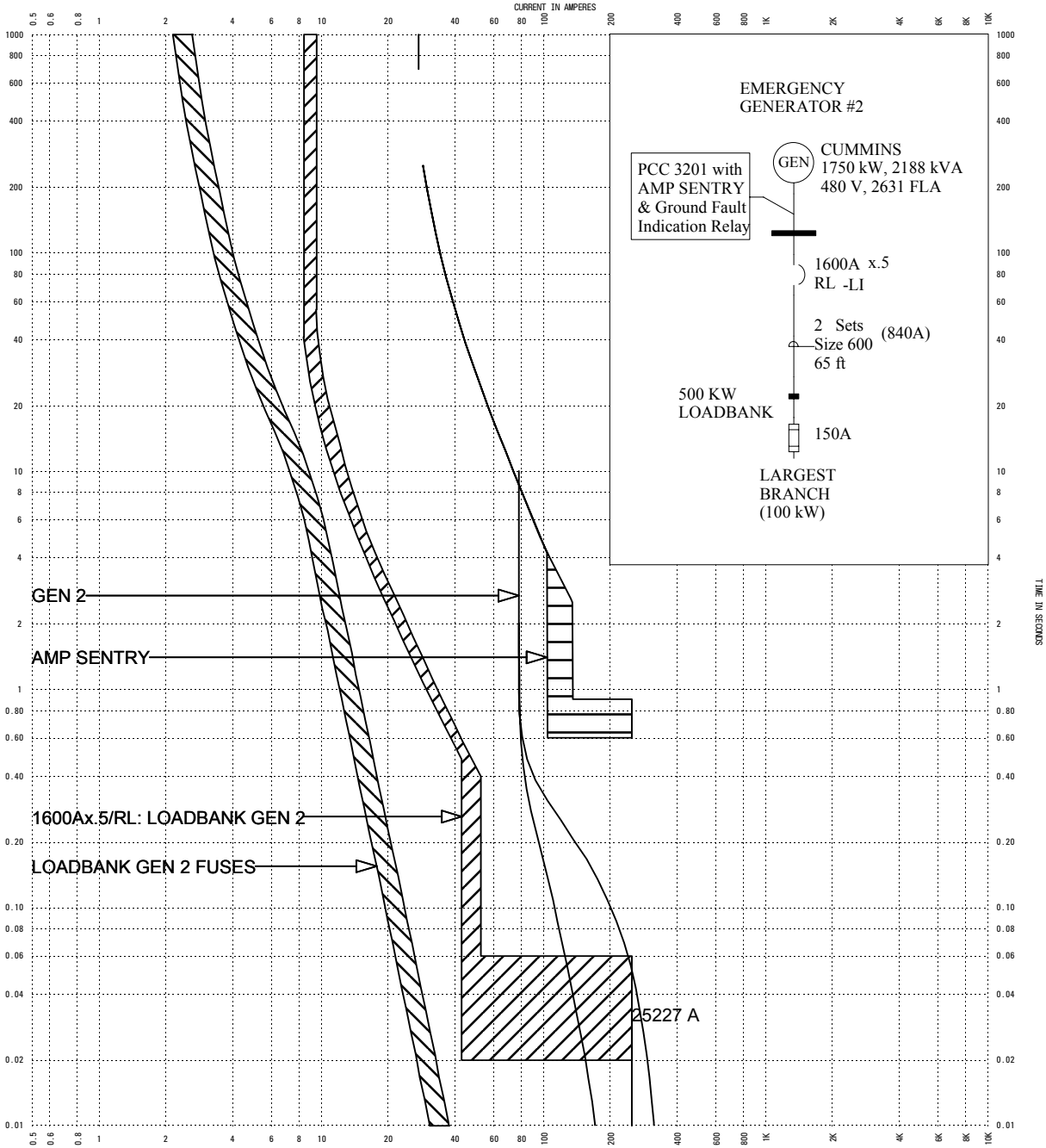
Device Name:	800A/PJ: LOADBANK GEN 1	TCC Name:	tccE-LB1.tcc
Bus Name:	GENERATOR 1	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	SQUARE D		
Description:	LI, 250-1200A, UL		
Type:	Powerpact P-Frame, 3.0 & 3.0A		
AIC Rating:	65kA	Fault Duty:	22999.0A
Frame:	PJ 480V 1200A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Sensor:	800A		
Plug:			
Setting: 1) LTPU (A);LTD	1 (800A) 0.5		
2) INST (PJ, PL 400-120	6 (4800A)		

Device Name:	LOADBANK GEN 1 FUSES	TCC Name:	tccE-LB1.tcc
Bus Name:	LOADBANKGEN1	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	GOULD SHAWMUT		
Description:	15-600A		
Type:	TRS, 600V Class RK5		
AIC Rating:	200kA	Fault Duty:	17699.2A
Cartridge:	TRS 600V 200A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Size:	150A		

DWG#: tccE-LB1
February 27, 2009

VOLTAGE: 480
PA Convention Center Philadelphia, PA

CURRENT SCALE: x 100
CPSI#8159



Device Name:	GEN 2	TCC Name:	tccE-LB2.tcc
Bus Name:	GENERATOR 2	Bus Voltage:	480V
		Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Description:	Generator Decrement Curve	Size:	2300.0KVA
Xd": 0.1400	Td": 0.0200	Power Factor:	0.800 Lag
Xd': 0.1900	Td': 0.1490	Ifg:	1.0000
Xd: 3.21	Ta: 0.2000	If:	9.1000

Device Name:	AMP SENTRY	TCC Name:	tccE-LB2.tcc
Bus Name:		Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	Cummins		
Description:	Control Amp Sentry		
Type:	PowerCommand +	Class Desc:	
AIC Rating:	N/A	Fault Duty:	25227.0A
Motor FLA:	2631.00A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Overload Factor:	1.00		
Setting:	1) Gen Overload		

Device Name:	1600Ax.5/RL: LOADBANK GEN 2	TCC Name:	tccE-LB2.tcc
Bus Name:	GENERATOR 2	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	SQUARE D		
Description:	LI, 600-2500A, UL		
Type:	Powerpact R-Frame, 3.0 & 3.0A		
AIC Rating:	100kA	Fault Duty:	25227.0A
Frame:	RL 480V 2500A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Sensor:	1600A		
Plug:			
Setting:	1) LTPU/LTD (B 0.4-1.0 0.5 (800A) 0.5		
	2) INST RJ/RL (1.5-12 x 3 (4800A)		

Device Name:	LOADBANK GEN 2 FUSES	TCC Name:	tccE-LB2.tcc
Bus Name:	LOADBANKGEN2	Bus Voltage:	480.0V
Function Name:	Phase		
Manufacturer:	GOULD SHAWMUT		
Description:	15-600A		
Type:	TRS, 600V Class RK5		
AIC Rating:	200kA	Fault Duty:	25227.0A
Cartridge:	TRS 600V 200A	Curve Multiplier:	1
Time Multiplier:	1	Time Adder:	0
Size:	150A		

DWG#: tccE-LB2
February 27, 2009

VOLTAGE: 480
PA Convention Center Philadelphia, PA

CURRENT SCALE: x 100
CPSI#8159

APPENDIX

SHORT CIRCUIT PROGRAM
INTERPRETATION OF RESULTS

Fault Location / Bus Name	-	Refer to bus designations on the one-line diagram.
3-Phase Amps	-	Represents the RMS ½ cycle symmetrical fault current. This value is used to define the symmetrical short circuit rating requirement of equipment at the location.
Mom Amps	-	Represents the RMS ½ cycle asymmetrical fault current.
3P Asym Amps	-	Represents the RMS asymmetrical fault current at 3, 5, or 8 cycles as shown.

DAPPER Unbalanced Fault Report

Comprehensive Short Circuit Study Settings

Three Phase Fault	Yes	**Faulted Bus**	All Buses
Single Line to Ground	Yes	**Bus Voltages**	First Bus From Fault
Line to Line Fault	No	**Branch Currents**	First Branch From Fault
Line to Line to Ground	No	**Phase or Sequence**	Report phase quantities
Motor Contribution	Yes	**Fault Current Calculation**	Initial Symmetrical RMS (with 1/2 Cycle Asym)
Transformer Tap	Yes	**Asym Fault Current at Time**	0.50 **Cycles**
Xformer Phase Shift	Yes		

Fault Location Bus Name	Bus Voltage	3-Phase Amps	3-Phase MVA	3P X/R	SLG Amps	SLG MVA	SLG X/R	Mom Amps	---------3P Asym Amps-------- 3 Cycles	 5 Cycles	 8 Cycles
AHU-03	480	9,718	8.08	1.03	6,074	1.68	0.78	9,739	9,718	9,718	9,718
AHU-04 RETURN	480	6,268	5.21	0.54	3,756	1.04	0.40	6,268	6,268	6,268	6,268
AHU-04 SUPPLY	480	11,014	9.16	1.18	7,179	1.99	0.87	11,067	11,014	11,014	11,014
AHU-05 RETURN	480	6,534	5.43	0.55	3,935	1.09	0.41	6,534	6,534	6,534	6,534
AHU-05 SUPPLY	480	7,737	6.43	0.69	4,743	1.31	0.51	7,738	7,737	7,737	7,737
AHU-06 RETURN	480	11,506	9.57	0.61	7,180	1.99	0.43	11,506	11,506	11,506	11,506
AHU-06 SUPPLY	480	13,436	11.17	0.77	8,645	2.40	0.54	13,439	13,436	13,436	13,436
AHU-08 RETURN	480	4,312	3.58	0.32	2,485	0.69	0.23	4,312	4,312	4,312	4,312
AHU-08 SUPPLY	480	7,711	6.41	0.58	4,664	1.29	0.43	7,711	7,711	7,711	7,711
AHU-10 SUPPLY 1	480	5,131	4.27	0.57	3,056	0.85	0.43	5,131	5,131	5,131	5,131

Fault Location Bus Name	Bus Voltage	3-Phase Amps	3-Phase MVA	3P X/R	SLG Amps	SLG MVA	SLG X/R	Mom Amps	---------3P Asym Amps-------- 3 Cycles	 5 Cycles	 8 Cycles
AHU-10 SUPPLY 2	480	5,131	4.27	0.57	3,056	0.85	0.43	5,131	5,131	5,131	5,131
AHU-11 SUPPLY 1	480	6,015	5.00	0.59	3,612	1.00	0.44	6,015	6,015	6,015	6,015
AHU-11 SUPPLY 2	480	6,015	5.00	0.59	3,612	1.00	0.44	6,015	6,015	6,015	6,015
AHU-12 SUPPLY 1	480	6,380	5.30	0.61	3,845	1.07	0.46	6,380	6,380	6,380	6,380
AHU-12 SUPPLY 2	480	6,380	5.30	0.61	3,845	1.07	0.46	6,380	6,380	6,380	6,380
AHU-13 SUPPLY 1	480	10,064	8.37	0.74	6,270	1.74	0.55	10,066	10,064	10,064	10,064
AHU-13 SUPPLY 2	480	10,064	8.37	0.74	6,270	1.74	0.55	10,066	10,064	10,064	10,064
AHU-14 SUPPLY 1	480	16,765	13.94	1.51	11,377	3.15	1.12	17,023	16,765	16,765	16,765
AHU-14 SUPPLY 2	480	16,765	13.94	1.51	11,377	3.15	1.12	17,023	16,765	16,765	16,765
AHU-15 SUPPLY 1	480	12,672	10.54	0.78	7,967	2.21	0.58	12,676	12,672	12,672	12,672
AHU-15 SUPPLY 2	480	12,672	10.54	0.78	7,967	2.21	0.58	12,676	12,672	12,672	12,672
AHU-16 SUPPLY 1	480	5,655	4.70	0.57	3,368	0.93	0.43	5,655	5,655	5,655	5,655
AHU-16 SUPPLY 2	480	5,655	4.70	0.57	3,368	0.93	0.43	5,655	5,655	5,655	5,655
AHU-19 SUPPLYA	480	11,521	9.58	0.78	7,577	2.10	0.53	11,524	11,521	11,521	11,521
AHU-19 SUPPLYB	480	11,521	9.58	0.78	7,577	2.10	0.53	11,524	11,521	11,521	11,521
AHU-22 RETURN	480	8,838	7.35	0.55	5,442	1.51	0.37	8,838	8,838	8,838	8,838
AHU-22 RETURN	480	8,838	7.35	0.55	5,442	1.51	0.37	8,838	8,838	8,838	8,838
AHU-22 SUPPLYA	480	22,819	18.97	1.96	19,358	5.36	1.31	23,721	22,819	22,819	22,819
AHU-22 SUPPLYB	480	22,819	18.97	1.96	19,358	5.36	1.31	23,721	22,819	22,819	22,819
AHU-28 RETURN	480	7,720	6.42	0.50	4,691	1.30	0.34	7,720	7,720	7,720	7,720
AHU-28 SUPPLY	480	15,991	13.30	1.62	12,005	3.33	1.13	16,322	15,991	15,991	15,991
AHU-29 RETURN	480	6,637	5.52	0.45	3,985	1.10	0.31	6,637	6,637	6,637	6,637
AHU-29 SUPPLY	480	14,771	12.28	1.50	10,849	3.01	1.04	14,993	14,771	14,771	14,771
ATS-1	480	19,185	15.95	2.86	14,687	4.07	2.17	21,209	19,185	19,185	19,185
ATS-1 (E)	480	18,900	15.71	14.40	20,859	5.78	11.35	28,619	20,233	19,139	18,917
ATS-1 (N)	480	19,185	15.95	2.86	14,687	4.07	2.17	21,209	19,185	19,185	19,185
ATS-2	480	31,305	26.03	4.04	26,152	7.25	2.89	37,337	31,308	31,305	31,305

Fault Location Bus Name	Bus Voltage	3-Phase Amps	3-Phase MVA	3P X/R	SLG Amps	SLG MVA	SLG X/R	Mom Amps	---------3P Asym Amps--------		
									3 Cycles	5 Cycles	8 Cycles
ATS-2 (E)	480	18,921	15.73	14.51	20,897	5.79	11.47	28,677	20,280	19,168	18,940
ATS-2 (N)	480	31,305	26.03	4.04	26,152	7.25	2.89	37,337	31,308	31,305	31,305
ATS-3	480	35,676	29.66	4.69	31,404	8.70	3.40	44,045	35,688	35,676	35,676
ATS-3 (E)	480	18,921	15.73	14.51	20,897	5.79	11.47	28,677	20,280	19,168	18,940
ATS-3 (N)	480	35,676	29.66	4.69	31,404	8.70	3.40	44,045	35,688	35,676	35,676
ATS-4	480	19,890	16.54	2.80	15,026	4.16	2.15	21,894	19,890	19,890	19,890
ATS-4 (E)	480	19,093	15.87	15.40	21,210	5.88	12.58	29,145	20,679	19,414	19,121
ATS-4 (N)	480	19,890	16.54	2.80	15,026	4.16	2.15	21,894	19,890	19,890	19,890
ATS-5	480	35,691	29.67	4.22	30,024	8.32	3.08	43,002	35,696	35,691	35,691
ATS-5 (E)	480	19,156	15.93	15.75	21,324	5.91	13.04	29,316	20,831	19,507	19,188
ATS-5 (N)	480	35,691	29.67	4.22	30,024	8.32	3.08	43,002	35,696	35,691	35,691
ATS-6	480	36,340	30.21	4.35	30,336	8.41	3.11	44,096	36,346	36,340	36,340
ATS-6 (E)	480	19,112	15.89	15.50	21,244	5.89	12.71	29,196	20,724	19,441	19,141
ATS-6 (N)	480	36,340	30.21	4.35	30,336	8.41	3.11	44,096	36,346	36,340	36,340
ATS-7	480	0	0.00	0.00	0	0.00	)00.00	0	0	0	0
ATS-7 (E)	480	4,549	3.78	17.99	4,524	1.25	16.71	7,063	5,078	4,686	4,566
ATS-7 (N)	480	0	0.00	0.00	0	0.00	)00.00	0	0	0	0
ATS-FP (E)	480	17,970	14.94	10.34	19,206	5.32	7.23	25,973	18,432	18,011	17,971
ATS-FP (E) CB	480	18,787	15.62	13.39	20,649	5.72	10.22	28,187	19,881	18,959	18,797
ATS-FP (N)	480	23,494	19.53	4.33	21,618	5.99	3.29	28,470	23,498	23,494	23,494
CH-3	4,160	5,912	42.59	10.43	0	0.00	Infinite	8,556	6,069	5,926	5,912
CH-4	4,160	5,945	42.84	10.35	0	0.00	Infinite	8,594	6,099	5,959	5,945
CHWP-1	480	10,824	9.00	0.76	6,573	1.82	0.54	10,827	10,824	10,824	10,824
CHWP-3	480	9,489	7.89	0.59	5,787	1.60	0.44	9,490	9,489	9,489	9,489
CHWP-5	480	9,489	7.89	0.59	5,787	1.60	0.44	9,490	9,489	9,489	9,489
CLTWR1 FAN1A	480	16,872	14.03	0.76	10,873	3.01	0.54	16,876	16,872	16,872	16,872
CLTWR1 FAN1B	480	16,872	14.03	0.76	10,873	3.01	0.54	16,876	16,872	16,872	16,872

Fault Location Bus Name	Bus Voltage	3-Phase Amps	3-Phase MVA	3P X/R	SLG Amps	SLG MVA	SLG X/R	Mom Amps	---------3P Asym Amps-------- 3 Cycles	 5 Cycles	 8 Cycles
CLTWR1 FAN2A	480	16,872	14.03	0.76	10,873	3.01	0.54	16,876	16,872	16,872	16,872
CLTWR1 FAN2B	480	16,872	14.03	0.76	10,873	3.01	0.54	16,876	16,872	16,872	16,872
CLTWR2 FAN2B	480	15,881	13.20	0.76	10,250	2.84	0.54	15,885	15,881	15,881	15,881
CLTWR2 FAN1A	480	15,881	13.20	0.76	10,250	2.84	0.54	15,885	15,881	15,881	15,881
CLTWR2 FAN1B	480	15,881	13.20	0.76	10,250	2.84	0.54	15,885	15,881	15,881	15,881
CLTWR2 FAN2A	480	15,881	13.20	0.76	10,250	2.84	0.54	15,885	15,881	15,881	15,881
CLTWR3 FAN 1B	480	18,205	15.14	0.85	12,048	3.34	0.59	18,215	18,205	18,205	18,205
CLTWR3 FAN1A	480	18,205	15.14	0.85	12,048	3.34	0.59	18,215	18,205	18,205	18,205
CLTWR3 FAN2A	480	18,205	15.14	0.85	12,048	3.34	0.59	18,215	18,205	18,205	18,205
CLTWR3 FAN2B	480	18,205	15.14	0.85	12,048	3.34	0.59	18,215	18,205	18,205	18,205
CWP-1	480	14,152	11.77	1.06	9,181	2.54	0.79	14,189	14,152	14,152	14,152
CWP-2	480	14,152	11.77	1.06	9,181	2.54	0.79	14,189	14,152	14,152	14,152
CWP-3	480	14,152	11.77	1.06	9,181	2.54	0.79	14,189	14,152	14,152	14,152
CWP-4	480	14,152	11.77	1.06	9,181	2.54	0.79	14,189	14,152	14,152	14,152
CWP-5	480	14,152	11.77	1.06	9,181	2.54	0.79	14,189	14,152	14,152	14,152
CWP-6	480	14,152	11.77	1.06	9,181	2.54	0.79	14,189	14,152	14,152	14,152
CWP-7	480	14,152	11.77	1.06	9,181	2.54	0.79	14,189	14,152	14,152	14,152
DB1A	208	2,405	0.87	0.37	1,422	0.17	0.31	2,405	2,405	2,405	2,405
DB1E	208	23,448	8.45	1.32	16,604	1.99	0.98	23,648	23,448	23,448	23,448
DB1F	480	6,271	5.21	0.43	3,780	1.05	0.33	6,271	6,271	6,271	6,271
DB1G	208	22,748	8.20	1.30	16,026	1.92	0.97	22,928	22,748	22,748	22,748
DB1H	480	33,000	27.44	1.63	27,164	7.53	1.03	33,689	33,000	33,000	33,000
DB2A	208	570	0.21	0.14	325	0.04	Infinite	570	570	570	570
DB2B	208	493	0.18	0.14	281	0.03	Infinite	493	493	493	493
DB2C	208	10,030	3.61	0.71	6,214	0.75	0.55	10,031	10,030	10,030	10,030
DB3A	208	1,157	0.42	0.15	660	0.08	0.12	1,157	1,157	1,157	1,157
DB3B	480	12,175	10.12	0.81	8,065	2.24	0.55	12,180	12,175	12,175	12,175

Fault Location Bus Name	Bus Voltage	3-Phase Amps	3-Phase MVA	3P X/R	SLG Amps	SLG MVA	SLG X/R	Mom Amps	---------3P Asym Amps-------- 3 Cycles	 5 Cycles	 8 Cycles
DB6A	208	23,221	8.37	0.69	15,133	1.82	0.48	23,224	23,221	23,221	23,221
DB6B	208	16,751	6.03	0.56	10,493	1.26	0.40	16,751	16,751	16,751	16,751
DP1B	480	3,149	2.62	0.24	1,813	0.50	0.18	3,149	3,149	3,149	3,149
DP1C	208	2,684	0.97	0.38	1,589	0.19	0.32	2,684	2,684	2,684	2,684
DP1D	480	2,697	2.24	0.22	1,550	0.43	0.17	2,697	2,697	2,697	2,697
EDB1A	480	1,784	1.48	0.22	1,024	0.28	0.18	1,784	1,784	1,784	1,784
EDB1B	480	9,750	8.11	0.69	6,052	1.68	0.52	9,751	9,750	9,750	9,750
EDB1C	480	2,062	1.71	0.39	1,205	0.33	0.32	2,062	2,062	2,062	2,062
EDB1D	480	2,062	1.71	0.39	1,205	0.33	0.32	2,062	2,062	2,062	2,062
EDB3A	480	5,203	4.33	0.98	3,311	0.92	0.79	5,212	5,203	5,203	5,203
EDP-A	480	4,605	3.83	20.00	4,605	1.28	20.00	7,224	5,258	4,800	4,635
EDP3.1	480	5,610	4.66	1.11	3,624	1.00	0.89	5,629	5,610	5,610	5,610
EF-1	480	6,078	5.05	0.64	3,605	1.00	0.47	6,078	6,078	6,078	6,078
EGD-1	480	19,492	16.21	17.96	21,945	6.08	16.29	30,256	21,749	20,072	19,564
EGD-2	480	19,443	16.17	17.60	21,855	6.06	15.73	30,120	21,607	19,984	19,508
FP CONTROLLER	480	23,494	19.53	4.33	21,618	5.99	3.29	28,470	23,498	23,494	23,494
FP PRI DISC	13,200	7,075	161.75	11.96	6,750	51.44	12.07	10,452	7,371	7,112	7,076
FREIGHT ELEV	480	12,530	10.42	0.81	7,962	2.21	0.59	12,536	12,530	12,530	12,530
FREIGHT ELEV 4	480	0	0.00	0.00	0	0.00	)00.00	0	0	0	0
GENERATOR 1	480	19,736	16.41	20.00	22,403	6.21	20.00	30,960	22,534	20,571	19,865
GENERATOR 2	480	19,736	16.41	20.00	22,403	6.21	20.00	30,960	22,534	20,571	19,865
HBD1-P01	208	7,350	2.65	2.31	5,328	0.64	1.86	7,819	7,350	7,350	7,350
HBD1-P02	208	7,349	2.65	2.31	5,327	0.64	1.86	7,818	7,349	7,349	7,349
HBD1-P03	208	7,348	2.65	2.31	5,326	0.64	1.86	7,817	7,348	7,348	7,348
HBD1-P04	208	7,347	2.65	2.31	5,325	0.64	1.86	7,816	7,347	7,347	7,347
HBD1-P05	208	7,346	2.65	2.31	5,324	0.64	1.86	7,815	7,346	7,346	7,346
HBD1-P06	208	7,346	2.65	2.31	5,323	0.64	1.86	7,814	7,346	7,346	7,346

Fault Location Bus Name	Bus Voltage	3-Phase Amps	3-Phase MVA	3P X/R	SLG Amps	SLG MVA	SLG X/R	Mom Amps	---------3P Asym Amps-------- 3 Cycles	 5 Cycles	 8 Cycles
HBD1-P07	208	7,345	2.65	2.31	5,321	0.64	1.86	7,813	7,345	7,345	7,345
HBD1-P08	208	7,344	2.65	2.31	5,320	0.64	1.86	7,812	7,344	7,344	7,344
HBD1-P09	208	7,343	2.65	2.31	5,319	0.64	1.86	7,811	7,343	7,343	7,343
HBD1-P10	208	7,342	2.65	2.31	5,318	0.64	1.86	7,810	7,342	7,342	7,342
HBD1-P11	208	6,145	2.21	1.84	3,865	0.46	1.38	6,342	6,145	6,145	6,145
HBD2-P01	208	12,506	4.51	2.67	9,791	1.18	2.13	13,647	12,506	12,506	12,506
HBD2-P02	208	12,503	4.50	2.67	9,787	1.18	2.13	13,643	12,503	12,503	12,503
HBD2-P03	208	12,501	4.50	2.67	9,783	1.17	2.13	13,640	12,501	12,501	12,501
HBD2-P04	208	12,496	4.50	2.67	9,776	1.17	2.12	13,633	12,496	12,496	12,496
HBD2-P05	208	12,494	4.50	2.67	9,772	1.17	2.12	13,630	12,494	12,494	12,494
HBD2-P06	208	12,492	4.50	2.67	9,768	1.17	2.12	13,626	12,492	12,492	12,492
HBD2-P07	208	12,490	4.50	2.67	9,764	1.17	2.12	13,623	12,490	12,490	12,490
HBD2-P08	208	12,487	4.50	2.67	9,761	1.17	2.12	13,619	12,487	12,487	12,487
HBD2-P09	208	12,485	4.50	2.67	9,757	1.17	2.12	13,616	12,485	12,485	12,485
HBD2-P10	208	12,483	4.50	2.66	9,753	1.17	2.12	13,613	12,483	12,483	12,483
HBD2-P11	208	9,396	3.38	1.80	5,773	0.69	1.29	9,675	9,396	9,396	9,396
HBD2-P12	208	12,499	4.50	2.67	9,779	1.17	2.12	13,637	12,499	12,499	12,499
HBD3-P01	208	10,456	3.77	2.52	7,934	0.95	2.01	11,286	10,456	10,456	10,456
HBD3-P02	208	10,454	3.77	2.52	7,931	0.95	2.01	11,284	10,454	10,454	10,454
HBD3-P03	208	10,453	3.77	2.52	7,929	0.95	2.01	11,281	10,453	10,453	10,453
HBD3-P04	208	10,451	3.77	2.52	7,926	0.95	2.01	11,279	10,451	10,451	10,451
HBD3-P05	208	10,450	3.76	2.52	7,924	0.95	2.01	11,277	10,450	10,450	10,450
HBD3-P06	208	10,448	3.76	2.52	7,921	0.95	2.01	11,274	10,448	10,448	10,448
HBD3-P07	208	10,446	3.76	2.51	7,919	0.95	2.00	11,272	10,446	10,446	10,446
HBD3-P08	208	10,445	3.76	2.51	7,916	0.95	2.00	11,270	10,445	10,445	10,445
HBD3-P09	208	10,443	3.76	2.51	7,914	0.95	2.00	11,267	10,443	10,443	10,443
HBD3-P10	208	10,441	3.76	2.51	7,911	0.95	2.00	11,265	10,441	10,441	10,441

Fault Location Bus Name	Bus Voltage	3-Phase Amps	3-Phase MVA	3P X/R	SLG Amps	SLG MVA	SLG X/R	Mom Amps	---------3P Asym Amps-------- 3 Cycles	 5 Cycles	 8 Cycles
HBD3-P11	208	10,440	3.76	2.51	7,909	0.95	2.00	11,263	10,440	10,440	10,440
HBD3-P12	208	10,438	3.76	2.51	7,906	0.95	2.00	11,261	10,438	10,438	10,438
HBD3-P13	208	10,436	3.76	2.51	7,904	0.95	2.00	11,258	10,436	10,436	10,436
HBD3-P14	208	8,181	2.95	1.81	5,070	0.61	1.32	8,432	8,181	8,181	8,181
HBD4-P01	208	16,406	5.91	3.03	13,661	1.64	2.42	18,350	16,406	16,406	16,406
HBD4-P02	208	16,402	5.91	3.03	13,654	1.64	2.42	18,344	16,402	16,402	16,402
HBD4-P03	208	16,398	5.91	3.02	13,647	1.64	2.41	18,337	16,398	16,398	16,398
HBD4-P04	208	16,394	5.91	3.02	13,640	1.64	2.41	18,331	16,394	16,394	16,394
HBD4-P05	208	16,390	5.90	3.02	13,633	1.64	2.41	18,324	16,390	16,390	16,390
HBD4-P06	208	16,386	5.90	3.02	13,626	1.64	2.41	18,318	16,386	16,386	16,386
HBD4-P07	208	16,383	5.90	3.02	13,619	1.64	2.41	18,312	16,383	16,383	16,383
HBD4-P08	208	11,471	4.13	1.77	6,943	0.83	1.23	11,798	11,471	11,471	11,471
HBD5-P01	208	20,982	7.56	3.57	18,874	2.27	2.94	24,319	20,983	20,982	20,982
HBD5-P02	208	20,976	7.56	3.56	18,861	2.26	2.93	24,307	20,977	20,976	20,976
HBD5-P03	208	20,970	7.55	3.56	18,848	2.26	2.93	24,296	20,971	20,970	20,970
HBD5-P04	208	20,964	7.55	3.56	18,835	2.26	2.92	24,284	20,965	20,964	20,964
HBD5-P05	208	20,958	7.55	3.55	18,822	2.26	2.92	24,272	20,958	20,958	20,958
HBD5-P06	208	20,952	7.55	3.55	18,809	2.26	2.91	24,260	20,952	20,952	20,952
HBD5-P07	208	20,946	7.55	3.55	18,796	2.26	2.91	24,249	20,946	20,946	20,946
HBD5-P08	208	20,940	7.54	3.54	18,783	2.26	2.91	24,237	20,940	20,940	20,940
HBD5-P09	208	20,933	7.54	3.54	18,771	2.25	2.90	24,225	20,934	20,933	20,933
HBD5-P10	208	13,569	4.89	1.75	8,085	0.97	1.18	13,936	13,569	13,569	13,569
HBD6-P01	208	12,513	4.51	2.68	9,794	1.18	2.13	13,658	12,513	12,513	12,513
HBD6-P02	208	12,510	4.51	2.68	9,790	1.18	2.13	13,654	12,510	12,510	12,510
HBD6-P03	208	12,508	4.51	2.68	9,786	1.18	2.13	13,651	12,508	12,508	12,508
HBD6-P04	208	12,506	4.51	2.67	9,782	1.17	2.13	13,647	12,506	12,506	12,506
HBD6-P05	208	12,503	4.50	2.67	9,779	1.17	2.12	13,644	12,504	12,503	12,503

Fault Location Bus Name	Bus Voltage	3-Phase Amps	3-Phase MVA	3P X/R	SLG Amps	SLG MVA	SLG X/R	Mom Amps	---------3P Asym Amps-------- 3 Cycles	 5 Cycles	 8 Cycles
HBD6-P06	208	12,501	4.50	2.67	9,775	1.17	2.12	13,640	12,501	12,501	12,501
HBD6-P07	208	12,499	4.50	2.67	9,771	1.17	2.12	13,637	12,499	12,499	12,499
HBD6-P08	208	12,497	4.50	2.67	9,767	1.17	2.12	13,633	12,497	12,497	12,497
HBD6-P09	208	12,494	4.50	2.67	9,764	1.17	2.12	13,630	12,494	12,494	12,494
HBD6-P10	208	12,492	4.50	2.67	9,760	1.17	2.12	13,627	12,492	12,492	12,492
HBD6-P11	208	12,490	4.50	2.67	9,756	1.17	2.12	13,623	12,490	12,490	12,490
HBD6-P12	208	12,487	4.50	2.67	9,753	1.17	2.12	13,620	12,487	12,487	12,487
HBD6-P13	208	9,399	3.39	1.80	5,772	0.69	1.29	9,679	9,399	9,399	9,399
HBD7-P01	480	17,152	14.26	3.05	13,786	3.82	2.30	19,212	17,152	17,152	17,152
HBD7-P02	480	17,150	14.26	3.05	13,783	3.82	2.30	19,209	17,150	17,150	17,150
HBD7-P03	480	17,148	14.26	3.05	13,780	3.82	2.30	19,206	17,148	17,148	17,148
HBD7-P04	480	17,146	14.26	3.05	13,777	3.82	2.30	19,203	17,146	17,146	17,146
HBD7-P05	480	12,976	10.79	1.94	8,098	2.24	1.32	13,472	12,976	12,976	12,976
HBD8-P01	480	21,597	17.96	3.56	18,449	5.11	2.66	25,018	21,598	21,597	21,597
HBD8-P02	480	21,594	17.95	3.56	18,444	5.11	2.66	25,012	21,595	21,594	21,594
HBD8-P03	480	21,592	17.95	3.55	18,438	5.11	2.65	25,007	21,592	21,592	21,592
HBD8-P04	480	21,589	17.95	3.55	18,433	5.11	2.65	25,001	21,589	21,589	21,589
HBD8-P05	480	15,418	12.82	1.94	9,526	2.64	1.28	16,010	15,418	15,418	15,418
HBD9-P01	480	28,111	23.37	4.68	26,415	7.32	3.58	34,682	28,120	28,111	28,111
HBD9-P02	480	28,106	23.37	4.68	26,404	7.32	3.57	34,671	28,115	28,106	28,106
HBD9-P03	480	18,583	15.45	1.94	11,334	3.14	1.23	19,302	18,583	18,583	18,583
HBE1-P01	208	18,027	6.49	3.19	15,433	1.85	2.57	20,390	18,027	18,027	18,027
HBE1-P02	208	18,022	6.49	3.19	15,424	1.85	2.57	20,382	18,023	18,022	18,022
HBE1-P03	208	18,018	6.49	3.19	15,415	1.85	2.57	20,374	18,018	18,018	18,018
HBE1-P04	208	18,013	6.49	3.19	15,406	1.85	2.56	20,366	18,013	18,013	18,013
HBE1-P05	208	18,009	6.49	3.18	15,397	1.85	2.56	20,358	18,009	18,009	18,009
HBE1-P06	208	12,256	4.42	1.76	7,381	0.89	1.21	12,597	12,256	12,256	12,256

Fault Location Bus Name	Bus Voltage	3-Phase Amps	3-Phase MVA	3P X/R	SLG Amps	SLG MVA	SLG X/R	Mom Amps	---------3P Asym Amps-------- 3 Cycles	 5 Cycles	 8 Cycles
HBE2-P01	208	14,534	5.24	2.85	11,749	1.41	2.27	16,053	14,534	14,534	14,534
HBE2-P02	208	14,531	5.24	2.84	11,743	1.41	2.26	16,048	14,531	14,531	14,531
HBE2-P03	208	14,528	5.23	2.84	11,738	1.41	2.26	16,043	14,528	14,528	14,528
HBE2-P04	208	14,525	5.23	2.84	11,733	1.41	2.26	16,038	14,525	14,525	14,525
HBE2-P05	208	14,522	5.23	2.84	11,727	1.41	2.26	16,033	14,522	14,522	14,522
HBE2-P06	208	14,519	5.23	2.84	11,722	1.41	2.26	16,029	14,519	14,519	14,519
HBE2-P07	208	14,516	5.23	2.84	11,717	1.41	2.26	16,024	14,516	14,516	14,516
HBE2-P08	208	14,513	5.23	2.84	11,711	1.41	2.25	16,019	14,513	14,513	14,513
HBE2-P09	208	14,510	5.23	2.84	11,706	1.41	2.25	16,014	14,510	14,510	14,510
HBE2-P10	208	14,507	5.23	2.83	11,701	1.41	2.25	16,009	14,507	14,507	14,507
HBE2-P11	208	10,508	3.79	1.78	6,405	0.77	1.26	10,813	10,508	10,508	10,508
HBE3-P01	208	9,985	3.60	2.48	7,524	0.90	1.98	10,751	9,985	9,985	9,985
HBE3-P02	208	9,983	3.60	2.48	7,522	0.90	1.98	10,749	9,983	9,983	9,983
HBE3-P03	208	9,982	3.60	2.48	7,520	0.90	1.98	10,747	9,982	9,982	9,982
HBE3-P04	208	9,980	3.60	2.48	7,518	0.90	1.98	10,745	9,980	9,980	9,980
HBE3-P05	208	9,979	3.60	2.48	7,515	0.90	1.98	10,743	9,979	9,979	9,979
HBE3-P06	208	9,977	3.59	2.48	7,513	0.90	1.98	10,741	9,977	9,977	9,977
HBE3-P07	208	9,976	3.59	2.48	7,511	0.90	1.98	10,739	9,976	9,976	9,976
HBE3-P08	208	9,974	3.59	2.48	7,509	0.90	1.98	10,737	9,974	9,974	9,974
HBE3-P09	208	9,973	3.59	2.48	7,506	0.90	1.98	10,734	9,973	9,973	9,973
HBE3-P10	208	9,971	3.59	2.48	7,504	0.90	1.98	10,732	9,971	9,971	9,971
HBE3-P11	208	7,891	2.84	1.81	4,902	0.59	1.33	8,135	7,891	7,891	7,891
HBE4-P01	208	9,772	3.52	2.47	7,338	0.88	1.97	10,513	9,772	9,772	9,772
HBE4-P02	208	9,771	3.52	2.47	7,336	0.88	1.97	10,511	9,771	9,771	9,771
HBE4-P03	208	9,770	3.52	2.47	7,334	0.88	1.97	10,509	9,770	9,770	9,770
HBE4-P04	208	9,768	3.52	2.47	7,332	0.88	1.97	10,507	9,768	9,768	9,768
HBE4-P05	208	9,767	3.52	2.47	7,329	0.88	1.97	10,505	9,767	9,767	9,767

Fault Location Bus Name	Bus Voltage	3-Phase Amps	3-Phase MVA	3P X/R	SLG Amps	SLG MVA	SLG X/R	Mom Amps	---------3P Asym Amps-------- 3 Cycles	 5 Cycles	 8 Cycles
HBE4-P06	208	9,765	3.52	2.47	7,327	0.88	1.97	10,503	9,765	9,765	9,765
HBE4-P07	208	9,764	3.52	2.47	7,325	0.88	1.97	10,501	9,764	9,764	9,764
HBE4-P08	208	7,761	2.80	1.82	4,826	0.58	1.33	8,002	7,761	7,761	7,761
HBE5-P01	208	12,871	4.64	2.71	10,131	1.22	2.15	14,077	12,871	12,871	12,871
HBE5-P02	208	12,869	4.64	2.70	10,127	1.22	2.15	14,074	12,869	12,869	12,869
HBE5-P03	208	12,867	4.64	2.70	10,123	1.22	2.15	14,070	12,867	12,867	12,867
HBE5-P04	208	12,864	4.63	2.70	10,119	1.22	2.15	14,066	12,864	12,864	12,864
HBE5-P05	208	12,862	4.63	2.70	10,115	1.21	2.15	14,063	12,862	12,862	12,862
HBE5-P06	208	12,859	4.63	2.70	10,111	1.21	2.15	14,059	12,859	12,859	12,859
HBE5-P07	208	12,857	4.63	2.70	10,107	1.21	2.14	14,055	12,857	12,857	12,857
HBE5-P08	208	12,854	4.63	2.70	10,103	1.21	2.14	14,052	12,854	12,854	12,854
HBE5-P09	208	12,852	4.63	2.70	10,099	1.21	2.14	14,048	12,852	12,852	12,852
HBE5-P10	208	10,571	3.81	2.00	6,941	0.83	1.43	11,017	10,571	10,571	10,571
HBE6-P01	208	12,511	4.51	2.68	9,793	1.18	2.13	13,655	12,511	12,511	12,511
HBE6-P02	208	12,509	4.51	2.68	9,789	1.18	2.13	13,652	12,509	12,509	12,509
HBE6-P03	208	12,507	4.51	2.67	9,786	1.18	2.13	13,649	12,507	12,507	12,507
HBE6-P04	208	12,504	4.50	2.67	9,782	1.17	2.13	13,645	12,504	12,504	12,504
HBE6-P05	208	10,418	3.75	2.02	6,888	0.83	1.46	10,871	10,418	10,418	10,418
HBE7-P01	480	17,152	14.26	3.05	13,786	3.82	2.30	19,212	17,152	17,152	17,152
HBE7-P02	480	17,150	14.26	3.05	13,783	3.82	2.30	19,209	17,150	17,150	17,150
HBE7-P03	480	17,148	14.26	3.05	13,780	3.82	2.30	19,206	17,148	17,148	17,148
HBE7-P04	480	17,146	14.26	3.05	13,777	3.82	2.30	19,203	17,146	17,146	17,146
HBE7-P05	480	17,144	14.25	3.05	13,774	3.82	2.30	19,200	17,144	17,144	17,144
HBE7-P06	480	13,636	11.34	2.06	8,823	2.45	1.41	14,265	13,636	13,636	13,636
HBE8-P01	480	21,597	17.96	3.56	18,449	5.11	2.66	25,018	21,598	21,597	21,597
HBE8-P02	480	21,594	17.95	3.56	18,444	5.11	2.66	25,012	21,595	21,594	21,594
HBE8-P03	480	21,592	17.95	3.55	18,438	5.11	2.65	25,007	21,592	21,592	21,592

Fault Location Bus Name	Bus Voltage	3-Phase Amps	3-Phase MVA	3P X/R	SLG Amps	SLG MVA	SLG X/R	Mom Amps	---------3P Asym Amps-------- 3 Cycles	 5 Cycles	 8 Cycles
HBE8-P04	480	21,589	17.95	3.55	18,433	5.11	2.65	25,001	21,589	21,589	21,589
HBE8-P05	480	21,586	17.95	3.55	18,427	5.11	2.65	24,996	21,586	21,586	21,586
HBE8-P06	480	16,357	13.60	2.09	10,551	2.92	1.37	17,144	16,357	16,357	16,357
HBE9-P01	480	33,370	27.74	6.26	34,019	9.43	5.28	43,925	33,450	33,371	33,370
HBE9-P02	480	33,364	27.74	6.25	34,003	9.42	5.27	43,907	33,444	33,365	33,364
HBE9-P03	480	33,357	27.73	6.24	33,987	9.42	5.26	43,889	33,437	33,359	33,357
HBE9-P04	480	33,351	27.73	6.24	33,970	9.41	5.24	43,870	33,430	33,353	33,351
HBE9-P05	480	33,345	27.72	6.23	33,954	9.41	5.23	43,852	33,424	33,347	33,345
HBE9-P06	480	33,339	27.72	6.22	33,938	9.41	5.22	43,833	33,417	33,341	33,339
HBE9-P07	480	33,333	27.71	6.22	33,922	9.40	5.20	43,815	33,410	33,334	33,333
HBE9-P08	480	24,030	19.98	2.36	16,193	4.49	1.40	25,658	24,030	24,030	24,030
HMB1-P01	480	16,183	13.45	2.77	12,322	3.41	2.10	17,776	16,183	16,183	16,183
HMB1-P02	480	16,181	13.45	2.77	12,319	3.41	2.10	17,774	16,181	16,181	16,181
HMB1-P03	480	16,180	13.45	2.77	12,316	3.41	2.10	17,771	16,180	16,180	16,180
HMB1-P04	480	16,178	13.45	2.77	12,314	3.41	2.10	17,769	16,178	16,178	16,178
HMB1-P05	480	13,458	11.19	2.06	8,700	2.41	1.45	14,080	13,458	13,458	13,458
HMB2-P01	480	12,588	10.47	2.53	9,249	2.56	1.96	13,597	12,588	12,588	12,588
HMB2-P02	480	12,587	10.46	2.53	9,248	2.56	1.96	13,596	12,587	12,587	12,587
HMB2-P03	480	12,586	10.46	2.53	9,246	2.56	1.95	13,594	12,586	12,586	12,586
HMB2-P04	480	10,862	9.03	2.03	7,043	1.95	1.48	11,344	10,862	10,862	10,862
HMB3-P01	208	7,606	2.74	2.33	5,532	0.66	1.87	8,101	7,606	7,606	7,606
HMB3-P02	208	7,605	2.74	2.33	5,531	0.66	1.87	8,100	7,605	7,605	7,605
HMB3-P03	208	7,604	2.74	2.33	5,530	0.66	1.87	8,098	7,604	7,604	7,604
HMB3-P04	208	7,604	2.74	2.32	5,528	0.66	1.87	8,097	7,604	7,604	7,604
HMB3-P05	208	7,603	2.74	2.32	5,527	0.66	1.87	8,096	7,603	7,603	7,603
HMB3-P06	208	7,602	2.74	2.32	5,526	0.66	1.87	8,095	7,602	7,602	7,602
HMB3-P07	208	6,390	2.30	1.86	4,042	0.49	1.39	6,603	6,390	6,390	6,390

Fault Location Bus Name	Bus Voltage	3-Phase Amps	3-Phase MVA	3P X/R	SLG Amps	SLG MVA	SLG X/R	Mom Amps	---------3P Asym Amps-------- 3 Cycles	 5 Cycles	 8 Cycles
HMB4-P01	208	7,875	2.84	2.34	5,750	0.69	1.88	8,397	7,875	7,875	7,875
HMB4-P02	208	7,874	2.84	2.34	5,749	0.69	1.88	8,396	7,874	7,874	7,874
HMB4-P03	208	7,873	2.84	2.34	5,747	0.69	1.88	8,395	7,873	7,873	7,873
HMB4-P04	208	7,873	2.84	2.34	5,746	0.69	1.88	8,393	7,873	7,873	7,873
HMB4-P05	208	7,872	2.84	2.34	5,745	0.69	1.88	8,392	7,872	7,872	7,872
HMB4-P06	208	7,871	2.84	2.34	5,743	0.69	1.88	8,391	7,871	7,871	7,871
HMB4-P07	208	7,870	2.84	2.34	5,742	0.69	1.88	8,390	7,870	7,870	7,870
HMB4-P08	208	6,579	2.37	1.85	4,156	0.50	1.39	6,797	6,579	6,579	6,579
HMB5-P01	208	8,898	3.21	2.41	6,594	0.79	1.93	9,532	8,898	8,898	8,898
HMB5-P02	208	7,285	2.62	1.85	4,586	0.55	1.37	7,525	7,285	7,285	7,285
HWP-3	480	5,350	4.45	0.36	3,084	0.85	0.25	5,350	5,350	5,350	5,350
HWP-4	480	5,350	4.45	0.36	3,084	0.85	0.25	5,350	5,350	5,350	5,350
HWP-5	480	8,385	6.97	0.48	5,027	1.39	0.36	8,385	8,385	8,385	8,385
K1	480	9,964	8.28	1.30	6,987	1.94	0.97	10,043	9,964	9,964	9,964
K2	208	5,637	2.03	0.91	3,557	0.43	0.74	5,642	5,637	5,637	5,637
L1.1	480	6,432	5.35	0.51	3,906	1.08	0.40	6,432	6,432	6,432	6,432
L1.2	480	7,109	5.91	1.10	4,630	1.28	0.87	7,132	7,109	7,109	7,109
L1.3	480	20,007	16.63	0.84	13,565	3.76	0.56	20,019	20,007	20,007	20,007
L1.4	480	12,082	10.05	1.19	8,215	2.28	0.90	12,143	12,082	12,082	12,082
L1.5	480	5,630	4.68	0.48	3,398	0.94	0.38	5,630	5,630	5,630	5,630
L1.6	480	18,717	15.56	0.79	12,510	3.47	0.53	18,724	18,717	18,717	18,717
L1.7	480	6,214	5.17	1.06	4,013	1.11	0.84	6,230	6,214	6,214	6,214
L2.1	480	6,063	5.04	0.58	3,767	1.04	0.43	6,063	6,063	6,063	6,063
L2.2	480	4,592	3.82	0.50	2,801	0.78	0.38	4,592	4,592	4,592	4,592
L2.3	480	8,256	6.86	0.45	4,990	1.38	0.35	8,256	8,256	8,256	8,256
L3.1	480	27,308	22.70	1.76	20,711	5.74	1.27	28,072	27,308	27,308	27,308
L3.3	480	16,943	14.09	1.28	11,692	3.24	0.97	17,070	16,943	16,943	16,943

Fault Location Bus Name	Bus Voltage	3-Phase Amps	3-Phase MVA	3P X/R	SLG Amps	SLG MVA	SLG X/R	Mom Amps	---------3P Asym Amps-------- 3 Cycles	 5 Cycles	 8 Cycles
L4.1	480	13,484	11.21	1.81	10,195	2.83	1.34	13,896	13,484	13,484	13,484
L4.2	480	18,618	15.48	2.79	15,637	4.33	2.05	20,478	18,618	18,618	18,618
L4.3	480	11,748	9.77	1.61	8,596	2.38	1.20	11,982	11,748	11,748	11,748
L5.1	480	7,518	6.25	1.15	5,076	1.41	0.89	7,550	7,518	7,518	7,518
L5.2	480	7,163	5.95	1.14	4,803	1.33	0.88	7,191	7,163	7,163	7,163
L5.3	480	4,962	4.13	0.46	3,021	0.84	0.35	4,962	4,962	4,962	4,962
L6.1	480	24,582	20.44	2.32	22,136	6.13	1.57	26,175	24,582	24,582	24,582
L6.2	480	24,105	20.04	2.29	21,314	5.91	1.56	25,605	24,105	24,105	24,105
LD DK SWA FL1	208	3,556	1.28	0.87	2,218	0.27	0.72	3,559	3,556	3,556	3,556
LD DK SWA FL2	208	7,294	2.63	1.19	4,753	0.57	0.96	7,331	7,294	7,294	7,294
LD DK SWB FL1	208	3,556	1.28	0.87	2,218	0.27	0.72	3,559	3,556	3,556	3,556
LD DK SWB FL2	208	7,294	2.63	1.19	4,753	0.57	0.96	7,331	7,294	7,294	7,294
LD DK SWC FL2	208	7,294	2.63	1.19	4,753	0.57	0.96	7,331	7,294	7,294	7,294
LD DK SWD FL2	208	7,294	2.63	1.19	4,753	0.57	0.96	7,331	7,294	7,294	7,294
LD DK SWE FL2	208	7,294	2.63	1.19	4,753	0.57	0.96	7,331	7,294	7,294	7,294
LOADBANKGEN1	480	17,699	14.71	10.30	18,762	5.20	7.19	25,565	18,148	17,739	17,700
LOADBANKGEN2	480	17,699	14.71	10.30	18,762	5.20	7.19	25,565	18,148	17,739	17,700
M1.1	480	8,698	7.23	0.49	5,326	1.48	0.36	8,698	8,698	8,698	8,698
M1.2	480	23,123	19.22	0.97	16,283	4.51	0.63	23,159	23,123	23,123	23,123
MCC 3.1	480	50,456	41.95	7.84	49,173	13.63	6.62	69,498	50,866	50,473	50,456
MCC 3.2	480	46,667	38.80	6.42	44,106	12.22	5.10	61,772	46,799	46,669	46,667
MDP 1.1	480	28,546	23.73	4.05	24,335	6.74	2.89	34,066	28,549	28,546	28,546
MDP 1.2	480	41,011	34.10	7.29	41,410	11.48	5.85	55,702	41,243	41,018	41,011
MDP 1.3	208	24,080	8.68	2.65	18,314	2.20	2.06	26,241	24,080	24,080	24,080
MDP 2.1	208	18,678	6.73	2.46	13,721	1.65	1.93	20,072	18,678	18,678	18,678
MDP 3.1	480	52,374	43.54	8.83	52,243	14.48	8.14	73,726	53,101	52,416	52,374
MDP 3.2	480	47,328	39.35	8.26	47,573	13.18	7.09	65,826	47,818	47,352	47,328

Fault Location Bus Name	Bus Voltage	3-Phase Amps	3-Phase MVA	3P X/R	SLG Amps	SLG MVA	SLG X/R	Mom Amps	---------3P Asym Amps--------		
									3 Cycles	5 Cycles	8 Cycles
MDP 3.3	480	48,902	40.66	9.21	49,633	13.75	8.19	69,349	49,712	48,955	48,903
MDP 3.4	480	47,813	39.75	8.64	48,478	13.43	7.62	67,051	48,418	47,846	47,813
MDP 3.5	480	47,606	39.58	8.53	48,220	13.36	7.49	66,598	48,174	47,636	47,606
MDP 3.6	480	21,754	18.09	4.11	19,521	5.41	3.18	26,046	21,756	21,754	21,754
MDP 6.1	480	28,835	23.97	6.52	29,506	8.18	5.97	38,284	28,923	28,837	28,835
MDP 6.2	480	28,246	23.48	6.03	28,203	7.82	5.24	36,892	28,300	28,247	28,246
NEDP-1	480	19,114	15.89	2.85	14,624	4.05	2.17	21,124	19,114	19,114	19,114
NEL1.1	480	1,805	1.50	0.48	1,076	0.30	0.40	1,805	1,805	1,805	1,805
NEL1.2	480	3,016	2.51	0.43	1,796	0.50	0.35	3,016	3,016	3,016	3,016
NEL1.3	480	2,884	2.40	0.62	1,751	0.49	0.51	2,885	2,884	2,884	2,884
NEL1.4	480	2,240	1.86	0.53	1,345	0.37	0.44	2,240	2,240	2,240	2,240
NEL2.1	480	3,317	2.76	0.68	2,030	0.56	0.56	3,317	3,317	3,317	3,317
NEL2.2	480	2,073	1.72	0.38	1,226	0.34	0.32	2,073	2,073	2,073	2,073
NEL2.3	480	7,626	6.34	0.70	4,756	1.32	0.55	7,627	7,626	7,626	7,626
NEL3.1	480	11,562	9.61	1.02	7,621	2.11	0.78	11,586	11,562	11,562	11,562
NEL4.2	480	3,481	2.89	0.70	2,138	0.59	0.58	3,482	3,481	3,481	3,481
NEL5.1	480	3,977	3.31	0.48	2,388	0.66	0.39	3,977	3,977	3,977	3,977
NEL5.2	480	2,174	1.81	0.39	1,287	0.36	0.32	2,174	2,174	2,174	2,174
NEL5.3	480	3,863	3.21	0.48	2,317	0.64	0.39	3,863	3,863	3,863	3,863
NEL6.1	480	3,297	2.74	0.45	1,968	0.55	0.36	3,297	3,297	3,297	3,297
NOFF1.1	208	666	0.24	2.34	668	0.08	2.34	710	666	666	666
NOFF1.2	208	1,578	0.57	2.81	1,588	0.19	2.80	1,739	1,578	1,578	1,578
NOFF1.3	208	666	0.24	2.34	668	0.08	2.34	710	666	666	666
NOFF1.4	208	852	0.31	2.51	855	0.10	2.51	919	852	852	852
NOFF1.6	208	637	0.23	2.45	649	0.08	2.40	684	637	637	637
NOFF2.1	208	666	0.24	2.34	668	0.08	2.34	710	666	666	666
NOFF2.2	208	666	0.24	2.34	668	0.08	2.34	710	666	666	666

Fault Location Bus Name	Bus Voltage	3-Phase Amps	3-Phase MVA	3P X/R	SLG Amps	SLG MVA	SLG X/R	Mom Amps	---------3P Asym Amps-------- 3 Cycles	 5 Cycles	 8 Cycles
NOFF2.3	208	666	0.24	2.34	668	0.08	2.34	710	666	666	666
NOFF3.1	208	2,566	0.92	3.05	2,594	0.31	3.03	2,875	2,566	2,566	2,566
NOFF4.1	208	1,578	0.57	2.81	1,588	0.19	2.80	1,739	1,578	1,578	1,578
NOFF4.2	208	1,578	0.57	2.81	1,588	0.19	2.80	1,739	1,578	1,578	1,578
NOFF5.1	208	666	0.24	2.34	668	0.08	2.34	710	666	666	666
NOFF6.1	208	666	0.24	2.34	668	0.08	2.34	710	666	666	666
NOFF6.2	208	666	0.24	2.34	668	0.08	2.34	710	666	666	666
NSDP-1	480	31,031	25.80	4.01	25,841	7.16	2.87	36,936	31,033	31,031	31,031
NSDP-2	480	33,615	27.95	4.36	28,897	8.01	3.14	40,802	33,621	33,615	33,615
NSDP-3	480	35,651	29.64	4.27	29,534	8.18	3.04	43,054	35,656	35,651	35,651
NSDP-4	480	17,531	14.58	2.79	12,174	3.37	2.04	19,285	17,531	17,531	17,531
NSDP-5	480	18,804	15.63	2.73	14,087	3.90	2.11	20,604	18,804	18,804	18,804
NSDP-6	480	0	0.00	0.00	0	0.00	)00.00	0	0	0	0
NSR1.1	208	2,269	0.82	2.35	2,402	0.29	2.50	2,421	2,269	2,269	2,269
NSR1.2	208	3,731	1.34	3.12	3,841	0.46	3.13	4,199	3,731	3,731	3,731
NSR2.1	208	816	0.29	2.32	832	0.10	2.37	868	816	816	816
NSR2.2	208	850	0.31	2.47	856	0.10	2.47	915	850	850	850
NSR3.1	208	850	0.31	2.47	856	0.10	2.47	915	850	850	850
NSR3.2	208	1,460	0.53	2.40	1,513	0.18	2.49	1,563	1,460	1,460	1,460
NSR3.3	208	664	0.24	2.32	668	0.08	2.31	707	664	664	664
NSR6.1	208	850	0.31	2.47	856	0.10	2.47	915	850	850	850
NSR6.2	208	816	0.29	2.32	832	0.10	2.37	868	816	816	816
NSRP1	208	0	0.00	0.00	0	0.00	)00.00	0	0	0	0
P2.1	480	22,272	18.52	1.50	16,099	4.46	1.10	22,609	22,272	22,272	22,272
P2.2	480	2,524	2.10	0.37	1,502	0.42	0.30	2,524	2,524	2,524	2,524
PASS ELEV 1A	480	3,036	2.52	0.53	1,749	0.48	0.40	3,037	3,036	3,036	3,036
PASS ELEV 1B	480	3,036	2.52	0.53	1,749	0.48	0.40	3,037	3,036	3,036	3,036

Fault Location Bus Name	Bus Voltage	3-Phase Amps	3-Phase MVA	3P X/R	SLG Amps	SLG MVA	SLG X/R	Mom Amps	---------3P Asym Amps-------- 3 Cycles	 5 Cycles	 8 Cycles
PASS ELEV 1C	480	3,036	2.52	0.53	1,749	0.48	0.40	3,037	3,036	3,036	3,036
PASS ELEV 2A A	480	6,751	5.61	0.81	4,055	1.12	0.62	6,753	6,751	6,751	6,751
PASS ELEV 2A B	480	6,751	5.61	0.81	4,055	1.12	0.62	6,753	6,751	6,751	6,751
PASS ELEV 2B A	480	5,835	4.85	0.65	3,465	0.96	0.51	5,836	5,835	5,835	5,835
PASS ELEV 2B B	480	5,835	4.85	0.65	3,465	0.96	0.51	5,836	5,835	5,835	5,835
PASS ELEV 4A	480	0	0.00	0.00	0	0.00	)00.00	0	0	0	0
PECO 1	13,200	7,135	163.13	13.72	6,833	52.08	14.16	10,739	7,579	7,208	7,140
PECO 2	13,200	6,933	158.52	14.02	6,709	51.13	14.35	10,464	7,390	7,011	6,939
R1.1	208	22,188	7.99	2.33	16,546	1.99	1.80	23,634	22,188	22,188	22,188
R1.10	208	28,713	10.34	2.85	22,538	2.71	2.19	31,731	28,713	28,713	28,713
R1.11	208	28,713	10.34	2.85	22,538	2.71	2.19	31,731	28,713	28,713	28,713
R1.12	208	28,713	10.34	2.85	22,538	2.71	2.19	31,731	28,713	28,713	28,713
R1.13	208	27,996	10.09	2.82	21,867	2.63	2.17	30,868	27,996	27,996	27,996
R1.14	208	28,713	10.34	2.85	22,538	2.71	2.19	31,731	28,713	28,713	28,713
R1.15	208	22,748	8.20	1.30	16,026	1.92	0.97	22,928	22,748	22,748	22,748
R1.16	208	7,877	2.84	2.12	5,408	0.65	1.72	8,273	7,877	7,877	7,877
R1.17	208	7,877	2.84	2.12	5,408	0.65	1.72	8,273	7,877	7,877	7,877
R1.18	208	7,877	2.84	2.12	5,408	0.65	1.72	8,273	7,877	7,877	7,877
R1.19	208	7,877	2.84	2.12	5,408	0.65	1.72	8,273	7,877	7,877	7,877
R1.2	208	22,168	7.99	2.58	16,647	2.00	2.01	24,030	22,168	22,168	22,168
R1.20	208	5,554	2.00	0.91	3,503	0.42	0.74	5,559	5,554	5,554	5,554
R1.21	208	5,295	1.91	1.01	3,370	0.40	0.83	5,305	5,295	5,295	5,295
R1.3	208	21,736	7.83	2.56	16,277	1.95	2.00	23,535	21,736	21,736	21,736
R1.4	208	21,321	7.68	2.55	15,922	1.91	1.99	23,060	21,321	21,321	21,321
R1.5	208	6,494	2.34	2.08	4,423	0.53	1.70	6,804	6,494	6,494	6,494
R1.6	208	6,494	2.34	2.08	4,423	0.53	1.70	6,804	6,494	6,494	6,494
R1.7	208	6,494	2.34	2.08	4,423	0.53	1.70	6,804	6,494	6,494	6,494

Fault Location Bus Name	Bus Voltage	3-Phase Amps	3-Phase MVA	3P X/R	SLG Amps	SLG MVA	SLG X/R	Mom Amps	---------3P Asym Amps--------		
									3 Cycles	5 Cycles	8 Cycles
R1.8	208	4,863	1.75	0.99	3,085	0.37	0.82	4,871	4,863	4,863	4,863
R1.9	208	28,713	10.34	2.85	22,538	2.71	2.19	31,731	28,713	28,713	28,713
R2.1	208	2,103	0.76	0.49	1,222	0.15	0.40	2,103	2,103	2,103	2,103
R2.2	208	1,821	0.66	0.49	1,057	0.13	0.39	1,821	1,821	1,821	1,821
R2.3	208	2,861	1.03	0.94	1,792	0.22	0.78	2,864	2,861	2,861	2,861
R2.4	208	9,724	3.50	1.35	6,488	0.78	1.08	9,817	9,724	9,724	9,724
R2.5	208	6,288	2.27	1.12	4,059	0.49	0.91	6,312	6,288	6,288	6,288
R3.1	208	1,592	0.57	2.69	1,605	0.19	2.70	1,739	1,592	1,592	1,592
R3.2	208	2,846	1.03	0.50	1,659	0.20	0.40	2,846	2,846	2,846	2,846
R3.3	208	2,679	0.97	0.50	1,560	0.19	0.40	2,679	2,679	2,679	2,679
R5.1	208	13,054	4.70	2.27	9,254	1.11	1.81	13,850	13,054	13,054	13,054
R5.10	208	19,527	7.03	1.21	13,444	1.61	0.92	19,637	19,527	19,527	19,527
R5.11	208	6,591	2.37	2.08	4,491	0.54	1.70	6,906	6,591	6,591	6,591
R5.12	208	6,630	2.39	2.08	4,519	0.54	1.70	6,948	6,630	6,630	6,630
R5.13	208	5,664	2.04	2.06	3,839	0.46	1.69	5,926	5,664	5,664	5,664
R5.14	208	3,933	1.42	0.88	2,459	0.30	0.72	3,936	3,933	3,933	3,933
R5.2	208	13,054	4.70	2.27	9,254	1.11	1.81	13,850	13,054	13,054	13,054
R5.3	208	9,549	3.44	0.99	6,165	0.74	0.78	9,565	9,549	9,549	9,549
R5.4	208	9,549	3.44	0.99	6,165	0.74	0.78	9,565	9,549	9,549	9,549
R5.5	208	13,061	4.71	1.06	8,618	1.03	0.83	13,096	13,061	13,061	13,061
R5.6	208	17,322	6.24	2.41	12,614	1.51	1.90	18,554	17,322	17,322	17,322
R5.7	208	17,322	6.24	2.41	12,614	1.51	1.90	18,554	17,322	17,322	17,322
R5.8	208	13,061	4.71	1.06	8,618	1.03	0.83	13,096	13,061	13,061	13,061
R5.9	208	19,527	7.03	1.21	13,444	1.61	0.92	19,637	19,527	19,527	19,527
R6.1	208	28,596	10.30	0.81	19,363	2.33	0.55	28,608	28,596	28,596	28,596
R6.2	208	28,628	10.31	0.81	19,371	2.33	0.55	28,641	28,628	28,628	28,628
RH1.1	208	6,402	2.31	2.25	4,577	0.55	1.82	6,784	6,402	6,402	6,402

Fault Location Bus Name	Bus Voltage	3-Phase Amps	3-Phase MVA	3P X/R	SLG Amps	SLG MVA	SLG X/R	Mom Amps	---------3P Asym Amps-------- 3 Cycles	 5 Cycles	 8 Cycles
RH1.2	208	6,401	2.31	2.25	4,576	0.55	1.82	6,783	6,401	6,401	6,401
RH1.3	208	6,223	2.24	2.24	4,438	0.53	1.81	6,590	6,223	6,223	6,223
RH1.4	208	6,222	2.24	2.24	4,437	0.53	1.81	6,589	6,222	6,222	6,222
RH1.5	208	6,401	2.31	2.25	4,576	0.55	1.82	6,783	6,401	6,401	6,401
RH1.6	208	6,400	2.31	2.25	4,575	0.55	1.82	6,782	6,400	6,400	6,400
RH1.7	208	6,222	2.24	2.24	4,436	0.53	1.81	6,588	6,222	6,222	6,222
RH1.8	208	6,221	2.24	2.24	4,436	0.53	1.81	6,587	6,221	6,221	6,221
RH2.10	208	9,164	3.30	2.43	6,819	0.82	1.94	9,828	9,164	9,164	9,164
RH2.11	208	9,162	3.30	2.43	6,817	0.82	1.94	9,826	9,162	9,162	9,162
RH2.12	208	6,600	2.38	1.83	4,137	0.50	1.37	6,810	6,600	6,600	6,600
RH2.13	208	8,000	2.88	2.35	5,847	0.70	1.88	8,533	8,000	8,000	8,000
RH2.14	208	8,001	2.88	2.35	5,849	0.70	1.88	8,534	8,001	8,001	8,001
RH2.15	208	12,501	4.50	2.67	9,789	1.18	2.13	13,640	12,501	12,501	12,501
RH2.16	208	12,499	4.50	2.67	9,785	1.18	2.13	13,637	12,499	12,499	12,499
RH2.17	208	12,497	4.50	2.67	9,781	1.17	2.12	13,633	12,497	12,497	12,497
RH2.18	208	12,494	4.50	2.67	9,777	1.17	2.12	13,630	12,494	12,494	12,494
RH2.19	208	10,447	3.76	2.51	7,921	0.95	2.00	11,273	10,447	10,447	10,447
RH2.2	208	10,455	3.77	2.52	7,933	0.95	2.01	11,285	10,455	10,455	10,455
RH2.20	208	10,445	3.76	2.51	7,918	0.95	2.00	11,271	10,445	10,445	10,445
RH2.21	208	10,444	3.76	2.51	7,916	0.95	2.00	11,268	10,444	10,444	10,444
RH2.22	208	10,442	3.76	2.51	7,914	0.95	2.00	11,266	10,442	10,442	10,442
RH2.23	208	6,047	2.18	2.23	4,302	0.52	1.80	6,399	6,047	6,047	6,047
RH2.24	208	6,047	2.18	2.23	4,301	0.52	1.80	6,398	6,047	6,047	6,047
RH2.25	208	6,046	2.18	2.23	4,300	0.52	1.80	6,397	6,046	6,046	6,046
RH2.26	208	6,045	2.18	2.23	4,300	0.52	1.80	6,397	6,045	6,045	6,045
RH2.27	208	9,159	3.30	2.43	6,812	0.82	1.94	9,821	9,159	9,159	9,159
RH2.28	208	9,157	3.30	2.42	6,810	0.82	1.94	9,819	9,157	9,157	9,157

Fault Location Bus Name	Bus Voltage	3-Phase Amps	3-Phase MVA	3P X/R	SLG Amps	SLG MVA	SLG X/R	Mom Amps	---------3P Asym Amps-------- 3 Cycles	 5 Cycles	 8 Cycles
RH2.29	208	9,156	3.30	2.42	6,808	0.82	1.94	9,818	9,156	9,156	9,156
RH2.3	208	10,454	3.77	2.52	7,931	0.95	2.01	11,282	10,454	10,454	10,454
RH2.30	208	9,155	3.30	2.42	6,806	0.82	1.94	9,816	9,155	9,155	9,155
RH2.31	208	8,006	2.88	2.35	5,855	0.70	1.89	8,541	8,006	8,006	8,006
RH2.32	208	8,007	2.88	2.35	5,857	0.70	1.89	8,542	8,007	8,007	8,007
RH2.33	208	8,008	2.89	2.35	5,858	0.70	1.89	8,543	8,008	8,008	8,008
RH2.34	208	8,009	2.89	2.35	5,860	0.70	1.89	8,544	8,009	8,009	8,009
RH2.35	208	8,010	2.89	2.35	5,861	0.70	1.89	8,546	8,010	8,010	8,010
RH2.36	208	8,011	2.89	2.35	5,862	0.70	1.89	8,547	8,011	8,011	8,011
RH2.38	208	7,868	2.83	2.34	5,748	0.69	1.88	8,390	7,868	7,868	7,868
RH2.39	208	7,867	2.83	2.34	5,746	0.69	1.88	8,388	7,867	7,867	7,867
RH2.4	208	10,452	3.77	2.52	7,928	0.95	2.01	11,280	10,452	10,452	10,452
RH2.40	208	7,867	2.83	2.34	5,745	0.69	1.88	8,387	7,867	7,867	7,867
RH2.41	208	7,604	2.74	2.33	5,531	0.66	1.87	8,099	7,604	7,604	7,604
RH2.42	208	7,603	2.74	2.33	5,530	0.66	1.87	8,098	7,603	7,603	7,603
RH2.43	208	7,602	2.74	2.33	5,529	0.66	1.87	8,096	7,602	7,602	7,602
RH2.44	208	7,601	2.74	2.33	5,528	0.66	1.87	8,095	7,601	7,601	7,601
RH2.45	208	11,112	4.00	2.57	8,513	1.02	2.05	12,036	11,112	11,112	11,112
RH2.46	208	11,110	4.00	2.57	8,510	1.02	2.04	12,034	11,110	11,110	11,110
RH2.47	208	11,109	4.00	2.57	8,507	1.02	2.04	12,031	11,109	11,109	11,109
RH2.48	208	11,107	4.00	2.57	8,504	1.02	2.04	12,029	11,107	11,107	11,107
RH2.49	208	13,453	4.85	2.76	10,685	1.28	2.19	14,765	13,453	13,453	13,453
RH2.5	208	6,050	2.18	2.23	4,306	0.52	1.81	6,402	6,050	6,050	6,050
RH2.50	208	13,451	4.85	2.75	10,681	1.28	2.19	14,761	13,451	13,451	13,451
RH2.51	208	13,448	4.84	2.75	10,676	1.28	2.19	14,757	13,448	13,448	13,448
RH2.52	208	13,445	4.84	2.75	10,672	1.28	2.19	14,753	13,445	13,445	13,445
RH2.53	208	7,370	2.66	1.82	4,594	0.55	1.34	7,601	7,370	7,370	7,370

Fault Location Bus Name	Bus Voltage	3-Phase Amps	3-Phase MVA	3P X/R	SLG Amps	SLG MVA	SLG X/R	Mom Amps	---------3P Asym Amps-------- 3 Cycles	 5 Cycles	 8 Cycles
RH2.54	208	9,156	3.30	2.42	6,804	0.82	1.94	9,818	9,156	9,156	9,156
RH2.55	208	9,157	3.30	2.42	6,806	0.82	1.94	9,820	9,157	9,157	9,157
RH2.56	208	9,159	3.30	2.43	6,808	0.82	1.94	9,821	9,159	9,159	9,159
RH2.57	208	9,162	3.30	2.43	6,813	0.82	1.94	9,827	9,162	9,162	9,162
RH2.58	208	7,866	2.83	2.34	5,744	0.69	1.88	8,386	7,866	7,866	7,866
RH2.59	208	7,865	2.83	2.34	5,742	0.69	1.88	8,385	7,865	7,865	7,865
RH2.6	208	6,049	2.18	2.23	4,305	0.52	1.81	6,402	6,049	6,049	6,049
RH2.62	208	9,357	3.37	2.44	6,979	0.84	1.95	10,044	9,357	9,357	9,357
RH2.63	208	9,355	3.37	2.44	6,977	0.84	1.95	10,043	9,355	9,355	9,355
RH2.64	208	7,598	2.74	2.33	5,524	0.66	1.87	8,092	7,598	7,598	7,598
RH2.65	208	6,323	2.28	1.84	3,972	0.48	1.38	6,527	6,323	6,323	6,323
RH2.66	208	9,169	3.30	2.43	6,824	0.82	1.94	9,836	9,169	9,169	9,169
RH2.67	208	11,101	4.00	2.56	8,496	1.02	2.04	12,021	11,101	11,101	11,101
RH2.68	208	13,437	4.84	2.75	10,659	1.28	2.18	14,740	13,437	13,437	13,437
RH2.69	208	13,435	4.84	2.75	10,654	1.28	2.18	14,736	13,435	13,435	13,435
RH2.7	208	6,049	2.18	2.23	4,304	0.52	1.81	6,401	6,049	6,049	6,049
RH2.70	208	13,432	4.84	2.75	10,650	1.28	2.18	14,732	13,432	13,432	13,432
RH2.71	208	9,165	3.30	2.43	6,817	0.82	1.94	9,830	9,165	9,165	9,165
RH2.72	208	9,166	3.30	2.43	6,819	0.82	1.94	9,832	9,166	9,166	9,166
RH2.73	208	9,168	3.30	2.43	6,821	0.82	1.94	9,834	9,168	9,168	9,168
RH2.74	208	9,169	3.30	2.43	6,822	0.82	1.94	9,835	9,169	9,169	9,169
RH2.76	208	9,358	3.37	2.44	6,981	0.84	1.95	10,046	9,358	9,358	9,358
RH2.77	208	9,362	3.37	2.44	6,987	0.84	1.95	10,052	9,362	9,362	9,362
RH2.78	208	9,361	3.37	2.44	6,985	0.84	1.95	10,050	9,361	9,361	9,361
RH2.79	208	9,359	3.37	2.44	6,983	0.84	1.95	10,048	9,359	9,359	9,359
RH2.8	208	9,166	3.30	2.43	6,823	0.82	1.94	9,832	9,166	9,166	9,166
RH2.9	208	9,165	3.30	2.43	6,821	0.82	1.94	9,830	9,165	9,165	9,165

Fault Location Bus Name	Bus Voltage	3-Phase Amps	3-Phase MVA	3P X/R	SLG Amps	SLG MVA	SLG X/R	Mom Amps	---------3P Asym Amps-------- 3 Cycles	 5 Cycles	 8 Cycles
RP1.1	208	0	0.00	0.00	0	0.00	)00.00	0	0	0	0
RP1.2	208	0	0.00	0.00	0	0.00	)00.00	0	0	0	0
SCHWP-1	480	20,459	17.01	3.07	14,988	4.15	2.20	22,952	20,459	20,459	20,459
SCHWP-2	480	20,459	17.01	3.07	14,988	4.15	2.20	22,952	20,459	20,459	20,459
SCHWP-3	480	20,459	17.01	3.07	14,988	4.15	2.20	22,952	20,459	20,459	20,459
SDP 3.1	480	5,576	4.64	1.10	3,589	0.99	0.89	5,595	5,576	5,576	5,576
SHWP-1	480	16,581	13.79	1.60	11,421	3.17	1.13	16,901	16,581	16,581	16,581
SHWP-2 STANDB	480	16,262	13.52	1.58	11,161	3.09	1.12	16,566	16,262	16,262	16,262
SUB 1	208	0	0.00	0.00	0	0.00	)00.00	0	0	0	0
SUB 1.1	480	45,411	37.75	10.23	48,596	13.47	10.29	65,522	46,535	45,508	45,413
SUB 1.2	208	28,108	10.13	4.86	28,714	3.45	4.81	34,987	28,120	28,108	28,108
SUB 1.3	208	66,510	23.96	6.93	70,015	8.41	6.81	89,413	66,797	66,518	66,510
SUB 1.4	480	29,701	24.69	7.05	30,984	8.59	6.88	40,067	29,841	29,705	29,701
SUB 3.1	480	54,023	44.91	9.91	54,832	15.20	10.08	77,551	55,212	54,118	54,025
SUB 3.2	480	50,294	41.81	10.30	52,212	14.47	10.35	72,647	51,570	50,406	50,296
SUB 3.3	480	49,933	41.51	10.16	51,952	14.40	10.25	71,975	51,141	50,036	49,936
SUB 4.1	480	36,392	30.26	7.76	38,925	10.79	7.62	50,032	36,673	36,403	36,392
SUB 4.2	208	28,068	10.11	4.88	28,686	3.44	4.82	34,963	28,080	28,068	28,068
SUB 4.3	208	28,074	10.11	4.88	28,690	3.45	4.82	34,979	28,086	28,074	28,074
SUB 4.4	208	28,022	10.10	4.84	28,654	3.44	4.79	34,848	28,034	28,022	28,022
SUB 4.5	208	28,037	10.10	4.85	28,664	3.44	4.80	34,884	28,049	28,037	28,037
SUB 4.6	208	28,042	10.10	4.86	28,668	3.44	4.81	34,899	28,054	28,042	28,042
SUB 6.1	480	29,753	24.74	7.02	31,022	8.60	6.87	40,109	29,891	29,757	29,753
SUB 6.2	208	66,230	23.86	6.95	69,808	8.38	6.83	89,110	66,522	66,238	66,230
SUB 6.3	480	30,153	25.07	6.98	31,310	8.68	6.84	40,599	30,288	30,156	30,153
SUB 6.4	208	66,507	23.96	6.92	70,013	8.41	6.80	89,404	66,794	66,515	66,507
SW B-10 (HMB2)	480	9,127	7.59	1.24	6,118	1.70	0.96	9,183	9,127	9,127	9,127

Fault Location Bus Name	Bus Voltage	3-Phase Amps	3-Phase MVA	3P X/R	SLG Amps	SLG MVA	SLG X/R	Mom Amps	---------3P Asym Amps--------		
									3 Cycles	5 Cycles	8 Cycles
SW B-10 (HMB3)	208	4,025	1.45	0.92	2,418	0.29	0.75	4,029	4,025	4,025	4,025
SW B-11 (HBE5) A	208	5,865	2.11	0.77	3,755	0.45	0.60	5,867	5,865	5,865	5,865
SW B-11 (HBE5) B	208	5,865	2.11	0.77	3,754	0.45	0.60	5,866	5,865	5,865	5,865
SW B-11 (HBE9) A	480	14,887	12.38	0.83	10,055	2.79	0.57	14,895	14,887	14,887	14,887
SW B-11 (HBE9) B	480	14,885	12.38	0.83	10,053	2.79	0.57	14,893	14,885	14,885	14,885
SW B-11 (HMB2)	480	9,126	7.59	1.24	6,117	1.70	0.96	9,183	9,126	9,126	9,126
SW B-11 (HMB4)	208	4,094	1.48	0.91	2,456	0.29	0.74	4,098	4,094	4,094	4,094
SW B-12 (HMB2)	480	9,126	7.59	1.24	6,116	1.69	0.96	9,182	9,126	9,126	9,126
SW B-12 (HMB4)	208	4,621	1.66	0.93	2,983	0.36	0.75	4,626	4,621	4,621	4,621
SW B-14 (HBE6) A	208	5,799	2.09	0.78	3,715	0.45	0.60	5,800	5,799	5,799	5,799
SW B-14 (HBE6) B	208	5,798	2.09	0.78	3,715	0.45	0.60	5,800	5,798	5,798	5,798
SW B-14 (HBE9) A	480	14,884	12.37	0.83	10,051	2.79	0.57	14,891	14,884	14,884	14,884
SW B-14 (HBE9) B	480	14,882	12.37	0.83	10,049	2.78	0.57	14,890	14,882	14,882	14,882
SW B-14 (HMB2)	480	8,091	6.73	1.17	4,995	1.38	0.91	8,128	8,091	8,091	8,091
SW B-14 (HMB5)	208	4,339	1.56	0.87	2,589	0.31	0.71	4,343	4,339	4,339	4,339
SW D-10 (HMB1) A	480	10,844	9.02	1.14	7,280	2.02	0.87	10,889	10,844	10,844	10,844
SW D-10 (HMB1) B	480	10,843	9.01	1.14	7,279	2.02	0.87	10,888	10,843	10,843	10,843
SW D-10 (HMB3) A	208	4,532	1.63	0.95	2,928	0.35	0.76	4,538	4,532	4,532	4,532
SW D-10 (HMB3) B	208	4,532	1.63	0.95	2,927	0.35	0.76	4,538	4,532	4,532	4,532
SW D-12 (HMB1) A	480	10,842	9.01	1.14	7,278	2.02	0.87	10,887	10,842	10,842	10,842
SW D-12 (HMB1) B	480	10,842	9.01	1.14	7,277	2.02	0.87	10,886	10,842	10,842	10,842
SW D-12 (HMB4) A	208	4,621	1.66	0.93	2,984	0.36	0.75	4,627	4,621	4,621	4,621
SW D-12 (HMB4) B	208	4,621	1.66	0.93	2,983	0.36	0.75	4,627	4,621	4,621	4,621
SW D-14 (HMB1)	480	9,401	7.82	1.08	5,737	1.59	0.83	9,430	9,401	9,401	9,401
SW D-14 (HMB5)	208	4,937	1.78	0.89	3,182	0.38	0.71	4,941	4,937	4,937	4,937
SW F-11 (HBE5) A	208	5,864	2.11	0.77	3,754	0.45	0.60	5,866	5,864	5,864	5,864
SW F-11 (HBE5) B	208	5,270	1.90	0.77	3,167	0.38	0.61	5,272	5,270	5,270	5,270

Fault Location Bus Name	Bus Voltage	3-Phase Amps	3-Phase MVA	3P X/R	SLG Amps	SLG MVA	SLG X/R	Mom Amps	---------3P Asym Amps-------- 3 Cycles	 5 Cycles	 8 Cycles
SW F-11 (HBE9) A	480	14,880	12.37	0.83	10,047	2.78	0.57	14,888	14,880	14,880	14,880
SW F-11 (HBE9) B	480	14,879	12.37	0.83	10,045	2.78	0.57	14,886	14,879	14,879	14,879
SW F-14 (HBD4)	208	5,405	1.95	0.71	3,127	0.38	0.57	5,406	5,405	5,405	5,405
SW F-14 (HBE6) A	208	5,797	2.09	0.78	3,714	0.45	0.60	5,799	5,797	5,797	5,797
SW F-14 (HBE6) B	208	5,240	1.89	0.77	3,161	0.38	0.62	5,242	5,240	5,240	5,240
SW F-14 (HBE9) A	480	14,877	12.37	0.83	10,043	2.78	0.57	14,885	14,877	14,877	14,877
SW F-14 (HBE9) B	480	12,256	10.19	0.82	7,326	2.03	0.60	12,262	12,256	12,256	12,256
SW F-18 (HBD5)	208	6,065	2.18	0.68	3,478	0.42	0.54	6,065	6,065	6,065	6,065
SW F-18 (HBD9)	480	13,772	11.45	0.89	9,312	2.58	0.62	13,783	13,772	13,772	13,772
SW F-22 (HBD6)	208	5,800	2.09	0.78	3,716	0.45	0.60	5,801	5,800	5,800	5,800
SW F-22 (HBD9)	480	13,770	11.45	0.89	9,311	2.58	0.62	13,782	13,770	13,770	13,770
SW F-24 (HBD9)	480	10,621	8.83	0.86	6,138	1.70	0.65	10,628	10,621	10,621	10,621
SW FL5 A200	208	5,574	2.01	0.91	3,516	0.42	0.74	5,580	5,574	5,574	5,574
SW FL5 A400	208	7,905	2.85	2.12	5,429	0.65	1.72	8,302	7,905	7,905	7,905
SW FL5 B200	208	5,574	2.01	0.91	3,516	0.42	0.74	5,580	5,574	5,574	5,574
SW FL5 B400	208	7,905	2.85	2.12	5,429	0.65	1.72	8,302	7,905	7,905	7,905
SW FL5 C200	208	6,990	2.52	0.94	4,446	0.53	0.76	6,999	6,990	6,990	6,990
SW FL5 C400	208	9,780	3.52	2.17	6,794	0.82	1.75	10,308	9,780	9,780	9,780
SW FL5 D200	208	6,990	2.52	0.94	4,446	0.53	0.76	6,999	6,990	6,990	6,990
SW FL5 D400	208	9,780	3.52	2.17	6,794	0.82	1.75	10,308	9,780	9,780	9,780
SW H-8 (HBE3) A	208	5,452	1.96	0.88	3,528	0.42	0.70	5,457	5,452	5,452	5,452
SW H-8 (HBE3) B	208	5,452	1.96	0.88	3,527	0.42	0.70	5,456	5,452	5,452	5,452
SW K-11 (HBE4) A	208	5,176	1.86	0.86	3,330	0.40	0.68	5,179	5,176	5,176	5,176
SW K-11 (HBE4) B	208	5,175	1.86	0.86	3,330	0.40	0.68	5,179	5,175	5,175	5,175
SW K-11 (HBE8) A	480	12,044	10.01	0.97	8,148	2.26	0.71	12,064	12,044	12,044	12,044
SW K-11 (HBE8) B	480	12,043	10.01	0.97	8,147	2.26	0.71	12,062	12,043	12,043	12,043
SW K-14 (HBD4) A	208	6,439	2.32	0.70	4,105	0.49	0.53	6,440	6,439	6,439	6,439

Fault Location Bus Name	Bus Voltage	3-Phase Amps	3-Phase MVA	3P X/R	SLG Amps	SLG MVA	SLG X/R	Mom Amps	---------3P Asym Amps-------- 3 Cycles	 5 Cycles	 8 Cycles
SW K-14 (HBD4) B	208	6,438	2.32	0.70	4,104	0.49	0.53	6,439	6,438	6,438	6,438
SW K-14 (HBE8) A	480	12,042	10.01	0.97	8,145	2.26	0.71	12,061	12,042	12,042	12,042
SW K-14 (HBE8) B	480	9,966	8.29	0.93	5,966	1.65	0.71	9,978	9,966	9,966	9,966
SW K-18 (HBD5) A	208	7,398	2.67	0.66	4,728	0.57	0.49	7,398	7,398	7,398	7,398
SW K-18 (HBD5) B	208	7,397	2.66	0.66	4,727	0.57	0.49	7,397	7,397	7,397	7,397
SW K-18 (HBD8) A	480	12,047	10.02	0.97	8,150	2.26	0.71	12,066	12,047	12,047	12,047
SW K-18 (HBD8) B	480	12,046	10.01	0.97	8,149	2.26	0.71	12,065	12,046	12,046	12,046
SW K-22 (HBD6) A	208	5,795	2.09	0.78	3,712	0.45	0.60	5,797	5,795	5,795	5,795
SW K-22 (HBD6) B	208	5,795	2.09	0.78	3,711	0.45	0.60	5,797	5,795	5,795	5,795
SW K-22 (HBD8) A	480	12,044	10.01	0.97	8,148	2.26	0.71	12,064	12,044	12,044	12,044
SW K-22 (HBD8) B	480	12,043	10.01	0.97	8,147	2.26	0.71	12,062	12,043	12,043	12,043
SW K-24 (HBD6)	208	5,797	2.09	0.78	3,713	0.45	0.60	5,798	5,797	5,797	5,797
SW K-24 (HBD8)	480	9,571	7.96	0.93	5,608	1.55	0.71	9,582	9,571	9,571	9,571
SW K-8 (HBE3) A	208	5,453	1.96	0.88	3,529	0.42	0.70	5,458	5,453	5,453	5,453
SW K-8 (HBE3) B	208	5,453	1.96	0.88	3,529	0.42	0.70	5,457	5,453	5,453	5,453
SW K-8 (HBE8) A	480	12,047	10.02	0.97	8,150	2.26	0.71	12,066	12,047	12,047	12,047
SW K-8 (HBE8) B	480	12,046	10.01	0.97	8,149	2.26	0.71	12,065	12,046	12,046	12,046
SW M-8 (HBE3) A	208	5,451	1.96	0.88	3,527	0.42	0.70	5,456	5,451	5,451	5,451
SW M-8 (HBE3) B	208	4,693	1.69	0.87	2,777	0.33	0.70	4,697	4,693	4,693	4,693
SW P-11 (HBE2) A	208	6,477	2.33	0.76	4,165	0.50	0.58	6,479	6,477	6,477	6,477
SW P-11 (HBE2) B	208	5,432	1.96	0.76	3,161	0.38	0.61	5,434	5,432	5,432	5,432
SW P-11 (HBE7) A	480	10,560	8.78	1.06	7,139	1.98	0.79	10,588	10,560	10,560	10,560
SW P-11 (HBE7) B	480	10,559	8.78	1.06	7,138	1.98	0.79	10,587	10,559	10,559	10,559
SW P-14 (HBD1) A	208	4,443	1.60	0.96	2,871	0.34	0.77	4,449	4,443	4,443	4,443
SW P-14 (HBD1) B	208	3,928	1.42	0.93	2,355	0.28	0.76	3,932	3,928	3,928	3,928
SW P-14 (HBE7) A	480	10,558	8.78	1.06	7,137	1.98	0.79	10,586	10,558	10,558	10,558
SW P-14 (HBE7) B	480	8,934	7.43	1.00	5,408	1.50	0.77	8,951	8,934	8,934	8,934

Fault Location Bus Name	Bus Voltage	3-Phase Amps	3-Phase MVA	3P X/R	SLG Amps	SLG MVA	SLG X/R	Mom Amps	---------3P Asym Amps-------- 3 Cycles	 5 Cycles	 8 Cycles
SW P-18 (HBD2) A	208	5,792	2.09	0.78	3,709	0.45	0.60	5,794	5,792	5,792	5,792
SW P-18 (HBD2) B	208	4,942	1.78	0.77	2,891	0.35	0.62	4,943	4,942	4,942	4,942
SW P-18 (HBD7) A	480	10,562	8.78	1.06	7,141	1.98	0.79	10,589	10,562	10,562	10,562
SW P-18 (HBD7) B	480	10,561	8.78	1.06	7,140	1.98	0.79	10,588	10,561	10,561	10,561
SW P-22 (HBD3) A	208	5,346	1.93	0.83	3,435	0.41	0.66	5,349	5,346	5,346	5,346
SW P-22 (HBD3) B	208	5,346	1.93	0.83	3,435	0.41	0.66	5,348	5,346	5,346	5,346
SW P-22 (HBD7) A	480	10,560	8.78	1.06	7,139	1.98	0.79	10,588	10,560	10,560	10,560
SW P-22 (HBD7) B	480	10,559	8.78	1.06	7,138	1.98	0.79	10,587	10,559	10,559	10,559
SW P-24 (HBD3)	208	5,350	1.93	0.83	3,439	0.41	0.66	5,352	5,350	5,350	5,350
SW P-24 (HBD7)	480	8,617	7.16	0.99	5,112	1.42	0.76	8,633	8,617	8,617	8,617
SW P-8 (HBE1) A	208	7,460	2.69	0.73	4,819	0.58	0.55	7,461	7,460	7,460	7,460
SW P-8 (HBE1) B	208	6,107	2.20	0.74	3,525	0.42	0.59	6,108	6,107	6,107	6,107
SW P-8 (HBE7) A	480	10,562	8.78	1.06	7,141	1.98	0.79	10,589	10,562	10,562	10,562
SW P-8 (HBE7) B	480	10,561	8.78	1.06	7,140	1.98	0.79	10,588	10,561	10,561	10,561
SW T-11 (HBE2) A	208	6,482	2.34	0.76	4,170	0.50	0.58	6,483	6,482	6,482	6,482
SW T-11 (HBE2) B	208	6,481	2.33	0.76	4,169	0.50	0.58	6,483	6,481	6,481	6,481
SW T-14 (HBD1) A	208	4,445	1.60	0.96	2,874	0.35	0.77	4,451	4,445	4,445	4,445
SW T-14 (HBD1) B	208	4,445	1.60	0.96	2,873	0.35	0.77	4,451	4,445	4,445	4,445
SW T-18 (HBD2) A	208	5,795	2.09	0.78	3,713	0.45	0.60	5,797	5,795	5,795	5,795
SW T-18 (HBD2) B	208	5,795	2.09	0.78	3,713	0.45	0.60	5,797	5,795	5,795	5,795
SW T-22 (HBD3) A	208	5,345	1.93	0.83	3,434	0.41	0.66	5,348	5,345	5,345	5,345
SW T-22 (HBD3) B	208	5,345	1.93	0.83	3,434	0.41	0.66	5,347	5,345	5,345	5,345
SWG-1 (L1)	13,200	7,100	162.33	13.19	6,778	51.66	13.48	10,632	7,497	7,160	7,103
SWG-1 (L2)	13,200	6,899	157.74	13.47	6,655	50.72	13.66	10,359	7,307	6,964	6,903
SWG-2 (L1)	13,200	7,093	162.17	13.10	6,774	51.63	13.42	10,611	7,482	7,151	7,096
SWG-2 (L2)	13,200	6,892	157.58	13.38	6,651	50.69	13.60	10,339	7,292	6,955	6,896
T-CH-3 PRI	13,200	6,811	155.72	10.62	6,525	49.72	10.30	9,887	7,004	6,829	6,812

Fault Location Bus Name	Bus Voltage	3-Phase Amps	3-Phase MVA	3P X/R	SLG Amps	SLG MVA	SLG X/R	Mom Amps	---------3P Asym Amps--------		
									3 Cycles	5 Cycles	8 Cycles
T-CH-3 SEC	4,160	5,912	42.60	10.43	0	0.00	Infinite	8,556	6,069	5,926	5,912
T-CH-4 PRI	13,200	7,000	160.04	10.23	6,636	50.57	10.00	10,101	7,173	7,015	7,000
T-CH-4 SEC	4,160	5,945	42.84	10.35	0	0.00	Infinite	8,594	6,099	5,959	5,945
T-SUB 1.1 PRI	13,200	6,972	159.41	10.39	6,611	50.38	10.31	10,086	7,155	6,989	6,973
T-SUB 1.2 PRI	13,200	6,956	159.03	10.10	6,588	50.21	10.00	10,017	7,120	6,969	6,956
T-SUB 1.3 PRI	13,200	6,970	159.35	10.35	6,609	50.37	10.29	10,077	7,150	6,986	6,970
T-SUB 1.4 (NC) FP	13,200	7,093	162.17	13.11	6,774	51.63	13.42	10,612	7,482	7,152	7,096
T-SUB 1.4 (NO) FP	13,200	6,892	157.58	13.38	6,651	50.69	13.60	10,340	7,293	6,955	6,896
T-SUB 1.4 PRI	13,200	7,065	161.53	11.46	6,738	51.35	11.50	10,374	7,324	7,095	7,066
T-SUB 3.1 PRI	13,200	6,849	156.60	12.07	6,579	50.14	11.93	10,132	7,145	6,887	6,851
T-SUB 3.2 PRI	13,200	7,040	160.95	11.66	6,694	51.02	11.67	10,362	7,312	7,072	7,041
T-SUB 3.3 PRI	13,200	7,045	161.06	11.76	6,697	51.04	11.73	10,382	7,324	7,078	7,046
T-SUB 4.1 PRI	13,200	6,775	154.89	10.55	6,490	49.46	10.40	9,824	6,962	6,792	6,775
T-SUB 4.2 PRI	13,200	6,795	155.36	10.96	6,518	49.67	10.84	9,911	7,010	6,817	6,796
T-SUB 4.3 PRI	13,200	6,816	155.83	11.39	6,546	49.89	11.33	9,999	7,060	6,843	6,817
T-SUB 4.4 PRI	13,200	6,646	151.95	8.61	6,317	48.14	8.33	9,314	6,729	6,651	6,646
T-SUB 4.5 PRI	13,200	6,693	153.02	9.22	6,379	48.62	8.98	9,493	6,804	6,700	6,693
T-SUB 4.6 PRI	13,200	6,712	153.45	9.50	6,405	48.81	9.27	9,568	6,837	6,721	6,712
T-SUB 6.1 PRI	13,200	6,791	155.26	10.87	6,511	49.62	10.74	9,892	6,999	6,812	6,792
T-SUB 6.2 PRI	13,200	6,778	154.97	10.62	6,494	49.49	10.47	9,839	6,971	6,797	6,779
T-SUB 6.3 PRI	13,200	6,982	159.62	10.56	6,624	50.48	10.50	10,125	7,175	7,000	6,982
T-SUB 6.4 PRI	13,200	6,968	159.31	10.32	6,606	50.34	10.24	10,069	7,146	6,984	6,969
TYP ESC	480	611	0.51	0.24	341	0.09	0.13	611	611	611	611

Input Report (English)

Utilities

Contribution From Name	Bus Name	In/Out Service	Nominal Voltage	-------- Contribution Data --------				PU (100 MVA Base)	
					Duty	Units	X/R	R PU	X PU
PECO LINE 1	PECO 1	In	13,200	3P:	6,300	Amps	15.00	Pos: 0.046	0.693
				SLG:	6,300	Amps	15.00	Zero: 0.046	0.693
PECO LINE 2	PECO 2	In	13,200	3P:	6,300	Amps	15.00	Pos: 0.046	0.693
				SLG:	6,300	Amps	15.00	Zero: 0.046	0.693

Generators

Name Connection	Bus Name	In/Out Service	Rated Size PF	Units	Rated Voltage	# of poles	-------- Contribution Data -------- Base kVA	X"	X/R
EXIST GEN	EDP-A	In	460.0	KW	480	4	575.00	0.15	20.00
Wye-Ground			0.80	Lagging				0.15	20.00
								0.15	20.00
GEN 1	GENERATOR 1	In	1840.0	KW	480	4	2,300.00	0.14	20.00
Wye-Ground			0.80	Lagging				0.20	20.00
								0.03	20.00
GEN 2	GENERATOR 2	In	1840.0	KW	480	4	2,300.00	0.14	20.00
Wye-Ground			0.80	Lagging				0.20	20.00
								0.03	20.00

Induction Motors

Name Phases	# of Motors	Bus Name Connection	In/Out Service	L-L Volts	Status	# of Poles	------- Contribution Data ------- Base kVA	Xd"	X/R
AHU-04 RETURN (MTR)	1	AHU-04 RETURN	In	480	Running	4	50.13	0.250	8.6
ABC		Wye							
AHU-04 SUPPLY (MTR)	1	AHU-04 SUPPLY	In	480	Running	4	100.27	0.250	8.6
ABC		Wye							
AHU-05 SUPPLY (MTR)	1	AHU-05 SUPPLY	In	480	Running	4	75.20	0.250	8.6
ABC		Wye							
AHU-06 RETURN (MTR)	1	AHU-06 RETURN	In	480	Running	4	40.11	0.250	8.6
ABC		Wye							
AHU-06 SUPPLY (MTR)	1	AHU-06 SUPPLY	In	480	Running	4	75.20	0.250	8.6

Name Phases	# of Motors	Bus Name Connection	In/Out Service	L-L Volts	Status	# of Poles	------- Contribution Data ------- Base kVA	 Xd"	 X/R
ABC		Wye							
AHU-08 RETURN (MTR)	1	AHU-08 RETURN	In	480	Running	4	33.26	0.250	10.0
ABC		Wye							
AHU-08 SUPPLY (MTR)	1	AHU-08 SUPPLY	In	480	Running	4	79.81	0.250	10.0
ABC		Wye							
AHU-10 SUPPLY 1 (MTR)	1	AHU-10 SUPPLY 1	In	480	Running	4	64.02	0.250	10.0
ABC		Wye							
AHU-10 SUPPLY 2 (MTR)	1	AHU-10 SUPPLY 2	In	480	Running	4	64.02	0.250	10.0
ABC		Wye							
AHU-11 SUPPLY 1 (MTR)	1	AHU-11 SUPPLY 1	In	480	Running	4	64.02	0.250	10.0
ABC		Wye							
AHU-11 SUPPLY 2 (MTR)	1	AHU-11 SUPPLY 2	In	480	Running	4	64.02	0.250	10.0
ABC		Wye							
AHU-12 SUPPLY 1 (MTR)	1	AHU-12 SUPPLY 1	In	480	Running	4	64.02	0.250	10.0
ABC		Wye							
AHU-12 SUPPLY 2 (MTR)	1	AHU-12 SUPPLY 2	In	480	Running	4	64.02	0.250	10.0
ABC		Wye							
AHU-13 SUPPLY 1 (MTR)	1	AHU-13 SUPPLY 1	In	480	Running	4	64.02	0.250	10.0
ABC		Wye							
AHU-13 SUPPLY 2 (MTR)	1	AHU-13 SUPPLY 2	In	480	Running	4	64.02	0.250	10.0
ABC		Wye							
AHU-14 SUPPLY 1 (MTR)	1	AHU-14 SUPPLY 1	In	480	Running	4	129.70	0.250	10.0
ABC		Wye							
AHU-14 SUPPLY 2 (MTR)	1	AHU-14 SUPPLY 2	In	480	Running	4	129.70	0.250	10.0
ABC		Wye							
AHU-15 SUPPLY 1 (MTR)	1	AHU-15 SUPPLY 1	In	480	Running	4	64.02	0.250	10.0
ABC		Wye							
AHU-15 SUPPLY 2 (MTR)	1	AHU-15 SUPPLY 2	In	480	Running	4	64.02	0.250	10.0
ABC		Wye							
AHU-16 SUPPLY 1 (MTR)	1	AHU-16 SUPPLY 1	In	480	Running	4	64.02	0.250	10.0
ABC		Wye							
AHU-16 SUPPLY 2 (MTR)	1	AHU-16 SUPPLY 2	In	480	Running	4	64.02	0.250	10.0
ABC		Wye							
AHU-19 SUPPLY A (MTR)	1	AHU-19 SUPPLYA	In	480	Running	4	50.13	0.250	10.0

Name Phases	# of Motors	Bus Name Connection	In/Out Service	L-L Volts	Status	# of Poles	------- Contribution Data ------- Base kVA	 Xd"	 X/R
ABC		Wye							
AHU-19 SUPPLY B (MTR)	1	AHU-19 SUPPLYB	In	480	Running	4	50.13	0.250	10.0
ABC		Wye							
AHU-21 RETURNA (MTR)	1	AHU-22 RETURNA	In	480	Running	4	30.08	0.250	8.6
ABC		Wye							
AHU-21 RETURNB (MTR)	1	AHU-22 RETURNB	In	480	Running	4	30.08	0.250	8.6
ABC		Wye							
AHU-22 SUPPLYA (MTR)	1	AHU-22 SUPPLYA	In	480	Running	4	50.13	0.250	8.6
ABC		Wye							
AHU-22 SUPPLYB (MTR)	1	AHU-22 SUPPLYB	In	480	Running	4	50.13	0.250	8.6
ABC		Wye							
AHU-28 RETURN (MTR)	1	AHU-28 RETURN	In	480	Running	4	25.07	0.250	8.6
ABC		Wye							
AHU-28 SUPPLY (MTR)	1	AHU-28 SUPPLY	In	480	Running	4	100.27	0.250	8.6
ABC		Wye							
AHU-29 RETURN (MTR)	1	AHU-29 RETURN	In	480	Running	4	25.07	0.250	10.0
ABC		Wye							
AHU-29 SUPPLY (MTR)	1	AHU-29 SUPPLY	In	480	Running	4	100.27	0.250	10.0
ABC		Wye							
AHU-3 (MTR)	1	AHU-03	In	480	Running	4	103.10	0.250	10.0
ABC		Wye							
AHU-5 RETURN (MTR)	1	AHU-05 RETURN	In	480	Running	4	40.11	0.250	8.6
ABC		Wye							
CHILLER 3	1	CH-3	In	4,160	Running	4	1,145.65	0.167	10.0
ABC		Wye							
CHILLER 4	1	CH-4	In	4,160	Running	4	1,145.65	0.167	10.0
ABC		Wye							
CHWP-1 (MTR)	1	CHWP-1	In	480	Running	4	79.81	0.250	10.0
ABC		Wye							
CHWP-3 (MTR)	1	CHWP-3	In	480	Running	4	79.81	0.250	10.0
ABC		Wye							
CHWP-5 (MTR)	1	CHWP-5	In	480	Running	4	79.81	0.250	10.0
ABC		Wye							
CLTWR1 FAN1A (MTR)	1	CLTWR1 FAN1A	In	480	Running	4	64.02	0.250	10.0

Name Phases	# of Motors	Bus Name Connection	In/Out Service	L-L Volts	Status	# of Poles	------- Contribution Data ------- Base kVA	 Xd"	 X/R
ABC		Wye							
CLTWR1 FAN1B (MTR)	1	CLTWR1 FAN1B	In	480	Running	4	64.02	0.250	10.0
ABC		Wye							
CLTWR1 FAN2A (MTR)	1	CLTWR1 FAN2A	In	480	Running	4	64.02	0.250	10.0
ABC		Wye							
CLTWR1 FAN2B (MTR)	1	CLTWR1 FAN2B	In	480	Running	4	64.02	0.250	10.0
ABC		Wye							
CLTWR2 FAN2B (MTR)	1	CLTWR2 FAN2B	In	480	Running	4	64.02	0.250	10.0
ABC		Wye							
CLTWR2 FAN1A (MTR)	1	CLTWR2 FAN1A	In	480	Running	4	64.02	0.250	10.0
ABC		Wye							
CLTWR2 FAN1B (MTR)	1	CLTWR2 FAN1B	In	480	Running	4	64.02	0.250	10.0
ABC		Wye							
CLTWR2 FAN2A (MTR)	1	CLTWR2 FAN2A	In	480	Running	4	64.02	0.250	10.0
ABC		Wye							
CLTWR3 FAN 1B (MTR)	1	CLTWR3 FAN 1B	In	480	Running	4	64.02	0.250	10.0
ABC		Wye							
CLTWR3 FAN1A (MTR)	1	CLTWR3 FAN1A	In	480	Running	4	64.02	0.250	10.0
ABC		Wye							
CLTWR3 FAN2A (MTR)	1	CLTWR3 FAN2A	In	480	Running	4	64.02	0.250	10.0
ABC		Wye							
CLTWR3 FAN2B (MTR)	1	CLTWR3 FAN2B	In	480	Running	4	64.02	0.250	10.0
ABC		Wye							
CWP-1 (MTR)	1	CWP-1	In	480	Running	4	103.10	0.250	10.0
ABC		Wye							
CWP-2 (MTR)	1	CWP-2	In	480	Running	4	103.10	0.250	10.0
ABC		Wye							
CWP-3 (MTR)	1	CWP-3	In	480	Running	4	103.10	0.250	10.0
ABC		Wye							
CWP-4 (MTR)	1	CWP-4	In	480	Running	4	103.10	0.250	10.0
ABC		Wye							
CWP-5 (MTR)	1	CWP-5	In	480	Running	4	103.10	0.250	10.0
ABC		Wye							
CWP-6 (MTR)	1	CWP-6	In	480	Running	4	103.10	0.250	10.0

Name Phases	# of Motors	Bus Name Connection	In/Out Service	L-L Volts	Status	# of Poles	------- Contribution Data ------- Base kVA	 Xd"	 X/R
ABC		Wye							
CWP-7 (MTR)	1	CWP-7	In	480	Running	4	103.10	0.250	10.0
ABC		Wye							
EF-1 (MTR)	1	EF-1	In	480	Running	4	75.20	0.169	10.0
ABC		Wye							
FIREPUMP	1	FP CONTROLLER	In	480	Running	4	350.94	0.498	10.0
ABC		Wye							
FREIGHT ELEVATOR	1	FREIGHT ELEV	In	480	Running	4	79.81	0.250	10.0
ABC		Wye							
FREIGHT ELEVATOR 4B	1	FREIGHT ELEV 4B	In	480	Running	4	0.00	0.169	10.0
ABC		Wye							
HWP-3 (MTR)	1	HWP-3	In	480	Running	4	54.04	0.250	10.0
ABC		Wye							
HWP-4 (MTR)	1	HWP-4	In	480	Running	4	54.04	0.250	10.0
ABC		Wye							
HWP-5 (MTR)	1	HWP-5	In	480	Running	4	54.04	0.250	10.0
ABC		Wye							
PASS ELEV 2A B (MTR)	1	PASS ELEV 2A B	In	480	Running	4	79.81	0.250	10.0
ABC		Wye							
PASS ELEVATOR 4A	1	PASS ELEV 4A	In	480	Running	4	75.20	0.169	10.0
ABC		Wye							
PASS ELEVEVATOR 1A (M	1	PASS ELEV 1A	In	480	Running	4	54.04	0.250	10.0
ABC		Wye							
PASS ELEVEVATOR 1B (MT	1	PASS ELEV 1B	In	480	Running	4	54.04	0.250	10.0
ABC		Wye							
PASS ELEVEVATOR 1C (MT	1	PASS ELEV 1C	In	480	Running	4	54.04	0.250	10.0
ABC		Wye							
PASS ELEVEVATOR 2A A (	1	PASS ELEV 2A A	In	480	Running	4	79.81	0.250	10.0
ABC		Wye							
PASS ELEVEVATOR 2B A (	1	PASS ELEV 2B A	In	480	Running	4	43.23	0.250	10.0
ABC		Wye							
PASS ELEVEVATOR 2B B (	1	PASS ELEV 2B B	In	480	Running	4	43.23	0.250	10.0
ABC		Wye							
SCHWP-1 (MTR)	1	SCHWP-1	In	480	Running	4	251.08	0.166	10.0

Name Phases	# of Motors	Bus Name Connection	In/Out Service	L-L Volts	Status	# of Poles	------- Contribution Data ------- Base kVA	 Xd"	 X/R
ABC		Wye							
SCHWP-2 (MTR)	1	SCHWP-2	In	480	Running	4	251.08	0.166	10.0
ABC		Wye							
SCHWP-3 (MTR)	1	SCHWP-3	In	480	Running	4	251.08	0.166	10.0
ABC		Wye							
SHWP-1 (MTR)	1	SHWP-1	In	480	Running	4	149.65	0.169	10.0
ABC		Wye							
SHWP-2 STANDBY (MTR)	1	SHWP-2 STANDBY	In	480	Running	4	149.65	0.169	10.0
ABC		Wye							
TYPICAL ESC (MTR)	1	TYP ESC	In	480	Running	4	17.46	0.250	8.6
ABC		Wye							

Cables

Name Phases	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	------ Cable Description ------ Size	 Cond. Type	 Duct Type	 Insul	Ohms/ 1000 feet 	R	jX
600 kCMIL CHL		In	1	0	600	Copper	Magnetic		Pos:	0.030	0.048
ABC									Zero:	0.081	0.114
C: AHU-03	NSDP-3	In	1	248	3/0	Copper	Magnetic		Pos:	0.080	0.052
ABC	AHU-03								Zero:	0.254	0.128
C: AHU-04 RETUR	MDP 1.1	In	1	190	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	AHU-04 RETUR								Zero:	0.637	0.144
C: AHU-04 SUPPLY	MDP 1.1	In	1	190	3/0	Copper	Magnetic		Pos:	0.080	0.052
ABC	AHU-04 SUPPLY								Zero:	0.254	0.128
C: AHU-05 RETUR	MDP 1.1	In	1	180	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	AHU-05 RETUR								Zero:	0.637	0.144
C: AHU-05 SUPPLY	MDP 1.1	In	1	180	1	Copper	Magnetic		Pos:	0.160	0.057
ABC	AHU-05 SUPPLY								Zero:	0.504	0.140
C: AHU-06 RETUR	MDP 1.2	In	1	100	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	AHU-06 RETUR								Zero:	0.637	0.144
C: AHU-06 SUPPLY	MDP 1.2	In	1	100	1	Copper	Magnetic		Pos:	0.160	0.057
ABC	AHU-06 SUPPLY								Zero:	0.504	0.140
C: AHU-08 RETURN	MDP 3.2	In	1	200	4	Copper	Magnetic		Pos:	0.310	0.060
ABC	AHU-08 RETUR								Zero:	1.012	0.156
C: AHU-08 SUPPLY	MDP 3.2	In	1	200	1	Copper	Magnetic		Pos:	0.160	0.057
ABC	AHU-08 SUPPLY								Zero:	0.504	0.140

Name Phases	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	------ Cable Description ------ Size	Cond. Type	Duct Type	Insul	Ohms/ 1000 feet	R	jX
C: AHU-10 SUPPLY	NSDP-2	In	1	300	1	Copper	Magnetic		Pos:	0.160	0.057
ABC	AHU-10 SUPPLY								Zero:	0.504	0.140
C: AHU-10 SUPPLY	NSDP-2	In	1	300	1	Copper	Magnetic		Pos:	0.160	0.057
ABC	AHU-10 SUPPLY								Zero:	0.504	0.140
C: AHU-11 SUPPLY	NSDP-2	In	1	250	1	Copper	Magnetic		Pos:	0.160	0.057
ABC	AHU-11 SUPPLY								Zero:	0.504	0.140
C: AHU-11 SUPPLY	NSDP-2	In	1	250	1	Copper	Magnetic		Pos:	0.160	0.057
ABC	AHU-11 SUPPLY								Zero:	0.504	0.140
C: AHU-12 SUPPLY	NSDP-1	In	1	230	1	Copper	Magnetic		Pos:	0.160	0.057
ABC	AHU-12 SUPPLY								Zero:	0.504	0.140
C: AHU-12 SUPPLY	NSDP-1	In	1	230	1	Copper	Magnetic		Pos:	0.160	0.057
ABC	AHU-12 SUPPLY								Zero:	0.504	0.140
C: AHU-13 SUPPLY	NSDP-1	In	1	130	1	Copper	Magnetic		Pos:	0.160	0.057
ABC	AHU-13 SUPPLY								Zero:	0.504	0.140
C: AHU-13 SUPPLY	NSDP-1	In	1	130	1	Copper	Magnetic		Pos:	0.160	0.057
ABC	AHU-13 SUPPLY								Zero:	0.504	0.140
C: AHU-14 SUPPLY	NSDP-3	In	1	125	4/0	Copper	Magnetic		Pos:	0.060	0.051
ABC	AHU-14 SUPPLY								Zero:	0.202	0.122
C: AHU-14 SUPPLY	NSDP-3	In	1	125	4/0	Copper	Magnetic		Pos:	0.060	0.051
ABC	AHU-14 SUPPLY								Zero:	0.202	0.122
C: AHU-15 SUPPLY	NSDP-3	In	1	100	1	Copper	Magnetic		Pos:	0.160	0.057
ABC	AHU-15 SUPPLY								Zero:	0.504	0.140
C: AHU-15 SUPPLY	NSDP-3	In	1	100	1	Copper	Magnetic		Pos:	0.160	0.057
ABC	AHU-15 SUPPLY								Zero:	0.504	0.140
C: AHU-16 SUPPLY	NSDP-3	In	1	270	1	Copper	Magnetic		Pos:	0.160	0.057
ABC	AHU-16 SUPPLY								Zero:	0.504	0.140
C: AHU-16 SUPPLY	NSDP-3	In	1	270	1	Copper	Magnetic		Pos:	0.160	0.057
ABC	AHU-16 SUPPLY								Zero:	0.504	0.140
C: AHU-19 SUPPLY	MDP 6.1	In	1	90	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	AHU-19 SUPPLY								Zero:	0.637	0.144
C: AHU-19 SUPPLY	MDP 6.1	In	1	90	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	AHU-19 SUPPLY								Zero:	0.637	0.144
C: AHU-22 RETURN	MDP 6.2	In	1	85	4	Copper	Magnetic		Pos:	0.310	0.060
ABC	AHU-22 RETURN								Zero:	1.012	0.156
C: AHU-22 RETURN	MDP 6.2	In	1	85	4	Copper	Magnetic		Pos:	0.310	0.060
ABC	AHU-22 RETURN								Zero:	1.012	0.156
C: AHU-22 SUPPLY	MDP 6.2	In	1	20	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	AHU-22 SUPPLY								Zero:	0.637	0.144

Name Phases	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	------ Cable Description ------ Size	Cond. Type	Duct Type	Insul	Ohms/ 1000 feet 	R	jX
C: AHU-22 SUPPLY	MDP 6.2	In	1	20	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	AHU-22 SUPPLY								Zero:	0.637	0.144
C: AHU-28 RETURN	MDP 6.2	In	1	100	4	Copper	Magnetic		Pos:	0.310	0.060
ABC	AHU-28 RETUR								Zero:	1.012	0.156
C: AHU-28 SUPPLY	MDP 6.2	In	1	100	3/0	Copper	Magnetic		Pos:	0.080	0.052
ABC	AHU-28 SUPPLY								Zero:	0.254	0.128
C: AHU-29 RETURN	MDP 6.1	In	1	120	4	Copper	Magnetic		Pos:	0.310	0.060
ABC	AHU-29 RETUR								Zero:	1.012	0.156
C: AHU-29 SUPPLY	MDP 6.1	In	1	120	3/0	Copper	Magnetic		Pos:	0.080	0.052
ABC	AHU-29 SUPPLY								Zero:	0.254	0.128
C: ATS-1 (E)	EGD-1	In	1	9	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	ATS-1 (E)								Zero:	0.081	0.114
C: ATS-1 (N)	SUB 3.3	In	1	169	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	ATS-1 (N)								Zero:	0.081	0.114
C: ATS-2 (E)	EGD-1	In	3	26	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	ATS-2 (E)								Zero:	0.081	0.114
C: ATS-2 (N)	SUB 3.3	In	2	140	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	ATS-2 (N)								Zero:	0.081	0.114
C: ATS-3 (E)	EGD-1	In	3	26	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	ATS-3 (E)								Zero:	0.081	0.114
C: ATS-3 (N)	SUB 3.3	In	3	140	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	ATS-3 (N)								Zero:	0.081	0.114
C: ATS-4 (E)	EGD-1	In	1	6	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	ATS-4 (E)								Zero:	0.081	0.114
C: ATS-4 (N)	SUB 3.1	In	1	167	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	ATS-4 (N)								Zero:	0.081	0.114
C: ATS-5 (E)	EGD-2	In	3	13	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	ATS-5 (E)								Zero:	0.081	0.114
C: ATS-5 (N)	SUB 3.1	In	3	167	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	ATS-5 (N)								Zero:	0.081	0.114
C: ATS-6 (E)	EGD-2	In	3	15	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	ATS-6 (E)								Zero:	0.081	0.114
C: ATS-6 (N)	SUB 3.1	In	3	167	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	ATS-6 (N)								Zero:	0.081	0.114
C: ATS-7 (E)	EDP-A	In	1	15	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	ATS-7 (E)								Zero:	0.081	0.114
C: ATS-7 (N)	SUB 1	In	1	100	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	ATS-7 (N)								Zero:	0.081	0.114

Name Phases	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	------ Cable Description ------ Size	Cond. Type	Duct Type	Insul	Ohms/ 1000 feet 	R	jX
C: ATS-FP	ATS-FP (E) CB	In	3	40	500	Copper	Magnetic		Pos:	0.030	0.048
ABC	ATS-FP (E)								Zero:	0.093	0.115
C: ATS-FP (E) CB	EGD-2	In	3	30	500	Copper	Magnetic		Pos:	0.030	0.048
ABC	ATS-FP (E) CB								Zero:	0.093	0.115
C: ATS-FP (N)	SUB 1.4	In	3	150	500	Copper	Magnetic		Pos:	0.030	0.048
ABC	ATS-FP (N)								Zero:	0.093	0.115
C: CH-3	T-CH-3 SEC	In	1	0	500	Copper	Magnetic	EPR	Pos:	0.030	0.053
ABC	CH-3								Zero:	0.095	0.130
C: CH-4	T-CH-4 SEC	In	1	0	500	Copper	Non-Magnetic	EPR	Pos:	0.030	0.042
ABC	CH-4								Zero:	0.045	0.107
C: CHWP-1	MCC 3.2	In	1	170	1/0	Copper	Magnetic		Pos:	0.120	0.055
ABC	CHWP-1								Zero:	0.403	0.133
C: CHWP-3	MDP 3.1	In	1	160	1	Copper	Magnetic		Pos:	0.160	0.057
ABC	CHWP-3								Zero:	0.504	0.140
C: CHWP-5	MDP 3.1	In	1	160	1	Copper	Magnetic		Pos:	0.160	0.057
ABC	CHWP-5								Zero:	0.504	0.140
C: CLTWR1 FAN1A	MDP 3.1	In	1	80	1	Copper	Magnetic		Pos:	0.160	0.057
ABC	CLTWR1 FAN1A								Zero:	0.504	0.140
C: CLTWR1 FAN1B	MDP 3.1	In	1	80	1	Copper	Magnetic		Pos:	0.160	0.057
ABC	CLTWR1 FAN1B								Zero:	0.504	0.140
C: CLTWR1 FAN2A	MDP 3.1	In	1	80	1	Copper	Magnetic		Pos:	0.160	0.057
ABC	CLTWR1 FAN2A								Zero:	0.504	0.140
C: CLTWR1 FAN2B	MDP 3.1	In	1	80	1	Copper	Magnetic		Pos:	0.160	0.057
ABC	CLTWR1 FAN2B								Zero:	0.504	0.140
C: CLTWR2 FAN2B	MDP 3.3	In	1	85	1	Copper	Magnetic		Pos:	0.160	0.057
ABC	CLTWR2 FAN2								Zero:	0.504	0.140
C: CLTWR2 FAN1A	MDP 3.3	In	1	85	1	Copper	Magnetic		Pos:	0.160	0.057
ABC	CLTWR2 FAN1A								Zero:	0.504	0.140
C: CLTWR2 FAN1B	MDP 3.3	In	1	85	1	Copper	Magnetic		Pos:	0.160	0.057
ABC	CLTWR2 FAN1B								Zero:	0.504	0.140
C: CLTWR2 FAN2A	MDP 3.3	In	1	85	1	Copper	Magnetic		Pos:	0.160	0.057
ABC	CLTWR2 FAN2A								Zero:	0.504	0.140
C: CLTWR3 FAN 1B	MDP 3.5	In	1	70	1	Copper	Magnetic		Pos:	0.160	0.057
ABC	CLTWR3 FAN 1								Zero:	0.504	0.140
C: CLTWR3 FAN1A	MDP 3.5	In	1	70	1	Copper	Magnetic		Pos:	0.160	0.057
ABC	CLTWR3 FAN1A								Zero:	0.504	0.140
C: CLTWR3 FAN2A	MDP 3.5	In	1	70	1	Copper	Magnetic		Pos:	0.160	0.057
ABC	CLTWR3 FAN2A								Zero:	0.504	0.140

Name Phases	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	------ Cable Description ------ Size	Cond. Type	Duct Type	Insul	Ohms/ 1000 feet 	R	jX
C: CLTWR3 FAN2B	MDP 3.5	In	1	70	1	Copper	Magnetic		Pos:	0.160	0.057
ABC	CLTWR3 FAN2B								Zero:	0.504	0.140
C: CWP-1	MCC 3.1	In	1	170	3/0	Copper	Magnetic		Pos:	0.080	0.052
ABC	CWP-1								Zero:	0.254	0.128
C: CWP-2	MCC 3.1	In	1	170	3/0	Copper	Magnetic		Pos:	0.080	0.052
ABC	CWP-2								Zero:	0.254	0.128
C: CWP-3	MCC 3.1	In	1	170	3/0	Copper	Magnetic		Pos:	0.080	0.052
ABC	CWP-3								Zero:	0.254	0.128
C: CWP-4	MCC 3.1	In	1	170	3/0	Copper	Magnetic		Pos:	0.080	0.052
ABC	CWP-4								Zero:	0.254	0.128
C: CWP-5	MCC 3.1	In	1	170	3/0	Copper	Magnetic		Pos:	0.080	0.052
ABC	CWP-5								Zero:	0.254	0.128
C: CWP-6	MCC 3.1	In	1	170	3/0	Copper	Magnetic		Pos:	0.080	0.052
ABC	CWP-6								Zero:	0.254	0.128
C: CWP-7	MCC 3.1	In	1	170	3/0	Copper	Magnetic		Pos:	0.080	0.052
ABC	CWP-7								Zero:	0.254	0.128
C: DB1A	MDP 1.3	In	1	225	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	DB1A								Zero:	0.637	0.144
C: DB1D	MDP 1.1	In	1	200	6	Copper	Magnetic		Pos:	0.490	0.064
ABC	DP1D								Zero:	1.607	0.169
C: DB1E	SUB 1.3	In	1	45	4/0	Copper	Magnetic		Pos:	0.060	0.051
ABC	DB1E								Zero:	0.202	0.122
C: DB1F	SUB 1.1	In	1	200	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	DB1F								Zero:	0.637	0.144
C: DB1G	SUB 1.3	In	1	47	4/0	Copper	Magnetic		Pos:	0.060	0.051
ABC	DB1G								Zero:	0.202	0.122
C: DB1H	SUB 1.1	In	1	19	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	DB1H								Zero:	0.637	0.144
C: DB2A	SUB 6.4	In	1	425	6	Copper	Magnetic		Pos:	0.490	0.064
ABC	DB2A								Zero:	1.607	0.169
C: DB2B	SUB 6.4	In	1	492	6	Copper	Magnetic		Pos:	0.490	0.064
ABC	DB2B								Zero:	1.607	0.169
C: DB2C	MDP 2.1	In	1	15	6	Copper	Magnetic		Pos:	0.490	0.064
ABC	DB2C								Zero:	1.607	0.169
C: DB3A	SUB 6.4	In	1	209	6	Copper	Magnetic		Pos:	0.490	0.064
ABC	DB3A								Zero:	1.607	0.169
C: DB3B	MDP 3.6	In	1	30	6	Copper	Magnetic		Pos:	0.490	0.064
ABC	DB3B								Zero:	1.607	0.169

Name Phases	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	------ Cable Description ------ Size	Cond. Type	Duct Type	Insul	Ohms/ 1000 feet 	R	jX
C: DB6A	SUB 6.2	In	1	20	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	DB6A								Zero:	0.637	0.144
C: DB6B	SUB 6.4	In	1	30	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	DB6B								Zero:	0.637	0.144
C: DP1B	MDP 1.1	In	1	170	6	Copper	Magnetic		Pos:	0.490	0.064
ABC	DP1B								Zero:	1.607	0.169
C: DP1C	MDP 1.3	In	1	200	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	DP1C								Zero:	0.637	0.144
C: EDB1A	NEDP-1	In	1	300	6	Copper	Magnetic		Pos:	0.490	0.064
ABC	EDB1A								Zero:	1.607	0.169
C: EDB1B	NEDP-1	In	1	38	6	Copper	Magnetic		Pos:	0.490	0.064
ABC	EDB1B								Zero:	1.607	0.169
C: EDB1C	EDP3.1	In	1	188	6	Copper	Magnetic		Pos:	0.490	0.064
ABC	EDB1C								Zero:	1.607	0.169
C: EDB1D	EDP3.1	In	1	188	6	Copper	Magnetic		Pos:	0.490	0.064
ABC	EDB1D								Zero:	1.607	0.169
C: EDB3A	EDP3.1	In	1	10	6	Copper	Magnetic		Pos:	0.490	0.064
ABC	EDB3A								Zero:	1.607	0.169
C: EDP3.1	NEDP-1	In	1	450	4/0	Copper	Magnetic		Pos:	0.060	0.051
ABC	EDP3.1								Zero:	0.202	0.122
C: EF-1	NSDP-1	In	1	250	1	Copper	Magnetic		Pos:	0.160	0.057
ABC	EF-1								Zero:	0.504	0.140
C: EGD-1	GENERATOR 1	In	7	25	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	EGD-1								Zero:	0.081	0.114
C: EGD-2	GENERATOR 2	In	7	30	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	EGD-2								Zero:	0.081	0.114
C: FREIGHT ELEV	NSDP-2	In	1	100	1	Copper	Magnetic		Pos:	0.160	0.057
ABC	FREIGHT ELEV								Zero:	0.504	0.140
C: FREIGHT ELEV 4	NSDP-6	In	1	75	1	Copper	Magnetic		Pos:	0.160	0.057
ABC	FREIGHT ELEV 4								Zero:	0.504	0.140
C: HBD1	SUB 4.5	In	2	450	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	HBD1-P01								Zero:	0.081	0.114
C: HBD1-P02	HBD1-P01	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBD1-P02								Zero:	0.099	0.068
C: HBD1-P03	HBD1-P02	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBD1-P03								Zero:	0.099	0.068
C: HBD1-P04	HBD1-P03	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBD1-P04								Zero:	0.099	0.068

Name Phases	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	------ Cable Description ------ Size	Cond. Type	Duct Type	Insul	Ohms/ 1000 feet R	jX
C: HBD1-P05	HBD1-P04	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD1-P05								Zero: 0.099	0.068
C: HBD1-P06	HBD1-P05	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD1-P06								Zero: 0.099	0.068
C: HBD1-P07	HBD1-P06	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD1-P07								Zero: 0.099	0.068
C: HBD1-P08	HBD1-P07	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD1-P08								Zero: 0.099	0.068
C: HBD1-P09	HBD1-P08	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD1-P09								Zero: 0.099	0.068
C: HBD1-P10	HBD1-P09	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD1-P10								Zero: 0.099	0.068
C: HBD1-P11	HBD1-P10	In	1	170	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD1-P11								Zero: 0.099	0.068
C: HBD2	SUB 4.6	In	2	200	600	Copper	Magnetic		Pos: 0.030	0.048
ABC	HBD2-P01								Zero: 0.081	0.114
C: HBD2-P02	HBD2-P01	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD2-P02								Zero: 0.099	0.068
C: HBD2-P03	HBD2-P02	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD2-P03								Zero: 0.099	0.068
C: HBD2-P04	HBD2-P03	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD2-P12								Zero: 0.099	0.068
C: HBD2-P05	HBD2-P04	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD2-P05								Zero: 0.099	0.068
C: HBD2-P06	HBD2-P05	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD2-P06								Zero: 0.099	0.068
C: HBD2-P07	HBD2-P06	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD2-P07								Zero: 0.099	0.068
C: HBD2-P08	HBD2-P07	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD2-P08								Zero: 0.099	0.068
C: HBD2-P09	HBD2-P08	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD2-P09								Zero: 0.099	0.068
C: HBD2-P10	HBD2-P09	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD2-P10								Zero: 0.099	0.068
C: HBD2-P11	HBD2-P10	In	1	170	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD2-P11								Zero: 0.099	0.068
C: HBD2-P12	HBD2-P12	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD2-P04								Zero: 0.099	0.068

Name Phases	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	------ Cable Description ------ Size	Cond. Type	Duct Type	Insul	Ohms/ 1000 feet 	R	jX
C: HBD3	SUB 4.6	In	2	270	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	HBD3-P01								Zero:	0.081	0.114
C: HBD3-P02	HBD3-P01	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBD3-P02								Zero:	0.099	0.068
C: HBD3-P03	HBD3-P02	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBD3-P03								Zero:	0.099	0.068
C: HBD3-P04	HBD3-P03	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBD3-P04								Zero:	0.099	0.068
C: HBD3-P05	HBD3-P04	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBD3-P05								Zero:	0.099	0.068
C: HBD3-P06	HBD3-P05	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBD3-P06								Zero:	0.099	0.068
C: HBD3-P07	HBD3-P06	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBD3-P07								Zero:	0.099	0.068
C: HBD3-P08	HBD3-P07	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBD3-P08								Zero:	0.099	0.068
C: HBD3-P09	HBD3-P08	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBD3-P09								Zero:	0.099	0.068
C: HBD3-P10	HBD3-P09	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBD3-P10								Zero:	0.099	0.068
C: HBD3-P11	HBD3-P10	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBD3-P11								Zero:	0.099	0.068
C: HBD3-P12	HBD3-P11	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBD3-P12								Zero:	0.099	0.068
C: HBD3-P13	HBD3-P12	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBD3-P13								Zero:	0.099	0.068
C: HBD3-P14	HBD3-P13	In	1	170	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBD3-P14								Zero:	0.099	0.068
C: HBD4	SUB 4.3	In	2	115	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	HBD4-P01								Zero:	0.081	0.114
C: HBD4-P02	HBD4-P01	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBD4-P02								Zero:	0.099	0.068
C: HBD4-P03	HBD4-P02	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBD4-P03								Zero:	0.099	0.068
C: HBD4-P04	HBD4-P03	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBD4-P04								Zero:	0.099	0.068
C: HBD4-P05	HBD4-P04	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBD4-P05								Zero:	0.099	0.068

Name Phases	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	------ Cable Description ------ Size	Cond. Type	Duct Type	Insul	Ohms/ 1000 feet R	jX
C: HBD4-P06	HBD4-P05	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD4-P06								Zero: 0.099	0.068
C: HBD4-P07	HBD4-P06	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD4-P07								Zero: 0.099	0.068
C: HBD4-P08	HBD4-P07	In	1	170	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD4-P08								Zero: 0.099	0.068
C: HBD5	SUB 4.3	In	2	55	600	Copper	Magnetic		Pos: 0.030	0.048
ABC	HBD5-P01								Zero: 0.081	0.114
C: HBD5-P02	HBD5-P01	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD5-P02								Zero: 0.099	0.068
C: HBD5-P03	HBD5-P02	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD5-P03								Zero: 0.099	0.068
C: HBD5-P04	HBD5-P03	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD5-P04								Zero: 0.099	0.068
C: HBD5-P05	HBD5-P04	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD5-P05								Zero: 0.099	0.068
C: HBD5-P06	HBD5-P05	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD5-P06								Zero: 0.099	0.068
C: HBD5-P07	HBD5-P06	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD5-P07								Zero: 0.099	0.068
C: HBD5-P08	HBD5-P07	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD5-P08								Zero: 0.099	0.068
C: HBD5-P09	HBD5-P08	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD5-P09								Zero: 0.099	0.068
C: HBD5-P10	HBD5-P09	In	1	170	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD5-P10								Zero: 0.099	0.068
C: HBD6	SUB 4.3	In	2	200	600	Copper	Magnetic		Pos: 0.030	0.048
ABC	HBD6-P01								Zero: 0.081	0.114
C: HBD6-P02	HBD6-P01	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD6-P02								Zero: 0.099	0.068
C: HBD6-P03	HBD6-P02	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD6-P03								Zero: 0.099	0.068
C: HBD6-P04	HBD6-P03	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD6-P04								Zero: 0.099	0.068
C: HBD6-P05	HBD6-P04	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD6-P05								Zero: 0.099	0.068
C: HBD6-P06	HBD6-P05	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD6-P06								Zero: 0.099	0.068

Name Phases	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	------ Cable Description ------ Size	Cond. Type	Duct Type	Insul	Ohms/ 1000 feet R	jX
C: HBD6-P07	HBD6-P06	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD6-P07								Zero: 0.099	0.068
C: HBD6-P08	HBD6-P07	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD6-P08								Zero: 0.099	0.068
C: HBD6-P09	HBD6-P08	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD6-P09								Zero: 0.099	0.068
C: HBD6-P10	HBD6-P09	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD6-P10								Zero: 0.099	0.068
C: HBD6-P11	HBD6-P10	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD6-P11								Zero: 0.099	0.068
C: HBD6-P12	HBD6-P11	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD6-P12								Zero: 0.099	0.068
C: HBD6-P13	HBD6-P12	In	1	170	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD6-P13								Zero: 0.099	0.068
C: HBD7	SUB 4.1	In	2	325	600	Copper	Magnetic		Pos: 0.030	0.048
ABC	HBD7-P01								Zero: 0.081	0.114
C: HBD7-P02	HBD7-P01	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD7-P02								Zero: 0.099	0.068
C: HBD7-P03	HBD7-P02	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD7-P03								Zero: 0.099	0.068
C: HBD7-P04	HBD7-P03	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD7-P04								Zero: 0.099	0.068
C: HBD7-P05	HBD7-P04	In	1	285	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD7-P05								Zero: 0.099	0.068
C: HBD8	SUB 4.1	In	2	200	600	Copper	Magnetic		Pos: 0.030	0.048
ABC	HBD8-P01								Zero: 0.081	0.114
C: HBD8-P02	HBD8-P01	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD8-P02								Zero: 0.099	0.068
C: HBD8-P03	HBD8-P02	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD8-P03								Zero: 0.099	0.068
C: HBD8-P04	HBD8-P03	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD8-P04								Zero: 0.099	0.068
C: HBD8-P05	HBD8-P04	In	1	285	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD8-P05								Zero: 0.099	0.068
C: HBD9	SUB 4.1	In	2	87	600	Copper	Magnetic		Pos: 0.030	0.048
ABC	HBD9-P01								Zero: 0.081	0.114
C: HBD9-P02	HBD9-P01	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBD9-P02								Zero: 0.099	0.068

Name Phases	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	------ Cable Description ------				Ohms/ 1000 feet		
					Size	Cond. Type	Duct Type	Insul		R	jX
C: HBD9-P03	HBD9-P02	In	1	285	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBD9-P03								Zero:	0.099	0.068
C: HBE1	SUB 4.4	In	2	90	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	HBE1-P01								Zero:	0.081	0.114
C: HBE1-P02	HBE1-P01	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBE1-P02								Zero:	0.099	0.068
C: HBE1-P03	HBE1-P02	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBE1-P03								Zero:	0.099	0.068
C: HBE1-P04	HBE1-P03	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBE1-P04								Zero:	0.099	0.068
C: HBE1-P05	HBE1-P04	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBE1-P05								Zero:	0.099	0.068
C: HBE1-P06	HBE1-P05	In	1	170	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBE1-P06								Zero:	0.099	0.068
C: HBE2	SUB 4.5	In	2	150	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	HBE2-P01								Zero:	0.081	0.114
C: HBE2-P02	HBE2-P01	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBE2-P02								Zero:	0.099	0.068
C: HBE2-P03	HBE2-P02	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBE2-P03								Zero:	0.099	0.068
C: HBE2-P04	HBE2-P03	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBE2-P04								Zero:	0.099	0.068
C: HBE2-P05	HBE2-P04	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBE2-P05								Zero:	0.099	0.068
C: HBE2-P06	HBE2-P05	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBE2-P06								Zero:	0.099	0.068
C: HBE2-P07	HBE2-P06	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBE2-P07								Zero:	0.099	0.068
C: HBE2-P08	HBE2-P07	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBE2-P08								Zero:	0.099	0.068
C: HBE2-P09	HBE2-P08	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBE2-P09								Zero:	0.099	0.068
C: HBE2-P10	HBE2-P09	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBE2-P10								Zero:	0.099	0.068
C: HBE2-P11	HBE2-P10	In	1	170	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBE2-P11								Zero:	0.099	0.068
C: HBE3	SUB 4.4	In	2	290	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	HBE3-P01								Zero:	0.081	0.114

Name Phases	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	------ Cable Description ------ Size	Cond. Type	Duct Type	Insul	Ohms/ 1000 feet R	jX
C: HBE3-P02	HBE3-P01	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBE3-P02								Zero: 0.099	0.068
C: HBE3-P03	HBE3-P02	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBE3-P03								Zero: 0.099	0.068
C: HBE3-P04	HBE3-P03	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBE3-P04								Zero: 0.099	0.068
C: HBE3-P05	HBE3-P04	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBE3-P05								Zero: 0.099	0.068
C: HBE3-P06	HBE3-P05	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBE3-P06								Zero: 0.099	0.068
C: HBE3-P07	HBE3-P06	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBE3-P07								Zero: 0.099	0.068
C: HBE3-P08	HBE3-P07	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBE3-P08								Zero: 0.099	0.068
C: HBE3-P09	HBE3-P08	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBE3-P09								Zero: 0.099	0.068
C: HBE3-P10	HBE3-P09	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBE3-P10								Zero: 0.099	0.068
C: HBE3-P11	HBE3-P10	In	1	170	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBE3-P11								Zero: 0.099	0.068
C: HBE4	SUB 4.2	In	2	300	600	Copper	Magnetic		Pos: 0.030	0.048
ABC	HBE4-P01								Zero: 0.081	0.114
C: HBE4-P02	HBE4-P01	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBE4-P02								Zero: 0.099	0.068
C: HBE4-P03	HBE4-P02	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBE4-P03								Zero: 0.099	0.068
C: HBE4-P04	HBE4-P03	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBE4-P04								Zero: 0.099	0.068
C: HBE4-P05	HBE4-P04	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBE4-P05								Zero: 0.099	0.068
C: HBE4-P06	HBE4-P05	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBE4-P06								Zero: 0.099	0.068
C: HBE4-P07	HBE4-P06	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBE4-P07								Zero: 0.099	0.068
C: HBE4-P08	HBE4-P07	In	1	170	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBE4-P08								Zero: 0.099	0.068
C: HBE5	SUB 4.2	In	2	190	600	Copper	Magnetic		Pos: 0.030	0.048
ABC	HBE5-P01								Zero: 0.081	0.114

Name Phases	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	------ Cable Description ------				Ohms/ 1000 feet		
					Size	Cond. Type	Duct Type	Insul		R	jX
C: HBE5-P02	HBE5-P01	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBE5-P02								Zero:	0.099	0.068
C: HBE5-P03	HBE5-P02	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBE5-P03								Zero:	0.099	0.068
C: HBE5-P04	HBE5-P03	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBE5-P04								Zero:	0.099	0.068
C: HBE5-P05	HBE5-P04	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBE5-P05								Zero:	0.099	0.068
C: HBE5-P06	HBE5-P05	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBE5-P06								Zero:	0.099	0.068
C: HBE5-P07	HBE5-P06	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBE5-P07								Zero:	0.099	0.068
C: HBE5-P08	HBE5-P07	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBE5-P08								Zero:	0.099	0.068
C: HBE5-P09	HBE5-P08	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBE5-P09								Zero:	0.099	0.068
C: HBE5-P10	HBE5-P09	In	1	110	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBE5-P10								Zero:	0.099	0.068
C: HBE6	SUB 4.2	In	2	200	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	HBE6-P01								Zero:	0.081	0.114
C: HBE6-P02	HBE6-P01	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBE6-P02								Zero:	0.099	0.068
C: HBE6-P03	HBE6-P02	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBE6-P03								Zero:	0.099	0.068
C: HBE6-P04	HBE6-P03	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBE6-P04								Zero:	0.099	0.068
C: HBE6-P05	HBE6-P04	In	1	105	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBE6-P05								Zero:	0.099	0.068
C: HBE7	SUB 4.1	In	2	325	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	HBE7-P01								Zero:	0.081	0.114
C: HBE7-P02	HBE7-P01	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBE7-P02								Zero:	0.099	0.068
C: HBE7-P03	HBE7-P02	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBE7-P03								Zero:	0.099	0.068
C: HBE7-P04	HBE7-P03	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBE7-P04								Zero:	0.099	0.068
C: HBE7-P05	HBE7-P04	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HBE7-P05								Zero:	0.099	0.068

Name Phases	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	------ Cable Description ------ Size	Cond. Type	Duct Type	Insul	Ohms/ 1000 feet R	jX
C: HBE7-P06	HBE7-P05	In	1	230	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBE7-P06								Zero: 0.099	0.068
C: HBE8	SUB 4.1	In	2	200	600	Copper	Magnetic		Pos: 0.030	0.048
ABC	HBE8-P01								Zero: 0.081	0.114
C: HBE8-P02	HBE8-P01	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBE8-P02								Zero: 0.099	0.068
C: HBE8-P03	HBE8-P02	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBE8-P03								Zero: 0.099	0.068
C: HBE8-P04	HBE8-P03	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBE8-P04								Zero: 0.099	0.068
C: HBE8-P05	HBE8-P04	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBE8-P05								Zero: 0.099	0.068
C: HBE8-P06	HBE8-P05	In	1	230	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBE8-P06								Zero: 0.099	0.068
C: HBE9	SUB 4.1	In	2	27	600	Copper	Magnetic		Pos: 0.030	0.048
ABC	HBE9-P01								Zero: 0.081	0.114
C: HBE9-P02	HBE9-P01	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBE9-P02								Zero: 0.099	0.068
C: HBE9-P03	HBE9-P02	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBE9-P03								Zero: 0.099	0.068
C: HBE9-P04	HBE9-P03	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBE9-P04								Zero: 0.099	0.068
C: HBE9-P05	HBE9-P04	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBE9-P05								Zero: 0.099	0.068
C: HBE9-P06	HBE9-P05	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBE9-P06								Zero: 0.099	0.068
C: HBE9-P07	HBE9-P06	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBE9-P07								Zero: 0.099	0.068
C: HBE9-P08	HBE9-P07	In	1	190	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HBE9-P08								Zero: 0.099	0.068
C: HMB1	SUB 1.1	In	2	418	600	Copper	Magnetic		Pos: 0.030	0.048
ABC	HMB1-P01								Zero: 0.081	0.114
C: HMB1-P02	HMB1-P01	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HMB1-P02								Zero: 0.099	0.068
C: HMB1-P03	HMB1-P02	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HMB1-P03								Zero: 0.099	0.068
C: HMB1-P04	HMB1-P03	In	1	0	800	Copper	Busway	Epoxy	Pos: 0.020	0.013
ABC	HMB1-P04								Zero: 0.099	0.068

Name Phases	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	------ Cable Description ------				Ohms/ 1000 feet		
					Size	Cond. Type	Duct Type	Insul		R	jX
C: HMB1-P05	HMB1-P04	In	1	190	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HMB1-P05								Zero:	0.099	0.068
C: HMB2	SUB 1.1	In	2	600	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	HMB2-P01								Zero:	0.081	0.114
C: HMB2-P02	HMB2-P01	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HMB2-P02								Zero:	0.099	0.068
C: HMB2-P03	HMB2-P02	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HMB2-P03								Zero:	0.099	0.068
C: HMB2-P04	HMB2-P03	In	1	190	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HMB2-P04								Zero:	0.099	0.068
C: HMB3	SUB 1.2	In	2	430	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	HMB3-P01								Zero:	0.081	0.114
C: HMB3-P02	HMB3-P01	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HMB3-P02								Zero:	0.099	0.068
C: HMB3-P03	HMB3-P02	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HMB3-P03								Zero:	0.099	0.068
C: HMB3-P04	HMB3-P03	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HMB3-P04								Zero:	0.099	0.068
C: HMB3-P05	HMB3-P04	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HMB3-P05								Zero:	0.099	0.068
C: HMB3-P06	HMB3-P05	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HMB3-P06								Zero:	0.099	0.068
C: HMB3-P07	HMB3-P06	In	1	160	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HMB3-P07								Zero:	0.099	0.068
C: HMB4	SUB 1.2	In	2	410	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	HMB4-P01								Zero:	0.081	0.114
C: HMB4-P02	HMB4-P02	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HMB4-P01								Zero:	0.099	0.068
C: HMB4-P03	HMB4-P03	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HMB4-P02								Zero:	0.099	0.068
C: HMB4-P04	HMB4-P04	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HMB4-P03								Zero:	0.099	0.068
C: HMB4-P05	HMB4-P05	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HMB4-P04								Zero:	0.099	0.068
C: HMB4-P06	HMB4-P06	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HMB4-P05								Zero:	0.099	0.068
C: HMB4-P07	HMB4-P07	In	1	0	800	Copper	Busway	Epoxy	Pos:	0.020	0.013
ABC	HMB4-P06								Zero:	0.099	0.068

Name Phases	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	------ Cable Description ------ Size	Cond. Type	Duct Type	Insul	Ohms/ 1000 feet R	jX
C: HMB4-P08 ABC	HMB4-P08 HMB4-P07	In	1	160	800	Copper	Busway	Epoxy	Pos: 0.020 Zero: 0.099	0.013 0.068
C: HMB5 ABC	SUB 1.2 HMB5-P01	In	2	345	600	Copper	Magnetic		Pos: 0.030 Zero: 0.081	0.048 0.114
C: HMB5-P02 ABC	HMB5-P01 HMB5-P02	In	1	160	800	Copper	Busway	Epoxy	Pos: 0.020 Zero: 0.099	0.013 0.068
C: HWP-3 ABC	MCC 3.2 HWP-3	In	1	160	4	Copper	Magnetic		Pos: 0.310 Zero: 1.012	0.060 0.156
C: HWP-4 ABC	MCC 3.2 HWP-4	In	1	160	4	Copper	Magnetic		Pos: 0.310 Zero: 1.012	0.060 0.156
C: HWP-5 ABC	MDP 3.1 HWP-5	In	1	150	2	Copper	Magnetic		Pos: 0.200 Zero: 0.637	0.057 0.144
C: K1 ABC	MDP 6.1 K1	In	1	246	4/0	Copper	Magnetic		Pos: 0.060 Zero: 0.202	0.051 0.122
C: K2 ABC	SUB 6.2 K2	In	1	246	4/0	Copper	Magnetic		Pos: 0.060 Zero: 0.202	0.051 0.122
C: L1.1 ABC	MDP 1.1 L1.1	In	1	180	2	Copper	Magnetic		Pos: 0.200 Zero: 0.637	0.057 0.144
C: L1.2 ABC	MDP 1.1 L1.2	In	1	380	4/0	Copper	Magnetic		Pos: 0.060 Zero: 0.202	0.051 0.122
C: L1.3 ABC	SUB 1.1 L1.3	In	1	50	2	Copper	Magnetic		Pos: 0.200 Zero: 0.637	0.057 0.144
C: L1.4 ABC	SUB 1.1 L1.4	In	1	225	4/0	Copper	Magnetic		Pos: 0.060 Zero: 0.202	0.051 0.122
C: L1.5 ABC	MDP 1.1 L1.5	In	1	210	2	Copper	Magnetic		Pos: 0.200 Zero: 0.637	0.057 0.144
C: L1.6 ABC	SUB 1.1 L1.6	In	1	55	2	Copper	Magnetic		Pos: 0.200 Zero: 0.637	0.057 0.144
C: L1.7 ABC	MDP 1.1 L1.7	In	1	450	4/0	Copper	Magnetic		Pos: 0.060 Zero: 0.202	0.051 0.122
C: L2.1 ABC	MDP 3.6 L2.1	In	1	183	2	Copper	Magnetic		Pos: 0.200 Zero: 0.637	0.057 0.144
C: L2.2 ABC	MDP 3.6 L2.2	In	1	255	2	Copper	Magnetic		Pos: 0.200 Zero: 0.637	0.057 0.144
C: L2.3 ABC	MDP 3.1 L2.3	In	1	150	2	Copper	Magnetic		Pos: 0.200 Zero: 0.637	0.057 0.144
C: L3.1 ABC	MDP 3.1 L3.1	In	1	70	4/0	Copper	Magnetic		Pos: 0.060 Zero: 0.202	0.051 0.122

Name Phases	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	------ Cable Description ------ Size	Cond. Type	Duct Type	Insul	Ohms/ 1000 feet R	jX
C: L3.3	MDP 3.1	In	1	150	4/0	Copper	Magnetic		Pos: 0.060	0.051
ABC	L3.3								Zero: 0.202	0.122
C: L4.1	MDP 3.6	In	1	110	4/0	Copper	Magnetic		Pos: 0.060	0.051
ABC	L4.1								Zero: 0.202	0.122
C: L4.2	MDP 3.6	In	1	32	4/0	Copper	Magnetic		Pos: 0.060	0.051
ABC	L4.2								Zero: 0.202	0.122
C: L4.3	MDP 3.6	In	1	150	4/0	Copper	Magnetic		Pos: 0.060	0.051
ABC	L4.3								Zero: 0.202	0.122
C: L5.1	MDP 6.1	In	1	360	4/0	Copper	Magnetic		Pos: 0.060	0.051
ABC	L5.1								Zero: 0.202	0.122
C: L5.2	MDP 6.2	In	1	380	4/0	Copper	Magnetic		Pos: 0.060	0.051
ABC	L5.2								Zero: 0.202	0.122
C: L5.3	MDP 6.1	In	1	246	2	Copper	Magnetic		Pos: 0.200	0.057
ABC	L5.3								Zero: 0.637	0.144
C: L6.1	MDP 6.1	In	1	15	2	Copper	Magnetic		Pos: 0.200	0.057
ABC	L6.1								Zero: 0.637	0.144
C: L6.2	MDP 6.2	In	1	15	2	Copper	Magnetic		Pos: 0.200	0.057
ABC	L6.2								Zero: 0.637	0.144
C: LD DK SWA FL1	SUB 1.3	In	1	400	4/0	Copper	Magnetic		Pos: 0.060	0.051
ABC	LD DK SWA FL1								Zero: 0.202	0.122
C: LD DK SWA FL2	MDP 2.1	In	1	130	4/0	Copper	Magnetic		Pos: 0.060	0.051
ABC	LD DK SWA FL2								Zero: 0.202	0.122
C: LD DK SWB FL1	SUB 1.3	In	1	400	4/0	Copper	Magnetic		Pos: 0.060	0.051
ABC	LD DK SWB FL1								Zero: 0.202	0.122
C: LD DK SWB FL2	MDP 2.1	In	1	130	4/0	Copper	Magnetic		Pos: 0.060	0.051
ABC	LD DK SWB FL2								Zero: 0.202	0.122
C: LD DK SWC FL2	MDP 2.1	In	1	130	4/0	Copper	Magnetic		Pos: 0.060	0.051
ABC	LD DK SWC FL2								Zero: 0.202	0.122
C: LD DK SWD FL2	MDP 2.1	In	1	130	4/0	Copper	Magnetic		Pos: 0.060	0.051
ABC	LD DK SWD FL2								Zero: 0.202	0.122
C: LD DK SWE FL2	MDP 2.1	In	1	130	4/0	Copper	Magnetic		Pos: 0.060	0.051
ABC	LD DK SWE FL2								Zero: 0.202	0.122
C: LINE 1 SG 2 - FP T	PECO 1	In	1	150	500	Copper	Non-Magnetic	XLP	Pos: 0.030	0.042
ABC	T-SUB 1.4 (NC) F								Zero: 0.045	0.107
C: LINE 2 SG 2 - FP T	PECO 2	In	1	150	500	Copper	Non-Magnetic	XLP	Pos: 0.030	0.042
ABC	T-SUB 1.4 (NO) F								Zero: 0.045	0.107
C: LOADBANK GE	GENERATOR 1	In	2	65	600	Copper	Magnetic		Pos: 0.030	0.048
ABC	LOADBANKGE								Zero: 0.081	0.114

Name Phases	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	------ Cable Description ------ Size	Cond. Type	Duct Type	Insul	Ohms/ 1000 feet 	R	jX
C: LOADBANK GE	GENERATOR 2	In	2	65	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	LOADBANKGE								Zero:	0.081	0.114
C: M1.1	SUB 1.1	In	1	140	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	M1.1								Zero:	0.637	0.144
C: M1.2	SUB 1.1	In	1	40	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	M1.2								Zero:	0.637	0.144
C: MCC 3.1	SUB 3.1	In	4	33	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	MCC 3.1								Zero:	0.081	0.114
C: MCC 3.2	SUB 3.1	In	2	33	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	MCC 3.2								Zero:	0.081	0.114
C: MDP 1.1	SUB 1.1	In	4	300	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	MDP 1.1								Zero:	0.081	0.114
C: MDP 1.2	SUB 1.1	In	3	40	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	MDP 1.2								Zero:	0.081	0.114
C: MDP 1.3	SUB 1.3	In	5	300	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	MDP 1.3								Zero:	0.081	0.114
C: MDP 2.1	SUB 6.2	In	3	260	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	MDP 2.1								Zero:	0.081	0.114
C: MDP 3.1	SUB 3.1	In	4	14	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	MDP 3.1								Zero:	0.081	0.114
C: MDP 3.2	SUB 3.2	In	3	21	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	MDP 3.2								Zero:	0.081	0.114
C: MDP 3.3	SUB 3.2	In	5	21	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	MDP 3.3								Zero:	0.081	0.114
C: MDP 3.4	SUB 3.3	In	3	16	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	MDP 3.4								Zero:	0.081	0.114
C: MDP 3.5	SUB 3.3	In	3	17	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	MDP 3.5								Zero:	0.081	0.114
C: MDP 3.6	SUB 6.3	In	3	205	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	MDP 3.6								Zero:	0.081	0.114
C: MDP 6.1	SUB 6.1	In	4	25	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	MDP 6.1								Zero:	0.081	0.114
C: MDP 6.2	SUB 6.3	In	3	40	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	MDP 6.2								Zero:	0.081	0.114
C: NEDP-1	ATS-1	In	1	1	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	NEDP-1								Zero:	0.081	0.114
C: NEL1.1	EDP3.1	In	1	526	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	NEL1.1								Zero:	0.637	0.144

Name Phases	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	------ Cable Description ------ Size	Cond. Type	Duct Type	Insul	Ohms/ 1000 feet R	jX
C: NEL1.2	NEDP-1	In	1	398	2	Copper	Magnetic	Pos:	0.200	0.057
ABC	NEL1.2							Zero:	0.637	0.144
C: NEL1.3	EDP3.1	In	1	243	2	Copper	Magnetic	Pos:	0.200	0.057
ABC	NEL1.3							Zero:	0.637	0.144
C: NEL1.4	EDP3.1	In	1	380	2	Copper	Magnetic	Pos:	0.200	0.057
ABC	NEL1.4							Zero:	0.637	0.144
C: NEL2.1	EDP3.1	In	1	180	2	Copper	Magnetic	Pos:	0.200	0.057
ABC	NEL2.1							Zero:	0.637	0.144
C: NEL2.2	NEDP-1	In	1	600	2	Copper	Magnetic	Pos:	0.200	0.057
ABC	NEL2.2							Zero:	0.637	0.144
C: NEL2.3	NEDP-1	In	1	125	2	Copper	Magnetic	Pos:	0.200	0.057
ABC	NEL2.3							Zero:	0.637	0.144
C: NEL3.1	NEDP-1	In	1	60	2	Copper	Magnetic	Pos:	0.200	0.057
ABC	NEL3.1							Zero:	0.637	0.144
C: NEL4.2	EDP3.1	In	1	160	2	Copper	Magnetic	Pos:	0.200	0.057
ABC	NEL4.2							Zero:	0.637	0.144
C: NEL5.1	NEDP-1	In	1	290	2	Copper	Magnetic	Pos:	0.200	0.057
ABC	NEL5.1							Zero:	0.637	0.144
C: NEL5.2	NEDP-1	In	1	570	2	Copper	Magnetic	Pos:	0.200	0.057
ABC	NEL5.2							Zero:	0.637	0.144
C: NEL5.3	NEDP-1	In	1	300	2	Copper	Magnetic	Pos:	0.200	0.057
ABC	NEL5.3							Zero:	0.637	0.144
C: NEL6.1	NEDP-1	In	1	360	2	Copper	Magnetic	Pos:	0.200	0.057
ABC	NEL6.1							Zero:	0.637	0.144
C: NSDP-1	ATS-2	In	3	5	600	Copper	Magnetic	Pos:	0.030	0.048
ABC	NSDP-1							Zero:	0.081	0.114
C: NSDP-2	ATS-3	In	3	30	600	Copper	Magnetic	Pos:	0.030	0.048
ABC	NSDP-2							Zero:	0.081	0.114
C: NSDP-3	ATS-6	In	3	10	600	Copper	Magnetic	Pos:	0.030	0.048
ABC	NSDP-3							Zero:	0.081	0.114
C: NSDP-4	ATS-5	In	3	535	600	Copper	Magnetic	Pos:	0.030	0.048
ABC	NSDP-4							Zero:	0.081	0.114
C: NSDP-5	ATS-4	In	1	15	600	Copper	Magnetic	Pos:	0.030	0.048
ABC	NSDP-5							Zero:	0.081	0.114
C: NSDP-6	ATS-7	In	1	10	600	Copper	Magnetic	Pos:	0.030	0.048
ABC	NSDP-6							Zero:	0.081	0.114
C: P2.1	MDP 3.1	In	1	100	4/0	Copper	Magnetic	Pos:	0.060	0.051
ABC	P2.1							Zero:	0.202	0.122

Name Phases	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	------ Cable Description ------ Size	Cond. Type	Duct Type	Insul	Ohms/ 1000 feet 	R	jX
C: P2.2	MDP 6.2	In	1	506	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	P2.2								Zero:	0.637	0.144
C: PASS ELEV 1A	NSDP-4	In	1	410	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	PASS ELEV 1A								Zero:	0.637	0.144
C: PASS ELEV 1B	NSDP-4	In	1	410	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	PASS ELEV 1B								Zero:	0.637	0.144
C: PASS ELEV 1C	NSDP-4	In	1	410	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	PASS ELEV 1C								Zero:	0.637	0.144
C: PASS ELEV 2A A	NSDP-4	In	1	180	1	Copper	Magnetic		Pos:	0.160	0.057
ABC	PASS ELEV 2A A								Zero:	0.504	0.140
C: PASS ELEV 2A B	NSDP-4	In	1	180	1	Copper	Magnetic		Pos:	0.160	0.057
ABC	PASS ELEV 2A B								Zero:	0.504	0.140
C: PASS ELEV 2B A	NSDP-4	In	1	180	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	PASS ELEV 2B A								Zero:	0.637	0.144
C: PASS ELEV 2B B	NSDP-4	In	1	180	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	PASS ELEV 2B B								Zero:	0.637	0.144
C: PASS ELEV 4A	NSDP-6	In	1	75	1	Copper	Magnetic		Pos:	0.160	0.057
ABC	PASS ELEV 4A								Zero:	0.504	0.140
C: R1.1	MDP 1.3	In	1	6	4/0	Copper	Magnetic		Pos:	0.060	0.051
ABC	R1.1								Zero:	0.202	0.122
C: R1.10	SUB 1.3	In	1	45	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	R1.10								Zero:	0.081	0.114
C: R1.11	SUB 1.3	In	1	45	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	R1.11								Zero:	0.081	0.114
C: R1.12	SUB 1.3	In	1	45	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	R1.12								Zero:	0.081	0.114
C: R1.13	SUB 1.3	In	1	47	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	R1.13								Zero:	0.081	0.114
C: R1.14	SUB 1.3	In	1	45	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	R1.14								Zero:	0.081	0.114
C: R1.15	SUB 1.3	In	1	47	4/0	Copper	Magnetic		Pos:	0.060	0.051
ABC	R1.15								Zero:	0.202	0.122
C: R1.16	SUB 1.3	In	1	250	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	R1.16								Zero:	0.081	0.114
C: R1.17	SUB 1.3	In	1	250	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	R1.17								Zero:	0.081	0.114
C: R1.18	SUB 1.3	In	1	250	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	R1.18								Zero:	0.081	0.114

Name Phases	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	------ Cable Description ------ Size	Cond. Type	Duct Type	Insul	Ohms/ 1000 feet	R	jX
C: R1.19 ABC	SUB 1.3 R1.19	In	1	250	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: R1.2 ABC	MDP 1.3 R1.2	In	1	8	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: R1.20 ABC	SUB 1.3 R1.20	In	1	250	4/0	Copper	Magnetic		Pos: Zero:	0.060 0.202	0.051 0.122
C: R1.21 ABC	MDP 1.3 R1.21	In	1	225	4/0	Copper	Magnetic		Pos: Zero:	0.060 0.202	0.051 0.122
C: R1.3 ABC	MDP 1.3 R1.3	In	1	10	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: R1.4 ABC	MDP 1.3 R1.4	In	1	12	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: R1.5 ABC	MDP 1.3 R1.5	In	1	250	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: R1.6 ABC	MDP 1.3 R1.6	In	1	250	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: R1.7 ABC	MDP 1.3 R1.7	In	1	250	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: R1.8 ABC	MDP 1.3 R1.8	In	1	250	4/0	Copper	Magnetic		Pos: Zero:	0.060 0.202	0.051 0.122
C: R1.9 ABC	SUB 1.3 R1.9	In	1	45	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: R2.1 ABC	SUB 6.4 R2.1	In	1	425	1/0	Copper	Magnetic		Pos: Zero:	0.120 0.403	0.055 0.133
C: R2.2 ABC	SUB 6.4 R2.2	In	1	492	1/0	Copper	Magnetic		Pos: Zero:	0.120 0.403	0.055 0.133
C: R2.3 ABC	MDP 2.1 R2.3	In	1	447	4/0	Copper	Magnetic		Pos: Zero:	0.060 0.202	0.051 0.122
C: R2.4 ABC	MDP 2.1 R2.4	In	1	78	4/0	Copper	Magnetic		Pos: Zero:	0.060 0.202	0.051 0.122
C: R2.5 ABC	MDP 2.1 R2.5	In	1	163	4/0	Copper	Magnetic		Pos: Zero:	0.060 0.202	0.051 0.122
C: R3.2 ABC	SUB 6.4 R3.2	In	1	312	1/0	Copper	Magnetic		Pos: Zero:	0.120 0.403	0.055 0.133
C: R3.3 ABC	SUB 6.4 R3.3	In	1	332	1/0	Copper	Magnetic		Pos: Zero:	0.120 0.403	0.055 0.133
C: R5.1 ABC	SUB 6.2 R5.1	In	1	138	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114

Name Phases	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	------ Cable Description ------ Size	Cond. Type	Duct Type	Insul	Ohms/ 1000 feet 	R	jX
C: R5.10 ABC	SUB 6.4 R5.10	In	1	58	4/0	Copper	Magnetic		Pos: Zero:	0.060 0.202	0.051 0.122
C: R5.11 ABC	SUB 6.4 R5.11	In	1	305	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: R5.12 ABC	SUB 6.4 R5.12	In	1	303	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: R5.13 ABC	SUB 6.2 R5.13	In	1	360	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: R5.14 ABC	SUB 6.2 R5.14	In	1	360	4/0	Copper	Magnetic		Pos: Zero:	0.060 0.202	0.051 0.122
C: R5.2 ABC	SUB 6.2 R5.2	In	1	138	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: R5.3 ABC	SUB 6.2 R5.3	In	1	138	4/0	Copper	Magnetic		Pos: Zero:	0.060 0.202	0.051 0.122
C: R5.4 ABC	SUB 6.2 R5.4	In	1	138	4/0	Copper	Magnetic		Pos: Zero:	0.060 0.202	0.051 0.122
C: R5.5 ABC	SUB 6.2 R5.5	In	1	96	4/0	Copper	Magnetic		Pos: Zero:	0.060 0.202	0.051 0.122
C: R5.6 ABC	SUB 6.2 R5.6	In	1	96	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: R5.7 ABC	SUB 6.2 R5.7	In	1	96	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: R5.8 ABC	SUB 6.2 R5.8	In	1	96	4/0	Copper	Magnetic		Pos: Zero:	0.060 0.202	0.051 0.122
C: R5.9 ABC	SUB 6.4 R5.9	In	1	58	4/0	Copper	Magnetic		Pos: Zero:	0.060 0.202	0.051 0.122
C: R6.1 ABC	SUB 6.2 R6.1	In	1	15	2	Copper	Magnetic		Pos: Zero:	0.200 0.637	0.057 0.144
C: R6.2 ABC	SUB 6.4 R6.2	In	1	15	2	Copper	Magnetic		Pos: Zero:	0.200 0.637	0.057 0.144
C: RH1.1 ABC	HMB4-P01 RH1.1	In	1	65	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH1.2 ABC	HMB4-P02 RH1.2	In	1	65	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH1.3 ABC	HMB3-P01 RH1.3	In	1	65	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH1.4 ABC	HMB3-P02 RH1.4	In	1	65	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114

Name Phases	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	------ Cable Description ------ Size	Cond. Type	Duct Type	Insul	Ohms/ 1000 feet 	R	jX
C: RH1.5 ABC	HMB4-P03 RH1.5	In	1	65	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH1.6 ABC	HMB4-P04 RH1.6	In	1	65	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH1.7 ABC	HMB3-P03 RH1.7	In	1	65	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH1.8 ABC	HMB3-P04 RH1.8	In	1	65	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.10 ABC	HBD2-P03 RH2.10	In	1	65	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.11 ABC	HBD2-P12 RH2.11	In	1	65	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.12 ABC	HBD3-P14 RH2.12	In	1	65	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.13 ABC	HBD3-P13 RH2.13	In	1	65	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.14 ABC	HBD3-P12 RH2.14	In	1	65	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.15 ABC	HBE1-P01 RH2.15	In	1	55	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.16 ABC	HBE1-P02 RH2.16	In	1	55	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.17 ABC	HBE1-P03 RH2.17	In	1	55	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.18 ABC	HBE1-P04 RH2.18	In	1	55	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.19 ABC	HBE2-P06 RH2.19	In	1	60	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.2 ABC	HBE2-P01 RH2.2	In	1	60	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.20 ABC	HBE2-P07 RH2.20	In	1	60	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.21 ABC	HBE2-P08 RH2.21	In	1	60	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.22 ABC	HBE2-P09 RH2.22	In	1	60	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.23 ABC	HBD1-P06 RH2.23	In	1	65	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114

Name Phases	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	------ Cable Description ------				Ohms/ 1000 feet		
					Size	Cond. Type	Duct Type	Insul		R	jX
C: RH2.24	HBD1-P07	In	1	65	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	RH2.24								Zero:	0.081	0.114
C: RH2.25	HBD1-P08	In	1	65	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	RH2.25								Zero:	0.081	0.114
C: RH2.26	HBD1-P09	In	1	65	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	RH2.26								Zero:	0.081	0.114
C: RH2.27	HBD2-P06	In	1	65	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	RH2.27								Zero:	0.081	0.114
C: RH2.28	HBD2-P07	In	1	65	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	RH2.28								Zero:	0.081	0.114
C: RH2.29	HBD2-P08	In	1	65	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	RH2.29								Zero:	0.081	0.114
C: RH2.3	HBE2-P02	In	1	60	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	RH2.3								Zero:	0.081	0.114
C: RH2.30	HBD2-P09	In	1	65	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	RH2.30								Zero:	0.081	0.114
C: RH2.31	HBD3-P07	In	1	65	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	RH2.31								Zero:	0.081	0.114
C: RH2.32	HBD3-P06	In	1	65	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	RH2.32								Zero:	0.081	0.114
C: RH2.33	HBD3-P05	In	1	65	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	RH2.33								Zero:	0.081	0.114
C: RH2.34	HBD3-P04	In	1	65	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	RH2.34								Zero:	0.081	0.114
C: RH2.35	HBD3-P03	In	1	65	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	RH2.35								Zero:	0.081	0.114
C: RH2.36	HBD3-P02	In	1	65	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	RH2.36								Zero:	0.081	0.114
C: RH2.38	HBE3-P01	In	1	60	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	RH2.38								Zero:	0.081	0.114
C: RH2.39	HBE3-P02	In	1	60	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	RH2.39								Zero:	0.081	0.114
C: RH2.4	HBE2-P03	In	1	60	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	RH2.4								Zero:	0.081	0.114
C: RH2.40	HBE3-P03	In	1	60	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	RH2.40								Zero:	0.081	0.114
C: RH2.41	HBE4-P01	In	1	65	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	RH2.41								Zero:	0.081	0.114

Name Phases	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	------ Cable Description ------ Size	Cond. Type	Duct Type	Insul	Ohms/ 1000 feet 	R	jX
C: RH2.42 ABC	HBE4-P02 RH2.42	In	1	65	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.43 ABC	HBE4-P03 RH2.43	In	1	65	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.44 ABC	HBE4-P04 RH2.44	In	1	65	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.45 ABC	HBD4-P01 RH2.45	In	1	65	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.46 ABC	HBD4-P02 RH2.46	In	1	65	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.47 ABC	HBD4-P03 RH2.47	In	1	65	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.48 ABC	HBD4-P04 RH2.48	In	1	65	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.49 ABC	HBD5-P01 RH2.49	In	1	60	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.5 ABC	HBD1-P01 RH2.5	In	1	65	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.50 ABC	HBD5-P02 RH2.50	In	1	60	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.51 ABC	HBD5-P03 RH2.51	In	1	60	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.52 ABC	HBD5-P04 RH2.52	In	1	60	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.53 ABC	HBD6-P13 RH2.53	In	1	65	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.54 ABC	HBD6-P12 RH2.54	In	1	65	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.55 ABC	HBD6-P11 RH2.55	In	1	65	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.56 ABC	HBD6-P10 RH2.56	In	1	65	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.57 ABC	HBD6-P07 RH2.57	In	1	65	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.58 ABC	HBE3-P04 RH2.58	In	1	60	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.59 ABC	HBE3-P05 RH2.59	In	1	60	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114

Name Phases	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	------ Cable Description ------ Size	Cond. Type	Duct Type	Insul	Ohms/ 1000 feet 	R	jX
C: RH2.6 ABC	HBD1-P02 RH2.6	In	1	65	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.62 ABC	HBE5-P05 RH2.62	In	1	65	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.63 ABC	HBE5-P06 RH2.63	In	1	65	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.64 ABC	HBE4-P07 RH2.64	In	1	65	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.65 ABC	HBE4-P08 RH2.65	In	1	65	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.66 ABC	HBE6-P01 RH2.66	In	1	65	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.67 ABC	HBD4-P07 RH2.67	In	1	65	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.68 ABC	HBD5-P07 RH2.68	In	1	60	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.69 ABC	HBD5-P08 RH2.69	In	1	60	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.7 ABC	HBD1-P03 RH2.7	In	1	65	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.70 ABC	HBD5-P09 RH2.70	In	1	60	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.71 ABC	HBD6-P05 RH2.71	In	1	65	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.72 ABC	HBD6-P04 RH2.72	In	1	65	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.73 ABC	HBD6-P03 RH2.73	In	1	65	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.74 ABC	HBD6-P02 RH2.74	In	1	65	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.76 ABC	HBE5-P04 RH2.76	In	1	65	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.77 ABC	HBE5-P01 RH2.77	In	1	65	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.78 ABC	HBE5-P02 RH2.78	In	1	65	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114
C: RH2.79 ABC	HBE5-P03 RH2.79	In	1	65	600	Copper	Magnetic		Pos: Zero:	0.030 0.081	0.048 0.114

Name Phases	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	------ Cable Description ------ Size	Cond. Type	Duct Type	Insul	Ohms/ 1000 feet 	R	jX
C: RH2.8	HBD2-P01	In	1	65	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	RH2.8								Zero:	0.081	0.114
C: RH2.9	HBD2-P02	In	1	65	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	RH2.9								Zero:	0.081	0.114
C: RP1.1	SUB 1	In	1	50	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	RP1.1								Zero:	0.637	0.144
C: RP1.2	SUB 1	In	1	50	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	RP1.2								Zero:	0.637	0.144
C: SCHWP-1	MDP 3.3	In	1	170	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	SCHWP-1								Zero:	0.081	0.114
C: SCHWP-2	MDP 3.3	In	1	170	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	SCHWP-2								Zero:	0.081	0.114
C: SCHWP-3	MDP 3.3	In	1	170	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	SCHWP-3								Zero:	0.081	0.114
C: SDP4.1	NSDP-5	In	1	450	4/0	Copper	Magnetic		Pos:	0.060	0.051
ABC	SDP 3.1								Zero:	0.202	0.122
C: SG-1 TIE	SWG-1 (L2)	In	1	0	1200	Copper	Busway	Epoxy	Pos:	0.010	0.062
ABC	SWG-1 (L1)								Zero:	0.071	0.331
C: SG-2 TIE	SWG-2 (L2)	In	1	0	1200	Copper	Busway	Epoxy	Pos:	0.010	0.062
ABC	SWG-2 (L1)								Zero:	0.071	0.331
C: SHWP-1	MDP 3.4	In	1	170	250	Copper	Magnetic		Pos:	0.050	0.052
ABC	SHWP-1								Zero:	0.174	0.122
C: SHWP-2 STANDB	MDP 3.4	In	1	175	250	Copper	Magnetic		Pos:	0.050	0.052
ABC	SHWP-2 STANDE								Zero:	0.174	0.122
C: SW B-10 (HMB2)	HMB2-P01	In	1	55	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW B-10 (HMB2)								Zero:	0.637	0.144
C: SW B-10 (HMB3)	HMB3-P07	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW B-10 (HMB3)								Zero:	0.637	0.144
C: SW B-11 (HBE5) A	HBE5-P07	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW B-11 (HBE5) A								Zero:	0.637	0.144
C: SW B-11 (HBE5) E	HBE5-P08	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW B-11 (HBE5) I								Zero:	0.637	0.144
C: SW B-11 (HBE9) A	HBE9-P01	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW B-11 (HBE9) A								Zero:	0.637	0.144
C: SW B-11 (HBE9) E	HBE9-P02	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW B-11 (HBE9) I								Zero:	0.637	0.144
C: SW B-11 (HMB2)	HMB2-P02	In	1	55	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW B-11 (HMB2)								Zero:	0.637	0.144

Name Phases	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	------ Cable Description ------ Size	Cond. Type	Duct Type	Insul	Ohms/ 1000 feet 	R	jX
C: SW B-11 (HMB4)	HMB4-P08	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW B-11 (HMB4)								Zero:	0.637	0.144
C: SW B-12 (HMB2)	HMB2-P03	In	1	55	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW B-12 (HMB2)								Zero:	0.637	0.144
C: SW B-12 (HMB4)	HMB4-P07	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW B-12 (HMB4)								Zero:	0.637	0.144
C: SW B-14 (HBE6) A	HBE6-P02	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW B-14 (HBE6) A								Zero:	0.637	0.144
C: SW B-14 (HBE6) B	HBE6-P03	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW B-14 (HBE6) B								Zero:	0.637	0.144
C: SW B-14 (HBE9) A	HBE9-P03	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW B-14 (HBE9) A								Zero:	0.637	0.144
C: SW B-14 (HBE9) B	HBE9-P04	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW B-14 (HBE9) B								Zero:	0.637	0.144
C: SW B-14 (HMB2)	HMB2-P04	In	1	55	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW B-14 (HMB2)								Zero:	0.637	0.144
C: SW B-14 (HMB5)	HMB5-P02	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW B-14 (HMB5)								Zero:	0.637	0.144
C: SW D-10 (HMB1)	HMB1-P01	In	1	55	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW D-10 (HMB1)								Zero:	0.637	0.144
C: SW D-10 (HMB1)	HMB1-P02	In	1	55	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW D-10 (HMB1)								Zero:	0.637	0.144
C: SW D-10 (HMB3)	HMB3-P05	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW D-10 (HMB3)								Zero:	0.637	0.144
C: SW D-10 (HMB3)	HMB3-P06	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW D-10 (HMB3)								Zero:	0.637	0.144
C: SW D-12 (HMB1)	HMB1-P03	In	1	55	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW D-12 (HMB1)								Zero:	0.637	0.144
C: SW D-12 (HMB1)	HMB1-P04	In	1	55	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW D-12 (HMB1)								Zero:	0.637	0.144
C: SW D-12 (HMB4)	HMB4-P05	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW D-12 (HMB4)								Zero:	0.637	0.144
C: SW D-12 (HMB4)	HMB4-P06	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW D-12 (HMB4)								Zero:	0.637	0.144
C: SW D-14 (HMB1)	HMB1-P05	In	1	55	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW D-14 (HMB1)								Zero:	0.637	0.144
C: SW D-14 (HMB5)	HMB5-P01	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW D-14 (HMB5)								Zero:	0.637	0.144

Name Phases	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	------ Cable Description ------ Size	Cond. Type	Duct Type	Insul	Ohms/ 1000 feet R	jX
C: SW F-11 (HBE5) A	HBE5-P09	In	1	65	2	Copper	Magnetic		Pos: 0.200	0.057
ABC	SW F-11 (HBE5) A								Zero: 0.637	0.144
C: SW F-11 (HBE5) B	HBE5-P10	In	1	65	2	Copper	Magnetic		Pos: 0.200	0.057
ABC	SW F-11 (HBE5) B								Zero: 0.637	0.144
C: SW F-11 (HBE9) A	HBE9-P05	In	1	65	2	Copper	Magnetic		Pos: 0.200	0.057
ABC	SW F-11 (HBE9) A								Zero: 0.637	0.144
C: SW F-11 (HBE9) B	HBE9-P06	In	1	65	2	Copper	Magnetic		Pos: 0.200	0.057
ABC	SW F-11 (HBE9) B								Zero: 0.637	0.144
C: SW F-14 (HBD4)	HBD4-P08	In	1	65	2	Copper	Magnetic		Pos: 0.200	0.057
ABC	SW F-14 (HBD4)								Zero: 0.637	0.144
C: SW F-14 (HBE6) A	HBE6-P04	In	1	65	2	Copper	Magnetic		Pos: 0.200	0.057
ABC	SW F-14 (HBE6) A								Zero: 0.637	0.144
C: SW F-14 (HBE6) B	HBE6-P05	In	1	65	2	Copper	Magnetic		Pos: 0.200	0.057
ABC	SW F-14 (HBE6) B								Zero: 0.637	0.144
C: SW F-14 (HBE9) A	HBE9-P07	In	1	65	2	Copper	Magnetic		Pos: 0.200	0.057
ABC	SW F-14 (HBE9) A								Zero: 0.637	0.144
C: SW F-14 (HBE9) B	HBE9-P08	In	1	65	2	Copper	Magnetic		Pos: 0.200	0.057
ABC	SW F-14 (HBE9) B								Zero: 0.637	0.144
C: SW F-18 (HBD5)	HBD5-P10	In	1	60	2	Copper	Magnetic		Pos: 0.200	0.057
ABC	SW F-18 (HBD5)								Zero: 0.637	0.144
C: SW F-18 (HBD9)	HBD9-P01	In	1	65	2	Copper	Magnetic		Pos: 0.200	0.057
ABC	SW F-18 (HBD9)								Zero: 0.637	0.144
C: SW F-22 (HBD6)	HBD6-P01	In	1	65	2	Copper	Magnetic		Pos: 0.200	0.057
ABC	SW F-22 (HBD6)								Zero: 0.637	0.144
C: SW F-22 (HBD9)	HBD9-P02	In	1	65	2	Copper	Magnetic		Pos: 0.200	0.057
ABC	SW F-22 (HBD9)								Zero: 0.637	0.144
C: SW F-24 (HBD9)	HBD9-P03	In	1	65	2	Copper	Magnetic		Pos: 0.200	0.057
ABC	SW F-24 (HBD9)								Zero: 0.637	0.144
C: SW FL5 A200	SUB 6.4	In	1	249	4/0	Copper	Magnetic		Pos: 0.060	0.051
ABC	SW FL5 A200								Zero: 0.202	0.122
C: SW FL5 A400	SUB 6.4	In	1	249	600	Copper	Magnetic		Pos: 0.030	0.048
ABC	SW FL5 A400								Zero: 0.081	0.114
C: SW FL5 B200	SUB 6.4	In	1	249	4/0	Copper	Magnetic		Pos: 0.060	0.051
ABC	SW FL5 B200								Zero: 0.202	0.122
C: SW FL5 B400	SUB 6.4	In	1	249	600	Copper	Magnetic		Pos: 0.030	0.048
ABC	SW FL5 B400								Zero: 0.081	0.114
C: SW FL5 C200	SUB 6.2	In	1	195	4/0	Copper	Magnetic		Pos: 0.060	0.051
ABC	SW FL5 C200								Zero: 0.202	0.122

Name Phases	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	------ Cable Description ------ Size	Cond. Type	Duct Type	Insul	Ohms/ 1000 feet 	R	jX
C: SW FL5 C400	SUB 6.2	In	1	195	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	SW FL5 C400								Zero:	0.081	0.114
C: SW FL5 D200	SUB 6.2	In	1	195	4/0	Copper	Magnetic		Pos:	0.060	0.051
ABC	SW FL5 D200								Zero:	0.202	0.122
C: SW FL5 D400	SUB 6.2	In	1	195	600	Copper	Magnetic		Pos:	0.030	0.048
ABC	SW FL5 D400								Zero:	0.081	0.114
C: SW H-8 (HBE3) A	HBE3-P08	In	1	60	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW H-8 (HBE3) A								Zero:	0.637	0.144
C: SW H-8 (HBE3) B	HBE3-P09	In	1	60	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW H-8 (HBE3) B								Zero:	0.637	0.144
C: SW K-11 (HBE4) A	HBE4-P05	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW K-11 (HBE4) A								Zero:	0.637	0.144
C: SW K-11 (HBE4) B	HBE4-P06	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW K-11 (HBE4) B								Zero:	0.637	0.144
C: SW K-11 (HBE8) A	HBE8-P03	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW K-11 (HBE8) A								Zero:	0.637	0.144
C: SW K-11 (HBE8) B	HBE8-P04	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW K-11 (HBE8) B								Zero:	0.637	0.144
C: SW K-14 (HBD4) A	HBD4-P05	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW K-14 (HBD4)								Zero:	0.637	0.144
C: SW K-14 (HBD4) B	HBD4-P06	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW K-14 (HBD4)								Zero:	0.637	0.144
C: SW K-14 (HBE8) A	HBE8-P05	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW K-14 (HBE8) A								Zero:	0.637	0.144
C: SW K-14 (HBE8) B	HBE8-P06	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW K-14 (HBE8) B								Zero:	0.637	0.144
C: SW K-18 (HBD5) A	HBD5-P05	In	1	60	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW K-18 (HBD5)								Zero:	0.637	0.144
C: SW K-18 (HBD5) B	HBD5-P06	In	1	60	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW K-18 (HBD5)								Zero:	0.637	0.144
C: SW K-18 (HBD8) A	HBD8-P01	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW K-18 (HBD8)								Zero:	0.637	0.144
C: SW K-18 (HBD8) B	HBD8-P02	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW K-18 (HBD8)								Zero:	0.637	0.144
C: SW K-22 (HBD6) A	HBD6-P08	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW K-22 (HBD6)								Zero:	0.637	0.144
C: SW K-22 (HBD6) B	HBD6-P09	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW K-22 (HBD6)								Zero:	0.637	0.144

Name Phases	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	------ Cable Description ------ Size	Cond. Type	Duct Type	Insul	Ohms/ 1000 feet 	R	jX
C: SW K-22 (HBD8) A	HBD8-P03	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW K-22 (HBD8)								Zero:	0.637	0.144
C: SW K-22 (HBD8) B	HBD8-P04	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW K-22 (HBD8)								Zero:	0.637	0.144
C: SW K-24 (HBD6)	HBD6-P06	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW K-24 (HBD6)								Zero:	0.637	0.144
C: SW K-24 (HBD8)	HBD8-P05	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW K-24 (HBD8)								Zero:	0.637	0.144
C: SW K-8 (HBE3) A	HBE3-P06	In	1	60	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW K-8 (HBE3) A								Zero:	0.637	0.144
C: SW K-8 (HBE3) B	HBE3-P07	In	1	60	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW K-8 (HBE3) B								Zero:	0.637	0.144
C: SW K-8 (HBE8) A	HBE8-P01	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW K-8 (HBE8) A								Zero:	0.637	0.144
C: SW K-8 (HBE8) B	HBE8-P02	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW K-8 (HBE8) B								Zero:	0.637	0.144
C: SW M-8 (HBE3) A	HBE3-P10	In	1	60	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW M-8 (HBE3) A								Zero:	0.637	0.144
C: SW M-8 (HBE3) B	HBE3-P11	In	1	60	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW M-8 (HBE3) B								Zero:	0.637	0.144
C: SW P-11 (HBE2) A	HBE2-P10	In	1	60	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW P-11 (HBE2) A								Zero:	0.637	0.144
C: SW P-11 (HBE2) B	HBE2-P11	In	1	60	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW P-11 (HBE2) B								Zero:	0.637	0.144
C: SW P-11 (HBE7) A	HBE7-P03	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW P-11 (HBE7) A								Zero:	0.637	0.144
C: SW P-11 (HBE7) B	HBE7-P04	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW P-11 (HBE7) B								Zero:	0.637	0.144
C: SW P-14 (HBD1) A	HBD1-P10	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW P-14 (HBD1) A								Zero:	0.637	0.144
C: SW P-14 (HBD1) B	HBD1-P11	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW P-14 (HBD1) B								Zero:	0.637	0.144
C: SW P-14 (HBE7) A	HBE7-P05	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW P-14 (HBE7) A								Zero:	0.637	0.144
C: SW P-14 (HBE7) B	HBE7-P06	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW P-14 (HBE7) B								Zero:	0.637	0.144
C: SW P-18 (HBD2) A	HBD2-P10	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW P-18 (HBD2) A								Zero:	0.637	0.144

Name Phases	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	------ Cable Description ------ Size	Cond. Type	Duct Type	Insul	Ohms/ 1000 feet 	R	jX
C: SW P-18 (HBD2) E	HBD2-P11	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW P-18 (HBD2) I								Zero:	0.637	0.144
C: SW P-18 (HBD7) A	HBD7-P01	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW P-18 (HBD7) A								Zero:	0.637	0.144
C: SW P-18 (HBD7) E	HBD7-P02	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW P-18 (HBD7) I								Zero:	0.637	0.144
C: SW P-22 (HBD3) A	HBD3-P08	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW P-22 (HBD3) A								Zero:	0.637	0.144
C: SW P-22 (HBD3) E	HBD3-P09	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW P-22 (HBD3) I								Zero:	0.637	0.144
C: SW P-22 (HBD7) A	HBD7-P03	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW P-22 (HBD7) A								Zero:	0.637	0.144
C: SW P-22 (HBD7) E	HBD7-P04	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW P-22 (HBD7) I								Zero:	0.637	0.144
C: SW P-24 (HBD3)	HBD3-P01	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW P-24 (HBD3)								Zero:	0.637	0.144
C: SW P-24 (HBD7)	HBD7-P05	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW P-24 (HBD7)								Zero:	0.637	0.144
C: SW P-8 (HBE1) A	HBE1-P05	In	1	55	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW P-8 (HBE1) A								Zero:	0.637	0.144
C: SW P-8 (HBE1) B	HBE1-P06	In	1	55	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW P-8 (HBE1) B								Zero:	0.637	0.144
C: SW P-8 (HBE7) A	HBE7-P01	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW P-8 (HBE7) A								Zero:	0.637	0.144
C: SW P-8 (HBE7) B	HBE7-P02	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW P-8 (HBE7) B								Zero:	0.637	0.144
C: SW T-11 (HBE2) A	HBE2-P04	In	1	60	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW T-11 (HBE2) A								Zero:	0.637	0.144
C: SW T-11 (HBE2) E	HBE2-P05	In	1	60	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW T-11 (HBE2) I								Zero:	0.637	0.144
C: SW T-14 (HBD1) A	HBD1-P04	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW T-14 (HBD1)								Zero:	0.637	0.144
C: SW T-14 (HBD1) E	HBD1-P05	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW T-14 (HBD1)								Zero:	0.637	0.144
C: SW T-18 (HBD2) A	HBD2-P04	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW T-18 (HBD2)								Zero:	0.637	0.144
C: SW T-18 (HBD2) E	HBD2-P05	In	1	65	2	Copper	Magnetic		Pos:	0.200	0.057
ABC	SW T-18 (HBD2)								Zero:	0.637	0.144

Name Phases	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	------ Cable Description ------ Size	Cond. Type	Duct Type	Insul	Ohms/ 1000 feet R	jX
C: SW T-22 (HBD3) A	HBD3-P10	In	1	65	2	Copper	Magnetic		Pos: 0.200	0.057
ABC	SW T-22 (HBD3)								Zero: 0.637	0.144
C: SW T-22 (HBD3) B	HBD3-P11	In	1	65	2	Copper	Magnetic		Pos: 0.200	0.057
ABC	SW T-22 (HBD3)								Zero: 0.637	0.144
C: SWG-1 (L1)	PECO 1	In	1	150	500	Copper	Non-Magnetic	XLP	Pos: 0.030	0.042
ABC	SWG-1 (L1)								Zero: 0.045	0.107
C: SWG-1 (L2)	PECO 2	In	1	150	500	Copper	Non-Magnetic	XLP	Pos: 0.030	0.042
ABC	SWG-1 (L2)								Zero: 0.045	0.107
C: SWG-2 (L1)	T-SUB 1.4 (NC) FP	In	1	0	1200	Copper	Busway	Epoxy	Pos: 0.010	0.062
ABC	SWG-2 (L1)								Zero: 0.071	0.331
C: SWG-2 (L2)	T-SUB 1.4 (NO) FP	In	1	0	1200	Copper	Busway	Epoxy	Pos: 0.010	0.062
ABC	SWG-2 (L2)								Zero: 0.071	0.331
C: T-CH-3	T-SUB 3.1 PRI	In	1	110	1/0	Copper	Non-Magnetic	XLP	Pos: 0.130	0.051
ABC	T-CH-3 PRI								Zero: 0.203	0.129
C: T-CH-4	T-SUB 3.3 PRI	In	1	120	1/0	Copper	Non-Magnetic	EPR	Pos: 0.130	0.051
ABC	T-CH-4 PRI								Zero: 0.203	0.129
C: T-SUB 1.1	SWG-2 (L1)	In	1	365	4/0	Copper	Non-Magnetic	XLP	Pos: 0.060	0.047
ABC	T-SUB 1.1 PRI								Zero: 0.102	0.119
C: T-SUB 1.2	T-SUB 1.1 PRI	In	1	50	4/0	Copper	Non-Magnetic	XLP	Pos: 0.060	0.047
ABC	T-SUB 1.2 PRI								Zero: 0.102	0.119
C: T-SUB 1.3	SWG-2 (L1)	In	1	365	4/0	Copper	Non-Magnetic	XLP	Pos: 0.060	0.047
ABC	T-SUB 1.3 PRI								Zero: 0.102	0.119
C: T-SUB 1.4	FP PRI DISC	In	1	20	2	Copper	Non-Magnetic	EPR	Pos: 0.200	0.055
ABC	T-SUB 1.4 PRI								Zero: 0.321	0.139
C: T-SUB 1.4 (NC)	T-SUB 1.4 (NC) FP	In	1	40	2	Copper	Non-Magnetic	EPR	Pos: 0.200	0.055
ABC	FP PRI DISC								Zero: 0.321	0.139
C: T-SUB 1.4 (NO)	T-SUB 1.4 (NO) FP	In	1	40	2	Copper	Non-Magnetic	EPR	Pos: 0.200	0.055
ABC	FP PRI DISC								Zero: 0.321	0.139
C: T-SUB 3.1	SWG-1 (L2)	In	1	190	4/0	Copper	Non-Magnetic	XLP	Pos: 0.060	0.047
ABC	T-SUB 3.1 PRI								Zero: 0.102	0.119
C: T-SUB 3.2	SWG-1 (L1)	In	1	190	4/0	Copper	Non-Magnetic	XLP	Pos: 0.060	0.047
ABC	T-SUB 3.2 PRI								Zero: 0.102	0.119
C: T-SUB 3.3	SWG-1 (L1)	In	1	190	4/0	Copper	Non-Magnetic	XLP	Pos: 0.060	0.047
ABC	T-SUB 3.3 PRI								Zero: 0.102	0.119
C: T-SUB 4.1	T-SUB 4.1 PRI	In	1	65	4/0	Copper	Non-Magnetic	XLP	Pos: 0.060	0.047
ABC	T-SUB 4.2 PRI								Zero: 0.102	0.119
C: T-SUB 4.2	T-SUB 4.2 PRI	In	1	65	4/0	Copper	Non-Magnetic	XLP	Pos: 0.060	0.047
ABC	T-SUB 4.3 PRI								Zero: 0.102	0.119

Name Phases	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	------ Cable Description ------ Size	Cond. Type	Duct Type	Insul	Ohms/ 1000 feet R	jX
C: T-SUB 4.3	SWG-2 (L2)	In	1	240	4/0	Copper	Non-Magnetic	XLP	Pos: 0.060	0.047
ABC	T-SUB 4.3 PRI								Zero: 0.102	0.119
C: T-SUB 4.4	T-SUB 4.4 PRI	In	1	150	4/0	Copper	Non-Magnetic	XLP	Pos: 0.060	0.047
ABC	T-SUB 4.5 PRI								Zero: 0.102	0.119
C: T-SUB 4.5	T-SUB 4.5 PRI	In	1	60	4/0	Copper	Non-Magnetic	XLP	Pos: 0.060	0.047
ABC	T-SUB 4.6 PRI								Zero: 0.102	0.119
C: T-SUB 4.6	SWG-2 (L2)	In	1	570	4/0	Copper	Non-Magnetic	XLP	Pos: 0.060	0.047
ABC	T-SUB 4.6 PRI								Zero: 0.102	0.119
C: T-SUB 6.1	SWG-2 (L2)	In	1	322	4/0	Copper	Non-Magnetic	XLP	Pos: 0.060	0.047
ABC	T-SUB 6.1 PRI								Zero: 0.102	0.119
C: T-SUB 6.2	T-SUB 6.1 PRI	In	1	40	4/0	Copper	Non-Magnetic	XLP	Pos: 0.060	0.047
ABC	T-SUB 6.2 PRI								Zero: 0.102	0.119
C: T-SUB 6.3	SWG-2 (L1)	In	1	335	4/0	Copper	Non-Magnetic	XLP	Pos: 0.060	0.047
ABC	T-SUB 6.3 PRI								Zero: 0.102	0.119
C: T-SUB 6.4	T-SUB 6.3 PRI	In	1	40	4/0	Copper	Non-Magnetic	XLP	Pos: 0.060	0.047
ABC	T-SUB 6.4 PRI								Zero: 0.102	0.119
C: TYP ESC	MDP 1.2	In	1	600	8	Copper	Magnetic		Pos: 0.780	0.065
ABC	TYP ESC								Zero: 2.556	0.186

2-Winding Transformers

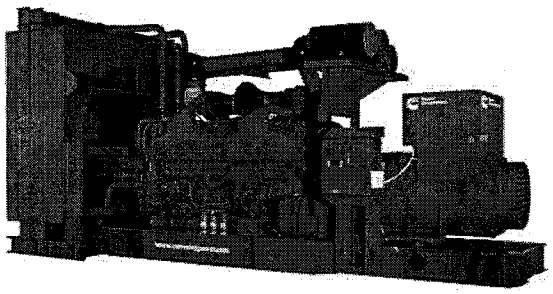
Name 1 / 3Phase	In/Out	----------Primary & Secondary---------- Phases	Bus	Conn.	Volts	FLA	Nominal kVA		Percent Z in % R	jX
T-CH-3	In	ABC	T-CH-3 PRI	D	13,200	109	2,500.0	Pos:	0.51	5.30
3Phase			T-CH-3 SEC	D	4,160	347		Zero:	9,999.00	9,999.00
T-CH-4	In	ABC	T-CH-4 PRI	D	13,200	109	2,500.0	Pos:	0.51	5.30
3Phase			T-CH-4 SEC	D	4,160	347		Zero:	9,999.00	9,999.00
T-NOFF1.1	In	ABC	EGD-1	D	480	11	9.0	Pos:	1.47	3.40
3Phase			NOFF1.1	WG	208	25		Zero:	1.47	3.40
T-NOFF1.2	In	ABC	EGD-1	D	480	36	30.0	Pos:	1.76	4.79
3Phase			NOFF1.2	WG	208	83		Zero:	1.76	4.79
T-NOFF1.3	In	ABC	EGD-1	D	480	11	9.0	Pos:	1.47	3.40
3Phase			NOFF1.3	WG	208	25		Zero:	1.47	3.40
T-NOFF1.4	In	ABC	EGD-1	D	480	18	15.0	Pos:	1.80	4.45
3Phase			NOFF1.4	WG	208	42		Zero:	1.80	4.45
T-NOFF1.6	In	ABC	EDP-A	D	480	11	9.0	Pos:	1.47	3.40
3Phase			NOFF1.6	WG	208	25		Zero:	1.47	3.40

Name 1 / 3Phase	In/Out	Primary & Secondary					Nominal kVA		Percent Z in % R	 jX
		Phases	Bus	Conn.	Volts	FLA				
T-NOFF2.1	In	ABC	EGD-1	D	480	11	9.0	Pos:	1.47	3.40
3Phase			NOFF2.1	WG	208	25		Zero:	1.47	3.40
T-NOFF2.2	In	ABC	EGD-1	D	480	11	9.0	Pos:	1.47	3.40
3Phase			NOFF2.2	WG	208	25		Zero:	1.47	3.40
T-NOFF2.3	In	ABC	EGD-1	D	480	11	9.0	Pos:	1.47	3.40
3Phase			NOFF2.3	WG	208	25		Zero:	1.47	3.40
T-NOFF3.1	In	ABC	EGD-1	D	480	54	45.0	Pos:	1.50	4.35
3Phase			NOFF3.1	WG	208	125		Zero:	1.50	4.35
T-NOFF4.1	In	ABC	EGD-1	D	480	36	30.0	Pos:	1.76	4.79
3Phase			NOFF4.1	WG	208	83		Zero:	1.76	4.79
T-NOFF4.2	In	ABC	EGD-1	D	480	36	30.0	Pos:	1.76	4.79
3Phase			NOFF4.2	WG	208	83		Zero:	1.76	4.79
T-NOFF5.1	In	ABC	EGD-1	D	480	11	9.0	Pos:	1.47	3.40
3Phase			NOFF5.1	WG	208	25		Zero:	1.47	3.40
T-NOFF6.1	In	ABC	EGD-1	D	480	11	9.0	Pos:	1.47	3.40
3Phase			NOFF6.1	WG	208	25		Zero:	1.47	3.40
T-NOFF6.2	In	ABC	EGD-1	D	480	11	9.0	Pos:	1.47	3.40
3Phase			NOFF6.2	WG	208	25		Zero:	1.47	3.40
T-NSR1.1	In	ABC	SDP 3.1	D	480	54	45.0	Pos:	1.50	4.35
3Phase			NSR1.1	WG	208	125		Zero:	1.50	4.35
T-NSR1.2	In	ABC	NSDP-5	D	480	90	75.0	Pos:	1.54	4.86
3Phase			NSR1.2	WG	208	208		Zero:	1.54	4.86
T-NSR2.1	In	ABC	SDP 3.1	D	480	18	15.0	Pos:	1.80	4.45
3Phase			NSR2.1	WG	208	42		Zero:	1.80	4.45
T-NSR2.2	In	ABC	NSDP-5	D	480	18	15.0	Pos:	1.80	4.45
3Phase			NSR2.2	WG	208	42		Zero:	1.80	4.45
T-NSR3.1	In	ABC	NSDP-5	D	480	18	15.0	Pos:	1.80	4.45
3Phase			NSR3.1	WG	208	42		Zero:	1.80	4.45
T-NSR3.2	In	ABC	SDP 3.1	D	480	36	30.0	Pos:	1.76	4.79
3Phase			NSR3.2	WG	208	83		Zero:	1.76	4.79
T-NSR3.3	In	ABC	NSDP-4	D	480	11	9.0	Pos:	1.47	3.40
3Phase			NSR3.3	WG	208	25		Zero:	1.47	3.40
T-NSR6.1	In	ABC	NSDP-5	D	480	18	15.0	Pos:	1.80	4.45
3Phase			NSR6.1	WG	208	42		Zero:	1.80	4.45

Name 1 / 3Phase	In/Out	Phases	Bus	Conn.	Volts	FLA	Nominal kVA		Percent Z in % R	 jX
T-NSR6.2	In	ABC	SDP 3.1	D	480	18	15.0	Pos:	1.80	4.45
3Phase			NSR6.2	WG	208	42		Zero:	1.80	4.45
T-NSRP1	In	ABC	NSDP-6	D	480	18	15.0	Pos:	1.80	4.45
3Phase			NSRP1	WG	208	42		Zero:	1.80	4.45
T-R3.1	In	ABC	L3.1	D	480	36	30.0	Pos:	1.76	4.79
3Phase			R3.1	WG	208	83		Zero:	1.76	4.79
T-SUB 1	In	ABC		D	13,200	29	500.0	Pos:	0.00	0.00
3Phase			SUB 1	WG	208	1,846		Zero:	1.04	4.89
T-SUB 1.1	In	ABC	T-SUB 1.1 PRI	D	13,200	146	2,500.0	Pos:	0.51	5.30
3Phase			SUB 1.1	WG	480	4,009		Zero:	0.51	5.30
T-SUB 1.2	In	ABC	T-SUB 1.2 PRI	D	13,200	29	500.0	Pos:	0.96	4.52
3Phase			SUB 1.2	WG	208	1,846		Zero:	0.96	4.52
T-SUB 1.3	In	ABC	T-SUB 1.3 PRI	D	13,200	66	1,500.0	Pos:	0.80	5.26
3Phase			SUB 1.3	WG	208	4,164		Zero:	0.80	5.26
T-SUB 1.4	In	ABC	T-SUB 1.4 PRI	D	13,200	66	1,500.0	Pos:	0.80	5.26
3Phase			SUB 1.4	WG	480	1,804		Zero:	0.80	5.26
T-SUB 3.1	In	ABC	T-SUB 3.1 PRI	D	13,200	146	2,500.0	Pos:	0.51	5.30
3Phase			SUB 3.1	WG	480	4,009		Zero:	0.51	5.30
T-SUB 3.2	In	ABC	T-SUB 3.2 PRI	D	13,200	146	2,500.0	Pos:	0.51	5.30
3Phase			SUB 3.2	WG	480	4,009		Zero:	0.51	5.30
T-SUB 3.3	In	ABC	T-SUB 3.3 PRI	D	13,200	146	2,500.0	Pos:	0.51	5.30
3Phase			SUB 3.3	WG	480	4,009		Zero:	0.51	5.30
T-SUB 4.1	In	ABC	T-SUB 4.1 PRI	D	13,200	117	2,000.0	Pos:	0.72	5.27
3Phase			SUB 4.1	WG	480	3,208		Zero:	0.72	5.27
T-SUB 4.2	In	ABC	T-SUB 4.2 PRI	D	13,200	29	500.0	Pos:	0.96	4.52
3Phase			SUB 4.2	WG	208	1,846		Zero:	0.96	4.52
T-SUB 4.3	In	ABC	T-SUB 4.3 PRI	D	13,200	29	500.0	Pos:	0.96	4.52
3Phase			SUB 4.3	WG	208	1,846		Zero:	0.96	4.52
T-SUB 4.4	In	ABC	T-SUB 4.4 PRI	D	13,200	29	500.0	Pos:	0.96	4.52
3Phase			SUB 4.4	WG	208	1,846		Zero:	0.96	4.52
T-SUB 4.5	In	ABC	T-SUB 4.5 PRI	D	13,200	29	500.0	Pos:	0.96	4.52
3Phase			SUB 4.5	WG	208	1,846		Zero:	0.96	4.52
T-SUB 4.6	In	ABC	T-SUB 4.6 PRI	D	13,200	29	500.0	Pos:	0.96	4.52
3Phase			SUB 4.6	WG	208	1,846		Zero:	0.96	4.52

Name 1 / 3Phase	In/Out	Primary & Secondary					Nominal kVA		Percent Z in % R	 jX
		Phases	Bus	Conn.	Volts	FLA				
T-SUB 6.1	In	ABC	T-SUB 6.1 PRI	D	13,200	66	1,500.0	Pos:	0.80	5.26
3Phase			SUB 6.1	WG	480	1,804		Zero:	0.80	5.26
T-SUB 6.2	In	ABC	T-SUB 6.2 PRI	D	13,200	66	1,500.0	Pos:	0.80	5.26
3Phase			SUB 6.2	WG	208	4,164		Zero:	0.80	5.26
T-SUB 6.3	In	ABC	T-SUB 6.3 PRI	D	13,200	66	1,500.0	Pos:	0.80	5.26
3Phase			SUB 6.3	WG	480	1,804		Zero:	0.80	5.26
T-SUB 6.4	In	ABC	T-SUB 6.4 PRI	D	13,200	66	1,500.0	Pos:	0.80	5.26
3Phase			SUB 6.4	WG	208	4,164		Zero:	0.80	5.26

Diesel generator set QSK60 series engine EPA emissions



> Specification sheet
1600 kW - 2000 kW 60 Hz

Our energy working for you.™

Cummins Power Generation

Description

Cummins Power Generation commercial generator sets are fully integrated power generation systems providing optimum performance, reliability and versatility for stationary and prime power applications.

This generator set is designed in facilities certified to ISO9001 and manufactured in facilities certified to ISO9001 or ISO9002.

The Prototype Test Support (PTS) program verifies the performance integrity of the generator set design. Cummins Power Generation products bearing the PTS symbol meet the prototype test requirements of NFPA 110 for Level 1 systems.

All low voltage models are CSA certified to product class 4215-01.

The generator set is available Listed to UL 2200, Stationary Engine Generator Assemblies. The PowerCommand control is Listed to UL 508 - Category NITW7 for U.S. and Canadian usage. Circuit breaker assemblies are UL 489 Listed for 100% continuous operation and also UL 869A Listed Service Equipment.

U.S. EPA Engine certified to U.S. EPA Nonroad Source Emissions Standards, 40 CFR 89, Tier 2.

Features

Cummins® heavy-duty engine - Rugged 4-cycle, industrial diesel delivers reliable power, low emissions and fast response to load changes.

Alternator - Several alternator sizes offer selectable motor starting capability with low reactance 2/3 pitch windings, low waveform distortion with non-linear loads and fault clearing short-circuit capability.

Permanent magnet generator (PMG) - Offers enhanced motor starting and fault clearing short-circuit capability.

Control system - The PowerCommand® electronic control is standard equipment and provides total genset system integration including automatic remote starting/stopping, precise frequency and voltage regulation, alarm and status message display, AmpSentry™ protection, output metering, auto-shutdown at fault detection and NFPA 110 Level 1 compliance.

Cooling system - Standard integral set-mounted radiator system, designed and tested for rated ambient temperatures, simplifies facility design requirements for rejected heat.

NFPA - The genset accepts full rated load in a single step in accordance with NFPA 110 for Level 1 systems.

Warranty and service - Backed by a comprehensive warranty and worldwide distributor network.

	Standby rating		Prime rating		Continuous rating		Data sheets	
Model	60 Hz kW (kVA)	50 Hz kW (kVA)	60 Hz kW (kVA)	50 Hz kW (kVA)	60 Hz kW (kVA)	50 Hz kW (kVA)	60 Hz	50 Hz
DQKAA	1750 (2188)		1600 (2000)				D-3335	
DQKAB	2000 (2500)		1825 (2281)				D-3336	

S-1514d (2/08)

Power Generation

PA CONVENTION CENTER

ALTERNATOR DATA SHEET

Frame Size P734E

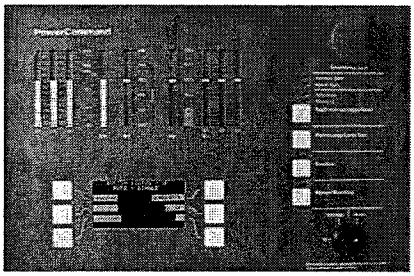
CHARACTERISTICS

WEIGHTS:	Stator Assembly:	3851 lb	1747 kg
	Rotor Assembly:	3276 lb	1486 kg
	Complete Assembly:	7840 lb	3556 kg
MAXIMUM SPEED:		2250	rpm
EXCITATION CURRENT:	Full Load	3.6	Amps
	No Load	0.5	Amps

INSULATION SYSTEM: Class H Throughout

3 Ø RATINGS (0.8 power factor) (Based on specific temperature rise at 40°C ambient temperature)		60 Hz Voltage (winding no)					
		220/380 (13)	240/416 (13)	220/380 (312)	240/416 (312)	254/440 (312)	277/480 (312)	347/600 (07)
163°C Rise Ratings	kW			1560	1772	1892	1972	1972
	kVA			1950	2215	2365	2465	2465
150°C Rise Ratings	kW			1516	1724	1840	1916	1916
	kVA			1895	2155	2300	2395	2395
125°C Rise Ratings	kW			1460	1656	1768	1840	1840
	kVA			1825	2070	2210	2300	2300
105°C Rise Ratings	kW			1356	1540	1644	1712	1712
	kVA			1695	1925	2055	2140	2140
80°C Rise Ratings	kW			1256	1424	1520	1584	1584
	kVA			1570	1780	1900	1980	1980
REACTANCES (per unit ± 10%) (Based on full load at 125°C Rise Rating)		220/380 (13)	240/416 (13)	220/380 (312)	240/416 (312)	254/440 (312)	277/480 (312)	347/600 (07)
Synchronous				4.06	3.85	3.67	3.21	3.21
Transient				0.24	0.23	0.22	0.19	0.12
Subtransient				0.18	0.17	0.16	0.14	0.09
Negative Sequence				0.25	0.24	0.23	0.20	0.12
Zero Sequence				0.04	0.03	0.03	0.03	0.02
MOTOR STARTING		220/380 (13)	240/416 (13)	220/380 (312)	240/416 (312)	254/440 (312)	277/480 (312)	347/600 (07)
Maximum kVA (90% Sustained Voltage)				6716	6716	6716	6716	6716
TIME CONSTANTS (Sec)		220/380 (13)	240/416 (13)	220/380 (312)	240/416 (312)	254/440 (312)	277/480 (312)	347/600 (07)
Transient				0.149	0.149	0.149	0.149	0.149
Subtransient				0.020	0.020	0.020	0.020	0.020
Open Circuit				2.460	2.460	2.460	2.460	2.460
DC				0.020	0.020	0.020	0.020	0.020
WINDINGS (@20°C)		220/380 (13)	240/416 (13)	220/380 (312)	240/416 (312)	254/440 (312)	277/480 (312)	347/600 (07)
Stator Resistance (Line to Line, Ohms)				0.00093	0.00093	0.00093	0.00093	0.00300
Rotor Resistance (Ohms)				2.17	2.17	2.17	2.17	2.17
Number of Leads				6	6	6	6	6

PowerCommand® 3201 digital generator set control



> Specification sheet

Our energy working for you.™

Cummins Power Generation

Description

The PowerCommand® 3201 Control is a microprocessor-based generator set monitoring, metering and control system. The control provides an operator interface to the genset, digital voltage regulation, digital governing and generator set protective functions. It may incorporate optional automatic digital paralleling controls and/or power transfer controls. The integration of all the functions into a single control system provides enhanced reliability and performance compared to conventional control systems.

The PowerCommand control is designed for mounting on the generator set and is suitable for use on generator sets ranging in size from 20 kW to 4000 kW. It will directly read AC voltages up to 600 VAC and can be configured for any frequency, voltage and power connection configuration from 120 to 13,800 VAC. The operator panel may be remote-mounted from the generator set and connected via an RS485 network connection.

The control offers a wide range of standard control and digital display features so custom control configurations are not needed to meet application requirements and system reliability is not compromised by use of untested special components.

Power for PowerCommand Control is usually derived from the generator set starting batteries. It functions over a voltage range from 8 VDC to 35 VDC.

Features

Digital full authority electronic engine controls - Provide engine monitoring, protection and governing. These functions are integrated with voltage regulation and paralleling functions for optimum system performance.

Digital voltage regulation - Provides fast, controlled response to load changes and high levels of immunity to the effects of non-linear loads.

AmpSentry™ protective relay - UL Listed, true alternator overcurrent protection.

AC output metering - Includes analog and digital display.

Battery monitoring system - Senses and warns against weak battery condition that is not detected by conventional DC over and undervoltage monitoring.

Message display - Digital alarm and status.

Generator set monitoring - Displays status of all critical engine and alternator generator set functions.

Smart starting control system - Integrated fuel ramping to limit black smoke and frequency overshoot, in addition to optimized cold weather starting.

Advanced serviceability - Utilizes InPower™, a PC-based software service tool.

Digital power transfer control - Optional control functions that allow operation in open transition, closed transition or soft (ramping) transfer modes.

PowerCommand LonWorks® network - Optional network interface providing expanded input/output capability, remote monitoring and control by annunciators and other equipment, and easier installation.

Warranty - Backed by a comprehensive warranty and worldwide distributor service network.

Isochronous (kVar) load sharing control - See *Paralleling Functions/Load sharing controls*.

Droop (kVar) load sharing control - See *Paralleling Functions/Load sharing controls*.

Protective functions

On a warning condition, the control will indicate a fault by lighting the warning LED on the control panel and displaying the fault name and code on the operator display panel. The nature of the fault and time of occurrence are logged in the control. The service manual and InPower service tool provide service keys and procedures based on the service codes provided.

On a shutdown condition, the control will light the shutdown LED on the control panel, display the fault name and code, initiate shutdown and lock out the generator set. The shutdown sequence of the generator set includes programmable cooldown at idle for fault conditions that do not endanger the engine. The control maintains a data log of all fault conditions as they occur and time stamps them with the controller run time and engine operating hours data. Adjustments to most set points are made using the InPower service tool.

The control system includes a *"fault bypass"* mode that forces the system to function regardless of the status of protective functions. In this mode, the only protective functions that are operational are over speed, loss of both speed sensors, moving the control switch to the *off* position or pressing the *emergency stop* switch. The control maintains a record of the time that the mode is enabled and of all warning or shutdown conditions that have occurred while in the "*fault bypass*" mode.

Many protective functions within the control system are configurable for warning, shutdown or both (2 levels). Exceptions to this include functions such as over speed conditions, and loss of speed sensing. In addition, some warning functions can incorporate control functions as a consequence of a fault.

System protective functions:

Ground fault warning (option - 600 VAC class generator sets) - Ground (earth) fault sensing is adjustable over a range of 100-1200 amps with time delays of 0-1 second. May be configured for shutdown rather than alarm.

Configurable alarm and status inputs - PowerCommand will accept up to four alarm or status inputs (contact closed to ground) to indicate customer-specified conditions. The control is programmable for warning, shutdown or status indication and for labeling the input (up to 24 characters). Sixteen additional faults can be input to the control via the network.

Breaker fail to close and breaker auxiliary contact warning or shutdown - When the paralleling control signals a circuit breaker to close, it will monitor the breaker auxiliary contacts and verify that the breaker has connected the generator set to the system bus. If the control does not sense a breaker closure within 0.5 second of the close signal, the control will monitor the phase relationship between the generator set and the bus. If this indicates that the generator set is not closed to the bus, the *"breaker fail to close"* alarm will be indicated, the breaker will be opened and the generator set shut down. If the phase relationship monitor indicates that the generator set is in parallel with the bus, "circuit breaker auxiliary contact failure" will be indicated and the generator set will continue to run in normal operation mode.

Breaker fail to open warning - The control system monitors the operation of breakers that have been signaled to open. If the breaker does not open within 1 second of initiation of signal, a *"breaker fail to open"* warning is initiated. The control will logically allow the generator set to continue to run if shutdown of the generator set with the breaker closed will cause potential damage or operating problems.

Bus or generator set PT input calibration error - The control system monitors the sensed voltage from the bus and generator set output voltage-potential transformers. When the paralleling breaker is closed, it will indicate a warning condition when they read different values.

Emergency stop - Annunciated whenever the local or remote emergency stop signal is received. Alarm panel distinguishes between local or remote operation.

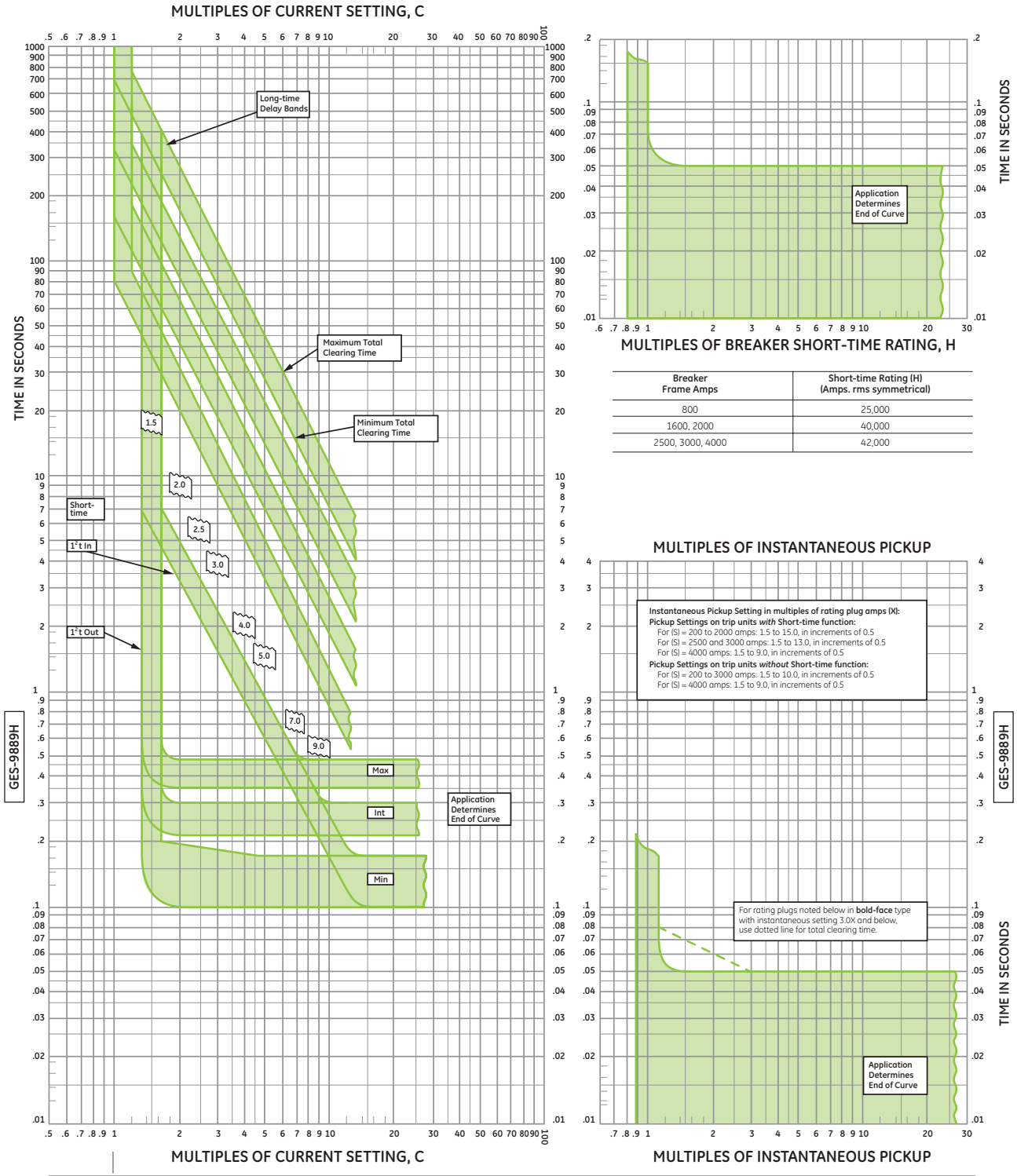
AmpSentry protective relay

AmpSentry protective relay is a UL Listed comprehensive monitoring and control system integral to the PowerCommand Control System that guards the electrical integrity of the alternator and power system by providing protection against a wide array of fault conditions in the generator set or in the load. It also provides single and three phase fault current regulation so that downstream protective devices have the maximum current available to quickly clear fault conditions without subjecting the alternator to potentially catastrophic failure conditions. See document R1053 below for a full size time over current curve. The control does not include protection required for interconnection to a utility (mains) service.

Over current warning - Output current on any phase at more than 110% of rating for more than 60 seconds.

Over current shutdown (51V) - Output current on any phase is more than 110%, less than 175% of rating and approaching thermal damage point of alternator. Control includes algorithms to protect alternator from repeated over current conditions over a short period of time. The control does not include instantaneous trip functions, as they are not necessary for alternator protection and complicate short circuit coordination (discrimination).

Power Generation



Breaker Frame Amps	Short-time Rating (H) (Amps. rms symmetrical)
800	25,000
1600, 2000	40,000
2500, 3000, 4000	42,000

GE Consumer & Industrial -
Electrical Distribution

Available Ratings (Amperes)

Frame	Current Sensor (S)	Rating Plug (X)
800	200	100, 150, 200
	400	**150***, 200, 225, 250, 300, 400
	800	**300***, 400, 450, 500, 600, 700, 800
1600	800	**300***, 400, 450, 500, 600, 700, 800
	1000	**400***, 600, 800, 1000
	1600	**600***, 800, 1000, 1100, 1200, 1600
2000	2000	**750***, **800***, 1000, 1200, 1500, 1600, 2000
2500	1000	**400***, 600, 800, 1000
	2000	**800***, 1000, 1200, 1600, 2000
	2500	1600, 2000, 2500
3000	3000	2000, 2500, 3000
4000	4000	1600, 2000, 2500, 3000, 4000

* Not available with Power+™ Trip Unit.

Voltage Rating: 600 Vac, maximum

PowerBreak™ II
Insulated Case Circuit Breakers

Types SS, SH
with Power+™ MicroVersaTrip Plus™
or MicroVersaTrip PM™
Digital RMS Trip Units

Long-time Delay, Short-time Delay, and Instantaneous Time-Current Curves

Curves apply at 50 to 60 Hertz
and from -20°C to 70°C breaker ambient

GES-9889H

Programmer Adjustments

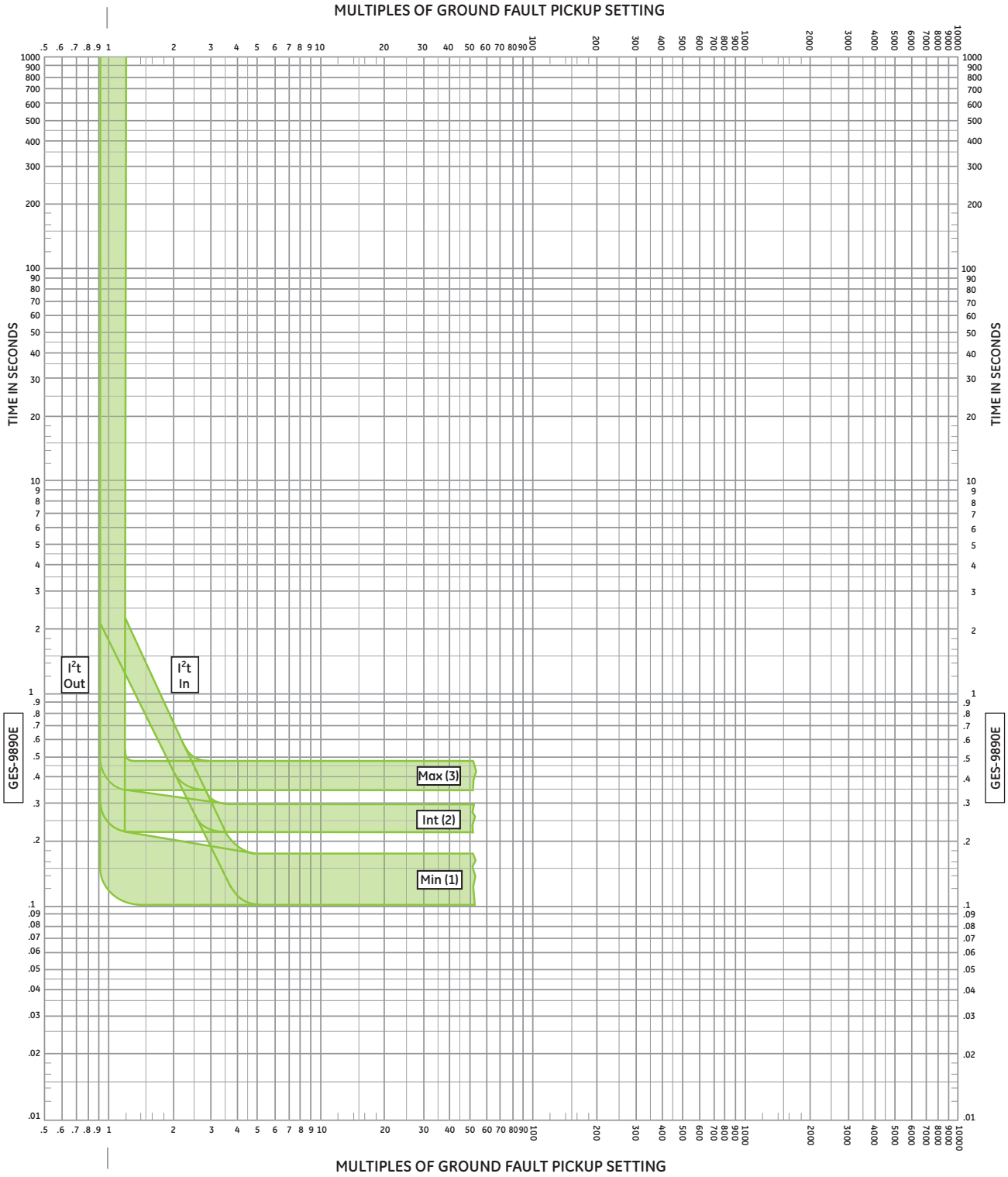
Long-time Function Current Settings (C):
0.50 to 1.0 multiples of rating plug amps (X).
Delay Bands: 1, 2, 3 and 4.

Short-time Function Pickup Settings:
1.5 to 9.0 multiples of current setting (C).

Delay Bands: MIN, INT, MAX; I^2t In/Out

Instantaneous Function:
See Table with Curves above.
(High-Range not available with Power+™

S: Current Sensor Amps
X: Rating Plug Amps
C: Current Setting Amps
H: Breaker Short-time Rating Amps



GE Consumer & Industrial - Electrical Distribution

Available Ratings (Amperes)

Frame	Current Sensor (S)
800	200, 400, 800
1600	800, 1000, 1600
2000	2000
2500	1000, 2000, 2500
3000	3000
4000	4000

Voltage Rating: 600 Vac, maximum

Insulated Case Circuit Breakers Power Break™ II

Types SS, SH
with Power+™, MicroVersaTrip Plus® or MicroVersaTrip® PM
Digital RMS Trip Units

Ground Fault Time-Current Curves

Curves apply at 50 to 60 Hertz
and from -20°C to +70°C breaker ambient.

GES-9890E

Adjustments

Ground Fault Function:

*Pickup settings are in multiples of Current Sensor Rating (S)

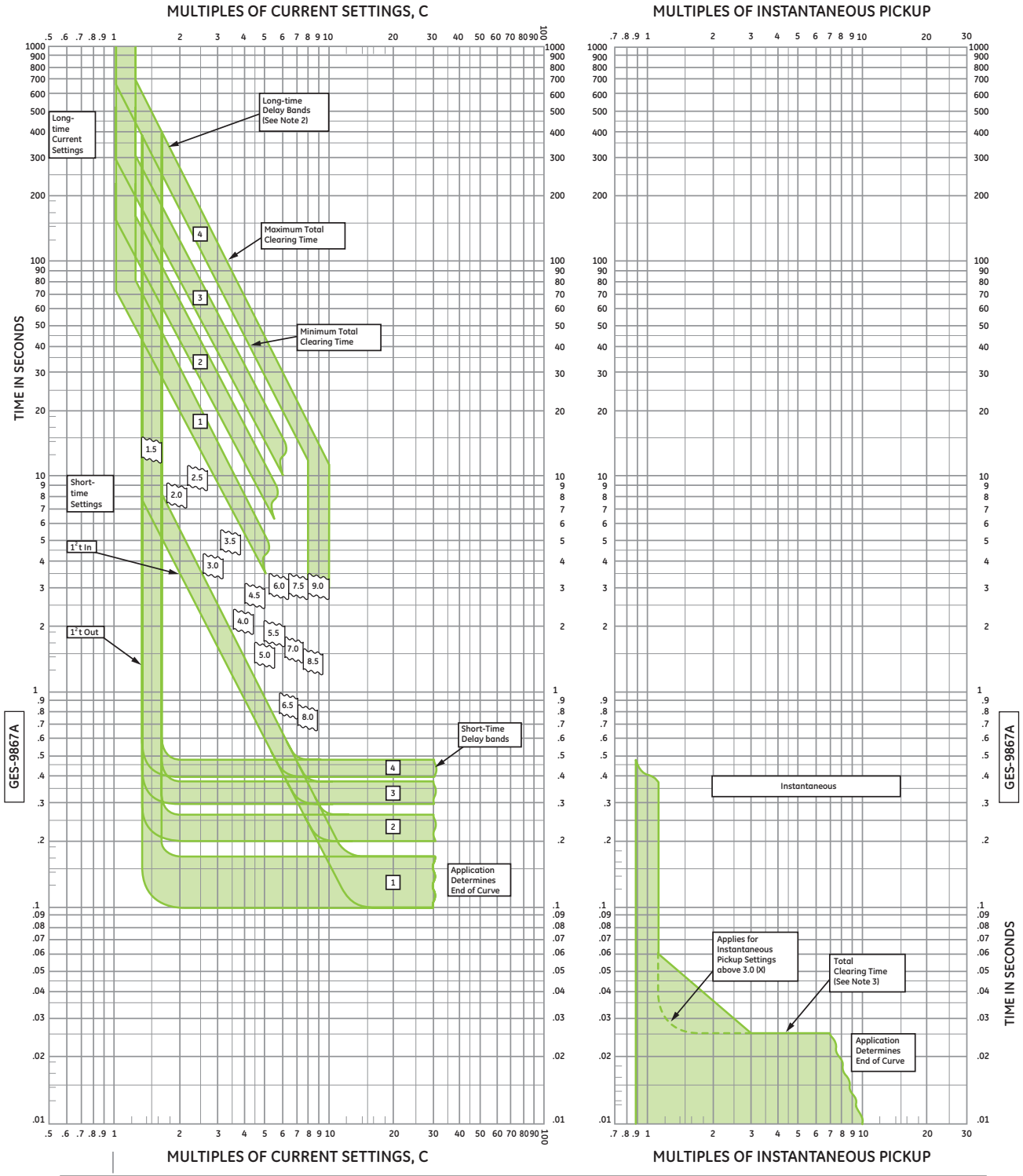
For (S) = 150 through 2000 amps
Pick-up setting: 0.20 to 0.60

For (S) = 2500 through 3000 amps
Pick-up setting: 0.20 to 0.37

For (S) = 4000 amps
Pick-up setting: 0.20 to 0.30
Delay Bands: Min (1), Int (2), Max (3); I^2t In/Out

Settings Glossary

S = Current Sensor Rating in amps



GE Consumer & Industrial -
Electrical Distribution

Molded Case Circuit Breakers

Types SG and SK
with MicroVersaTrip Plus™
or MicroVersaTrip PM™

Long-time Current Setting and Delay,
Short-time Pickup Setting and Delay,
and Instantaneous Pickup Setting
Time-Current Curves

Curves apply at 50 to 60 Hertz
and from -20°C to 55°C breaker ambient

GES-9867A

Available Ratings (Amperes)

Breaker Type	Breaker Model	Breaker Frame	Current Sensor (S)	Rating Plug (X)
MCCB	SG	600	150	60, 80, 100, 125, 150
			400	150, 200, 225, 250, 300, 350, 400
			600	300, 400, 450, 500, 500
	SK	1200	800	300, 400, 500, 600, 700, 800
			1200	600, 700, 800, 1000, 1200

Voltage Rating: 600 Vac, 50 through 60Hertz

Notes:
1. Operation above 60 Hertz requires thermal and interrupting derating of the circuit breaker.
2. Long-time delay band 4 not available on SG frame
3. For current limiting SG breakers in the current limiting range breaker totally clears prior to 0.01 sec. For additional data, refer to Ip and I^2t curves.

Programmer Adjustments

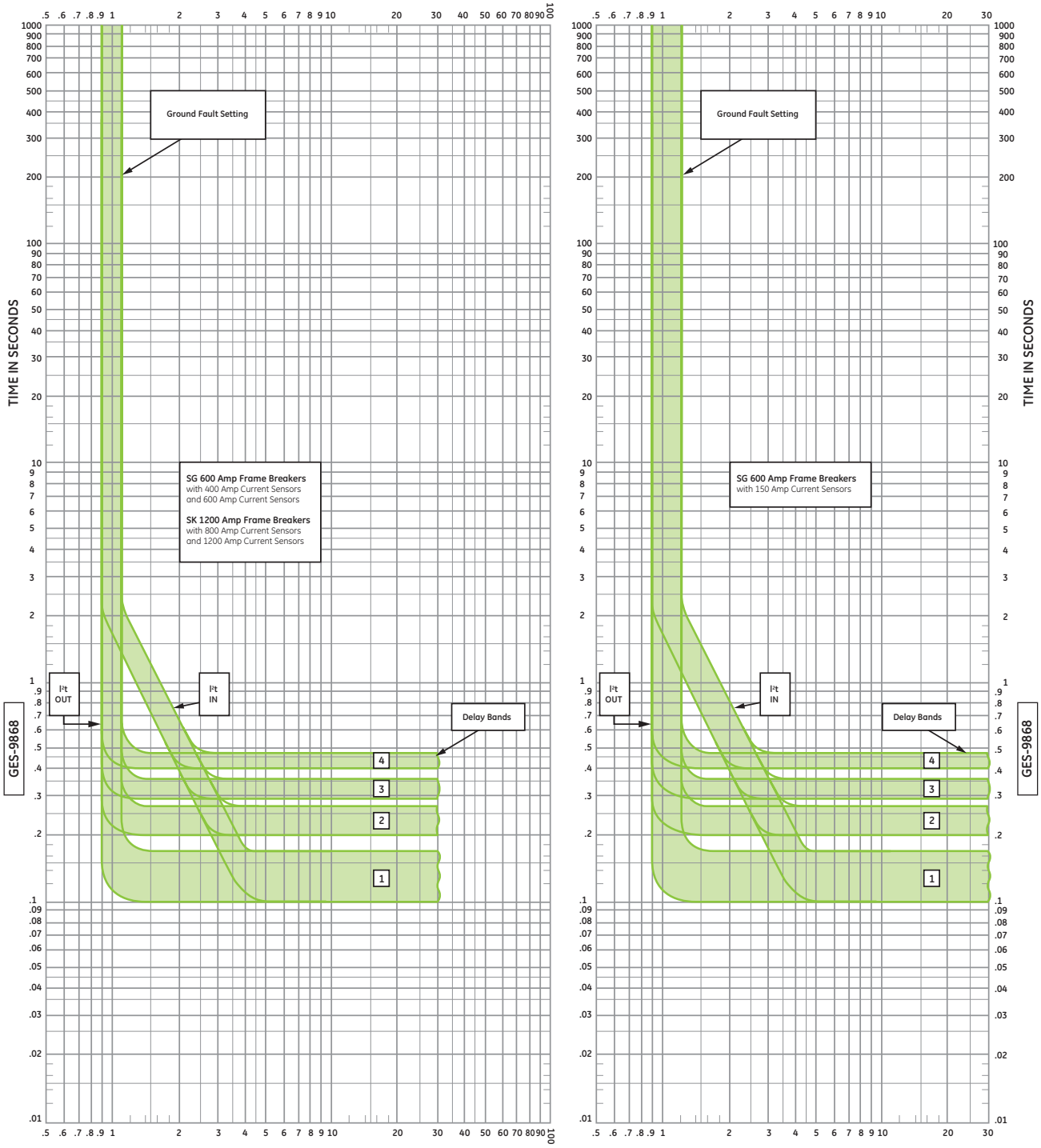
Long-time Function:
Current Settings (C): 0.50 to 1.0 in increments of 0.05 multiples of rating plug amps (X).
Delay Bands: 1, 2, 3 and 4. (See Note 2)

Short-time Function
Pickup Settings: 1.5 to 9.0 in increments of 0.5 multiples of current setting (C).
Delay Bands: 1, 2, 3 and 4. I^2t In, I^2tOut

Instantaneous Function
Pickup Settings: 1.5 to 10.0 in increments of 0.5 multiples of rating plug amps (X).

S: Current Sensor in Amps
X: Rating Plug in Amps
***C:** Current Setting in Amps
* Appears as LTIME pickup on trip unit setup screen

MULTIPLES OF GROUND FAULT PICKUP SETTING



MULTIPLES OF GROUND FAULT PICKUP SETTING

GE Consumer & Industrial - Electrical Distribution

Available Ratings (Amperes)

Breaker			Current
Type	Model	Frame	Sensor (S)
MCCB	SG	600	150
			400
			600
	SK	1200	800
			1200

Voltage Ratings: 600 Vac, 50 to 60 Hertz

Molded Case Circuit Breakers

Types SG and SK

With MicroVersaTrip Plus™ or MicroVersaTrip PM™

Time - Current Curves of Ground Fault Pick-up Setting and Delay

Curves apply at 50 to 60 Hertz and from -20°C to 55°C breaker ambient.

Note: Operation above 60 Hertz requires thermal and interrupting derating of the circuit breaker.

GES-9868

Programmer Adjustments

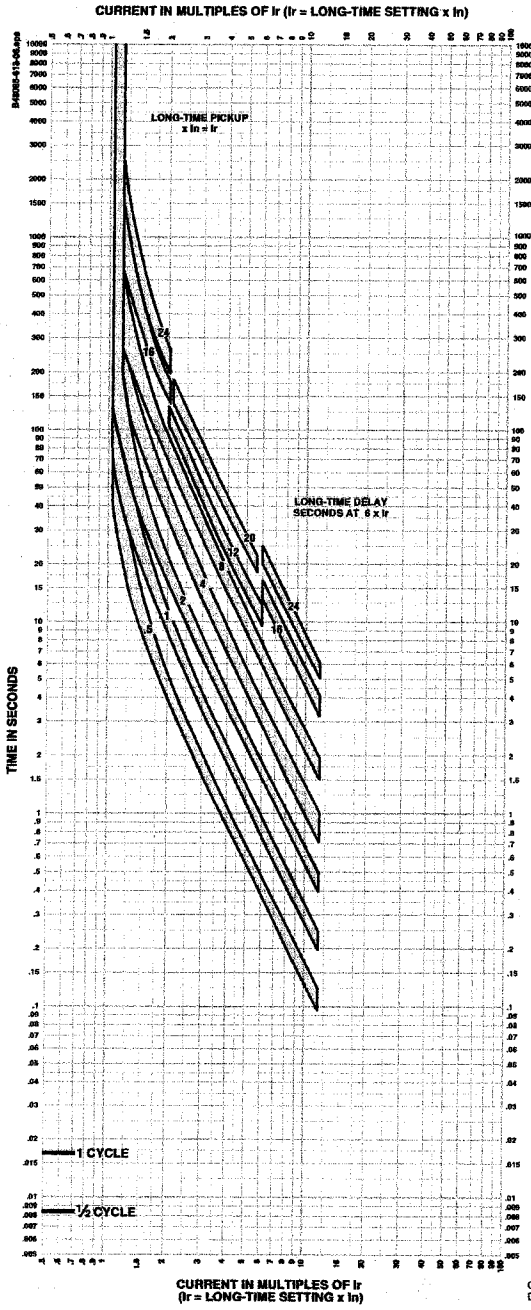
Ground Fault function:
Pickup settings: 0.2 to 1.00 in increments of 0.05 multiples of current sensor amps (S)
Delay Bands: 1, 2, 3 and 4; I^2t In, I^2t out.

Long-time, Short-time and Instantaneous function:
See GES-9867

Settings Glossary:
S = Current Sensor Rating in Amps

03.94 3M

Micrologic 3.0A Trip Unit Characteristic Trip Curve



Curve No. 0613TC0006
Drawing No. B48095-613-06

Micrologic 3.0A Trip Unit

Long-time Pickup and Delay

Characteristic Trip Curve No. 613-6

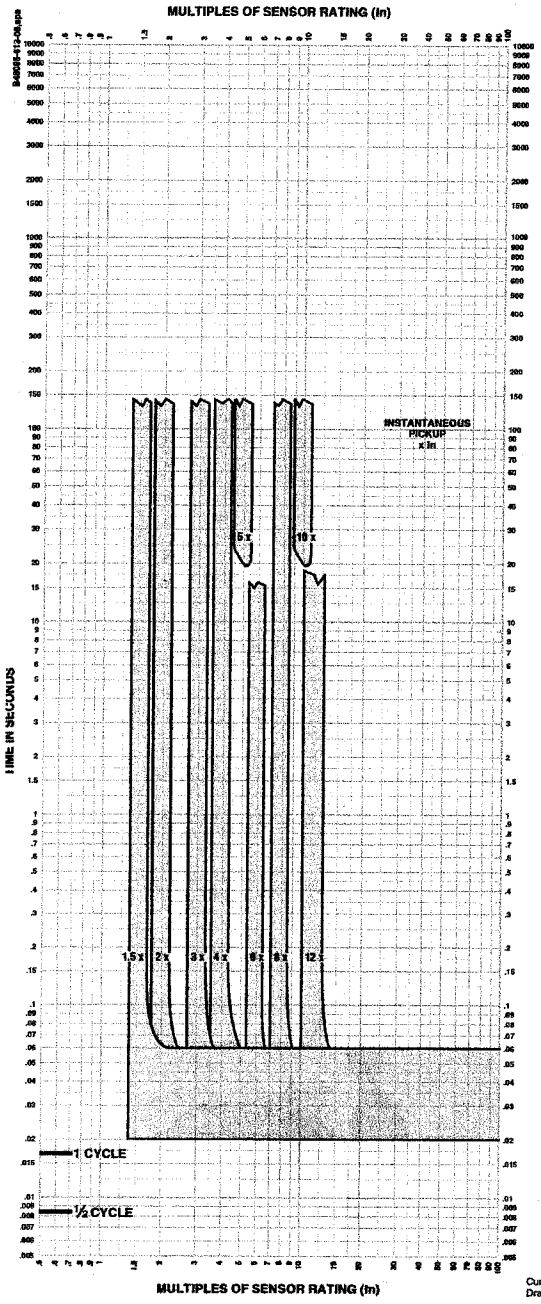
The time-current curve information is to be used for application and coordination purposes only.

Curves apply from -30°C to +60°C (-22°F to +140°F) ambient temperature.

Notes:

1. There is a thermal-imaging effect that can act to shorten the long-time delay. The thermal-imaging effect comes into play if a current above the long-time delay pickup value exists for a time and then is cleared by the tripping of a downstream device or the circuit breaker itself. A subsequent overload will cause the circuit breaker to trip in a shorter time than normal. The amount of time delay reduction is inverse to the amount of time that has elapsed since the previous overload. Approximately twenty minutes is required between overloads to completely reset thermal-imaging.
2. The end of the curve is determined by the instantaneous setting of the circuit breaker.
3. Total clearing times shown include the response times of the trip unit, the circuit breaker opening, and the extinction of current.
4. See trip curve 613-8 on page 114 for instantaneous pickup trip curve.

Micrologic 3.0A Trip Unit Characteristic Trip Curve



Curve No. 0613TC0008
Drawing No. B48095-613-08

Micrologic 3.0A Trip Unit

Instantaneous Pickup, 1.5X to 12X

Characteristic Trip Curve No. 613-8

The time-current curve information is to be used for application and coordination purposes only.

Curves apply from -30°C to +60°C (-22°F to +140°F) ambient temperature.

Notes:

The end of the curve is determined by the interrupting rating of the circuit breaker.

Total clearing times shown include the response times of the trip unit, the circuit breaker opening, and the extinction of current.

The instantaneous region of the trip curve shows maximum total clearing times. Actual clearing times in this region can vary depending on the circuit breaker mechanism design and other factors. The actual clearing time can be considerably faster than indicated. Contact your local sales office for additional information.

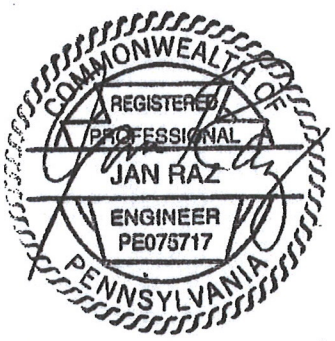
See trip curve 613-6 on page 112 for long-time pickup and delay trip curves.

Table 72: Micrologic 2.0/3.0/5.0/6.0 A/P/H Trip Unit Instantaneous Override Values Characteristic Trip Curve

UL/IEC Circuit Breaker	Instantaneous Override (kA RMS)	IEC Circuit Breaker	Instantaneous Override (kA RMS)
RG 600	57 ± 10%	NS 1600b N	57 ± 10%
RG 800	57 ± 10%	NS 2000 N	57 ± 10%
RG 1000	57 ± 10%	NS 2500 N	57 ± 10%
RG 1200	57 ± 10%	NS 3200 N	57 ± 10%
RG 1600	57 ± 10%	NS 1600b H	48 ± 15%
RG 2000	57 ± 10%	NS 2000 H	48 ± 15%
RG 2500	57 ± 10%	NS 2500 H	48 ± 15%
RJ 600	48 ± 15%	NS 3200 H	48 ± 15%
RJ 800	48 ± 15%	NS 630b N	24 ± 10%
RJ 1000	48 ± 15%	NS 800 N	24 ± 10%
RJ 1200	48 ± 15%	NS 1000 N	24 ± 10%
RJ 1600	48 ± 15%	NS 1250 N	24 ± 10%
RJ 2000	48 ± 15%	NS 1600 N	24 ± 10%
RJ 2500	48 ± 15%	NS 630b H	24 ± 10%
RK 600	57 ± 15%	NS 800 H	24 ± 10%
RK 800	57 ± 15%	NS 1000 H	24 ± 10%
RK 1000	57 ± 15%	NS 1250 H	24 ± 10%
RK 1200	57 ± 15%	NS 1600 H	24 ± 10%
RK 1600	57 ± 15%		
RK 2000	57 ± 15%		
RK 2500	57 ± 15%		
RL 600	48 ± 15%		
RL 800	48 ± 15%		
RL 1000	48 ± 15%		
RL 1200	48 ± 15%		
RL 1600	48 ± 15%		
RL 2000	48 ± 15%		
RL 2500	48 ± 15%		
PG 250	24 ± 10%		
PG 400	24 ± 10%		
PG 600	24 ± 10%		
PG 800	24 ± 10%		
PG 1000	24 ± 10%		
PG 1200	24 ± 10%		
PJ 250	7 ± 10%		
PJ 400	10 ± 10%		
PJ 600	10 ± 10%		
PJ 800	10 ± 10%		
PJ 1000	10 ± 10%		
PJ 1200	10 ± 10%		
PK 250	24 ± 10%		
PK 400	24 ± 10%		
PK 600	24 ± 10%		
PK 800	24 ± 10%		
PK 1000	24 ± 10%		
PK 1200	24 ± 10%		
PL 250	7 ± 10%		
PL 400	10 ± 10%		
PL 600	10 ± 10%		
PL 800	10 ± 10%		
PL 1000	10 ± 10%		
PL 1200	10 ± 10%		

[12] Note: Faults at or above instantaneous override value will be cleared at 20 msec or less.

Preliminary
Arc Flash and Shock Hazard Analysis
for
Pennsylvania Convention Center
Philadelphia, PA



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CPSI#8159
February 27, 2009

Reviewed by Jan Raz, P.E.

This is Section VI of the Short Circuit Study, Protective Device Coordination Study, Arc Flash and Shock Hazard Analysis for the Pennsylvania Convention Center, Philadelphia, PA

Since the short circuit and protective device coordination study raises a number of issues which may result in changes being made to the system, only one preliminary arc flash calculation case is included at this time to demonstrate typical arc flash calculation results for this system. Once the short circuit and protective device coordination study is reviewed and approved, this arc flash case will be updated and additional arc flash cases will be reviewed.

INTRODUCTION

Working around live equipment can expose personnel to potential injury from electric shock hazards and arc-flash hazards. An electric shock can result from contact with energized equipment. An arc-flash is a short circuit through the air, which results in the release of an enormous amount of energy, that can cause severe injury, burns, and even death from melting metal, flying objects, extreme heat, and pressure waves.

An electrical hazard analysis is required to determine appropriate safety-related work practices before any person approaches exposed live parts. This includes both a shock hazard analysis and an arc-flash hazard analysis.

A shock hazard analysis is used to determine the voltage to which personnel may be exposed, approach boundary requirements (limited, restricted, and prohibited), and the personal protective equipment necessary in order to minimize the possibility of electric shock to personnel.

An arc-flash hazard analysis is intended to provide guidance in developing specific strategies that have the goal of minimizing burn injuries. This analysis is used to determine the (arc) flash hazard boundary (aka. flash protection boundary), and the personal protective equipment that people within the flash hazard boundary should use.

The generic arc-flash hazard labels included in this report provide a general warning of a potential arc flash hazard. These labels could be placed on the applicable equipment and incorporated into the overall work safety practices at this facility.

Samples of specific arc-flash and shock hazard labels are included in this report. Specific labels can be used to identify the calculated (arc) flash hazard, suggested PPE category, voltage, and applicable approach boundaries at the respective equipment. If desired, specific labels can be provided which could be placed on the respective equipment and incorporated into the overall work safety practices at this facility.

NOTE: At the time this report was prepared, the busduct layout were not yet available and the distances between each bus plug were not defined. For the calculations shown in this report, all busplugs are connected at the beginning of the bus except the last plug, which is connected at the end of the bus. This provides a range of arc flash results at the bus plugs and the downstream panel or switch. When the distances between bus plugs become available, we will provide specific data for each location.

SUMMARY

As a result of this arc flash and shock hazard analysis, the following should be noted.

1) Shock Hazard Analysis: The equipment voltage, glove class, and approach boundaries (limited, restricted, prohibited) are discussed on page 6 of this report.

2) Arc-Flash Labels: This report includes two types of generic arc flash hazard labels as well as samples of specific labels starting on page 8 of this report.

   Once this report is reviewed and approved, the desired labels can be printed to a stick-on label media and placed on each applicable piece of equipment in the system. If desired, Coordinated Power Systems Inc. can provide a sufficient quantity of waterproof vinyl labels for this project.

3) Arc-Flash Evaluation: The results of the arc-flash hazard analysis are summarized on the arc-flash evaluation tables starting on page 14 of this report.

   The values shown in the Arc-Flash Evaluation tables are based on the settings of the upstream protective devices recommended in the coordination study portion of this report. If these settings are not applied to the respective protective devices, the values shown in the Arc-Flash Evaluation tables may not be applicable.

   The facilities personnel should refer to these tables to define the safe working distances and appropriate Personal Protection Equipment (PPE) needed to safely work on or around a piece of energized equipment. A copy of this report should be placed in the main electrical equipment room and/or where facilities personnel can have easy access it.

For a detailed discussion of the arc-flash and shock hazard analysis, refer to the following pages.

ARC-FLASH HAZARD ANALYSIS

An arc-flash hazard analysis was performed on the system as defined on the one line diagram, and the corresponding system data as shown in Section III of this report. Since an arc-flash hazard analysis is dependant upon the system available fault currents and the time it takes upstream devices to clear a fault, this analysis utilizes the short circuit calculation results in Section III, and the overcurrent protective device data in Section IV of this report.

The Power*Tools for Windows (PTW) Arc Flash software program developed by SKM Systems Analysis, Inc. was utilized for this analysis. The PTW Arc Flash software follows the NFPA 70E-2004, and IEEE 1584-2002 methods for determining the flash protection (or arc-flash hazard) boundary and the incident energy that workers may be exposed to when working on or near live electrical equipment.

The Arc-Flash software program was used to calculate the available arcing fault current for a fault at each bus in the system, the resultant flash-protection (or arc-flash hazard) boundary based on the applicable protective device operating times, and the associated incident energy that workers may be exposed to at the specified working distances.

Typically several cases are reviewed in an attempt to define the worst case calculated arc flash hazard condition. Only one case is included at this time to demonstrate typical arc flash calculation results for this system. Once the short circuit and protective device coordination study is reviewed and approved, additional arc flash cases will be reviewed.

Case 1: **High Isc:** The assumptions used for this case are identical to those used in the short circuit study. All ATS' are switched to normal (utility) source only. It is based on the protective device sizes, types and recommended settings shown in the coordination study.

Case 2: **Low Isc:** This case is utilized only in the arc flash hazard analysis section of this report. In some situations, calculations based on lower fault current assumptions may result in higher calculated arc-flash hazard categories. This can occur since the protective devices in the system may take longer to clear a lower level fault. Thus the fault may persist longer and yield a higher calculated incident energy, and thus a higher arc-flash hazard category.

For this case, a minimum utility available fault current of 1200A at 13.2kV is used, and all ATS' are switched to emergency (Generator) source only. The loads not fed by ATS are connected to transformers with the high range (nominal +7.5%) impedance. No motors are connected in this case. It is based on the protective device sizes, types and recommended settings shown in the coordination study. This case will be run, after the short circuit and protective device coordination study is reviewed and approved.

Maintenance Mode cases: (See Work Safety Practices on page 7 in this report for further discussion.) These cases define the lowest arc flash values that could be achieved on this system when the upstream protective devices are set at their lowest instantaneous setting. These cases will be run after the short circuit and protective device coordination study is reviewed and approved.

Cases 3 & 4: Same as Case 1 & 2 respectively, except the instantaneous settings of all low voltage circuit breakers set at the lowest setting. These cases will be run, after the short circuit and protective device coordination study is reviewed and approved.

The following assumptions were utilized for the arc-flash calculations in all cases:

1) The maximum arcing duration time was set to two seconds per IEEE 1584-2002, Annex B. This assumes that the worker will move outside the flash-protection boundary if the fault is not cleared within two seconds. If the equipment is located in an area, or the work to be performed is such that a worker cannot move outside the flash-protection boundary within two seconds, the arc flash values may be greater than those shown in this report and therefore it would be best not to work on this equipment live.

2) All 208V equipment downstream of transformers less than 125kVA are defaulted to Category 0 per IEEE 1584, pages 6 and 25.

3) Calculations were performed at each bus, as well as the line side of the main device, where applicable.

A more detailed list of options used in this report are summarized on the 'Arc Flash Evaluation Study Options' at the very end of the SKM Arc Flash software printouts.

The results of the arc-flash hazard analysis for all cases are summarized in the Arc-Flash Evaluation tables included at the end of this section of the report. An explanation of the Arc Flash Evaluation tables and the PPE category descriptions are included on the following pages.

The values shown in the Arc-Flash Evaluation tables are based on the settings of the upstream protective devices recommended in the coordination study portion of this report. If these settings are not applied to the respective protective devices, the values shown in the Arc-Flash Evaluation tables may not be applicable.

SHOCK HAZARD ANALYSIS

The shock hazard at a piece of equipment is based solely on the voltage of the equipment (ie. the voltage to which personnel may be exposed). The customer's equipment on the portions of this system covered by this study is either 12470V, 480V, or 208V.

Following is an general explanation of the information addressed by the shock hazard analysis. For more specific requirements of these terms refer to NFPA 70E.

Glove Class: Glove class per ASTM International standard D120 for rubber insulating gloves. 00=500V, 0=1,000V, 1=7,500V, 2=17,000V, 3=26,500V, 4=36,000V.

Limited Approach: The distance from an exposed live part within which a shock hazard exists. (Per NFPA 70E table 130.2(C).)

Restricted Approach: The distance from an exposed live part within which there is an increased risk of shock. (Per NFPA 70E table 130.2(C).)

Prohibited Approach: The distance from an exposed live part within which work is considered the same as making contact with the live part. (Per NFPA 70E table 130.2(C).)

Following is a summary of the glove class and approach boundaries based on the respective equipment voltage:

12470V Equipment:	Glove Class = 2	Limited Approach = 60 inches Restricted Approach = 26 inches Prohibited Approach = 7 inch
480V Equipment:	Glove Class = 00	Limited Approach = 42 inches Restricted Approach = 12 inches Prohibited Approach = 1 inch
208V Equipment:	Glove Class = 00	Limited Approach = 42 inches Restricted Approach = Avoid Contact Prohibited Approach = Avoid Contact

WORK SAFETY PRACTICES

The best safety practice is to de-energize and lock out the piece of equipment before working on or around it. If this is not feasible, the results of an arc-flash hazard analysis can be used as a basis to develop strategies that have the goal of minimizing burn injuries. This is done by specifying the rating of personal protective equipment (PPE) and safe working distances.

Where used, PPE for the arc-flash hazard is the last line of defense. The protection is not intended to prevent all injuries but to mitigate the impact of an arc flash upon the individual, should one occur. The calculations in this report suggest a level of PPE that is a balance between the calculated estimated incident energy exposure and the work activity being performed while meeting the following concerns:

a) The desire to provide enough protection to prevent a second degree burn in all cases.

b) The desire to avoid providing more protection than is needed. Hazards may be introduced by the garments such as heat stress, poor visibility, and limited body movement.

Professional judgement, the facility's safety practices, in addition to the result of this analysis, should be used in the selection of adequate PPE.

Reducing an arc flash hazard.

One way to reduce an arc flash hazard at a piece of equipment is to set the upstream protective device at it's lowest setting to assure an arc flash is cleared as fast as possible. This, however, is not always feasible since higher settings are usually necessary to allow normal load currents to flow, to avoid nuisance tripping, and to maximize system coordination.

Since maximum continuity of power and therefore selective coordination of protective devices is usually the highest priority in today's power distribution systems, a high instantaneous setting is recommended for most of the protective devices in this system. However, if work on a piece of energized equipment needs to be performed, consideration should be given to temporarily reducing the instantaneous setting of the upstream protective device to the minimum value. This would act to reduce the arc flash hazard while the work is being performed. After the work is finished, the setting should be returned to the original value. This would permit maximum protection of personnel, while work is being performed, and maximum selectivity at all other times.

NOTE: The minimum instantaneous setting discussed above may not allow transient inrush currents of downstream motors and transformers to flow. To avoid tripping of the respective overcurrent device, these settings should be considered only if switching of significant transformer or motor loads is not likely to occur while the work is being performed.

ARC-FLASH HAZARD LABELS

NEC article 110.16 calls for:
"Switchboards, panelboards, industrial control panels, meter socket enclosures, and motor control centers that are in other than dwelling occupancies and are likely to require examination, adjustment, servicing, or maintenance while energized shall be field marked to warn qualified persons of potential arc flash hazards. The markings shall be located so as to be clearly visible to qualified persons before examination, adjustment, servicing, or maintenance of the equipment."

Generic vs Specific labels
Labels can provide a general warning or include specific values of incident energy, safe working distances and category of protective equipment that should be worn if working around a piece of live equipment. The specific values, shown in the Arc-Flash Evaluation tables, however, are dependent on the available fault current and the time it takes an upstream protective device to clear that fault. Changes to sizes and/or settings of upstream protective devices or changes to the available fault current can therefore result in different values than those shown in the attached report. Thus labels on equipment with specific values may be misleading, since they may not reflect changes to the system that may have occurred since the label was attached. For this reason generic warning labels are recommended rather than arc flash labels with detailed arc flash calculation results.

The facility's safety program should provide for personnel working around energized equipment to first verify that the upstream protective device and/or setting has not changed since the latest arc flash hazard report and that there have not been any other significant system changes. They should then refer to the latest arc flash hazard report and the facility safety practices to define the specific values of incident energy, safe working distances and category of protective equipment that should be worn if working around a piece of live equipment. If significant changes are made to the system, consideration should be given to updating the arc flash hazard analysis.

Labels provided in this report:
Two types of generic arc flash labels are included in this report. These labels, or similar labels provided by the manufacturer, could be placed on the applicable equipment.

1. Label provides a general warning of a potential arc flash hazard which can be placed on all equipment in this system.

2. A generic Category 0 arc flash label which can be placed (instead of the first type of label) on all 208V equipment fed by small dry type transformers, less than 125kVA. All 208V equipment downstream of transformers less than 125kVA (refer to IEEE 1584, pages 6 and 25), and where the fault current is less than 10,000A (refer to NFPA 70E, Table 130.7(C)(9)(a)), can be considered Category 0.

If labels with the specific information shown in the evaluation forms are desired, we can provide these upon request. Sample Bus and LineSide specific labels are included following the generic labels.

GENERIC ARC FLASH WARNING LABELS

WARNING

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

* Refer to latest Arc Flash Hazard Analysis for appropriate Personal Protection Equipment (PPE), and follow safe electrical work practices, when working on this equipment.

* Failure to follow these instructions could result in death or serious injury.

WARNING

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

* Refer to latest Arc Flash Hazard Analysis for appropriate Personal Protection Equipment (PPE), and follow safe electrical work practices, when working on this equipment.

* Failure to follow these instructions could result in death or serious injury.

WARNING

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

* Refer to latest Arc Flash Hazard Analysis for appropriate Personal Protection Equipment (PPE), and follow safe electrical work practices, when working on this equipment.

* Failure to follow these instructions could result in death or serious injury.

WARNING

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

* Refer to latest Arc Flash Hazard Analysis for appropriate Personal Protection Equipment (PPE), and follow safe electrical work practices, when working on this equipment.

* Failure to follow these instructions could result in death or serious injury.

WARNING

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

* Refer to latest Arc Flash Hazard Analysis for appropriate Personal Protection Equipment (PPE), and follow safe electrical work practices, when working on this equipment.

* Failure to follow these instructions could result in death or serious injury.

WARNING

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

* Refer to latest Arc Flash Hazard Analysis for appropriate Personal Protection Equipment (PPE), and follow safe electrical work practices, when working on this equipment.

* Failure to follow these instructions could result in death or serious injury.

FOR USE ON EQUIPMENT DOWNSTREAM OF 208V TRANSFORMERS LESS THAN 125KVA

WARNING

Arc Flash and Shock Hazard

Appropriate PPE Required

Category 0	PPE Category, Per NFPA 70E
208 VAC	Shock Hazard when cover is removed
00	Glove Class
42 inches	Limited Approach
Avoid Contact	Restricted Approach
Avoid Contact	Prohibited Approach

208V panel fed by Xfmr, 125kVA or less

WARNING

Arc Flash and Shock Hazard

Appropriate PPE Required

Category 0	PPE Category, Per NFPA 70E
208 VAC	Shock Hazard when cover is removed
00	Glove Class
42 inches	Limited Approach
Avoid Contact	Restricted Approach
Avoid Contact	Prohibited Approach

208V panel fed by Xfmr, 125kVA or less

WARNING

Arc Flash and Shock Hazard

Appropriate PPE Required

Category 0	PPE Category, Per NFPA 70E
208 VAC	Shock Hazard when cover is removed
00	Glove Class
42 inches	Limited Approach
Avoid Contact	Restricted Approach
Avoid Contact	Prohibited Approach

208V panel fed by Xfmr, 125kVA or less

WARNING

Arc Flash and Shock Hazard

Appropriate PPE Required

Category 0	PPE Category, Per NFPA 70E
208 VAC	Shock Hazard when cover is removed
00	Glove Class
42 inches	Limited Approach
Avoid Contact	Restricted Approach
Avoid Contact	Prohibited Approach

208V panel fed by Xfmr, 125kVA or less

WARNING

Arc Flash and Shock Hazard

Appropriate PPE Required

Category 0	PPE Category, Per NFPA 70E
208 VAC	Shock Hazard when cover is removed
00	Glove Class
42 inches	Limited Approach
Avoid Contact	Restricted Approach
Avoid Contact	Prohibited Approach

208V panel fed by Xfmr, 125kVA or less

WARNING

Arc Flash and Shock Hazard

Appropriate PPE Required

Category 0	PPE Category, Per NFPA 70E
208 VAC	Shock Hazard when cover is removed
00	Glove Class
42 inches	Limited Approach
Avoid Contact	Restricted Approach
Avoid Contact	Prohibited Approach

208V panel fed by Xfmr, 125kVA or less

SPECIFIC ARC-FLASH AND SHOCK HAZARD LABELS

Following is an general explanation of the information shown on the arc-flash and shock hazard labels. For more specific requirements of these terms refer to NFPA 70E.

Flash Hazard Boundary: The distance within which the specified PPE must be worn by qualified personnel when working on exposed live equipment.

Incident Energy (cal/cm^2): The calculated incident energy at the indicated working distance used to define the category.

Category: Defines the category of required Personnel Protection Equipment (PPE) required to be worn when working on live exposed equipment within the flash hazard boundary. Refer to the previous page for clothing description.

Equipment Voltage: Voltage of the live bus at this equipment.

Glove Class: Glove class per ASTM International standard D120 for rubber insulating gloves. 00=500V, 0=1,000V, 1=7,500V, 2=17,000V, 3=26,500V, 4=36,000V.

Limited Approach: The distance from an exposed live part within which a shock hazard exists. (Per NFPA 70E table 130.2(C).)

Restricted Approach: The distance from an exposed live part within which there is an increased risk of shock.

Prohibited Approach: The distance from an exposed live part within which work is considered the same as making contact with the live part.

Equip. Name: Switchboard, Panel, MCC or other Equipment Designation for which this label applies to and where it should be placed.

Prot. Device: The upstream protective device that is expected to clear the arcing fault at this equipment. (Refer to the one line diagram in section III of this report.) Note: The arc flash values defined in this report are based on the size and settings recommended in this report for this upstream protective device. The arc flash values may change if the upstream device settings change.

LineSide of Main: These labels refer to a fault on the line side of the respective equipment's main protective device.

WARNING

Arc Flash and Shock Hazard

Appropriate PPE Required

14 inches	Flash Hazard Boundary
0.76	cal/cm^2 Flash Hazard at 18 inches
Category 0	PPE Category, Per NFPA 70E
480 VAC	Shock Hazard when cover is removed
00	Glove Class
42 inches	Limited Approach
12 inches	Restricted Approach
1 inches	Prohibited Approach

Equip. Name: **PNL-A**
Protective Device:
Source: CPS, Inc.
Study Da

WARNING

Arc Flash and Shock Hazard

Appropriate PPE Required

111 inches	Flash Hazard Boundary
23	cal/cm^2 Flash Hazard at 18 inches
Category 3	PPE Category, Per NFPA 70E
480 VAC	Shock Hazard when cover is removed
00	Glove Class
42 inches	Limited Approach
	ed Approach
	ed Approach

Protective Device: 2000A/SS: SWBD-1
Study Date: October 14, 2008

SAMPLES OF AVAILABLE SPECIFIC LABELS

DO NOT USE

Labels with specific data for this project will be provided, upon request, after this study is approved.

WARN

Arc Flash and Sho

Appropriate PPE

15 inches	Flash Hazard Boundary
0.87	cal/cm^2 Flash Hazard at 18 inches
Category 0	PPE Category, Per NFPA 70E
480 VAC	Shock Hazard when cover is removed
00	Glove Class
42 inches	Limited Approach
12 inches	Restricted Approach
1 inches	Prohibited Approach

Equip. Name: **PNL-B**
Protective Device: 400A/SGLA4: PNL-B
Source: CPS, Inc.
Study Date: October 14, 2008

ARNING

and Shock Hazard

te PPE Required

35 inches	Flash Hazard Boundary
3.6	cal/cm^2 Flash Hazard at 18 inches
Category 1	PPE Category, Per NFPA 70E
208 VAC	Shock Hazard when cover is removed
00	Glove Class
42 inches	Limited Approach
Avoid Contact	Restricted Approach
Avoid Contact	Prohibited Approach

Equip. Name: **SWBD-2**
Protective Device: 1600A/SS: SWBD-2
Source: CPS, Inc.
Study Date: October 14, 2008

WARNING

Arc Flash and Shock Hazard

Appropriate PPE Required

8 inches	Flash Hazard Boundary
0.30	cal/cm^2 Flash Hazard at 18 inches
Category 0	PPE Category, Per NFPA 70E
208 VAC	Shock Hazard when cover is removed
00	Glove Class
42 inches	Limited Approach
Avoid Contact	Restricted Approach
Avoid Contact	Prohibited Approach

Equip. Name: **PNL-C**
Protective Device: 225A/SFHA: PNL-C
Source: CPS, Inc.
Study Date: October 14, 2008

WARNING

Arc Flash and Shock Hazard

Appropriate PPE Required

5 inches	Flash Hazard Boundary
0.24	cal/cm^2 Flash Hazard at 36 inches
Category 0	PPE Category, Per NFPA 70E
4160 VAC	Shock Hazard when cover is removed
1	Glove Class
60 inches	Limited Approach
26 inches	Restricted Approach
7 inches	Prohibited Approach

Equip. Name: **XFMR-1 PRI.**
Protective Device: 300A/EJO1
Source: CPS, Inc.
Study Date: October 14, 2008

DANGER

NO SAFE PPE EXISTS

ENERGIZED WORK PROHIBITED

268 inches	Flash Hazard Boundary
101	cal/cm^2 Flash Hazard at 18 inches
Dangerous!	PPE Category, Per NFPA 70E
480 VAC	Shock Hazard when cover is removed
00	Glove Class
42 inches	Limited Approach
12 inches	Restricted Approach
1 inches	Prohibited Approach

Equip. Name: **SWBD-1**
Source: CPS, Inc.
Upstream Prot. Dev
Study Da

SAMPLES OF AVAILABLE SPECIFIC LABELS

DO NOT USE

Labels with specific data for this project will be provided, upon request, after this study is approved.

DANG

NO SAFE PPE

ENERGIZED WORK

157 inches	Flash Hazard Boundary
42	cal/cm^2 Flash Hazard at 18 inches
Dangerous!	PPE Category, Per NFPA 70E
208 VAC	Shock Hazard when cover is removed
00	Glove Class
42 inches	Limited Approach
Avoid Contact	Restricted Approach
Avoid Contact	Prohibited Approach

LineSide of Main

Equip. Name: **SWBD-2**
Source: CPS, Inc.
Upstream Prot. Device: 800A/SKHA8: XFMR-2
Study Date: October 14, 2008

DANGER

NO SAFE PPE EXISTS

ENERGIZED WORK PROHIBITED

1600 inches	Flash Hazard Boundary
48	cal/cm^2 Flash Hazard at 36 inches
Dangerous!	PPE Category, Per NFPA 70E
4160 VAC	Shock Hazard when cover is removed
1	Glove Class
60 inches	Limited Approach
26 inches	Restricted Approach
7 inches	Prohibited Approach

LineSide of Main

Equip. Name: **XFMR-1 PRI.**
Source: CPS, Inc.
Upstream Prot. Device: MaxTripTime @2.0s
Study Date: October 14, 2008

ARC-FLASH EVALUATION TABLES

The following definitions explain the column headings in the Arc-Flash Evaluation tables:

Bus Name: Equipment designation at fault location. Where there is a main protective device on the bus, an additional calculation (denoted in the table as 'LineSide') was performed on the line side of the respective protective device.

Protective Device Name: Refers to the protective device that clears the arcing fault or portion of the total arcing fault current.

Bus Bolted Fault (kA): 3-phase bolted fault current at the respective bus.

Protective Device Bolted Fault (kA): Portion of the 3-phase bolted fault current that flows through a given protective device.

Protective Device Arcing Fault (kA): The current flowing through the protective device feeding the arc fault.

Trip / Delay Time: The time required for the protective device to operate for a given fault current. (Note: This time is capped at two seconds, since it is assumed that the worker will move outside the flash-protection boundary if the fault is not cleared within two seconds)

Breaker Opening Time: The time required for a breaker to open after receiving a signal from the trip unit to operate.

Ground: Indicates whether the fault location includes a path to ground.

Equipment Type: Indicates whether the equipment is Switchgear, Panel, Cable, or Open Air. The equipment type provides a default Gap value and a distance exponent used in the IEEE incident energy equations.

Gap: Defines the spacing between bus bars or conductors at the arc location.

Flash-Protection (Arc-Flash) Boundary: The distance from exposed live parts within which a person could receive a 2nd degree burn.

Working Distance: The distance between the arc source and the worker's face or chest. Typical working distances utilized in this report, per IEEE Std. 1584-2002, Section 4.8, Table 3:

15kV and 5kV switchgear:	36"
Low-Voltage switchgear:	24"
Low-Voltage MCCs:	18"
Low-Voltage Panels, Cable:	18"

Incident Energy: The amount of energy on a surface at the specified working distance from the arc source.

Required Protective FR (fire rated) Clothing Category: Indicates the Personnel Protection Equipment (PPE) category required to prevent an incurable burn when working on exposed, live equipment at the specified working distance during an arcing fault.

Per NFPA 70E Table 130.7(C)(11). These are as follows**:**

Category	Incident Energy (cal/cm^2)	Clothing description
0	**0-1.2**	Non-melting, flammable materials (ie. Untreated cotton, wool, rayon, or silk, or blends of these materials) with a fabric weight at least 4.5 oz/sq yd
1	**1.2-4**	FR shirt and FR pants or FR overalls
2	**4-8**	Cotton underwear - conventional short sleeve and briefs/shorts, plus FR shirt and FR pants
3	**8-25**	Cotton underwear plus FR shirt and FR pants plus FR overall, or cotton underwear and two FR overalls
4	**25-40**	Cotton underwear plus FR shirt and FR pants plus multilayer flash suit

The clothing descriptions shown in the table above are in addition to any other safety equipment (such as goggles, hard hat, etc.) and safe working practices which may normally be required for the specific work to be performed.

CASE 1 - RESULTS

Case 1: **High Isc:** The assumptions used for this case are identical to those used in the short circuit study. All ATS' are switched to normal (utility) source only. It is based on the protective device sizes, types and recommended settings shown in the coordination study.

Arc Flash Evaluation IEEE 1584 - 2002/2004a Edition Bus + Line Side Report (Include Line Side + Load Side Contributions), 80% Cleared Fault Threshold, include Ind. Motors for 5.0 Cycles), mis-coordi

	Bus Name	Protective Device Name	Bus kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Prot Dev Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	Required Protective FR Clothing Category
1	AHU-03	200A/SFLA: AHU-03	0.48	9.77	9.39	6.18	0.025	0.000	Yes	PNL	25	11	18	0.51	Category 0
2	AHU-04 RETURN	100A/FBH6: AHU-04 RETURN	0.48	6.29	6.15	4.32	0.013	0.000	Yes	PNL	25	5.5	18	0.17	Category 0
3	AHU-04 SUPPLY	200A/SFLA: AHU-04 SUPPLY	0.48	11.10	10.71	6.92	0.025	0.000	Yes	PNL	25	12	18	0.58	Category 0
4	AHU-05 RETURN	90A/FBH6: AHU-05 RETURN	0.48	6.55	6.45	4.50	0.012	0.000	Yes	PNL	25	5.6	18	0.18	Category 0
5	AHU-05 SUPPLY	125A/SELA: AHU-05 SUPPLY	0.48	7.77	7.54	5.13	0.025	0.000	Yes	PNL	25	9.5	18	0.42	Category 0
6	AHU-06 RETURN	90A/FBH6: AHU-06 RETURN	0.48	11.58	11.46	7.36	0.012	0.000	Yes	PNL	25	7.6	18	0.29	Category 0
7	AHU-06 SUPPLY	125A/SELA: AHU-06 SUPPLY	0.48	13.55	13.30	8.35	0.025	0.000	Yes	PNL	25	13	18	0.70	Category 0
8	AHU-08 RETURN	80A/FBN: AHU-08 RETURN	0.48	4.32	4.26	2.68	0.026	0.000	Yes	PNL	25	6.3	18	0.21	Category 0 (*N3)
9	AHU-08 SUPPLY	125A/SELA: AHU-08 SUPPLY	0.48	7.74	7.52	5.12	0.025	0.000	Yes	PNL	25	9.4	18	0.41	Category 0
10	AHU-10 SUPPLY 1	110A/SELA: AHU-10 SUPPLY 1	0.48	5.14	4.97	3.59	0.025	0.000	Yes	PNL	25	7.5	18	0.28	Category 0
11	AHU-10 SUPPLY 2	110A/SELA: AHU-10 SUPPLY 2	0.48	5.14	4.97	3.59	0.025	0.000	Yes	PNL	25	7.5	18	0.28	Category 0
12	AHU-11 SUPPLY 1	110A/SELA: AHU-11 SUPPLY 1	0.48	6.03	5.85	4.13	0.025	0.000	Yes	PNL	25	8.2	18	0.33	Category 0
13	AHU-11 SUPPLY 2	110A/SELA: AHU-11 SUPPLY 2	0.48	6.03	5.85	4.13	0.025	0.000	Yes	PNL	25	8.2	18	0.33	Category 0
14	AHU-12 SUPPLY 1	110A/SELA: AHU-12 SUPPLY 1	0.48	6.40	6.22	4.35	0.025	0.000	Yes	PNL	25	8.5	18	0.35	Category 0
15	AHU-12 SUPPLY 2	110A/SELA: AHU-12 SUPPLY 2	0.48	6.40	6.22	4.35	0.025	0.000	Yes	PNL	25	8.5	18	0.35	Category 0
16	AHU-13 SUPPLY 1	110A/SELA: AHU-13 SUPPLY 1	0.48	10.12	9.91	6.49	0.025	0.000	Yes	PNL	25	11	18	0.53	Category 0
17	AHU-13 SUPPLY 2	110A/SELA: AHU-13 SUPPLY 2	0.48	10.12	9.91	6.49	0.025	0.000	Yes	PNL	25	11	18	0.53	Category 0
18	AHU-14 SUPPLY 1	225A/SFLA: AHU-14 SUPPLY 1	0.48	16.96	16.42	9.97	0.025	0.000	Yes	PNL	25	15	18	0.86	Category 0

	Bus Name	Protective Device Name	Bus kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Prot Dev Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	Required Protective FR Clothing Category
19	AHU-14 SUPPLY 2	225A/SFLA: AHU-14 SUPPLY 2	0.48	16.96	16.42	9.97	0.025	0.000	Yes	PNL	25	15	18	0.86	Category 0
20	AHU-15 SUPPLY 1	110A/SELA: AHU-15 SUPPLY 1	0.48	12.76	12.55	7.94	0.025	0.000	Yes	PNL	25	13	18	0.66	Category 0
21	AHU-15 SUPPLY 2	110A/SELA: AHU-15 SUPPLY 2	0.48	12.76	12.55	7.94	0.025	0.000	Yes	PNL	25	13	18	0.66	Category 0
22	AHU-16 SUPPLY 1	110A/SELA: AHU-16 SUPPLY 1	0.48	5.67	5.50	3.92	0.025	0.000	Yes	PNL	25	7.9	18	0.31	Category 0
23	AHU-16 SUPPLY 2	110A/SELA: AHU-16 SUPPLY 2	0.48	5.67	5.50	3.92	0.025	0.000	Yes	PNL	25	7.9	18	0.31	Category 0
24	AHU-19 SUPPLYA	100A/FBH: AHU-19 SUPPLYA	0.48	11.53	11.36	7.30	0.012	0.000	Yes	PNL	25	7.6	18	0.29	Category 0
25	AHU-19 SUPPLYB	100A/FBH: AHU-19 SUPPLYB	0.48	11.53	11.36	7.30	0.012	0.000	Yes	PNL	25	7.6	18	0.29	Category 0
26	AHU-22 RETURNA	80A/FBH6: AHU-22 RETURNA	0.48	8.83	8.75	5.84	0.012	0.000	Yes	PNL	25	6.5	18	0.23	Category 0
27	AHU-22 RETURNB	80A/FBH6: AHU-22 RETURNB	0.48	8.83	8.75	5.84	0.012	0.000	Yes	PNL	25	6.5	18	0.23	Category 0
28	AHU-22 SUPPLYA	100A/FBH: AHU-22 SUPPLYA	0.48	22.86	22.64	13.16	0.011	0.000	Yes	PNL	25	11	18	0.50	Category 0
29	AHU-22 SUPPLYB	100A/FBH: AHU-22 SUPPLYB	0.48	22.86	22.64	13.16	0.011	0.000	Yes	PNL	25	11	18	0.50	Category 0
30	AHU-28 RETURN	70A/FBH6: AHU-28 RETURN	0.48	7.72	7.65	5.21	0.012	0.000	Yes	PNL	25	6.0	18	0.20	Category 0
31	AHU-28 SUPPLY	200A/SELA: AHU-28 SUPPLY	0.48	16.01	15.57	9.54	0.025	0.000	Yes	PNL	25	14	18	0.81	Category 0
32	AHU-29 RETURN	70A/FBH: AHU-29 RETURN	0.48	6.64	6.58	4.58	0.012	0.000	Yes	PNL	25	5.5	18	0.17	Category 0
33	AHU-29 SUPPLY	200A/SFLA: AHU-29 SUPPLY	0.48	14.81	14.38	8.91	0.025	0.000	Yes	PNL	25	14	18	0.76	Category 0
34	ATS-1	400A/SGLA: ATS-1 (N)	0.48	19.52	19.52	11.61	0.025	0.000	Yes	PNL	25	16	18	0.98	Category 0
35	ATS-2	800A/SKLA8: ATS-2 (N)	0.48	32.17	30.47	16.85	0.025	0.000	Yes	PNL	25	21	18	1.5	Category 1
36	ATS-3	1000A/SKLB12: ATS-3 (N)	0.48	36.84	35.27	19.13	0.025	0.000	Yes	PNL	25	23	18	1.8	Category 1

	Bus Name	Protective Device Name	Bus kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Prot Dev Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	Required Protective FR Clothing Category
37	ATS-4	400A/SGLA: ATS-4 (N)	0.48	20.25	20.25	11.98	0.025	0.000	Yes	PNL	25	16	18	1.0	Category 0
38	ATS-5	1200A/SKLLB12: ATS-5 (N)	0.48	36.84	35.05	19.01	0.025	0.000	Yes	PNL	25	23	18	1.8	Category 1
39	ATS-6	1000A/SKLLB12: ATS-6 (N)	0.48	37.51	34.62	18.72	0.025	0.000	Yes	PNL	25	23	18	1.8	Category 1
40	CH-3	50/51: CH-3	4.16	6.23	5.28	5.17	0.016	0.050	No	SWG	104	13	36	0.57	Category 0
41	CH-3 (12R-230A: CH-3 LineSide)	50/51: CH-3	4.16	6.23	5.28	5.17	0.016	0.050	No	SWG	104	13	36	0.57	Category 0
42	CH-4	PD-0564	4.16	6.23	5.28	5.17	0.073	0.000	No	SWG	104	15	36	0.63	Category 0
43	CH-4 (PD-0564 LineSide)	150E/EJ0-1: T-CH-4	4.16	6.23	5.28	5.17	0.238	0.000	No	SWG	104	56	36	1.8	Category 1 (*N5) (*N16)
44	CHWP-1	150A/SEPA: CHWP-1	0.48	10.89	10.63	6.89	0.025	0.000	Yes	PNL	25	11	18	0.57	Category 0
45	CHWP-3	125A/SELA: CHWP-3	0.48	9.53	9.31	6.15	0.025	0.000	Yes	PNL	25	11	18	0.50	Category 0
46	CHWP-5	125A/SELA: CHWP-5	0.48	9.53	9.31	6.15	0.025	0.000	Yes	PNL	25	11	18	0.50	Category 0
47	CLTWR1 FAN1A	110A/SELA: CLTWR1 FAN1A	0.48	17.04	16.83	10.21	0.025	0.000	Yes	PNL	25	15	18	0.86	Category 0
48	CLTWR1 FAN1B	110A/SELA: CLTWR1 FAN1B	0.48	17.04	16.83	10.21	0.025	0.000	Yes	PNL	25	15	18	0.86	Category 0
49	CLTWR1 FAN2A	110A/SELA: CLTWR1 FAN2A	0.48	17.04	16.83	10.21	0.025	0.000	Yes	PNL	25	15	18	0.86	Category 0
50	CLTWR1 FAN2B	110A/SELA: CLTWR1 FAN2B	0.48	17.04	16.83	10.21	0.025	0.000	Yes	PNL	25	15	18	0.86	Category 0
51	CLTWR2 FAN2B	110A/SELA: CLTWR2 FAN2B	0.48	16.02	15.82	9.68	0.025	0.000	Yes	PNL	25	14	18	0.81	Category 0
52	CLTWR2 FAN1A	110A/SELA: CLTWR2 FAN1A	0.48	16.02	15.82	9.68	0.025	0.000	Yes	PNL	25	14	18	0.81	Category 0
53	CLTWR2 FAN1B	110A/SELA: CLTWR2 FAN1B	0.48	16.02	15.82	9.68	0.025	0.000	Yes	PNL	25	14	18	0.81	Category 0
54	CLTWR2 FAN2A	110A/SELA: CLTWR2 FAN2A	0.48	16.02	15.82	9.68	0.025	0.000	Yes	PNL	25	14	18	0.81	Category 0
55	CLTWR3 FAN 1B	110A/SELA: CLTWR3 FAN 1B	0.48	18.41	18.19	10.91	0.025	0.000	Yes	PNL	25	15	18	0.92	Category 0
56	CLTWR3 FAN1A	110A/SELA: CLTWR3 FAN1A	0.48	18.41	18.19	10.91	0.025	0.000	Yes	PNL	25	15	18	0.92	Category 0

	Bus Name	Protective Device Name	Bus kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Prot Dev Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	Required Protective FR Clothing Category
57	CLTWR3 FAN2A	110A/SELA: CLTWR3 FAN2A	0.48	18.41	18.19	10.91	0.025	0.000	Yes	PNL	25	15	18	0.92	Category 0
58	CLTWR3 FAN2B	110A/SELA: CLTWR3 FAN2B	0.48	18.41	18.19	10.91	0.025	0.000	Yes	PNL	25	15	18	0.92	Category 0
59	CWP-1	150A/SEPA: CWP-1	0.48	14.28	13.90	8.65	0.025	0.000	Yes	PNL	25	13	18	0.73	Category 0
60	CWP-2	150A/SEPA: CWP-2	0.48	14.28	13.90	8.65	0.025	0.000	Yes	PNL	25	13	18	0.73	Category 0
61	CWP-3	150A/SEPA: CWP-3	0.48	14.28	13.90	8.65	0.025	0.000	Yes	PNL	25	13	18	0.73	Category 0
62	CWP-4	150A/SEPA: CWP-4	0.48	14.28	13.90	8.65	0.025	0.000	Yes	PNL	25	13	18	0.73	Category 0
63	CWP-5	150A/SEPA: CWP-5	0.48	14.28	13.90	8.65	0.025	0.000	Yes	PNL	25	13	18	0.73	Category 0
64	CWP-6	150A/SEPA: CWP-6	0.48	14.28	13.90	8.65	0.025	0.000	Yes	PNL	25	13	18	0.73	Category 0
65	CWP-7	150A/SEPA: CWP-7	0.48	14.28	13.90	8.65	0.025	0.000	Yes	PNL	25	13	18	0.73	Category 0
66	DB1A	100A/TEY: DB1A	0.208	2.41	2.41	1.36	1.093	0.000	Yes	PNL	25	39	18	4.2	Category 2 (*N3)
67	DB1E	225A/SFHA: DB1E	0.208	23.45	23.45	7.92	0.025	0.000	Yes	PNL	25	12	18	0.64	Category 0
68	DB1F	100A/FBH6: DB1F	0.48	6.29	6.29	4.41	0.012	0.000	Yes	PNL	25	5.5	18	0.17	Category 0
69	DB1G	225A/SFHA: DB1G	0.208	22.75	22.75	7.75	0.025	0.000	Yes	PNL	25	12	18	0.63	Category 0
70	DB1H	100A/FBH6: DB1H	0.48	34.02	34.02	18.66	0.01	0.000	Yes	PNL	25	13	18	0.67	Category 0
71	DB2A	60A/TEY: DB2A	0.208	0.57	0.57	0.57	2	0.000	Yes	PNL	25	13	18	0.58	Category 0 (*N1) (*N9)
72	DB2B	60A/TEY: DB2B	0.208	0.49	0.49	0.49	2	0.000	Yes	PNL	25	12	18	0.50	Category 0 (*N1) (*N9)
73	DB2C	60A/TEY: DB2C	0.208	10.03	10.03	4.36	0.016	0.000	Yes	PNL	25	6.4	18	0.22	Category 0
74	DB3A	60A/TEY: DB3A	0.208	1.16	1.16	0.81	1.032	0.000	Yes	PNL	25	27	18	2.3	Category 1 (*N3)
75	DB3B	60A/FCH: DB3B	0.48	12.17	12.17	7.76	0.012	0.000	Yes	PNL	25	7.8	18	0.30	Category 0
76	DB6A	400A/SGDA4: DB6A	0.208	23.23	23.23	7.86	0.025	0.000	Yes	PNL	25	12	18	0.64	Category 0
77	DB6A (400A/SGDA4: DB6A (M) LineSide)	400A/SGDA4: DB6A	0.208	23.23	23.23	7.86	0.025	0.000	Yes	PNL	25	12	18	0.64	Category 0
78	DB6B	400A/SGDA4: DB6B	0.208	16.74	16.74	6.25	0.026	0.000	Yes	PNL	25	11	18	0.52	Category 0
79	DB6B (400A/SGDA4: DB6B ENC CB LineSide)	400A/SGDA4: DB6B	0.208	16.74	16.74	6.25	0.026	0.000	Yes	PNL	25	11	18	0.52	Category 0
80	DP1B	60A/FCH: DB1B	0.48	3.15	3.15	2.08	0.055	0.000	Yes	PNL	25	8.3	18	0.33	Category 0 (*N3)
81	DP1C	100A/TEY: DP1C	0.208	2.68	2.68	1.47	0.939	0.000	Yes	PNL	25	37	18	3.9	Category 1 (*N3)
82	DP1D	60A/FCH: DB1D	0.48	2.70	2.70	1.82	0.082	0.000	Yes	PNL	25	9.7	18	0.43	Category 0 (*N3)
83	EDB1A	60A/FBN: EDB1A	0.48	1.79	1.79	1.28	0.448	0.000	Yes	PNL	25	22	18	1.6	Category 1 (*N3) (*N16)
84	EDB1B	60A/FBN: EDB1B	0.48	9.80	9.80	6.45	0.012	0.000	Yes	PNL	25	6.9	18	0.25	Category 0

	Bus Name	Protective Device Name	Bus kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Prot Dev Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	Required Protective FR Clothing Category
85	EDB1C	60A/FBN: EDB1C	0.48	2.06	2.06	1.45	0.333	0.000	Yes	PNL	25	20	18	1.4	Category 1 (*N3) (*N16)
86	EDB1D	60A/FBN: EDB1D	0.48	2.06	2.06	1.45	0.333	0.000	Yes	PNL	25	20	18	1.4	Category 1 (*N3) (*N16)
87	EDB3A	60A/FBN: EDB3A	0.48	5.22	5.22	3.20	0.016	0.000	Yes	PNL	25	5.2	18	0.16	Category 0 (*N3)
88	EDP3.1	225A/SFLA: EDP3.1	0.48	5.63	5.63	4.02	0.025	0.000	Yes	PNL	25	7.9	18	0.31	Category 0
89	EDP-A	MaxTripTime @2.0s	0.48	4.61	4.61	3.38	2	0.000	Yes	PNL	25	69	18	11	Category 3 (*N2) (*N9)
90	EF-1	125A/SELA: EF-1	0.48	6.09	5.78	4.07	0.025	0.000	Yes	PNL	25	8.3	18	0.33	Category 0
91	EGD-1	2500A/RL: EGD-1	0.48	19.49	19.49	11.60	2	0.000	Yes	PNL	25	150	18	39	Category 4 (*N9) (*N16)
92	EGD-2	2500A/RL: EGD-2	0.48	19.44	19.44	11.57	2	0.000	Yes	PNL	25	150	18	39	Category 4 (*N9) (*N16)
93	FP CONTROLLER	2500A/SS: ATS-FP	0.48	23.57	22.73	13.15	0.05	0.000	Yes	PNL	25	27	18	2.3	Category 1
94	FREIGHT ELEV	125A/RK5: FREIGHT ELEV	0.48	12.62	12.35	7.83	0.004	0.000	Yes	PNL	25	4.2	18	0.11	Category 0
95	FREIGHT ELEV (125A/RK5: FREIGHT ELEV LineSide)	125A/SELA: FREIGHT ELEV	0.48	12.62	12.35	7.83	0.025	0.000	Yes	PNL	25	12	18	0.65	Category 0
96	GENERATOR 1	MaxTripTime @2.0s	0.48	19.74	19.74	11.72	2	0.000	Yes	PNL	25	151	18	39	Category 4 (*N2) (*N9)
97	GENERATOR 2	MaxTripTime @2.0s	0.48	19.74	19.74	11.72	2	0.000	Yes	PNL	25	151	18	39	Category 4 (*N2) (*N9)
98	HBD1-P01	800A/SKHA8: HBD1	0.208	7.27	7.27	3.48	2	0.000	Yes	PNL	25	104	18	21	Category 3 (*N9) (*N16)
99	HBD1-P02	800A/SKHA8: HBD1	0.208	7.27	7.27	3.48	2	0.000	Yes	PNL	25	104	18	21	Category 3 (*N9) (*N16)
100	HBD1-P03	800A/SKHA8: HBD1	0.208	7.27	7.27	3.48	2	0.000	Yes	PNL	25	104	18	21	Category 3 (*N9) (*N16)
101	HBD1-P04	800A/SKHA8: HBD1	0.208	7.26	7.26	3.48	2	0.000	Yes	PNL	25	104	18	21	Category 3 (*N9) (*N16)
102	HBD1-P05	800A/SKHA8: HBD1	0.208	7.26	7.26	3.48	2	0.000	Yes	PNL	25	104	18	21	Category 3 (*N9) (*N16)
103	HBD1-P06	800A/SKHA8: HBD1	0.208	7.26	7.26	3.47	2	0.000	Yes	PNL	25	104	18	21	Category 3 (*N9) (*N16)
104	HBD1-P07	800A/SKHA8: HBD1	0.208	7.26	7.26	3.47	2	0.000	Yes	PNL	25	104	18	21	Category 3 (*N9) (*N16)
105	HBD1-P08	800A/SKHA8: HBD1	0.208	7.26	7.26	3.47	2	0.000	Yes	PNL	25	104	18	21	Category 3 (*N9) (*N16)
106	HBD1-P09	800A/SKHA8: HBD1	0.208	7.26	7.26	3.47	2	0.000	Yes	PNL	25	104	18	21	Category 3 (*N9) (*N16)
107	HBD1-P10	800A/SKHA8: HBD1	0.208	7.26	7.26	3.47	2	0.000	Yes	PNL	25	104	18	21	Category 3 (*N9) (*N16)
108	HBD1-P11	800A/SKHA8: HBD1	0.208	6.09	6.09	3.07	2	0.000	Yes	PNL	25	96	18	19	Category 3 (*N9) (*N16)
109	HBD2-P01	800A/SKHA8: HBD2	0.208	12.27	12.27	5.02	2	0.000	Yes	PNL	25	132	18	31	Category 4 (*N9) (*N16)
110	HBD2-P02	800A/SKHA8: HBD2	0.208	12.26	12.26	5.02	2	0.000	Yes	PNL	25	132	18	31	Category 4 (*N9) (*N16)
111	HBD2-P03	800A/SKHA8: HBD2	0.208	12.26	12.26	5.02	2	0.000	Yes	PNL	25	132	18	31	Category 4 (*N9) (*N16)
112	HBD2-P04	800A/SKHA8: HBD2	0.208	12.26	12.26	5.02	2	0.000	Yes	PNL	25	132	18	31	Category 4 (*N9) (*N16)
113	HBD2-P05	800A/SKHA8: HBD2	0.208	12.26	12.26	5.02	2	0.000	Yes	PNL	25	132	18	31	Category 4 (*N9) (*N16)

	Bus Name	Protective Device Name	Bus kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Prot Dev Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	Required Protective FR Clothing Category
114	HBD2-P06	800A/SKHA8: HBD2	0.208	12.25	12.25	5.02	2	0.000	Yes	PNL	25	132	18	31	Category 4 (*N9) (*N16)
115	HBD2-P07	800A/SKHA8: HBD2	0.208	12.25	12.25	5.02	2	0.000	Yes	PNL	25	132	18	31	Category 4 (*N9) (*N16)
116	HBD2-P08	800A/SKHA8: HBD2	0.208	12.25	12.25	5.02	2	0.000	Yes	PNL	25	132	18	31	Category 4 (*N9) (*N16)
117	HBD2-P09	800A/SKHA8: HBD2	0.208	12.25	12.25	5.02	2	0.000	Yes	PNL	25	132	18	31	Category 4 (*N9) (*N16)
118	HBD2-P10	800A/SKHA8: HBD2	0.208	12.24	12.24	5.01	2	0.000	Yes	PNL	25	132	18	31	Category 4 (*N9) (*N16)
119	HBD2-P11	800A/SKHA8: HBD2	0.208	9.26	9.26	4.12	2	0.000	Yes	PNL	25	116	18	25	Category 4 (*N9) (*N16)
120	HBD2-P12	800A/SKHA8: HBD2	0.208	12.26	12.26	5.02	2	0.000	Yes	PNL	25	132	18	31	Category 4 (*N9) (*N16)
121	HBD3-P01	800A/SKHA8: HBD3	0.208	10.29	10.29	4.44	2	0.000	Yes	PNL	25	122	18	28	Category 4 (*N9) (*N16)
122	HBD3-P02	800A/SKHA8: HBD3	0.208	10.29	10.29	4.44	2	0.000	Yes	PNL	25	122	18	28	Category 4 (*N9) (*N16)
123	HBD3-P03	800A/SKHA8: HBD3	0.208	10.29	10.29	4.44	2	0.000	Yes	PNL	25	122	18	28	Category 4 (*N9) (*N16)
124	HBD3-P04	800A/SKHA8: HBD3	0.208	10.28	10.28	4.44	2	0.000	Yes	PNL	25	122	18	28	Category 4 (*N9) (*N16)
125	HBD3-P05	800A/SKHA8: HBD3	0.208	10.28	10.28	4.44	2	0.000	Yes	PNL	25	122	18	28	Category 4 (*N9) (*N16)
126	HBD3-P06	800A/SKHA8: HBD3	0.208	10.28	10.28	4.44	2	0.000	Yes	PNL	25	122	18	28	Category 4 (*N9) (*N16)
127	HBD3-P07	800A/SKHA8: HBD3	0.208	10.28	10.28	4.43	2	0.000	Yes	PNL	25	122	18	28	Category 4 (*N9) (*N16)
128	HBD3-P08	800A/SKHA8: HBD3	0.208	10.28	10.28	4.43	2	0.000	Yes	PNL	25	122	18	28	Category 4 (*N9) (*N16)
129	HBD3-P09	800A/SKHA8: HBD3	0.208	10.28	10.28	4.43	2	0.000	Yes	PNL	25	122	18	28	Category 4 (*N9) (*N16)
130	HBD3-P10	800A/SKHA8: HBD3	0.208	10.27	10.27	4.43	2	0.000	Yes	PNL	25	122	18	28	Category 4 (*N9) (*N16)
131	HBD3-P11	800A/SKHA8: HBD3	0.208	10.27	10.27	4.43	2	0.000	Yes	PNL	25	122	18	28	Category 4 (*N9) (*N16)
132	HBD3-P12	800A/SKHA8: HBD3	0.208	10.27	10.27	4.43	2	0.000	Yes	PNL	25	122	18	28	Category 4 (*N9) (*N16)
133	HBD3-P13	800A/SKHA8: HBD3	0.208	10.27	10.27	4.43	2	0.000	Yes	PNL	25	122	18	28	Category 4 (*N9) (*N16)
134	HBD3-P14	800A/SKHA8: HBD3	0.208	8.08	8.08	3.74	2	0.000	Yes	PNL	25	109	18	23	Category 3 (*N9) (*N16)
135	HBD4-P01	800A/SKHA8: HBD4	0.208	16.00	16.00	5.14	2	0.000	Yes	PNL	25	134	18	32	Category 4 (*N3) (*N9) (*N16)
136	HBD4-P02	800A/SKHA8: HBD4	0.208	15.99	15.99	5.14	2	0.000	Yes	PNL	25	134	18	32	Category 4 (*N3) (*N9) (*N16)
137	HBD4-P03	800A/SKHA8: HBD4	0.208	15.99	15.99	5.14	2	0.000	Yes	PNL	25	134	18	32	Category 4 (*N3) (*N9) (*N16)
138	HBD4-P04	800A/SKHA8: HBD4	0.208	15.98	15.98	5.14	2	0.000	Yes	PNL	25	134	18	32	Category 4 (*N3) (*N9) (*N16)
139	HBD4-P05	800A/SKHA8: HBD4	0.208	15.98	15.98	5.14	2	0.000	Yes	PNL	25	134	18	32	Category 4 (*N3) (*N9) (*N16)
140	HBD4-P06	800A/SKHA8: HBD4	0.208	15.98	15.98	5.14	2	0.000	Yes	PNL	25	134	18	32	Category 4 (*N3) (*N9) (*N16)

	Bus Name	Protective Device Name	Bus kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Prot Dev Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	Required Protective FR Clothing Category
141	HBD4-P07	800A/SKHA8: HBD4	0.208	15.97	15.97	5.14	2	0.000	Yes	PNL	25	134	18	32	Category 4 (*N3) (*N9) (*N16)
142	HBD4-P08	800A/SKHA8: HBD4	0.208	11.27	11.27	4.73	2	0.000	Yes	PNL	25	127	18	30	Category 4 (*N9) (*N16)
143	HBD5-P01	800A/SKHA8: HBD5	0.208	20.32	20.32	6.08	0.49	0.000	Yes	PNL	25	64	18	9.5	Category 3 (*N3) (*N16)
144	HBD5-P02	800A/SKHA8: HBD5	0.208	20.31	20.31	6.08	0.49	0.000	Yes	PNL	25	64	18	9.5	Category 3 (*N3) (*N16)
145	HBD5-P03	800A/SKHA8: HBD5	0.208	20.31	20.31	6.08	0.49	0.000	Yes	PNL	25	64	18	9.5	Category 3 (*N3) (*N16)
146	HBD5-P04	800A/SKHA8: HBD5	0.208	20.30	20.30	6.08	0.491	0.000	Yes	PNL	25	64	18	9.5	Category 3 (*N3) (*N16)
147	HBD5-P05	800A/SKHA8: HBD5	0.208	20.29	20.29	6.08	0.491	0.000	Yes	PNL	25	64	18	9.5	Category 3 (*N3) (*N16)
148	HBD5-P06	800A/SKHA8: HBD5	0.208	20.29	20.29	6.08	0.491	0.000	Yes	PNL	25	64	18	9.5	Category 3 (*N3) (*N16)
149	HBD5-P07	800A/SKHA8: HBD5	0.208	20.28	20.28	6.08	0.491	0.000	Yes	PNL	25	64	18	9.5	Category 3 (*N3) (*N16)
150	HBD5-P08	800A/SKHA8: HBD5	0.208	20.28	20.28	6.07	0.491	0.000	Yes	PNL	25	64	18	9.5	Category 3 (*N3) (*N16)
151	HBD5-P09	800A/SKHA8: HBD5	0.208	20.27	20.27	6.07	0.491	0.000	Yes	PNL	25	64	18	9.5	Category 3 (*N3) (*N16)
152	HBD5-P10	800A/SKHA8: HBD5	0.208	13.29	13.29	5.31	2	0.000	Yes	PNL	25	137	18	33	Category 4 (*N9) (*N16)
153	HBD6-P01	800A/SKHA8: HBD6	0.208	12.27	12.27	5.02	2	0.000	Yes	PNL	25	132	18	32	Category 4 (*N9) (*N16)
154	HBD6-P02	800A/SKHA8: HBD6	0.208	12.27	12.27	5.02	2	0.000	Yes	PNL	25	132	18	31	Category 4 (*N9) (*N16)
155	HBD6-P03	800A/SKHA8: HBD6	0.208	12.27	12.27	5.02	2	0.000	Yes	PNL	25	132	18	31	Category 4 (*N9) (*N16)
156	HBD6-P04	800A/SKHA8: HBD6	0.208	12.27	12.27	5.02	2	0.000	Yes	PNL	25	132	18	31	Category 4 (*N9) (*N16)
157	HBD6-P05	800A/SKHA8: HBD6	0.208	12.26	12.26	5.02	2	0.000	Yes	PNL	25	132	18	31	Category 4 (*N9) (*N16)
158	HBD6-P06	800A/SKHA8: HBD6	0.208	12.26	12.26	5.02	2	0.000	Yes	PNL	25	132	18	31	Category 4 (*N9) (*N16)
159	HBD6-P07	800A/SKHA8: HBD6	0.208	12.26	12.26	5.02	2	0.000	Yes	PNL	25	132	18	31	Category 4 (*N9) (*N16)
160	HBD6-P08	800A/SKHA8: HBD6	0.208	12.26	12.26	5.02	2	0.000	Yes	PNL	25	132	18	31	Category 4 (*N9) (*N16)
161	HBD6-P09	800A/SKHA8: HBD6	0.208	12.26	12.26	5.02	2	0.000	Yes	PNL	25	132	18	31	Category 4 (*N9) (*N16)
162	HBD6-P10	800A/SKHA8: HBD6	0.208	12.25	12.25	5.02	2	0.000	Yes	PNL	25	132	18	31	Category 4 (*N9) (*N16)
163	HBD6-P11	800A/SKHA8: HBD6	0.208	12.25	12.25	5.02	2	0.000	Yes	PNL	25	132	18	31	Category 4 (*N9) (*N16)
164	HBD6-P12	800A/SKHA8: HBD6	0.208	12.25	12.25	5.02	2	0.000	Yes	PNL	25	132	18	31	Category 4 (*N9) (*N16)
165	HBD6-P13	800A/SKHA8: HBD6	0.208	9.27	9.27	4.12	2	0.000	Yes	PNL	25	116	18	25	Category 4 (*N9) (*N16)
166	HBD7-P01	800A/SKLA8: HBD7	0.48	17.40	17.40	8.95	0.255	0.000	Yes	PNL	25	55	18	7.5	Category 2 (*N3) (*N16)
167	HBD7-P02	800A/SKLA8: HBD7	0.48	17.40	17.40	8.95	0.255	0.000	Yes	PNL	25	55	18	7.5	Category 2 (*N3) (*N16)
168	HBD7-P03	800A/SKLA8: HBD7	0.48	17.40	17.40	8.95	0.255	0.000	Yes	PNL	25	55	18	7.5	Category 2 (*N3) (*N16)
169	HBD7-P04	800A/SKLA8: HBD7	0.48	17.40	17.40	8.94	0.255	0.000	Yes	PNL	25	55	18	7.5	Category 2 (*N3) (*N16)
170	HBD7-P05	800A/SKLA8: HBD7	0.48	13.11	13.11	7.02	0.384	0.000	Yes	PNL	25	60	18	8.7	Category 3 (*N3) (*N16)

	Bus Name	Protective Device Name	Bus kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Prot Dev Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	Required Protective FR Clothing Category
171	HBD8-P01	800A/SKLA8: HBD8	0.48	22.00	22.00	10.93	0.035	0.000	Yes	PNL	25	19	18	1.3	Category 1 (*N3)
172	HBD8-P02	800A/SKLA8: HBD8	0.48	22.00	22.00	10.93	0.035	0.000	Yes	PNL	25	19	18	1.3	Category 1 (*N3)
173	HBD8-P03	800A/SKLA8: HBD8	0.48	21.99	21.99	10.93	0.035	0.000	Yes	PNL	25	19	18	1.3	Category 1 (*N3)
174	HBD8-P04	800A/SKLA8: HBD8	0.48	21.99	21.99	10.93	0.035	0.000	Yes	PNL	25	19	18	1.3	Category 1 (*N3)
175	HBD8-P05	800A/SKLA8: HBD8	0.48	15.60	15.60	8.15	0.299	0.000	Yes	PNL	25	57	18	7.9	Category 2 (*N3) (*N16)
176	HBD9-P01	800A/SKLA8: HBD9	0.48	28.81	28.81	16.19	0.025	0.000	Yes	PNL	25	20	18	1.4	Category 1
177	HBD9-P02	800A/SKLA8: HBD9	0.48	28.81	28.81	16.19	0.025	0.000	Yes	PNL	25	20	18	1.4	Category 1
178	HBD9-P03	800A/SKLA8: HBD9	0.48	18.85	18.85	9.58	0.227	0.000	Yes	PNL	25	54	18	7.2	Category 2 (*N3) (*N16)
179	HBE1-P01	800A/SKHA8: HBE1	0.208	17.53	17.53	5.48	2	0.000	Yes	PNL	25	140	18	35	Category 4 (*N3) (*N9) (*N16)
180	HBE1-P02	800A/SKHA8: HBE1	0.208	17.53	17.53	5.48	2	0.000	Yes	PNL	25	140	18	35	Category 4 (*N3) (*N9) (*N16)
181	HBE1-P03	800A/SKHA8: HBE1	0.208	17.52	17.52	5.48	2	0.000	Yes	PNL	25	140	18	35	Category 4 (*N3) (*N9) (*N16)
182	HBE1-P04	800A/SKHA8: HBE1	0.208	17.52	17.52	5.48	2	0.000	Yes	PNL	25	140	18	35	Category 4 (*N3) (*N9) (*N16)
183	HBE1-P05	800A/SKHA8: HBE1	0.208	17.52	17.52	5.48	2	0.000	Yes	PNL	25	140	18	35	Category 4 (*N3) (*N9) (*N16)
184	HBE1-P06	800A/SKHA8: HBE1	0.208	12.03	12.03	4.95	2	0.000	Yes	PNL	25	131	18	31	Category 4 (*N9) (*N16)
185	HBE2-P01	800A/SKHA8: HBE2	0.208	14.21	14.21	5.57	2	0.000	Yes	PNL	25	141	18	35	Category 4 (*N9) (*N16)
186	HBE2-P02	800A/SKHA8: HBE2	0.208	14.21	14.21	5.57	2	0.000	Yes	PNL	25	141	18	35	Category 4 (*N9) (*N16)
187	HBE2-P03	800A/SKHA8: HBE2	0.208	14.21	14.21	5.57	2	0.000	Yes	PNL	25	141	18	35	Category 4 (*N9) (*N16)
188	HBE2-P04	800A/SKHA8: HBE2	0.208	14.20	14.20	5.57	2	0.000	Yes	PNL	25	141	18	35	Category 4 (*N9) (*N16)
189	HBE2-P05	800A/SKHA8: HBE2	0.208	14.20	14.20	5.56	2	0.000	Yes	PNL	25	141	18	35	Category 4 (*N9) (*N16)
190	HBE2-P06	800A/SKHA8: HBE2	0.208	14.20	14.20	5.56	2	0.000	Yes	PNL	25	141	18	35	Category 4 (*N9) (*N16)
191	HBE2-P07	800A/SKHA8: HBE2	0.208	14.19	14.19	5.56	2	0.000	Yes	PNL	25	141	18	35	Category 4 (*N9) (*N16)
192	HBE2-P08	800A/SKHA8: HBE2	0.208	14.19	14.19	5.56	2	0.000	Yes	PNL	25	141	18	35	Category 4 (*N9) (*N16)
193	HBE2-P09	800A/SKHA8: HBE2	0.208	14.19	14.19	5.56	2	0.000	Yes	PNL	25	141	18	35	Category 4 (*N9) (*N16)
194	HBE2-P10	800A/SKHA8: HBE2	0.208	14.19	14.19	5.56	2	0.000	Yes	PNL	25	141	18	35	Category 4 (*N9) (*N16)
195	HBE2-P11	800A/SKHA8: HBE2	0.208	10.34	10.34	4.45	2	0.000	Yes	PNL	25	122	18	28	Category 4 (*N9) (*N16)
196	HBE3-P01	800A/SKHA8: HBE3	0.208	9.83	9.83	4.30	2	0.000	Yes	PNL	25	119	18	27	Category 4 (*N9) (*N16)
197	HBE3-P02	800A/SKHA8: HBE3	0.208	9.83	9.83	4.30	2	0.000	Yes	PNL	25	119	18	27	Category 4 (*N9) (*N16)

	Bus Name	Protective Device Name	Bus kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Prot Dev Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	Required Protective FR Clothing Category
198	HBE3-P03	800A/SKHA8: HBE3	0.208	9.83	9.83	4.30	2	0.000	Yes	PNL	25	119	18	27	Category 4 (*N9) (*N16)
199	HBE3-P04	800A/SKHA8: HBE3	0.208	9.83	9.83	4.30	2	0.000	Yes	PNL	25	119	18	27	Category 4 (*N9) (*N16)
200	HBE3-P05	800A/SKHA8: HBE3	0.208	9.83	9.83	4.30	2	0.000	Yes	PNL	25	119	18	27	Category 4 (*N9) (*N16)
201	HBE3-P06	800A/SKHA8: HBE3	0.208	9.82	9.82	4.30	2	0.000	Yes	PNL	25	119	18	27	Category 4 (*N9) (*N16)
202	HBE3-P07	800A/SKHA8: HBE3	0.208	9.82	9.82	4.30	2	0.000	Yes	PNL	25	119	18	27	Category 4 (*N9) (*N16)
203	HBE3-P08	800A/SKHA8: HBE3	0.208	9.82	9.82	4.30	2	0.000	Yes	PNL	25	119	18	27	Category 4 (*N9) (*N16)
204	HBE3-P09	800A/SKHA8: HBE3	0.208	9.82	9.82	4.29	2	0.000	Yes	PNL	25	119	18	27	Category 4 (*N9) (*N16)
205	HBE3-P10	800A/SKHA8: HBE3	0.208	9.82	9.82	4.29	2	0.000	Yes	PNL	25	119	18	27	Category 4 (*N9) (*N16)
206	HBE3-P11	800A/SKHA8: HBE3	0.208	7.80	7.80	3.65	2	0.000	Yes	PNL	25	107	18	22	Category 3 (*N9) (*N16)
207	HBE4-P01	800A/SKHA8: HBE4	0.208	9.63	9.63	4.23	2	0.000	Yes	PNL	25	118	18	26	Category 4 (*N9) (*N16)
208	HBE4-P02	800A/SKHA8: HBE4	0.208	9.62	9.62	4.23	2	0.000	Yes	PNL	25	118	18	26	Category 4 (*N9) (*N16)
209	HBE4-P03	800A/SKHA8: HBE4	0.208	9.62	9.62	4.23	2	0.000	Yes	PNL	25	118	18	26	Category 4 (*N9) (*N16)
210	HBE4-P04	800A/SKHA8: HBE4	0.208	9.62	9.62	4.23	2	0.000	Yes	PNL	25	118	18	26	Category 4 (*N9) (*N16)
211	HBE4-P05	800A/SKHA8: HBE4	0.208	9.62	9.62	4.23	2	0.000	Yes	PNL	25	118	18	26	Category 4 (*N9) (*N16)
212	HBE4-P06	800A/SKHA8: HBE4	0.208	9.62	9.62	4.23	2	0.000	Yes	PNL	25	118	18	26	Category 4 (*N9) (*N16)
213	HBE4-P07	800A/SKHA8: HBE4	0.208	9.62	9.62	4.23	2	0.000	Yes	PNL	25	118	18	26	Category 4 (*N9) (*N16)
214	HBE4-P08	800A/SKHA8: HBE4	0.208	7.67	7.67	3.61	2	0.000	Yes	PNL	25	106	18	22	Category 3 (*N9) (*N16)
215	HBE5-P01	800A/SKHA8: HBE5	0.208	12.62	12.62	5.12	2	0.000	Yes	PNL	25	134	18	32	Category 4 (*N9) (*N16)
216	HBE5-P02	800A/SKHA8: HBE5	0.208	12.62	12.62	5.12	2	0.000	Yes	PNL	25	134	18	32	Category 4 (*N9) (*N16)
217	HBE5-P03	800A/SKHA8: HBE5	0.208	12.61	12.61	5.12	2	0.000	Yes	PNL	25	134	18	32	Category 4 (*N9) (*N16)
218	HBE5-P04	800A/SKHA8: HBE5	0.208	12.61	12.61	5.12	2	0.000	Yes	PNL	25	134	18	32	Category 4 (*N9) (*N16)
219	HBE5-P05	800A/SKHA8: HBE5	0.208	12.61	12.61	5.12	2	0.000	Yes	PNL	25	134	18	32	Category 4 (*N9) (*N16)
220	HBE5-P06	800A/SKHA8: HBE5	0.208	12.61	12.61	5.12	2	0.000	Yes	PNL	25	134	18	32	Category 4 (*N9) (*N16)
221	HBE5-P07	800A/SKHA8: HBE5	0.208	12.60	12.60	5.12	2	0.000	Yes	PNL	25	134	18	32	Category 4 (*N9) (*N16)
222	HBE5-P08	800A/SKHA8: HBE5	0.208	12.60	12.60	5.12	2	0.000	Yes	PNL	25	134	18	32	Category 4 (*N9) (*N16)
223	HBE5-P09	800A/SKHA8: HBE5	0.208	12.60	12.60	5.12	2	0.000	Yes	PNL	25	134	18	32	Category 4 (*N9) (*N16)
224	HBE5-P10	800A/SKHA8: HBE5	0.208	10.40	10.40	4.47	2	0.000	Yes	PNL	25	122	18	28	Category 4 (*N9) (*N16)
225	HBE6-P01	800A/SKHA8: HBE6	0.208	12.27	12.27	5.02	2	0.000	Yes	PNL	25	132	18	31	Category 4 (*N9) (*N16)
226	HBE6-P02	800A/SKHA8: HBE6	0.208	12.27	12.27	5.02	2	0.000	Yes	PNL	25	132	18	31	Category 4 (*N9) (*N16)
227	HBE6-P03	800A/SKHA8: HBE6	0.208	12.27	12.27	5.02	2	0.000	Yes	PNL	25	132	18	31	Category 4 (*N9) (*N16)
228	HBE6-P04	800A/SKHA8: HBE6	0.208	12.27	12.27	5.02	2	0.000	Yes	PNL	25	132	18	31	Category 4 (*N9) (*N16)

	Bus Name	Protective Device Name	Bus kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Prot Dev Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	Required Protective FR Clothing Category
229	HBE6-P05	800A/SKHA8: HBE6	0.208	10.25	10.25	4.43	2	0.000	Yes	PNL	25	122	18	27	Category 4 (*N9) (*N16)
230	HBE7-P01	800A/SKLA8: HBE7	0.48	17.40	17.40	8.95	0.255	0.000	Yes	PNL	25	55	18	7.5	Category 2 (*N3) (*N16)
231	HBE7-P02	800A/SKLA8: HBE7	0.48	17.40	17.40	8.95	0.255	0.000	Yes	PNL	25	55	18	7.5	Category 2 (*N3) (*N16)
232	HBE7-P03	800A/SKLA8: HBE7	0.48	17.40	17.40	8.95	0.255	0.000	Yes	PNL	25	55	18	7.5	Category 2 (*N3) (*N16)
233	HBE7-P04	800A/SKLA8: HBE7	0.48	17.40	17.40	8.94	0.255	0.000	Yes	PNL	25	55	18	7.5	Category 2 (*N3) (*N16)
234	HBE7-P05	800A/SKLA8: HBE7	0.48	17.39	17.39	8.94	0.255	0.000	Yes	PNL	25	55	18	7.5	Category 2 (*N3) (*N16)
235	HBE7-P06	800A/SKLA8: HBE7	0.48	13.78	13.78	7.33	0.357	0.000	Yes	PNL	25	59	18	8.5	Category 3 (*N3) (*N16)
236	HBE8-P01	800A/SKLA8: HBE8	0.48	22.00	22.00	10.93	0.035	0.000	Yes	PNL	25	19	18	1.3	Category 1 (*N3)
237	HBE8-P02	800A/SKLA8: HBE8	0.48	22.00	22.00	10.93	0.035	0.000	Yes	PNL	25	19	18	1.3	Category 1 (*N3)
238	HBE8-P03	800A/SKLA8: HBE8	0.48	21.99	21.99	10.93	0.035	0.000	Yes	PNL	25	19	18	1.3	Category 1 (*N3)
239	HBE8-P04	800A/SKLA8: HBE8	0.48	21.99	21.99	10.93	0.035	0.000	Yes	PNL	25	19	18	1.3	Category 1 (*N3)
240	HBE8-P05	800A/SKLA8: HBE8	0.48	21.99	21.99	10.93	0.035	0.000	Yes	PNL	25	19	18	1.3	Category 1 (*N3)
241	HBE8-P06	800A/SKLA8: HBE8	0.48	16.57	16.57	8.58	0.274	0.000	Yes	PNL	25	56	18	7.7	Category 2 (*N3) (*N16)
242	HBE9-P01	800A/SKLA8: HBE9	0.48	34.37	34.37	18.83	0.025	0.000	Yes	PNL	25	22	18	1.6	Category 1
243	HBE9-P02	800A/SKLA8: HBE9	0.48	34.37	34.37	18.83	0.025	0.000	Yes	PNL	25	22	18	1.6	Category 1
244	HBE9-P03	800A/SKLA8: HBE9	0.48	34.36	34.36	18.82	0.025	0.000	Yes	PNL	25	22	18	1.6	Category 1
245	HBE9-P04	800A/SKLA8: HBE9	0.48	34.36	34.36	18.82	0.025	0.000	Yes	PNL	25	22	18	1.6	Category 1
246	HBE9-P05	800A/SKLA8: HBE9	0.48	34.35	34.35	18.82	0.025	0.000	Yes	PNL	25	22	18	1.6	Category 1
247	HBE9-P06	800A/SKLA8: HBE9	0.48	34.34	34.34	18.81	0.025	0.000	Yes	PNL	25	22	18	1.6	Category 1
248	HBE9-P07	800A/SKLA8: HBE9	0.48	34.34	34.34	18.81	0.025	0.000	Yes	PNL	25	22	18	1.6	Category 1
249	HBE9-P08	800A/SKLA8: HBE9	0.48	24.50	24.50	14.10	0.025	0.000	Yes	PNL	25	18	18	1.2	Category 1
250	HMB1-P01	800A/SKLA8: HBM1	0.48	16.45	16.45	8.53	0.282	0.000	Yes	PNL	25	56	18	7.8	Category 2 (*N3) (*N16)
251	HMB1-P02	800A/SKLA8: HBM1	0.48	16.45	16.45	8.53	0.282	0.000	Yes	PNL	25	56	18	7.8	Category 2 (*N3) (*N16)
252	HMB1-P03	800A/SKLA8: HBM1	0.48	16.45	16.45	8.53	0.282	0.000	Yes	PNL	25	56	18	7.8	Category 2 (*N3) (*N16)
253	HMB1-P04	800A/SKLA8: HBM1	0.48	16.44	16.44	8.52	0.282	0.000	Yes	PNL	25	56	18	7.8	Category 2 (*N3) (*N16)
254	HMB1-P05	800A/SKLA8: HBM1	0.48	13.63	13.63	7.26	0.369	0.000	Yes	PNL	25	60	18	8.6	Category 3 (*N3) (*N16)
255	HMB2-P01	800A/SKLA8: HBM2	0.48	12.75	12.75	6.86	0.406	0.000	Yes	PNL	25	61	18	8.9	Category 3 (*N3) (*N16)
256	HMB2-P02	800A/SKLA8: HBM2	0.48	12.75	12.75	6.86	0.406	0.000	Yes	PNL	25	61	18	8.9	Category 3 (*N3) (*N16)
257	HMB2-P03	800A/SKLA8: HBM2	0.48	12.74	12.74	6.86	0.406	0.000	Yes	PNL	25	61	18	8.9	Category 3 (*N3) (*N16)
258	HMB2-P04	800A/SKLA8: HBM2	0.48	10.98	10.98	6.04	2	0.000	Yes	PNL	25	148	18	38	Category 4 (*N3) (*N9) (*N16)

	Bus Name	Protective Device Name	Bus kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Prot Dev Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	Required Protective FR Clothing Category
259	HMB3-P01	800A/SKHA8: HMB3	0.208	7.51	7.51	3.56	2	0.000	Yes	PNL	25	105	18	22	Category 3 (*N9) (*N16)
260	HMB3-P02	800A/SKHA8: HMB3	0.208	7.51	7.51	3.56	2	0.000	Yes	PNL	25	105	18	22	Category 3 (*N9) (*N16)
261	HMB3-P03	800A/SKHA8: HMB3	0.208	7.51	7.51	3.56	2	0.000	Yes	PNL	25	105	18	22	Category 3 (*N9) (*N16)
262	HMB3-P04	800A/SKHA8: HMB3	0.208	7.51	7.51	3.56	2	0.000	Yes	PNL	25	105	18	22	Category 3 (*N9) (*N16)
263	HMB3-P05	800A/SKHA8: HMB3	0.208	7.51	7.51	3.56	2	0.000	Yes	PNL	25	105	18	22	Category 3 (*N9) (*N16)
264	HMB3-P06	800A/SKHA8: HMB3	0.208	7.51	7.51	3.56	2	0.000	Yes	PNL	25	105	18	22	Category 3 (*N9) (*N16)
265	HMB3-P07	800A/SKHA8: HMB3	0.208	6.33	6.33	3.15	2	0.000	Yes	PNL	25	97	18	19	Category 3 (*N9) (*N16)
266	HMB4-P01	800A/SKHA8: HBM4	0.208	7.78	7.78	3.65	2	0.000	Yes	PNL	25	107	18	22	Category 3 (*N9) (*N16)
267	HMB4-P02	800A/SKHA8: HBM4	0.208	7.78	7.78	3.65	2	0.000	Yes	PNL	25	107	18	22	Category 3 (*N9) (*N16)
268	HMB4-P03	800A/SKHA8: HBM4	0.208	7.77	7.77	3.65	2	0.000	Yes	PNL	25	107	18	22	Category 3 (*N9) (*N16)
269	HMB4-P04	800A/SKHA8: HBM4	0.208	7.77	7.77	3.64	2	0.000	Yes	PNL	25	107	18	22	Category 3 (*N9) (*N16)
270	HMB4-P05	800A/SKHA8: HBM4	0.208	7.77	7.77	3.64	2	0.000	Yes	PNL	25	107	18	22	Category 3 (*N9) (*N16)
271	HMB4-P06	800A/SKHA8: HBM4	0.208	7.77	7.77	3.64	2	0.000	Yes	PNL	25	107	18	22	Category 3 (*N9) (*N16)
272	HMB4-P07	800A/SKHA8: HBM4	0.208	7.77	7.77	3.64	2	0.000	Yes	PNL	25	107	18	22	Category 3 (*N9) (*N16)
273	HMB4-P08	800A/SKHA8: HBM4	0.208	6.51	6.51	3.22	2	0.000	Yes	PNL	25	99	18	19	Category 3 (*N9) (*N16)
274	HMB5-P01	800A/SKHA8: HBM5	0.208	8.77	8.77	3.97	2	0.000	Yes	PNL	25	113	18	24	Category 3 (*N9) (*N16)
275	HMB5-P02	800A/SKHA8: HBM5	0.208	7.20	7.20	3.45	2	0.000	Yes	PNL	25	103	18	21	Category 3 (*N9) (*N16)
276	HWP-3	125A/SEPA: HWP-3	0.48	5.36	5.25	3.77	0.025	0.000	Yes	PNL	25	7.7	18	0.30	Category 0
277	HWP-4	125A/SEPA: HWP-4	0.48	5.36	5.25	3.77	0.025	0.000	Yes	PNL	25	7.7	18	0.30	Category 0
278	HWP-5	100A/FBH: HWP-5	0.48	8.41	8.28	5.57	0.012	0.000	Yes	PNL	25	6.3	18	0.22	Category 0
279	K1	225A/SFLA: K1	0.48	9.98	9.98	6.55	0.025	0.000	Yes	PNL	25	11	18	0.52	Category 0
280	K1 (225A/SFHA: K1 LineSide)	225A/SFLA: K1	0.48	9.98	9.98	6.55	0.025	0.000	Yes	PNL	25	11	18	0.52	Category 0
281	K2	150A/THQD: K2	0.208	5.64	5.64	2.47	0.03	0.000	Yes	PNL	25	6.4	18	0.22	Category 0 (*N3)
282	K2 (150A/THQD: K2 LineSide)	225A/SFHA: K2	0.208	5.64	5.64	2.47	0.3	0.000	Yes	PNL	25	26	18	2.2	Category 1 (*N3) (*N16)
283	L1.1	100A/FBH6: L1.1	0.48	6.45	6.45	4.51	0.012	0.000	Yes	PNL	25	5.5	18	0.17	Category 0
284	L1.2	225A/SFLA: L1.2	0.48	7.15	7.15	4.92	0.025	0.000	Yes	PNL	25	9.0	18	0.39	Category 0
285	L1.3	100A/FBH6: L1.3	0.48	20.29	20.29	12.00	0.011	0.000	Yes	PNL	25	10	18	0.46	Category 0
286	L1.4	225A/SFLA: L1.4	0.48	12.20	12.20	7.77	0.025	0.000	Yes	PNL	25	12	18	0.63	Category 0
287	L1.5	100A/FBH6: L1.5	0.48	5.65	5.65	3.42	0.016	0.000	Yes	PNL	25	5.4	18	0.17	Category 0 (*N3)

	Bus Name	Protective Device Name	Bus kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Prot Dev Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	Required Protective FR Clothing Category
288	L1.6	100A/FBH6: L1.6	0.48	18.96	18.96	11.33	0.012	0.000	Yes	PNL	25	9.8	18	0.44	Category 0
289	L1.7	225A/SFLA: L1.7	0.48	6.24	6.24	4.38	0.025	0.000	Yes	PNL	25	8.4	18	0.34	Category 0
290	L2.1	100A/FBH6: L2.1	0.48	6.06	6.06	4.28	0.013	0.000	Yes	PNL	25	5.4	18	0.17	Category 0
291	L2.2	100A/FBH6: L2.2	0.48	4.59	4.59	2.87	0.026	0.000	Yes	PNL	25	6.5	18	0.23	Category 0 (*N3)
292	L2.3	100A/FBH6: L2.3	0.48	8.29	8.29	5.58	0.012	0.000	Yes	PNL	25	6.3	18	0.21	Category 0
293	L3.1	225A/SFLA: L3.1	0.48	27.94	27.94	15.77	0.025	0.000	Yes	PNL	25	19	18	1.4	Category 1
294	L3.3	225A/SFLA: L3.3	0.48	17.16	17.16	10.40	0.025	0.000	Yes	PNL	25	15	18	0.87	Category 0
295	L4.1	225A/SFLA: L4.1	0.48	13.50	13.50	8.47	0.025	0.000	Yes	PNL	25	13	18	0.69	Category 0
296	L4.2	225A/SFLA: L4.2	0.48	18.66	18.66	11.17	0.025	0.000	Yes	PNL	25	16	18	0.94	Category 0
297	L4.3	225A/SFLA: L4.3	0.48	11.76	11.76	7.53	0.025	0.000	Yes	PNL	25	12	18	0.61	Category 0
298	L5.1	225A/SFLA: L5.1	0.48	7.53	7.53	5.14	0.025	0.000	Yes	PNL	25	9.3	18	0.40	Category 0
299	L5.2	225A/SFLA: L5.2	0.48	7.16	7.16	4.93	0.025	0.000	Yes	PNL	25	9.0	18	0.39	Category 0
300	L5.3	100A/FBH: L5.3	0.48	4.96	4.96	3.06	0.021	0.000	Yes	PNL	25	5.9	18	0.19	Category 0 (*N3)
301	L5.3 (100A/SFHA: L5.3 LineSide)	100A/FBH: L5.3	0.48	4.96	4.96	3.06	0.021	0.000	Yes	PNL	25	5.9	18	0.19	Category 0 (*N3)
302	L6.1	100A/FBH: L6.1	0.48	24.72	24.72	14.21	0.011	0.000	Yes	PNL	25	11	18	0.53	Category 0
303	L6.2	100A/FBH: L6.2	0.48	24.16	24.16	13.93	0.011	0.000	Yes	PNL	25	11	18	0.52	Category 0
304	LD DK SWA FL1	200A/SFHA: LD DK SWA FL1	0.208	3.56	3.56	1.79	0.42	0.000	Yes	PNL	25	26	18	2.2	Category 1 (*N3) (*N16)
305	LD DK SWA FL2	200A/SFHA: LD DK SWA FL2	0.208	7.30	7.30	3.49	0.025	0.000	Yes	PNL	25	7.2	18	0.27	Category 0
306	LD DK SWB FL1	200A/SFHA: LD DK SWB FL1	0.208	3.56	3.56	1.79	0.42	0.000	Yes	PNL	25	26	18	2.2	Category 1 (*N3) (*N16)
307	LD DK SWB FL2	200A/SFHA: LD DK SWB FL2	0.208	7.30	7.30	3.49	0.025	0.000	Yes	PNL	25	7.2	18	0.27	Category 0
308	LD DK SWC FL2	200A/SFHA: LD DK SWC FL2	0.208	7.30	7.30	3.49	0.025	0.000	Yes	PNL	25	7.2	18	0.27	Category 0
309	LD DK SWD FL2	200A/SFHA: LD DK SWD FL2	0.208	7.30	7.30	3.49	0.025	0.000	Yes	PNL	25	7.2	18	0.27	Category 0
310	LD DK SWE FL2	200A/SFHA: LD DK SWE FL2	0.208	7.30	7.30	3.49	0.025	0.000	Yes	PNL	25	7.2	18	0.27	Category 0
311	LOADBANKGEN1	800A/PJ: LOADBANK GEN 1	0.48	17.70	17.70	10.68	0.06	0.000	Yes	PNL	25	26	18	2.1	Category 1

	Bus Name	Protective Device Name	Bus kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Prot Dev Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	Required Protective FR Clothing Category
312	LOADBANKGEN2	1600Ax.5/RL: LOADBANK GEN 2	0.48	17.70	17.70	10.68	0.06	0.000	Yes	PNL	25	26	18	2.1	Category 1
313	M1.1	100A/FBH6: M1.1	0.48	8.74	8.74	5.84	0.012	0.000	Yes	PNL	25	6.5	18	0.22	Category 0
314	M1.1 (100A/SFHA: M1.1 LineSide)	100A/FBH6: M1.1	0.48	8.74	8.74	5.84	0.012	0.000	Yes	PNL	25	6.5	18	0.22	Category 0
315	M1.2	100A/FBH6: M1.2	0.48	23.54	23.54	13.62	0.011	0.000	Yes	PNL	25	11	18	0.51	Category 0
316	M1.2 (100A/SFHA: M1.2 LineSide)	100A/FBH6: M1.2	0.48	23.54	23.54	13.62	0.011	0.000	Yes	PNL	25	11	18	0.51	Category 0
317	MCC 3.1	1600A/SS: MCC 3.1	0.48	52.90	49.50	25.46	0.172	0.000	Yes	PNL	25	85	18	15	Category 3 (*N16)
318	MCC 3.2	600A/SGLA: MCC 3.2	0.48	48.75	47.87	24.92	0.025	0.000	Yes	PNL	25	27	18	2.3	Category 1
319	MDP 1.1	1600A/SS: MDP 1.1	0.48	29.37	28.13	15.77	0.172	0.000	Yes	PNL	25	64	18	9.5	Category 3 (*N16)
320	MDP 1.1 (1600A/SS: MDP 1.1 (M) LineSide)	1600A/SS: MDP 1.1	0.48	29.37	28.13	15.77	0.172	0.000	Yes	PNL	25	64	18	9.5	Category 3 (*N16)
321	MDP 1.2	1200A/SKLA12: MDP 1.2	0.48	42.83	42.20	22.39	0.025	0.000	Yes	PNL	25	25	18	2.0	Category 1
322	MDP 1.2 (1200A/SKLA12: MDP 1.2 (M) LineSide)	1200A/SKLA12: MDP 1.2	0.48	42.83	42.20	22.39	0.025	0.000	Yes	PNL	25	25	18	2.0	Category 1
323	MDP 1.3	2000A/SS: MDP 1.3	0.208	24.10	24.10	8.07	0.172	0.000	Yes	PNL	25	40	18	4.5	Category 2 (*N16)
324	MDP 1.3 (2000A/SS: MDP 1.3 (M) LineSide)	2000A/SS: MDP 1.3	0.208	24.10	24.10	8.07	0.172	0.000	Yes	PNL	25	40	18	4.5	Category 2 (*N16)
325	MDP 2.1	1200A/SKHB12: MDP 2.1	0.208	18.71	18.71	6.75	0.175	0.000	Yes	PNL	25	36	18	3.8	Category 1 (*N16)
326	MDP 2.1 (1200A/SKHB12: MDP 2.1 (M) LineSide)	1200A/SKHB12: MDP 2.1	0.208	18.71	18.71	6.75	0.175	0.000	Yes	PNL	25	36	18	3.8	Category 1 (*N16)
327	MDP 3.1	1600A/SS: MDP 3.1	0.48	55.03	52.81	22.96	0.172	0.000	Yes	PNL	25	78	18	13	Category 3 (*N3) (*N16)
328	MDP 3.2	1000A/SKLLB12: MDP 3.2	0.48	49.46	48.93	25.41	0.025	0.000	Yes	PNL	25	27	18	2.3	Category 1
329	MDP 3.3	2000A/SS: MDP 3.3	0.48	51.16	44.80	23.15	0.172	0.000	Yes	PNL	25	85	18	15	Category 3 (*N16)
330	MDP 3.4	1200A/SKLB12: MDP 3.4	0.48	50.00	47.96	24.87	0.025	0.000	Yes	PNL	25	27	18	2.3	Category 1
331	MDP 3.5	1200A/SKLB12: MDP 3.5	0.48	49.78	48.56	25.20	0.025	0.000	Yes	PNL	25	27	18	2.3	Category 1
332	MDP 3.6	1200A/SKLB12: MDP 3.6	0.48	21.82	21.82	12.77	0.175	0.000	Yes	PNL	25	55	18	7.4	Category 2 (*N16)

	Bus Name	Protective Device Name	Bus kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Prot Dev Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	Required Protective FR Clothing Category
333	MDP 3.6 (1200A/SKLB12: MDP 3.6 LineSide)	1200A/SKLA12: MDP 3.6	0.48	21.82	21.82	12.77	0.416	0.000	Yes	PNL	25	92	18	17	Category 3 (*N16)
334	MDP 6.1	1600A/SS: MDP 6.1	0.48	29.07	28.00	15.72	0.172	0.000	Yes	PNL	25	64	18	9.5	Category 3 (*N16)
335	MDP 6.2	1200A/SKLB12: MDP 6.2	0.48	28.36	27.00	12.93	0.175	0.000	Yes	PNL	25	57	18	7.9	Category 2 (*N3) (*N16)
336	NEDP-1	400A/SGLA: ATS-1 (N)	0.48	19.44	19.44	11.57	0.025	0.000	Yes	PNL	25	16	18	0.97	Category 0
337	NEL1.1	100A/HHED6: NEL1.1	0.48	1.81	1.81	1.52	0.02	0.000	Yes	PNL	25	3.6	18	0.09	Category 0
338	NEL1.1 (100A/HHED6: NEL1.1 LineSide)	100A/FBN: NEL1.1	0.48	1.81	1.81	1.29	1.322	0.000	Yes	PNL	25	42	18	4.8	Category 2 (*N3) (*N16)
339	NEL1.2	100A/HHED6: NEL1.2	0.48	3.02	3.02	2.36	0.017	0.000	Yes	PNL	25	4.4	18	0.12	Category 0
340	NEL1.2 (100A/HHED6: NEL1.2 LineSide)	100A/FBN: NEL1.2	0.48	3.02	3.02	2.00	0.599	0.000	Yes	PNL	25	35	18	3.5	Category 1 (*N3) (*N16)
341	NEL1.3	100A/HHED6: NEL1.3	0.48	2.89	2.89	2.27	0.017	0.000	Yes	PNL	25	4.3	18	0.11	Category 0
342	NEL1.3 (100A/HHED6: NEL1.3 LineSide)	225A/SFLA: EDP3.1	0.48	2.89	2.89	1.93	0.453	0.000	Yes	PNL	25	28	18	2.5	Category 1 (*N3) (*N5) (*N16)
343	NEL1.4	100A/HHED6: NEL1.4	0.48	2.24	2.24	1.83	0.019	0.000	Yes	PNL	25	3.9	18	0.10	Category 0
344	NEL1.4 (100A/HHED6: NEL1.4 LineSide)	100A/FBN: NEL1.4	0.48	2.24	2.24	1.55	0.933	0.000	Yes	PNL	25	38	18	4.1	Category 2 (*N3) (*N16)
345	NEL2.1	100A/HHED6: NEL2.1	0.48	3.32	3.32	2.56	0.016	0.000	Yes	PNL	25	4.6	18	0.13	Category 0
346	NEL2.1 (100A/HHED6: NEL2.1 LineSide)	100A/FBN: NEL2.1	0.48	3.32	3.32	2.18	0.064	0.000	Yes	PNL	25	9.4	18	0.41	Category 0 (*N3)
347	NEL2.2	100A/HHED6: NEL2.2	0.48	2.07	2.07	1.71	0.019	0.000	Yes	PNL	25	3.8	18	0.09	Category 0
348	NEL2.2 (100A/HHED6: NEL2.2 LineSide)	100A/FBN: NEL2.2	0.48	2.07	2.07	1.45	1.052	0.000	Yes	PNL	25	39	18	4.3	Category 2 (*N3) (*N16)
349	NEL2.3	100A/FBN: NEL2.3	0.48	7.66	7.66	5.22	0.012	0.000	Yes	PNL	25	6.0	18	0.20	Category 0
350	NEL2.3 (100A/HHED6: NEL2.3 LineSide)	100A/FBN: NEL2.3	0.48	7.66	7.66	5.22	0.012	0.000	Yes	PNL	25	6.0	18	0.20	Category 0
351	NEL3.1	100A/FBN: NEL3.1	0.48	11.65	11.65	7.47	0.012	0.000	Yes	PNL	25	7.6	18	0.29	Category 0
352	NEL3.1 (100A/SFHA: NEL3.1 LineSide)	100A/FBN: NEL3.1	0.48	11.65	11.65	7.47	0.012	0.000	Yes	PNL	25	7.6	18	0.29	Category 0
353	NEL4.2	100A/HHED6: NEL4.2	0.48	3.49	3.49	2.67	0.016	0.000	Yes	PNL	25	4.6	18	0.13	Category 0
354	NEL4.2 (100A/HHED6: NEL4.2 LineSide)	100A/FBN: NEL4.2	0.48	3.49	3.49	2.27	0.057	0.000	Yes	PNL	25	9.0	18	0.38	Category 0 (*N3)
355	NEL5.1	100A/HHED6: NEL5.1	0.48	3.98	3.98	2.99	0.016	0.000	Yes	PNL	25	4.9	18	0.14	Category 0

	Bus Name	Protective Device Name	Bus kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Prot Dev Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	Required Protective FR Clothing Category
356	NEL5.1 (100A/HHED6: NEL5.1 LineSide)	100A/FBN: NEL5.1	0.48	3.98	3.98	2.54	0.04	0.000	Yes	PNL	25	7.8	18	0.30	Category 0 (*N3)
357	NEL5.2	100A/HHED6: NEL5.2	0.48	2.18	2.18	1.78	0.019	0.000	Yes	PNL	25	3.9	18	0.10	Category 0
358	NEL5.2 (100A/HHED6: NEL5.2 LineSide)	100A/FBN: NEL5.2	0.48	2.18	2.18	1.51	0.975	0.000	Yes	PNL	25	39	18	4.2	Category 2 (*N3) (*N16)
359	NEL5.3	100A/FBN: NEL5.3	0.48	3.87	3.87	2.91	0.025	0.000	Yes	PNL	25	6.4	18	0.22	Category 0
360	NEL5.3 (100A/SFHA: NEL5.3 LineSide)	100A/FBN: NEL5.3	0.48	3.87	3.87	2.48	0.044	0.000	Yes	PNL	25	8.1	18	0.32	Category 0 (*N3)
361	NEL6.1	100A/HHED6: NEL6.1	0.48	3.30	3.30	2.54	0.016	0.000	Yes	PNL	25	4.5	18	0.12	Category 0
362	NEL6.1 (100A/HHED6: NEL6.1 LineSide)	100A/FBN: NEL6.1	0.48	3.30	3.30	2.16	0.065	0.000	Yes	PNL	25	9.4	18	0.41	Category 0 (*N3)
363	NSDP-1	800A/SKLA8: ATS-2 (N)	0.48	31.88	30.17	16.71	0.025	0.000	Yes	PNL	25	21	18	1.5	Category 1
364	NSDP-2	1000A/SKLB12: ATS-3 (N)	0.48	34.64	33.07	18.09	0.025	0.000	Yes	PNL	25	22	18	1.7	Category 1
365	NSDP-3	1000A/SKLLB12: ATS-6 (N)	0.48	36.77	33.88	18.38	0.025	0.000	Yes	PNL	25	23	18	1.8	Category 1
366	NSDP-4	1200A/SKLLB12: ATS-5 (N)	0.48	17.76	15.89	9.59	0.175	0.000	Yes	PNL	25	47	18	5.8	Category 2 (*N16)
367	NSDP-5	400A/SGLA: ATS-4 (N)	0.48	19.12	19.12	11.41	0.025	0.000	Yes	PNL	25	16	18	0.96	Category 0
368	P2.1	225A/SFLA: P2.1	0.48	22.67	22.67	13.20	0.025	0.000	Yes	PNL	25	17	18	1.1	Category 0
369	P2.1 (225A/SFHA: P2.1 LineSide)	225A/SFLA: P2.1	0.48	22.67	22.67	13.20	0.025	0.000	Yes	PNL	25	17	18	1.1	Category 0
370	P2.2	100A/SFHA: P2.2	0.48	2.52	2.52	2.02	0.025	0.000	Yes	PNL	25	5.0	18	0.15	Category 0
371	P2.2 (100A/SFHA: P2.2 LineSide)	100A/FBH: P2.2	0.48	2.52	2.52	1.72	0.778	0.000	Yes	PNL	25	37	18	3.8	Category 1 (*N3) (*N16)
372	PASS ELEV 1A	100A/RK5: PASS ELEV 1A	0.48	3.04	2.90	1.93	0.064	0.000	Yes	PNL	25	8.9	18	0.38	Category 0 (*N3)
373	PASS ELEV 1A (100A/RK5: PASS ELEV 1A LineSide)	100A/FBN: PASS ELEV 1A	0.48	3.04	2.90	1.93	0.648	0.000	Yes	PNL	25	35	18	3.6	Category 1 (*N3) (*N16)
374	PASS ELEV 1B	100A/RK5: PASS ELEV 1B	0.48	3.04	2.90	1.93	0.064	0.000	Yes	PNL	25	8.9	18	0.38	Category 0 (*N3)
375	PASS ELEV 1B (100A/RK5: PASS ELEV 1B LineSide)	100A/FBN: PASS ELEV 1B	0.48	3.04	2.90	1.93	0.648	0.000	Yes	PNL	25	35	18	3.6	Category 1 (*N3) (*N16)

	Bus Name	Protective Device Name	Bus kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Prot Dev Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	Required Protective FR Clothing Category
376	PASS ELEV 1C	100A/RK5: PASS ELEV 1C	0.48	3.04	2.90	1.93	0.064	0.000	Yes	PNL	25	8.9	18	0.38	Category 0 (*N3)
377	PASS ELEV 1C (100A/RK5: PASS ELEV 1C LineSide)	100A/FBN: PASS ELEV 1C	0.48	3.04	2.90	1.93	0.648	0.000	Yes	PNL	25	35	18	3.6	Category 1 (*N3) (*N16)
378	PASS ELEV 2A A	125A/RK5: PASS ELEV 2A A	0.48	6.77	6.51	4.52	0.008	0.000	Yes	PNL	25	4.5	18	0.12	Category 0
379	PASS ELEV 2A A (125A/RK5: PASS ELEV 2A A LineSide)	125A/SELA: PASS ELEV 2A A	0.48	6.77	6.51	4.52	0.025	0.000	Yes	PNL	25	8.8	18	0.37	Category 0
380	PASS ELEV 2A B	125A/RK5: PASS ELEV 2A B	0.48	6.77	6.51	4.52	0.008	0.000	Yes	PNL	25	4.5	18	0.12	Category 0
381	PASS ELEV 2A B (125A/RK5: PASS ELEV 2A B LineSide)	125A/SELA: PASS ELEV 2A B	0.48	6.77	6.51	4.52	0.025	0.000	Yes	PNL	25	8.8	18	0.37	Category 0
382	PASS ELEV 2B A	100A/RK5: PASS ELEV 2B A	0.48	5.85	5.72	4.06	0.008	0.000	Yes	PNL	25	4.1	18	0.11	Category 0
383	PASS ELEV 2B A (100A/RK5: PASS ELEV 2B A LineSide)	100A/FBN: PASS ELEV 2B A	0.48	5.85	5.72	3.45	0.016	0.000	Yes	PNL	25	5.5	18	0.17	Category 0 (*N3)
384	PASS ELEV 2B B	100A/RK5: PASS ELEV 2B B	0.48	5.85	5.72	4.06	0.008	0.000	Yes	PNL	25	4.1	18	0.11	Category 0
385	PASS ELEV 2B B (100A/RK5: PASS ELEV 2B B LineSide)	100A/FBN: PASS ELEV 2B B	0.48	5.85	5.72	3.45	0.016	0.000	Yes	PNL	25	5.5	18	0.17	Category 0 (*N3)
386	R1.1	225A/THQD: R1.1	0.208	22.21	22.21	7.62	0.019	0.000	Yes	PNL	25	10	18	0.47	Category 0
387	R1.1 (225A/THQD: R1.1 LineSide)	225A/SFHA: R1.1	0.208	22.21	22.21	7.62	0.025	0.000	Yes	PNL	25	12	18	0.62	Category 0
388	R1.10	400A/SGDA4: R1.10	0.208	28.75	28.75	9.13	0.025	0.000	Yes	PNL	25	14	18	0.75	Category 0
389	R1.10 (400A/SGHA4: R1.10 LineSide)	400A/SGDA4: R1.10	0.208	28.75	28.75	9.13	0.025	0.000	Yes	PNL	25	14	18	0.75	Category 0
390	R1.11	400A/SGDA4: R1.11	0.208	28.75	28.75	9.13	0.025	0.000	Yes	PNL	25	14	18	0.75	Category 0
391	R1.11 (400A/SGHA4: R1.11 LineSide)	400A/SGDA4: R1.11	0.208	28.75	28.75	9.13	0.025	0.000	Yes	PNL	25	14	18	0.75	Category 0
392	R1.12	400A/SGDA4: R1.12	0.208	28.75	28.75	9.13	0.025	0.000	Yes	PNL	25	14	18	0.75	Category 0
393	R1.12 (400A/SGHA4: R1.12 LineSide)	400A/SGDA4: R1.12	0.208	28.75	28.75	9.13	0.025	0.000	Yes	PNL	25	14	18	0.75	Category 0

	Bus Name	Protective Device Name	Bus kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Prot Dev Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	Required Protective FR Clothing Category
394	R1.13	400A/SGDA4: R1.13	0.208	28.03	28.03	8.97	0.025	0.000	Yes	PNL	25	13	18	0.74	Category 0
395	R1.13 (400A/SGHA4: R1.13 LineSide)	400A/SGDA4: R1.13	0.208	28.03	28.03	8.97	0.025	0.000	Yes	PNL	25	13	18	0.74	Category 0
396	R1.14	400A/SGDA4: R1.14	0.208	28.75	28.75	9.13	0.025	0.000	Yes	PNL	25	14	18	0.75	Category 0
397	R1.14 (400A/SGHA4: R1.14 LineSide)	400A/SGDA4: R1.14	0.208	28.75	28.75	9.13	0.025	0.000	Yes	PNL	25	14	18	0.75	Category 0
398	R1.15	225A/THQD: R1.15	0.208	22.75	22.75	7.75	0.019	0.000	Yes	PNL	25	10	18	0.48	Category 0
399	R1.15 (225A/THQD: R1.15 LineSide)	225A/SFHA: R1.15	0.208	22.75	22.75	7.75	0.025	0.000	Yes	PNL	25	12	18	0.63	Category 0
400	R1.16	400A/SGDA4: R1.16	0.208	7.88	7.88	3.13	0.496	0.000	Yes	PNL	25	41	18	4.7	Category 2 (*N3) (*N16)
401	R1.16 (400A/SGHA4: R1.16 LineSide)	400A/SGDA4: R1.16	0.208	7.88	7.88	3.13	0.496	0.000	Yes	PNL	25	41	18	4.7	Category 2 (*N3) (*N16)
402	R1.17	400A/SGDA4: R1.17	0.208	7.88	7.88	3.13	0.496	0.000	Yes	PNL	25	41	18	4.7	Category 2 (*N3) (*N16)
403	R1.17 (400A/SGHA4: R1.17 LineSide)	400A/SGDA4: R1.17	0.208	7.88	7.88	3.13	0.496	0.000	Yes	PNL	25	41	18	4.7	Category 2 (*N3) (*N16)
404	R1.18	400A/SGDA4: R1.18	0.208	7.88	7.88	3.13	0.496	0.000	Yes	PNL	25	41	18	4.7	Category 2 (*N3) (*N16)
405	R1.18 (400A/SGHA4: R1.18 LineSide)	400A/SGDA4: R1.18	0.208	7.88	7.88	3.13	0.496	0.000	Yes	PNL	25	41	18	4.7	Category 2 (*N3) (*N16)
406	R1.19	400A/SGDA4: R1.19	0.208	7.88	7.88	3.13	0.496	0.000	Yes	PNL	25	41	18	4.7	Category 2 (*N3) (*N16)
407	R1.19 (400A/SGHA4: R1.19 LineSide)	400A/SGDA4: R1.19	0.208	7.88	7.88	3.13	0.496	0.000	Yes	PNL	25	41	18	4.7	Category 2 (*N3) (*N16)
408	R1.2	400A/SGLA: R1.2	0.208	22.19	22.19	7.61	0.025	0.000	Yes	PNL	25	12	18	0.62	Category 0
409	R1.2 (400A/SGHA4: R1.2 LineSide)	400A/SGLA: R1.2	0.208	22.19	22.19	7.61	0.025	0.000	Yes	PNL	25	12	18	0.62	Category 0
410	R1.20	225A/SFHA: R1.20	0.208	5.55	5.55	2.45	0.306	0.000	Yes	PNL	25	26	18	2.2	Category 1 (*N3) (*N16)
411	R1.20 (225A/THQD: R1.20 LineSide)	225A/SFHA: R1.20	0.208	5.55	5.55	2.45	0.306	0.000	Yes	PNL	25	26	18	2.2	Category 1 (*N3) (*N16)
412	R1.21	225A/SFHA: R1.21	0.208	5.29	5.29	2.37	0.323	0.000	Yes	PNL	25	27	18	2.3	Category 1 (*N3) (*N16)
413	R1.21 (225A/THQD: R1.21 LineSide)	225A/SFHA: R1.21	0.208	5.29	5.29	2.37	0.323	0.000	Yes	PNL	25	27	18	2.3	Category 1 (*N3) (*N16)
414	R1.3	400A/SGLA: R1.3	0.208	21.75	21.75	7.51	0.025	0.000	Yes	PNL	25	12	18	0.61	Category 0
415	R1.3 (400A/SGHA4: R1.3 LineSide)	400A/SGLA: R1.3	0.208	21.75	21.75	7.51	0.025	0.000	Yes	PNL	25	12	18	0.61	Category 0
416	R1.4	400A/SGLA: R1.4	0.208	21.34	21.34	7.41	0.025	0.000	Yes	PNL	25	12	18	0.60	Category 0

	Bus Name	Protective Device Name	Bus kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Prot Dev Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	Required Protective FR Clothing Category
417	R1.4 (400A/SGHA4: R1.4 LineSide)	400A/SGLA: R1.4	0.208	21.34	21.34	7.41	0.025	0.000	Yes	PNL	25	12	18	0.60	Category 0
418	R1.5	400A/SGLA: R1.5	0.208	6.50	6.50	2.73	2	0.000	Yes	PNL	25	89	18	16	Category 3 (*N3) (*N9) (*N16)
419	R1.5 (400A/SGHA4: R1.5 LineSide)	400A/SGLA: R1.5	0.208	6.50	6.50	2.73	2	0.000	Yes	PNL	25	89	18	16	Category 3 (*N3) (*N9) (*N16)
420	R1.6	400A/SGLA: R1.6	0.208	6.50	6.50	2.73	2	0.000	Yes	PNL	25	89	18	16	Category 3 (*N3) (*N9) (*N16)
421	R1.6 (400A/SGHA4: R1.6 LineSide)	400A/SGLA: R1.6	0.208	6.50	6.50	2.73	2	0.000	Yes	PNL	25	89	18	16	Category 3 (*N3) (*N9) (*N16)
422	R1.7	400A/SGLA: R1.7	0.208	6.50	6.50	2.73	2	0.000	Yes	PNL	25	89	18	16	Category 3 (*N3) (*N9) (*N16)
423	R1.7 (400A/SGHA4: R1.7 LineSide)	400A/SGLA: R1.7	0.208	6.50	6.50	2.73	2	0.000	Yes	PNL	25	89	18	16	Category 3 (*N3) (*N9) (*N16)
424	R1.8	225A/SFHA: R1.8	0.208	4.86	4.86	2.23	0.356	0.000	Yes	PNL	25	27	18	2.3	Category 1 (*N3) (*N16)
425	R1.8 (225A/THQD: R1.8 LineSide)	225A/SFHA: R1.8	0.208	4.86	4.86	2.23	0.356	0.000	Yes	PNL	25	27	18	2.3	Category 1 (*N3) (*N16)
426	R1.9	400A/SGDA4: R1.9	0.208	28.75	28.75	9.13	0.025	0.000	Yes	PNL	25	14	18	0.75	Category 0
427	R1.9 (400A/SGHA4: R1.9 LineSide)	400A/SGDA4: R1.9	0.208	28.75	28.75	9.13	0.025	0.000	Yes	PNL	25	14	18	0.75	Category 0
428	R2.1	100A/TEY: R2.1	0.208	2.10	2.10	1.24	1.316	0.000	Yes	PNL	25	41	18	4.6	Category 2 (*N3)
429	R2.1 (100A/THHQB: R2.1 LineSide)	100A/TEY: R2.1	0.208	2.10	2.10	1.24	1.316	0.000	Yes	PNL	25	41	18	4.6	Category 2 (*N3)
430	R2.2	100A/TEY: R2.2	0.208	1.82	1.82	1.12	1.605	0.000	Yes	PNL	25	43	18	5.0	Category 2 (*N3)
431	R2.2 (100A/THHQB: R2.2 LineSide)	100A/TEY: R2.2	0.208	1.82	1.82	1.12	1.605	0.000	Yes	PNL	25	43	18	5.0	Category 2 (*N3)
432	R2.3	225A/SFHA: R2.3	0.208	2.86	2.86	1.54	2	0.000	Yes	PNL	25	61	18	8.8	Category 3 (*N3) (*N9) (*N16)
433	R2.3 (225A/THQD: R2.3 LineSide)	225A/SFHA: R2.3	0.208	2.86	2.86	1.54	2	0.000	Yes	PNL	25	61	18	8.8	Category 3 (*N3) (*N9) (*N16)
434	R2.4	225A/THQD: R2.4	0.208	9.73	9.73	4.27	0.023	0.000	Yes	PNL	25	7.7	18	0.30	Category 0
435	R2.4 (225A/THQD: R2.4 LineSide)	225A/SFHA: R2.4	0.208	9.73	9.73	4.27	0.025	0.000	Yes	PNL	25	8.2	18	0.33	Category 0
436	R2.5	225A/SFHA: R2.5	0.208	6.29	6.29	2.67	0.265	0.000	Yes	PNL	25	25	18	2.1	Category 1 (*N3) (*N16)

	Bus Name	Protective Device Name	Bus kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Prot Dev Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	Required Protective FR Clothing Category
437	R2.5 (225A/THQD: R2.5 LineSide)	225A/SFHA: R2.5	0.208	6.29	6.29	2.67	0.265	0.000	Yes	PNL	25	25	18	2.1	Category 1 (*N3) (*N16)
438	R3.1	45A/FBV: T-R3.1	0.208	1.59	1.59	1.20	1.722	0.000	Yes	PNL	25	18	18	1.2	Category 0 (*N15) (*N16)
439	R3.1 (100A/THHQB: R3.1 LineSide)	45A/FBV: T-R3.1	0.208	1.59	1.59	1.20	1.722	0.000	Yes	PNL	25	18	18	1.2	Category 0 (*N15) (*N16)
440	R3.2	100A/TEY: R3.2	0.208	2.85	2.85	1.53	0.866	0.000	Yes	PNL	25	36	18	3.8	Category 1 (*N3) (*N16)
441	R3.2 (100A/THHQB: R3.2 LineSide)	100A/TEY: R3.2	0.208	2.85	2.85	1.53	0.866	0.000	Yes	PNL	25	36	18	3.8	Category 1 (*N3) (*N16)
442	R3.3	100A/TEY: R3.3	0.208	2.68	2.68	1.47	0.942	0.000	Yes	PNL	25	37	18	3.9	Category 1 (*N3)
443	R3.3 (100A/THHQB: R3.3 LineSide)	100A/TEY: R3.3	0.208	2.68	2.68	1.47	0.942	0.000	Yes	PNL	25	37	18	3.9	Category 1 (*N3)
444	R5.1	400A/SGDA4: R5.1	0.208	13.07	13.07	4.46	0.274	0.000	Yes	PNL	25	36	18	3.8	Category 1 (*N3) (*N16)
445	R5.1 (400A/SGHA4: R5.1 LineSide)	400A/SGDA4: R5.1	0.208	13.07	13.07	4.46	0.274	0.000	Yes	PNL	25	36	18	3.8	Category 1 (*N3) (*N16)
446	R5.10	225A/THQD: R5.10	0.208	19.53	19.53	6.96	0.019	0.000	Yes	PNL	25	9.6	18	0.43	Category 0
447	R5.10 (225A/THQD: R5.10 LineSide)	225A/SFHA: R5.10	0.208	19.53	19.53	6.96	0.025	0.000	Yes	PNL	25	11	18	0.56	Category 0
448	R5.11	400A/SGDA4: R5.11	0.208	6.59	6.59	2.76	2	0.000	Yes	PNL	25	89	18	16	Category 3 (*N3) (*N9) (*N16)
449	R5.11 (400A/SGHA4: R5.11 LineSide)	400A/SGDA4: R5.11	0.208	6.59	6.59	2.76	2	0.000	Yes	PNL	25	89	18	16	Category 3 (*N3) (*N9) (*N16)
450	R5.12	400A/SGDA4: R5.12	0.208	6.63	6.63	2.77	2	0.000	Yes	PNL	25	89	18	17	Category 3 (*N3) (*N9) (*N16)
451	R5.12 (400A/SGHA4: R5.12 LineSide)	400A/SGDA4: R5.12	0.208	6.63	6.63	2.77	2	0.000	Yes	PNL	25	89	18	17	Category 3 (*N3) (*N9) (*N16)
452	R5.13	400A/SGDA4: R5.13	0.208	5.67	5.67	2.92	2	0.000	Yes	PNL	25	92	18	18	Category 3 (*N9) (*N16)
453	R5.13 (400A/SGHA4: R5.13 LineSide)	400A/SGDA4: R5.13	0.208	5.67	5.67	2.92	2	0.000	Yes	PNL	25	92	18	18	Category 3 (*N9) (*N16)
454	R5.14	225A/SFHA: R5.14	0.208	3.93	3.93	1.92	0.454	0.000	Yes	PNL	25	28	18	2.5	Category 1 (*N3) (*N16)
455	R5.14 (225A/THQD: R5.14 LineSide)	225A/SFHA: R5.14	0.208	3.93	3.93	1.92	0.454	0.000	Yes	PNL	25	28	18	2.5	Category 1 (*N3) (*N16)
456	R5.2	400A/SGDA4: R5.2	0.208	13.07	13.07	4.46	0.274	0.000	Yes	PNL	25	36	18	3.8	Category 1 (*N3) (*N16)
457	R5.2 (400A/SGHA4: R5.2 LineSide)	400A/SGDA4: R5.2	0.208	13.07	13.07	4.46	0.274	0.000	Yes	PNL	25	36	18	3.8	Category 1 (*N3) (*N16)

	Bus Name	Protective Device Name	Bus kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Prot Dev Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	Required Protective FR Clothing Category
458	R5.3	225A/THQD: R5.3	0.208	9.55	9.55	4.21	0.023	0.000	Yes	PNL	25	7.7	18	0.30	Category 0
459	R5.3 (225A/THQD: R5.3 LineSide)	225A/SFHA: R5.3	0.208	9.55	9.55	4.21	0.025	0.000	Yes	PNL	25	8.2	18	0.33	Category 0
460	R5.4	225A/THQD: R5.4	0.208	9.55	9.55	4.21	0.023	0.000	Yes	PNL	25	7.7	18	0.30	Category 0
461	R5.4 (225A/THQD: R5.4 LineSide)	225A/SFHA: R5.4	0.208	9.55	9.55	4.21	0.025	0.000	Yes	PNL	25	8.2	18	0.33	Category 0
462	R5.5	225A/THQD: R5.5	0.208	13.07	13.07	5.25	0.02	0.000	Yes	PNL	25	8.2	18	0.33	Category 0
463	R5.5 (225A/THQD: R5.5 LineSide)	225A/SFHA: R5.5	0.208	13.07	13.07	5.25	0.025	0.000	Yes	PNL	25	9.4	18	0.41	Category 0
464	R5.6	400A/SGDA4: R5.6	0.208	17.35	17.35	6.41	0.026	0.000	Yes	PNL	25	11	18	0.53	Category 0
465	R5.6 (400A/SGHA4: R5.6 LineSide)	400A/SGDA4: R5.6	0.208	17.35	17.35	6.41	0.026	0.000	Yes	PNL	25	11	18	0.53	Category 0
466	R5.7	400A/SGDA4: R5.7	0.208	17.35	17.35	6.41	0.026	0.000	Yes	PNL	25	11	18	0.53	Category 0
467	R5.7 (400A/SGHA4: R5.7 LineSide)	400A/SGDA4: R5.7	0.208	17.35	17.35	6.41	0.026	0.000	Yes	PNL	25	11	18	0.53	Category 0
468	R5.8	225A/THQD: R5.8	0.208	13.07	13.07	5.25	0.02	0.000	Yes	PNL	25	8.2	18	0.33	Category 0
469	R5.8 (225A/THQD: R5.8 LineSide)	225A/SFHA: R5.8	0.208	13.07	13.07	5.25	0.025	0.000	Yes	PNL	25	9.4	18	0.41	Category 0
470	R5.9	225A/THQD: R5.9	0.208	19.53	19.53	6.96	0.019	0.000	Yes	PNL	25	9.6	18	0.43	Category 0
471	R5.9 (225A/THQD: R5.9 LineSide)	225A/SFHA: R5.9	0.208	19.53	19.53	6.96	0.025	0.000	Yes	PNL	25	11	18	0.56	Category 0
472	R6.1	100A/TEY: R6.1	0.208	28.62	28.62	9.10	0.016	0.000	Yes	PNL	25	10	18	0.48	Category 0
473	R6.2	100A/TEY: R6.2	0.208	28.62	28.62	9.10	0.016	0.000	Yes	PNL	25	10	18	0.48	Category 0
474	RH1.1	400A/SGHA4: RH1.1	0.208	6.34	6.34	2.68	2	0.000	Yes	PNL	25	88	18	16	Category 3 (*N3) (*N9) (*N16)
475	RH1.1 (400A/SGHA4: RH1.1 (M) LineSide)	400A/SGHA4: RH1.1	0.208	6.34	6.34	2.68	2	0.000	Yes	PNL	25	88	18	16	Category 3 (*N3) (*N9) (*N16)
476	RH1.2	400A/SGHA4: RH1.2	0.208	6.34	6.34	2.68	2	0.000	Yes	PNL	25	87	18	16	Category 3 (*N3) (*N9) (*N16)
477	RH1.2 (400A/SGHA4: RH1.2 (M) LineSide)	400A/SGHA4: RH1.2	0.208	6.34	6.34	2.68	2	0.000	Yes	PNL	25	87	18	16	Category 3 (*N3) (*N9) (*N16)
478	RH1.3	400A/SGHA4: RH1.3	0.208	6.16	6.16	2.63	2	0.000	Yes	PNL	25	86	18	16	Category 3 (*N3) (*N9) (*N16)
479	RH1.3 (400A/SGHA4: RH1.3 (M) LineSide)	400A/SGHA4: RH1.3	0.208	6.16	6.16	2.63	2	0.000	Yes	PNL	25	86	18	16	Category 3 (*N3) (*N9) (*N16)

	Bus Name	Protective Device Name	Bus kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Prot Dev Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	Required Protective FR Clothing Category
480	RH1.4	400A/SGHA4: RH1.4	0.208	6.16	6.16	2.63	2	0.000	Yes	PNL	25	86	18	16	Category 3 (*N3) (*N9) (*N16)
481	RH1.4 (400A/SGHA4: RH1.4 (M) LineSide)	400A/SGHA4: RH1.4	0.208	6.16	6.16	2.63	2	0.000	Yes	PNL	25	86	18	16	Category 3 (*N3) (*N9) (*N16)
482	RH1.5	400A/SGHA4: RH1.5	0.208	6.34	6.34	2.68	2	0.000	Yes	PNL	25	87	18	16	Category 3 (*N3) (*N9) (*N16)
483	RH1.5 (400A/SGHA4: RH1.5 (M) LineSide)	400A/SGHA4: RH1.5	0.208	6.34	6.34	2.68	2	0.000	Yes	PNL	25	87	18	16	Category 3 (*N3) (*N9) (*N16)
484	RH1.6	400A/SGHA4: RH1.6	0.208	6.33	6.33	2.68	2	0.000	Yes	PNL	25	87	18	16	Category 3 (*N3) (*N9) (*N16)
485	RH1.6 (400A/SGHA4: RH1.6 (M) LineSide)	400A/SGHA4: RH1.6	0.208	6.33	6.33	2.68	2	0.000	Yes	PNL	25	87	18	16	Category 3 (*N3) (*N9) (*N16)
486	RH1.7	400A/SGHA4: RH1.7	0.208	6.16	6.16	2.63	2	0.000	Yes	PNL	25	86	18	16	Category 3 (*N3) (*N9) (*N16)
487	RH1.7 (400A/SGHA4: RH1.7 (M) LineSide)	400A/SGHA4: RH1.7	0.208	6.16	6.16	2.63	2	0.000	Yes	PNL	25	86	18	16	Category 3 (*N3) (*N9) (*N16)
488	RH1.8	400A/SGHA4: RH1.8	0.208	6.16	6.16	2.63	2	0.000	Yes	PNL	25	86	18	16	Category 3 (*N3) (*N9) (*N16)
489	RH1.8 (400A/SGHA4: RH1.8 (M) LineSide)	400A/SGHA4: RH1.8	0.208	6.16	6.16	2.63	2	0.000	Yes	PNL	25	86	18	16	Category 3 (*N3) (*N9) (*N16)
490	RH2.10	400A/SGHA4: RH2.10	0.208	9.03	9.03	3.44	0.423	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)
491	RH2.10 (400A/SGHA4: RH2.10 (M) LineSide)	400A/SGHA4: RH2.10	0.208	9.03	9.03	3.44	0.423	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)
492	RH2.11	400A/SGHA4: RH2.11	0.208	9.03	9.03	3.44	0.423	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)
493	RH2.11 (400A/SGHA4: RH2.11 (M) LineSide)	400A/SGHA4: RH2.11	0.208	9.03	9.03	3.44	0.423	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)
494	RH2.12	400A/SGHA4: RH2.12	0.208	6.53	6.53	2.74	2	0.000	Yes	PNL	25	89	18	16	Category 3 (*N3) (*N9) (*N16)
495	RH2.12 (400A/SGHA4: RH2.12 (M) LineSide)	400A/SGHA4: RH2.12	0.208	6.53	6.53	2.74	2	0.000	Yes	PNL	25	89	18	16	Category 3 (*N3) (*N9) (*N16)
496	RH2.13	400A/SGHA4: RH2.13	0.208	7.90	7.90	3.13	0.495	0.000	Yes	PNL	25	41	18	4.7	Category 2 (*N3) (*N16)
497	RH2.13 (400A/SGHA4: RH2.13 (M) LineSide)	400A/SGHA4: RH2.13	0.208	7.90	7.90	3.13	0.495	0.000	Yes	PNL	25	41	18	4.7	Category 2 (*N3) (*N16)
498	RH2.14	400A/SGHA4: RH2.14	0.208	7.90	7.90	3.13	0.495	0.000	Yes	PNL	25	41	18	4.7	Category 2 (*N3) (*N16)
499	RH2.14 (400A/SGHA4: RH2.14 (M) LineSide)	400A/SGHA4: RH2.14	0.208	7.90	7.90	3.13	0.495	0.000	Yes	PNL	25	41	18	4.7	Category 2 (*N3) (*N16)

	Bus Name	Protective Device Name	Bus kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Prot Dev Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	Required Protective FR Clothing Category
500	RH2.15	400A/SGHA4: RH2.15	0.208	12.26	12.26	4.27	0.295	0.000	Yes	PNL	25	37	18	3.9	Category 1 (*N3) (*N16)
501	RH2.15 (400A/SGHA4: RH2.15 (M) LineSide)	400A/SGHA4: RH2.15	0.208	12.26	12.26	4.27	0.295	0.000	Yes	PNL	25	37	18	3.9	Category 1 (*N3) (*N16)
502	RH2.16	400A/SGHA4: RH2.16	0.208	12.26	12.26	4.27	0.295	0.000	Yes	PNL	25	37	18	3.9	Category 1 (*N3) (*N16)
503	RH2.16 (400A/SGHA4: RH2.16 (M) LineSide)	400A/SGHA4: RH2.16	0.208	12.26	12.26	4.27	0.295	0.000	Yes	PNL	25	37	18	3.9	Category 1 (*N3) (*N16)
504	RH2.17	400A/SGHA4: RH2.17	0.208	12.26	12.26	4.27	0.295	0.000	Yes	PNL	25	37	18	3.9	Category 1 (*N3) (*N16)
505	RH2.17 (400A/SGHA4: RH2.17 (M) LineSide)	400A/SGHA4: RH2.17	0.208	12.26	12.26	4.27	0.295	0.000	Yes	PNL	25	37	18	3.9	Category 1 (*N3) (*N16)
506	RH2.18	400A/SGHA4: RH2.18	0.208	12.26	12.26	4.26	0.295	0.000	Yes	PNL	25	37	18	3.9	Category 1 (*N3) (*N16)
507	RH2.18 (400A/SGHA4: RH2.18 (M) LineSide)	400A/SGHA4: RH2.18	0.208	12.26	12.26	4.26	0.295	0.000	Yes	PNL	25	37	18	3.9	Category 1 (*N3) (*N16)
508	RH2.19	400A/SGHA4: RH2.19	0.208	10.28	10.28	3.77	0.363	0.000	Yes	PNL	25	39	18	4.2	Category 2 (*N3) (*N16)
509	RH2.19 (400A/SGHA4: RH2.19 (M) LineSide)	400A/SGHA4: RH2.19	0.208	10.28	10.28	3.77	0.363	0.000	Yes	PNL	25	39	18	4.2	Category 2 (*N3) (*N16)
510	RH2.2	400A/SGHA4: RH2.2	0.208	10.29	10.29	3.77	0.363	0.000	Yes	PNL	25	39	18	4.2	Category 2 (*N3) (*N16)
511	RH2.2 (400A/SGHA4: RH2.2 (M) LineSide)	400A/SGHA4: RH2.2	0.208	10.29	10.29	3.77	0.363	0.000	Yes	PNL	25	39	18	4.2	Category 2 (*N3) (*N16)
512	RH2.20	400A/SGHA4: RH2.20	0.208	10.28	10.28	3.77	0.363	0.000	Yes	PNL	25	39	18	4.2	Category 2 (*N3) (*N16)
513	RH2.20 (400A/SGHA4: RH2.20 (M) LineSide)	400A/SGHA4: RH2.20	0.208	10.28	10.28	3.77	0.363	0.000	Yes	PNL	25	39	18	4.2	Category 2 (*N3) (*N16)
514	RH2.21	400A/SGHA4: RH2.21	0.208	10.28	10.28	3.77	0.363	0.000	Yes	PNL	25	39	18	4.2	Category 2 (*N3) (*N16)
515	RH2.21 (400A/SGHA4: RH2.21 (M) LineSide)	400A/SGHA4: RH2.21	0.208	10.28	10.28	3.77	0.363	0.000	Yes	PNL	25	39	18	4.2	Category 2 (*N3) (*N16)
516	RH2.22	400A/SGHA4: RH2.22	0.208	10.27	10.27	3.77	0.363	0.000	Yes	PNL	25	39	18	4.2	Category 2 (*N3) (*N16)
517	RH2.22 (400A/SGHA4: RH2.22 (M) LineSide)	400A/SGHA4: RH2.22	0.208	10.27	10.27	3.77	0.363	0.000	Yes	PNL	25	39	18	4.2	Category 2 (*N3) (*N16)
518	RH2.23	400A/SGHA4: RH2.23	0.208	5.99	5.99	3.04	2	0.000	Yes	PNL	25	95	18	18	Category 3 (*N9) (*N16)
519	RH2.23 (400A/SGHA4: RH2.23 (M) LineSide)	400A/SGHA4: RH2.23	0.208	5.99	5.99	3.04	2	0.000	Yes	PNL	25	95	18	18	Category 3 (*N9) (*N16)
520	RH2.24	400A/SGHA4: RH2.24	0.208	5.99	5.99	3.04	2	0.000	Yes	PNL	25	95	18	18	Category 3 (*N9) (*N16)
521	RH2.24 (400A/SGHA4: RH2.24 (M) LineSide)	400A/SGHA4: RH2.24	0.208	5.99	5.99	3.04	2	0.000	Yes	PNL	25	95	18	18	Category 3 (*N9) (*N16)
522	RH2.25	400A/SGHA4: RH2.25	0.208	5.99	5.99	3.04	2	0.000	Yes	PNL	25	95	18	18	Category 3 (*N9) (*N16)

	Bus Name	Protective Device Name	Bus kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Prot Dev Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	Required Protective FR Clothing Category
523	RH2.25 (400A/SGHA4: RH2.25 (M) LineSide)	400A/SGHA4: RH2.25	0.208	5.99	5.99	3.04	2	0.000	Yes	PNL	25	95	18	18	Category 3 (*N9) (*N16)
524	RH2.26	400A/SGHA4: RH2.26	0.208	5.99	5.99	3.03	2	0.000	Yes	PNL	25	95	18	18	Category 3 (*N9) (*N16)
525	RH2.26 (400A/SGHA4: RH2.26 (M) LineSide)	400A/SGHA4: RH2.26	0.208	5.99	5.99	3.03	2	0.000	Yes	PNL	25	95	18	18	Category 3 (*N9) (*N16)
526	RH2.27	400A/SGHA4: RH2.27	0.208	9.03	9.03	3.44	0.423	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)
527	RH2.27 (400A/SGHA4: RH2.27 (M) LineSide)	400A/SGHA4: RH2.27	0.208	9.03	9.03	3.44	0.423	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)
528	RH2.28	400A/SGHA4: RH2.28	0.208	9.03	9.03	3.44	0.423	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)
529	RH2.28 (400A/SGHA4: RH2.28 (M) LineSide)	400A/SGHA4: RH2.28	0.208	9.03	9.03	3.44	0.423	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)
530	RH2.29	400A/SGHA4: RH2.29	0.208	9.03	9.03	3.44	0.423	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)
531	RH2.29 (400A/SGHA4: RH2.29 (M) LineSide)	400A/SGHA4: RH2.29	0.208	9.03	9.03	3.44	0.423	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)
532	RH2.3	400A/SGHA4: RH2.3	0.208	10.29	10.29	3.77	0.363	0.000	Yes	PNL	25	39	18	4.2	Category 2 (*N3) (*N16)
533	RH2.3 (400A/SGHA4: RH2.3 (M) LineSide)	400A/SGHA4: RH2.3	0.208	10.29	10.29	3.77	0.363	0.000	Yes	PNL	25	39	18	4.2	Category 2 (*N3) (*N16)
534	RH2.30	400A/SGHA4: RH2.30	0.208	9.03	9.03	3.44	0.423	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)
535	RH2.30 (400A/SGHA4: RH2.30 (M) LineSide)	400A/SGHA4: RH2.30	0.208	9.03	9.03	3.44	0.423	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)
536	RH2.31	400A/SGHA4: RH2.31	0.208	7.91	7.91	3.14	0.494	0.000	Yes	PNL	25	41	18	4.7	Category 2 (*N3) (*N16)
537	RH2.31 (400A/SGHA4: RH2.31 (M) LineSide)	400A/SGHA4: RH2.31	0.208	7.91	7.91	3.14	0.494	0.000	Yes	PNL	25	41	18	4.7	Category 2 (*N3) (*N16)
538	RH2.32	400A/SGHA4: RH2.32	0.208	7.91	7.91	3.14	0.494	0.000	Yes	PNL	25	41	18	4.7	Category 2 (*N3) (*N16)
539	RH2.32 (400A/SGHA4: RH2.32 (M) LineSide)	400A/SGHA4: RH2.32	0.208	7.91	7.91	3.14	0.494	0.000	Yes	PNL	25	41	18	4.7	Category 2 (*N3) (*N16)
540	RH2.33	400A/SGHA4: RH2.33	0.208	7.91	7.91	3.14	0.494	0.000	Yes	PNL	25	41	18	4.7	Category 2 (*N3) (*N16)
541	RH2.33 (400A/SGHA4: RH2.33 (M) LineSide)	400A/SGHA4: RH2.33	0.208	7.91	7.91	3.14	0.494	0.000	Yes	PNL	25	41	18	4.7	Category 2 (*N3) (*N16)
542	RH2.34	400A/SGHA4: RH2.34	0.208	7.91	7.91	3.14	0.494	0.000	Yes	PNL	25	41	18	4.7	Category 2 (*N3) (*N16)
543	RH2.34 (400A/SGHA4: RH2.34 (M) LineSide)	400A/SGHA4: RH2.34	0.208	7.91	7.91	3.14	0.494	0.000	Yes	PNL	25	41	18	4.7	Category 2 (*N3) (*N16)
544	RH2.35	400A/SGHA4: RH2.35	0.208	7.91	7.91	3.14	0.494	0.000	Yes	PNL	25	41	18	4.7	Category 2 (*N3) (*N16)
545	RH2.35 (400A/SGHA4: RH2.35 (M) LineSide)	400A/SGHA4: RH2.35	0.208	7.91	7.91	3.14	0.494	0.000	Yes	PNL	25	41	18	4.7	Category 2 (*N3) (*N16)

	Bus Name	Protective Device Name	Bus kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Prot Dev Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	Required Protective FR Clothing Category
546	RH2.36	400A/SGHA4: RH2.36	0.208	7.91	7.91	3.14	0.494	0.000	Yes	PNL	25	41	18	4.7	Category 2 (*N3) (*N16)
547	RH2.36 (400A/SGHA4: RH2.36 (M) LineSide)	400A/SGHA4: RH2.36	0.208	7.91	7.91	3.14	0.494	0.000	Yes	PNL	25	41	18	4.7	Category 2 (*N3) (*N16)
548	RH2.38	400A/SGHA4: RH2.38	0.208	7.77	7.77	3.10	0.504	0.000	Yes	PNL	25	42	18	4.7	Category 2 (*N3) (*N16)
549	RH2.38 (400A/SGHA4: RH2.38 (M) LineSide)	400A/SGHA4: RH2.38	0.208	7.77	7.77	3.10	0.504	0.000	Yes	PNL	25	42	18	4.7	Category 2 (*N3) (*N16)
550	RH2.39	400A/SGHA4: RH2.39	0.208	7.77	7.77	3.10	0.504	0.000	Yes	PNL	25	42	18	4.7	Category 2 (*N3) (*N16)
551	RH2.39 (400A/SGHA4: RH2.39 (M) LineSide)	400A/SGHA4: RH2.39	0.208	7.77	7.77	3.10	0.504	0.000	Yes	PNL	25	42	18	4.7	Category 2 (*N3) (*N16)
552	RH2.4	400A/SGHA4: RH2.4	0.208	10.28	10.28	3.77	0.363	0.000	Yes	PNL	25	39	18	4.2	Category 2 (*N3) (*N16)
553	RH2.4 (400A/SGHA4: RH2.4 (M) LineSide)	400A/SGHA4: RH2.4	0.208	10.28	10.28	3.77	0.363	0.000	Yes	PNL	25	39	18	4.2	Category 2 (*N3) (*N16)
554	RH2.40	400A/SGHA4: RH2.40	0.208	7.77	7.77	3.10	0.504	0.000	Yes	PNL	25	42	18	4.7	Category 2 (*N3) (*N16)
555	RH2.40 (400A/SGHA4: RH2.40 (M) LineSide)	400A/SGHA4: RH2.40	0.208	7.77	7.77	3.10	0.504	0.000	Yes	PNL	25	42	18	4.7	Category 2 (*N3) (*N16)
556	RH2.41	400A/SGHA4: RH2.41	0.208	7.51	7.51	3.03	2	0.000	Yes	PNL	25	95	18	18	Category 3 (*N3) (*N9) (*N16)
557	RH2.41 (400A/SGHA4: RH2.41 (M) LineSide)	400A/SGHA4: RH2.41	0.208	7.51	7.51	3.03	2	0.000	Yes	PNL	25	95	18	18	Category 3 (*N3) (*N9) (*N16)
558	RH2.42	400A/SGHA4: RH2.42	0.208	7.51	7.51	3.02	2	0.000	Yes	PNL	25	95	18	18	Category 3 (*N3) (*N9) (*N16)
559	RH2.42 (400A/SGHA4: RH2.42 (M) LineSide)	400A/SGHA4: RH2.42	0.208	7.51	7.51	3.02	2	0.000	Yes	PNL	25	95	18	18	Category 3 (*N3) (*N9) (*N16)
560	RH2.43	400A/SGHA4: RH2.43	0.208	7.51	7.51	3.02	2	0.000	Yes	PNL	25	95	18	18	Category 3 (*N3) (*N9) (*N16)
561	RH2.43 (400A/SGHA4: RH2.43 (M) LineSide)	400A/SGHA4: RH2.43	0.208	7.51	7.51	3.02	2	0.000	Yes	PNL	25	95	18	18	Category 3 (*N3) (*N9) (*N16)
562	RH2.44	400A/SGHA4: RH2.44	0.208	7.51	7.51	3.02	2	0.000	Yes	PNL	25	95	18	18	Category 3 (*N3) (*N9) (*N16)
563	RH2.44 (400A/SGHA4: RH2.44 (M) LineSide)	400A/SGHA4: RH2.44	0.208	7.51	7.51	3.02	2	0.000	Yes	PNL	25	95	18	18	Category 3 (*N3) (*N9) (*N16)
564	RH2.45	400A/SGHA4: RH2.45	0.208	10.92	10.92	3.93	0.338	0.000	Yes	PNL	25	38	18	4.1	Category 2 (*N3) (*N16)
565	RH2.45 (400A/SGHA4: RH2.45 (M) LineSide)	400A/SGHA4: RH2.45	0.208	10.92	10.92	3.93	0.338	0.000	Yes	PNL	25	38	18	4.1	Category 2 (*N3) (*N16)
566	RH2.46	400A/SGHA4: RH2.46	0.208	10.92	10.92	3.93	0.338	0.000	Yes	PNL	25	38	18	4.1	Category 2 (*N3) (*N16)

	Bus Name	Protective Device Name	Bus kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Prot Dev Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	Required Protective FR Clothing Category
567	RH2.46 (400A/SGHA4: RH2.46 (M) LineSide)	400A/SGHA4: RH2.46	0.208	10.92	10.92	3.93	0.338	0.000	Yes	PNL	25	38	18	4.1	Category 2 (*N3) (*N16)
568	RH2.47	400A/SGHA4: RH2.47	0.208	10.92	10.92	3.93	0.338	0.000	Yes	PNL	25	38	18	4.1	Category 2 (*N3) (*N16)
569	RH2.47 (400A/SGHA4: RH2.47 (M) LineSide)	400A/SGHA4: RH2.47	0.208	10.92	10.92	3.93	0.338	0.000	Yes	PNL	25	38	18	4.1	Category 2 (*N3) (*N16)
570	RH2.48	400A/SGHA4: RH2.48	0.208	10.92	10.92	3.93	0.338	0.000	Yes	PNL	25	38	18	4.1	Category 2 (*N3) (*N16)
571	RH2.48 (400A/SGHA4: RH2.48 (M) LineSide)	400A/SGHA4: RH2.48	0.208	10.92	10.92	3.93	0.338	0.000	Yes	PNL	25	38	18	4.1	Category 2 (*N3) (*N16)
572	RH2.49	400A/SGHA4: RH2.49	0.208	13.18	13.18	4.49	0.271	0.000	Yes	PNL	25	36	18	3.8	Category 1 (*N3) (*N16)
573	RH2.49 (400A/SGHA4: RH2.49 (M) LineSide)	400A/SGHA4: RH2.49	0.208	13.18	13.18	4.49	0.271	0.000	Yes	PNL	25	36	18	3.8	Category 1 (*N3) (*N16)
574	RH2.5	400A/SGHA4: RH2.5	0.208	5.99	5.99	3.04	2	0.000	Yes	PNL	25	95	18	18	Category 3 (*N9) (*N16)
575	RH2.5 (400A/SGHA4: RH2.5 (M) LineSide)	400A/SGHA4: RH2.5	0.208	5.99	5.99	3.04	2	0.000	Yes	PNL	25	95	18	18	Category 3 (*N9) (*N16)
576	RH2.50	400A/SGHA4: RH2.50	0.208	13.17	13.17	4.49	0.271	0.000	Yes	PNL	25	36	18	3.8	Category 1 (*N3) (*N16)
577	RH2.50 (400A/SGHA4: RH2.50 (M) LineSide)	400A/SGHA4: RH2.50	0.208	13.17	13.17	4.49	0.271	0.000	Yes	PNL	25	36	18	3.8	Category 1 (*N3) (*N16)
578	RH2.51	400A/SGHA4: RH2.51	0.208	13.17	13.17	4.49	0.271	0.000	Yes	PNL	25	36	18	3.8	Category 1 (*N3) (*N16)
579	RH2.51 (400A/SGHA4: RH2.51 (M) LineSide)	400A/SGHA4: RH2.51	0.208	13.17	13.17	4.49	0.271	0.000	Yes	PNL	25	36	18	3.8	Category 1 (*N3) (*N16)
580	RH2.52	400A/SGHA4: RH2.52	0.208	13.17	13.17	4.49	0.271	0.000	Yes	PNL	25	36	18	3.8	Category 1 (*N3) (*N16)
581	RH2.52 (400A/SGHA4: RH2.52 (M) LineSide)	400A/SGHA4: RH2.52	0.208	13.17	13.17	4.49	0.271	0.000	Yes	PNL	25	36	18	3.8	Category 1 (*N3) (*N16)
582	RH2.53	400A/SGHA4: RH2.53	0.208	7.29	7.29	2.96	2	0.000	Yes	PNL	25	93	18	18	Category 3 (*N3) (*N9) (*N16)
583	RH2.53 (400A/SGHA4: RH2.53 (M) LineSide)	400A/SGHA4: RH2.53	0.208	7.29	7.29	2.96	2	0.000	Yes	PNL	25	93	18	18	Category 3 (*N3) (*N9) (*N16)
584	RH2.54	400A/SGHA4: RH2.54	0.208	9.03	9.03	3.44	0.423	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)
585	RH2.54 (400A/SGHA4: RH2.54 (M) LineSide)	400A/SGHA4: RH2.54	0.208	9.03	9.03	3.44	0.423	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)
586	RH2.55	400A/SGHA4: RH2.55	0.208	9.03	9.03	3.44	0.423	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)
587	RH2.55 (400A/SGHA4: RH2.55 (M) LineSide)	400A/SGHA4: RH2.55	0.208	9.03	9.03	3.44	0.423	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)
588	RH2.56	400A/SGHA4: RH2.56	0.208	9.03	9.03	3.44	0.423	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)

	Bus Name	Protective Device Name	Bus kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Prot Dev Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	Required Protective FR Clothing Category
589	RH2.56 (400A/SGHA4: RH2.56 (M) LineSide)	400A/SGHA4: RH2.56	0.208	9.03	9.03	3.44	0.423	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)
590	RH2.57	400A/SGHA4: RH2.57	0.208	9.03	9.03	3.44	0.423	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)
591	RH2.57 (400A/SGHA4: RH2.57 (M) LineSide)	400A/SGHA4: RH2.57	0.208	9.03	9.03	3.44	0.423	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)
592	RH2.58	400A/SGHA4: RH2.58	0.208	7.77	7.77	3.10	0.505	0.000	Yes	PNL	25	42	18	4.7	Category 2 (*N3) (*N16)
593	RH2.58 (400A/SGHA4: RH2.58 (M) LineSide)	400A/SGHA4: RH2.58	0.208	7.77	7.77	3.10	0.505	0.000	Yes	PNL	25	42	18	4.7	Category 2 (*N3) (*N16)
594	RH2.59	400A/SGHA4: RH2.59	0.208	7.77	7.77	3.10	0.505	0.000	Yes	PNL	25	42	18	4.7	Category 2 (*N3) (*N16)
595	RH2.59 (400A/SGHA4: RH2.59 (M) LineSide)	400A/SGHA4: RH2.59	0.208	7.77	7.77	3.10	0.505	0.000	Yes	PNL	25	42	18	4.7	Category 2 (*N3) (*N16)
596	RH2.6	400A/SGHA4: RH2.6	0.208	5.99	5.99	3.04	2	0.000	Yes	PNL	25	95	18	18	Category 3 (*N9) (*N16)
597	RH2.6 (400A/SGHA4: RH2.6 (M) LineSide)	400A/SGHA4: RH2.6	0.208	5.99	5.99	3.04	2	0.000	Yes	PNL	25	95	18	18	Category 3 (*N9) (*N16)
598	RH2.62	400A/SGHA4: RH2.62	0.208	9.22	9.22	3.49	0.412	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)
599	RH2.62 (400A/SGHA4: RH2.62 (M) LineSide)	400A/SGHA4: RH2.62	0.208	9.22	9.22	3.49	0.412	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)
600	RH2.63	400A/SGHA4: RH2.63	0.208	9.22	9.22	3.49	0.412	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)
601	RH2.63 (400A/SGHA4: RH2.63 (M) LineSide)	400A/SGHA4: RH2.63	0.208	9.22	9.22	3.49	0.412	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)
602	RH2.64	400A/SGHA4: RH2.64	0.208	7.51	7.51	3.02	2	0.000	Yes	PNL	25	95	18	18	Category 3 (*N3) (*N9) (*N16)
603	RH2.64 (400A/SGHA4: RH2.64 (M) LineSide)	400A/SGHA4: RH2.64	0.208	7.51	7.51	3.02	2	0.000	Yes	PNL	25	95	18	18	Category 3 (*N3) (*N9) (*N16)
604	RH2.65	400A/SGHA4: RH2.65	0.208	6.26	6.26	2.66	2	0.000	Yes	PNL	25	87	18	16	Category 3 (*N3) (*N9) (*N16)
605	RH2.65 (400A/SGHA4: RH2.65 (M) LineSide)	400A/SGHA4: RH2.65	0.208	6.26	6.26	2.66	2	0.000	Yes	PNL	25	87	18	16	Category 3 (*N3) (*N9) (*N16)
606	RH2.66	400A/SGHA4: RH2.66	0.208	9.04	9.04	3.44	0.422	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)
607	RH2.66 (400A/SGHA4: RH2.66 (M) LineSide)	400A/SGHA4: RH2.66	0.208	9.04	9.04	3.44	0.422	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)
608	RH2.67	400A/SGHA4: RH2.67	0.208	10.91	10.91	3.93	0.338	0.000	Yes	PNL	25	38	18	4.1	Category 2 (*N3) (*N16)
609	RH2.67 (400A/SGHA4: RH2.67 (M) LineSide)	400A/SGHA4: RH2.67	0.208	10.91	10.91	3.93	0.338	0.000	Yes	PNL	25	38	18	4.1	Category 2 (*N3) (*N16)
610	RH2.68	400A/SGHA4: RH2.68	0.208	13.16	13.16	4.48	0.271	0.000	Yes	PNL	25	36	18	3.8	Category 1 (*N3) (*N16)

	Bus Name	Protective Device Name	Bus kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Prot Dev Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	Required Protective FR Clothing Category
611	RH2.68 (400A/SGHA4: RH2.68 (M) LineSide)	400A/SGHA4: RH2.68	0.208	13.16	13.16	4.48	0.271	0.000	Yes	PNL	25	36	18	3.8	Category 1 (*N3) (*N16)
612	RH2.69	400A/SGHA4: RH2.69	0.208	13.16	13.16	4.48	0.271	0.000	Yes	PNL	25	36	18	3.8	Category 1 (*N3) (*N16)
613	RH2.69 (400A/SGHA4: RH2.69 (M) LineSide)	400A/SGHA4: RH2.69	0.208	13.16	13.16	4.48	0.271	0.000	Yes	PNL	25	36	18	3.8	Category 1 (*N3) (*N16)
614	RH2.7	400A/SGHA4: RH2.7	0.208	5.99	5.99	3.04	2	0.000	Yes	PNL	25	95	18	18	Category 3 (*N9) (*N16)
615	RH2.7 (400A/SGHA4: RH2.7 (M) LineSide)	400A/SGHA4: RH2.7	0.208	5.99	5.99	3.04	2	0.000	Yes	PNL	25	95	18	18	Category 3 (*N9) (*N16)
616	RH2.70	400A/SGHA4: RH2.70	0.208	13.16	13.16	4.48	0.271	0.000	Yes	PNL	25	36	18	3.8	Category 1 (*N3) (*N16)
617	RH2.70 (400A/SGHA4: RH2.70 (M) LineSide)	400A/SGHA4: RH2.70	0.208	13.16	13.16	4.48	0.271	0.000	Yes	PNL	25	36	18	3.8	Category 1 (*N3) (*N16)
618	RH2.71	400A/SGHA4: RH2.71	0.208	9.04	9.04	3.44	0.422	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)
619	RH2.71 (400A/SGHA4: RH2.71 (M) LineSide)	400A/SGHA4: RH2.71	0.208	9.04	9.04	3.44	0.422	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)
620	RH2.72	400A/SGHA4: RH2.72	0.208	9.04	9.04	3.44	0.422	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)
621	RH2.72 (400A/SGHA4: RH2.72 (M) LineSide)	400A/SGHA4: RH2.72	0.208	9.04	9.04	3.44	0.422	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)
622	RH2.73	400A/SGHA4: RH2.73	0.208	9.04	9.04	3.44	0.422	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)
623	RH2.73 (400A/SGHA4: RH2.73 (M) LineSide)	400A/SGHA4: RH2.73	0.208	9.04	9.04	3.44	0.422	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)
624	RH2.74	400A/SGHA4: RH2.74	0.208	9.04	9.04	3.44	0.422	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)
625	RH2.74 (400A/SGHA4: RH2.74 (M) LineSide)	400A/SGHA4: RH2.74	0.208	9.04	9.04	3.44	0.422	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)
626	RH2.76	400A/SGHA4: RH2.76	0.208	9.22	9.22	3.49	0.412	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)
627	RH2.76 (400A/SGHA4: RH2.76 (M) LineSide)	400A/SGHA4: RH2.76	0.208	9.22	9.22	3.49	0.412	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)
628	RH2.77	400A/SGHA4: RH2.77	0.208	9.23	9.23	3.49	0.412	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)
629	RH2.77 (400A/SGHA4: RH2.77 (M) LineSide)	400A/SGHA4: RH2.77	0.208	9.23	9.23	3.49	0.412	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)
630	RH2.78	400A/SGHA4: RH2.78	0.208	9.23	9.23	3.49	0.412	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)
631	RH2.78 (400A/SGHA4: RH2.78 (M) LineSide)	400A/SGHA4: RH2.78	0.208	9.23	9.23	3.49	0.412	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)
632	RH2.79	400A/SGHA4: RH2.79	0.208	9.22	9.22	3.49	0.412	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)
633	RH2.79 (400A/SGHA4: RH2.79 (M) LineSide)	400A/SGHA4: RH2.79	0.208	9.22	9.22	3.49	0.412	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)

	Bus Name	Protective Device Name	Bus kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Prot Dev Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	Required Protective FR Clothing Category
634	RH2.8	400A/SGHA4: RH2.8	0.208	9.04	9.04	3.44	0.422	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)
635	RH2.8 (400A/SGHA4: RH2.8 (M) LineSide)	400A/SGHA4: RH2.8	0.208	9.04	9.04	3.44	0.422	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)
636	RH2.9	400A/SGHA4: RH2.9	0.208	9.04	9.04	3.44	0.422	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)
637	RH2.9 (400A/SGHA4: RH2.9 (M) LineSide)	400A/SGHA4: RH2.9	0.208	9.04	9.04	3.44	0.422	0.000	Yes	PNL	25	40	18	4.4	Category 2 (*N3) (*N16)
638	SCHWP-1	400A/SGLA:	0.48	20.79	19.02	11.21	0.025	0.000	Yes	PNL	25	16	18	1.0	Category 0
639	SCHWP-2	400A/SGLA:	0.48	20.79	19.02	11.21	0.025	0.000	Yes	PNL	25	16	18	1.0	Category 0
640	SCHWP-3	400A/SGLA:	0.48	20.79	19.02	11.21	0.025	0.000	Yes	PNL	25	16	18	1.0	Category 0
641	SDP 3.1	225A/SFLA: SDP3.1	0.48	5.60	5.60	4.00	0.025	0.000	Yes	PNL	25	7.9	18	0.31	Category 0
642	SHWP-1	250A/SFLA: SHWP-1	0.48	16.78	15.84	9.63	0.025	0.000	Yes	PNL	25	15	18	0.85	Category 0
643	SHWP-2 STANDBY	250A/SFLA: SHWP-2 STANDBY	0.48	16.45	15.52	9.46	0.025	0.000	Yes	PNL	25	14	18	0.83	Category 0
644	SUB 1.1	4000A/SS: SUB 1.1	0.48	47.66	45.81	20.34	0.83	0.000	Yes	PNL	25	194	18	59	Dangerous! (*N3) (*N16)
645	SUB 1.1 (4000A/SS: SUB 1.1 LineSide)	50/51: SUB 1.1	0.48	47.66	45.81	23.93	1.857	0.050	Yes	PNL	25	358	18	162	Dangerous! (*N5) (*N16)
646	SUB 1.2	2000A/SS: SUB 1.2	0.208	26.89	26.89	8.71	2	0.000	Yes	PNL	25	190	18	57	Dangerous! (*N9) (*N16)
647	SUB 1.2 (2000A/SS: SUB 1.2 LineSide)	30E/EJO1: T-SUB 1.2	0.208	26.89	26.89	8.71	2	0.000	Yes	PNL	25	190	18	57	Dangerous! (*N9) (*N16)
648	SUB 1.3	4000A/SS: SUB 1.3	0.208	66.77	66.77	16.50	0.3	0.000	Yes	PNL	25	91	18	17	Category 3 (*N16)
649	SUB 1.3 (4000A/SS: SUB 1.3 LineSide)	100E/EJ0-1: T-SUB 1.3	0.208	66.77	66.77	16.50	2	0.000	Yes	PNL	25	288	18	113	Dangerous! (*N9) (*N16)
650	SUB 3.1	4000A/SS: SUB 3.1	0.48	56.87	45.81	23.32	0.3	0.000	Yes	PNL	25	121	18	27	Category 4 (*N16)
651	SUB 3.1 (4000A/SS: SUB 3.1 LineSide)	50/51: SUB 3.1	0.48	56.87	45.81	23.32	1.848	0.050	Yes	PNL	25	360	18	163	Dangerous! (*N5) (*N16)
652	SUB 3.2	4000A/SS: SUB 3.2	0.48	52.71	45.85	23.60	0.3	0.000	Yes	PNL	25	119	18	27	Category 4 (*N16)
653	SUB 3.2 (4000A/SS: SUB 3.2 LineSide)	50/51: SUB 3.2	0.48	52.71	45.85	23.60	1.95	0.050	Yes	PNL	25	85	18	15	Category 3 (*N5) (*N9) (*N16)
654	SUB 3.3	4000A/SS: SUB 3.3	0.48	52.34	45.86	20.08	0.828	0.000	Yes	PNL	25	195	18	60	Dangerous! (*N3) (*N16)
655	SUB 3.3 (4000A/SS: SUB 3.3 LineSide)	50/51: SUB 3.3	0.48	52.34	45.86	23.62	1.848	0.050	Yes	PNL	25	359	18	162	Dangerous! (*N5) (*N16)
656	SUB 4.1	4000A/SS: SUB 4.1	0.48	37.60	37.60	20.33	0.172	0.000	Yes	PNL	25	74	18	12	Category 3 (*N16)
657	SUB 4.1 (4000A/SS: SUB 4.1 LineSide)	125A/EJ0-1: T-SUB 4.1	0.48	37.60	37.60	20.33	2	0.000	Yes	PNL	25	330	18	142	Dangerous! (*N9) (*N16)

	Bus Name	Protective Device Name	Bus kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Prot Dev Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	Required Protective FR Clothing Category
658	SUB 4.2	2000A/SS: SUB 4.2	0.208	26.89	26.89	8.71	2	0.000	Yes	PNL	25	190	18	57	Dangerous! (*N9) (*N16)
659	SUB 4.2 (2000A/SS: SUB 4.2 LineSide)	30A/EJ0-1: T-SUB 4.2	0.208	26.89	26.89	8.71	2	0.000	Yes	PNL	25	190	18	57	Dangerous! (*N9) (*N16)
660	SUB 4.3	2000A/SS: SUB 4.3	0.208	26.90	26.90	8.71	2	0.000	Yes	PNL	25	190	18	57	Dangerous! (*N9) (*N16)
661	SUB 4.3 (2000A/SS: SUB 4.3 LineSide)	30A/EJ0-1: T-SUB 4.3	0.208	26.90	26.90	8.71	2	0.000	Yes	PNL	25	190	18	57	Dangerous! (*N9) (*N16)
662	SUB 4.4	2000A/SS: SUB 4.4	0.208	26.85	26.85	8.70	2	0.000	Yes	PNL	25	190	18	57	Dangerous! (*N9) (*N16)
663	SUB 4.4 (2000A/SS: SUB 4.4 LineSide)	30A/EJ0-1: T-SUB 4.4	0.208	26.85	26.85	8.70	2	0.000	Yes	PNL	25	190	18	57	Dangerous! (*N9) (*N16)
664	SUB 4.5	2000A/SS: SUB 4.5	0.208	26.87	26.87	8.71	2	0.000	Yes	PNL	25	190	18	57	Dangerous! (*N9) (*N16)
665	SUB 4.5 (2000A/SS: SUB 4.5 LineSide)	30A/EJ0-1: T-SUB 4.5	0.208	26.87	26.87	8.71	2	0.000	Yes	PNL	25	190	18	57	Dangerous! (*N9) (*N16)
666	SUB 4.6	2000A/SS: SUB 4.6	0.208	26.87	26.87	8.71	2	0.000	Yes	PNL	25	190	18	57	Dangerous! (*N9) (*N16)
667	SUB 4.6 (2000A/SS: SUB 4.6 LineSide)	30A/EJ0-1: T-SUB 4.6	0.208	26.87	26.87	8.71	2	0.000	Yes	PNL	25	190	18	57	Dangerous! (*N9) (*N16)
668	SUB 6.1	2000A/SS: SUB 6.1	0.48	30.01	28.94	16.17	0.3	0.000	Yes	PNL	25	90	18	17	Category 3 (*N16)
669	SUB 6.1 (2000A/SS: SUB 6.1 LineSide)	100E/EJ0-1: SUB 6.1	0.48	30.01	28.94	16.17	2	0.000	Yes	PNL	25	286	18	112	Dangerous! (*N9) (*N16)
670	SUB 6.2	4000A/SS: SUB 6.2	0.208	66.77	66.77	16.50	0.3	0.000	Yes	PNL	25	91	18	17	Category 3 (*N16)
671	SUB 6.2 (4000A/SS: SUB 6.2 LineSide)	100E/EJ0-1: SUB 6.2	0.208	66.77	66.77	16.50	2	0.000	Yes	PNL	25	288	18	113	Dangerous! (*N9) (*N16)
672	SUB 6.3	100E/EJ0-1: T-SUB	0.48	30.29	28.93	16.14	2	0.000	Yes	PNL	25	286	18	112	Dangerous! (*N9) (*N16)
673	SUB 6.3 (2000A/SS: SUB 6.3 LineSide)	100E/EJ0-1: T-SUB 6.3	0.48	30.29	28.93	16.14	2	0.000	Yes	PNL	25	286	18	112	Dangerous! (*N9) (*N16)
674	SUB 6.4	4000A/SS: SUB 6.4	0.208	66.77	66.77	16.50	0.172	0.000	Yes	PNL	25	65	18	9.8	Category 3 (*N16)
675	SUB 6.4 (4000A/SS: SUB 6.4 LineSide)	100E/EJ0-1: T-SUB 6.4	0.208	66.77	66.77	16.50	2	0.000	Yes	PNL	25	288	18	113	Dangerous! (*N9) (*N16)
676	SW B-10 (HMB2)	100A/RK5: SW B-10 (HMB2)	0.48	9.20	9.20	5.19	0.008	0.000	Yes	PNL	25	4.8	18	0.14	Category 0 (*N3)
677	SW B-10 (HMB2) (100A/RK5: SW B-10 (HMB2) LineSide)	100A/SELA: SW B-10 (HMB2)	0.48	9.20	9.20	6.11	0.025	0.000	Yes	PNL	25	10	18	0.49	Category 0
678	SW B-10 (HMB3)	100A/SEHA: SW B-10 (HMB3)	0.208	4.00	4.00	2.29	0.025	0.000	Yes	PNL	25	5.5	18	0.17	Category 0

	Bus Name	Protective Device Name	Bus kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Prot Dev Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	Required Protective FR Clothing Category
679	SW B-10 (HMB3) (100A/RK5: SW B-10 (HMB3) LineSide)	100A/SEHA: SW B-10 (HMB3)	0.208	4.00	4.00	2.29	0.025	0.000	Yes	PNL	25	5.5	18	0.17	Category 0
680	SW B-11 (HBE5) A	100A/RK5: SW B-11 (HBE5) A	0.208	5.82	5.82	2.53	0.019	0.000	Yes	PNL	25	4.9	18	0.14	Category 0 (*N3)
681	SW B-11 (HBE5) A (100A/RK5: SW B-11 (HBE5) A LineSide)	100A/SEHA: SW B-11 (HBE5) A	0.208	5.82	5.82	2.97	0.025	0.000	Yes	PNL	25	6.5	18	0.22	Category 0
682	SW B-11 (HBE5) B	100A/RK5: SW B-11 (HBE5) B	0.208	5.82	5.82	2.53	0.019	0.000	Yes	PNL	25	4.9	18	0.14	Category 0 (*N3)
683	SW B-11 (HBE5) B (100A/RK5: SW B-11 (HBE5) B LineSide)	100A/SEHA: SW B-11 (HBE5) B	0.208	5.82	5.82	2.97	0.025	0.000	Yes	PNL	25	6.5	18	0.22	Category 0
684	SW B-11 (HBE9) A	100A/RK5: SW B-11 (HBE9) A	0.48	15.01	15.01	9.27	0.004	0.000	Yes	PNL	25	4.6	18	0.13	Category 0
685	SW B-11 (HBE9) A (100A/RK5: SW B-11 (HBE9) A LineSide)	100A/SELA: SW B-11 (HBE9) A	0.48	15.01	15.01	9.27	0.025	0.000	Yes	PNL	25	14	18	0.76	Category 0
686	SW B-11 (HBE9) B	100A/RK5: SW B-11 (HBE9) B	0.48	15.00	15.00	9.27	0.004	0.000	Yes	PNL	25	4.6	18	0.13	Category 0
687	SW B-11 (HBE9) B (100A/RK5: SW B-11 (HBE9) B LineSide)	100A/SELA: SW B-11 (HBE9) B	0.48	15.00	15.00	9.27	0.025	0.000	Yes	PNL	25	14	18	0.76	Category 0
688	SW B-11 (HMB2)	100A/RK5: SW B-11 (HMB2)	0.48	9.20	9.20	5.19	0.008	0.000	Yes	PNL	25	4.8	18	0.14	Category 0 (*N3)
689	SW B-11 (HMB2) (100A/RK5: SW B-11 (HMB2) LineSide)	100A/SELA: SW B-11 (HMB2)	0.48	9.20	9.20	6.11	0.025	0.000	Yes	PNL	25	10	18	0.49	Category 0
690	SW B-11 (HMB4)	100A/SEHA: SW B-11 (HMB4)	0.208	4.07	4.07	2.31	0.025	0.000	Yes	PNL	25	5.5	18	0.17	Category 0
691	SW B-11 (HMB4) (100A/RK5: SW B-11 (HMB4) LineSide)	100A/SEHA: SW B-11 (HMB4)	0.208	4.07	4.07	2.31	0.025	0.000	Yes	PNL	25	5.5	18	0.17	Category 0
692	SW B-12 (HMB2)	100A/RK5: SW B-12 (HMB2)	0.48	9.20	9.20	5.19	0.008	0.000	Yes	PNL	25	4.8	18	0.14	Category 0 (*N3)
693	SW B-12 (HMB2) (100A/RK5: SW B-12 (HMB2) LineSide)	100A/SELA: SW B-12 (HMB2)	0.48	9.20	9.20	6.10	0.025	0.000	Yes	PNL	25	10	18	0.49	Category 0

	Bus Name	Protective Device Name	Bus kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Prot Dev Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	Required Protective FR Clothing Category
694	SW B-12 (HMB4)	100A/SEHA: SW B-12 (HMB4)	0.208	4.59	4.59	2.14	0.026	0.000	Yes	PNL	25	5.3	18	0.16	Category 0 (*N3)
695	SW B-12 (HMB4) (100A/RK5: SW B-12 (HMB4) LineSide)	100A/SEHA: SW B-12 (HMB4)	0.208	4.59	4.59	2.52	0.025	0.000	Yes	PNL	25	5.8	18	0.19	Category 0
696	SW B-14 (HBE6) A	100A/RK5: SW B-14 (HBE6) A	0.208	5.76	5.76	2.51	0.02	0.000	Yes	PNL	25	5.0	18	0.15	Category 0 (*N3)
697	SW B-14 (HBE6) A (100A/RK5: SW B-14 (HBE6) A LineSide)	100A/SEHA: SW B-14 (HBE6) A	0.208	5.76	5.76	2.95	0.025	0.000	Yes	PNL	25	6.5	18	0.22	Category 0
698	SW B-14 (HBE6) B	100A/RK5: SW B-14 (HBE6) B	0.208	5.75	5.75	2.51	0.02	0.000	Yes	PNL	25	5.0	18	0.15	Category 0 (*N3)
699	SW B-14 (HBE6) B (100A/RK5: SW B-14 (HBE6) B LineSide)	100A/SEHA: SW B-14 (HBE6) B	0.208	5.75	5.75	2.95	0.025	0.000	Yes	PNL	25	6.5	18	0.22	Category 0
700	SW B-14 (HBE9) A	100A/RK5: SW B-14 (HBE9) A	0.48	15.00	15.00	9.27	0.004	0.000	Yes	PNL	25	4.6	18	0.13	Category 0
701	SW B-14 (HBE9) A (100A/RK5: SW B-14 (HBE9) A LineSide)	100A/SELA: SW B-14 (HBE9) A	0.48	15.00	15.00	9.27	0.025	0.000	Yes	PNL	25	14	18	0.76	Category 0
702	SW B-14 (HBE9) B	100A/RK5: SW B-14 (HBE9) B	0.48	15.00	15.00	9.27	0.004	0.000	Yes	PNL	25	4.6	18	0.13	Category 0
703	SW B-14 (HBE9) B (100A/RK5: SW B-14 (HBE9) B LineSide)	100A/SELA: SW B-14 (HBE9) B	0.48	15.00	15.00	9.27	0.025	0.000	Yes	PNL	25	14	18	0.76	Category 0
704	SW B-14 (HMB2)	100A/RK5: SW B-14 (HMB2)	0.48	8.15	8.15	5.50	0.008	0.000	Yes	PNL	25	5.0	18	0.15	Category 0
705	SW B-14 (HMB2) (100A/RK5: SW B-14 (HMB2) LineSide)	100A/SELA: SW B-14 (HMB2)	0.48	8.15	8.15	5.50	0.025	0.000	Yes	PNL	25	9.7	18	0.44	Category 0
706	SW B-14 (HMB5)	100A/RK5: SW B-14 (HMB5)	0.208	4.31	4.31	2.41	0.023	0.000	Yes	PNL	25	5.4	18	0.17	Category 0
707	SW B-14 (HMB5) (100A/RK5: SW B-14 (HMB5) LineSide)	100A/SEHA: SW B-14 (HMB5)	0.208	4.31	4.31	2.41	0.025	0.000	Yes	PNL	25	5.7	18	0.18	Category 0
708	SW D-10 (HMB1) A	100A/RK5: SW D-10 (HMB1) A	0.48	10.94	10.94	7.08	0.004	0.000	Yes	PNL	25	3.9	18	0.10	Category 0

	Bus Name	Protective Device Name	Bus kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Prot Dev Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	Required Protective FR Clothing Category
709	SW D-10 (HMB1) A (100A/RK5: SW D-10 (HMB1) A LineSide)	100A/SELA: SW D-10 (HMB1)	0.48	10.94	10.94	7.08	0.025	0.000	Yes	PNL	25	11	18	0.57	Category 0
710	SW D-10 (HMB1) B	100A/RK5: SW D-10 (HMB1) B	0.48	10.94	10.94	7.08	0.004	0.000	Yes	PNL	25	3.9	18	0.10	Category 0
711	SW D-10 (HMB1) B (100A/RK5: SW D-10 (HMB1) B LineSide)	100A/SELA: SW D-10 (HMB1) B	0.48	10.94	10.94	7.08	0.025	0.000	Yes	PNL	25	11	18	0.57	Category 0
712	SW D-10 (HMB3) A	100A/SEHA: SW D-10 (HMB3) A	0.208	4.50	4.50	2.11	0.026	0.000	Yes	PNL	25	5.3	18	0.16	Category 0 (*N3)
713	SW D-10 (HMB3) A (100A/RK5: SW D-10 (HMB3) A LineSide)	100A/SEHA: SW D-10 (HMB3) A	0.208	4.50	4.50	2.48	0.025	0.000	Yes	PNL	25	5.8	18	0.18	Category 0
714	SW D-10 (HMB3) B	100A/SEHA: SW D-10 (HMB3) B	0.208	4.50	4.50	2.11	0.026	0.000	Yes	PNL	25	5.3	18	0.16	Category 0 (*N3)
715	SW D-10 (HMB3) B (100A/RK5: SW D-10 (HMB3) B LineSide)	100A/SEHA: SW D-10 (HMB3) B	0.208	4.50	4.50	2.48	0.025	0.000	Yes	PNL	25	5.8	18	0.18	Category 0
716	SW D-12 (HMB1) A	100A/RK5: SW D-12 (HMB1) A	0.48	10.94	10.94	7.08	0.004	0.000	Yes	PNL	25	3.9	18	0.10	Category 0
717	SW D-12 (HMB1) A (100A/RK5: SW D-12 (HMB1) A LineSide)	100A/SELA: SW D-12 (HMB1) A	0.48	10.94	10.94	7.08	0.025	0.000	Yes	PNL	25	11	18	0.57	Category 0
718	SW D-12 (HMB1) B	100A/RK5: SW D-12 (HMB1) B	0.48	10.94	10.94	7.08	0.004	0.000	Yes	PNL	25	3.9	18	0.10	Category 0
719	SW D-12 (HMB1) B (100A/RK5: SW D-12 (HMB1) B LineSide)	100A/SELA: SW D-12 (HMB1) B	0.48	10.94	10.94	7.08	0.025	0.000	Yes	PNL	25	11	18	0.57	Category 0
720	SW D-12 (HMB4) A	100A/SEHA: SW D-12 (HMB4) A	0.208	4.59	4.59	2.14	0.026	0.000	Yes	PNL	25	5.3	18	0.16	Category 0 (*N3)
721	SW D-12 (HMB4) A (100A/RK5: SW D-12 (HMB4) A LineSide)	100A/SEHA: SW D-12 (HMB4) A	0.208	4.59	4.59	2.52	0.025	0.000	Yes	PNL	25	5.8	18	0.19	Category 0
722	SW D-12 (HMB4) B	100A/SEHA: SW D-12 (HMB4) B	0.208	4.59	4.59	2.14	0.026	0.000	Yes	PNL	25	5.3	18	0.16	Category 0 (*N3)
723	SW D-12 (HMB4) B (100A/RK5: SW D-12 (HMB4) B LineSide)	100A/SEHA: SW D-12 (HMB4) B	0.208	4.59	4.59	2.52	0.025	0.000	Yes	PNL	25	5.8	18	0.19	Category 0

	Bus Name	Protective Device Name	Bus kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Prot Dev Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	Required Protective FR Clothing Category
724	SW D-14 (HMB1)	100A/RK5: SW D-14 (HMB1)	0.48	9.47	9.47	5.32	0.008	0.000	Yes	PNL	25	4.9	18	0.14	Category 0 (*N3)
725	SW D-14 (HMB1) (100A/RK5: SW D-14 (HMB1) LineSide)	100A/SELA: SW D-14 (HMB1)	0.48	9.47	9.47	6.26	0.025	0.000	Yes	PNL	25	11	18	0.50	Category 0
726	SW D-14 (HMB5)	100A/SEHA: SW D-14 (HMB5)	0.208	4.90	4.90	2.24	0.025	0.000	Yes	PNL	25	5.4	18	0.17	Category 0 (*N3)
727	SW D-14 (HMB5) (100A/RK5: SW D-14 (HMB5) LineSide)	100A/SEHA: SW D-14 (HMB5)	0.208	4.90	4.90	2.64	0.025	0.000	Yes	PNL	25	6.0	18	0.20	Category 0
728	SW F-11 (HBE5) A	100A/RK5: SW F-11 (HBE5) A	0.208	5.82	5.82	2.53	0.019	0.000	Yes	PNL	25	4.9	18	0.14	Category 0 (*N3)
729	SW F-11 (HBE5) A (100A/RK5: SW F-11 (HBE5) A LineSide)	100A/SEHA: SW F-11 (HBE5) A	0.208	5.82	5.82	2.97	0.025	0.000	Yes	PNL	25	6.5	18	0.22	Category 0
730	SW F-11 (HBE5) B	100A/SEHA: SW F-11 (HBE5) B	0.208	5.23	5.23	2.35	0.025	0.000	Yes	PNL	25	5.6	18	0.18	Category 0 (*N3)
731	SW F-11 (HBE5) B (100A/RK5: SW F-11 (HBE5) B LineSide)	100A/SEHA: SW F-11 (HBE5) B	0.208	5.23	5.23	2.76	0.025	0.000	Yes	PNL	25	6.2	18	0.21	Category 0
732	SW F-11 (HBE9) A	100A/RK5: SW F-11 (HBE9) A	0.48	15.00	15.00	9.27	0.004	0.000	Yes	PNL	25	4.6	18	0.13	Category 0
733	SW F-11 (HBE9) A (100A/RK5: SW F-11 (HBE9) A LineSide)	100A/SELA: SW F-11 (HBE9) A	0.48	15.00	15.00	9.27	0.025	0.000	Yes	PNL	25	14	18	0.76	Category 0
734	SW F-11 (HBE9) B	100A/RK5: SW F-11 (HBE9) B	0.48	15.00	15.00	9.27	0.004	0.000	Yes	PNL	25	4.6	18	0.13	Category 0
735	SW F-11 (HBE9) B (100A/RK5: SW F-11 (HBE9) B LineSide)	100A/SELA: SW F-11 (HBE9) B	0.48	15.00	15.00	9.27	0.025	0.000	Yes	PNL	25	14	18	0.76	Category 0
736	SW F-14 (HBD4)	100A/RK5: SW F-14 (HBD4)	0.208	5.37	5.37	2.39	0.024	0.000	Yes	PNL	25	5.5	18	0.17	Category 0 (*N3)
737	SW F-14 (HBD4) (100A/RK5: SW F-14 (HBD4) LineSide)	100A/SEHA: SW F-14 (HBD4)	0.208	5.37	5.37	2.81	0.025	0.000	Yes	PNL	25	6.2	18	0.21	Category 0
738	SW F-14 (HBE6) A	100A/RK5: SW F-14 (HBE6) A	0.208	5.75	5.75	2.51	0.02	0.000	Yes	PNL	25	5.0	18	0.15	Category 0 (*N3)

	Bus Name	Protective Device Name	Bus kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Prot Dev Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	Required Protective FR Clothing Category
739	SW F-14 (HBE6) A (100A/RK5: SW F-14 (HBE6) A LineSide)	100A/SEHA: SW F-14 (HBE6) A	0.208	5.75	5.75	2.95	0.025	0.000	Yes	PNL	25	6.5	18	0.22	Category 0
740	SW F-14 (HBE6) B	100A/SEHA: SW F-14 (HBE6) B	0.208	5.20	5.20	2.34	0.025	0.000	Yes	PNL	25	5.6	18	0.17	Category 0 (*N3)
741	SW F-14 (HBE6) B (100A/RK5: SW F-14 (HBE6) B LineSide)	100A/SEHA: SW F-14 (HBE6) B	0.208	5.20	5.20	2.75	0.025	0.000	Yes	PNL	25	6.2	18	0.21	Category 0
742	SW F-14 (HBE9) A	100A/RK5: SW F-14 (HBE9) A	0.48	15.00	15.00	9.27	0.004	0.000	Yes	PNL	25	4.6	18	0.13	Category 0
743	SW F-14 (HBE9) A (100A/RK5: SW F-14 (HBE9) A LineSide)	100A/SELA: SW F-14 (HBE9) A	0.48	15.00	15.00	9.27	0.025	0.000	Yes	PNL	25	14	18	0.76	Category 0
744	SW F-14 (HBE9) B	100A/RK5: SW F-14 (HBE9) B	0.48	12.34	12.34	7.85	0.004	0.000	Yes	PNL	25	4.1	18	0.11	Category 0
745	SW F-14 (HBE9) B (100A/RK5: SW F-14 (HBE9) B LineSide)	100A/SELA: SW F-14 (HBE9) B	0.48	12.34	12.34	7.85	0.025	0.000	Yes	PNL	25	12	18	0.64	Category 0
746	SW F-18 (HBD5)	100A/RK5: SW F-18 (HBD5)	0.208	6.02	6.02	2.59	0.017	0.000	Yes	PNL	25	4.7	18	0.13	Category 0 (*N3)
747	SW F-18 (HBD5) (100A/RK5: SW F-18	100A/SEHA: SW F-18 (HBD5)	0.208	6.02	6.02	3.05	0.025	0.000	Yes	PNL	25	6.6	18	0.23	Category 0
748	SW F-18 (HBD9)	100A/RK5: SW F-18 (HBD9)	0.48	13.88	13.88	8.68	0.004	0.000	Yes	PNL	25	4.4	18	0.12	Category 0
749	SW F-18 (HBD9) (100A/RK5: SW F-18	100A/SELA: SW F-18 (HBD9)	0.48	13.88	13.88	8.68	0.025	0.000	Yes	PNL	25	13	18	0.71	Category 0
750	SW F-22 (HBD6)	100A/RK5: SW F-22 (HBD6)	0.208	5.76	5.76	2.51	0.02	0.000	Yes	PNL	25	5.0	18	0.15	Category 0 (*N3)
751	SW F-22 (HBD6) (100A/RK5: SW F-22	100A/SEHA: SW F-22 (HBD6)	0.208	5.76	5.76	2.95	0.025	0.000	Yes	PNL	25	6.5	18	0.22	Category 0
752	SW F-22 (HBD9)	100A/RK5: SW F-22 (HBD9)	0.48	13.88	13.88	8.68	0.004	0.000	Yes	PNL	25	4.4	18	0.12	Category 0
753	SW F-22 (HBD9) (100A/RK5: SW F-22	100A/SELA: SW F-22 (HBD9)	0.48	13.88	13.88	8.68	0.025	0.000	Yes	PNL	25	13	18	0.71	Category 0
754	SW F-24 (HBD9)	100A/RK5: F-24 (HBD9)	0.48	10.68	10.68	6.94	0.004	0.000	Yes	PNL	25	3.8	18	0.09	Category 0

	Bus Name	Protective Device Name	Bus kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Prot Dev Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	Required Protective FR Clothing Category
755	SW F-24 (HBD9) (100A/RK5: F-24 (HBD9)	100A/SELA: SW F-24 (HBD9)	0.48	10.68	10.68	6.94	0.025	0.000	Yes	PNL	25	11	18	0.56	Category 0
756	SW FL5 A200	200A/SFHA: SW FL5 A200	0.208	5.57	5.57	2.45	0.034	0.000	Yes	PNL	25	6.9	18	0.25	Category 0 (*N3)
757	SW FL5 A400	400A/SGDA4: SW FL5 A400	0.208	7.91	7.91	3.14	0.494	0.000	Yes	PNL	25	41	18	4.7	Category 2 (*N3) (*N16)
758	SW FL5 B200	200A/SFHA: SW FL5 B200	0.208	5.57	5.57	2.45	0.034	0.000	Yes	PNL	25	6.9	18	0.25	Category 0 (*N3)
759	SW FL5 B400	400A/SGDA4: SW FL5 B400	0.208	7.91	7.91	3.14	0.494	0.000	Yes	PNL	25	41	18	4.7	Category 2 (*N3) (*N16)
760	SW FL5 C200	200A/SFHA: SW FL5 C200	0.208	6.99	6.99	3.38	0.025	0.000	Yes	PNL	25	7.1	18	0.26	Category 0
761	SW FL5 C400	400A/SGDA4: SW FL5 C400	0.208	9.79	9.79	3.64	0.384	0.000	Yes	PNL	25	39	18	4.3	Category 2 (*N3) (*N16)
762	SW FL5 D200	200A/SFHA: SW FL5 D200	0.208	6.99	6.99	3.38	0.025	0.000	Yes	PNL	25	7.1	18	0.26	Category 0
763	SW FL5 D400	400A/SGDA4: SW FL5 D400	0.208	9.79	9.79	3.64	0.384	0.000	Yes	PNL	25	39	18	4.3	Category 2 (*N3) (*N16)
764	SW H-8 (HBE3) A	100A/RK5: SW H-8 (HBE3) A	0.208	5.41	5.41	2.40	0.024	0.000	Yes	PNL	25	5.4	18	0.17	Category 0 (*N3)
765	SW H-8 (HBE3) A (100A/RK5: SW H-8 (HBE3) A LineSide)	100A/SEHA: SW H-8 (HBE3) A	0.208	5.41	5.41	2.83	0.025	0.000	Yes	PNL	25	6.3	18	0.21	Category 0
766	SW H-8 (HBE3) B	100A/RK5: SW H-8 (HBE3) B	0.208	5.41	5.41	2.40	0.024	0.000	Yes	PNL	25	5.4	18	0.17	Category 0 (*N3)
767	SW H-8 (HBE3) B (100A/RK5: SW H-8 (HBE3) B LineSide)	100A/SEHA: SW H-8 (HBE3) B	0.208	5.41	5.41	2.83	0.025	0.000	Yes	PNL	25	6.3	18	0.21	Category 0
768	SW K-11 (HBE4) A	100A/SEHA: SW K-11 (HBE4) A	0.208	5.14	5.14	2.32	0.025	0.000	Yes	PNL	25	5.5	18	0.17	Category 0 (*N3)
769	SW K-11 (HBE4) A (100A/RK5: SW K-11 (HBE4) A LineSide)	100A/SEHA: SW K-11 (HBE4) A	0.208	5.14	5.14	2.73	0.025	0.000	Yes	PNL	25	6.1	18	0.20	Category 0
770	SW K-11 (HBE4) B	100A/SEHA: SW K-11 (HBE4) B	0.208	5.14	5.14	2.32	0.025	0.000	Yes	PNL	25	5.5	18	0.17	Category 0 (*N3)

	Bus Name	Protective Device Name	Bus kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Prot Dev Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	Required Protective FR Clothing Category
771	SW K-11 (HBE4) B (100A/RK5: SW K-11 (HBE4) B LineSide)	100A/SEHA: SW K-11 (HBE4) B	0.208	5.14	5.14	2.73	0.025	0.000	Yes	PNL	25	6.1	18	0.20	Category 0
772	SW K-11 (HBE8) A	100A/RK5: SW K-11 (HBE8) A	0.48	12.13	12.13	7.73	0.004	0.000	Yes	PNL	25	4.1	18	0.10	Category 0
773	SW K-11 (HBE8) A (100A/RK5: SW K-11 (HBE8) A LineSide)	100A/SELA: SW K-11 (HBE8) A	0.48	12.13	12.13	7.73	0.025	0.000	Yes	PNL	25	12	18	0.63	Category 0
774	SW K-11 (HBE8) B	100A/RK5: SW K-11 (HBE8) B	0.48	12.13	12.13	7.73	0.004	0.000	Yes	PNL	25	4.1	18	0.10	Category 0
775	SW K-11 (HBE8) B (100A/RK5: SW K-11 (HBE8) B LineSide)	100A/SELA: SW K-11 (HBE8) B	0.48	12.13	12.13	7.73	0.025	0.000	Yes	PNL	25	12	18	0.63	Category 0
776	SW K-14 (HBD4) A	100A/RK5: SW K-14 (HBD4) A	0.208	6.39	6.39	2.70	0.014	0.000	Yes	PNL	25	4.3	18	0.11	Category 0 (*N3)
777	SW K-14 (HBD4) A (100A/RK5: SW K-14 (HBD4) A LineSide)	100A/SEHA: SW K-14 (HBD4) A	0.208	6.39	6.39	3.18	0.025	0.000	Yes	PNL	25	6.8	18	0.24	Category 0
778	SW K-14 (HBD4) B	100A/RK5: SW K-14 (HBD4) B	0.208	6.39	6.39	2.70	0.014	0.000	Yes	PNL	25	4.3	18	0.11	Category 0 (*N3)
779	SW K-14 (HBD4) B (100A/RK5: SW K-14 (HBD4) B LineSide)	100A/SEHA: SW K-14 (HBD4) B	0.208	6.39	6.39	3.18	0.025	0.000	Yes	PNL	25	6.8	18	0.24	Category 0
780	SW K-14 (HBE8) A	100A/RK5: SW K-14 (HBE8) A	0.48	12.13	12.13	7.73	0.004	0.000	Yes	PNL	25	4.1	18	0.10	Category 0
781	SW K-14 (HBE8) A (100A/RK5: SW K-14 (HBE8) A LineSide)	100A/SELA: SW K-14 (HBE8) A	0.48	12.13	12.13	7.73	0.025	0.000	Yes	PNL	25	12	18	0.63	Category 0
782	SW K-14 (HBE8) B	100A/RK5: SW K-14 (HBE8) B	0.48	10.02	10.02	5.58	0.008	0.000	Yes	PNL	25	5.0	18	0.15	Category 0 (*N3)
783	SW K-14 (HBE8) B (100A/RK5: SW K-14 (HBE8) B LineSide)	100A/SELA: SW K-14 (HBE8) B	0.48	10.02	10.02	6.57	0.025	0.000	Yes	PNL	25	11	18	0.53	Category 0
784	SW K-18 (HBD5) A	100A/RK5: SW K-18 (HBD5) A	0.208	7.33	7.33	3.50	0.008	0.000	Yes	PNL	25	3.7	18	0.09	Category 0
785	SW K-18 (HBD5) A (100A/RK5: SW K-18 (HBD5) A LineSide)	SW 100A/SEHA: K-18 (HBD5) A	0.208	7.33	7.33	3.50	0.025	0.000	Yes	PNL	25	7.2	18	0.27	Category 0

	Bus Name	Protective Device Name	Bus kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Prot Dev Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	Required Protective FR Clothing Category
786	SW K-18 (HBD5) B	100A/RK5: SW K-18 (HBD5) B	0.208	7.33	7.33	3.50	0.008	0.000	Yes	PNL	25	3.7	18	0.09	Category 0
787	SW K-18 (HBD5) B (100A/RK5: SW K-18 (HBD5) B LineSide)	100A/SEHA: SW K-18 (HBD5) B	0.208	7.33	7.33	3.50	0.025	0.000	Yes	PNL	25	7.2	18	0.27	Category 0
788	SW K-18 (HBD8) A	100A/RK5: SW K-18 (HBD8) A	0.48	12.13	12.13	7.74	0.004	0.000	Yes	PNL	25	4.1	18	0.10	Category 0
789	SW K-18 (HBD8) A (100A/RK5: SW K-18 (HBD8) A LineSide)	100A/SELA: SW K-18 (HBD8) A	0.48	12.13	12.13	7.74	0.025	0.000	Yes	PNL	25	12	18	0.63	Category 0
790	SW K-18 (HBD8) B	100A/RK5: SW K-18 (HBD8) B	0.48	12.13	12.13	7.73	0.004	0.000	Yes	PNL	25	4.1	18	0.10	Category 0
791	SW K-18 (HBD8) B (100A/RK5: SW K-18 (HBD8) B LineSide)	100A/SELA: SW K-18 (HBD8) B	0.48	12.13	12.13	7.73	0.025	0.000	Yes	PNL	25	12	18	0.63	Category 0
792	SW K-22 (HBD6) A	100A/RK5: SW K-22 (HBD6) A	0.208	5.75	5.75	2.51	0.02	0.000	Yes	PNL	25	5.0	18	0.15	Category 0 (*N3)
793	SW K-22 (HBD6) A (100A/RK5: SW K-22 (HBD6) A LineSide)	100A/SEHA: SW K-22 (HBD6) A	0.208	5.75	5.75	2.95	0.025	0.000	Yes	PNL	25	6.4	18	0.22	Category 0
794	SW K-22 (HBD6) B	100A/RK5: SW K-22 (HBD6) B	0.208	5.75	5.75	2.51	0.02	0.000	Yes	PNL	25	5.0	18	0.15	Category 0 (*N3)
795	SW K-22 (HBD6) B (100A/RK5: SW K-22 (HBD6) B LineSide)	100A/SEHA: SW K-22 (HBD6) B	0.208	5.75	5.75	2.95	0.025	0.000	Yes	PNL	25	6.4	18	0.22	Category 0
796	SW K-22 (HBD8) A	100A/RK5: SW K-22 (HBD8) A	0.48	12.13	12.13	7.73	0.004	0.000	Yes	PNL	25	4.1	18	0.10	Category 0
797	SW K-22 (HBD8) A (100A/RK5: SW K-22 (HBD8) A LineSide)	100A/SELA: SW K-22 (HBD8) A	0.48	12.13	12.13	7.73	0.025	0.000	Yes	PNL	25	12	18	0.63	Category 0
798	SW K-22 (HBD8) B	100A/RK5: SW K-22 (HBD8) B	0.48	12.13	12.13	7.73	0.004	0.000	Yes	PNL	25	4.1	18	0.10	Category 0
799	SW K-22 (HBD8) B (100A/RK5: SW K-22 (HBD8) B LineSide)	100A/SELA: SW K-22 (HBD8) B	0.48	12.13	12.13	7.73	0.025	0.000	Yes	PNL	25	12	18	0.63	Category 0
800	SW K-24 (HBD6)	100A/RK5: SW K-24 (HBD6)	0.208	5.75	5.75	2.51	0.02	0.000	Yes	PNL	25	5.0	18	0.15	Category 0 (*N3)

	Bus Name	Protective Device Name	Bus kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Prot Dev Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	Required Protective FR Clothing Category
801	SW K-24 (HBD6) (100A/RK5: SW K-24	100A/SEHA: SW K-24 (HBD6)	0.208	5.75	5.75	2.95	0.025	0.000	Yes	PNL	25	6.4	18	0.22	Category 0
802	SW K-24 (HBD8)	100A/RK5: SW K-24 (HBD8)	0.48	9.62	9.62	5.39	0.008	0.000	Yes	PNL	25	4.9	18	0.14	Category 0 (*N3)
803	SW K-24 (HBD8) (100A/RK5: SW K-24	100A/SELA: SW K-24 (HBD8)	0.48	9.62	9.62	6.35	0.025	0.000	Yes	PNL	25	11	18	0.51	Category 0
804	SW K-8 (HBE3) A	100A/RK5: SW K-8 (HBE3) A	0.208	5.41	5.41	2.40	0.024	0.000	Yes	PNL	25	5.4	18	0.17	Category 0 (*N3)
805	SW K-8 (HBE3) A (100A/RK5: SW K-8 (HBE3) A LineSide)	100A/SEHA:SW K-8 (HBE3) A	0.208	5.41	5.41	2.83	0.025	0.000	Yes	PNL	25	6.3	18	0.21	Category 0
806	SW K-8 (HBE3) B	100A/RK5: SW K-8 (HBE3) B	0.208	5.41	5.41	2.40	0.024	0.000	Yes	PNL	25	5.4	18	0.17	Category 0 (*N3)
807	SW K-8 (HBE3) B (100A/RK5: SW K-8 (HBE3) B LineSide)	100A/SEHA: SW K-8 (HBE3) B	0.208	5.41	5.41	2.83	0.025	0.000	Yes	PNL	25	6.3	18	0.21	Category 0
808	SW K-8 (HBE8) A	100A/RK5: SW K-8 (HBE8) A	0.48	12.13	12.13	7.74	0.004	0.000	Yes	PNL	25	4.1	18	0.10	Category 0
809	SW K-8 (HBE8) A (100A/RK5: SW K-8 (HBE8) A LineSide)	100A/SELA: SW K-8 (HBE8) A	0.48	12.13	12.13	7.74	0.025	0.000	Yes	PNL	25	12	18	0.63	Category 0
810	SW K-8 (HBE8) B	100A/RK5: SW K-8 (HBE8) B	0.48	12.13	12.13	7.73	0.004	0.000	Yes	PNL	25	4.1	18	0.10	Category 0
811	SW K-8 (HBE8) B (100A/RK5: SW K-8 (HBE8) B LineSide)	100A/SELA: SW K-8 (HBE8) B	0.48	12.13	12.13	7.73	0.025	0.000	Yes	PNL	25	12	18	0.63	Category 0
812	SW M-8 (HBE3) A	100A/RK5: SW M-8 (HBE3) A	0.208	5.41	5.41	2.40	0.024	0.000	Yes	PNL	25	5.4	18	0.17	Category 0 (*N3)
813	SW M-8 (HBE3) A (100A/RK5: SW M-8 (HBE3) A LineSide)	100A/SEHA: SW M-8 (HBE3) A	0.208	5.41	5.41	2.83	0.025	0.000	Yes	PNL	25	6.3	18	0.21	Category 0
814	SW M-8 (HBE3) B	100A/SEHA: SW M-8 (HBE3) B	0.208	4.66	4.66	2.16	0.026	0.000	Yes	PNL	25	5.3	18	0.16	Category 0 (*N3)
815	SW M-8 (HBE3) B (100A/RK5: SW M-8 (HBE3) B LineSide)	100A/SEHA: SW M-8 (HBE3) B	0.208	4.66	4.66	2.55	0.025	0.000	Yes	PNL	25	5.9	18	0.19	Category 0

	Bus Name	Protective Device Name	Bus kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Prot Dev Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	Required Protective FR Clothing Category
816	SW P-11 (HBE2) A	100A/RK5: SW P-11 (HBE2) A	0.208	6.42	6.42	2.71	0.014	0.000	Yes	PNL	25	4.3	18	0.11	Category 0 (*N3)
817	SW P-11 (HBE2) A (100A/RK5: SW P-11 (HBE2) A LineSide)	100A/SEHA: SW P-11 (HBE2) A	0.208	6.42	6.42	3.19	0.025	0.000	Yes	PNL	25	6.8	18	0.24	Category 0
818	SW P-11 (HBE2) B	100A/RK5: SW P-11 (HBE2) B	0.208	5.39	5.39	2.40	0.024	0.000	Yes	PNL	25	5.5	18	0.17	Category 0 (*N3)
819	SW P-11 (HBE2) B (100A/RK5: SW P-11 (HBE2) B LineSide)	100A/SEHA: SW P-11 (HBE2) B	0.208	5.39	5.39	2.82	0.025	0.000	Yes	PNL	25	6.3	18	0.21	Category 0
820	SW P-11 (HBE7) A	100A/RK5: SW P-11 (HBE7) A	0.48	10.63	10.63	6.91	0.004	0.000	Yes	PNL	25	3.8	18	0.09	Category 0
821	SW P-11 (HBE7) A (100A/RK5: SW P-11 (HBE7) A LineSide)	100A/SELA: SW P-11 (HBE7) A	0.48	10.63	10.63	6.91	0.025	0.000	Yes	PNL	25	11	18	0.56	Category 0
822	SW P-11 (HBE7) B	100A/RK5: SW P-11 (HBE7) B	0.48	10.63	10.63	6.91	0.004	0.000	Yes	PNL	25	3.8	18	0.09	Category 0
823	SW P-11 (HBE7) B (100A/RK5: SW P-11 (HBE7) B LineSide)	100A/SELA: SW P-11 (HBE7) B	0.48	10.63	10.63	6.91	0.025	0.000	Yes	PNL	25	11	18	0.56	Category 0
824	SW P-14 (HBD1) A	100A/RK5: SW P-14 (HBD1) A	0.208	4.42	4.42	2.45	0.022	0.000	Yes	PNL	25	5.2	18	0.16	Category 0
825	SW P-14 (HBD1) A (100A/RK5: SW P-14 (HBD1) A LineSide)	100A/SEHA: SW P-14 (HBD1) A	0.208	4.42	4.42	2.45	0.025	0.000	Yes	PNL	25	5.7	18	0.18	Category 0
826	SW P-14 (HBD1) B	100A/SEHA: SW P-14 (HBD1) B	0.208	3.91	3.91	2.25	0.025	0.000	Yes	PNL	25	5.5	18	0.17	Category 0
827	SW P-14 (HBD1) B (100A/RK5: SW P-14 (HBD1) B LineSide)	100A/SEHA: SW P-14 (HBD1) B	0.208	3.91	3.91	2.25	0.025	0.000	Yes	PNL	25	5.5	18	0.17	Category 0
828	SW P-14 (HBE7) A	100A/RK5: SW P-14 (HBE7) A	0.48	10.63	10.63	6.91	0.004	0.000	Yes	PNL	25	3.8	18	0.09	Category 0
829	SW P-14 (HBE7) A (100A/RK5: SW P-14 (HBE7) A LineSide)	100A/SELA: SW P-14 (HBE7) A	0.48	10.63	10.63	6.91	0.025	0.000	Yes	PNL	25	11	18	0.56	Category 0
830	SW P-14 (HBE7) B	100A/RK5: SW P-14 (HBE7) B	0.48	8.98	8.98	5.09	0.008	0.000	Yes	PNL	25	4.7	18	0.13	Category 0 (*N3)

	Bus Name	Protective Device Name	Bus kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Prot Dev Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	Required Protective FR Clothing Category
831	SW P-14 (HBE7) B (100A/RK5: SW P-14 (HBE7) B LineSide)	100A/SELA: SW P-14 (HBE7) B	0.48	8.98	8.98	5.98	0.025	0.000	Yes	PNL	25	10	18	0.48	Category 0
832	SW P-18 (HBD2) A	100A/RK5: SW P-18 (HBD2) A	0.208	5.75	5.75	2.51	0.02	0.000	Yes	PNL	25	5.0	18	0.15	Category 0 (*N3)
833	SW P-18 (HBD2) A (100A/RK5: SW P-18 (HBD2) A LineSide)	100A/SEHA: SW P-18 (HBD2) A	0.208	5.75	5.75	2.95	0.025	0.000	Yes	PNL	25	6.4	18	0.22	Category 0
834	SW P-18 (HBD2) B	100A/SEHA: SW P-18 (HBD2) B	0.208	4.91	4.91	2.24	0.025	0.000	Yes	PNL	25	5.4	18	0.17	Category 0 (*N3)
835	SW P-18 (HBD2) B (100A/RK5: SW P-18 (HBD2) B LineSide)	100A/SEHA: SW P-18 (HBD2) B	0.208	4.91	4.91	2.64	0.025	0.000	Yes	PNL	25	6.0	18	0.20	Category 0
836	SW P-18 (HBD7) A	100A/RK5: SW P-18 (HBD7) A	0.48	10.63	10.63	6.91	0.004	0.000	Yes	PNL	25	3.8	18	0.09	Category 0
837	SW P-18 (HBD7) A (100A/RK5: SW P-18 (HBD7) A LineSide)	100A/SELA: SW P-18 (HBD7) A	0.48	10.63	10.63	6.91	0.025	0.000	Yes	PNL	25	11	18	0.56	Category 0
838	SW P-18 (HBD7) B	100A/RK5: SW P-18 (HBD7) B	0.48	10.63	10.63	6.91	0.004	0.000	Yes	PNL	25	3.8	18	0.09	Category 0
839	SW P-18 (HBD7) B (100A/RK5: SW P-18 (HBD7) B LineSide)	100A/SELA: SW P-18 (HBD7) B	0.48	10.63	10.63	6.91	0.025	0.000	Yes	PNL	25	11	18	0.56	Category 0
840	SW P-22 (HBD3) A	100A/RK5: SW P-22 (HBD3) A	0.208	5.31	5.31	2.37	0.025	0.000	Yes	PNL	25	5.6	18	0.18	Category 0 (*N3)
841	SW P-22 (HBD3) A (100A/RK5: SW P-22 (HBD3) A LineSide)	100A/SEHA: SW P-22 (HBD3) A	0.208	5.31	5.31	2.79	0.025	0.000	Yes	PNL	25	6.2	18	0.21	Category 0
842	SW P-22 (HBD3) B	100A/RK5: SW P-22 (HBD3) B	0.208	5.31	5.31	2.37	0.025	0.000	Yes	PNL	25	5.6	18	0.18	Category 0 (*N3)
843	SW P-22 (HBD3) B (100A/RK5: SW P-22 (HBD3) B LineSide)	100A/SEHA: SW P-22 (HBD3) B	0.208	5.31	5.31	2.79	0.025	0.000	Yes	PNL	25	6.2	18	0.21	Category 0
844	SW P-22 (HBD7) A	100A/RK5: SW P-22 (HBD7) A	0.48	10.63	10.63	6.91	0.004	0.000	Yes	PNL	25	3.8	18	0.09	Category 0
845	SW P-22 (HBD7) A (100A/RK5: SW P-22 (HBD7) A LineSide)	100A/SELA: SW P-22 (HBD7) A	0.48	10.63	10.63	6.91	0.025	0.000	Yes	PNL	25	11	18	0.56	Category 0

	Bus Name	Protective Device Name	Bus kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Prot Dev Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	Required Protective FR Clothing Category
846	SW P-22 (HBD7) B	100A/RK5: SW P-22 (HBD7) B	0.48	10.63	10.63	6.91	0.004	0.000	Yes	PNL	25	3.8	18	0.09	Category 0
847	SW P-22 (HBD7) B (100A/RK5: SW P-22 (HBD7) B LineSide)	100A/SELA: SW P-22 (HBD7) B	0.48	10.63	10.63	6.91	0.025	0.000	Yes	PNL	25	11	18	0.56	Category 0
848	SW P-24 (HBD3)	100A/RK5: SW P-24 (HBD3)	0.208	5.31	5.31	2.37	0.025	0.000	Yes	PNL	25	5.6	18	0.18	Category 0 (*N3)
849	SW P-24 (HBD3) (100A/RK5: SW P-24	100A/SEHA: SW P-24 (HBD3)	0.208	5.31	5.31	2.79	0.025	0.000	Yes	PNL	25	6.2	18	0.21	Category 0
850	SW P-24 (HBD7)	100A/RK5: SW P-24 (HBD7)	0.48	8.66	8.66	5.80	0.008	0.000	Yes	PNL	25	5.2	18	0.15	Category 0
851	SW P-24 (HBD7) (100A/RK5: SW P-24	100A/SELA: SW P-24 (HBD7)	0.48	8.66	8.66	5.80	0.025	0.000	Yes	PNL	25	10	18	0.46	Category 0
852	SW P-8 (HBE1) A	100A/RK5: SW P-8 (HBE1) A	0.208	7.39	7.39	3.52	0.008	0.000	Yes	PNL	25	3.7	18	0.09	Category 0
853	SW P-8 (HBE1) A (100A/RK5: SW P-8 (HBE1) A LineSide)	100A/SEHA: SW P-8 (HBE1) A	0.208	7.39	7.39	3.52	0.025	0.000	Yes	PNL	25	7.2	18	0.27	Category 0
854	SW P-8 (HBE1) B	100A/RK5: SW P-8 (HBE1) B	0.208	6.06	6.06	2.60	0.017	0.000	Yes	PNL	25	4.6	18	0.13	Category 0 (*N3)
855	SW P-8 (HBE1) B (100A/RK5: SW P-8 (HBE1) B LineSide)	100A/SEHA: SW P-8 (HBE1) B	0.208	6.06	6.06	3.06	0.025	0.000	Yes	PNL	25	6.6	18	0.23	Category 0
856	SW P-8 (HBE7) A	100A/RK5: SW P-8 (HBE7) A	0.48	10.63	10.63	6.91	0.004	0.000	Yes	PNL	25	3.8	18	0.09	Category 0
857	SW P-8 (HBE7) A (100A/RK5: SW P-8 (HBE7) A LineSide)	100A/SELA: SW P-8 (HBE7) A	0.48	10.63	10.63	6.91	0.025	0.000	Yes	PNL	25	11	18	0.56	Category 0
858	SW P-8 (HBE7) B	100A/RK5: SW P-8 (HBE7) B	0.48	10.63	10.63	6.91	0.004	0.000	Yes	PNL	25	3.8	18	0.09	Category 0
859	SW P-8 (HBE7) B (100A/RK5: SW P-8 (HBE7) B LineSide)	100A/SELA: SW P-8 (HBE7) B	0.48	10.63	10.63	6.91	0.025	0.000	Yes	PNL	25	11	18	0.56	Category 0
860	SW T-11 (HBE2) A	100A/RK5: SW T-11 (HBE2) A	0.208	6.43	6.43	2.71	0.014	0.000	Yes	PNL	25	4.2	18	0.11	Category 0 (*N3)

	Bus Name	Protective Device Name	Bus kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Prot Dev Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	Required Protective FR Clothing Category
861	SW T-11 (HBE2) A (100A/RK5: SW T-11 (HBE2) A LineSide)	100A/SEHA: SW T-11 (HBE2) A	0.208	6.43	6.43	3.19	0.025	0.000	Yes	PNL	25	6.8	18	0.24	Category 0
862	SW T-11 (HBE2) B	100A/RK5: SW T-11 (HBE2) B	0.208	6.43	6.43	2.71	0.014	0.000	Yes	PNL	25	4.2	18	0.11	Category 0 (*N3)
863	SW T-11 (HBE2) B (100A/RK5: SW T-11 (HBE2) B LineSide)	100A/SEHA: SW T-11 (HBE2) B	0.208	6.43	6.43	3.19	0.025	0.000	Yes	PNL	25	6.8	18	0.24	Category 0
864	SW T-14 (HBD1) A	100A/SEHA: SW T-14 (HBD1) A	0.208	4.42	4.42	2.08	0.026	0.000	Yes	PNL	25	5.2	18	0.16	Category 0 (*N3)
865	SW T-14 (HBD1) A (100A/RK5: SW T-14 (HBD1) A LineSide)	100A/SEHA: SW T-14 (HBD1) A	0.208	4.42	4.42	2.45	0.025	0.000	Yes	PNL	25	5.7	18	0.18	Category 0
866	SW T-14 (HBD1) B	100A/SEHA: SW T-14 (HBD1) B	0.208	4.42	4.42	2.08	0.026	0.000	Yes	PNL	25	5.2	18	0.16	Category 0 (*N3)
867	SW T-14 (HBD1) B (100A/RK5: SW T-14 (HBD1) B LineSide)	100A/SEHA: SW T-14 (HBD1) B	0.208	4.42	4.42	2.45	0.025	0.000	Yes	PNL	25	5.7	18	0.18	Category 0
868	SW T-18 (HBD2) A	100A/RK5: SW T-18 (HBD2) A	0.208	5.75	5.75	2.51	0.02	0.000	Yes	PNL	25	5.0	18	0.15	Category 0 (*N3)
869	SW T-18 (HBD2) A (100A/RK5: SW T-18 (HBD2) A LineSide)	100A/SEHA: SW T-18 (HBD2) A	0.208	5.75	5.75	2.95	0.025	0.000	Yes	PNL	25	6.4	18	0.22	Category 0
870	SW T-18 (HBD2) B	100A/RK5: SW T-18 (HBD2) B	0.208	5.75	5.75	2.51	0.02	0.000	Yes	PNL	25	5.0	18	0.15	Category 0 (*N3)
871	SW T-18 (HBD2) B (100A/RK5: SW T-18 (HBD2) B LineSide)	100A/SEHA: SW T-18 (HBD2) B	0.208	5.75	5.75	2.95	0.025	0.000	Yes	PNL	25	6.4	18	0.22	Category 0
872	SW T-22 (HBD3) A	100A/RK5: SW T-22 (HBD3) A	0.208	5.31	5.31	2.37	0.025	0.000	Yes	PNL	25	5.6	18	0.18	Category 0 (*N3)
873	SW T-22 (HBD3) A (100A/RK5: SW T-22 (HBD3) A LineSide)	100A/SEHA: SW T-22 (HBD3) A	0.208	5.31	5.31	2.79	0.025	0.000	Yes	PNL	25	6.2	18	0.21	Category 0
874	SW T-22 (HBD3) B	100A/RK5: SW T-22 (HBD3) B	0.208	5.31	5.31	2.37	0.025	0.000	Yes	PNL	25	5.6	18	0.18	Category 0 (*N3)
875	SW T-22 (HBD3) B (100A/RK5: SW T-22 (HBD3) B LineSide)	100A/SEHA: SW T-22 (HBD3) B	0.208	5.31	5.31	2.79	0.025	0.000	Yes	PNL	25	6.2	18	0.21	Category 0

	Bus Name	Protective Device Name	Bus kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Prot Dev Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	Required Protective FR Clothing Category
876	SWG-1 (L1)	51: SWG-1 (L2)	13.20	13.99	6.35	6.13	0.195	0.050	Yes	SWG	153	126	36	4.0	Category 2 (*N16)
877	SWG-1 (L2)	51: SWG-1 (L1)	13.20	13.99	6.35	6.13	0.195	0.050	Yes	SWG	153	126	36	4.0	Category 2 (*N16)
878	SWG-2 (L1)	51: SWG-2 (L2)	13.20	13.97	6.90	6.66	0.195	0.050	Yes	SWG	153	126	36	4.0	Category 2 (*N16)
879	SWG-2 (L2)	51: SWG-2 (L1)	13.20	13.97	6.90	6.66	0.195	0.050	Yes	SWG	153	126	36	4.0	Category 2 (*N16)
880	TYP ESC	40A/RK5: TYP ESC	0.48	0.61	0.59	0.50	0.658	0.000	Yes	PNL	25	11	18	0.46	Category 0 (*N1) (*N3) (*N16)
881	TYP ESC (40A/RK5: TYP ESC LineSide)	40A/FCH: TYP ESC	0.48	0.61	0.59	0.50	1.51	0.000	Yes	PNL	25	17	18	1.0	Category 0 (*N1) (*N3) (*N16)
882	Category 0: Untreated Cotton														(*N11) - Out of IEEE 1584 Range, Lee Equation Used. Applicable for Open Air only. Existing Equipment type is not Open Air!
883	Category 1: FR Shirt & Pants														(*N2) < 80% Cleared Fault Threshold
884	Category 2: Cotton Underwear + FR Shirt & Pants														(*N3) - Arcing Current Low Tolerances Used
885	Category 3: Cotton Underwear + FR Shirt & Pant + FR Coverall														(*N5) - Miscoordinated, Upstream Device Tripped
886	Category 4: Cotton Underwear + FR Shirt & Pant + Multi Layer Flash Suit														(*N9) - Max Arcing Duration Reached
887	Category Dangerous!: No FR Category Found														(*N15) - Report as category 0 if fed by one transformer size < 125 kVA
888															(*N16) - Trip Time Recalculated

	Bus Name	Protective Device Name	Bus kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Prot Dev Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	Required Protective FR Clothing Category
889															IEEE 1584 - 2002/2004a Edition Bus + Line Side Report (Include Line Side + Load Side Contributions), 80% Cleared Fault Threshold, include Ind. Motors for 5.0 Cycles), mis-coordination checked

Arc Flash Evaluation Study Options

Project:

Standard:	IEEE 1584	**Max Arcing Duration:**	2.0 seconds
Unit:	English	**Include Transformer Phase Shift:**	No
Clear Fault Threshold:	80 %	**Define Grounded as SLG/3P Fault >= :**	5.0 %
Check Upstream Miscoordination:	Yes		

---------- Flash Boundary Calculation Adjustment Option ----------

For voltage above 1 kV and trip time <= 0.1s, use 1.5 cal/cm^2 *(5.0 J/cm^2) for flash boundary calculation.

---------- Incident Energy Report Option for Equipment Below 240 V ----------

Report as Category 0 if Transformer Size < 125 kVA

---------- Generator and Synchronous Motor Decay Option ----------

Decay to 300% of the Rated Current after 10 cycl Apply decay to generators only

---------- Induction Motor Decay Option ----------

Include induction motors for 5 cycles.

---------- Fuse Current Limiting Option ----------

All fuses are assumed as Standard fuses, arc duration will be read from total clearing curve.

---------- Report Option ----------

Report Bus + Line Side Results Include Line and Load Side contributions (protective device failed to open)

Report last trip device