

ADDENDUM No. 2

RFP No. 26-43

WWTP Electrical Preventative Maintenance

Due: September 9, 2026 by 2:00 P.M. (local time)

The information contained herein shall take precedence over the original documents and all previous addenda (if any) and is appended thereto. **This Addendum includes one thousand and fifty-two (1052) pages.**

The Proposer is to acknowledge receipt of this Addendum No. 2, including all attachments in its Proposal by so indicating in the proposal that the addendum has been received. Proposals submitted without acknowledgement of receipt of this addendum may be considered non-conforming.

The following forms provided within the RFP Document should be included in submitted proposal:

- Attachment A – City of Ann Arbor Prevailing Wage Declaration of Compliance
- Attachment C – City of Ann Arbor Non-Discrimination Declaration of Compliance
- Attachment D - City of Ann Arbor Living Wage Declaration of Compliance
- Attachment E - Vendor Conflict of Interest Disclosure Form of the RFP Document

Proposals that fail to provide these completed forms listed above upon proposal opening may be rejected as non-responsive and may not be considered for award.

I. QUESTIONS AND ANSWERS

The following Questions have been received by the City. Responses are being provided in accordance with the terms of the RFP. Respondents are directed to take note in its review of the documents of the following questions and City responses as they affect work or details in other areas not specifically referenced here.

Question 1: Can the previous Arc Flash Study be provided?

Answer 1: See attached.

Question 2: If the breakers are to be primary injected for testing is there power available or would this require a generator to supply the needed power?

Answer 2: Yes, power will be available on the online side of the equipment.

Offerors are responsible for any conclusions that they may draw from the information contained in the Addendum.



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SHORT CIRCUIT, COORDINATION AND
ARC FLASH STUDY

FOR
ANN ARBOR WASTE WATER TREATMENT PLANT
FACILITIES RENOVATION

HVE PROJECT NO: 412075



DATE: MARCH 31, 2017

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CHAPTER 1

EXECUTIVE SUMMARY

1.0 Executive Summary

This report presents the results of three-phase system studies that were performed for the Ann Arbor Wastewater Treatment Plant. A Short Circuit Study was performed to calculate fault currents at all points within the power distribution system. A Protective Device Evaluation study was performed to compare calculated short circuit currents with the manufacturer's ratings. A Protective Device Coordination study was performed to establish optimum time and current settings which minimize disruption of electrical service under overload and fault conditions. An Arc Flash Study was performed to calculate arcing fault incident energy levels and provide equipment labels. Protective device time and current settings were re-evaluated for cases in which arc flash incident energy levels could be reduced with acceptable compromise in coordination selectivity.

1.1 System Information

Initial reference data and system information was obtained from Malcolm-Pirnie contract drawings and a partial SKM model received from Malcolm-Pirnie. The SKM system model one-line diagram was modified, enhanced, and completed with approved shop drawing/submittal documentation, contract one-line drawings received on-site for the Solids Handling Building and Gravity Thickening Facilities of the Residuals Handling Improvement project, and obtained by field inspection to the extent possible given availability of safe access to equipment.

Some assumptions and/or estimates were necessary and may affect the outcome of study results. Assumptions and/or estimates are only made in cases where there are safety concerns in obtaining or verifying equipment data, or there are physical limitations to obtaining or verifying equipment data. An example of the former is inaccessible fuse data on energized medium voltage equipment. An example of the latter is accurate cable length in hidden conduit embedded within the building structure.

1.2 Utility Information

Utility information is retained from previous studies as:

Utility Line #DC-8266 'North': Three phase fault current = 6,307 A symmetrical at 13.2 kV, X/R = 3.4833. Single phase fault current = 5465 A symmetrical.

Utility Line #DC-9798 'South': Three phase fault current = 6,073 A symmetrical at 13.2 kV, X/R = 4.8873. Single phase fault current = 5091 A symmetrical.

1.3 Modeled Scenarios

Multiple scenarios were modeled to evaluate equipment ratings and arc flash incident energy levels under worst case system configurations. Higher available short circuit currents impose a predictable higher corresponding level of stress on the short circuit bracing of equipment, such as seen from parallel connection of two utility lines during "closed transition" operation of Main and Tie breakers. Paradoxically, higher available short circuit currents often result in a *lower* level of arc flash incident energy level, due to a reduction in tripping *time* of the protective device. SKM PTW software options were chosen to filter the results of all modeled scenarios and generate equipment arc flash labels based on the equipment's specific worst case scenario outcome.

1.4 Results - Short Circuit Study

The worst case short circuit scenario was found to be all plant loads running simultaneously for maximum motor contribution and both incoming DTE lines paralleled at the 13.2kV Bus-1/2 switchgear, as would be incurred momentarily during a closed transition Main-Tie breaker transfer. Short circuit and arc flash scenarios were also evaluated with plant operation on the new generators only.

Equipment short circuit ratings were found to be adequate for the calculated available fault currents. Short circuit results are compiled under Tab 2 in this report.

1.5 Results - Coordination Study

Coordination efforts began with the DTE type SM-5 300E pole mounted fuses that connect the DTE #DC-8266 'North' and #DC-9798 'South' utility

lines to the Main Breakers 52M1 and 52M2, and Tie and Isolation Breakers 52T and 52IB in the new 13.2kV Square D switchgear. Time/overcurrent settings for the Main breakers, and coordination with the DTE pole mounted fuses, has been reviewed and approved by DTE. Coordination progressed downstream through the substation feeder breakers and protection devices serving the largest loads on the Motor Control Centers, Automatic Transfer Switches, and Power Panels.

There is unavoidable overlap in some of the time coordination curves for the protective devices at the MCC level in the system. This is kept to a minimum by optimizing the settings available in each protective device. Progressively higher priority was given to full coordination of protective devices located upstream in the distribution system. Time coordination curves (TCC's) are provided and specific coordination points are addressed in detail under Section 3 in this report.

In general, molded case circuit breakers with no or limited adjustment capability will not coordinate in the instantaneous region. Upstream feeder breakers may mis-coordinate with downstream main breakers in motor control centers or panelboards. This is typically inconsequential as operation of either breaker results in the same interruption of service.

Coordination Study results are compiled under Tab 3 in this report.

1.6 Protective Device Settings

Characteristic data for non-adjustable devices such as fuses and molded case circuit breakers, together with settings for adjustable devices such as protective relays, are tabulated and compiled under Tab 4 in this report.

1.7 Data Printouts

Input data, such as cable size and length, transformer ratings and impedance, motor and generator data, etc., that PTW uses for study calculations is contained in the document "INPUT". Calculated fault current data is contained in the document "SCANSI". These are compiled under Tab 5 in this report.

1.8 Results – Arc Flash Study

In the case of a panel or equipment with a main breaker, the Arc Flash incident energy at the incoming terminals is calculated based on the next upstream device clearing the fault, and the value is reported as “LineSide”. The highest arc fault incident energy levels were found at Substation 3 Bus A, at 85 cal/cm², Substation 3 Bus B, at 84 cal/cm², Substation 5 Bus A, at 78 cal/cm², Substation 5 Bus B, at 77 cal/cm², Substation 7 Bus A, at 68 cal/cm², and Substation 7 Bus B, at 68 cal/cm². These levels are equivalent to a PPE category of “Dangerous”, and work within this equipment must be performed with the equipment de-energized.

High arc fault current incident energy levels, greater than 25 cal/cm², were found at automatic transfer switch ATS-ADM, motor control center MCC-ADM-A and MCC-XA, Substation 1 Bus A and B, Substation 2 Bus A and B, and Substation 4 Bus A and B. These levels are equivalent to a PPE level 4.

Arc Flash data for each modeled scenario and a worst-case scenario are compiled under Tab 6 in this report.

1.9 Tables

Complete listings of short circuit data, protective relay and breaker settings, and arc flash incident energy levels are provided under respective tabs in this report.

CHAPTER 2

SHORT CIRCUIT ANALYSIS

2.0 Short Circuit Study

2.1 Objective

The Short Circuit Study determines the maximum currents that equipment experiences during various fault conditions. Equipment ratings are compared to the calculated fault currents and are used to evaluate the capability of the equipment to withstand the fault. Calculated results are subsequently used in the Device Evaluation, Protective Device Coordination Study, and Arc Flash Study.

2.2 Methodology

The short circuit analysis was performed using the A_Fault module of version 7.0.4.3 of SKM PowerTools software which is based on, and conforms to, ANSI/IEEE Standards C37.13, C37.5, and C37.010.

The ANSI/IEEE methodology involves separate complex “Z”, reactive “X”, and resistive “R” networks for the analysis. X/R ratios are calculated based on a reduction of the X and R networks, and used in calculating fault duty multipliers for use in the evaluation of short circuit ratings of the equipment. Complex circuit impedance is calculated and reported as “Equivalent Impedance” in the printed reports. Momentary and interrupting duties are calculated using the E/Z solution method. Where the system X/R ratio is higher than the breaker design test X/R ratio, the breaker is derated. The program reports a “Fault Report” for application of low voltage systems, a “Momentary Duty Report” for medium voltage systems, and an “Interrupting Duty Report” for medium voltage systems.

2.3 Modeled Scenarios

Fault current studies were performed with the system in a normal configuration and also in alternate configurations, including emergency, that are possible when energy sources are in parallel, such as would occur when bus main, generator, and tie breakers are closed simultaneously during closed-transition manual or automatic bus-transfer operations.

2.4 Bus and Device Evaluation

PTW software compares the maximum calculated short circuit currents to the short circuit ratings of the devices and equipment, after application of the adjustment

factors documented in the ANSI/IEEE standards. Two report tables are included, one for Bus evaluation, and one for Device evaluation. The tables list a Pass/Fail status, a calculated fault current, the device rating, and a % “duty” for the fault. Where an actual fault current rating is not known from field data, manufacturer’s literature, or equipment submittals, a default I_{sc} rating of 10,000 A is entered for the device or equipment. A characteristic of the PTW Device Evaluation report generator is to show device status as “Unknown” in cases where device component model data is incomplete, or the device is out of service (such as an open tie breaker), or the device is the ground fault element of low voltage breakers (which have a “GFP” extension in the device name). For the latter cases, the “Unknown” status can be ignored.

2.5 Results

1. In general, the short circuit capability of the new equipment provided is adequate for the maximum calculated fault currents available.
2. The 13,200V primary fuses on Substation 5 Transformer A and Transformer B are adequate for normal operation, but are over-dutied during closed transition Bus 1/2/3 Main/Tie transfer schemes.
3. See tabulated listings in this section for complete device description, ratings and evaluation of fault, momentary, and interrupting duty as applicable to the equipment.

2.6 Other Short Circuit Study Tables

A complete listing of calculated short circuit current data is provided under Tab 5, Data Printouts, and Tab 6, Arc Flash Study.

BUS EVALUATION

Project: SKMmodel 050516
ANN ARBOR WASTEWATER TREATMENT PLANT
PLANT FACILITIES RENOVATION
POWER DISTRIBUTION SYSTEM STUDY
AAWWTP

Bus Evaluation A_FAULT Report

Bus Name	Status	EquipCategory	Calc Isc kA	Dev Isc kA	Isc Rating%	Series Rating	Calc Mom_kA	Dev Mom kA	Mom Rating%
15 KV BUS 1	Pass	MV Switchgear	14.42	18.00	80.10	0.00	18.60	37.00	50.28
15 KV BUS 1 LineSide	Pass	MV Switchgear	14.42	18.00	80.10	0.00	18.60	37.00	50.27
15 KV BUS 2	Pass	MV Switchgear	14.42	18.00	80.10	0.00	18.60	37.00	50.27
15 KV BUS 2 LineSide	Pass	MV Switchgear	14.42	18.00	80.10	0.00	18.60	37.00	50.27
15 KV BUS 3	Pass	MV Switchgear	14.41	18.00	80.06	0.00	18.59	37.00	50.25
78IN GC DISC	Pass	LV Panelboard	1.31	10.00	13.12	0.00	0.00	0.00	0.00
AC2 DISC	Pass	LV Panelboard	1.47	10.00	14.69	0.00	0.00	0.00	0.00
AC2F DISC	Pass	LV Panelboard	2.74	10.00	27.37	0.00	0.00	0.00	0.00
ADM ACCU1 DISC	Pass	LV Panelboard	4.71	10.00	47.06	0.00	0.00	0.00	0.00
ADM ACU1 DISC	Pass	LV Panelboard	8.49	10.00	84.94	0.00	0.00	0.00	0.00
ADM-CH-1 DISC	Marginal	LV Panelboard	9.51	10.00	95.12	0.00	0.00	0.00	0.00
ADM-EF-1 DISC	Pass	LV Panelboard	2.27	10.00	22.67	0.00	0.00	0.00	0.00
ADM-EF-2 DISC	Pass	LV Panelboard	2.27	10.00	22.66	0.00	0.00	0.00	0.00
ADM-HVAC-1 DISC	Pass	LV Panelboard	5.69	10.00	56.92	0.00	0.00	0.00	0.00
ADM-HVAC-2 DISC	Pass	LV Panelboard	2.68	10.00	26.76	0.00	0.00	0.00	0.00
ADM-P-1 DISC	Pass	LV Panelboard	3.24	10.00	32.39	0.00	0.00	0.00	0.00
ADM-P-2 DISC	Pass	LV Panelboard	2.67	10.00	26.71	0.00	0.00	0.00	0.00
ADM-P-3 DISC	Pass	LV Panelboard	8.24	10.00	82.43	0.00	0.00	0.00	0.00
ADM-P-4 DISC	Pass	LV Panelboard	7.61	10.00	76.08	0.00	0.00	0.00	0.00
ADM-SUP LCP	Pass	LV Panelboard	2.20	10.00	22.04	0.00	0.00	0.00	0.00
ADP-E1 DISC	Pass	LV Panelboard	1.62	10.00	16.21	0.00	0.00	0.00	0.00
ADP-E2 DISC	Pass	LV Panelboard	5.97	10.00	59.71	0.00	0.00	0.00	0.00
ADP-W1 DISC	Pass	LV Panelboard	5.64	10.00	56.37	0.00	0.00	0.00	0.00
AIR COMP 1 DISC	Pass	LV Panelboard	2.76	10.00	27.56	0.00	0.00	0.00	0.00
AIR COMP 1P DISC	Pass	LV Panelboard	3.24	10.00	32.40	0.00	0.00	0.00	0.00
AIR WASH MV DISC	Pass	LV Panelboard	1.45	10.00	14.45	0.00	0.00	0.00	0.00
ALTERNATOR P	Pass	LV Panelboard	0.14	10.00	1.40	0.00	0.00	0.00	0.00
AT-E1 FCV BF-64-25	Pass	LV Panelboard	1.44	10.00	14.45	0.00	0.00	0.00	0.00
AT-E2 FCV BF-64-26	Pass	LV Panelboard	1.63	10.00	16.32	0.00	0.00	0.00	0.00
AT-E3 Z1 FCV	Pass	LV Panelboard	0.86	10.00	8.58	0.00	0.00	0.00	0.00
AT-E3 Z2 FCV	Pass	LV Panelboard	1.01	10.00	10.08	0.00	0.00	0.00	0.00
AT-E3 Z3 FCV	Pass	LV Panelboard	1.14	10.00	11.39	0.00	0.00	0.00	0.00
AT-E4 Z1 FCV	Pass	LV Panelboard	0.86	10.00	8.58	0.00	0.00	0.00	0.00
AT-E4 Z2 FCV	Pass	LV Panelboard	1.01	10.00	10.08	0.00	0.00	0.00	0.00
AT-E4 Z3 FCV	Pass	LV Panelboard	1.14	10.00	11.39	0.00	0.00	0.00	0.00
AT-W2 FCV JB	Pass	LV Panelboard	2.50	10.00	25.03	0.00	0.00	0.00	0.00
ATS PEWP2 NRM	Pass	LV Panelboard	20.11	25.00	80.46	0.00	0.00	0.00	0.00
ATS PP-UV-EMG	Pass	LV Panelboard	3.45	35.00	9.84	0.00	0.00	0.00	0.00
ATS PP-UV-LOAD	Pass	LV Panelboard	1.65	35.00	4.72	0.00	0.00	0.00	0.00
ATS PP-UV-NRM	Pass	LV Panelboard	1.65	10.00	16.51	0.00	0.00	0.00	0.00

Bus Name	Status	EquipCategory	Calc Isc kA	Dev Isc kA	Isc Rating %	Series Rating	Calc Mom_kA	Dev Mom kA	Mom Rating %
ATS-51 EMG	Pass	LV Panelboard	38.89	65.00	59.83	10.00	0.00	0.00	0.00
ATS-51 LOAD	Pass	LV Panelboard	37.70	65.00	58.00	10.00	0.00	0.00	0.00
ATS-51 NRM	Pass	LV Panelboard	37.70	65.00	58.00	10.00	0.00	0.00	0.00
ATS-52 EMG	Pass	LV Panelboard	37.83	65.00	58.20	10.00	0.00	0.00	0.00
ATS-52 LOAD	Pass	LV Panelboard	36.58	65.00	56.28	10.00	0.00	0.00	0.00
ATS-52 NRM	Pass	LV Panelboard	36.58	65.00	56.28	10.00	0.00	0.00	0.00
ATS-54 EMG	Pass	LV Panelboard	32.04	65.00	49.29	10.00	0.00	0.00	0.00
ATS-54 LOAD	Pass	LV Panelboard	29.27	65.00	45.03	10.00	0.00	0.00	0.00
ATS-54 NRM	Pass	LV Panelboard	29.27	65.00	45.03	10.00	0.00	0.00	0.00
ATS-55 EMG	Pass	LV Panelboard	32.86	65.00	50.56	10.00	0.00	0.00	0.00
ATS-55 LOAD	Pass	LV Panelboard	29.10	65.00	44.77	10.00	0.00	0.00	0.00
ATS-55 NRM	Pass	LV Panelboard	29.10	65.00	44.77	10.00	0.00	0.00	0.00
ATS-ADM EMG	Pass	LV Switchboard	12.32	50.00	24.63	0.00	0.00	0.00	0.00
ATS-ADM LOAD	Pass	LV Switchboard	12.32	50.00	24.63	0.00	0.00	0.00	0.00
ATS-ADM NRM	Pass	LV Switchboard	11.17	50.00	22.33	0.00	0.00	0.00	0.00
ATS-CEB LOAD	Pass	LV Panelboard	22.74	35.00	64.98	0.00	0.00	0.00	0.00
ATS-CEB-EMG	Pass	LV Panelboard	21.66	35.00	61.89	0.00	0.00	0.00	0.00
ATS-CEB-NRM	Pass	LV Panelboard	22.74	35.00	64.98	0.00	0.00	0.00	0.00
ATS-EBB NORM	Pass	LV Panelboard	10.36	42.00	24.68	0.00	0.00	0.00	0.00
ATS-EBB-EMG	Pass	LV Panelboard	10.93	42.00	26.03	0.00	0.00	0.00	0.00
ATS-EBB-LOAD	Pass	LV Panelboard	10.36	42.00	24.68	0.00	0.00	0.00	0.00
ATS-LSE EMG	Pass	LV Panelboard	12.67	35.00	36.21	0.00	0.00	0.00	0.00
ATS-LSE LOAD	Pass	LV Panelboard	13.03	35.00	37.22	0.00	0.00	0.00	0.00
ATS-LSE NRM	Pass	LV Panelboard	13.03	35.00	37.22	0.00	0.00	0.00	0.00
ATS-RLS EMG	Pass	LV Panelboard	14.03	35.00	40.08	0.00	0.00	0.00	0.00
ATS-RLS LOAD	Pass	LV Panelboard	11.89	35.00	33.98	0.00	0.00	0.00	0.00
ATS-RLS NRM	Pass	LV Panelboard	11.89	35.00	33.98	0.00	0.00	0.00	0.00
ATS-WPB-EMG	Pass	ATS BUS	10.39	35.00	29.70	0.00	0.00	0.00	0.00
ATS-WPB-LOAD	Pass	ATS BUS	9.09	35.00	25.97	0.00	0.00	0.00	0.00
ATS-WPB-NORM	Pass	ATS BUS	9.09	35.00	25.97	0.00	0.00	0.00	0.00
B-54-1 DISC	Pass	LV Panelboard	3.42	10.00	34.18	0.00	0.00	0.00	0.00
B-54-1 MTR VALVE.	Pass	LV Panelboard	3.37	10.00	33.69	0.00	0.00	0.00	0.00
B-54-2 DISC	Pass	LV Panelboard	3.42	10.00	34.18	0.00	0.00	0.00	0.00
B-54-2 MTR VALVE.	Pass	LV Panelboard	3.37	10.00	33.69	0.00	0.00	0.00	0.00
B-54-3 DISC	Pass	LV Panelboard	3.42	10.00	34.18	0.00	0.00	0.00	0.00
B-54-3 MTR VALVE.	Pass	LV Panelboard	3.37	10.00	33.69	0.00	0.00	0.00	0.00
BAR SCREEN 2 TERM	Pass	LV Panelboard	4.38	10.00	43.76	0.00	0.00	0.00	0.00
BF - 64- 29	Pass	LV Panelboard	1.24	10.00	12.40	0.00	0.00	0.00	0.00
BF- 64- 30	Pass	LV Panelboard	1.38	10.00	13.77	0.00	0.00	0.00	0.00
BF-64-07	Pass	LV Panelboard	1.02	10.00	10.21	0.00	0.00	0.00	0.00
BF-64-08	Pass	LV Panelboard	1.11	10.00	11.11	0.00	0.00	0.00	0.00
BSCRN-3 STR	Pass	LV Panelboard	4.29	10.00	42.87	0.00	0.00	0.00	0.00
BSN-OUT-GT-1 DISC	Pass	LV Panelboard	2.75	10.00	27.52	0.00	0.00	0.00	0.00
BSN-OUT-GT-3 DISC	Pass	LV Panelboard	2.75	10.00	27.52	0.00	0.00	0.00	0.00
BSNHST DISC	Pass	LV Panelboard	4.08	10.00	40.78	0.00	0.00	0.00	0.00
BSNINFLGT-1 DISC	Pass	LV Panelboard	2.75	10.00	27.52	0.00	0.00	0.00	0.00
BSNINFLGT-3 DISC	Pass	LV Panelboard	2.75	10.00	27.52	0.00	0.00	0.00	0.00
BSNINFLGT2 DISC	Pass	LV Panelboard	2.74	10.00	27.39	0.00	0.00	0.00	0.00
BSNOUTGT2 DISC	Pass	LV Panelboard	2.74	10.00	27.39	0.00	0.00	0.00	0.00
BTAB-1 DISC	Pass	LV Panelboard	1.47	10.00	14.71	0.00	0.00	0.00	0.00
BTAB-2 DISC	Pass	LV Panelboard	1.45	10.00	14.53	0.00	0.00	0.00	0.00
BTAB-3 DISC	Pass	LV Panelboard	1.35	10.00	13.48	0.00	0.00	0.00	0.00
BUS-0097	Pass	LV Panelboard	1.07	10.00	10.68	0.00	0.00	0.00	0.00
BUS-0099	Pass	LV Panelboard	1.07	10.00	10.68	0.00	0.00	0.00	0.00
BUS-0101	Pass	LV Panelboard	1.07	10.00	10.68	0.00	0.00	0.00	0.00
BUS-0103	Pass	LV Panelboard	1.07	10.00	10.68	0.00	0.00	0.00	0.00
BUS-0105	Pass	LV Panelboard	1.07	10.00	10.68	0.00	0.00	0.00	0.00

Bus Name	Status	EquipCategory	Calc Isc kA	Dev Isc kA	Isc Rating%	Series Rating	Calc Mom_kA	Dev Mom kA	Mom Rating%
BUS-0107	Pass	LV Panelboard	1.07	10.00	10.68	0.00	0.00	0.00	0.00
BUS-0109	Pass	LV Panelboard	1.07	10.00	10.68	0.00	0.00	0.00	0.00
BUS-0111	Pass	LV Panelboard	1.07	10.00	10.68	0.00	0.00	0.00	0.00
BUS-0113	Pass	LV Panelboard	1.07	10.00	10.68	0.00	0.00	0.00	0.00
BUS-0115	Pass	LV Panelboard	1.07	10.00	10.68	0.00	0.00	0.00	0.00
BUS-0117	Pass	LV Panelboard	1.07	10.00	10.68	0.00	0.00	0.00	0.00
BUS-0119	Pass	LV Panelboard	1.07	10.00	10.68	0.00	0.00	0.00	0.00
BUS-0121	Pass	LV Panelboard	1.07	10.00	10.68	0.00	0.00	0.00	0.00
BUS-0123	Pass	LV Panelboard	1.07	10.00	10.68	0.00	0.00	0.00	0.00
BUS-0125	Pass	LV Panelboard	1.07	10.00	10.68	0.00	0.00	0.00	0.00
BUS-0127	Pass	LV Panelboard	1.07	10.00	10.68	0.00	0.00	0.00	0.00
BUS-0141	Pass	LV Panelboard	0.83	10.00	8.27	0.00	0.00	0.00	0.00
BUS-0143	Pass	LV Panelboard	0.83	10.00	8.27	0.00	0.00	0.00	0.00
BUS-0145	Pass	LV Panelboard	0.83	10.00	8.27	0.00	0.00	0.00	0.00
BUS-0147	Pass	LV Panelboard	0.83	10.00	8.27	0.00	0.00	0.00	0.00
BUS-0149	Pass	LV Panelboard	0.83	10.00	8.27	0.00	0.00	0.00	0.00
BUS-0151	Pass	LV Panelboard	0.83	10.00	8.27	0.00	0.00	0.00	0.00
BUS-0153	Pass	LV Panelboard	0.83	10.00	8.27	0.00	0.00	0.00	0.00
BUS-0155	Pass	LV Panelboard	0.83	10.00	8.27	0.00	0.00	0.00	0.00
BUS-0157	Pass	LV Panelboard	0.83	10.00	8.27	0.00	0.00	0.00	0.00
BUS-0159	Pass	LV Panelboard	0.83	10.00	8.27	0.00	0.00	0.00	0.00
BUS-0161	Pass	LV Panelboard	0.83	10.00	8.27	0.00	0.00	0.00	0.00
BUS-0163	Pass	LV Panelboard	0.83	10.00	8.27	0.00	0.00	0.00	0.00
BUS-0165	Pass	LV Panelboard	0.83	10.00	8.27	0.00	0.00	0.00	0.00
BUS-0167	Pass	LV Panelboard	0.83	10.00	8.27	0.00	0.00	0.00	0.00
BUS-0169	Pass	LV Panelboard	0.83	10.00	8.27	0.00	0.00	0.00	0.00
BUS-0171	Pass	LV Panelboard	0.83	10.00	8.27	0.00	0.00	0.00	0.00
BUS-0178	Pass	LV Panelboard	6.37	10.00	63.74	0.00	0.00	0.00	0.00
BUS-0179	Pass	LV Panelboard	1.38	10.00	13.85	0.00	0.00	0.00	0.00
BUS-0180	Pass	LV Panelboard	1.38	10.00	13.85	0.00	0.00	0.00	0.00
BUS-0181	Pass	LV Panelboard	6.21	10.00	62.15	0.00	0.00	0.00	0.00
BUS-0182	Pass	LV Panelboard	2.09	10.00	20.93	0.00	0.00	0.00	0.00
BUS-0188	Pass	LV Panelboard	2.50	10.00	25.04	0.00	0.00	0.00	0.00
BUS-0273	Pass	LV Panelboard	1.88	10.00	18.83	0.00	0.00	0.00	0.00
BUS-0274	Pass	LV Panelboard	1.47	10.00	14.72	0.00	0.00	0.00	0.00
BUS-0275	Pass	LV Panelboard	1.85	10.00	18.53	0.00	0.00	0.00	0.00
BUS-0276	Pass	LV Panelboard	1.59	10.00	15.91	0.00	0.00	0.00	0.00
BUS-0277	Pass	LV Panelboard	2.24	10.00	22.39	0.00	0.00	0.00	0.00
BUS-0278	Pass	LV Panelboard	2.01	10.00	20.11	0.00	0.00	0.00	0.00
BUS-0279	Pass	LV Panelboard	1.96	10.00	19.61	0.00	0.00	0.00	0.00
BUS-0281	Pass	LV Panelboard	2.96	10.00	29.63	0.00	0.00	0.00	0.00
BUS-0289	Pass	LV Panelboard	3.47	10.00	34.66	0.00	0.00	0.00	0.00
BUS-0290	Pass	LV Panelboard	2.47	10.00	24.66	0.00	0.00	0.00	0.00
BUS-0291	Pass	LV Panelboard	1.99	10.00	19.91	0.00	0.00	0.00	0.00
BUS-0292	Pass	LV Panelboard	1.67	10.00	16.68	0.00	0.00	0.00	0.00
BUS-0293	Pass	LV Panelboard	2.02	10.00	20.25	0.00	0.00	0.00	0.00
BUS-0294	Pass	LV Panelboard	1.94	10.00	19.42	0.00	0.00	0.00	0.00
BUS-0295	Pass	LV Panelboard	1.53	10.00	15.27	0.00	0.00	0.00	0.00
BUS-0296	Pass	LV Panelboard	3.11	10.00	31.08	0.00	0.00	0.00	0.00
BUS-0310	Pass	LV Panelboard	6.52	10.00	65.15	0.00	0.00	0.00	0.00
BUS-0311	Pass	LV Panelboard	6.34	10.00	63.42	0.00	0.00	0.00	0.00
BUS-0312	Pass	LV Panelboard	6.52	10.00	65.15	0.00	0.00	0.00	0.00
BUS-0313	Pass	LV Panelboard	6.34	10.00	63.42	0.00	0.00	0.00	0.00
BUS-0314	Pass	LV Panelboard	4.13	10.00	41.34	0.00	0.00	0.00	0.00
BUS-0315	Pass	LV Panelboard	4.06	10.00	40.63	0.00	0.00	0.00	0.00
BUS-0316	Pass	LV Panelboard	4.13	10.00	41.34	0.00	0.00	0.00	0.00
BUS-0317	Pass	LV Panelboard	4.06	10.00	40.63	0.00	0.00	0.00	0.00

Bus Name	Status	EquipCategory	Calc Isc kA	Dev Isc kA	Isc Rating %	Series Rating	Calc Mom_kA	Dev Mom kA	Mom Rating %
BUS-0318	Pass	LV Panelboard	2.48	10.00	24.76	0.00	0.00	0.00	0.00
BUS-0319	Pass	LV Panelboard	2.45	10.00	24.50	0.00	0.00	0.00	0.00
BUS-0320	Pass	LV Panelboard	5.31	10.00	53.15	0.00	0.00	0.00	0.00
BUS-0321	Pass	LV Panelboard	2.48	10.00	24.76	0.00	0.00	0.00	0.00
BUS-0322	Pass	LV Panelboard	2.45	10.00	24.50	0.00	0.00	0.00	0.00
BUS-0323	Pass	LV Panelboard	2.48	10.00	24.76	0.00	0.00	0.00	0.00
BUS-0324	Pass	LV Panelboard	2.45	10.00	24.50	0.00	0.00	0.00	0.00
BUS-0325	Pass	LV Panelboard	2.26	10.00	22.59	0.00	0.00	0.00	0.00
BUS-0326	Pass	LV Panelboard	4.98	10.00	49.82	0.00	0.00	0.00	0.00
BUS-0327	Pass	LV Panelboard	4.88	10.00	48.80	0.00	0.00	0.00	0.00
BUS-0328	Pass	LV Panelboard	4.98	10.00	49.82	0.00	0.00	0.00	0.00
BUS-0329	Pass	LV Panelboard	4.88	10.00	48.80	0.00	0.00	0.00	0.00
BUS-0331	Pass	LV Panelboard	3.11	10.00	31.10	0.00	0.00	0.00	0.00
BUS-0332	Pass	LV Panelboard	8.70	10.00	86.97	0.00	0.00	0.00	0.00
BUS-0333	Pass	LV Panelboard	4.66	10.00	46.64	0.00	0.00	0.00	0.00
BUS-0337	Pass	LV Panelboard	1.13	10.00	11.25	0.00	0.00	0.00	0.00
BUS-0348	Pass	LV Panelboard	0.83	10.00	8.34	0.00	0.00	0.00	0.00
BUS-0349	Pass	LV Panelboard	0.96	10.00	9.64	0.00	0.00	0.00	0.00
BUS-0350	Pass	LV Panelboard	0.83	10.00	8.34	0.00	0.00	0.00	0.00
BUS-0351	Pass	LV Panelboard	0.96	10.00	9.64	0.00	0.00	0.00	0.00
BUS-0352	Pass	LV Panelboard	0.96	10.00	9.64	0.00	0.00	0.00	0.00
BUS-0353	Pass	LV Panelboard	0.87	10.00	8.67	0.00	0.00	0.00	0.00
BUS-0354	Pass	LV Panelboard	0.96	10.00	9.64	0.00	0.00	0.00	0.00
BUS-0355	Pass	LV Panelboard	0.96	10.00	9.64	0.00	0.00	0.00	0.00
BUS-0356	Pass	LV Panelboard	0.96	10.00	9.64	0.00	0.00	0.00	0.00
BUS-0357	Pass	LV Panelboard	0.96	10.00	9.64	0.00	0.00	0.00	0.00
BUS-0358	Pass	LV Panelboard	0.96	10.00	9.64	0.00	0.00	0.00	0.00
BUS-0359	Pass	LV Panelboard	0.96	10.00	9.64	0.00	0.00	0.00	0.00
BUS-0360	Pass	LV Panelboard	0.96	10.00	9.64	0.00	0.00	0.00	0.00
BUS-0361	Pass	LV Panelboard	0.96	10.00	9.64	0.00	0.00	0.00	0.00
BUS-0362	Pass	LV Panelboard	0.83	10.00	8.34	0.00	0.00	0.00	0.00
BUS-0363	Pass	LV Panelboard	0.96	10.00	9.64	0.00	0.00	0.00	0.00
BUS-0364	Pass	LV Panelboard	0.96	10.00	9.64	0.00	0.00	0.00	0.00
BUS-0387	Pass	LV Panelboard	0.00	10.00	0.00	0.00	0.00	0.00	0.00
BUS-0392	Pass	LV Panelboard	1.46	10.00	14.62	0.00	0.00	0.00	0.00
BUS-0393	Pass	LV Panelboard	2.01	10.00	20.05	0.00	0.00	0.00	0.00
BUS-0394	Pass	LV Panelboard	2.01	10.00	20.05	0.00	0.00	0.00	0.00
BUS-0395	Pass	LV Panelboard	2.01	10.00	20.05	0.00	0.00	0.00	0.00
BUS-0396	Pass	LV Panelboard	2.38	10.00	23.81	0.00	0.00	0.00	0.00
BUS-0397	Pass	LV Panelboard	2.38	10.00	23.81	0.00	0.00	0.00	0.00
BUS-0398	Pass	LV Panelboard	2.38	10.00	23.81	0.00	0.00	0.00	0.00
BUS-0399	Pass	LV Panelboard	1.46	10.00	14.62	0.00	0.00	0.00	0.00
BUS-0400	Pass	LV Panelboard	1.46	10.00	14.62	0.00	0.00	0.00	0.00
BUS-0401	Pass	LV Panelboard	1.46	10.00	14.62	0.00	0.00	0.00	0.00
BUS-0402	Pass	LV Panelboard	1.46	10.00	14.62	0.00	0.00	0.00	0.00
BUS-0403	Pass	LV Panelboard	1.46	10.00	14.62	0.00	0.00	0.00	0.00
BUS-0406	Pass	LV Panelboard	1.86	10.00	18.58	0.00	0.00	0.00	0.00
BUS-0409	Pass	LV Panelboard	1.30	10.00	12.98	0.00	0.00	0.00	0.00
BUS-0410	Pass	LV Panelboard	1.30	10.00	12.98	0.00	0.00	0.00	0.00
BUS-0412	Pass	LV Panelboard	5.40	10.00	54.02	0.00	0.00	0.00	0.00
BUS-0413	Pass	LV Panelboard	2.55	10.00	25.46	0.00	0.00	0.00	0.00
BUS-0414	Pass	LV Panelboard	2.20	10.00	21.98	0.00	0.00	0.00	0.00
BUS-0415	Pass	LV Panelboard	6.29	10.00	62.93	0.00	0.00	0.00	0.00
BUS-0436	Pass	LV Panelboard	2.79	10.00	27.89	0.00	0.00	0.00	0.00
BYPGT1 DISC	Pass	LV Panelboard	2.74	10.00	27.40	0.00	0.00	0.00	0.00
BYPGT2 DISC	Pass	LV Panelboard	2.74	10.00	27.40	0.00	0.00	0.00	0.00
C SUMP PUMP DISC	Pass	LV Panelboard	4.28	10.00	42.78	0.00	0.00	0.00	0.00

Bus Name	Status	EquipCategory	Calc Isc kA	Dev Isc kA	Isc Rating %	Series Rating	Calc Mom_kA	Dev Mom kA	Mom Rating %
CC-1 DISC	Pass	LV Panelboard	2.75	10.00	27.54	0.00	0.00	0.00	0.00
CC-3 DISC	Pass	LV Panelboard	2.75	10.00	27.54	0.00	0.00	0.00	0.00
CC2 DISC	Pass	LV Panelboard	2.74	10.00	27.41	0.00	0.00	0.00	0.00
CE WET WELL GT DISC	Pass	LV Panelboard	1.45	10.00	14.45	0.00	0.00	0.00	0.00
CEB-ACCU-1 DISC	Pass	LV Panelboard	4.90	10.00	48.99	0.00	0.00	0.00	0.00
CEB-EF-1 DISC	Pass	LV Panelboard	1.71	10.00	17.12	0.00	0.00	0.00	0.00
CEB-EF-2 DISC	Pass	LV Panelboard	1.85	10.00	18.55	0.00	0.00	0.00	0.00
CEB-FCP-1 DISC	Pass	LV Panelboard	3.99	10.00	39.88	0.00	0.00	0.00	0.00
CEB-FCP-2 TERM	Pass	LV Panelboard	3.15	10.00	31.51	0.00	0.00	0.00	0.00
CEB-P-1 DISC	Pass	LV Panelboard	3.15	10.00	31.49	0.00	0.00	0.00	0.00
CEB-P-2 DISC	Pass	LV Panelboard	3.15	10.00	31.53	0.00	0.00	0.00	0.00
CF2 AHU-1 DISC	Pass	LV Panelboard	1.20	10.00	12.03	0.00	0.00	0.00	0.00
CF2 AHU-3 DISC	Pass	LV Panelboard	2.06	10.00	20.58	0.00	0.00	0.00	0.00
CFG-1 BACK DR DISC	Pass	LV Panelboard	5.75	10.00	57.52	0.00	0.00	0.00	0.00
CFG-3 BACK DR DISC	Pass	LV Panelboard	5.87	10.00	58.69	0.00	0.00	0.00	0.00
CHABLWR DISC	Pass	LV Panelboard	4.38	10.00	43.83	0.00	0.00	0.00	0.00
CN-50-3 FCV	Pass	LV Panelboard	1.00	10.00	10.05	0.00	0.00	0.00	0.00
CONT TK INT GT DISC	Pass	LV Panelboard	1.45	10.00	14.50	0.00	0.00	0.00	0.00
CP-70 EMG	Pass	LV Panelboard	1.45	10.00	14.55	0.00	0.00	0.00	0.00
CP-70 NRM	Pass	LV Panelboard	2.80	10.00	28.01	0.00	0.00	0.00	0.00
CR-1 HSP 5 DISC	Pass	LV Panelboard	3.33	10.00	33.29	0.00	0.00	0.00	0.00
CR-1 HSP 6 DISC	Pass	LV Panelboard	3.18	10.00	31.76	0.00	0.00	0.00	0.00
D SP-2 DISC	Pass	LV Panelboard	4.38	10.00	43.76	0.00	0.00	0.00	0.00
DCH FNL EFF SP DISC	Pass	LV Panelboard	1.45	10.00	14.55	0.00	0.00	0.00	0.00
DOOR OP EE1	Pass	LV Panelboard	2.72	10.00	27.15	0.00	0.00	0.00	0.00
DOOR OP EE2	Pass	LV Panelboard	2.72	10.00	27.15	0.00	0.00	0.00	0.00
DOOR OP FF	Pass	LV Panelboard	2.69	10.00	26.94	0.00	0.00	0.00	0.00
DOOR OPERATOR STR	Pass	LV Panelboard	4.37	10.00	43.66	0.00	0.00	0.00	0.00
DP-51	Pass	LV Panelboard	34.03	65.00	52.36	10.00	0.00	0.00	0.00
DP-52	Pass	LV Panelboard	31.99	65.00	49.21	10.00	0.00	0.00	0.00
DP-54	Pass	LV Panelboard	23.77	65.00	36.57	10.00	0.00	0.00	0.00
DP-56	Pass	LV Panelboard	13.68	65.00	21.04	10.00	0.00	0.00	0.00
DRILL PRESS	Pass	LV Panelboard	4.48	10.00	44.79	0.00	0.00	0.00	0.00
DROP (NGW) STR	Pass	LV Panelboard	4.27	10.00	42.75	0.00	0.00	0.00	0.00
DROP (SG) STR	Pass	LV Panelboard	4.27	10.00	42.75	0.00	0.00	0.00	0.00
E CONT TK G1 DISC	Pass	LV Panelboard	1.45	10.00	14.45	0.00	0.00	0.00	0.00
E SUMP PUMP 1 DISC	Pass	LV Panelboard	2.76	10.00	27.61	0.00	0.00	0.00	0.00
EBB SUMP PUMP 2 DISC	Pass	LV Panelboard	3.41	10.00	34.07	0.00	0.00	0.00	0.00
EBB SUMP PUMP 4 DISC	Pass	LV Panelboard	0.97	10.00	9.70	0.00	0.00	0.00	0.00
EBB-A HOIST 1	Pass	LV Panelboard	0.95	10.00	9.49	0.00	0.00	0.00	0.00
EBB-A HOIST 1 DISC	Pass	LV Panelboard	1.01	10.00	10.14	0.00	0.00	0.00	0.00
EBB-A HOIST 2	Pass	LV Panelboard	0.95	10.00	9.49	0.00	0.00	0.00	0.00
EBB-A HOIST 2 DISC	Pass	LV Panelboard	1.01	10.00	10.14	0.00	0.00	0.00	0.00
EBB-EDH-1 LINE'	Pass	LV Panelboard	3.99	10.00	39.89	0.00	0.00	0.00	0.00
EBB-EF-10 DISC	Pass	LV Panelboard	2.69	10.00	26.95	0.00	0.00	0.00	0.00
EBB-EF-5 DISC	Pass	LV Panelboard	4.05	10.00	40.52	0.00	0.00	0.00	0.00
EBB-EF-6 DISC	Pass	LV Panelboard	2.13	10.00	21.28	0.00	0.00	0.00	0.00
EBB-EF-7 DISC	Pass	LV Panelboard	1.42	10.00	14.19	0.00	0.00	0.00	0.00
EBB-EF-9 DISC	Pass	LV Panelboard	0.96	10.00	9.64	0.00	0.00	0.00	0.00
EBB-EUH-1 TERM	Pass	LV Panelboard	6.30	10.00	62.97	0.00	0.00	0.00	0.00
EBB-HV-1 DISC	Pass	LV Panelboard	3.27	10.00	32.66	0.00	0.00	0.00	0.00
EF1 DISC	Pass	LV Panelboard	1.45	10.00	14.51	0.00	0.00	0.00	0.00
EF2 DISC	Pass	LV Panelboard	1.45	10.00	14.51	0.00	0.00	0.00	0.00
EF3 DISC	Pass	LV Panelboard	1.46	10.00	14.58	0.00	0.00	0.00	0.00
EF4 DISC	Pass	LV Panelboard	1.44	10.00	14.44	0.00	0.00	0.00	0.00
ELEVATOR CP DISC	Pass	LV Panelboard	1.53	10.00	15.27	0.00	0.00	0.00	0.00
ELEVATOR CP INPUT	Pass	LV Panelboard	1.43	10.00	14.34	0.00	0.00	0.00	0.00

Bus Name	Status	EquipCategory	Calc Isc kA	Dev Isc kA	Isc Rating %	Series Rating	Calc Mom_kA	Dev Mom kA	Mom Rating %
EP THRV CONTROLLER	Pass	LV Panelboard	4.37	10.00	43.65	0.00	0.00	0.00	0.00
EPB-EUH-1 DISC	Pass	LV Panelboard	4.19	10.00	41.86	0.00	0.00	0.00	0.00
EPB-EUH-1 TERM	Pass	LV Panelboard	3.89	10.00	38.91	0.00	0.00	0.00	0.00
EPBBV DISC	Pass	LV Panelboard	1.32	10.00	13.24	0.00	0.00	0.00	0.00
EPBBV STARTER	Pass	LV Panelboard	1.26	10.00	12.57	0.00	0.00	0.00	0.00
EPSEGE DISC	Pass	LV Panelboard	1.45	10.00	14.53	0.00	0.00	0.00	0.00
EPSEGW DISC	Pass	LV Panelboard	1.45	10.00	14.53	0.00	0.00	0.00	0.00
EQ INFL GATE 1 STR	Pass	LV Panelboard	2.75	10.00	27.52	0.00	0.00	0.00	0.00
EQ INFL GATE 10 STR	Pass	LV Panelboard	2.75	10.00	27.52	0.00	0.00	0.00	0.00
EQ INFL GATE 11 STR	Pass	LV Panelboard	2.75	10.00	27.52	0.00	0.00	0.00	0.00
EQ INFL GATE 12 STR	Pass	LV Panelboard	2.75	10.00	27.52	0.00	0.00	0.00	0.00
EQ INFL GATE 2 STR	Pass	LV Panelboard	2.75	10.00	27.52	0.00	0.00	0.00	0.00
EQ INFL GATE 3 STR	Pass	LV Panelboard	2.75	10.00	27.52	0.00	0.00	0.00	0.00
EQ INFL GATE 4 STR	Pass	LV Panelboard	2.75	10.00	27.52	0.00	0.00	0.00	0.00
EQ INFL GATE 9 STR	Pass	LV Panelboard	2.75	10.00	27.52	0.00	0.00	0.00	0.00
EQ-RET-V-1 DISC	Pass	LV Panelboard	2.76	10.00	27.55	0.00	0.00	0.00	0.00
EQ-RET-V-2 DISC	Pass	LV Panelboard	2.76	10.00	27.55	0.00	0.00	0.00	0.00
EQINGT5 DISC	Pass	LV Panelboard	2.74	10.00	27.39	0.00	0.00	0.00	0.00
EQINGT6 DISC	Pass	LV Panelboard	2.74	10.00	27.39	0.00	0.00	0.00	0.00
EQINGT7 DISC	Pass	LV Panelboard	2.74	10.00	27.39	0.00	0.00	0.00	0.00
EQINGT8 DISC	Pass	LV Panelboard	2.74	10.00	27.39	0.00	0.00	0.00	0.00
EQPRM HOIST DISC	Pass	LV Panelboard	6.00	10.00	59.98	0.00	0.00	0.00	0.00
EQPT RCPT C	Pass	LV Panelboard	6.08	10.00	60.83	0.00	0.00	0.00	0.00
EQPT RCPT D	Pass	LV Panelboard	6.27	10.00	62.67	0.00	0.00	0.00	0.00
EQPT RCPT EBB-A	Marginal	LV Panelboard	9.00	10.00	90.02	0.00	0.00	0.00	0.00
EQPT RCPT EBB-B	Pass	LV Panelboard	8.46	10.00	84.57	0.00	0.00	0.00	0.00
EQPT RCPT EE	Pass	LV Panelboard	4.01	10.00	40.12	0.00	0.00	0.00	0.00
EQPT RCPT EPB-B	Pass	LV Panelboard	4.85	10.00	48.48	0.00	0.00	0.00	0.00
EQPT RCPT F	Pass	LV Panelboard	2.74	10.00	27.36	0.00	0.00	0.00	0.00
EQPT RCPT M	Pass	LV Panelboard	2.26	10.00	22.58	0.00	0.00	0.00	0.00
EQPT RCPT RLS-B	Pass	LV Panelboard	4.33	10.00	43.32	0.00	0.00	0.00	0.00
EQRETFCV DISC	Pass	LV Panelboard	2.74	10.00	27.37	0.00	0.00	0.00	0.00
EQRETV3 DISC	Pass	LV Panelboard	2.74	10.00	27.42	0.00	0.00	0.00	0.00
ERU DISC	Pass	LV Panelboard	2.74	10.00	27.36	0.00	0.00	0.00	0.00
ESESP6 DISC	Pass	LV Panelboard	1.45	10.00	14.55	0.00	0.00	0.00	0.00
EUH-E1 TERM	Pass	LV Panelboard	5.90	10.00	59.02	0.00	0.00	0.00	0.00
EUH-E2 TERM	Pass	LV Panelboard	3.77	10.00	37.73	0.00	0.00	0.00	0.00
EUH1 DISC	Pass	LV Panelboard	1.45	10.00	14.50	0.00	0.00	0.00	0.00
EWB-1 DISC	Marginal	LV Panelboard	9.25	10.00	92.53	0.00	0.00	0.00	0.00
F-1-1 DISC	Pass	LV Panelboard	2.32	10.00	23.22	0.00	0.00	0.00	0.00
F-1-1 STARTER	Pass	LV Panelboard	1.95	10.00	19.52	0.00	0.00	0.00	0.00
F-1-2 DISC	Pass	LV Panelboard	2.30	10.00	23.00	0.00	0.00	0.00	0.00
F-1-2 STARTER	Pass	LV Panelboard	1.85	10.00	18.48	0.00	0.00	0.00	0.00
F-1-3 DISC	Pass	LV Panelboard	2.28	10.00	22.79	0.00	0.00	0.00	0.00
F-1-3 STARTER	Pass	LV Panelboard	1.55	10.00	15.51	0.00	0.00	0.00	0.00
F-1-4 DISC	Pass	LV Panelboard	2.26	10.00	22.58	0.00	0.00	0.00	0.00
F-1-4 STARTER	Pass	LV Panelboard	1.48	10.00	14.84	0.00	0.00	0.00	0.00
F-1-5 DISC	Pass	LV Panelboard	1.88	10.00	18.79	0.00	0.00	0.00	0.00
F-1-5 STARTER	Pass	LV Panelboard	1.31	10.00	13.08	0.00	0.00	0.00	0.00
F-1-6 DISC	Pass	LV Panelboard	1.87	10.00	18.65	0.00	0.00	0.00	0.00
F-1-6 STARTER	Pass	LV Panelboard	1.34	10.00	13.44	0.00	0.00	0.00	0.00
F-1-7 DISC	Pass	LV Panelboard	1.85	10.00	18.51	0.00	0.00	0.00	0.00
F-1-7 STARTER	Pass	LV Panelboard	1.54	10.00	15.44	0.00	0.00	0.00	0.00
F-1-8 DISC	Pass	LV Panelboard	1.84	10.00	18.37	0.00	0.00	0.00	0.00
F-1-8 STARTER	Pass	LV Panelboard	1.59	10.00	15.95	0.00	0.00	0.00	0.00
F-2-1 DISC	Pass	LV Panelboard	6.59	10.00	65.91	0.00	0.00	0.00	0.00
F-2-1 STARTER	Pass	LV Panelboard	4.56	10.00	45.55	0.00	0.00	0.00	0.00

Bus Name	Status	EquipCategory	Calc Isc kA	Dev Isc kA	Isc Rating %	Series Rating	Calc Mom_kA	Dev Mom kA	Mom Rating %
F-2-12 DISC	Pass	LV Panelboard	6.38	10.00	63.79	0.00	0.00	0.00	0.00
F-2-12 STARTER	Pass	LV Panelboard	4.48	10.00	44.83	0.00	0.00	0.00	0.00
F-2-13 DISC	Pass	LV Panelboard	1.59	10.00	15.92	0.00	0.00	0.00	0.00
F-2-13 STARTER	Pass	LV Panelboard	1.04	10.00	10.38	0.00	0.00	0.00	0.00
F-2-18 DISC	Pass	LV Panelboard	1.58	10.00	15.82	0.00	0.00	0.00	0.00
F-2-18 STARTER	Pass	LV Panelboard	1.40	10.00	13.97	0.00	0.00	0.00	0.00
F-2-19 DISC	Pass	LV Panelboard	1.57	10.00	15.71	0.00	0.00	0.00	0.00
F-2-19 STARTER	Pass	LV Panelboard	1.39	10.00	13.89	0.00	0.00	0.00	0.00
F-2-24 DISC	Pass	LV Panelboard	1.56	10.00	15.61	0.00	0.00	0.00	0.00
F-2-24 STARTER	Pass	LV Panelboard	1.00	10.00	10.03	0.00	0.00	0.00	0.00
F-2-6 DISC	Pass	LV Panelboard	6.82	10.00	68.17	0.00	0.00	0.00	0.00
F-2-6 STARTER	Pass	LV Panelboard	2.13	10.00	21.25	0.00	0.00	0.00	0.00
F-2-7 DISC	Pass	LV Panelboard	6.18	10.00	61.81	0.00	0.00	0.00	0.00
F-2-7 STARTER	Pass	LV Panelboard	2.16	10.00	21.63	0.00	0.00	0.00	0.00
F-5-1 DISC	Pass	LV Panelboard	4.37	10.00	43.68	0.00	0.00	0.00	0.00
F-5-2 DISC	Pass	LV Panelboard	4.37	10.00	43.68	0.00	0.00	0.00	0.00
F-54-1 DISC	Pass	LV Panelboard	1.76	10.00	17.57	0.00	0.00	0.00	0.00
F-54-1 STR	Pass	LV Panelboard	1.71	10.00	17.07	0.00	0.00	0.00	0.00
F-54-2 DISC	Pass	LV Panelboard	2.39	10.00	23.92	0.00	0.00	0.00	0.00
F-54-2 STR	Pass	LV Panelboard	2.30	10.00	22.99	0.00	0.00	0.00	0.00
F-54-4 DISC	Pass	LV Panelboard	4.51	10.00	45.14	0.00	0.00	0.00	0.00
F-54-4 STR	Pass	LV Panelboard	4.06	10.00	40.64	0.00	0.00	0.00	0.00
F-54-5 STR	Marginal	LV Panelboard	9.23	10.00	92.34	0.00	0.00	0.00	0.00
F-6-1 DISC	Pass	LV Panelboard	4.28	10.00	42.79	0.00	0.00	0.00	0.00
F-6-2 DISC	Pass	LV Panelboard	4.28	10.00	42.79	0.00	0.00	0.00	0.00
F-6-4 DISC	Pass	LV Panelboard	4.37	10.00	43.67	0.00	0.00	0.00	0.00
F-60-5	Pass	LV Panelboard	0.90	10.00	8.97	0.00	0.00	0.00	0.00
F-60-6	Pass	LV Panelboard	0.90	10.00	8.97	0.00	0.00	0.00	0.00
F-7-1 DISC	Pass	LV Panelboard	3.39	10.00	33.94	0.00	0.00	0.00	0.00
F-8-6 DISC	Pass	LV Panelboard	2.77	10.00	27.70	0.00	0.00	0.00	0.00
FASB-1 LCP	Marginal	LV Panelboard	16.96	18.00	94.22	0.00	0.00	0.00	0.00
FCB-1 DISC	Pass	LV Panelboard	8.61	10.00	86.12	0.00	0.00	0.00	0.00
FCB-1-EF DISC	Pass	LV Panelboard	8.63	10.00	86.34	0.00	0.00	0.00	0.00
FDSP1 DISC	Pass	LV Panelboard	1.45	10.00	14.55	0.00	0.00	0.00	0.00
FDSP2 DISC	Pass	LV Panelboard	1.45	10.00	14.50	0.00	0.00	0.00	0.00
FDSP4 DISC	Pass	LV Panelboard	1.46	10.00	14.63	0.00	0.00	0.00	0.00
FLRDRNSP3 DISC	Pass	LV Panelboard	1.46	10.00	14.58	0.00	0.00	0.00	0.00
GDWU-1 DISC	Pass	LV Panelboard	4.36	10.00	43.64	0.00	0.00	0.00	0.00
GDWU-2 DISC	Pass	LV Panelboard	4.36	10.00	43.64	0.00	0.00	0.00	0.00
GP-3 DISC TERM	Pass	LV Panelboard	4.29	10.00	42.93	0.00	0.00	0.00	0.00
GRIT BLOWER 2 DISC	Pass	LV Panelboard	4.38	10.00	43.76	0.00	0.00	0.00	0.00
GRTBLWR3 DISC	Pass	LV Panelboard	4.29	10.00	42.87	0.00	0.00	0.00	0.00
GSP1 DISC	Pass	LV Panelboard	4.38	10.00	43.83	0.00	0.00	0.00	0.00
GSP2 DISC	Pass	LV Panelboard	4.38	10.00	43.83	0.00	0.00	0.00	0.00
GSP4 DISC	Pass	LV Panelboard	4.38	10.00	43.83	0.00	0.00	0.00	0.00
HEAT REC UNIT DISC	Pass	LV Panelboard	8.04	10.00	80.42	0.00	0.00	0.00	0.00
HOIST D DISC	Pass	LV Panelboard	4.38	10.00	43.77	0.00	0.00	0.00	0.00
HOIST EPB-B DISC	Pass	LV Panelboard	4.52	10.00	45.24	0.00	0.00	0.00	0.00
HOIST EPB-B STARTER	Pass	LV Panelboard	3.90	10.00	39.00	0.00	0.00	0.00	0.00
HOIST P DISC	Pass	LV Panelboard	1.46	10.00	14.59	0.00	0.00	0.00	0.00
HOIST Q DISC	Pass	LV Panelboard	1.45	10.00	14.55	0.00	0.00	0.00	0.00
HORZ BAND SAW	Pass	LV Panelboard	2.33	10.00	23.32	0.00	0.00	0.00	0.00
HT BOOST PMP DISC	Pass	LV Panelboard	1.44	10.00	14.45	0.00	0.00	0.00	0.00
HV-1 DISC	Pass	LV Panelboard	3.45	10.00	34.47	0.00	0.00	0.00	0.00
IFSAB-1 LCP	Pass	LV Panelboard	7.76	10.00	77.56	0.00	0.00	0.00	0.00
IPC LP-EFB	Pass	LV Panelboard	4.15	10.00	41.53	0.00	0.00	0.00	0.00
IPC LP-WFB	Pass	LV Panelboard	1.80	10.00	18.03	0.00	0.00	0.00	0.00

Bus Name	Status	EquipCategory	Calc Isc kA	Dev Isc kA	Isc Rating %	Series Rating	Calc Mom_kA	Dev Mom kA	Mom Rating %
IRON WORK	Pass	LV Panelboard	4.73	10.00	47.33	0.00	0.00	0.00	0.00
JC-1 DISC	Pass	LV Panelboard	4.37	10.00	43.69	0.00	0.00	0.00	0.00
JC-2 DISC	Pass	LV Panelboard	3.40	10.00	33.96	0.00	0.00	0.00	0.00
Junction Box	Pass	LV Panelboard	4.87	10.00	48.70	0.00	0.00	0.00	0.00
Junction box.	Pass	LV Panelboard	2.10	10.00	21.02	0.00	0.00	0.00	0.00
LBP-6 STARTER	Pass	LV Panelboard	4.06	10.00	40.58	0.00	0.00	0.00	0.00
LBP-7 STARTER	Pass	LV Panelboard	4.09	10.00	40.93	0.00	0.00	0.00	0.00
LBP-8 STARTER	Pass	LV Panelboard	4.09	10.00	40.93	0.00	0.00	0.00	0.00
LP-ADM-1	Pass	LV Panelboard	6.56	10.00	65.57	0.00	0.00	0.00	0.00
LP-ADM-1A	Pass	LV Panelboard	6.32	10.00	63.18	0.00	0.00	0.00	0.00
LP-ADM-2	Pass	LV Panelboard	0.00	10.00	0.00	0.00	0.00	0.00	0.00
LP-ADM-2 DISC TERM	Pass	LV Panelboard	0.00	10.00	0.00	0.00	0.00	0.00	0.00
LP-ADM-UPS	Pass	LV Panelboard	0.06	10.00	0.60	0.00	0.00	0.00	0.00
LP-C	Pass	LV Panelboard	1.80	10.00	17.97	0.00	0.00	0.00	0.00
LP-CEB-A	Pass	LV Panelboard	3.27	10.00	32.65	0.00	0.00	0.00	0.00
LP-CEB-B	Pass	LV Panelboard	3.18	10.00	31.79	0.00	0.00	0.00	0.00
LP-D	Pass	LV Panelboard	2.02	10.00	20.23	0.00	0.00	0.00	0.00
LP-E	Pass	LV Panelboard	4.71	10.00	47.05	0.00	0.00	0.00	0.00
LP-EBB-A	Pass	LV Panelboard	3.20	10.00	32.02	0.00	0.00	0.00	0.00
LP-EE	Pass	LV Panelboard	0.44	10.00	4.41	0.00	0.00	0.00	0.00
LP-F	Pass	LV Panelboard	4.27	10.00	42.66	0.00	0.00	0.00	0.00
LP-FF	Pass	LV Panelboard	0.48	10.00	4.77	0.00	0.00	0.00	0.00
LP-LSE	Pass	LV Panelboard	1.84	10.00	18.36	0.00	0.00	0.00	0.00
LP-M	Pass	LV Panelboard	3.34	10.00	33.39	0.00	0.00	0.00	0.00
LP-MTB	Pass	LV Panelboard	0.00	10.00	0.00	0.00	0.00	0.00	0.00
LP-N	Pass	LV Panelboard	3.47	10.00	34.69	0.00	0.00	0.00	0.00
LP-O	Pass	LV Panelboard	2.65	10.00	26.45	0.00	0.00	0.00	0.00
LP-Q	Pass	LV Panelboard	3.33	10.00	33.28	0.00	0.00	0.00	0.00
LP-RLS	Pass	LV Panelboard	1.90	10.00	19.04	0.00	0.00	0.00	0.00
LP-T	Pass	LV Panelboard	2.93	10.00	29.29	0.00	0.00	0.00	0.00
LP-U	Pass	LV Panelboard	2.67	10.00	26.68	0.00	0.00	0.00	0.00
LP-V	Pass	LV Panelboard	1.88	10.00	18.78	0.00	0.00	0.00	0.00
LP-W	Pass	LV Panelboard	1.64	10.00	16.44	0.00	0.00	0.00	0.00
LP-WBB-A	Pass	LV Panelboard	3.47	10.00	34.73	0.00	0.00	0.00	0.00
LP-WBB-B	Pass	LV Panelboard	3.40	10.00	33.97	0.00	0.00	0.00	0.00
LP-WPB-A	Pass	LV Panelboard	1.78	10.00	17.85	0.00	0.00	0.00	0.00
LP-WPB-B	Pass	LV Panelboard	1.76	10.00	17.55	0.00	0.00	0.00	0.00
LSE-ACCU-1	Pass	LV Panelboard	6.29	10.00	62.90	0.00	0.00	0.00	0.00
LSE-ACU-1	Pass	LV Panelboard	3.92	10.00	39.18	0.00	0.00	0.00	0.00
LSE-PPU-1	Pass	LV Panelboard	2.92	10.00	29.21	0.00	0.00	0.00	0.00
MB-EF-1 DISC	Pass	LV Panelboard	3.24	10.00	32.37	0.00	0.00	0.00	0.00
MCC-51A	Pass	LV MCC	44.50	65.00	68.46	0.00	0.00	0.00	0.00
MCC-51B	Pass	LV MCC	44.49	65.00	68.45	0.00	0.00	0.00	0.00
MCC-52A	Pass	LV MCC	44.55	65.00	68.54	0.00	0.00	0.00	0.00
MCC-52B	Pass	LV MCC	45.38	65.00	69.81	0.00	0.00	0.00	0.00
MCC-53 A	Pass	LV MCC	44.72	65.00	68.80	0.00	0.00	0.00	0.00
MCC-53B	Pass	LV MCC	44.38	65.00	68.27	0.00	0.00	0.00	0.00
MCC-54 A	Pass	LV MCC	42.78	65.00	65.82	0.00	0.00	0.00	0.00
MCC-54B	Pass	LV MCC	42.78	65.00	65.82	0.00	0.00	0.00	0.00
MCC-55 A	Pass	LV MCC	44.26	65.00	68.10	0.00	0.00	0.00	0.00
MCC-55B	Pass	LV MCC	44.26	65.00	68.10	0.00	0.00	0.00	0.00
MCC-56 A	Pass	LV MCC	15.57	65.00	23.95	0.00	0.00	0.00	0.00
MCC-56B	Pass	LV MCC	15.34	65.00	23.60	0.00	0.00	0.00	0.00
MCC-ADM-A	Pass	LV MCC	12.21	65.00	18.78	0.00	0.00	0.00	0.00
MCC-ADM-A.	Pass	LV MCC	12.21	65.00	18.78	0.00	0.00	0.00	0.00
MCC-C	Pass	LV MCC	15.09	65.00	23.21	0.00	0.00	0.00	0.00
MCC-CEB-A	Pass	LV MCC	25.40	65.00	39.07	0.00	0.00	0.00	0.00

Bus Name	Status	EquipCategory	Calc Isc kA	Dev Isc kA	Isc Rating %	Series Rating	Calc Mom_kA	Dev Mom kA	Mom Rating %
MCC-CEB-B	Pass	LV MCC	25.17	65.00	38.72	0.00	0.00	0.00	0.00
MCC-D	Pass	LV MCC	15.87	65.00	24.41	0.00	0.00	0.00	0.00
MCC-D.	Pass	LV MCC	15.87	65.00	24.41	0.00	0.00	0.00	0.00
MCC-E	Pass	LV MCC	13.91	65.00	21.40	0.00	0.00	0.00	0.00
MCC-E.	Pass	LV MCC	13.91	65.00	21.40	0.00	0.00	0.00	0.00
MCC-E..	Pass	LV MCC	13.91	65.00	21.40	0.00	0.00	0.00	0.00
MCC-EBB-A	Pass	LV MCC	11.53	65.00	17.73	0.00	0.00	0.00	0.00
MCC-EBB-A.	Pass	LV MCC	11.53	65.00	17.73	0.00	0.00	0.00	0.00
MCC-EBB-B	Pass	LV MCC	10.90	65.00	16.76	0.00	0.00	0.00	0.00
MCC-EBB-B.	Pass	LV MCC	10.90	65.00	16.76	0.00	0.00	0.00	0.00
MCC-EE	Pass	LV MCC	13.10	42.00	31.18	0.00	0.00	0.00	0.00
MCC-EPB-A	Pass	LV MCC	6.60	65.00	10.15	0.00	0.00	0.00	0.00
MCC-EPB-A.	Pass	LV MCC	6.60	65.00	10.15	0.00	0.00	0.00	0.00
MCC-EPB-A..	Pass	LV MCC	6.60	65.00	10.15	0.00	0.00	0.00	0.00
MCC-EPB-B	Pass	LV MCC	6.22	65.00	9.57	0.00	0.00	0.00	0.00
MCC-EPB-B.	Pass	LV MCC	6.22	65.00	9.57	0.00	0.00	0.00	0.00
MCC-EPB-B..	Pass	LV MCC	6.22	65.00	9.57	0.00	0.00	0.00	0.00
MCC-F	Pass	LV MCC	13.17	65.00	20.26	0.00	0.00	0.00	0.00
MCC-F.	Pass	LV MCC	13.17	65.00	20.26	0.00	0.00	0.00	0.00
MCC-F..	Pass	LV MCC	13.17	65.00	20.26	0.00	0.00	0.00	0.00
MCC-FF	Pass	LV MCC	12.54	42.00	29.86	0.00	0.00	0.00	0.00
MCC-M	Pass	LV MCC	21.14	65.00	32.52	0.00	0.00	0.00	0.00
MCC-M.	Pass	LV MCC	21.14	65.00	32.52	0.00	0.00	0.00	0.00
MCC-N	Pass	LV MCC	22.82	65.00	35.10	0.00	0.00	0.00	0.00
MCC-N.	Pass	LV MCC	22.82	65.00	35.10	0.00	0.00	0.00	0.00
MCC-P	Pass	LV MCC	20.91	65.00	32.17	0.00	0.00	0.00	0.00
MCC-Q	Pass	LV MCC	20.21	65.00	31.09	0.00	0.00	0.00	0.00
MCC-R	Fail	LV MCC	80.74	65.00	124.21	0.00	0.00	0.00	0.00
MCC-RLS-A	Pass	LV MCC	15.27	65.00	23.50	0.00	0.00	0.00	0.00
MCC-RLS-B	Pass	LV MCC	12.81	65.00	19.71	0.00	0.00	0.00	0.00
MCC-S	Fail	LV MCC	80.43	65.00	123.75	0.00	0.00	0.00	0.00
MCC-WBB-A	Pass	LV MCC	41.26	65.00	63.48	0.00	0.00	0.00	0.00
MCC-WBB-A.	Pass	LV MCC	41.26	65.00	63.48	0.00	0.00	0.00	0.00
MCC-WBB-B	Pass	LV MCC	37.51	65.00	57.72	0.00	0.00	0.00	0.00
MCC-WBB-B.	Pass	LV MCC	37.51	65.00	57.71	0.00	0.00	0.00	0.00
MCC-WPB-A	Pass	LV MCC	13.17	65.00	20.26	0.00	0.00	0.00	0.00
MCC-WPB-A.	Pass	LV MCC	13.17	65.00	20.26	0.00	0.00	0.00	0.00
MCC-WPB-B	Pass	LV MCC	12.87	65.00	19.80	0.00	0.00	0.00	0.00
MCC-WPB-B.	Pass	LV MCC	12.87	65.00	19.80	0.00	0.00	0.00	0.00
MCC-XA	Pass	LV MCC	20.11	65.00	30.94	0.00	0.00	0.00	0.00
MCC-XB	Fail	LV MCC	72.70	65.00	111.84	0.00	0.00	0.00	0.00
METAL LATHE	Pass	LV Panelboard	4.86	10.00	48.64	0.00	0.00	0.00	0.00
MILL MACH	Pass	LV Panelboard	4.02	10.00	40.16	0.00	0.00	0.00	0.00
MOD VALVE 1 DISC	Pass	LV Panelboard	1.45	10.00	14.54	0.00	0.00	0.00	0.00
MOD VALVE 3 DISC	Pass	LV Panelboard	1.33	10.00	13.26	0.00	0.00	0.00	0.00
MOD VALVE 5 DISC	Pass	LV Panelboard	1.22	10.00	12.18	0.00	0.00	0.00	0.00
MOD VALVE 7 DISC	Pass	LV Panelboard	1.13	10.00	11.26	0.00	0.00	0.00	0.00
MU HV2 DISC	Pass	LV Panelboard	1.46	10.00	14.59	0.00	0.00	0.00	0.00
MV10 DISC	Pass	LV Panelboard	1.45	10.00	14.48	0.00	0.00	0.00	0.00
MV11 DISC	Pass	LV Panelboard	1.43	10.00	14.34	0.00	0.00	0.00	0.00
MV12 DISC	Pass	LV Panelboard	1.42	10.00	14.20	0.00	0.00	0.00	0.00
MV2 DISC	Pass	LV Panelboard	1.47	10.00	14.66	0.00	0.00	0.00	0.00
MV4 DISC	Pass	LV Panelboard	1.45	10.00	14.52	0.00	0.00	0.00	0.00
MV6 DISC	Pass	LV Panelboard	1.44	10.00	14.38	0.00	0.00	0.00	0.00
MV8 DISC	Pass	LV Panelboard	1.42	10.00	14.24	0.00	0.00	0.00	0.00
MV9 DISC	Pass	LV Panelboard	1.46	10.00	14.62	0.00	0.00	0.00	0.00
N EQPT RCPT	Pass	LV Panelboard	2.27	10.00	22.70	0.00	0.00	0.00	0.00

Bus Name	Status	EquipCategory	Calc Isc kA	Dev Isc kA	Isc Rating %	Series Rating	Calc Mom_kA	Dev Mom kA	Mom Rating %
OZNTR DISC	Pass	LV Panelboard	8.41	10.00	84.07	0.00	0.00	0.00	0.00
P-53-06 DISC	Pass	LV Panelboard	5.85	10.00	58.53	0.00	0.00	0.00	0.00
P-53-06 STR	Pass	LV Panelboard	4.94	10.00	49.36	0.00	0.00	0.00	0.00
P-53-07 DISC.	Pass	LV Panelboard	3.43	10.00	34.29	0.00	0.00	0.00	0.00
P-53-07 STR	Pass	LV Panelboard	3.08	10.00	30.78	0.00	0.00	0.00	0.00
P-53-20 DISC	Pass	LV Panelboard	5.90	10.00	58.97	0.00	0.00	0.00	0.00
P-53-20 STR	Pass	LV Panelboard	4.97	10.00	49.65	0.00	0.00	0.00	0.00
P-53-21 DISC	Pass	LV Panelboard	5.36	10.00	53.59	0.00	0.00	0.00	0.00
P-53-21 STR	Pass	LV Panelboard	4.57	10.00	45.72	0.00	0.00	0.00	0.00
PAB-E1 DV & BOV	Pass	LV Panelboard	2.20	10.00	21.98	0.00	0.00	0.00	0.00
PAB-E1 LCP	Pass	LV Panelboard	3.66	10.00	36.60	0.00	0.00	0.00	0.00
PAB-E1 STR IN	Pass	MV E2 Starter	2.44	50.00	4.87	0.00	3.69	80.00	4.61
PAB-E1 STR OUT	Pass	MV E2 Starter	2.44	50.00	4.87	0.00	3.69	80.00	4.61
PAB-E2 DV & BOV1	Pass	LV Panelboard	1.86	10.00	18.58	0.00	0.00	0.00	0.00
PAB-E2 LCP	Pass	LV Panelboard	3.04	10.00	30.42	0.00	0.00	0.00	0.00
PAB-E2 STR IN	Pass	MV E2 Starter	2.09	50.00	4.18	0.00	2.97	80.00	3.71
PAB-E2 STR OUT	Pass	MV E2 Starter	2.09	50.00	4.18	0.00	2.97	80.00	3.71
PAB-E3 DV & BOV	Pass	LV Panelboard	1.62	10.00	16.22	0.00	0.00	0.00	0.00
PAB-E3 LCP	Pass	LV Panelboard	2.34	10.00	23.37	0.00	0.00	0.00	0.00
PAB-E3 STR IN	Pass	MV E2 Starter	2.44	50.00	4.87	0.00	3.69	80.00	4.61
PAB-E3 STR OUT	Pass	MV E2 Starter	2.44	50.00	4.87	0.00	3.69	80.00	4.61
PAB-W1 VALVES JB	Pass	LV Panelboard	6.70	10.00	66.98	0.00	0.00	0.00	0.00
PAB-W2 VALVES JB	Pass	LV Panelboard	5.09	10.00	50.89	0.00	0.00	0.00	0.00
PAB-W3 VALVES JB	Pass	LV Panelboard	4.21	10.00	42.07	0.00	0.00	0.00	0.00
PC-E1 DISC	Pass	LV Panelboard	0.59	10.00	5.87	0.00	0.00	0.00	0.00
PC-E2 DISC	Pass	LV Panelboard	0.75	10.00	7.45	0.00	0.00	0.00	0.00
PC-E3 DISC	Pass	LV Panelboard	0.77	10.00	7.68	0.00	0.00	0.00	0.00
PC-E4 DISC	Pass	LV Panelboard	0.53	10.00	5.33	0.00	0.00	0.00	0.00
PC-WPB-EF-2 DISC	Pass	LV Panelboard	3.14	10.00	31.35	0.00	0.00	0.00	0.00
PC-WPB-P-2 DISC	Pass	LV Panelboard	1.98	10.00	19.77	0.00	0.00	0.00	0.00
PCDR W1 DISC	Pass	LV Panelboard	1.31	10.00	13.10	0.00	0.00	0.00	0.00
PCDR-W2 DISC	Pass	LV Panelboard	2.13	10.00	21.35	0.00	0.00	0.00	0.00
PDP UV 2A	Pass	LV MCC	14.50	65.00	22.30	0.00	0.00	0.00	0.00
PDP UV 2B	Pass	LV MCC	14.50	65.00	22.30	0.00	0.00	0.00	0.00
PDP-E1 DISC	Pass	LV Panelboard	4.72	10.00	47.25	0.00	0.00	0.00	0.00
PDP-W1 DISC	Pass	LV Panelboard	3.37	10.00	33.70	0.00	0.00	0.00	0.00
PEW STRAINER DISC	Pass	LV Panelboard	1.45	10.00	14.48	0.00	0.00	0.00	0.00
PMPRM HOIST DISC	Pass	LV Panelboard	4.08	10.00	40.78	0.00	0.00	0.00	0.00
PP-ADM-1	Pass	LV Panelboard	2.86	35.00	8.17	0.00	0.00	0.00	0.00
PP-ADM-2	Pass	LV Panelboard	2.14	35.00	6.10	0.00	0.00	0.00	0.00
PP-EBB-A	Pass	LV Panelboard	9.88	35.00	28.22	0.00	0.00	0.00	0.00
PP-EBB-B	Pass	LV Panelboard	7.78	35.00	22.24	0.00	0.00	0.00	0.00
PP-LSE	Pass	LV Panelboard	12.49	35.00	35.68	0.00	0.00	0.00	0.00
PP-LSE CKT #14	Pass	LV Panelboard	0.98	35.00	2.79	0.00	0.00	0.00	0.00
PP-LSE CKT #2	Pass	LV Panelboard	0.98	35.00	2.79	0.00	0.00	0.00	0.00
PP-LSE CKT #26	Pass	LV Panelboard	0.98	35.00	2.79	0.00	0.00	0.00	0.00
PP-LSE CKT #8	Pass	LV Panelboard	0.98	35.00	2.79	0.00	0.00	0.00	0.00
PP-MTB	Pass	LV Panelboard	5.41	35.00	15.45	0.00	0.00	0.00	0.00
PP-MTB DISC SW	Pass	LV Panelboard	5.79	10.00	57.91	0.00	0.00	0.00	0.00
PP-UV	Pass	LV Panelboard	1.62	10.00	16.20	0.00	0.00	0.00	0.00
PP-WBB-A	Pass	LV Panelboard	31.71	65.00	48.79	0.00	0.00	0.00	0.00
PP-WBB-B	Pass	LV Panelboard	30.58	65.00	47.04	0.00	0.00	0.00	0.00
PP-Z	Pass	LV Panelboard	4.82	10.00	48.18	0.00	0.00	0.00	0.00
PSCP-E1 DISC	Pass	LV Panelboard	4.04	10.00	40.36	0.00	0.00	0.00	0.00
PSCP-E2 DISC	Pass	LV Panelboard	3.91	10.00	39.05	0.00	0.00	0.00	0.00
PSCP-W1 DISC	Pass	LV Panelboard	6.83	10.00	68.32	0.00	0.00	0.00	0.00
PSCP-W2 DISC	Pass	LV Panelboard	4.42	10.00	44.18	0.00	0.00	0.00	0.00

Bus Name	Status	EquipCategory	Calc Isc kA	Dev Isc kA	Isc Rating %	Series Rating	Calc Mom_kA	Dev Mom kA	Mom Rating %
PSLP-E1 VFD IN	Pass	LV Panelboard	4.05	10.00	40.51	0.00	0.00	0.00	0.00
PSLP-E2 VFD IN	Pass	LV Panelboard	3.66	10.00	36.60	0.00	0.00	0.00	0.00
PSLP-E3 VFD IN	Pass	LV Panelboard	3.52	10.00	35.23	0.00	0.00	0.00	0.00
PSLP-W1 VFD IN	Pass	LV Panelboard	6.99	10.00	69.92	0.00	0.00	0.00	0.00
PSLP-W2 INPUT	Pass	LV Panelboard	8.31	10.00	83.12	0.00	0.00	0.00	0.00
PSLPG-W1 VFD IN	Pass	LV Panelboard	2.55	10.00	25.51	0.00	0.00	0.00	0.00
PSLPG-W2 INPUT	Pass	LV Panelboard	4.63	10.00	46.34	0.00	0.00	0.00	0.00
PSLPM-E1 LCP	Pass	LV Panelboard	3.90	10.00	39.00	0.00	0.00	0.00	0.00
PSLPM-E2 LCP	Pass	LV Panelboard	3.64	10.00	36.39	0.00	0.00	0.00	0.00
RASP-E1 VFD IN	Pass	LV Panelboard	2.04	10.00	20.36	0.00	0.00	0.00	0.00
RASP-E2 VFD IN	Pass	LV Panelboard	2.02	10.00	20.23	0.00	0.00	0.00	0.00
RASP-E3 VFD IN	Pass	LV Panelboard	2.04	10.00	20.36	0.00	0.00	0.00	0.00
RASP-E4 VFD IN	Pass	LV Panelboard	2.02	10.00	20.22	0.00	0.00	0.00	0.00
RASP-E5 VFD IN	Pass	LV Panelboard	2.03	10.00	20.35	0.00	0.00	0.00	0.00
RASP-E6 VFD IN	Pass	LV Panelboard	2.02	10.00	20.21	0.00	0.00	0.00	0.00
RASP-E7 VFD IN	Pass	LV Panelboard	2.04	10.00	20.35	0.00	0.00	0.00	0.00
RASP-E8 VFD IN	Pass	LV Panelboard	2.02	10.00	20.22	0.00	0.00	0.00	0.00
RBDP1 DISC	Marginal	LV Panelboard	8.90	10.00	89.05	0.00	0.00	0.00	0.00
RBDP3 DISC	Marginal	LV Panelboard	8.90	10.00	89.05	0.00	0.00	0.00	0.00
RECIRCV PAB-E1	Pass	LV Panelboard	2.30	10.00	22.99	0.00	0.00	0.00	0.00
RECIRCV PAB-E2	Pass	LV Panelboard	1.93	10.00	19.28	0.00	0.00	0.00	0.00
RECIRCV PAB-E3	Pass	LV Panelboard	1.50	10.00	15.02	0.00	0.00	0.00	0.00
RETBSNRFCV STARTER	Pass	LV Panelboard	2.75	10.00	27.50	0.00	0.00	0.00	0.00
RF # 5 DISC	Pass	LV Panelboard	2.74	10.00	27.38	0.00	0.00	0.00	0.00
RF # 6 DISC	Pass	LV Panelboard	2.74	10.00	27.37	0.00	0.00	0.00	0.00
RF-1 DISC	Pass	LV Panelboard	3.44	10.00	34.37	0.00	0.00	0.00	0.00
RIVER VALVE DISC	Pass	LV Panelboard	1.45	10.00	14.48	0.00	0.00	0.00	0.00
RLS-ACCU-1	Pass	LV Panelboard	2.76	10.00	27.62	0.00	0.00	0.00	0.00
RLS-ACCU-1 DISC	Pass	LV Panelboard	3.38	10.00	33.81	0.00	0.00	0.00	0.00
RLS-ACU-1	Pass	LV Panelboard	7.07	10.00	70.68	0.00	0.00	0.00	0.00
RLS-EF-1 DISC	Pass	LV Panelboard	2.70	10.00	27.03	0.00	0.00	0.00	0.00
RLS-EF-2 DISC	Pass	LV Panelboard	4.82	10.00	48.20	0.00	0.00	0.00	0.00
RLS-PPU-1	Pass	LV Panelboard	7.46	10.00	74.63	0.00	0.00	0.00	0.00
RLS-SF-1 DISC	Pass	LV Panelboard	1.76	10.00	17.57	0.00	0.00	0.00	0.00
ROOF FAN 10 DISC	Pass	LV Panelboard	2.86	10.00	28.59	0.00	0.00	0.00	0.00
ROOF FAN 11 DISC	Pass	LV Panelboard	2.83	10.00	28.28	0.00	0.00	0.00	0.00
ROOF FAN 12 DISC	Pass	LV Panelboard	2.86	10.00	28.59	0.00	0.00	0.00	0.00
RS-SAP-1 DISC	Pass	LV Panelboard	2.01	10.00	20.14	0.00	0.00	0.00	0.00
RVSS SRP2 OUT	Pass	LV MCC	12.81	65.00	19.71	0.00	0.00	0.00	0.00
RVSS SRP4 OUT	Pass	LV MCC	12.81	65.00	19.71	0.00	0.00	0.00	0.00
S-1-1 DISC	Pass	LV Panelboard	1.64	10.00	16.41	0.00	0.00	0.00	0.00
S-21-1 DISC	Pass	LV Panelboard	2.24	10.00	22.38	0.00	0.00	0.00	0.00
S-21-1 STARTER	Pass	LV Panelboard	1.97	10.00	19.68	0.00	0.00	0.00	0.00
S-21-2 DISC	Pass	LV Panelboard	2.22	10.00	22.17	0.00	0.00	0.00	0.00
S-21-2 STARTER	Pass	LV Panelboard	1.74	10.00	17.42	0.00	0.00	0.00	0.00
S-21-3 DISC	Pass	LV Panelboard	1.82	10.00	18.23	0.00	0.00	0.00	0.00
S-21-3 STARTER	Pass	LV Panelboard	1.49	10.00	14.86	0.00	0.00	0.00	0.00
S-21-4 DISC	Pass	LV Panelboard	1.81	10.00	18.10	0.00	0.00	0.00	0.00
S-21-4 STARTER	Pass	LV Panelboard	1.63	10.00	16.27	0.00	0.00	0.00	0.00
S-54-2 DISC	Pass	LV Panelboard	2.39	10.00	23.92	0.00	0.00	0.00	0.00
S-54-2 STR	Pass	LV Panelboard	2.30	10.00	22.99	0.00	0.00	0.00	0.00
SC-1 DISC	Pass	LV Panelboard	4.28	10.00	42.79	0.00	0.00	0.00	0.00
SC-2 DISC	Pass	LV Panelboard	4.37	10.00	43.68	0.00	0.00	0.00	0.00
SC-3 DISC	Pass	LV Panelboard	4.37	10.00	43.68	0.00	0.00	0.00	0.00
SC-E1 DISC	Pass	LV Panelboard	0.56	10.00	5.62	0.00	0.00	0.00	0.00
SC-E2 DISC	Pass	LV Panelboard	0.56	10.00	5.61	0.00	0.00	0.00	0.00
SC-E3 DISC	Pass	LV Panelboard	0.32	10.00	3.24	0.00	0.00	0.00	0.00

Bus Name	Status	EquipCategory	Calc Isc kA	Dev Isc kA	Isc Rating%	Series Rating	Calc Mom_kA	Dev Mom kA	Mom Rating%
SC-E4 DISC	Pass	LV Panelboard	0.32	10.00	3.23	0.00	0.00	0.00	0.00
SCDR-W1 DISC	Pass	LV Panelboard	0.61	10.00	6.10	0.00	0.00	0.00	0.00
SCDR-W2 DISC	Pass	LV Panelboard	0.61	10.00	6.10	0.00	0.00	0.00	0.00
SCREW CONV 3 STR	Pass	LV Panelboard	4.38	10.00	43.76	0.00	0.00	0.00	0.00
SCRNCNV DISC	Pass	LV Panelboard	4.37	10.00	43.66	0.00	0.00	0.00	0.00
SCTY GATE STARTER	Pass	LV Panelboard	4.80	10.00	47.99	0.00	0.00	0.00	0.00
SE ISO VALVE DISC	Pass	LV Panelboard	1.45	10.00	14.48	0.00	0.00	0.00	0.00
SECURITY GATE DISC	Pass	LV Panelboard	5.80	10.00	57.97	0.00	0.00	0.00	0.00
SEG1 DISC	Pass	LV Panelboard	1.45	10.00	14.53	0.00	0.00	0.00	0.00
SEPPMP DISC TERM	Pass	LV Panelboard	8.09	10.00	80.87	0.00	0.00	0.00	0.00
SF1 DISC	Pass	LV Panelboard	1.43	10.00	14.30	0.00	0.00	0.00	0.00
SF1FF DISC	Pass	LV Panelboard	4.02	10.00	40.19	0.00	0.00	0.00	0.00
SF2EE DISC	Pass	LV Panelboard	1.54	10.00	15.39	0.00	0.00	0.00	0.00
SF3FF DISC	Pass	LV Panelboard	4.00	10.00	40.05	0.00	0.00	0.00	0.00
SF4EE DISC	Pass	LV Panelboard	4.05	10.00	40.55	0.00	0.00	0.00	0.00
SLC 4 DISC	Pass	LV Panelboard	3.55	10.00	35.48	0.00	0.00	0.00	0.00
SLC 5 DISC	Pass	LV Panelboard	3.34	10.00	33.41	0.00	0.00	0.00	0.00
SLC 6 DISC	Pass	LV Panelboard	2.41	10.00	24.10	0.00	0.00	0.00	0.00
SLC 7 DISC	Pass	LV Panelboard	2.26	10.00	22.56	0.00	0.00	0.00	0.00
SLC-1 DISC	Pass	LV Panelboard	2.75	10.00	27.51	0.00	0.00	0.00	0.00
SLC-3 DISC	Pass	LV Panelboard	2.75	10.00	27.51	0.00	0.00	0.00	0.00
SLC2 DISC	Pass	LV Panelboard	2.74	10.00	27.38	0.00	0.00	0.00	0.00
SLDG F-50-1	Pass	LV Panelboard	0.86	10.00	8.58	0.00	0.00	0.00	0.00
SLDG F-50-2	Pass	LV Panelboard	0.86	10.00	8.58	0.00	0.00	0.00	0.00
SLDG F-50-3	Pass	LV Panelboard	0.75	10.00	7.48	0.00	0.00	0.00	0.00
SLDG F-50-4	Pass	LV Panelboard	0.75	10.00	7.48	0.00	0.00	0.00	0.00
SLDG F-60-1	Pass	LV Panelboard	0.90	10.00	8.97	0.00	0.00	0.00	0.00
SLDG F-60-2	Pass	LV Panelboard	0.90	10.00	8.97	0.00	0.00	0.00	0.00
SLDG F-60-3	Pass	LV Panelboard	0.90	10.00	8.97	0.00	0.00	0.00	0.00
SLDG F-60-4	Pass	LV Panelboard	0.74	10.00	7.37	0.00	0.00	0.00	0.00
SLDG S-50-1	Pass	LV Panelboard	0.78	10.00	7.81	0.00	0.00	0.00	0.00
SLDG S-50-2	Pass	LV Panelboard	0.86	10.00	8.58	0.00	0.00	0.00	0.00
SLDG S-50-3	Pass	LV Panelboard	0.86	10.00	8.58	0.00	0.00	0.00	0.00
SLDG S-50-4	Pass	LV Panelboard	0.86	10.00	8.58	0.00	0.00	0.00	0.00
SLDG S-50-5	Pass	LV Panelboard	0.86	10.00	8.58	0.00	0.00	0.00	0.00
SLDG S-60-1	Pass	LV Panelboard	0.84	10.00	8.37	0.00	0.00	0.00	0.00
SLDG S-60-2	Pass	LV Panelboard	0.84	10.00	8.37	0.00	0.00	0.00	0.00
SLG-3 DISC	Pass	LV Panelboard	4.28	10.00	42.79	0.00	0.00	0.00	0.00
SLG-4 DISC	Pass	LV Panelboard	4.28	10.00	42.79	0.00	0.00	0.00	0.00
SLGT-5 DISC	Pass	LV Panelboard	4.37	10.00	43.68	0.00	0.00	0.00	0.00
SLGT1 DISC	Pass	LV Panelboard	7.04	10.00	70.42	0.00	0.00	0.00	0.00
SLGT2 DISC	Pass	LV Panelboard	2.74	10.00	27.40	0.00	0.00	0.00	0.00
SLP1 DISC	Pass	LV Panelboard	2.76	10.00	27.61	0.00	0.00	0.00	0.00
SLP2 DISC	Pass	LV Panelboard	2.76	10.00	27.61	0.00	0.00	0.00	0.00
SLP3 DISC	Pass	LV Panelboard	2.75	10.00	27.48	0.00	0.00	0.00	0.00
SLUDGE CND LCP	Pass	LV Panelboard	3.52	10.00	35.23	0.00	0.00	0.00	0.00
SMP2 DISC	Pass	LV Panelboard	2.74	10.00	27.41	0.00	0.00	0.00	0.00
SP NGB DISC	Pass	LV Panelboard	4.29	10.00	42.87	0.00	0.00	0.00	0.00
SRP-1 RVSS OUT	Pass	LV MCC	15.27	65.00	23.50	0.00	0.00	0.00	0.00
SRP-3 RVSS OUT	Pass	LV MCC	15.27	65.00	23.50	0.00	0.00	0.00	0.00
SRP-5 RVSS OUT	Pass	LV MCC	15.27	65.00	23.50	0.00	0.00	0.00	0.00
SSC-1 DISC	Pass	LV Panelboard	4.29	10.00	42.87	0.00	0.00	0.00	0.00
SSC-2 DISC	Pass	LV Panelboard	4.38	10.00	43.76	0.00	0.00	0.00	0.00
SSCP-E1 DISC	Pass	LV Panelboard	1.36	10.00	13.57	0.00	0.00	0.00	0.00
SSCP-W1 DISC	Pass	LV Panelboard	7.01	10.00	70.07	0.00	0.00	0.00	0.00
SSCP-W2 DISC	Pass	LV Panelboard	6.96	10.00	69.56	0.00	0.00	0.00	0.00
STWP 1 DISC	Pass	LV Panelboard	5.73	10.00	57.29	0.00	0.00	0.00	0.00

Bus Name	Status	EquipCategory	Calc Isc kA	Dev Isc kA	Isc Rating %	Series Rating	Calc Mom_kA	Dev Mom kA	Mom Rating %
STWP 2 DISC	Pass	LV Panelboard	5.18	10.00	51.76	0.00	0.00	0.00	0.00
SUB 1 BUS A	Pass	LV Switchgear	17.11	100.00	17.11	0.00	0.00	0.00	0.00
SUB 1 BUS B	Pass	LV Switchgear	16.99	100.00	16.99	0.00	0.00	0.00	0.00
SUB 1 PRIMARY SWITC	Pass	MV Switchgear	8.23	25.00	32.93	0.00	8.47	40.00	21.16
SUB 1 PRIMARY SWITC	Pass	MV Switchgear	11.63	25.00	46.52	0.00	12.42	40.00	31.06
SUB 2 BUS A	Pass	LV Switchgear	13.98	100.00	13.98	0.00	0.00	0.00	0.00
SUB 2 BUS B	Pass	LV Switchgear	13.42	100.00	13.42	0.00	0.00	0.00	0.00
SUB 2 PRIMARY SWITC	Pass	MV Switchgear	8.99	25.00	35.98	0.00	9.29	40.00	23.23
SUB 2 PRIMARY SWITC	Pass	MV Switchgear	13.06	25.00	52.24	0.00	14.76	40.00	36.89
SUB 3 BUS A	Pass	LV Switchgear	43.33	100.00	43.33	0.00	0.00	0.00	0.00
SUB 3 BUS B	Pass	LV Switchgear	40.88	100.00	40.88	0.00	0.00	0.00	0.00
SUB 3 PRIMARY SWITC	Pass	MV Switchgear	13.83	25.00	55.30	0.00	17.05	40.00	42.64
SUB 3 PRIMARY SWITC	Pass	MV Switchgear	13.82	25.00	55.29	0.00	17.03	40.00	42.58
SUB 4 BUS A	Pass	LV Switchgear	21.67	42.00	51.60	0.00	0.00	0.00	0.00
SUB 4 BUS B	Pass	LV Switchgear	22.35	42.00	53.21	0.00	0.00	0.00	0.00
SUB 4 PRIMARY SWITC	Pass	MV Switchgear	10.42	25.00	41.66	0.00	10.93	40.00	27.32
SUB 4 PRIMARY SWITC	Pass	MV Switchgear	13.95	25.00	55.78	0.00	16.94	40.00	42.36
SUB 5 BUS A	Fail	LV Switchgear	90.44	85.00	106.40	0.00	0.00	0.00	0.00
SUB 5 BUS B	Fail	LV Switchgear	90.44	85.00	106.40	0.00	0.00	0.00	0.00
SUB 5 PRIMARY SWITC	Pass	MV Switchgear	14.18	25.00	56.70	0.00	18.03	40.00	45.06
SUB 5 PRIMARY SWITC	Pass	MV Switchgear	14.18	25.00	56.70	0.00	18.03	40.00	45.06
SUB 6 BUS A	Pass	LV Switchgear	12.58	100.00	12.58	0.00	0.00	0.00	0.00
SUB 6 BUS B	Pass	LV Switchgear	11.82	100.00	11.82	0.00	0.00	0.00	0.00
SUB 7 BUS A	Pass	LV Switchgear	30.76	100.00	30.76	0.00	0.00	0.00	0.00
SUB 7 BUS B	Pass	LV Switchgear	29.86	100.00	29.86	0.00	0.00	0.00	0.00
SUB 7 XFMR A PRI	Pass	MV Switchgear	14.25	25.00	57.01	0.00	17.95	40.00	44.87
SUB 7 XFMR B PRI	Pass	MV Switchgear	14.25	25.00	57.01	0.00	17.95	40.00	44.87
SUB 8 BUS A	Pass	MV Switchgear	2.45	41.00	5.97	0.00	3.75	78.00	4.81
SUB 8 BUS B	Pass	MV Switchgear	2.10	41.00	5.12	0.00	3.00	78.00	3.84
SUB 8 PRIMARY SWITC	Pass	MV Switchgear	13.97	25.00	55.88	0.00	17.54	40.00	43.85
SUB 8 PRIMARY SWITC	Pass	MV Switchgear	13.97	25.00	55.87	0.00	17.53	40.00	43.82
SUB SP-1 DISC	Pass	LV Panelboard	4.29	10.00	42.87	0.00	0.00	0.00	0.00
SUB SP-2 DISC	Pass	LV Panelboard	4.38	10.00	43.76	0.00	0.00	0.00	0.00
SUMP PUMP 1 DISC	Pass	LV Panelboard	2.27	10.00	22.73	0.00	0.00	0.00	0.00
SUMP PUMP 3 DISC	Pass	LV Panelboard	0.91	10.00	9.06	0.00	0.00	0.00	0.00
SWP LCP	Marginal	LV Panelboard	9.16	10.00	91.63	0.00	0.00	0.00	0.00
SWPSO VALVE DISC S -	Pass	LV Panelboard	2.61	10.00	26.07	0.00	0.00	0.00	0.00
SWPSO-SG DISC S - 91 -	Pass	LV Panelboard	2.61	10.00	26.07	0.00	0.00	0.00	0.00
TABLET FDR DISC	Pass	LV Panelboard	3.78	10.00	37.75	0.00	0.00	0.00	0.00
TEMP ADM1 DISC	Pass	LV Panelboard	5.70	10.00	56.95	0.00	0.00	0.00	0.00
TEMP ADM2 DISC	Pass	LV Panelboard	5.70	10.00	56.95	0.00	0.00	0.00	0.00
TEMP PUMPS	Pass	LV Panelboard	1.45	10.00	14.47	0.00	0.00	0.00	0.00
TER FIL EFF SP DISC	Pass	LV Panelboard	1.46	10.00	14.59	0.00	0.00	0.00	0.00
TFB-MPC	Pass	LV Panelboard	1.47	10.00	14.71	0.00	0.00	0.00	0.00
TGS DISC	Pass	LV Panelboard	3.63	10.00	36.26	0.00	0.00	0.00	0.00
UDSP1 DISC	Pass	LV Panelboard	1.46	10.00	14.63	0.00	0.00	0.00	0.00
UDSP2 DISC	Pass	LV Panelboard	1.45	10.00	14.55	0.00	0.00	0.00	0.00
UH EE	Pass	LV Panelboard	2.45	10.00	24.49	0.00	0.00	0.00	0.00
UH EE DISC	Pass	LV Panelboard	2.71	10.00	27.14	0.00	0.00	0.00	0.00
UH FF	Pass	LV Panelboard	2.69	10.00	26.93	0.00	0.00	0.00	0.00
UPS-ADM-1 INPUT	Pass	LV Panelboard	5.30	10.00	52.98	0.00	0.00	0.00	0.00
UPS-ADM-1 OUTPUT	Pass	LV Panelboard	0.06	10.00	0.60	0.00	0.00	0.00	0.00
UV 2A	Pass	LV Panelboard	3.27	10.00	32.75	0.00	0.00	0.00	0.00
UV 2B	Pass	LV Panelboard	3.27	10.00	32.75	0.00	0.00	0.00	0.00
UV-1A	Pass	LV Switchboard	2.95	10.00	29.49	0.00	0.00	0.00	0.00
UV-1A PD LINE SIDE	Pass	LV Switchboard	2.98	10.00	29.81	0.00	0.00	0.00	0.00
UV-1B	Pass	LV Switchboard	3.51	10.00	35.13	0.00	0.00	0.00	0.00

Bus Name	Status	EquipCategory	Calc Isc kA	Dev Isc kA	Isc Rating %	Series Rating	Calc Mom_kA	Dev Mom kA	Mom Rating %
UV-1B PD LINE SIDE	Pass	LV Switchboard	3.56	10.00	35.58	0.00	0.00	0.00	0.00
W CONT GT2 DISC	Pass	LV Panelboard	1.45	10.00	14.45	0.00	0.00	0.00	0.00
W1 FLOW VALVES JB	Pass	LV Panelboard	3.47	10.00	34.69	0.00	0.00	0.00	0.00
WA MAIN BOV	Pass	LV Panelboard	3.67	10.00	36.66	0.00	0.00	0.00	0.00
WAS VALVE W1	Pass	LV Panelboard	3.18	10.00	31.84	0.00	0.00	0.00	0.00
WAS VALVE W1 DISC	Pass	LV Panelboard	5.11	10.00	51.13	0.00	0.00	0.00	0.00
WAS VALVE W2	Pass	LV Panelboard	2.67	10.00	26.69	0.00	0.00	0.00	0.00
WASP-E1 VFD IN	Pass	LV Panelboard	1.45	10.00	14.55	0.00	0.00	0.00	0.00
WASP-E2 VFD IN	Pass	LV Panelboard	1.45	10.00	14.48	0.00	0.00	0.00	0.00
WASP-W1 VFD IN	Pass	LV Panelboard	7.00	10.00	69.96	0.00	0.00	0.00	0.00
WASP-W2 VFD IN	Pass	LV Panelboard	6.94	10.00	69.45	0.00	0.00	0.00	0.00
WASV E1	Pass	LV Panelboard	1.24	10.00	12.40	0.00	0.00	0.00	0.00
WASV E2	Pass	LV Panelboard	1.24	10.00	12.40	0.00	0.00	0.00	0.00
WASV E3	Pass	LV Panelboard	1.17	10.00	11.70	0.00	0.00	0.00	0.00
WASV E4	Pass	LV Panelboard	1.17	10.00	11.70	0.00	0.00	0.00	0.00
WBB-EF-1 DISC	Pass	LV Panelboard	7.00	10.00	70.00	0.00	0.00	0.00	0.00
WBB-EF-2 DISC	Pass	LV Panelboard	7.65	10.00	76.50	0.00	0.00	0.00	0.00
WBB-EF-3 DISC	Pass	LV Panelboard	3.61	10.00	36.14	0.00	0.00	0.00	0.00
WBB-EF-4 DISC	Pass	LV Panelboard	2.79	10.00	27.91	0.00	0.00	0.00	0.00
WBB-EF-5 DISC	Pass	LV Panelboard	1.95	10.00	19.49	0.00	0.00	0.00	0.00
WBB-EF-6 DISC	Pass	LV Panelboard	1.48	10.00	14.76	0.00	0.00	0.00	0.00
WBB-EF-7 DISC	Pass	LV Panelboard	2.43	10.00	24.32	0.00	0.00	0.00	0.00
WBB-H1	Pass	LV Panelboard	6.86	10.00	68.61	0.00	0.00	0.00	0.00
WBB-H1 DISC	Marginal	LV Panelboard	9.60	10.00	95.97	0.00	0.00	0.00	0.00
WBB-H2	Pass	LV Panelboard	5.02	10.00	50.16	0.00	0.00	0.00	0.00
WBB-H2 DISC	Pass	LV Panelboard	6.36	10.00	63.59	0.00	0.00	0.00	0.00
WBB-HV-1 DISC	Pass	LV Panelboard	4.29	10.00	42.87	0.00	0.00	0.00	0.00
WBB-HV-2 DISC	Pass	LV Panelboard	12.80	22.00	58.19	0.00	0.00	0.00	0.00
WBB-P-1 DISC	Pass	LV Panelboard	2.10	10.00	21.02	0.00	0.00	0.00	0.00
WBB-P-2 DISC	Pass	LV Panelboard	2.10	10.00	20.99	0.00	0.00	0.00	0.00
WEST AESG W1	Pass	LV Panelboard	2.68	10.00	26.77	0.00	0.00	0.00	0.00
WEST AESG W2	Pass	LV Panelboard	1.59	10.00	15.87	0.00	0.00	0.00	0.00
WEST AESGW1 DISC	Pass	LV Panelboard	2.84	10.00	28.38	0.00	0.00	0.00	0.00
WFB-EUH-TERM's	Pass	LV Panelboard	1.61	10.00	16.10	0.00	0.00	0.00	0.00
WHM DISC	Pass	LV Panelboard	2.26	10.00	22.58	0.00	0.00	0.00	0.00
Wireway	Pass	LV Panelboard	1.51	10.00	15.09	0.00	0.00	0.00	0.00
Wireway.	Pass	LV Panelboard	1.51	10.00	15.09	0.00	0.00	0.00	0.00
WPB-EF-1 DISC	Pass	LV Panelboard	2.22	10.00	22.18	0.00	0.00	0.00	0.00
WPB-H1 DISC	Pass	LV Panelboard	5.60	10.00	56.02	0.00	0.00	0.00	0.00
WPB-H1 HOIST	Pass	LV Panelboard	4.58	10.00	45.78	0.00	0.00	0.00	0.00
WPB-HV-1 DISC	Pass	LV Panelboard	2.69	10.00	26.91	0.00	0.00	0.00	0.00
WPB-P-1 DISC	Pass	LV Panelboard	1.75	10.00	17.49	0.00	0.00	0.00	0.00
WPE-SAP-2 DISC	Pass	LV Panelboard	2.01	10.00	20.11	0.00	0.00	0.00	0.00
WPSE GATE E DISC	Pass	LV Panelboard	1.46	10.00	14.58	0.00	0.00	0.00	0.00
WPSE GATE W DISC	Pass	LV Panelboard	1.46	10.00	14.58	0.00	0.00	0.00	0.00
WPSE SMPL PMP DISC	Pass	LV Panelboard	1.47	10.00	14.67	0.00	0.00	0.00	0.00
WSE-SAP-3 DISC	Pass	LV Panelboard	3.62	10.00	36.19	0.00	0.00	0.00	0.00
WTR-CRC-PMP-1 DISC	Marginal	LV Panelboard	9.37	10.00	93.68	0.00	0.00	0.00	0.00
WTR-CRC-PMP-2 DISC	Marginal	LV Panelboard	9.37	10.00	93.68	0.00	0.00	0.00	0.00
WW BYP GATE E DISC	Pass	LV Panelboard	1.46	10.00	14.58	0.00	0.00	0.00	0.00
WWRDP2 DISC	Pass	LV Panelboard	3.31	10.00	33.08	0.00	0.00	0.00	0.00
WWRDP3 DISC	Pass	LV Panelboard	3.27	10.00	32.66	0.00	0.00	0.00	0.00
WWWRESDP1 DISC	Pass	LV Panelboard	3.28	10.00	32.83	0.00	0.00	0.00	0.00

PROTECTIVE DEVICE EVALUATION

Project: SKMmodel 050516
ANN ARBOR WASTEWATER TREATMENT PLANT
PLANT FACILITIES RENOVATION
POWER DISTRIBUTION SYSTEM STUDY
AAWWTP

Device Evaluation A_FAULT Report

Connected Bus	DevName	Bus Voltage	Frame Voltage	Frame Trip	Status	Calc Int kA	Dev Int kA	Int Rating %	Series Rating	Calc Mom kA	Dev Mom kA	Mom Rating %
15 KV BUS 1	52F11	13,200	15000	1,200	Pass	14.42	20.5	70.49		18.60	37.0	50.28
	52F12	13,200	15000	1,200	Pass	14.42	20.5	70.49		18.60	37.0	50.28
	52F13	13,200	15000	1,200	Pass	14.42	20.5	70.49		18.60	37.0	50.28
	52F14	13,200	15000	1,200	Pass	14.42	20.5	70.49		18.60	37.0	50.28
	52F15	13,200	15000	1,200	Pass	14.42	20.5	70.49		18.60	37.0	50.28
	52F17	13,200	15000	1,200	Pass	14.42	20.5	70.49		18.60	37.0	50.28
	52F18	13,200	15000	1,200	Pass	14.42	20.5	70.49		18.60	37.0	50.28
	52F1SP	13,200	15000	1,200	Unknown	0.00	0.0	0.00			37.0	
	52GT1	13,200	15000	1,200	Pass	14.42	20.5	70.49		18.60	37.0	50.28
	52M1	13,200	15000	1,200	Pass	14.42	20.5	70.49		18.60	37.0	50.28
15 KV BUS 2	52T	13,200	15000	1,200	Pass	14.42	20.5	70.49		18.60	37.0	50.28
	52F21	13,200	15000	1,200	Pass	14.42	20.5	70.49		18.60	37.0	50.27

Connected Bus	DevName	Bus Voltage	Frame Voltage	Frame Trip	Status	Calc Int kA	Dev Int kA	Int Rating %	Series Rating	Calc Mom kA	Dev Mom kA	Mom Rating %
15 KV BUS 2	52F22	13,200	15000	1,200	Pass	14.42	20.5	70.49		18.60	37.0	50.27
	52F23	13,200	15000	1,200	Pass	14.42	20.5	70.49		18.60	37.0	50.27
	52F24	13,200	15000	1,200	Pass	14.42	20.5	70.49		18.60	37.0	50.27
	52F25	13,200	15000	1,200	Pass	14.42	20.5	70.49		18.60	37.0	50.27
	52F27	13,200	15000	1,200	Pass	14.42	20.5	70.49		18.60	37.0	50.27
	52F28	13,200	15000	1,200	Pass	14.42	20.5	70.49		18.60	37.0	50.27
	52F2SP	13,200	15000	1,200	Unknown	0.00	0.0	0.00			37.0	
	52GT2	13,200	15000	1,200	Unknown	0.00	0.0	0.00			37.0	
	52IB	13,200	15000	1,200	Pass	14.42	20.5	70.49		18.60	37.0	50.27
	52M2	13,200	15000	1,200	Pass	14.42	20.5	70.49		18.60	37.0	50.27
15 KV BUS 3	52G1	13,200	15000	1,200	Pass	14.41	20.5	70.46		18.59	37.0	50.25
	52G2	13,200	15000	1,200	Pass	14.41	20.5	70.46		18.59	37.0	50.25
	52LB	13,200	15000	1,200	Pass	14.41	20.5	70.46		18.59	37.0	50.25
ADM ACCU1 DISC	FU ADM-ACCU-1	480	600	20	Pass	4.71	200.0	2.35				
ADM ACU1 DISC	FU ADM ACU-1	480	600	45	Pass	8.49	200.0	4.25				
ADM-CH-1 DISC	FU ADM-CH-1	480	600	90	Pass	9.51	200.0	4.76				
DP-51	MB DP-51	480	480	600	Fail	34.03	14.0	243.08				
DP-52	MB DP-52	480	480	400	Pass	31.99	65.0	49.21				
DP-54	MB DP-54	480	480	400	Pass	23.77	65.0	36.57				
DP-55	MB DP-55	480	480	400	Pass	24.82	65.0	38.19				
DP-56	MB DP-56	480	480	400	Pass	13.68	65.0	21.04				
DTE NORTH	FU DTE North	13,200	13200	300	Pass	14.97	20.0	74.83		17.99	32.0	56.22
DTE SOUTH	FU DTE South	13,200	13200	300	Pass	14.95	20.0	74.74		18.26	32.0	57.06

Connected Bus	DevName	Bus Voltage	Frame Voltage	Frame Trip	Status	Calc Int kA	Dev Int kA	Int Rating %	Series Rating	Calc Mom kA	Dev Mom kA	Mom Rating %
ELEVATOR CP DISC	FU ELEVATOR CP	480	600	20 / 15	Pass	1.53	200.0	0.76				
IPC LP-EFB	MB IPC LP-EFB	208	240	100	Pass	4.15	10.0	41.53				
IPC LP-WFB	MB IPC LP-WFB	208	240	100	Pass	1.80	10.0	18.03				
	PD WFB-EUH-1	208	240	20	Pass	1.80	10.0	18.03				
LP-ADM-1	MB LP-ADM-1	208	240	400 / 250	Pass	5.67	42.0	13.51				
LP-ADM-1A	MB LP-ADM-1A	208	240	400 / 250	Pass	5.54	42.0	13.19				
	PD-UPS-ADM-1	208	240	60	Pass	6.32	10.0	63.18				
LP-ADM-2	PD WASHER	240	240	30	Pass	0.00	10.0	0.00				
LP-ADM-2 DISC TERM	FU LP-ADM-2	240	250	250	Pass	0.00	300.0	0.00				
LP-ADM-UPS	MB LP-ADM-UPS	208	240	60	Pass	0.06	10.0	0.60				
LP-C	MB LP-C	208	240	70	Pass	1.80	10.0	17.97				
LP-CEB-A	MB LP-CEB-A	208	240	150	Pass	3.27	10.0	32.65				
LP-E	#MB LP-E	208	240	150	Pass	4.71	10.0	47.05				
LP-EBB-A	MB LP-EBB-A	208	240	150	Pass	3.20	10.0	32.02				
LP-N	MB LP-N	208	240	150	Pass	3.47	10.0	34.69				
LP-Q	MB LP-Q	208	240	150	Pass	3.33	10.0	33.28				
LP-RLS	MB-LP-RLS	208	240	100	Pass	1.90	10.0	19.04				
LP-V	PD-0635	208	240	150	Pass	1.88	10.0	18.78				
LP-W	PD-0638	208	240	150	Pass	1.64	10.0	16.44				
LP-WBB-A	MB-WBB-A	208	240	150	Pass	3.47	10.0	34.73				
LP-WPB-A	MB LP-WPB-B	208	240	100	Pass	1.78	10.0	17.85				
MCC-51A	FB ATS-51 NRM	480	480	600	Pass	44.50	65.0	68.46				
	MB MCC-51A	480	480	800	Pass	44.50	65.0	68.46				

Connected Bus	DevName	Bus Voltage	Frame Voltage	Frame Trip	Status	Calc Int kA	Dev Int kA	Int Rating %	Series Rating	Calc Mom kA	Dev Mom kA	Mom Rating %
MCC-51A	MCC-51A/B TIE	480	480	800	Unknown	0.00	0.0	0.00				
	MCP STWP -1	480	480	100	Pass	44.50	65.0	68.46				
MCC-51B	FB ATS-51 EMG	480	480	600	Pass	44.49	65.0	68.45				
	MB MCC-51B	480	480	800	Pass	44.49	65.0	68.45				
	MCP STWP -2	480	480	100	Pass	44.49	65.0	68.45				
MCC-52A	FB ATS-52N	480	480	600	Pass	44.55	65.0	68.54				
	MB MCC-52A	480	480	800	Pass	44.55	65.0	68.54				
	MCC-52A/B TIE	480	480	800	Unknown	0.00	0.0	0.00				
	MCP BTAB-1	480	480	70	Pass	44.55	65.0	68.54				
	MCP BTAB-3	480	480	70	Pass	44.55	65.0	68.54				
MCC-52B	FB ATS-52E	480	480	600	Pass	45.38	65.0	69.81				
	MB MCC-52B	480	480	800	Pass	45.38	65.0	69.81				
	MCP BTAB-2	480	480	70	Pass	45.38	65.0	69.81				
MCC-53 A	MB MCC-53A	480	480	800 / 600	Pass	44.72	65.0	68.80				
	MCC-53A/B TIE	480	480	800 / 600	Unknown	0.00	0.0	0.00				
	MCP AHU-1	480	480	50	Pass	44.72	65.0	68.80				
	MCP AHU-3	480	480	100	Pass	44.72	65.0	68.80				
	MCP HSP 5	480	480	50	Pass	44.72	65.0	68.80				
MCC-53B	MB MCC-53B	480	480	800 / 600	Pass	44.38	65.0	68.27				
	MCP HSP 6	480	480	50	Pass	44.38	65.0	68.27				
MCC-54 A	FB ATS-54 NRM	480	480	600 / 400	Pass	42.78	65.0	65.82				
	FB SLC -6	480	480	50	Pass	42.78	65.0	65.82				
	MB MCC-54A	480	480	800	Pass	42.78	65.0	65.82				

Connected Bus	DevName	Bus Voltage	Frame Voltage	Frame Trip	Status	Calc Int kA	Dev Int kA	Int Rating %	Series Rating	Calc Mom kA	Dev Mom kA	Mom Rating %
MCC-54 A	MCC-54A/B TIE	480	480	800	Unknown	0.00	0.0	0.00				
	MCP SLC -4	480	480	100	Pass	42.78	65.0	65.82				
MCC-54B	FB ATS-54 EMG	480	480	600 / 400	Pass	42.78	65.0	65.82				
	FB SLC -7	480	480	50	Pass	42.78	65.0	65.82				
	MB MCC-54B	480	480	800	Pass	42.78	65.0	65.82				
	MCP SLC -5	480	480	100	Pass	42.78	65.0	65.82				
MCC-55 A	FB ATS-55 NRM	480	480	800	Pass	44.26	65.0	68.10				
	MB MCC-55A	480	480	800 / 600	Pass	44.26	65.0	68.10				
	MCC-55A/B TIE	480	480	800 / 600	Unknown	0.00	0.0	0.00				
MCC-55B	FB ATS-55 EMG	480	480	800	Pass	44.26	65.0	68.10				
	MB MCC-55B	480	480	800 / 600	Pass	44.26	65.0	68.10				
MCC-56 A	MB MCC-56A	480	480	800 / 600	Pass	15.57	65.0	23.95				
	MCC-56A/B TIE	480	480	800 / 600	Unknown	0.00	0.0	0.00				
	MCP BT1-1M	480	480	150	Pass	15.57	65.0	23.95				
MCC-56B	FB DP-56	480	480	800	Pass	15.34	65.0	23.60				
	MB MCC-56B	480	480	800 / 600	Pass	15.34	65.0	23.60				
	MCP BT2-1M	480	480	150	Pass	15.34	65.0	23.60				
MCC-ADM-A	MB MCC-ADM-A	480	480	1,200 / 800	Pass	12.21	100.0	12.21				
	MB MCC-ADM-A GFP	480	480	1,200 / 800	Unknown	0.00	0.0	0.00				
	MCP ADM-EF-1	480	480	3	Pass	12.21	65.0	18.78				
	MCP ADM-EF-2	480	480	3	Pass	12.21	65.0	18.78				
	PD ADM-ACCU-1	480	480	15	Pass	12.21	65.0	18.78				
	PD ADM-ACU-1	480	480	45	Pass	12.21	65.0	18.78				

Connected Bus	DevName	Bus Voltage	Frame Voltage	Frame Trip	Status	Calc Int kA	Dev Int kA	Int Rating %	Series Rating	Calc Mom kA	Dev Mom kA	Mom Rating %
MCC-ADM-A	PD ADM-HVAC-1	480	480	30	Pass	12.21	65.0	18.78				
	PD ADM-HVAC-2	480	480	20	Pass	12.21	65.0	18.78				
	PD ELEVATOR CP	480	480	30	Pass	12.21	65.0	18.78				
	PD STORM WATER PUM	480	480	250 / 150	Pass	12.21	65.0	18.78				
	PD STORM WATER PUM	480	480	250	Unknown	0.00	0.0	0.00				
	PD XFMR LP-ADM-2	480	480	250 / 200	Pass	12.21	65.0	18.78				
	PD XFMR LP-ADM-2 GF	480	480	250 / 200	Unknown	0.00	0.0	0.00				
	PD XFMR PP-ADM-1	480	480	400	Pass	12.21	65.0	18.78				
	PD XFMR PP-ADM-1 GF	480	480	400	Unknown	0.00	0.0	0.00				
	PD XFMR-LP-ADM-1	480	480	250 / 150	Pass	12.21	65.0	18.78				
	PD XFMR-LP-ADM-1 GF	480	480	250	Unknown	0.00	0.0	0.00				
MCC-ADM-A.	MCP ADM-P-1	480	480	6	Pass	12.21	65.0	18.78				
	MCP ADM-P-2	480	480	6	Pass	12.21	65.0	18.78				
	MCP ADM-P-3	480	480	27	Pass	12.21	65.0	18.78				
	MCP ADM-P-4	480	480	27	Pass	12.21	65.0	18.78				
	PD ADM-CH-1	480	480	100	Pass	12.21	65.0	18.78				
	PD ADM-EWH-1	480	480	20	Pass	12.21	65.0	18.78				
	PD ADM-EWH-2	480	480	20	Pass	12.21	65.0	18.78				
	PD EWH-1	480	480	50	Pass	12.21	65.0	18.78				
	PD SWPSO-SG	480	480	30	Pass	12.21	65.0	18.78				
MCC-C	FB ATS-LSE-EMG	480	480	250	Pass	15.32	18.0	85.10				
	FU BAR SCREEN 1	480	600	15	Pass	15.09	200.0	7.54				
	FU BAR SCREEN 3	480	600	15	Pass	15.09	200.0	7.54				

Connected Bus	DevName	Bus Voltage	Frame Voltage	Frame Trip	Status	Calc Int kA	Dev Int kA	Int Rating %	Series Rating	Calc Mom kA	Dev Mom kA	Mom Rating %
MCC-C	FU C SUMP PUMP	480	600	5	Pass	15.09	200.0	7.54				
	FU DOOR OP (NGW)	480	600	3	Pass	15.09	200.0	7.54				
	FU DOOR OP (SG)	480	600	3	Pass	15.09	200.0	7.54				
	FU F-6-1	480	600	15	Pass	15.09	200.0	7.54				
	FU F-6-2	480	600	15	Pass	15.09	200.0	7.54				
	FU GP-3	480	600	20	Pass	15.09	200.0	7.54				
	FU GRIT BLOWER 3	480	600	15	Pass	15.09	200.0	7.54				
	FU SC-1	480	600	4	Pass	15.09	200.0	7.54				
	FU SLUICE GATE 3	480	600	7	Pass	15.09	200.0	7.54				
	FU SLUICE GATE 4	480	600	7	Pass	15.09	200.0	7.54				
	FU SSC-1	480	600	15	Pass	15.09	200.0	7.54				
	FU SUB SUMP PUMP 1	480	600	15	Pass	15.09	200.0	7.54				
	FU SUMP PUMP NGB	480	600	5	Pass	15.09	200.0	7.54				
	FU WELDER OUTLET C	480	600	30	Pass	15.09	200.0	7.54				
	FU XFMR LP-C	480	600	80	Pass	15.09	300.0	5.03				
MCC-CEB-A	FB ATS-CEB EMG	480	480	90	Pass	25.40	65.0	39.07				
	MCP CEB-EF-1	480	480	8	Pass	25.40	65.0	39.07				
	MCP CEB-FCP-1	480	480	2	Pass	25.40	65.0	39.07				
	MCP CEB-P-1	480	480	2	Pass	25.40	65.0	39.07				
	PD CEB-ACCU-1	480	480	15	Pass	25.40	65.0	39.07				
	PD CEB-ACU-1	480	480	45	Pass	25.40	65.0	39.07				
	TB MCC-CEB-A/B	480	480	600	Unknown	0.00	0.0	0.00				
	TB MCC-CEB-A/B GFP	480	480	600	Unknown	0.00	0.0	0.00				

Connected Bus	DevName	Bus Voltage	Frame Voltage	Frame Trip	Status	Calc Int kA	Dev Int kA	Int Rating %	Series Rating	Calc Mom kA	Dev Mom kA	Mom Rating %
MCC-CEB-B	FB ATS-CEB NRM	480	480	90	Pass	25.17	65.0	38.72				
	FB ATS-PP-UV-EMG	480	480	60	Pass	25.17	65.0	38.72				
	IB MCC-CEB-A/B	480	480	600	Unknown	0.00	0.0	0.00				
	IB MCC-CEB-A/B GFP	480	480	600	Unknown	0.00	0.0	0.00				
	MCP CEB-EF-2	480	480	2	Pass	25.17	65.0	38.72				
	MCP CEB-P-2	480	480	2	Pass	25.17	65.0	38.72				
	PD CEB-PPU-1	480	480	15	Pass	25.17	65.0	38.72				
	PD CEP-FCP-2	480	480	20	Pass	25.17	65.0	38.72				
MCC-D	FB ATS-LSE-NRM	480	480	250	Pass	15.87	65.0	24.41				
	FB GATE OPERATORS	480	480	20	Pass	15.87	65.0	24.41				
	FU D SUMP PUMP 2	480	600	5	Pass	15.87	200.0	7.93				
	FU DOOR OPERATOR	480	600	3	Pass	15.87	200.0	7.93				
	FU E. PLANT THR VALV	480	600	3	Pass	15.87	200.0	7.93				
	FU JIB CRANES	480	600	20	Pass	15.87	200.0	7.93				
	FU SCREEN COMP SC-2	480	600	4	Pass	15.87	200.0	7.93				
	FU SCREEN COMP SC-3	480	600	4	Pass	15.87	200.0	7.93				
	FU SCREENINGS CONV	480	600	4	Pass	15.87	200.0	7.93				
	FU SCREW CONV 3	480	600	15	Pass	15.87	200.0	7.93				
	FU SSC-2	480	600	15	Pass	15.87	200.0	7.93				
	FU SUB SUMP PUMP 2	480	600	5	Pass	15.87	200.0	7.93				
MCC-D.	FU 5-5-2	480	600	15	Pass	15.87	200.0	7.93				
	FU BAR SCREEN 2	480	600	15	Pass	15.87	200.0	7.93				
	FU CHANNEL AIR BLOW	480	600	20	Pass	15.87	200.0	7.93				

Connected Bus	DevName	Bus Voltage	Frame Voltage	Frame Trip	Status	Calc Int kA	Dev Int kA	Int Rating %	Series Rating	Calc Mom kA	Dev Mom kA	Mom Rating %
MCC-D.	FU F-5-1	480	600	15	Pass	15.87	200.0	7.93				
	FU GRIT BLOWER 2	480	600	15	Pass	15.87	200.0	7.93				
	FU GRIT DEWATER UNI	480	600	15	Pass	15.87	200.0	7.93				
	FU GRIT DEWATER UNI	480	600	15	Pass	15.87	200.0	7.93				
	FU GRIT SLURRY PUMP	480	600	20	Pass	15.87	200.0	7.93				
	FU GRIT SLURRY PUMP	480	600	20	Pass	15.87	200.0	7.93				
	FU GRIT SLURRY PUMP	480	600	20	Pass	15.87	200.0	7.93				
	FU HEAT RECOVERY U	480	600	15	Pass	15.87	200.0	7.93				
	FU HOIST D	480	600	15	Pass	15.87	200.0	7.93				
	FU SEPTIC PUMP	480	600	35	Pass	15.87	200.0	7.93				
	FU SLUICE GATE 5	480	600	7	Pass	15.87	200.0	7.93				
	FU WELDER OUTLET D	480	600	30	Pass	15.87	200.0	7.93				
	FU XFMR LP-D PRI	480	600	80	Pass	15.87	300.0	5.29				
MCC-E	FU BASIN INFL GATE 1	480	600	7	Pass	13.91	200.0	6.96				
	FU BASIN INFL GATE 3	480	600	7	Pass	13.91	200.0	6.96				
	FU CROSS COLL 1	480	600	6	Pass	13.91	200.0	6.96				
	FU CROSS COLL 3	480	600	6	Pass	13.91	200.0	6.96				
	FU E SUMP PUMP 1	480	600	15	Pass	13.91	200.0	6.96				
	FU MCC-EE	480	600	125	Pass	13.91	300.0	4.64				
	FU RB DRAIN PUMP 2	480	600	90	Pass	13.91	200.0	6.96				
	FU RB DRAIN PUMP 4	480	600	90	Pass	13.91	200.0	6.96				
	FU SCREW PUMP 7	480	600	200	Pass	13.91	200.0	6.96				
	FU SCREW PUMP 8	480	600	200	Pass	13.91	200.0	6.96				

Connected Bus	DevName	Bus Voltage	Frame Voltage	Frame Trip	Status	Calc Int kA	Dev Int kA	Int Rating %	Series Rating	Calc Mom kA	Dev Mom kA	Mom Rating %
MCC-E	FU SLUDGE COLL 1	480	600	3	Pass	13.91	200.0	6.96				
	FU SLUDGE COLL 3	480	600	3	Pass	13.91	200.0	6.96				
	FU XFMR-LP-E	480	600	80	Pass	13.91	300.0	4.64				
MCC-E.	FU AIR COMP 1	480	600	9	Pass	13.91	200.0	6.96				
	FU BASIN OUT GATE 1	480	600	7	Pass	13.91	200.0	6.96				
	FU BASIN OUT GATE 3	480	600	7	Pass	13.91	200.0	6.96				
	FU EQ RET VALVE 1	480	600	12	Pass	13.91	200.0	6.96				
	FU EQ RET VALVE 2	480	600	12	Pass	13.91	200.0	6.96				
	FU HP PEW PUMP 1	480	600	200	Pass	13.91	200.0	6.96				
	FU MP PEW PUMP 1	480	600	125	Pass	13.91	200.0	6.96				
	FU RET BSN RF CV	480	600	2	Pass	13.91	200.0	6.96				
	FU SECURITY GATE	480	600	30	Pass	13.91	200.0	6.96				
	FU SLUDGE PUMP 1	480	600	15	Pass	13.91	200.0	6.96				
	FU SLUDGE PUMP 2	480	600	15	Pass	13.91	200.0	6.96				
	FU WELD RCPT E	480	600	30	Pass	13.91	200.0	6.96				
	PD-0537	480	480	30	Pass	13.91	65.0	21.40				
MCC-E..	FU EQ INFL GATE 1	480	600	7	Pass	13.91	200.0	6.96				
	FU EQ INFL GATE 10	480	600	7	Pass	13.91	200.0	6.96				
	FU EQ INFL GATE 11	480	600	7	Pass	13.91	200.0	6.96				
	FU EQ INFL GATE 12	480	600	7	Pass	13.91	200.0	6.96				
	FU EQ INFL GATE 2	480	600	7	Pass	13.91	200.0	6.96				
	FU EQ INFL GATE 3	480	600	7	Pass	13.91	200.0	6.96				
	FU EQ INFL GATE 4	480	600	7	Pass	13.91	200.0	6.96				

Connected Bus	DevName	Bus Voltage	Frame Voltage	Frame Trip	Status	Calc Int kA	Dev Int kA	Int Rating %	Series Rating	Calc Mom kA	Dev Mom kA	Mom Rating %
MCC-E..	FU EQ INFL GATE 9	480	600	7	Pass	13.91	200.0	6.96				
	PD-0538	480	480	20	Pass	13.91	65.0	21.40				
	PD-0539	480	480	20	Pass	13.91	65.0	21.40				
MCC-EBB-A	FB ATS-EBB EMG GFP	480	480	400 / 300	Unknown	0.00	0.0	0.00				
	FB ATS-EBB-EMG	480	480	400 / 300	Pass	11.53	65.0	17.73				
	MCP ADP-E2	480	480	63	Pass	11.53	65.0	17.73				
	MCP SEC SCUM PMP-E1	480	480	20	Pass	11.53	65.0	17.73				
	PD RASP-E1	480	480	40	Pass	11.53	65.0	17.73				
	PD RASP-E3	480	480	40	Pass	11.53	65.0	17.73				
	PD RASP-E5	480	480	40	Pass	11.53	65.0	17.73				
	PD RASP-E7	480	480	40	Pass	11.53	65.0	17.73				
	PD WASP-E1	480	480	30	Pass	11.53	65.0	17.73				
	PD XFMR LP-O	480	480	60	Pass	11.53	65.0	17.73				
	PD XFMR LP-U	480	480	60	Pass	11.53	65.0	17.73				
MCC-EBB-A.	MCP EBB SUMP PUMP 2	480	480	8	Pass	11.53	65.0	17.73				
	MCP EBB SUMP PUMP 4	480	480	8	Pass	11.53	65.0	17.73				
	MCP EBB-EF-10	480	480	3	Pass	11.53	65.0	17.73				
	MCP EBB-EF-6	480	480	3	Pass	11.53	65.0	17.73				
	MCP SEC-CLAR-E1	480	480	2	Pass	11.53	65.0	17.73				
	MCP SEC-CLAR-E3	480	480	2	Pass	11.53	65.0	17.73				
	PD EBB-A HOIST1	480	480	20	Pass	11.53	65.0	17.73				
	PD EBB-A HOIST2	480	480	20	Pass	11.53	65.0	17.73				
	PD EBB-A WELD RCPT	480	480	30	Pass	11.53	65.0	17.73				

Connected Bus	DevName	Bus Voltage	Frame Voltage	Frame Trip	Status	Calc Int kA	Dev Int kA	Int Rating %	Series Rating	Calc Mom kA	Dev Mom kA	Mom Rating %
MCC-EBB-A.	PD EBB-HV-1	480	480	20	Pass	11.53	65.0	17.73				
MCC-EBB-B	FB ATS-EBB NORM	480	480	400 / 300	Pass	10.90	65.0	16.76				
	FB ATS-EBB NORM GFP	480	480	400 / 300	Unknown	0.00	0.0	0.00				
	MCP ADP-E1	480	480	63	Pass	10.90	65.0	16.76				
	MCP CLARIFIER SC-E2	480	480	2	Pass	10.90	65.0	16.76				
	MCP CLARIFIER SC-E4	480	480	2	Pass	10.90	65.0	16.76				
	MCP SUMP PUMP 1	480	480	6	Pass	10.90	65.0	16.76				
	MCP SUMP PUMP 3	480	480	6	Pass	10.90	65.0	16.76				
	PD WELD RCPT EBB-B	480	480	30	Pass	10.90	65.0	16.76				
	PD RASP-E2	480	480	50	Pass	10.90	65.0	16.76				
	PD RASP-E4	480	480	50	Pass	10.90	65.0	16.76				
	PD RASP-E6	480	480	50	Pass	10.90	65.0	16.76				
	PD RASP-E8	480	480	50	Pass	10.90	65.0	16.76				
	PD WASP-E2	480	480	30	Pass	10.90	65.0	16.76				
	TB MCC-EBB-A/B	480	480	600	Unknown	0.00	0.0	0.00				
	TB MCC-EBB-A/B GFP	480	480	600	Unknown	0.00	0.0	0.00				
MCC-EBB-B.	FB PP-EBB-B	480	480	60	Pass	10.90	65.0	16.76				
	MCP EBB-EF-5	480	480	6	Pass	10.90	65.0	16.76				
	MCP EBB-EF-7	480	480	6	Pass	10.90	65.0	16.76				
	MCP EBB-EF-9	480	480	6	Pass	10.90	65.0	16.76				
	PD EBB-EUH-1	480	480	20	Pass	10.90	65.0	16.76				
	PD XFMR LP-T	480	480	60	Pass	10.90	65.0	16.76				
MCC-EE	FU 0904	480	600	18	Pass	13.10	200.0	6.55				

Connected Bus	DevName	Bus Voltage	Frame Voltage	Frame Trip	Status	Calc Int kA	Dev Int kA	Int Rating %	Series Rating	Calc Mom kA	Dev Mom kA	Mom Rating %
MCC-EE	FU 0905	480	600	3	Pass	13.10	200.0	6.55				
	FU 0906	480	600	3	Pass	13.10	200.0	6.55				
	FU 0907	480	600	20	Pass	13.10	300.0	4.37				
	FU 0908	480	600	30	Pass	13.10	300.0	4.37				
	FU 0909	480	600	35	Pass	13.10	200.0	6.55				
	FU 0911	480	600	35	Pass	13.10	200.0	6.55				
MCC-EPB-A	MB MCC-EPB-A	480	480	400	Pass	6.60	65.0	10.15				
	MB MCC-EPB-A GFP	480	480	400	Unknown	0.00	0.0	0.00				
	MCP EPB-SUP-1	480	480	6	Pass	6.60	65.0	10.15				
	MCP EPE-SAP-5	480	480	11	Pass	6.60	65.0	10.15				
	MCP EPI-SAP-4	480	480	11	Pass	6.60	65.0	10.15				
	MCP PC-E1	480	480	3	Pass	6.60	65.0	10.15				
	MCP PC-E3	480	480	3	Pass	6.60	65.0	10.15				
	MCP PDP-E1	480	480	20	Pass	6.60	65.0	10.15				
	MCP PSLMP-E4	480	480	11	Pass	6.60	65.0	10.15				
	PD PSLP-E1	480	480	30	Pass	6.60	65.0	10.15				
	PD PSLP-E3	480	480	30	Pass	6.60	65.0	10.15				
	PD PSLPM-E3	480	480	30	Pass	6.60	65.0	10.15				
	PD XFMR-LP-V	480	480	70	Pass	6.60	65.0	10.15				
	TB MCC-EPB-A/B	480	480	250 / 200	Unknown	0.00	0.0	0.00				
MCC-EPB-A.	MCP ANMX-E1A	480	480	3	Pass	6.60	65.0	10.15				
	MCP ANMX-E1B	480	480	3	Pass	6.60	65.0	10.15				
	MCP ANMX-E1C	480	480	3	Pass	6.60	65.0	10.15				

Connected Bus	DevName	Bus Voltage	Frame Voltage	Frame Trip	Status	Calc Int kA	Dev Int kA	Int Rating %	Series Rating	Calc Mom kA	Dev Mom kA	Mom Rating %
MCC-EPB-A.	MCP ANMX-E1D	480	480	3	Pass	6.60	65.0	10.15				
	MCP ANMX-E3A	480	480	3	Pass	6.60	65.0	10.15				
	MCP ANMX-E3B	480	480	3	Pass	6.60	65.0	10.15				
	MCP ANMX-E3C	480	480	3	Pass	6.60	65.0	10.15				
	MCP ANMX-E3D	480	480	3	Pass	6.60	65.0	10.15				
	MCP AXMX-E1A	480	480	3	Pass	6.60	65.0	10.15				
	MCP AXMX-E1B	480	480	3	Pass	6.60	65.0	10.15				
	MCP AXMX-E1C	480	480	3	Pass	6.60	65.0	10.15				
	MCP AXMX-E3A	480	480	3	Pass	6.60	65.0	10.15				
	MCP AXMX-E3B	480	480	3	Pass	6.60	65.0	10.15				
	MCP AXMX-E3C	480	480	3	Pass	6.60	65.0	10.15				
	MCP SWMX-E1	480	480	3	Pass	6.60	65.0	10.15				
	MCP SWMX-E3	480	480	3	Pass	6.60	65.0	10.15				
MCC-EPB-A..	PD F-2-13	480	480	30	Pass	6.60	65.0	10.15				
	PD F-2-6	480	480	30	Pass	6.60	65.0	10.15				
MCC-EPB-B	MB MCC-EPB-B	480	480	400	Pass	6.22	65.0	9.57				
	MB MCC-EPB-B GFP	480	480	400	Unknown	0.00	0.0	0.00				
	MCP EPB-SUP-2	480	480	6	Pass	6.22	65.0	9.57				
	MCP PC-E2	480	480	3	Pass	6.22	65.0	9.57				
	MCP PC-E4	480	480	3	Pass	6.22	65.0	9.57				
	MCP PDP-E2	480	480	14	Pass	6.22	65.0	9.57				
	MCP PSCP-E2	480	480	11	Pass	6.22	65.0	9.57				
	MCP RF-1	480	480	3	Pass	6.22	65.0	9.57				

Connected Bus	DevName	Bus Voltage	Frame Voltage	Frame Trip	Status	Calc Int kA	Dev Int kA	Int Rating %	Series Rating	Calc Mom kA	Dev Mom kA	Mom Rating %
MCC-EPB-B	PD EPB-EUH-1	480	480	30	Pass	6.22	65.0	9.57				
	PD EQRCPT-EPB-B	480	480	30	Pass	6.22	65.0	9.57				
	PD HOIST EPB-B	480	480	20	Pass	6.22	65.0	9.57				
	PD HV-1	480	480	15	Pass	6.22	65.0	9.57				
	PD PSLP-E2	480	480	30	Pass	6.22	65.0	9.57				
	PD PSLPM-E1	480	480	30	Pass	6.22	65.0	9.57				
	PD PSLPM-E2	480	480	30	Pass	6.22	65.0	9.57				
	PD XFMR-LP-W	480	480	70	Pass	6.22	65.0	9.57				
MCC-EPB-B.	PD F-1-1	480	480	30	Pass	6.22	65.0	9.57				
	PD F-1-5	480	480	30	Pass	6.22	65.0	9.57				
MCC-EPB-B..	MCP ANMX-E2A	480	480	3	Pass	6.22	65.0	9.57				
	MCP ANMX-E2B	480	480	3	Pass	6.22	65.0	9.57				
	MCP ANMX-E2C	480	480	3	Pass	6.22	65.0	9.57				
	MCP ANMX-E2D	480	480	3	Pass	6.22	65.0	9.57				
	MCP ANMX-E4A	480	480	3	Pass	6.22	65.0	9.57				
	MCP ANMX-E4B	480	480	3	Pass	6.22	65.0	9.57				
	MCP ANMX-E4C	480	480	3	Pass	6.22	65.0	9.57				
	MCP ANMX-E4D	480	480	3	Pass	6.22	65.0	9.57				
	MCP AXMX-E2A	480	480	3	Pass	6.22	65.0	9.57				
	MCP AXMX-E2B	480	480	3	Pass	6.22	65.0	9.57				
	MCP AXMX-E2C	480	480	3	Pass	6.22	65.0	9.57				
	MCP AXMX-E4A	480	480	3	Pass	6.22	65.0	9.57				
	MCP AXMX-E4B	480	480	3	Pass	6.22	65.0	9.57				

Connected Bus	DevName	Bus Voltage	Frame Voltage	Frame Trip	Status	Calc Int kA	Dev Int kA	Int Rating %	Series Rating	Calc Mom kA	Dev Mom kA	Mom Rating %
MCC-EPB-B..	MCP AXMX-E4C	480	480	3	Pass	6.22	65.0	9.57				
	MCP SWMX-E2	480	480	3	Pass	6.22	65.0	9.57				
	MCP SWMX-E4	480	480	3	Pass	6.22	65.0	9.57				
MCC-F	FU 0502	480	600	80	Pass	13.17	300.0	4.39				
	FU 0521	480	600	20	Pass	13.17	200.0	6.58				
	FU 0525	480	600	15	Pass	13.17	200.0	6.58				
	FU 0527	480	600	3	Pass	13.17	200.0	6.58				
	FU 0528	480	600	6	Pass	13.17	200.0	6.58				
	FU 0535	480	600	7	Pass	13.17	200.0	6.58				
	FU 0536	480	600	7	Pass	13.17	200.0	6.58				
	FU 0546	480	600	200	Pass	13.17	200.0	6.58				
	FU 0548	480	600	125	Pass	13.17	200.0	6.58				
	FU 0554	480	600	7	Pass	13.17	200.0	6.58				
	FU 0560	480	600	125	Pass	13.17	300.0	4.39				
	FU 0562	480	600	7	Pass	13.17	200.0	6.58				
	FU 0563	480	600	7	Pass	13.17	200.0	6.58				
	FU 0564	480	600	7	Pass	13.17	200.0	6.58				
	FU SCREW PUMP 6	480	600	200	Pass	13.17	200.0	6.58				
MCC-F.	FU 0519	480	600	2	Pass	13.17	300.0	4.39				
	FU 0530	480	600	3	Pass	13.17	200.0	6.58				
	FU 0553	480	600	2	Pass	13.17	200.0	6.58				
	FU 0555	480	600	2	Pass	13.17	200.0	6.58				
	FU 0559	480	600	30	Pass	13.17	200.0	6.58				

Connected Bus	DevName	Bus Voltage	Frame Voltage	Frame Trip	Status	Calc Int kA	Dev Int kA	Int Rating %	Series Rating	Calc Mom kA	Dev Mom kA	Mom Rating %
MCC-F.	FU 0573	480	600	90	Pass	13.17	200.0	6.58				
	FU 0574	480	600	9	Pass	13.17	200.0	6.58				
	FU 0575	480	600	18	Pass	13.17	200.0	6.58				
	FU 0576	480	600	10	Pass	13.17	200.0	6.58				
	PD 0561	480	480	30	Pass	13.17	65.0	20.26				
MCC-F..	FU 0523	480	600	90	Pass	13.17	200.0	6.58				
	FU 0542	480	600	90	Pass	13.17	200.0	6.58				
	FU 0551	480	600	15	Pass	13.17	200.0	6.58				
	FU 0557	480	600	12	Pass	13.17	200.0	6.58				
	FU 0565	480	600	7	Pass	13.17	200.0	6.58				
	FU 0566	480	600	7	Pass	13.17	200.0	6.58				
	FU 0577	480	600	7	Pass	13.17	200.0	6.58				
	FU 0578	480	600	7	Pass	13.17	200.0	6.58				
	PD 0581	480	480	60	Pass	13.17	65.0	20.26				
	PD 0582	480	480	80	Pass	13.17	65.0	20.26				
	PD 0583	480	480	80	Pass	13.17	65.0	20.26				
MCC-FF	FU 0917	480	600	90	Pass	12.54	300.0	4.18				
	FU 0918	480	600	20	Pass	12.54	300.0	4.18				
	FU 0919	480	600	2	Pass	12.54	200.0	6.27				
	FU 0920	480	600	35	Pass	12.54	200.0	6.27				
	FU 0922	480	600	35	Pass	12.54	200.0	6.27				
	FU XFMR-LP-FF	480	600	18	Pass	12.54	200.0	6.27				
MCC-M	FU 0645	480	600	80	Pass	21.13	300.0	7.04				

Connected Bus	DevName	Bus Voltage	Frame Voltage	Frame Trip	Status	Calc Int kA	Dev Int kA	Int Rating %	Series Rating	Calc Mom kA	Dev Mom kA	Mom Rating %
MCC-M	FU 0652	480	600	60	Pass	21.13	200.0	10.57				
	FU 0654	480	600	15	Pass	21.13	200.0	10.57				
	FU 0656	480	600	15	Pass	21.13	200.0	10.57				
	FU 0657	480	600	15	Pass	21.13	200.0	10.57				
	FU 0659	480	600	15	Pass	21.13	200.0	10.57				
	FU PEW PUMP 2	480	600	400	Pass	21.13	200.0	10.57				
	FU SEC EFF PUMP 1	480	600	200	Pass	21.13	300.0	7.04				
	FU SEC EFF PUMP 5	480	600	200	Pass	21.13	200.0	10.57				
	PD 0650	480	480	20	Pass	21.14	35.0	60.39				
MCC-M.	FU 0646	480	600	15	Pass	21.13	200.0	10.57				
	FU 0660	480	600	20	Pass	21.13	200.0	10.57				
	FU 0662	480	600	20	Pass	21.13	300.0	7.04				
	FU 0663	480	600	30	Pass	21.13	300.0	7.04				
	FU 0664	480	600	15	Pass	21.13	200.0	10.57				
	FU 0665	480	600	30	Pass	21.13	300.0	7.04				
	FU 0668	480	600	150	Pass	21.13	200.0	10.57				
	FU 0670	480	600	20	Pass	21.13	200.0	10.57				
	PD 0672	480	480	175	Pass	21.14	35.0	60.39				
MCC-N	FU 0711	480	600	15	Pass	22.82	200.0	11.41				
	FU BACKWASH PUMP 2	480	600	150	Pass	22.82	200.0	11.41				
	FU EF-3,4,1	480	600	15	Pass	22.82	200.0	11.41				
	FU FLOOR DRN SP 4	480	600	15	Pass	22.82	200.0	11.41				
	FU PEW PUMP 3	480	600	400	Pass	22.82	200.0	11.41				

Connected Bus	DevName	Bus Voltage	Frame Voltage	Frame Trip	Status	Calc Int kA	Dev Int kA	Int Rating %	Series Rating	Calc Mom kA	Dev Mom kA	Mom Rating %
MCC-N	FU SEC EFF PUMP 2	480	600	300	Pass	22.82	300.0	7.61				
	FU SEC EFF PUMP 6	480	600	300	Pass	22.82	200.0	11.41				
	FU WPSE GATE E MTR	480	600	15	Pass	22.82	200.0	11.41				
	FU WWRD PUMP 2	480	600	60	Pass	22.82	200.0	11.41				
MCC-N.	FU 0699	480	600	125	Pass	22.82	300.0	7.61				
	FU 0712	480	600	20	Pass	22.82	200.0	11.41				
	FU 0715	480	600	30	Pass	22.82	300.0	7.61				
	FU 0716	480	600	15	Pass	22.82	200.0	11.41				
	FU 0722	480	600	15	Pass	22.82	200.0	11.41				
	FU 0730	480	600	40	Pass	22.82	300.0	7.61				
	FU 0731	480	600	15	Pass	22.82	200.0	11.41				
	FU 0733	480	600	15	Pass	22.82	200.0	11.41				
	FU CP70 EMG TERM	480	600	20	Pass	22.82	300.0	7.61				
	PD 0724	480	480	100	Pass	22.82	35.0	65.19				
MCC-P	FU 0677	480	600	300	Pass	20.91	200.0	10.46				
	FU 0679	480	600	15	Pass	20.91	200.0	10.46				
	FU 0681	480	600	20	Pass	20.91	200.0	10.46				
	FU 0682	480	600	15	Pass	20.91	200.0	10.46				
	FU 0683	480	600	20	Pass	20.91	200.0	10.46				
	FU 0685	480	600	2	Pass	20.91	300.0	6.97				
	FU 0687	480	600	40	Pass	20.91	200.0	10.46				
	FU 0688	480	600	15	Pass	20.91	200.0	10.46				
	FU 0689	480	600	15	Pass	20.91	200.0	10.46				

Connected Bus	DevName	Bus Voltage	Frame Voltage	Frame Trip	Status	Calc Int kA	Dev Int kA	Int Rating %	Series Rating	Calc Mom kA	Dev Mom kA	Mom Rating %
MCC-P	FU 0691	480	600	20	Pass	20.91	200.0	10.46				
	FU 0693	480	600	15	Pass	20.91	200.0	10.46				
	FU 0695	480	600	20	Pass	20.91	200.0	10.46				
	FU 0697	480	600	15	Pass	20.91	200.0	10.46				
	FU ATS-PP-UV-NRM	480	600	60	Pass	20.91	200.0	10.46				
	FU PEW PUMP #1	480	600	300	Pass	20.91	200.0	10.46				
	FU SEC EFF PUMP #3	480	600	250	Pass	20.91	300.0	6.97				
MCC-Q	FU 0734	480	600	125	Pass	20.21	300.0	6.74				
	FU 0739	480	600	15	Pass	20.21	200.0	10.10				
	FU 0741	480	600	20	Pass	20.21	200.0	10.10				
	FU 0743	480	600	30	Pass	20.21	200.0	10.10				
	FU 0745	480	600	15	Pass	20.21	200.0	10.10				
	FU 0746	480	600	15	Pass	20.21	200.0	10.10				
	FU 0747	480	600	15	Pass	20.21	200.0	10.10				
	FU 0748	480	600	15	Pass	20.21	200.0	10.10				
	FU 0749	480	600	20	Pass	20.21	200.0	10.10				
	FU 0750	480	600	20	Pass	20.21	200.0	10.10				
	FU 0751	480	600	20	Pass	20.21	200.0	10.10				
	FU 0753	480	600	15	Pass	20.21	200.0	10.10				
	FU 0754	480	600	15	Pass	20.21	200.0	10.10				
	FU 0756	480	600	20	Pass	20.21	300.0	6.74				
	FU SEC EFF PUMP #4	480	600	300	Pass	20.21	200.0	10.10				
MCC-RLS-A	FB ATS-RLS EMG	480	480	60	Pass	15.27	65.0	23.50				

Connected Bus	DevName	Bus Voltage	Frame Voltage	Frame Trip	Status	Calc Int kA	Dev Int kA	Int Rating %	Series Rating	Calc Mom kA	Dev Mom kA	Mom Rating %
MCC-RLS-A	MB MCC-RLS-A	480	480	1,200 / 600	Pass	15.27	100.0	15.27				
	MB MCC-RLS-A GFP	480	480	1,200 / 600	Unknown	0.00	0.0	0.00				
	MCP SCREW PUMP 1	480	480	130	Pass	15.27	65.0	23.50				
	MCP SCREW PUMP 3	480	480	130	Pass	15.27	65.0	23.50				
	MCP SCREW PUMP 5	480	480	130	Pass	15.27	65.0	23.50				
	MCP WATER CIRC PUM	480	480	2	Pass	15.27	65.0	23.50				
	MCP WATER CIRC PUM	480	480	2	Pass	15.27	65.0	23.50				
	PD 78IN GATE CONTROL	480	480	20	Pass	15.27	65.0	23.50				
	PD RLS-ACCU-1	480	480	15	Pass	15.27	65.0	23.50				
	PD RLS-ACU-1	480	480	25	Pass	15.27	65.0	23.50				
	TB MCC-RLS-A/B	480	480	800 / 600	Unknown	0.00	0.0	0.00				
MCC-RLS-B	FB ATS-RLS NRM	480	480	60	Pass	12.81	65.0	19.71				
	MB MCC-RLS-B	480	480	400	Pass	12.81	65.0	19.71				
	MB MCC-RLS-B GFP	480	480	400	Unknown	0.00	0.0	0.00				
	MCP RLS-EF-1	480	480	2	Pass	12.81	65.0	19.71				
	MCP RLS-EF-2	480	480	2	Pass	12.81	65.0	19.71				
	MCP RLS-SF-1	480	480	3	Pass	12.81	65.0	19.71				
	MCP SCREW PUMP 2	480	480	130	Pass	12.81	65.0	19.71				
	MCP SCREW PUMP 4	480	480	130	Pass	12.81	65.0	19.71				
	PD 48IN GATE S-1-1	480	480	30	Pass	12.81	65.0	19.71				
	PD RLS-PPU-1	480	480	25	Pass	12.81	65.0	19.71				
	PD WELD OUTLET RLS-	480	480	30	Pass	12.81	65.0	19.71				
MCC-WBB-A	FB ATS-WBB-EMG	480	480	400	Pass	41.26	65.0	63.48				

Connected Bus	DevName	Bus Voltage	Frame Voltage	Frame Trip	Status	Calc Int kA	Dev Int kA	Int Rating %	Series Rating	Calc Mom kA	Dev Mom kA	Mom Rating %
MCC-WBB-A	FB ATS-WBB-EMG GFP	480	480	400	Unknown	0.00	0.0	0.00				
	MCP ADP-W1	480	480	24	Pass	41.26	65.0	63.48				
	MCP WBB-EF-1	480	480	3	Pass	41.26	65.0	63.48				
	MCP WBB-EF-3	480	480	3	Pass	41.26	65.0	63.48				
	MCP WBB-EF-7	480	480	3	Pass	41.26	65.0	63.48				
	PD PAB-W1	480	480	800	Pass	41.26	65.0	63.48				
	PD PAB-W3	480	480	800	Pass	41.26	65.0	63.48				
	PD RASP-W1	480	480	50	Pass	41.26	65.0	63.48				
	PD RASP-W3	480	480	50	Pass	41.26	65.0	63.48				
	PD WASP-W1	480	480	30	Pass	41.26	65.0	63.48				
	TB MCC-WBB-A/B	480	480	3,000 / 1,600	Unknown	0.00	0.0	0.00				
	TB MCC-WBB-A/B GFP	480	480	2,500 / 1,600	Unknown	0.00	0.0	0.00				
MCC-WBB-A.	MCP SCDR-W1	480	480	2	Pass	41.26	65.0	63.48				
	MCP SSCP-W1	480	480	6	Pass	41.26	65.0	63.48				
	MCP WBB-HV-1	480	480	6	Pass	41.26	65.0	63.48				
	MCP WBB-P-1	480	480	11	Pass	41.26	65.0	63.48				
	MCP WSE-SAP-3	480	480	6	Pass	41.26	65.0	63.48				
	PD WBB-H2	480	480	30	Pass	41.26	65.0	63.48				
MCC-WBB-B	FB ATS-WBB-NORM	480	480	400	Pass	37.51	65.0	57.72				
	FB ATS-WBB-NORM GF	480	480	400	Unknown	0.00	0.0	0.00				
	MCP WBB-P-2	480	480	11	Pass	37.51	65.0	57.72				
	PD PAB-W2	480	480	800	Pass	37.51	65.0	57.72				
	PD RASP-W2	480	480	40	Pass	37.51	65.0	57.72				

Connected Bus	DevName	Bus Voltage	Frame Voltage	Frame Trip	Status	Calc Int kA	Dev Int kA	Int Rating %	Series Rating	Calc Mom kA	Dev Mom kA	Mom Rating %
MCC-WBB-B	PD RASP-W4	480	480	40	Pass	37.51	65.0	57.72				
	PD WASP-W2	480	480	30	Pass	37.51	65.0	57.72				
MCC-WBB-B.	MCP SCDR-W2	480	480	2	Pass	37.51	65.0	57.71				
	MCP SSCP-W2	480	480	6	Pass	37.51	65.0	57.71				
	MCP WBB-EF-2	480	480	2	Pass	37.51	65.0	57.71				
	MCP WBB-EF-4	480	480	3	Pass	37.51	65.0	57.71				
	MCP WBB-EF-5	480	480	3	Pass	37.51	65.0	57.71				
	MCP WBB-EF-6	480	480	8	Pass	37.51	65.0	57.71				
	PD PP-WBB-B	480	480	90	Pass	37.51	65.0	57.71				
	PD WBB-H1	480	480	30	Pass	37.51	65.0	57.71				
	PD WBB-HV-2	480	480	45	Pass	37.51	65.0	57.71				
	FB ATS-WPB-EMG	480	480	60	Pass	13.17	65.0	20.26				
MCC-WPB-A	MB MCC-WPB-A	480	480	400	Pass	13.17	65.0	20.26				
	MB MCC-WPB-A GFP	480	480	400	Unknown	0.00	0.0	0.00				
	MCP PCDR-W1	480	480	2	Pass	13.17	65.0	20.26				
	MCP PDP-W1	480	480	17	Pass	13.17	65.0	20.26				
	MCP PSCP-W1	480	480	2	Pass	13.17	65.0	20.26				
	MCP RS-SAP-1	480	480	6	Pass	13.17	65.0	20.26				
	MCP WPB-EF-1	480	480	3	Pass	13.17	65.0	20.26				
	PD F-54-4	480	480	20	Pass	13.17	65.0	20.26				
	PD PSLPG-W1	480	480	20	Pass	13.17	65.0	20.26				
	PD PSLP-W1	480	480	45	Pass	13.17	65.0	20.26				
	TB MCC-WPB-A/B	480	480	400	Unknown	0.00	0.0	0.00				

Connected Bus	DevName	Bus Voltage	Frame Voltage	Frame Trip	Status	Calc Int kA	Dev Int kA	Int Rating %	Series Rating	Calc Mom kA	Dev Mom kA	Mom Rating %
MCC-WPB-A	TB MCC-WPB-A/B GFP	480	480	400	Unknown	0.00	0.0	0.00				
MCC-WPB-A.	MCP ANMX-W1A	480	480	2	Pass	13.17	65.0	20.26				
	MCP ANMX-W1B	480	480	2	Pass	13.17	65.0	20.26				
	MCP ANMX-W1C	480	480	2	Pass	13.17	65.0	20.26				
	MCP ANMX-W1D	480	480	2	Pass	13.17	65.0	20.26				
	MCP AXMX-W1A	480	480	2	Pass	13.17	65.0	20.26				
	MCP AXMX-W1B	480	480	2	Pass	13.17	65.0	20.26				
	MCP AXMX-W1C	480	480	2	Pass	13.17	65.0	20.26				
	MCP SWMX-W1	480	480	2	Pass	13.17	65.0	20.26				
	MCP WPB-P-1	480	480	2	Pass	13.17	65.0	20.26				
	PD IFSAB-1	480	480	35	Pass	13.17	65.0	20.26				
	PD P-53-07	480	480	20	Pass	13.17	65.0	20.26				
MCC-WPB-B	FB ATS-WPB-NORM	480	480	60	Pass	12.87	65.0	19.80				
	MB MCC-WPB-B	480	480	400	Pass	12.87	65.0	19.80				
	MB MCC-WPB-B GFP	480	480	400	Unknown	0.00	0.0	0.00				
	MCP PCDR-W2	480	480	2	Pass	12.87	65.0	19.80				
	MCP PSCP-W2	480	480	6	Pass	12.87	65.0	19.80				
	MCP WPB-EF-2	480	480	6	Pass	12.87	65.0	19.80				
	MCP WPE-SAP-2	480	480	6	Pass	12.87	65.0	19.80				
	PD F-54-5	480	480	20	Pass	12.87	65.0	19.80				
	PD PSLPG-W2	480	480	20	Pass	12.87	65.0	19.80				
	PD PSLP-W2	480	480	45	Pass	12.87	65.0	19.80				
	PD WPB-HV-1	480	480	30	Pass	12.87	65.0	19.80				

Connected Bus	DevName	Bus Voltage	Frame Voltage	Frame Trip	Status	Calc Int kA	Dev Int kA	Int Rating %	Series Rating	Calc Mom kA	Dev Mom kA	Mom Rating %
MCC-WPB-B.	MCP ANMX-W2A	480	480	2	Pass	12.87	65.0	19.80				
	MCP ANMX-W2B	480	480	2	Pass	12.87	65.0	19.80				
	MCP ANMX-W2C	480	480	2	Pass	12.87	65.0	19.80				
	MCP ANMX-W2D	480	480	2	Pass	12.87	65.0	19.80				
	MCP AXMX-W2A	480	480	2	Pass	12.87	65.0	19.80				
	MCP AXMX-W2B	480	480	2	Pass	12.87	65.0	19.80				
	MCP AXMX-W2C	480	480	2	Pass	12.87	65.0	19.80				
	MCP SWMX-W2	480	480	2	Pass	12.87	65.0	19.80				
	MCP WPB-P-2	480	480	2	Pass	12.87	65.0	19.80				
	PD P-53-06	480	480	20	Pass	12.87	65.0	19.80				
	PD WPB-H1	480	480	30	Pass	12.87	65.0	19.80				
PAB-E1 STR IN	FU PAB-E1	4,160	7200	200	Pass	2.80	50.0	5.61		3.69	80.0	4.61
PAB-E2 STR IN	FU PAB-E2	4,160	7200	200	Pass	2.29	50.0	4.57		2.97	80.0	3.71
PAB-E3 STR IN	FU PAB-E3	4,160	7200	200	Pass	2.80	50.0	5.61		3.69	80.0	4.61
PP-ADM-1	FB PP-ADM-2	480	480	125	Pass	2.86	65.0	4.40				
	MB PP-ADM-1	480	480	250 / 225	Pass	2.86	65.0	4.40				
PP-EBB-A	FB AT-E1 FCV	480	480	20	Pass	9.88	35.0	28.22				
	FB AT-E2 FCV	480	480	20	Pass	9.88	35.0	28.22				
	FB EWH-2	480	480	250 / 200	Pass	9.88	35.0	28.22				
	FB IPC LP-EFB	480	480	60	Pass	9.88	35.0	28.22				
	FB PAB-E1 LCP	480	480	30	Pass	9.88	35.0	28.22				
	FB PAB-E2 LCP	480	480	30	Pass	9.88	35.0	28.22				
	FB PAB-E3 DV & BOV	480	480	20	Pass	9.88	35.0	28.22				

Connected Bus	DevName	Bus Voltage	Frame Voltage	Frame Trip	Status	Calc Int kA	Dev Int kA	Int Rating %	Series Rating	Calc Mom kA	Dev Mom kA	Mom Rating %
PP-EBB-A	FB PAB-E3 LCP	480	480	30	Pass	9.88	35.0	28.22				
	FB WASV E1 P-65-1	480	480	20	Pass	9.88	35.0	28.22				
	FB WASV E2 P-65-2	480	480	20	Pass	9.88	35.0	28.22				
	FB XFMR LP-EBB-A	480	480	90	Pass	9.88	35.0	28.22				
PP-EBB-B	FB AT-E3 Z2 FCV	480	480	20	Pass	7.78	35.0	22.24				
	FB AT-E4 Z2 FCV	480	480	20	Pass	7.78	35.0	22.24				
	FB EBB-EDH-1	480	480	30	Pass	7.78	35.0	22.24				
	FB PAB-E1 DV & BOV	480	480	20	Pass	7.78	35.0	22.24				
	FB PAB-E2 DV & BOV1	480	480	20	Pass	7.78	35.0	22.24				
	FB RECIRCV PAB-E1	480	480	20	Pass	7.78	35.0	22.24				
	FB RECIRCV PAB-E2	480	480	20	Pass	7.78	35.0	22.24				
	FB RECIRCV PAB-E3	480	480	20	Pass	7.78	35.0	22.24				
	FB WASV E3	480	480	20	Pass	7.78	35.0	22.24				
	FB WASV E4	480	480	20	Pass	7.78	35.0	22.24				
PP-LSE	FB CN-50-3 FCV	480	480	20	Pass	12.49	35.0	35.68				
	FB EAST JC GATES	480	480	20	Pass	12.49	35.0	35.68				
	FB LSE-ACCU-1	480	480	20	Pass	12.49	35.0	35.68				
	FB LSE-ACU-1	480	480	70	Pass	12.49	35.0	35.68				
	FB LSE-PPU-1	480	480	20	Pass	12.49	35.0	35.68				
	FB SLDG'S F-50-3,4	480	480	20	Pass	12.49	35.0	35.68				
	FB SLDG'S F-60-1,2,3	480	480	20	Pass	12.49	35.0	35.68				
	FB SLDG'S S-50-1,2,3,4,5	480	480	20	Pass	12.49	35.0	35.68				
	FB SLDG's S-60-1,2	480	480	20	Pass	12.49	35.0	35.68				

Connected Bus	DevName	Bus Voltage	Frame Voltage	Frame Trip	Status	Calc Int kA	Dev Int kA	Int Rating %	Series Rating	Calc Mom kA	Dev Mom kA	Mom Rating %
PP-LSE	MB PP-LSE	480	480	150	Pass	12.49	35.0	35.68				
	PD-LP-LSE XFMR	480	480	60	Pass	12.49	35.0	35.68				
PP-MTB	FB DRILL PRESS	480	480	20	Pass	5.41	35.0	15.45				
	FB HORZ BAND SAW	480	480	20	Pass	5.41	35.0	15.45				
	FB IRON WORK	480	480	20	Pass	5.41	35.0	15.45				
	FB LP-MTB	480	480	90	Pass	5.41	35.0	15.45				
	FB MB-EF-1	480	480	30	Pass	5.41	35.0	15.45				
	FB METAL LATHE	480	480	30	Pass	5.41	35.0	15.45				
	FB MILL MACH	480	480	30	Pass	5.41	35.0	15.45				
	FB PP-Z	480	480	100	Pass	5.41	35.0	15.45				
PP-MTB DISC SW	FU PP-MTB	480	600	200	Pass	5.65	200.0	2.83				
PP-WBB-A	PD EWH-2	480	480	250 / 200	Pass	31.71	65.0	48.79				
	PD IPC LP-WFB	480	480	60	Pass	31.71	100.0	31.71				
	PD LP-WBB XFMR	480	480	90	Pass	31.71	65.0	48.79				
	PD PAB-W1 VALVES	480	480	20	Pass	31.71	65.0	48.79				
	PD PAB-W3 VALVES	480	480	20	Pass	31.71	65.0	48.79				
	PD W1 FLOW VALVES	480	480	20	Pass	31.71	65.0	48.79				
	PD WAS VALVE W1	480	480	20	Pass	31.71	65.0	48.79				
	PD WEST AESG W1	480	480	20	Pass	31.71	65.0	48.79				
PP-WBB-B	PD AT-W2 FCV	480	480	20	Pass	30.58	65.0	47.04				
	PD PAB-W2 VALVES	480	480	20	Pass	30.58	65.0	47.04				
	PD WA MAIN BOV	480	480	20	Pass	30.58	65.0	47.04				
	PD WAS VALVE W2	480	480	20	Pass	30.58	65.0	47.04				

Connected Bus	DevName	Bus Voltage	Frame Voltage	Frame Trip	Status	Calc Int kA	Dev Int kA	Int Rating %	Series Rating	Calc Mom kA	Dev Mom kA	Mom Rating %
PP-WBB-B	PD WEST AESG W2	480	480	20	Pass	30.58	65.0	47.04				
PP-Z	MB-PP-Z	480	480	100	Pass	4.82	18.0	26.77				
SUB 1 BUS A	800/200 MCC-C	480	635	800 / 250	Pass	17.11	85.0	20.13			113.1	
	800/200 MCC-C GFP	480	635	800 / 250	Unknown	0.00	0.0	0.00			113.1	
	800/600 MCC-RLS-A	480	635	800 / 600	Pass	17.11	85.0	20.13			113.1	
	800/600 MCC-RLS-A GFP	480	635	800 / 600	Unknown	0.00	0.0	0.00			113.1	
	SUB 1 MAIN A	480	635	1,600 / 1,200	Pass	17.11	85.0	20.13			113.1	
	SUB 1 MAIN A GFP	480	635	1,600 / 1,200	Unknown	0.00	0.0	0.00			113.1	
	SUB 1 TIE	480	635	1,600 / 1,200	Unknown	0.00	0.0	0.00			113.1	
	SUB 1 TIE GFP	480	635	1,600 / 1,200	Unknown	0.00	0.0	0.00			113.1	
SUB 1 BUS B	800/200 MCC-D	480	635	800 / 250	Pass	16.99	85.0	19.99			113.1	
	800/200 MCC-D GFP	480	635	800 / 250	Unknown	0.00	0.0	0.00			113.1	
	800/400 MCC-RLS-B	480	635	800 / 400	Pass	16.99	85.0	19.99			113.1	
	800/400 MCC-RLS-B GFP	480	635	800 / 400	Unknown	0.00	0.0	0.00			113.1	
	SUB 1 MAIN B	480	635	1,600 / 1,200	Pass	16.99	85.0	19.99			113.1	
	SUB 1 MAIN B GFP	480	635	1,600 / 1,200	Unknown	0.00	0.0	0.00			113.1	
SUB 2 BUS A	800/400 MCC-E	480	635	800 / 400	Pass	13.98	85.0	16.45			113.1	
	800/400 MCC-E GFP	480	635	800 / 400	Unknown	0.00	0.0	0.00			113.1	
	SUB 2 MAIN A	480	635	800	Pass	13.98	85.0	16.45			113.1	
	SUB 2 MAIN A GFP	480	635	800	Unknown	0.00	0.0	0.00			113.1	
	SUB 2 TIE	480	635	800	Unknown	0.00	0.0	0.00			113.1	
	SUB 2 TIE GFP	480	635	800	Unknown	0.00	0.0	0.00			113.1	
SUB 2 BUS B	800/400 MCC-F	480	635	800 / 400	Pass	13.42	85.0	15.79			113.1	

Connected Bus	DevName	Bus Voltage	Frame Voltage	Frame Trip	Status	Calc Int kA	Dev Int kA	Int Rating %	Series Rating	Calc Mom kA	Dev Mom kA	Mom Rating %
SUB 2 BUS B	800/400 MCC-F GFP	480	635	800 / 400	Unknown	0.00	0.0	0.00			113.1	
	SUB 2 MAIN B	480	635	800	Pass	13.42	85.0	15.79			113.1	
	SUB 2 MAIN B GFP	480	635	800	Unknown	0.00	0.0	0.00			113.1	
SUB 3 BUS A	1600/1440 MCC-WBB-A	480	635	1,600	Pass	43.33	85.0	50.98			113.1	
	1600/1440 MCC-WBB-A G	480	635	1,600	Unknown	0.00	0.0	0.00			113.1	
	800/400 MCC-WPB-A	480	635	800 / 400	Pass	43.33	85.0	50.98			113.1	
	800/400 MCC-WPB-A GF	480	635	800 / 400	Unknown	0.00	0.0	0.00			113.1	
	SUB 3 MAIN A	480	635	3,200 / 3,000	Pass (*N3)	43.33	85.0	50.98			113.1	
	SUB 3 MAIN A GFP	480	635	3,200 / 3,000	Unknown	0.00	0.0	0.00			113.1	
	SUB 3 TIE	480	635	3,200 / 3,000	Unknown	0.00	0.0	0.00			113.1	
	SUB 3 TIE GFP	480	635	3,200 / 3,000	Unknown	0.00	0.0	0.00			113.1	
	1600/1440 MCC-WBB-B	480	635	1,600	Pass	40.88	85.0	48.09			113.1	
	1600/1440 MCC-WBB-B G	480	635	1,600	Unknown	0.00	0.0	0.00			113.1	
SUB 3 BUS B	800/400 MCC-WPB-B	480	635	800 / 400	Pass	40.88	85.0	48.09			113.1	
	800/400 MCC-WPB-B GF	480	635	800 / 400	Unknown	0.00	0.0	0.00			113.1	
	SUB 3 ISOLATION	480	635	3,200 / 3,000	Unknown	0.00	0.0	0.00			113.1	
	SUB 3 ISOLATION GFP	480	635	3,200 / 3,000	Unknown	0.00	0.0	0.00			113.1	
	SUB 3 MAIN B	480	635	3,200 / 3,000	Pass (*N3)	40.88	85.0	48.09			113.1	
	SUB 3 MAIN B GFP	480	635	3,200 / 3,000	Unknown	0.00	0.0	0.00			113.1	
	FB-MCC-M	480	480	800	Pass	22.23	30.0	74.11				
	FB-MCC-Q	480	480	600	Pass	22.23	30.0	74.11				
SUB 4 BUS A	SUB 4 MAIN A	480	480	1,600 / 1,000	Pass	22.23	50.0	44.46				
	SUB 4 TIE	480	480	1,600	Unknown	0.00	0.0	0.00				

Connected Bus	DevName	Bus Voltage	Frame Voltage	Frame Trip	Status	Calc Int kA	Dev Int kA	Int Rating %	Series Rating	Calc Mom kA	Dev Mom kA	Mom Rating %
SUB 4 BUS A	TB-US-46	480	480	800	Unknown	0.00	0.0	0.00				
SUB 4 BUS B	FB-MCC-N	480	480	800	Pass	23.32	30.0	77.74				
	FB-MCC-P	480	480	600 / 400	Pass	23.32	30.0	77.74				
	FB-PDP-UV-2A	480	480	250 / 200	Pass	23.32	100.0	23.32				
	FB-PDP-UV-2B	480	480	250 / 200	Pass	23.32	100.0	23.32				
	SUB 4 MAIN B	480	480	1,600 / 1,000	Pass	23.32	50.0	46.64				
SUB 5 BUS A	800/600 MCC-53A	480	480	800 / 600	Marginal	90.44	100.0	90.44				
	800/600 MCC-53A GFP	480	480	800 / 600	Unknown	0.00	0.0	0.00				
	800/600 MCC-55A	480	480	800 / 600	Marginal	90.44	100.0	90.44				
	800/600 MCC-55A GFP	480	480	800 / 600	Unknown	0.00	0.0	0.00				
	800/600 MCC-56A	480	480	800 / 600	Marginal	90.44	100.0	90.44				
	800/600 MCC-56A GFP	480	480	800 / 600	Unknown	0.00	0.0	0.00				
	800/600 VFD CFG-1	480	480	800 / 600	Marginal	90.44	100.0	90.44				
	800/600 VFD CFG-1 GFP	480	480	800 / 600	Unknown	0.00	0.0	0.00				
	800/800 MCC-51A	480	480	800	Marginal	90.44	100.0	90.44				
	800/800 MCC-51A GFP	480	480	800	Unknown	0.00	0.0	0.00				
	800/800 MCC-52A	480	480	800	Marginal	90.44	100.0	90.44				
	800/800 MCC-52A GFP	480	480	800	Unknown	0.00	0.0	0.00				
	800/800 MCC-54A	480	480	800	Marginal	90.44	100.0	90.44				
	800/800 MCC-54A GFP	480	480	800	Unknown	0.00	0.0	0.00				
	800/800 MCC-R	480	480	800	Fail	90.44	65.0	139.14				
	800/800 MCC-R GFP	480	480	800	Unknown	0.00	0.0	0.00				
	800/800 MCC-XA	480	480	800	Fail	90.44	65.0	139.14				

Connected Bus	DevName	Bus Voltage	Frame Voltage	Frame Trip	Status	Calc Int kA	Dev Int kA	Int Rating %	Series Rating	Calc Mom kA	Dev Mom kA	Mom Rating %
SUB 5 BUS A	800/800 MCC-XA GFP	480	480	800	Unknown	0.00	0.0	0.00				
	SUB 5 MAIN A	480	480	4,000	Marginal (*N	90.44	100.0	90.44				
	SUB 5 MAIN A GFP	480	480	4,000	Unknown	0.00	0.0	0.00				
	SUB 5 TIE	480	480	4,000 / 3,200	Marginal	90.44	100.0	90.44				
	SUB 5 TIE GFP	480	480	4,000 / 3,200	Unknown	0.00	0.0	0.00				
SUB 5 BUS B	800/600 MCC-53B	480	480	800 / 600	Fail	90.44	65.0	139.14				
	800/600 MCC-53B GFP	480	480	800	Unknown	0.00	0.0	0.00				
	800/600 MCC-55B	480	480	800 / 600	Marginal	90.44	100.0	90.44				
	800/600 MCC-55B GFP	480	480	800 / 600	Unknown	0.00	0.0	0.00				
	800/600 MCC-56B	480	480	800 / 600	Marginal	90.44	100.0	90.44				
	800/600 MCC-56B GFP	480	480	800	Unknown	0.00	0.0	0.00				
	800/600 VFD CFG-2	480	480	800 / 600	Marginal	90.44	100.0	90.44				
	800/600 VFD CFG-2 GFP	480	480	800 / 600	Unknown	0.00	0.0	0.00				
	800/600 VFD CFG-3	480	480	800 / 600	Marginal	90.44	100.0	90.44				
	800/600 VFD CFG-3 GFP	480	480	800 / 600	Unknown	0.00	0.0	0.00				
	800/800 MCC-51B	480	480	800	Marginal	90.44	100.0	90.44				
	800/800 MCC-51B GFP	480	480	800	Unknown	0.00	0.0	0.00				
	800/800 MCC-52B	480	480	800	Marginal	90.44	100.0	90.44				
	800/800 MCC-52B GFP	480	480	800	Unknown	0.00	0.0	0.00				
	800/800 MCC-54B	480	480	800	Marginal	90.44	100.0	90.44				
	800/800 MCC-54B GFP	480	480	800	Unknown	0.00	0.0	0.00				
	800/800 MCC-S	480	480	800	Marginal	90.44	100.0	90.44				
	800/800 MCC-S GFP	480	480	800	Unknown	0.00	0.0	0.00				

Connected Bus	DevName	Bus Voltage	Frame Voltage	Frame Trip	Status	Calc Int kA	Dev Int kA	Int Rating %	Series Rating	Calc Mom kA	Dev Mom kA	Mom Rating %
SUB 5 BUS B	800/800 MCC-XB	480	480	800	Marginal	90.44	100.0	90.44				
	800/800 MCC-XB GFP	480	480	800	Unknown	0.00	0.0	0.00				
	SUB 5 MAIN B	480	480	4,000	Marginal (*N 90.44		100.0	90.44				
	SUB 5 MAIN B GFP	480	480	4,000	Unknown	0.00	0.0	0.00				
SUB 5 PRIMARY SWITC	SUB 5 XFMR A PRI FUSE	13,200	13800	400	Fail	14.84	12.5	118.74		18.03	20.0	90.13
SUB 5 PRIMARY SWITC	SUB 5 XFMR B PRI FUSE	13,200	13800	400	Fail	14.84	12.5	118.74		18.03	20.0	90.13
SUB 6 BUS A	800/200 MCC-EPB-A	480	635	800 / 250	Pass	12.58	85.0	14.80			113.1	
	800/200 MCC-EPB-A GFP	480	635	800 / 250	Unknown	0.00	0.0	0.00			113.1	
	800/600 MCC-EBB-A	480	635	800 / 600	Pass	12.58	85.0	14.80			113.1	
	800/600 MCC-EBB-A GFP	480	635	800 / 600	Unknown	0.00	0.0	0.00			113.1	
	SUB 6 MAIN A	480	635	1,600	Pass	12.58	85.0	14.80			113.1	
	SUB 6 MAIN A GFP	480	635	1,600	Unknown	0.00	0.0	0.00			113.1	
	SUB 6 TIE	480	635	1,600	Unknown	0.00	0.0	0.00			113.1	
	SUB 6 TIE GFP	480	635	1,600	Unknown	0.00	0.0	0.00			113.1	
SUB 6 BUS B	800/200 MCC-EPB-B	480	635	800 / 250	Pass	11.82	85.0	13.91			113.1	
	800/200 MCC-EPB-B GFP	480	635	800 / 250	Unknown	0.00	0.0	0.00			113.1	
	800/600 MCC-EBB-B	480	635	800 / 600	Pass	11.82	85.0	13.91			113.1	
	800/600 MCC-EBB-B GFP	480	635	800 / 600	Unknown	0.00	0.0	0.00			113.1	
	SUB 6 MAIN B	480	635	1,600	Pass	11.82	85.0	13.91			113.1	
	SUB 6 MAIN B GFP	480	635	1,600	Unknown	0.00	0.0	0.00			113.1	
SUB 7 BUS A	800/200 UV-1A	480	635	800 / 250	Pass	30.76	85.0	36.19			113.1	
	800/200 UV-1A GFP	480	635	800 / 250	Unknown	0.00	0.0	0.00			113.1	
	800/600 MCC-CEB-A	480	635	800 / 600	Pass	30.76	85.0	36.19			113.1	

Connected Bus	DevName	Bus Voltage	Frame Voltage	Frame Trip	Status	Calc Int kA	Dev Int kA	Int Rating %	Series Rating	Calc Mom kA	Dev Mom kA	Mom Rating %
SUB 7 BUS A	800/600 MCC-CEB-A GFP	480	635	800 / 600	Unknown	0.00	0.0	0.00			113.1	
	800/800 ATS-ADM-EMG	480	635	800	Pass	30.76	85.0	36.19			113.1	
	800/800 ATS-EMG GFP	480	635	800	Unknown	0.00	0.0	0.00			113.1	
	SUB 7 MAIN A	480	635	3,200	Pass (*N3)	30.76	85.0	36.19			113.1	
	SUB 7 MAIN A GFP	480	635	3,200	Unknown	0.00	0.0	0.00			113.1	
	SUB 7 TIE	480	635	3,200	Unknown	0.00	0.0	0.00			113.1	
	SUB 7 TIE GFP	480	635	3,200	Unknown	0.00	0.0	0.00			113.1	
SUB 7 BUS B	800/200 UV-1B	480	635	800 / 250	Pass	29.86	85.0	35.13			113.1	
	800/200 UV-1B GFP	480	635	800 / 250	Unknown	0.00	0.0	0.00			113.1	
	800/250 PP-MTB	480	635	800 / 250	Pass	29.86	85.0	35.13			113.1	
	800/250 PP-MTB GFP	480	635	800 / 250	Unknown	0.00	0.0	0.00			113.1	
	800/600 MCC-CEB-B	480	635	800 / 600	Pass	29.86	85.0	35.13			113.1	
	800/600 MCC-CEB-B GFP	480	635	800 / 600	Unknown	0.00	0.0	0.00			113.1	
	800/800 ATS-ADM-NRM	480	635	800	Pass	29.86	85.0	35.13			113.1	
	800/800 ATS-NRM GFP	480	635	800	Unknown	0.00	0.0	0.00			113.1	
	SUB 7 ISO	480	635	3,200	Unknown	0.00	0.0	0.00			113.1	
	SUB 7 ISO GFP	480	635	3,200	Unknown	0.00	0.0	0.00			113.1	
	SUB 7 MAIN B	480	635	3,200	Pass (*N3)	29.86	85.0	35.13			113.1	
	SUB 7 MAIN B GFP	480	635	3,200	Unknown	0.00	0.0	0.00			113.1	
SUB 8 BUS A	PD PAB-E1	4,160	4760	1,200	Pass	2.45	33.2	7.38		3.75	58.0	6.47
	PD PAB-E3	4,160	4760	1,200	Pass	2.45	33.2	7.38		3.75	58.0	6.47
	PD SUB 6 XFMR A	4,160	4760	1,200	Pass	2.45	33.2	7.38		3.75	58.0	6.47
	SUB 8 MAIN A	4,160	4760	1,200	Pass	2.45	33.2	7.38		3.75	58.0	6.47

Connected Bus	DevName	Bus Voltage	Frame Voltage	Frame Trip	Status	Calc Int kA	Dev Int kA	Int Rating %	Series Rating	Calc Mom kA	Dev Mom kA	Mom Rating %
SUB 8 BUS A	SUB 8 TIE	4,160	4760	1,200	Unknown	0.00	0.0	0.00			58.0	
SUB 8 BUS B	PD PAB-E2	4,160	4760	1,200	Pass	2.10	33.2	6.33		3.00	58.0	5.16
	PD SUB 6 XFMR B	4,160	4760	1,200	Pass	2.10	33.2	6.33		3.00	58.0	5.16
	SUB 8 ISOLATION	4,160	4760	1,200	Unknown	0.00	0.0	0.00			58.0	
	SUB 8 MAIN B	4,160	4760	1,200	Pass	2.10	33.2	6.33		3.00	58.0	5.16
SUB 8 PRIMARY SWITC	SUB 8 XFMR A PRI FUSE	13,200	17500	150	Pass	14.62	65.0	22.49		17.54	98.9	17.74
SUB 8 PRIMARY SWITC	SUB 8 XFMR B PRI FUSE	13,200	17500	150	Pass	14.61	65.0	22.48		17.53	98.9	17.72
TFB-MPC	MB TFB-MPC	208	240	50	Pass	1.47	10.0	14.71				
UV-1A PD LINE SIDE	PD UV-1A	480	600	200	Pass	2.98	18.0	16.56				
UV-1B PD LINE SIDE	PD-UV-1B	480	600	200	Pass	3.56	18.0	19.77				
VFD CFG-1 INPUT	FU CFG-1	480	600	400	Pass	42.48	200.0	21.24				
	MB CFG-1	480	480	400	Pass	42.48	65.0	65.36				
VFD CFG-2 INPUT	FU CFG-2	480	600	500	Pass	42.48	200.0	21.24				
	MB CFG-2	480	480	400	Pass	42.48	65.0	65.36				
VFD CFG-3 INPUT	FU CFG-3	480	600	400	Pass	50.00	200.0	25.00				
	MB CFG-3	480	480	400	Pass	50.00	65.0	76.92				

CHAPTER 3

PROTECTIVE DEVICE COORDINATION

3.0 Coordination Study

3.1 Objective

The Coordination Study was performed to determine protective relay settings that optimize protection and selectivity. Results are shown graphically as time current curves, or TCC's. The primary objective of the final study was to integrate the new 13.2kV switchgear into the plant electrical distribution, and includes new and existing equipment. In cases where a range of protective relay settings is available that provide satisfactory coordination, choice of settings is weighted in favor of those that result in reduced arc flash energy exposure. See Section 6.0 "Arc Flash Study".

3.2 Results

Coordination efforts began with the DTE type SM-5 300E pole mounted fuses that connect the DTE #DC-8266 'North' and #DC-9798 'South' utility lines to the main breakers 52 M1 and 52 M2, and Tie and Isolation Breakers 52 T and 52 IB in the new 13.2kV Square D switchgear. Coordination progressed downstream through the substation feeder breakers and protection devices serving the largest loads on the Motor Control Centers, Automatic Transfer Switches, and Power Panels.

There is unavoidable overlap in some of the time coordination curves for low voltage protective devices in the system. This is kept to a minimum by utilizing the optimum settings available in each protective device. Progressively higher priority was given to full coordination of protective devices located furthest upstream in the distribution system.

3.3 Comments

A review of the physical plant treatment process could, in some cases, facilitate optimization of TCC settings that would minimize the impact of unintended equipment outages. In cases where compromises in coordination are unavoidable, effects of unintended outages might be mitigated to some extent by "assigning" coordination tradeoffs based on process downtime priorities.

For new 480V substation feeder breakers that are equipped with an Arc Reduction Maintenance Switch (ARMS), a second TCC is provided which shows the curve modification effected by activating the ARMS switch. See Section 6.0 "ARC FLASH STUDY" for results and comments.

See Section 3.4 "Time-Current-Curves (TCC's) and One-Line Diagrams" of this report for documents referenced in the comments.

DTE Main North and South

DTE NORTH_52M1 and DTE SOUTH_52M2:

Full coordination is achieved between the DTE SM-5 300E pole mounted fuses and 15kV Bus 1, Bus 2 main breakers 52M1, 52M2. Bus 1-2 tie breaker 52T and isolation breaker 52IB are coordinated with both 52M1 and 52M2.

Generators

GEN 1 and GEN 2:

Generator tie breakers 52GT1 and 52GT2 coordinate with Bus 1-2 tie breaker 52TP and isolation breaker 52IB.

Substation 1

52F11_S1A and 52F21_S1B:

Full coordination is achieved between 13.2 kV feeder breakers 52F11, 52F21, tie breaker 52T, isolation breaker 52IB, and Substation 1 secondary main breakers SUB 1 MAIN A and Sub 1 MAIN B.

S1A_MCC-C and S1B_MCC-D:

Full coordination is achieved between main breakers SUB 1 MAIN A, SUB 1 MAIN B, tie breaker SUB 1 TIE, and feeder breakers 800/200

MCC-C, 800/200 MCC-D. Motor control center feeder breakers FB ATS-LSE-NORM and FB ATS-LSE-EMG will not coordinate with upstream breakers in the instantaneous region. Main breaker MB PP-LSE will not coordinate with upstream breakers. Short time pickup for 800/200 MCC-C, 800/200 MCC-D, FB ATS-LSE-EMG, and FB ATS-LSE-NRM are at maximum available setting.

S1A_MCC-C and S1B_MCC-D (ARMS Engaged):

See Section 6.0 ARC FLASH STUDY for comments.

S1A_MCC-RLS-A and S1B_MCC-RLS-B:

Full coordination is achieved between main breakers SUB 1 MAIN A, SUB 1 MAIN B, tie breaker SUB 1 TIE, and substation feeder breakers 800/600 MCC-RLS-A, 800/400 MCC-RLS-B. MCC tie breaker TB MCC-RLS-A/B has fixed long time pickup and delay, and miscoordination with MCC main breakers MB MCC-RLS-A and MB MCC-RLS-B. 800/600 MCC-RLS-A and MB MCC-RLS-A are in series. Miscoordination of these is not a serious problem as operation of either breaker results in the same service interruption. 800/400 MCC-RLS-B and MB MCC-RLS-B are in series. Miscoordination of these is not a serious problem as operation of either breaker results in the same service interruption.

S1A_MCC-RLS-A and S1B_MCC-RLS-B (ARMS Engaged):

See Section 6.0 ARC FLASH STUDY for comments.

MCC-RLS-A_ATS-RLS-EMG and MCC-RLS-B_ATS-RLS-NRM:

Feeder breakers FB ATS-RLS EMG and FB ATS-RLS NRM coordinate well with upstream devices except in the higher instantaneous region.

Substation 2

52F12_S2A and 52F22_S2B:

Full coordination is achieved between 13.2 kV feeder breakers 52F12, 52F22, tie breaker 52T, isolation breaker 52IB, and Substation 2 secondary main breakers SUB 2 MAIN A and Sub 2 MAIN B.

S2A_MCC-E_ScrPmp7 and S2B_MCC-F_ScrPmp6:

The 250 ampere plugs on feeder breakers 800/400 MCC-E and 800/400 MCC-F were changed to 400 amperes per WCD #150. There is some miscoordination near the short time pickup setting.

S2A_MCC-E_ScrPmp7 and S2B_MCC-F_ScrPmp6 (ARMS Engaged):

See Section 6.0 ARC FLASH STUDY for comments.

Substation 3

52F13_S3A and 52F23_S3B:

Full coordination is achieved between 13.2 kV feeder breakers 52F13, 52F23, tie breaker 52T, isolation breaker 52IB, and Substation 3 secondary main breakers SUB 3 MAIN A and Sub 3 MAIN B.

S3A_WBB-A and S3B_WBB-B:

Full coordination is achieved between main breakers SUB 3 MAIN A, SUB 3 MAIN B, tie breaker SUB 3 TIE, and feeder breakers 1600/1440 MCC-WBB-A, 1600/1440 MCC-WBB-B.

S3A_WBB-A and S3B_WBB-B (ARMS Engaged):

See Section 6.0 ARC FLASH STUDY for comments.

MCC-WBB-A,B_PP-WBB-A GFP:

Larger downstream breakers will not coordinate with FB ATS-WBB-EMG GFP for ground fault currents exceeding the pickup setting.

MCC-WBB-A_ATS-WBB-EMG:

There is some miscoordination between PD-EHW-2 and FB ATS-WBB-EMG in the instantaneous region. There is some miscoordination between FB ATS-WBB-EMG and TB MCC-WBB-A/B.

MCC-WBB-A_ATS-WBB-NRM:

There is some miscoordination between PD-EHW-2 and FB ATS-WBB-NORM in the instantaneous region. There is some miscoordination between FB ATS-WBB-NORM and TB MCC-WBB-A/B.

MCC-WBB-A_PAB-W1 and MCC-WBB-A_PAB-W3:

There is some overlap in the curves for feeder breaker 1600/1440 MCC-WBB-A, tie breaker TB MCC-WBB-A/B, and protection devices PD PAB-W1 and PD PAB-W3. The 210 ms time delay in PD PAB-W1 and PD PAB-W3 is intentional, to allow breaker(s) upstream of the motor contactor to interrupt high magnitude fault currents.

MCC-WBB-B_PAB-W2:

There is some overlap in the curves for feeder breaker 1600/1440 MCC-WBB-B, tie breaker TB MCC-WBB-A/B, and protection device PD PAB-W2. The 210 ms time delay in PD PAB-W2 is intentional, to allow breaker(s) upstream of the motor contactor to interrupt high magnitude fault currents.

S3A_WPB-A and S3B_WPB-B:

There is full coordination between devices SUB 3 MAIN A, SUB 3 MAIN B, SUB 3 TIE, SUB 3 ISOLATION, 800/400 MCC-WPB-A, 800/400 MCC-WPB-B, MB MCC-WPB-A, and MB MCC-WPB-B.

S3A_WPB-A and S3B_WPB-B (ARMS Engaged):

See Section 6.0 ARC FLASH STUDY for comments.

MCC-WPB-A_ATS-WPB-EMG and MCC-WPB-B_ATS-WPB-NRM:

There is some miscoordination between main breaker MB LP-WPB-B and feeder breakers FB ATS-WPB-EMG, and FB ATS-WPB-NORM. These breakers are fixed, non-adjustable. There is miscoordination with TB MCC-WPB-A/B and MB MCC-WPB-A in the instantaneous region.

Substation 4

52F14_S4A and 52F24_S4B:

Full coordination is achieved between 13.2 kV feeder breakers 52F14, 52F24, tie breaker 52T, isolation breaker 52IB, and Substation 4 secondary main breakers SUB 4 MAIN A and Sub 4 MAIN B.

S4A_MCC-M:

There is miscoordination between SUB 4 MAIN A, SUB 4 TIE, and FB-MCC-M. See recommended settings changes for SUB 4 TIE and FB-MCC-M.

S4B_MCC-N:

There is miscoordination between SUB 4 MAIN B, SUB 4 TIE, and FB-MCC-N. See recommended settings changes for SUB 4 TIE and FB-MCC-N.

S4A_MCC-Q:

There is miscoordination between SUB 4 MAIN A, SUB 4 TIE, and FB-MCC-Q. See recommended settings changes for SUB 4 TIE and FB-MCC-Q.

S4B_MCC-P:

There is miscoordination between SUB 4 MAIN B, SUB 4 TIE, and FB-MCC-P. See recommended settings changes for SUB 4 TIE and FB-MCC-P.

S4B_UV-2A:

There is miscoordination between SUB 4 MAIN B, and SUB 4 TIE. See recommended settings changes for SUB 4 TIE.

S4B_UV-2B:

There is miscoordination between SUB 4 MAIN B, and SUB 4 TIE. See recommended settings changes for SUB 4 TIE.

Substation 5

52F15_S5A and 52F25_S5B:

Full coordination is achieved between 13.2 kV feeder breakers 52F15, 52F25, tie breaker 52T, isolation breaker 52IB, and Substation 5 secondary main breakers SUB 5 MAIN A and Sub 5 MAIN B.

S5A_MCC-51A:

No comments.

S5B_MCC-51B:

No comments.

MCC-51A

No comments.

MCC-51B

No comments.

S5A_MCC-52A:

No comments.

S5B_MCC-52B:

No comments.

MCC-52A:

No comments.

MCC-52B:

No comments.

S5A_MCC-53A:

No comments.

S5B_MCC-53B:

No comments.

MCC-53A

No comments.

MCC-53B

No comments.

S5A_MCC-54A:

No comments.

S5B_MCC-54B:

No comments.

MCC-54A

No comments.

MCC-54B

No comments.

S5A_MCC-55A:

No comments.

S5B_MCC-55B:

No comments.

MCC-55A

No comments.

MCC-55B

No comments.

S5A_MCC-56A:

No comments.

S5B_MCC-56B:

No comments.

MCC-56A

No comments.

MCC-56B

No comments.

S5A_VFD CFG-1:

No comments.

S5B_VFD CFG-2:

Miscoordination of feeder breaker 800/600 VFD CFG-2 with main breaker MB CFG-2 is not a serious problem as operation of either breaker results in the same service interruption.

S5B_VFD CFG-3:

Miscoordination of feeder breaker 800/600 VFD CFG-3 with main breaker MB CFG-3 is not a serious problem as operation of either breaker results in the same service interruption.

Substation 6

S6A_MCC-EBB-A:

FB EWH-2 is non-adjustable, and will not coordinate with FB ATS-EBB-EMG.

S6A_MCC-EBB-A (ARMS Engaged):

See Section 6.0 ARC FLASH STUDY for comments.

S6B_MCC-EBB-B:

FB EWH-2 is non-adjustable, and will not coordinate with FB ATS-EBB-NORM.

S6B_MCC-EBB-B (ARMS Engaged):

See Section 6.0 ARC FLASH STUDY for comments.

S6A_MCC-EPB-A:

Long time pickup for substation feeder breaker 800/200 MCC-EPB-A is set for 200A per contract drawing E05-02, and will not coordinate with MCC main breaker MB MCC-EPB-A. 800/200 MCC-EPB-A has a 250A plug and an available long time setting of 225A is recommended. There is some unavoidable miscoordination in the instantaneous region.

S6A_MCC-EPB-A (ARMS Engaged):

See Section 6.0 ARC FLASH STUDY for comments.

S6B_MCC-EPB-B:

Long time pickup for substation feeder breaker 800/200 MCC-EPB-B is set for 200A per contract drawing E05-02, and will not coordinate with MCC main breaker MB MCC-EPB-B. 800/200 MCC-EPB-B has a 250A plug and an available long time setting of 225A is recommended. There is some unavoidable miscoordination in the instantaneous region.

S6B_MCC-EPB-B (ARMS Engaged):

See Section 6.0 ARC FLASH STUDY for comments.

Substation 7

52F17_S7A and 52F27_S7B:

Full coordination is achieved between 13.2 kV feeder breakers 52F17, 52F27, tie breaker 52T, isolation breaker 52IB, and Substation 7 secondary main breakers SUB 7 MAIN A and Sub 7 MAIN B.

S7A_ATS-ADM-A-EMG and S7B_ATS-ADM-A-NRM:

Full coordination is achieved between SUB 7 MAIN A, SUB 7 TIE, and 800/800 ATS-ADM-EMG. MB MCC-ADM-A coordinates well with 800/800 ATS-ADM-EMG except in the high instantaneous region. Full coordination is achieved between SUB 7 MAIN B, SUB 7 TIE, and 800/800 ATS-ADM-NRM. MB MCC-ADM-A coordinates

well with 800/800 ATS-ADM-NRM except in the high instantaneous region.

S7A_ATS-ADM-A-EMG and S7B_ATS-ADM-A-NRM (ARMS Engaged):

See Section 6.0 ARC FLASH STUDY for comments.

MCC-ADM-A_ELEVATOR and MCC-ADM-A_ELEVATOR GFP:

Normally, phase current curves and ground fault current curves are coordinated separately. In this case there are breakers in MCC-ADM-A that do not have a ground fault trip sensor. A ground fault on one of these breakers is sensed as a phase current fault. If the phase trip curve exceeds the ground trip curve of the first upstream breaker having a ground fault trip element, the breakers will not be selectively coordinated and the upstream breaker will trip first. Review NEC 620.62.

MCC-ADM-A_LP-ADM-1:

There is some miscoordination between MB-LP-ADM-1 and PD XFMR-LP-ADM-1, which is of no consequence since the service interruption with either device opening is the same. MB LP-ADM-1 and PD-UPS-ADM-1 miscoordinate in the instantaneous region.

MCC-ADM-A_LP-ADM-2:

There is slight miscoordination between PD XFMR LP-ADM-2 and FU LP-ADM-2, which is of no consequence since the service interruption with either device opening is the same. PD XFMR LP-ADM-2 and PD-WASHER miscoordinate in the instantaneous region.

MCC-ADM-A_PP-ADM-1,2:

FB PP-ADM-2 and MB PP-ADM-1 have fixed thermal curves and will not coordinate with PD XFMR PP-ADM-1. The short time pickup of PD XFMR PP-ADM-1 could be increased to improve coordination with FB PP-ADM-2 and MB PP-ADM-1, but this raises the short time pickup above the bus arcing fault currents and results in arc flash

incident energy levels of 104 cal/cm² at PP-ADM-1 and 68 cal/cm² at PP-ADM-2. Intentionally mis-coordinating PD XFMR PP-ADM-1 by lowering the short time pickup below the bus arcing fault current levels in PP-ADM-1 and PP-ADM-2 reduces the arc flash incident energy levels to 3.7 and 4.4 cal/cm² respectively.

MCC-ADM-A_SWP1:

No comment.

S7A_ATS-CEB-EMG and S7B_ATS-CEB-NRM:

No comment.

S7A_ATS-CEB-EMG and S7B_ATS-CEB-NRM (ARMS Engaged):

See Section 6.0 ARC FLASH STUDY for comments.

MCC-CEB-A_LP-CEB-A and MCC-CEB-B_LP-CEB-A:

MB LP-CEB-A and FB ATS-CEB EMG,NRM have fixed thermal curves and will not coordinate.

S7A_UV-1A and S7B_UV-1B:

No comment.

S7A_UV-1A and S7B_UV-1B (ARMS Engaged):

See Section 6.0 ARC FLASH STUDY for comments.

S7B_PP-MTB:

There is some miscoordination between 800/250 PP-MTB and FU PP-MTB, which is of no consequence since the service interruption with either device opening is the same. FB PP-Z and FU PP-MTB have fixed thermal curves and will not coordinate.

S7B_PP-MTB:

See Section 6.0 ARC FLASH STUDY for comments.

Substation 8

52F18_S8A and 52F28_S8B:

Full coordination is achieved between 13.2 kV feeder breakers 52F18, 52F28, tie breaker 52T, isolation breaker 52IB, and Substation 7 secondary main breakers SUB 8 MAIN A Relay and Sub 8 MAIN B Relay. There is some miscoordination between 13.2 kV feeder breakers 52F18 and SUB 8 XFMR A PRI FUSE, and between 52F28 and SUB 8 XFMR B PRI FUSE, which is of no consequence since the service interruption with either device opening is the same.

S8A_PAB-E1, S8A_PAB-E3, and S8B_PAB-E2:

In each case, transformer primary fuse does not coordinate with upstream 13.2 kV feeder breaker protective relay or 4160 V secondary main bus breaker protective relay. This is of no consequence since the service interruption with either device opening is the same.

S8A_S6A and S8B_S6B:

No comment.

3.4 Time Current Curves (TCC's) and One-Line Diagrams

Time Current Curves (TCC's) are printed in 8-1/2 x 11 inch format. One-Line Diagrams associated with the TCC's are printed in 11 x 17 inch format. Two or more TCC's are associated with each One-Line Diagram and are grouped as follows:

3.4.1 DTE Main North & South

3.4.2 Generators

3.4.3 Substation 1

3.4.4 Substation 2

3.4.5 Substation 3

3.4.6 Substation 4

3.4.7 Substation 5

3.4.8 Substation 6

3.4.9 Substation 7

3.4.10 Substation 8

3.4.1 DTE Main North & South:

Online: TCC DTE-N,S_52M1,M2

TCC: DTE NORTH_52M1

TCC: DTE SOUTH_52M2

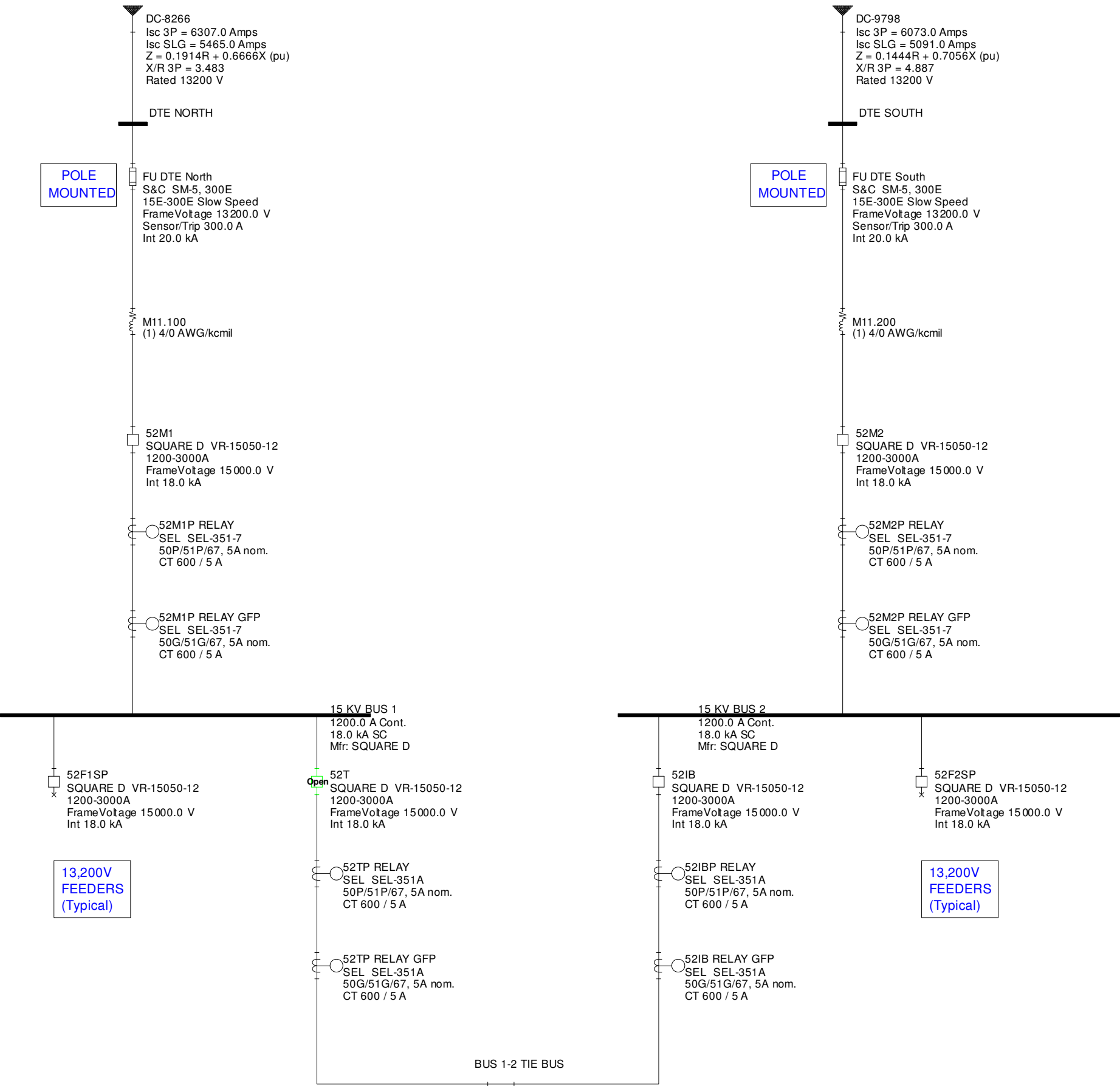
Online: TCC 52F1SP,F2SP_T-N,S

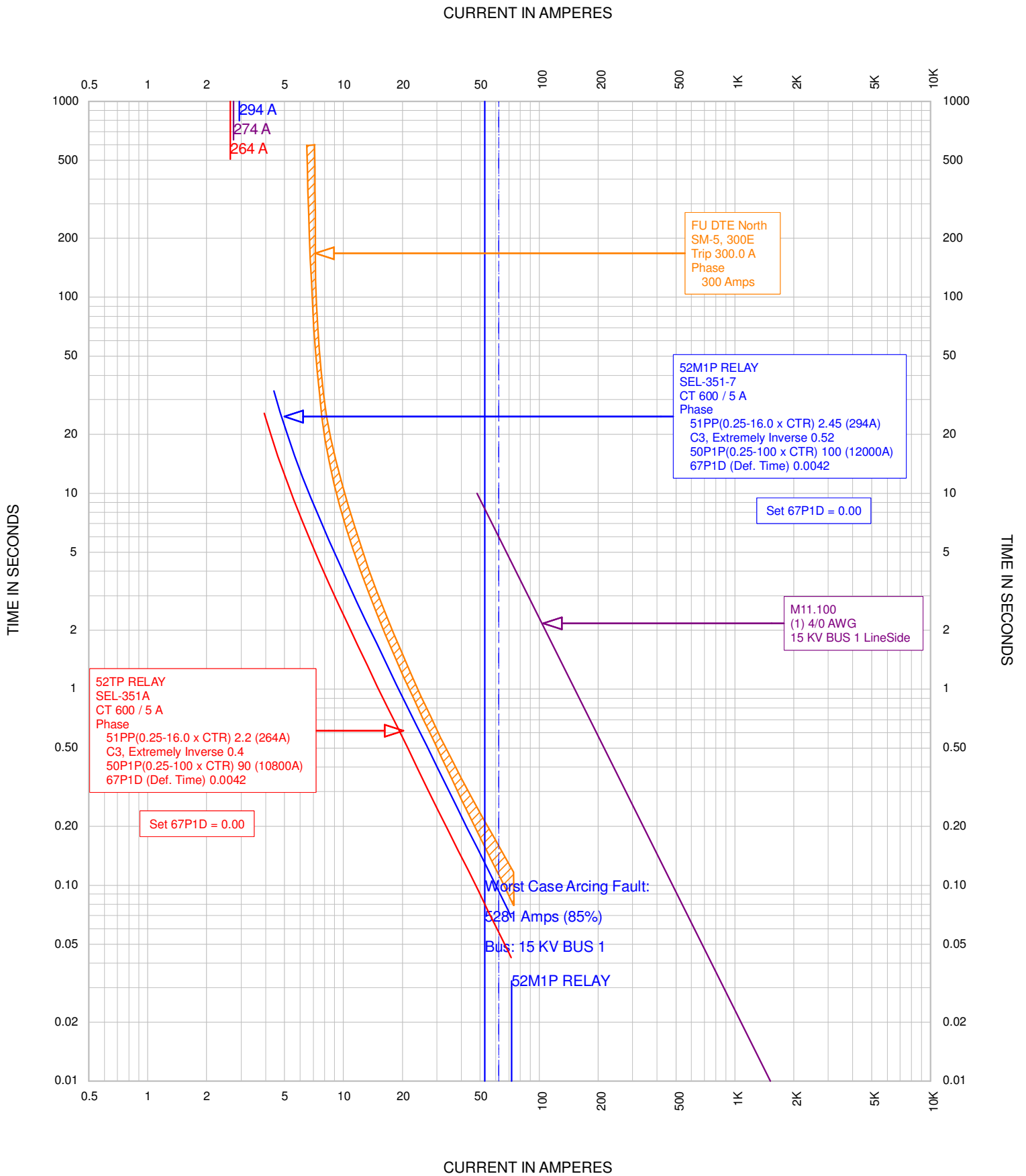
TCC: 52F1SP GFP

TCC: 52F1SP_XFMR-MAIN NORTH

TCC: 52F2SP GFP

TCC: 52F2SP_XFMR-MAIN SOUTH





Online: TCC DTE-N,S_52M1,M2

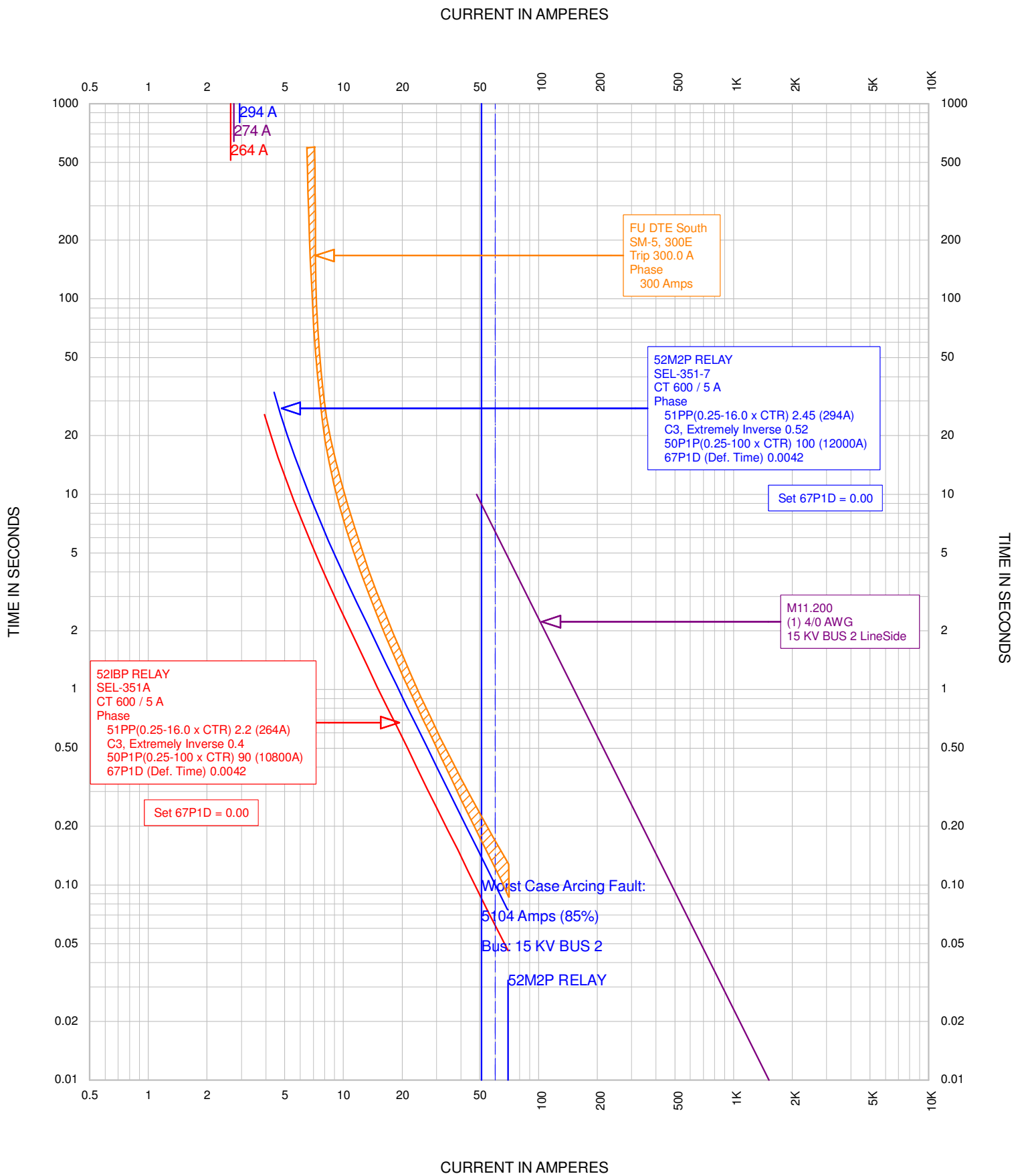
Current Scale x 100

Reference Voltage: 13200

December 18, 2015 2:00 PM

AAWWTP

DTE NORTH_52M1



Online: TCC DTE-N,S_52M1,M2

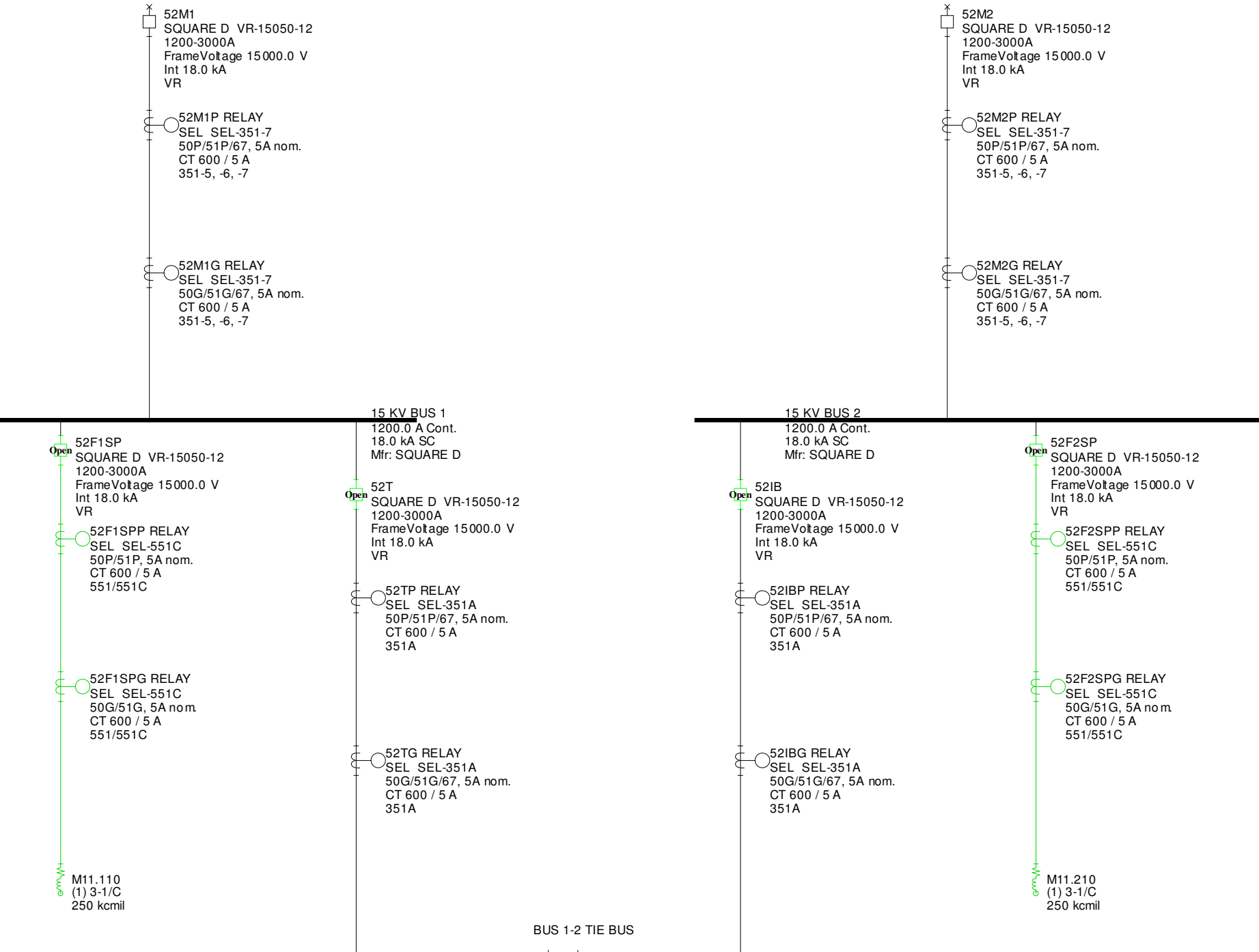
Current Scale x 100

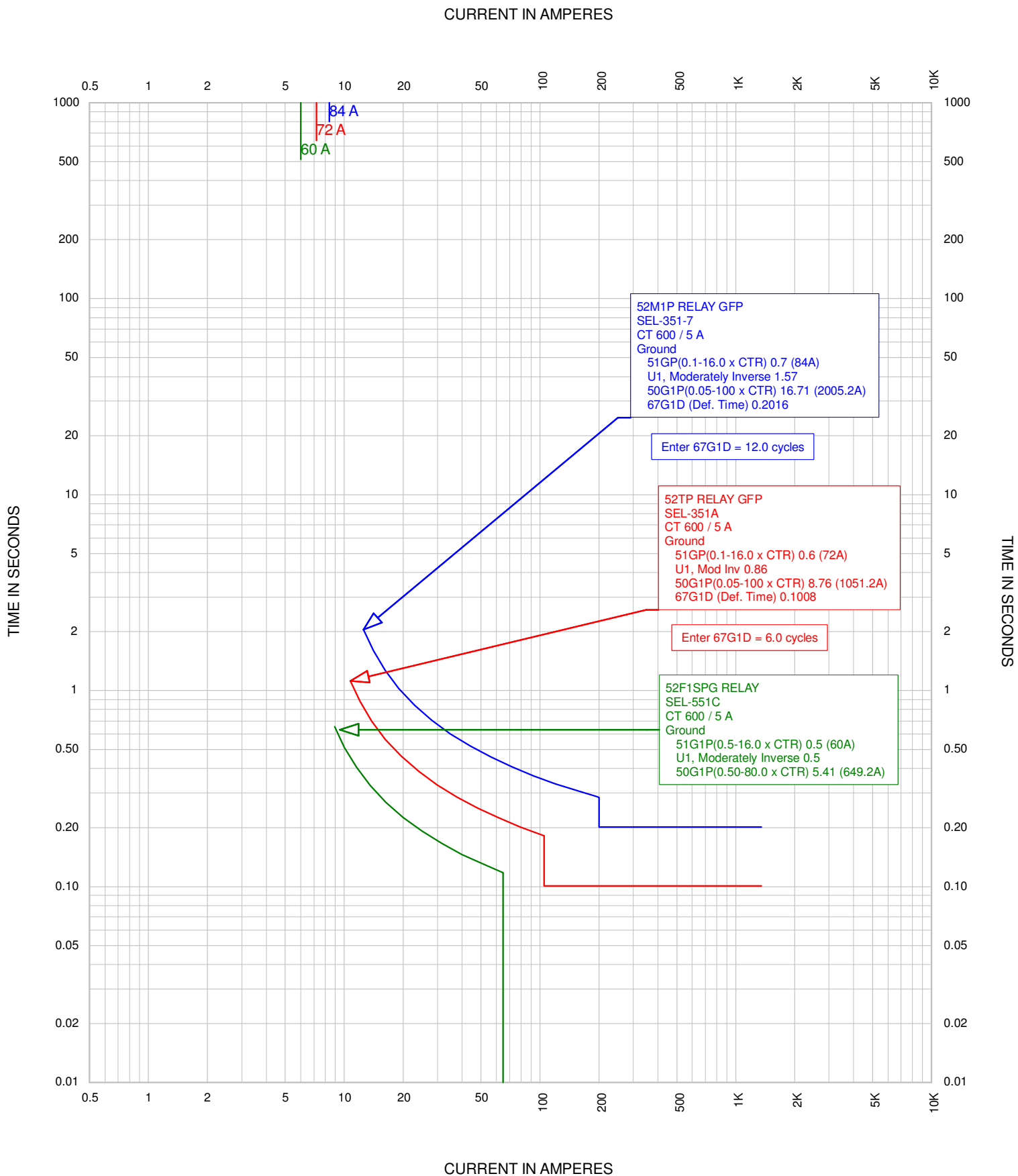
Reference Voltage: 13200

December 18, 2015 2:04 PM

AAWWTP

DTE SOUTH_52M2





Online: TCC 52F1SP,F2SP_T-N,S

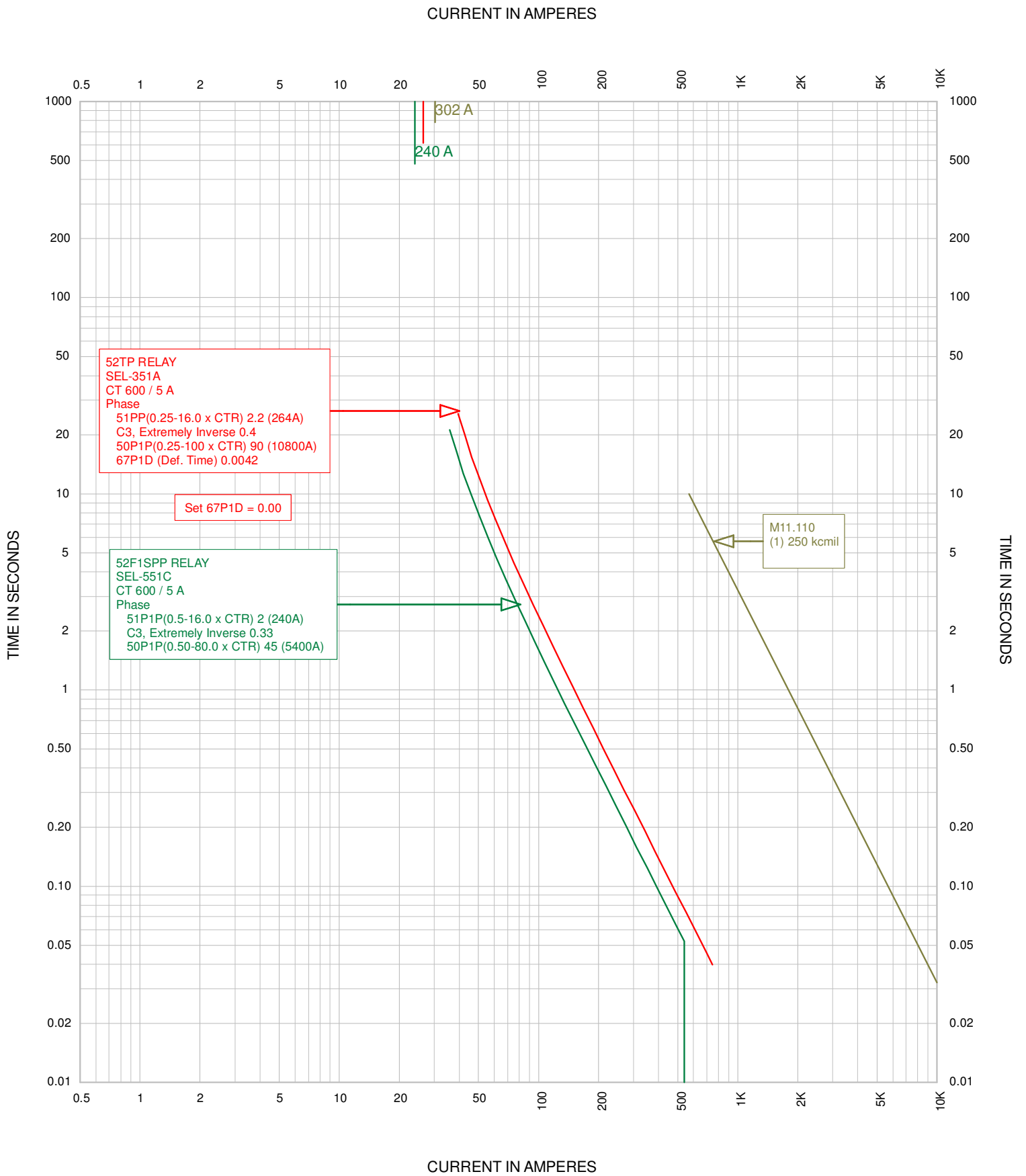
Current Scale x 10

Reference Voltage: 13200

May 22, 2015 12:18 PM

AAWWTP

52F1SP GFP



Online: TCC 52F1SP,F2SP_T-N,S

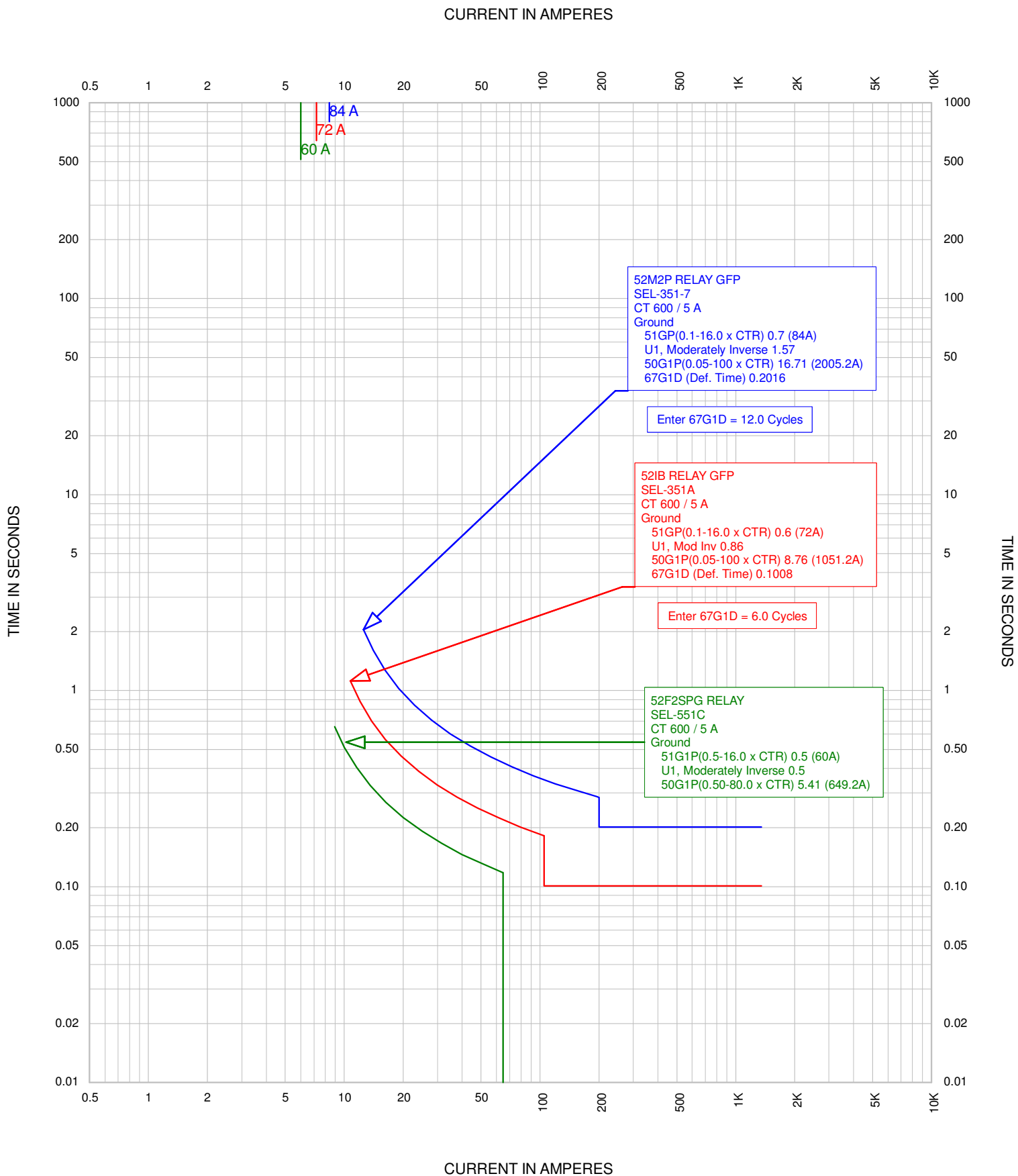
Current Scale x 10

Reference Voltage: 13200

March 1, 2017 8:29 AM

AAWWTP

52F1SP_XFMR-MAIN NORTH



Online: TCC 52F1SP,F2SP_T-N,S

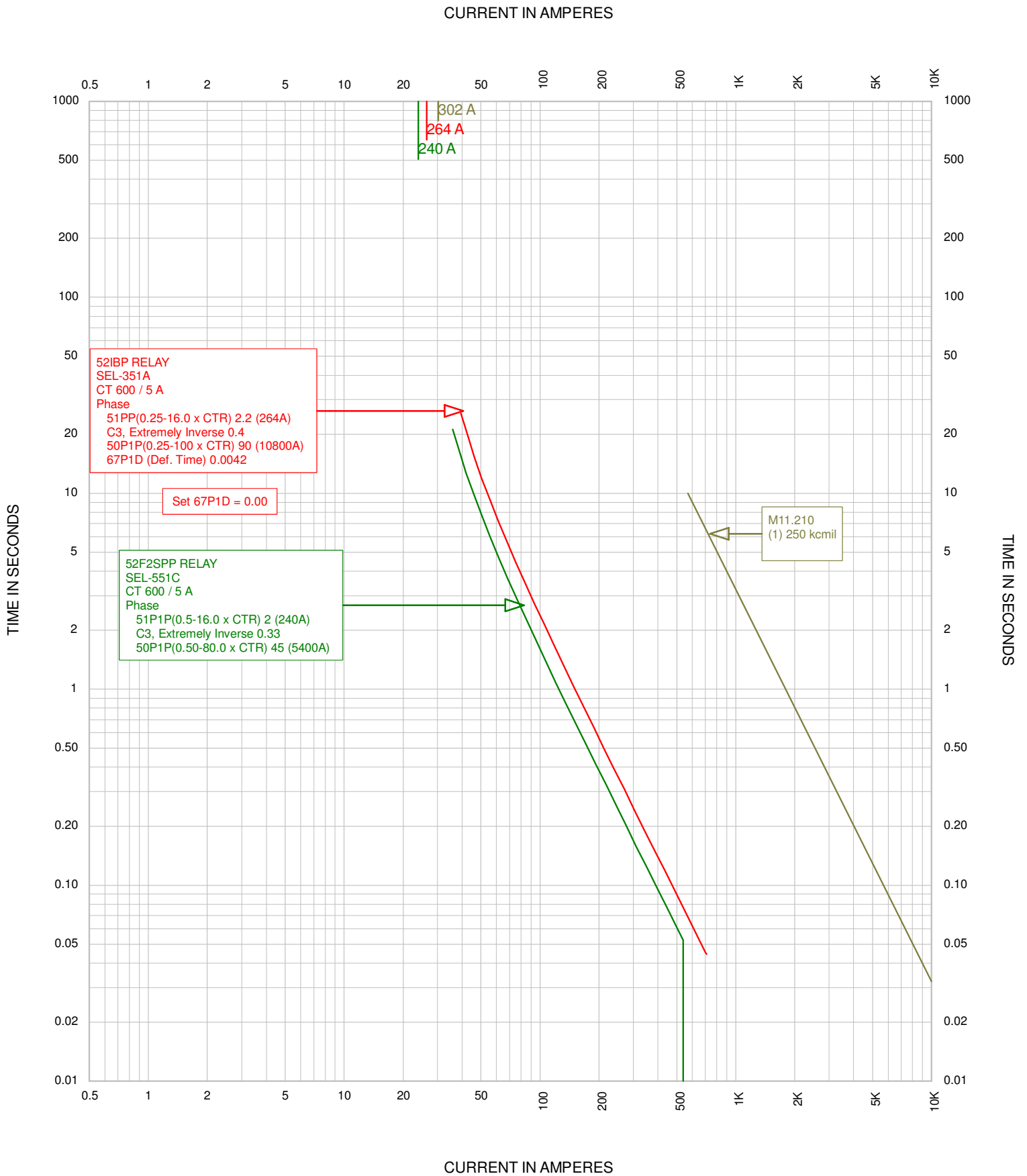
Current Scale x 10

Reference Voltage: 13200

May 22, 2015 12:31 PM

AAWWTP

52F2SP GFP



Online: TCC 52F1SP,F2SP_T-N,S

Current Scale x 10

Reference Voltage: 13200

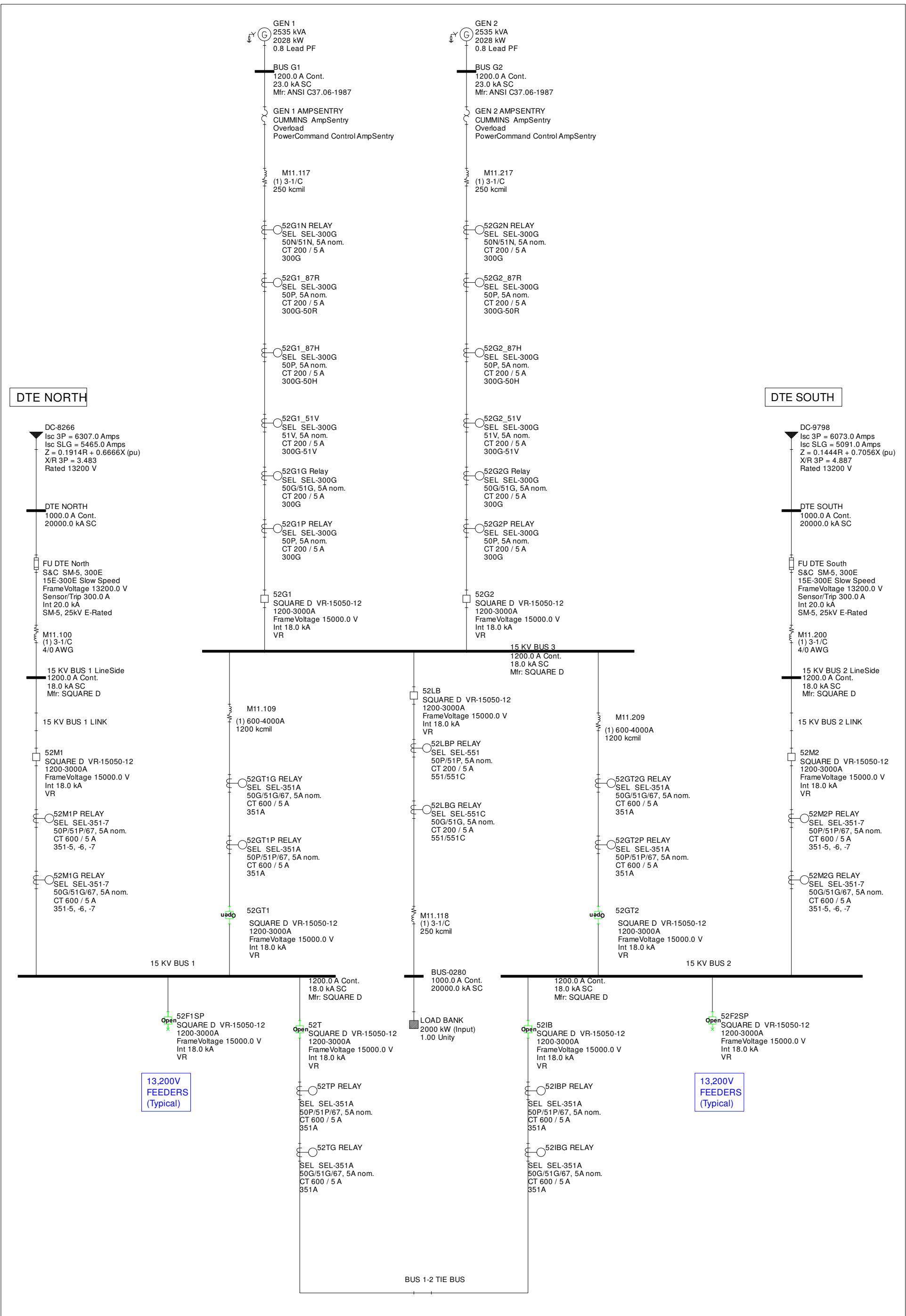
March 1, 2017 8:33 AM

AAWWTP

52F2SP_XFMR-MAIN SOUTH

3.4.2 Generators:

Online:	TCC GEN's-1,2_BUS-1,2
TCC:	GEN-1 GFP
TCC:	GEN-1
TCC:	GEN-2 GFP
TCC:	GEN-2
TCC:	GEN-1 DIFFERENTIAL
TCC:	GEN-2 DIFFERENTIAL
TCC:	GEN's LOAD BANK GFP
TCC:	GEN's LOAD BANK

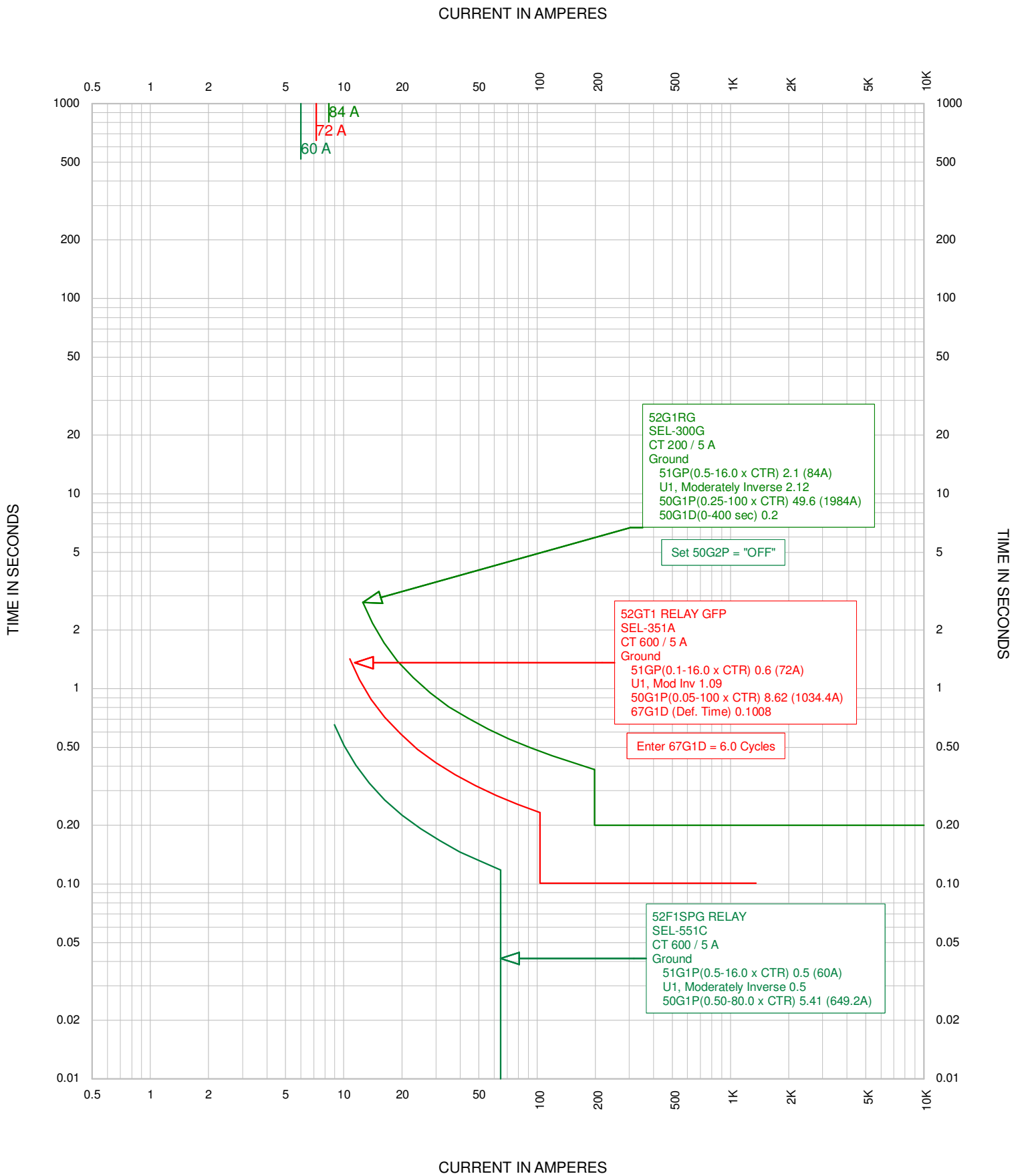


Online: TCC GEN's 1,2_BUS-1,2

April 1, 2016 12:40 PM

AAWWTP





Online: TCC GEN's 1,2_BUS-1,2

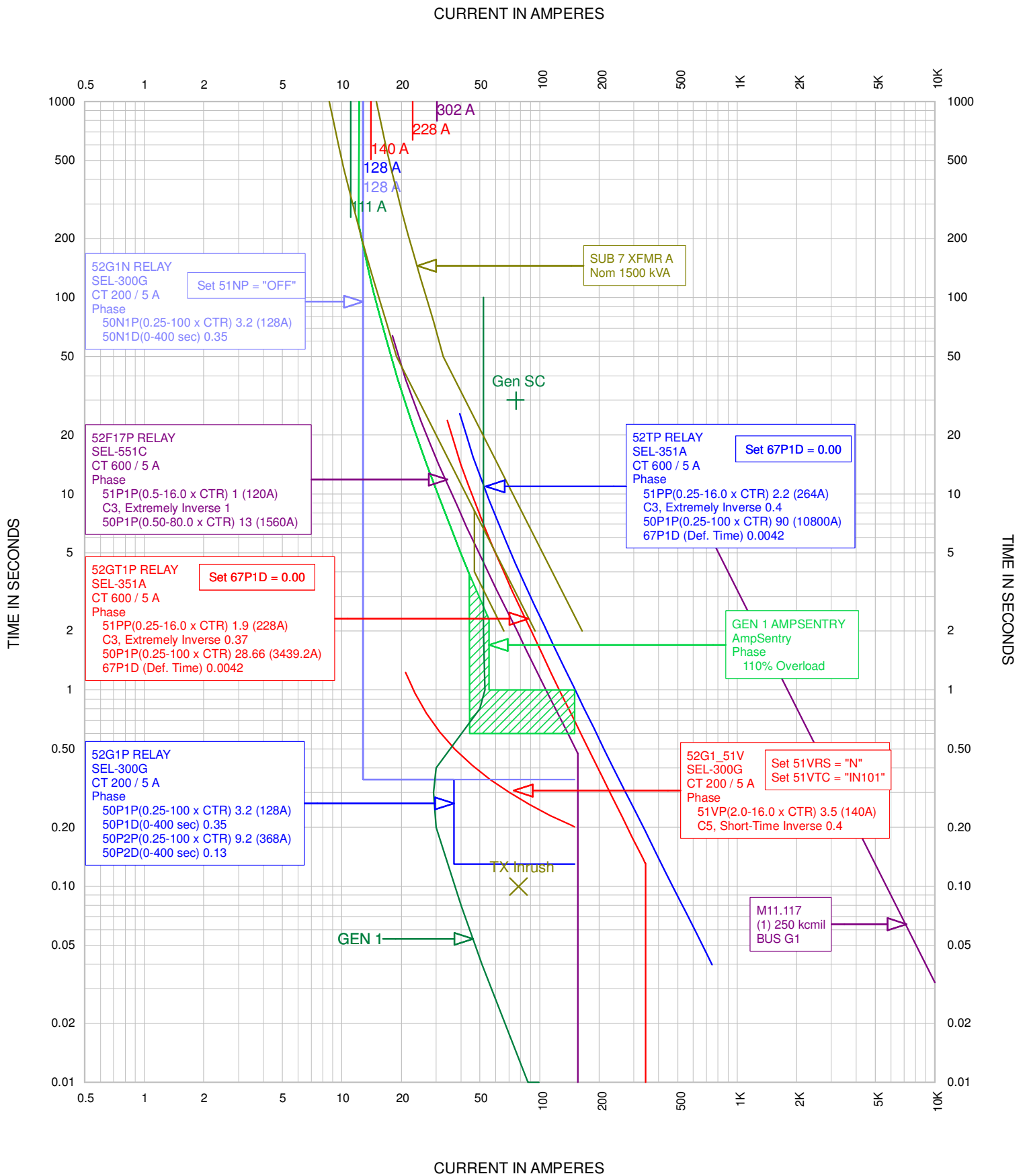
Current Scale x 10

Reference Voltage: 13200

May 22, 2015 12:04 PM

AAWWTP

GEN-1 GFP



Online: TCC GEN's 1,2_BUS-1,2

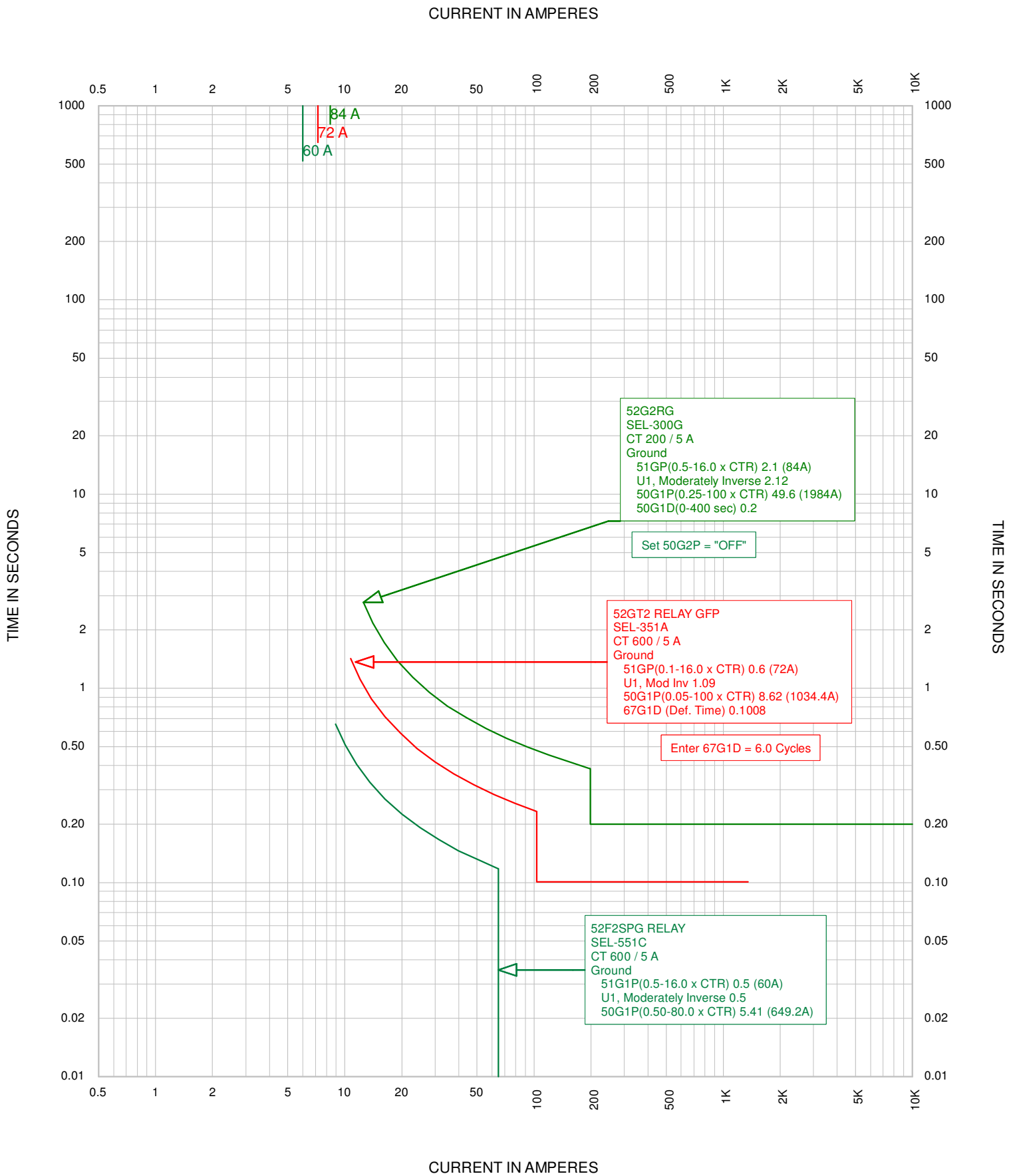
Current Scale x 10

Reference Voltage: 13200

April 15, 2016 4:23 PM

AAWWTP

GEN-1



Online: TCC GEN's 1,2_BUS-1,2

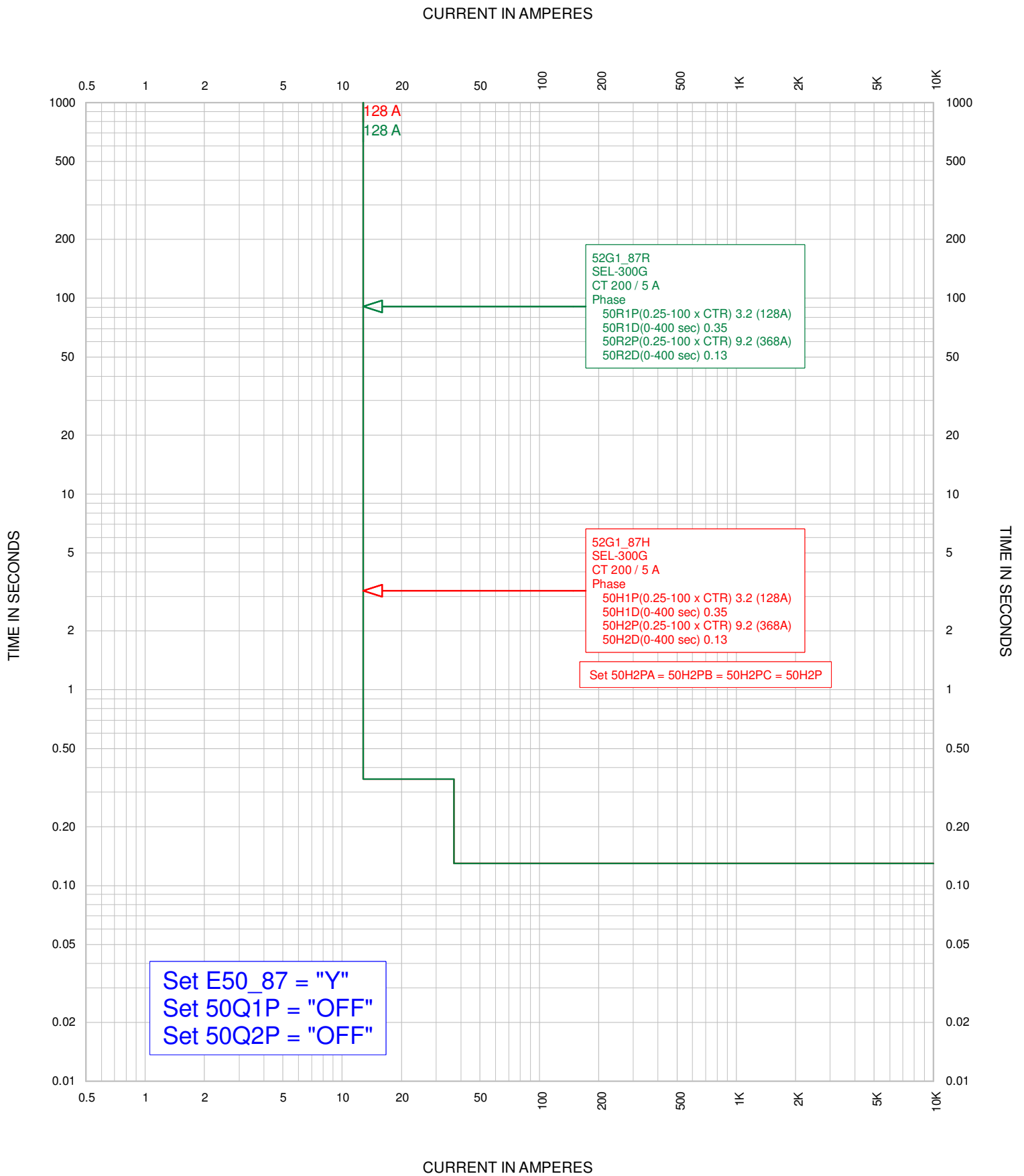
Current Scale x 10

Reference Voltage: 13200

May 22, 2015 12:08 PM

AAWWTP

GEN-2 GFP



Online: TCC GEN's 1,2_BUS-1,2

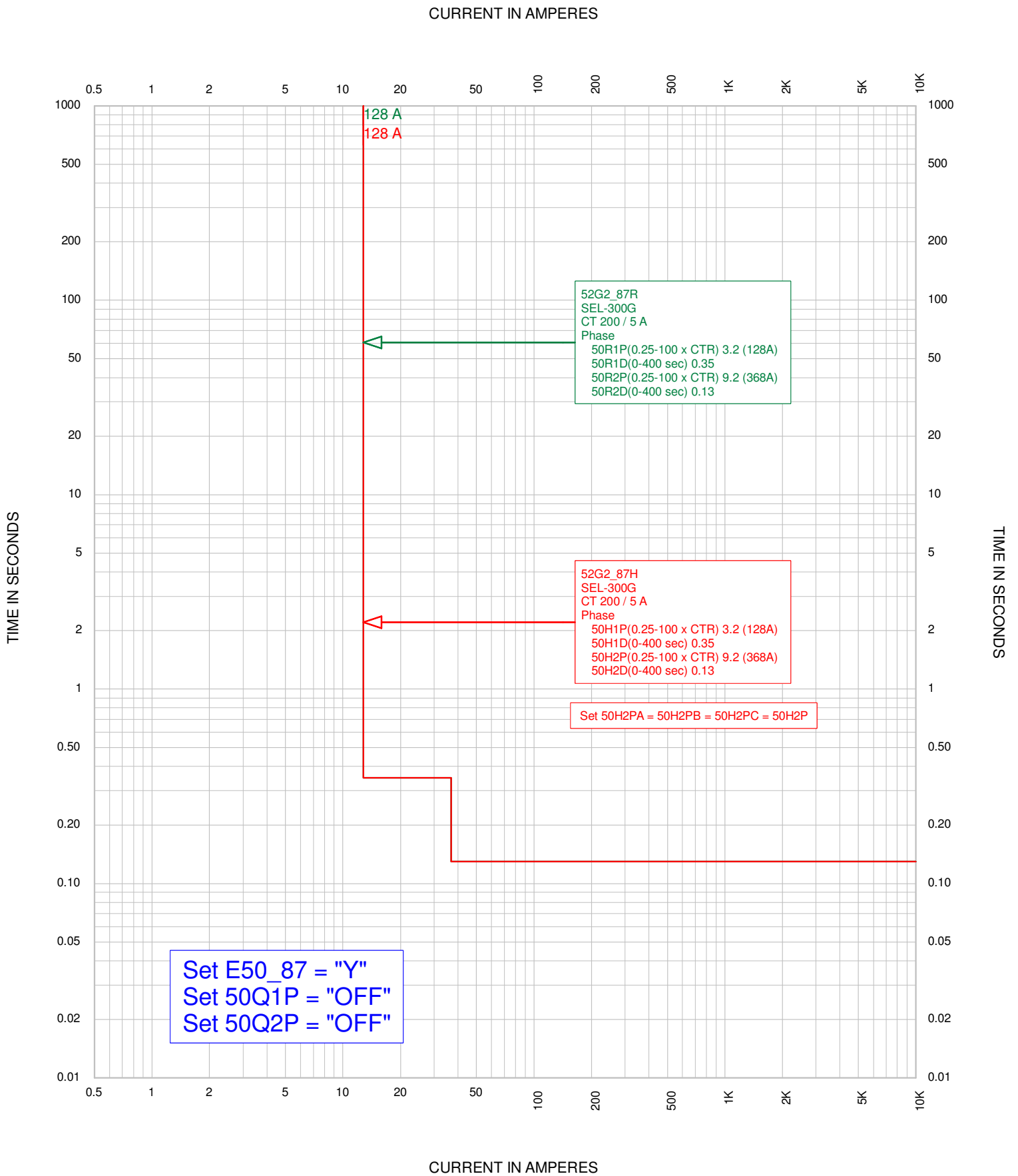
Current Scale x 10

Reference Voltage: 13200

March 24, 2015 11:52 AM

AAWWTP

GEN-1 DIFFERENTIAL



Online: TCC GEN's 1,2_BUS-1,2

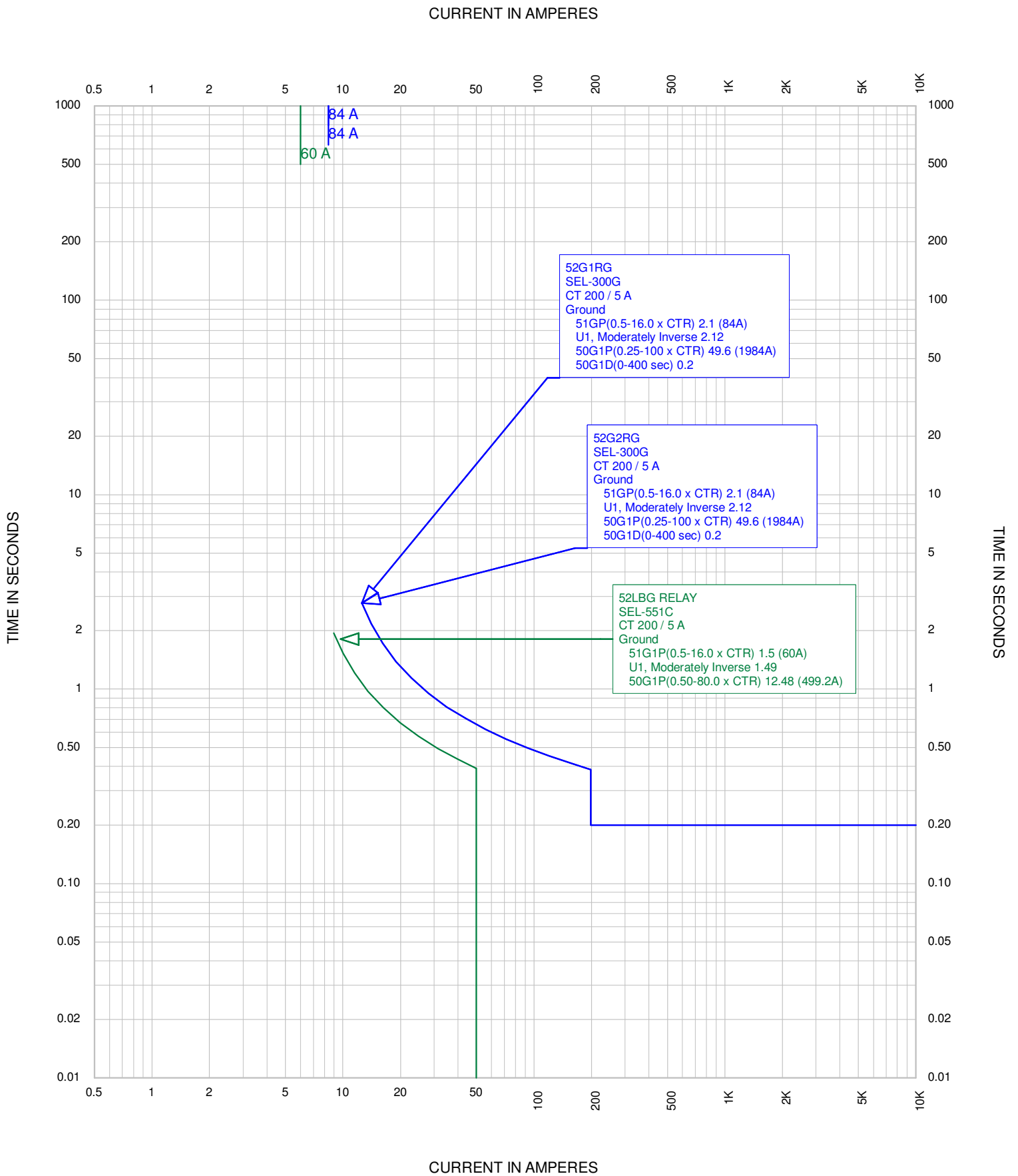
Current Scale x 10

Reference Voltage: 13200

March 24, 2015 11:56 AM

AAWWTP

GEN-2 DIFFERENTIAL



Online: TCC GEN's 1,2_BUS-1,2

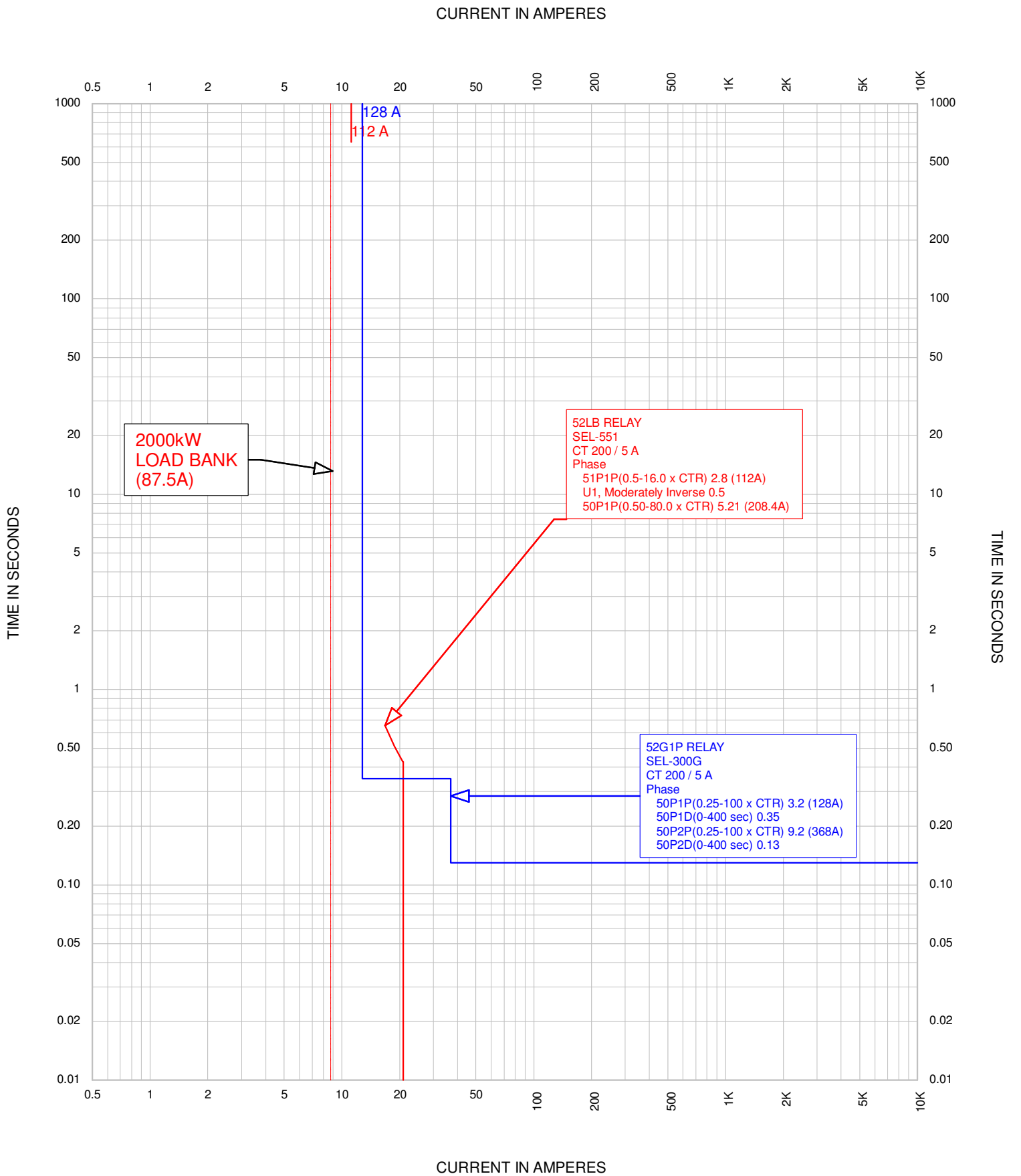
Current Scale x 10

Reference Voltage: 13200

May 22, 2015 12:12 PM

AAWWTP

GEN'S LOAD BANK GFP



Online: TCC GEN's 1,2_BUS-1,2

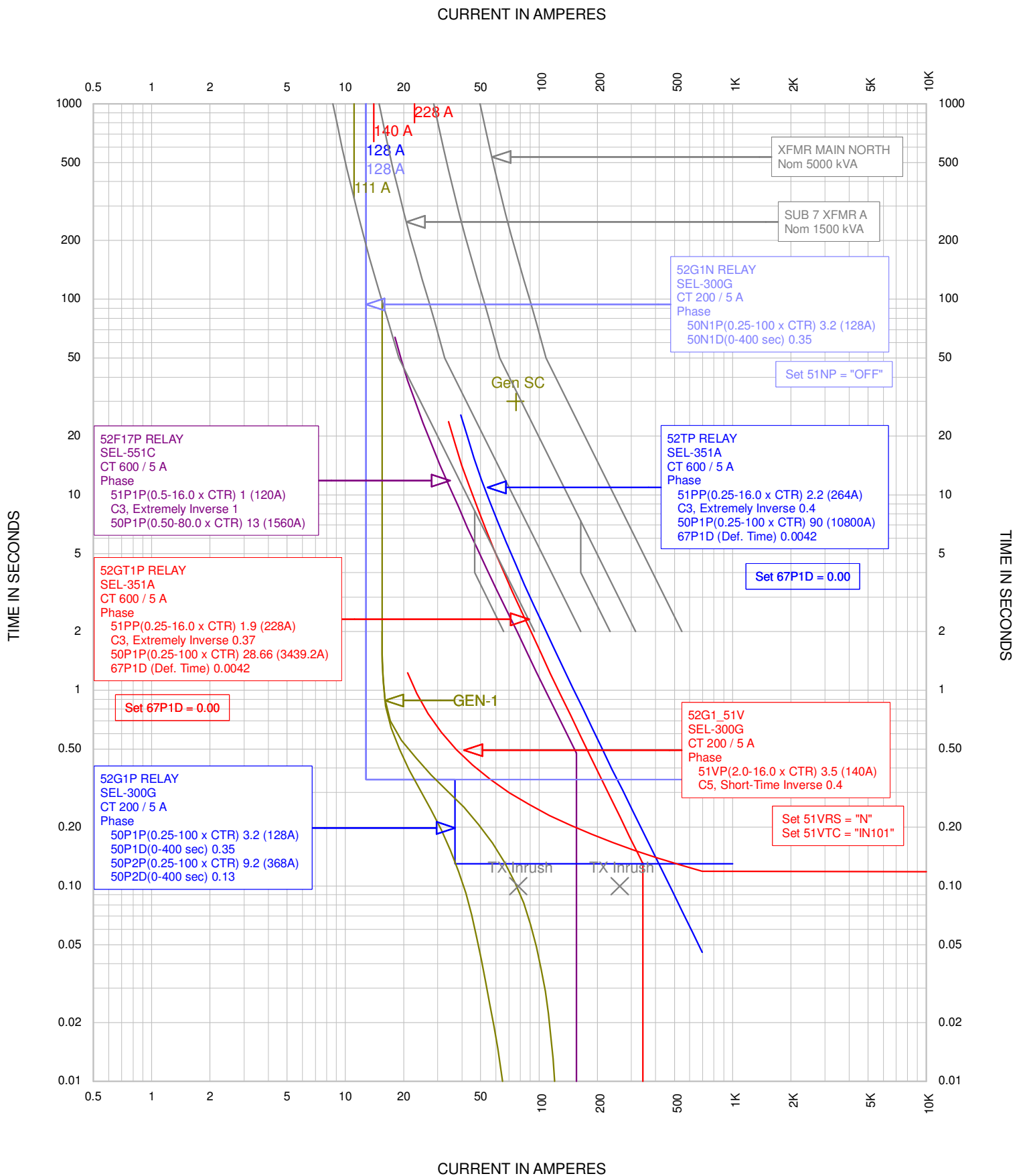
Current Scale x 10

Reference Voltage: 13200

March 24, 2015 12:13 PM

AAWWTP

GEN'S LOAD BANK



Online: TCC GEN's 1,2_BUS-1,2

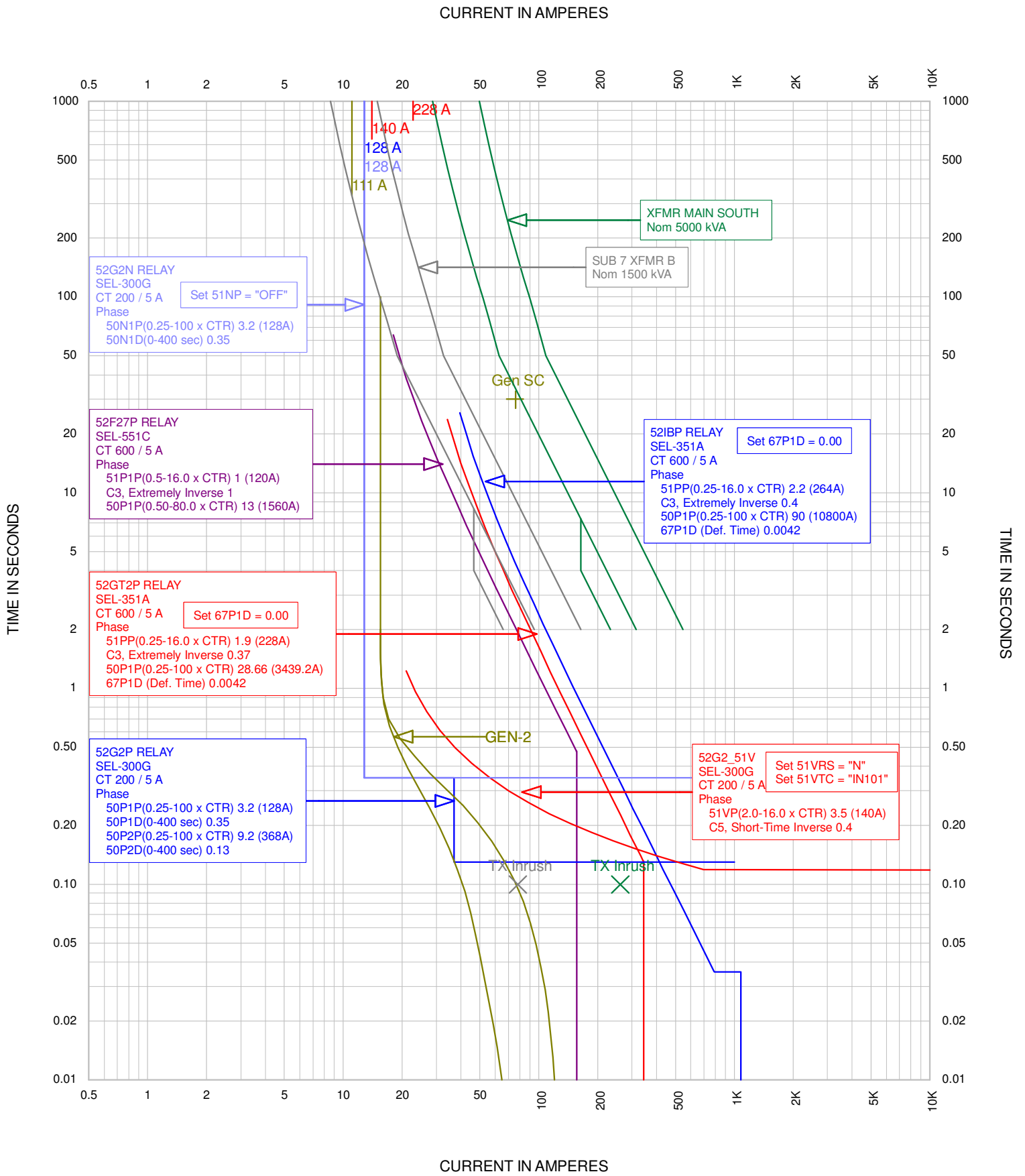
Current Scale x 10

Reference Voltage: 13200

March 24, 2015 1:02 PM

AAWWTP

GEN-1



Online: TCC GEN's 1,2_Bus-1,2

Current Scale x 10

Reference Voltage: 13200

March 24, 2015 3:12 PM

AAWWTP

GEN-2

3.4.3 Substation 1:

Online: TCC 52F11,21_S1A,B

TCC: 52F11 GFP

TCC: 52F11_S1A

TCC: 52F21 GFP

TCC: 52F21_S1B

Online: TCC S1A,B_MCC-C,D

TCC: S1A_MCC-C GFP

TCC: S1A_MCC-C

TCC: S1A_MCC-C (ARMS Engaged)

TCC: S1B_MCC-D GFP

TCC: S1B_MCC-D

TCC: S1B_MCC-D (ARMS Engaged)

Online: TCC S1A,B_MCC-RLS-A,B

TCC: S1A_MCC-RLS-A GFP

TCC: S1A_MCC-RLS-A

TCC: S1A_MCC-RLS-A (ARMS Engaged)

TCC: S1B_MCC-RLS-B GFP

TCC: S1B_MCC-RLS-B

TCC: S1B_MCC-RLS-B (ARMS Engaged)

TCC: MCC-RLS-A_ATS-RLS-EMG

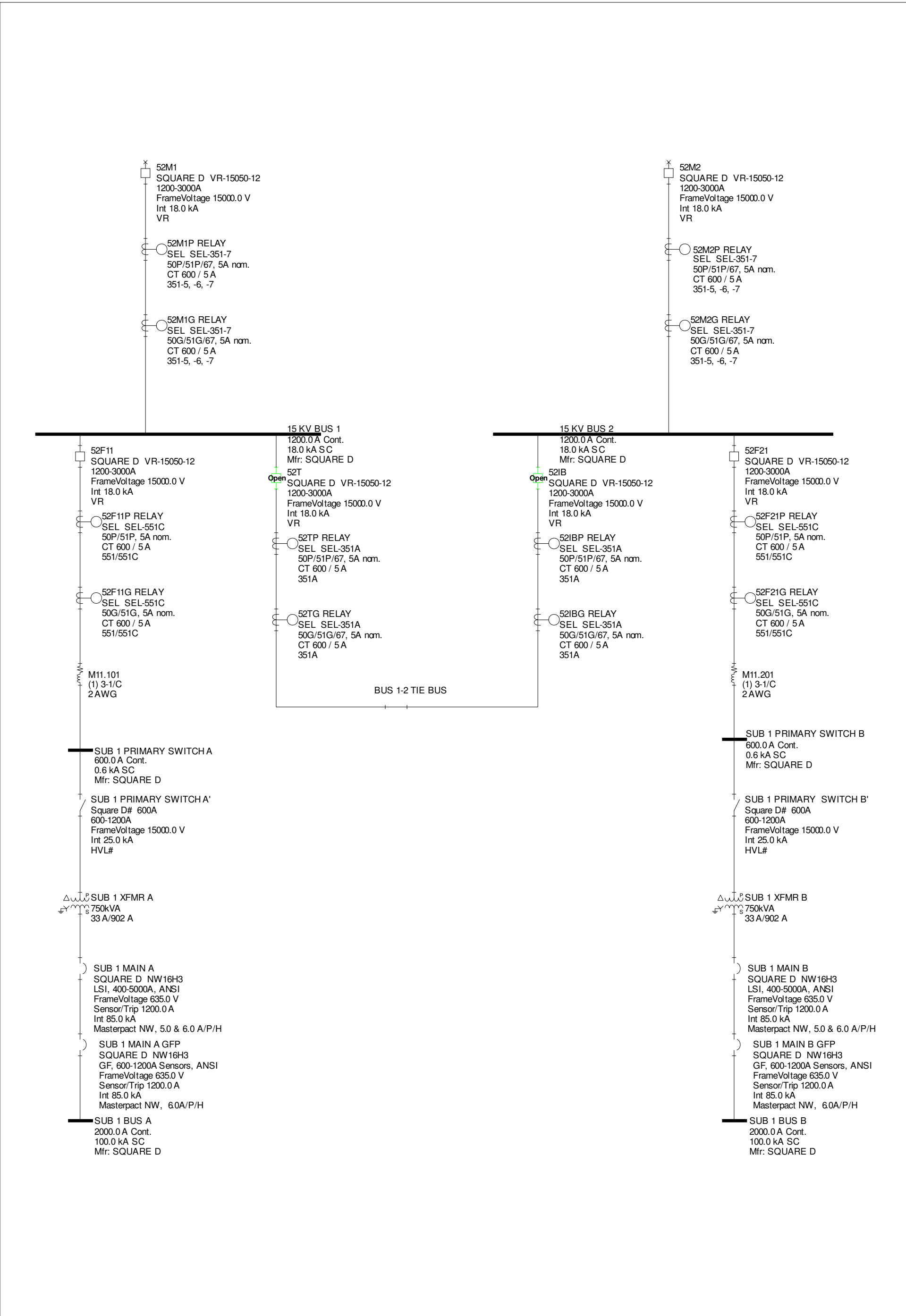
TCC: MCC-RLS-B_ATS-RLS-NRM

TCC: MCC-RLS-A_SP1

TCC: MCC-RLS-B_SP2

Online: AA MCC-D,RLS-A (for MCP settings)

Online: AA MCC-C,RLS-B (for MCP settings)

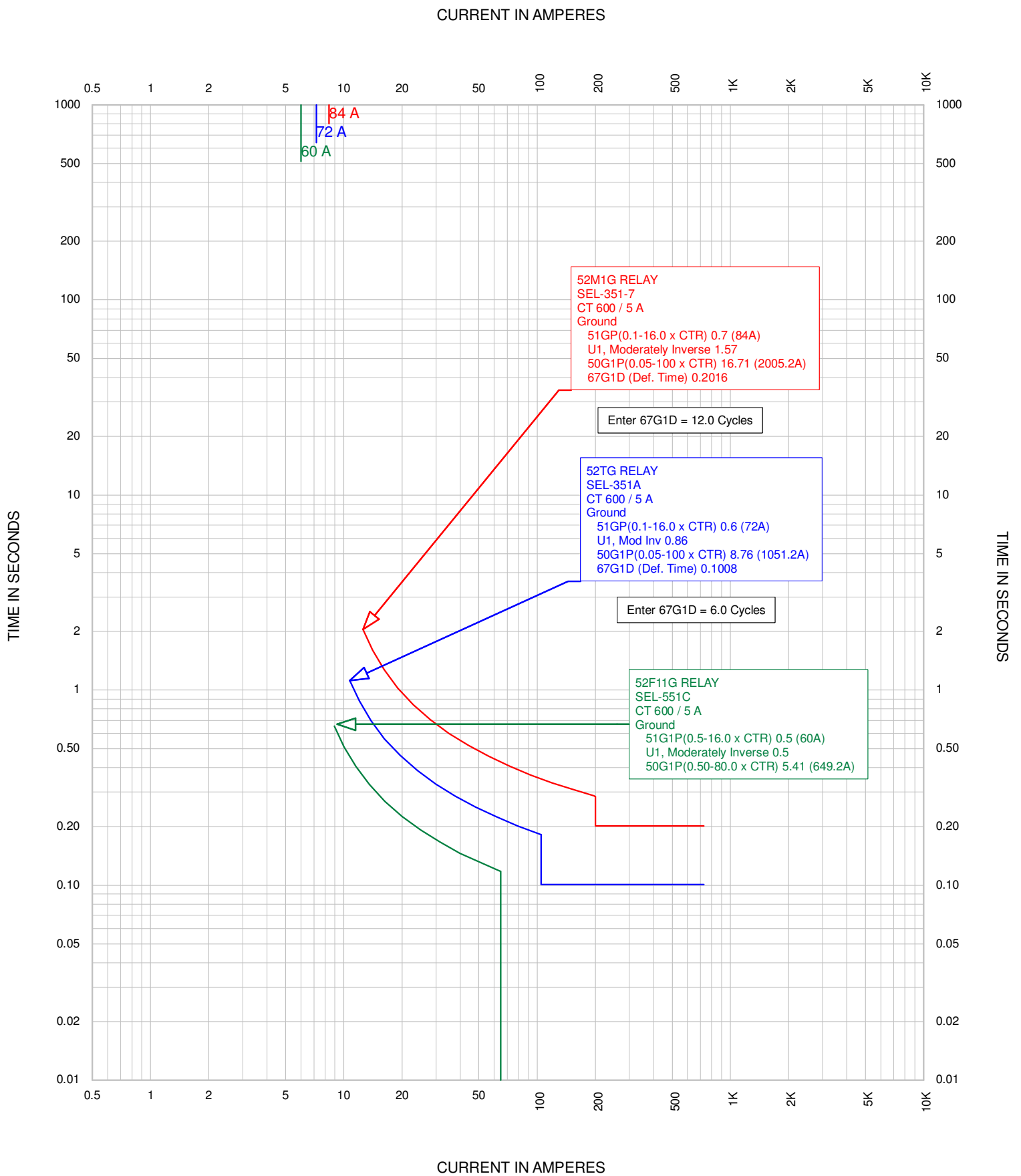


Online: TCC 52F11,21_S1A,B

April 1, 2016 12:53 PM

AAWWTP





Online: TCC 52F11,21_S1A,B

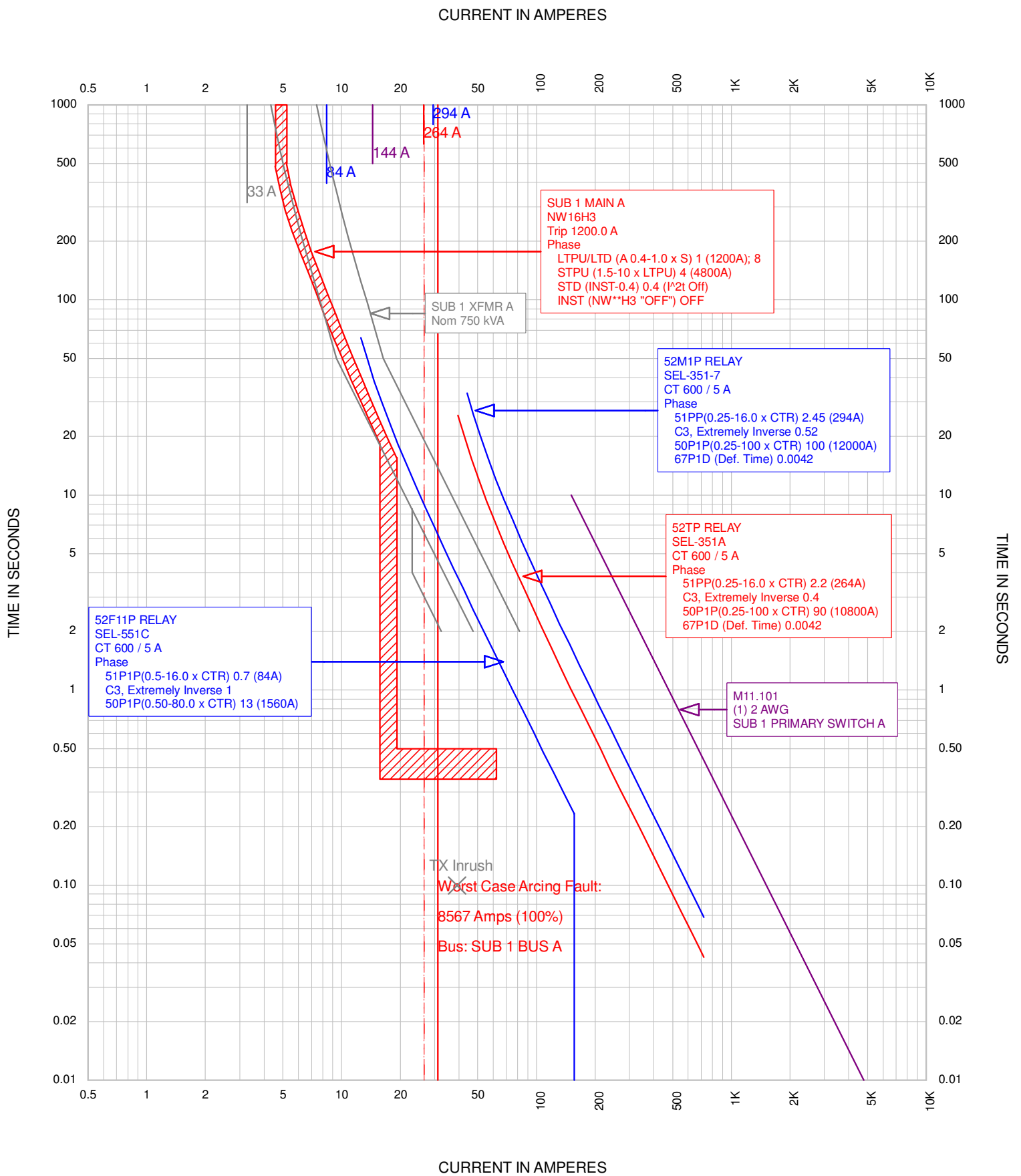
Current Scale x 10

Reference Voltage: 13200

February 15, 2016 3:45 PM

AAWWTP

52F11 GFP



Online: TCC 52F11,21_S1A,B

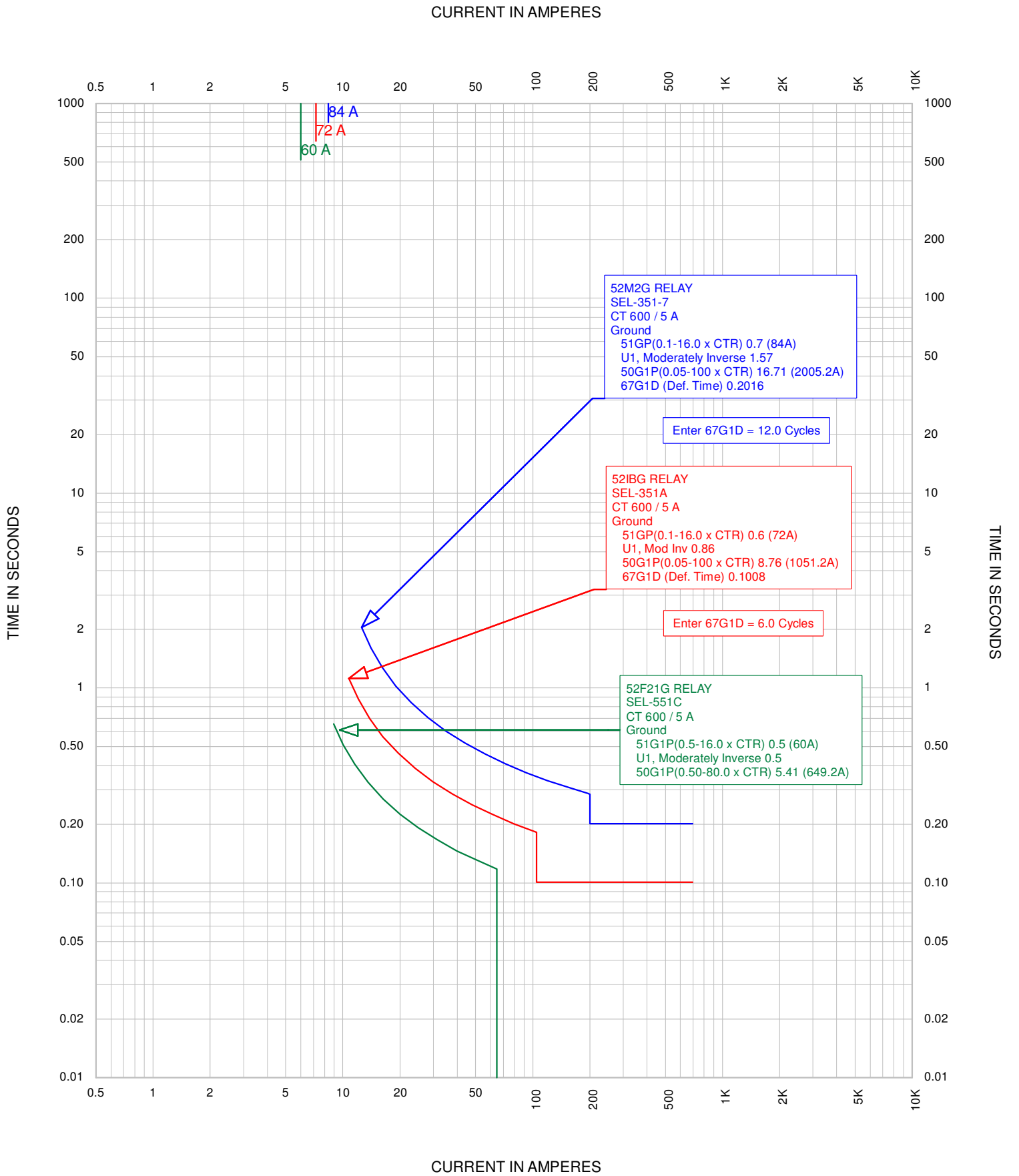
Current Scale x 10

Reference Voltage: 13200

December 16, 2015 3:23 PM

AAWWTP

52F11_S1A



Online: TCC 52F11,21_S1A,B

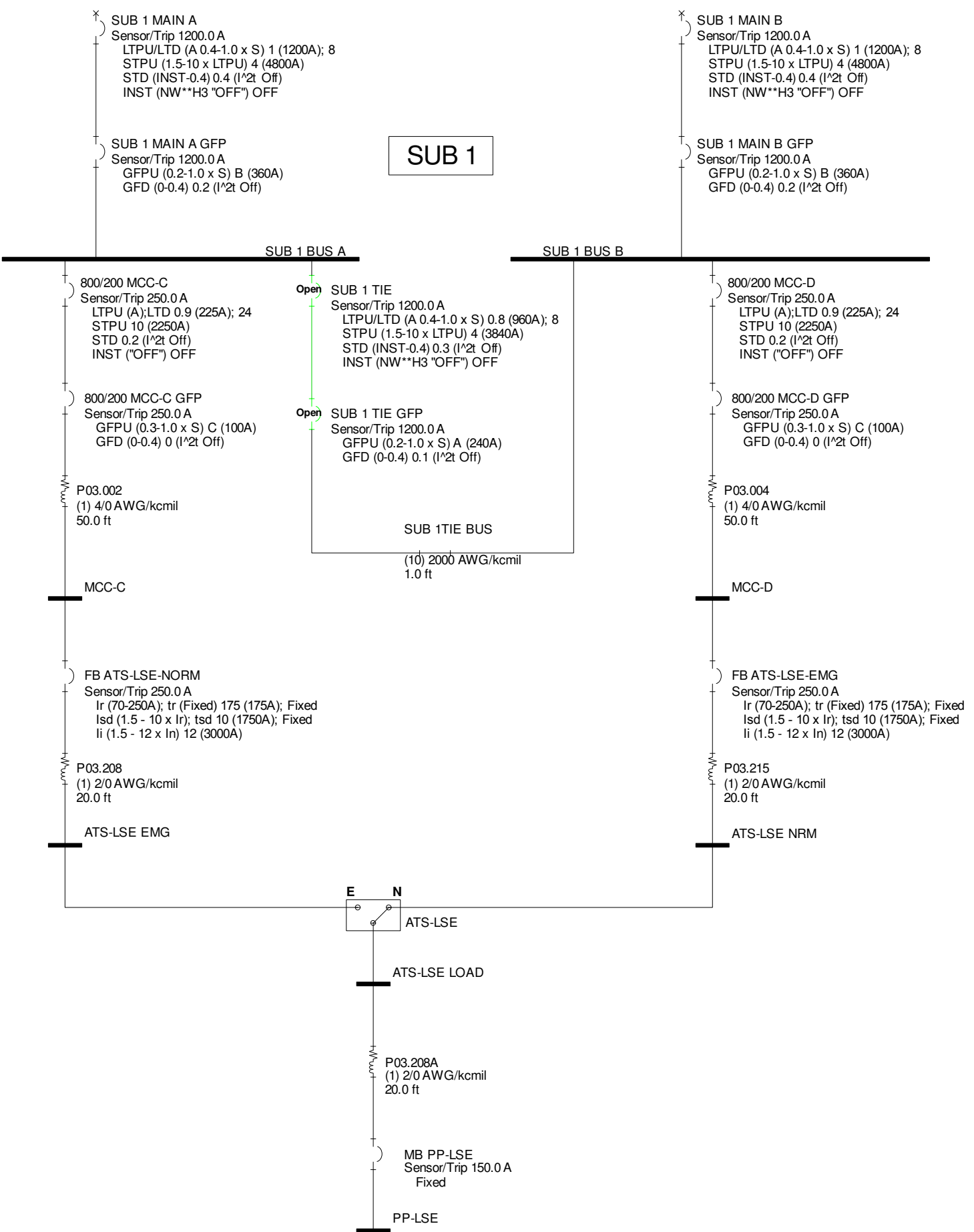
Current Scale x 10

Reference Voltage: 13200

February 15, 2016 3:52 PM

AAWWTP

52F21 GFP

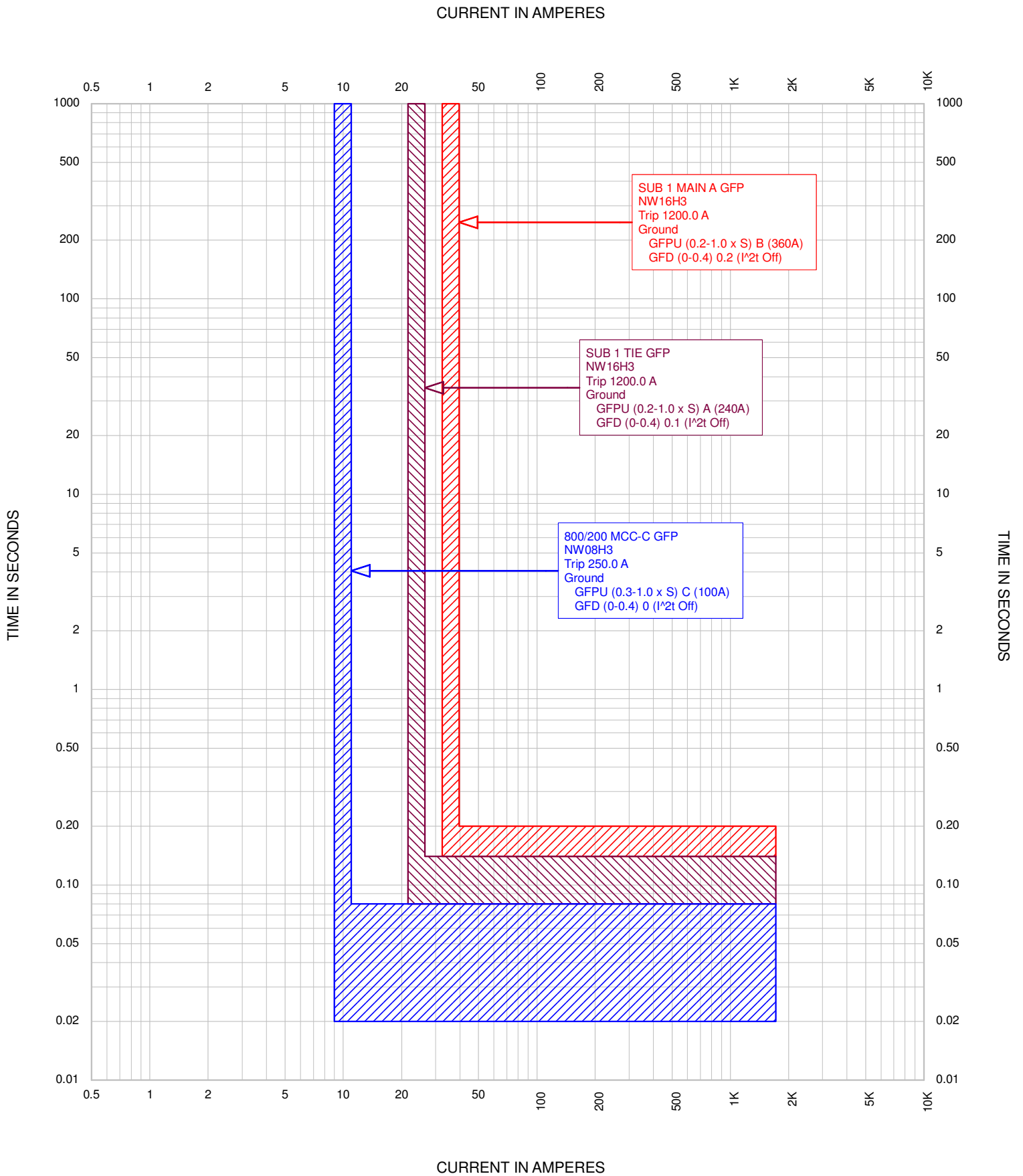


Online: TCC S1A,B_MCC-C,D

May 11, 2015 2:35 PM

AAWWTP





Online: TCC S1A,B_MCC-C,D

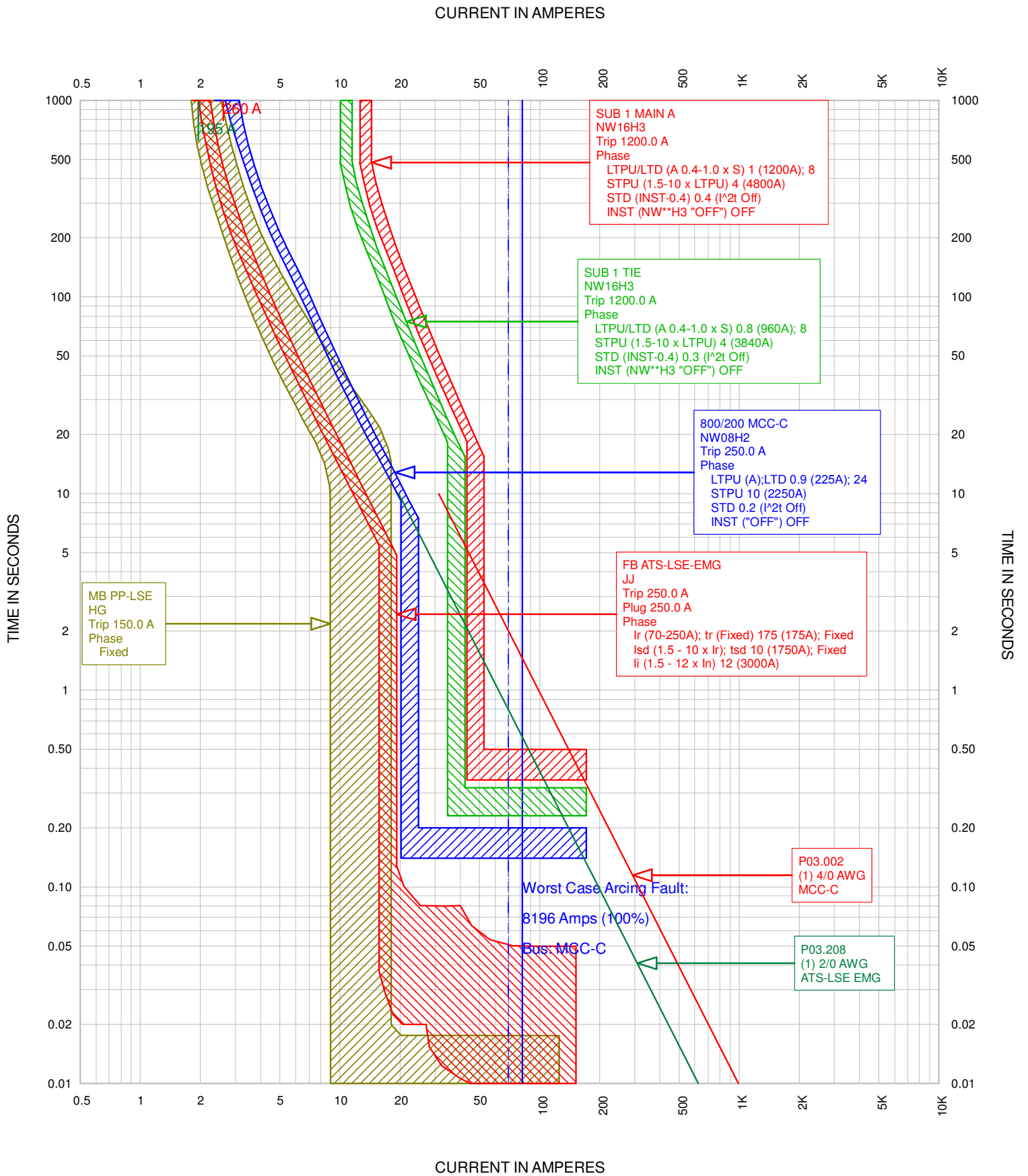
Current Scale x 10

Reference Voltage: 480

May 13, 2015 3:48 PM

AAWWTP

S1A_MCC-C GFP



Online: TCC S1A,B_MCC-C,D

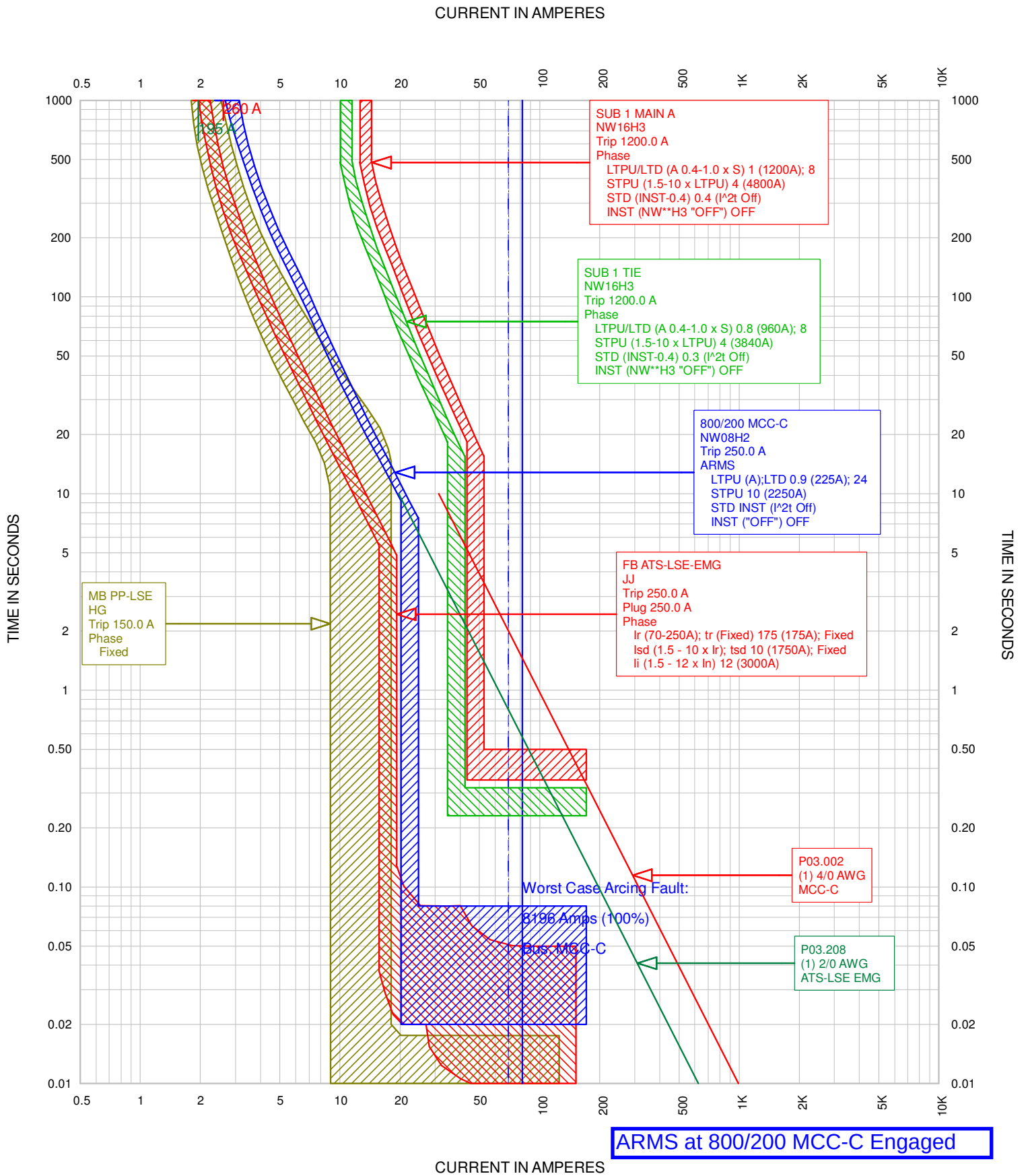
Current Scale x 100

Reference Voltage: 480

December 16, 2015 4:04 PM

AAWWTP

S1A_MCC-C



Online: TCC S1A,B_MCC-C,D

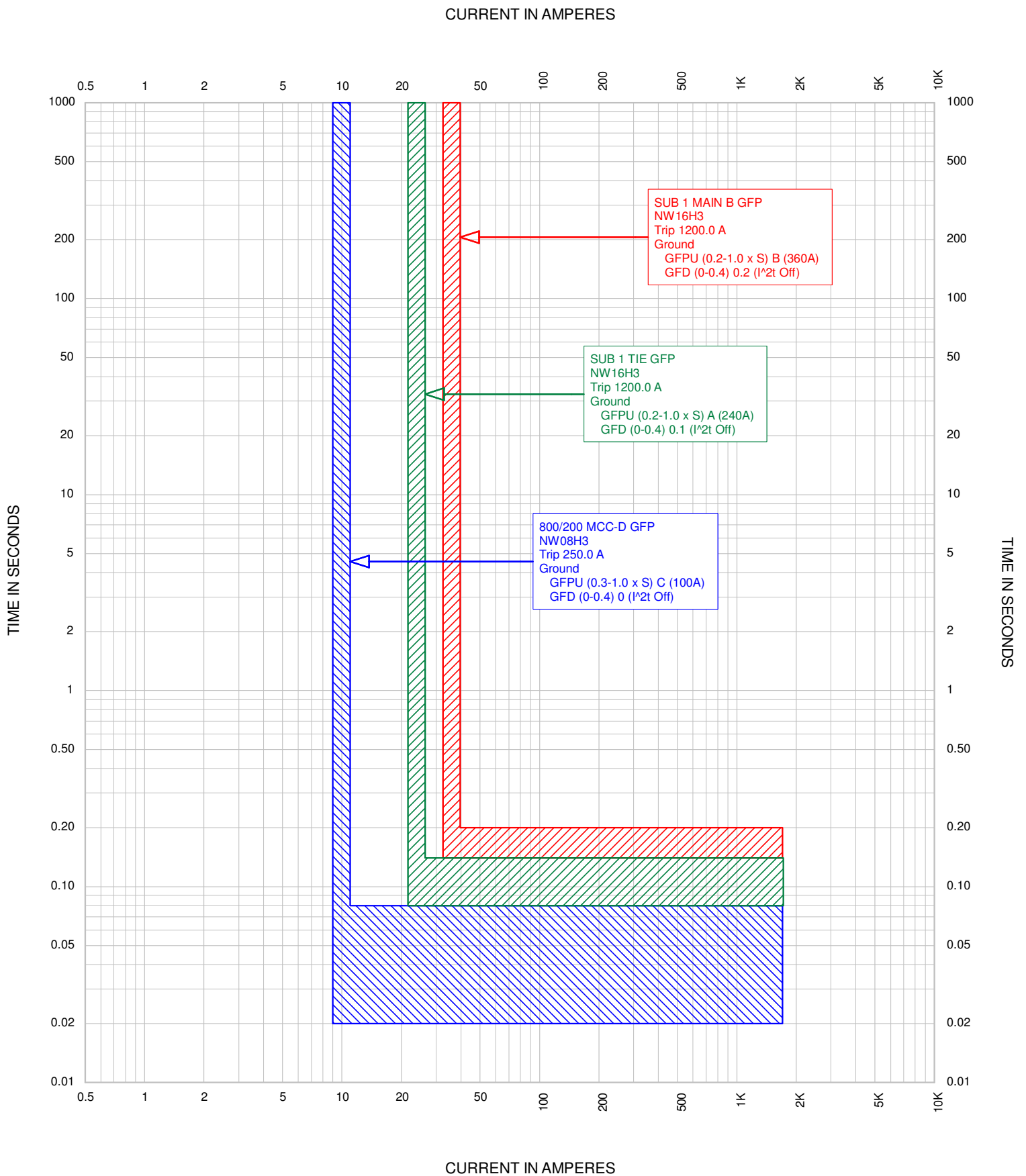
Current Scale x 100

Reference Voltage: 480

December 18, 2015 4:48 PM

AAWWTP

S1A_MCC-C



Online: TCC S1A,B_MCC-C,D

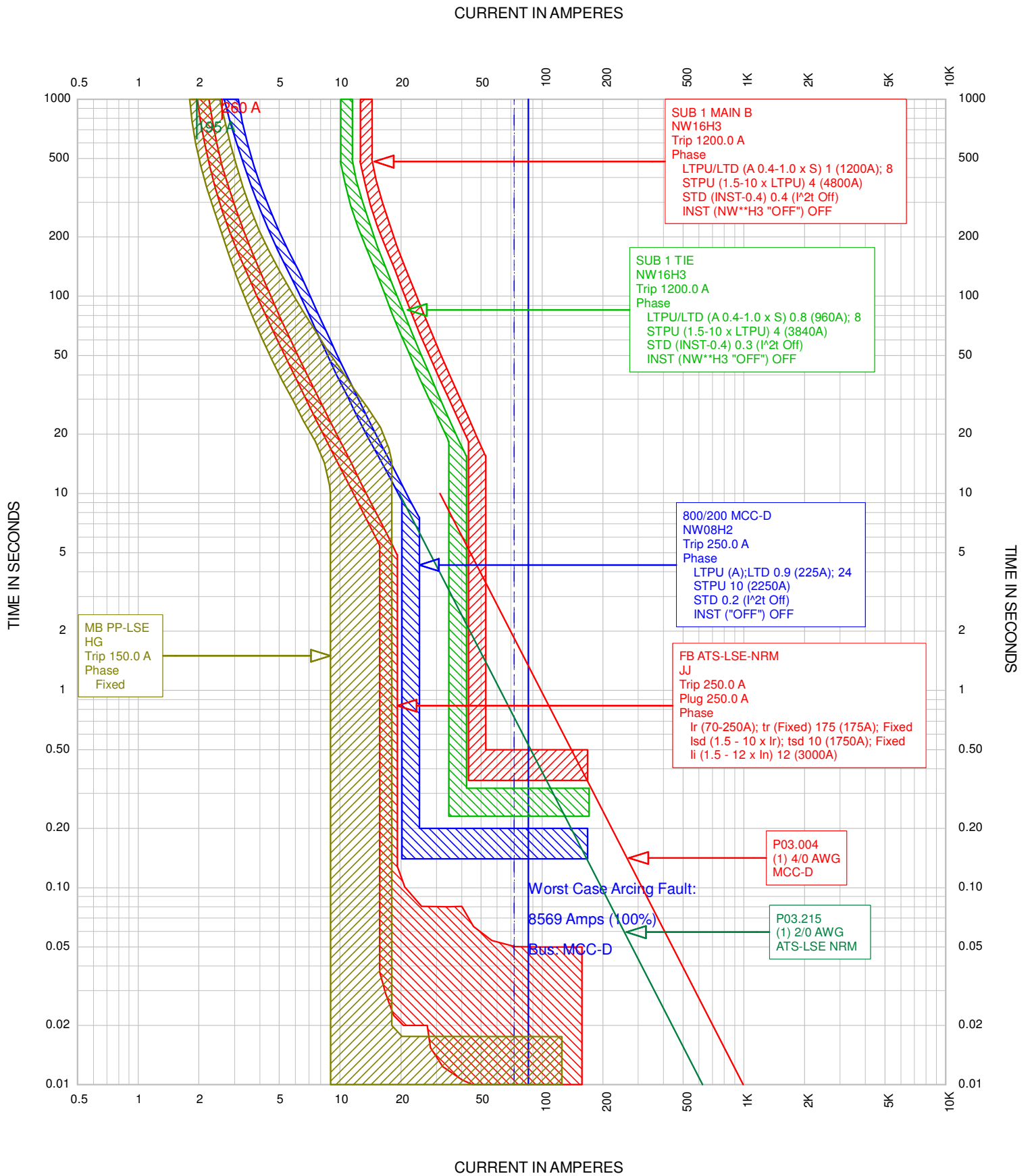
Current Scale x 10

Reference Voltage: 480

May 13, 2015 3:52 PM

AAWWTP

S1B_MCC-D GFP



Online: TCC S1A,B_MCC-C,D

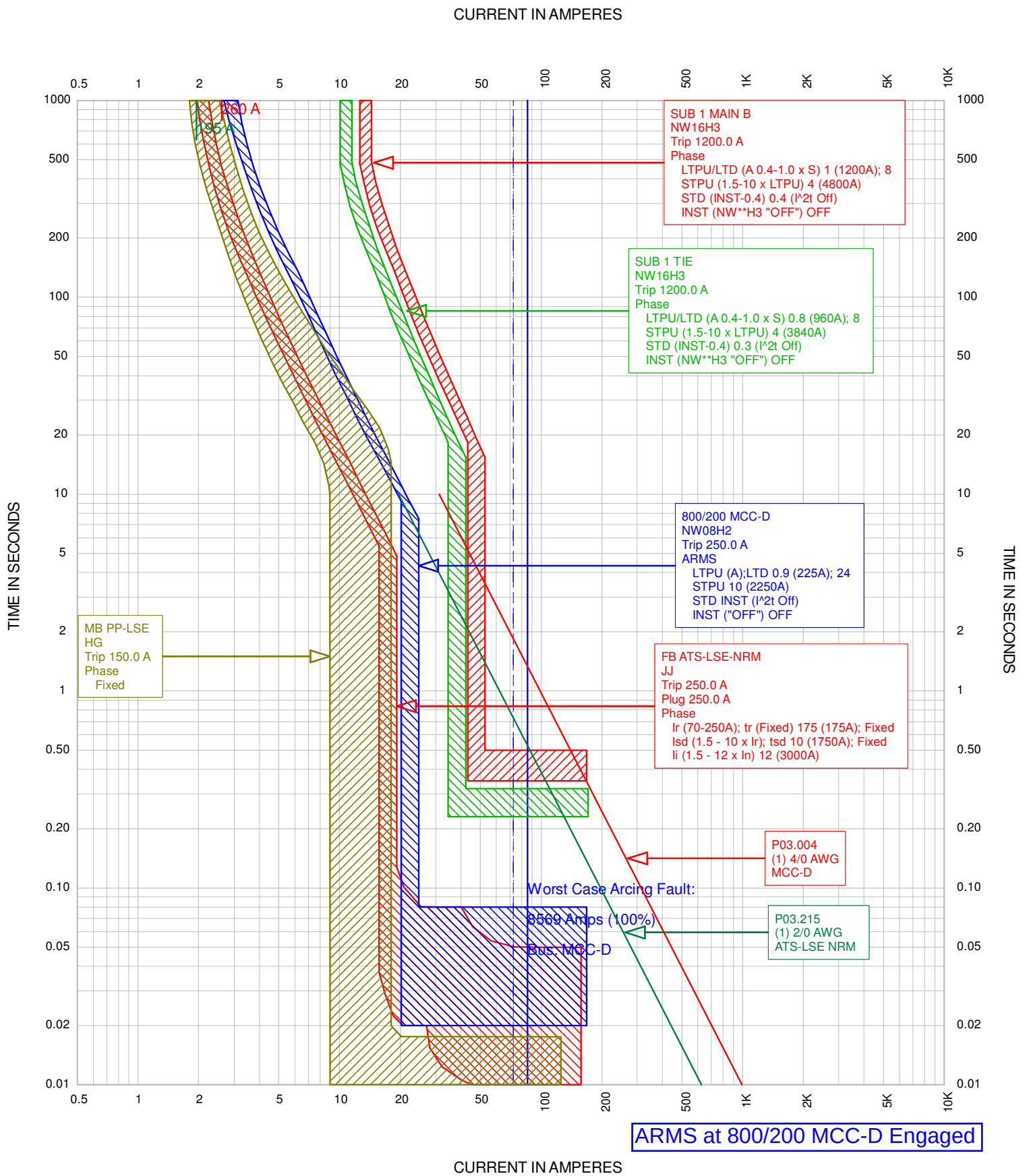
Current Scale x 100

Reference Voltage: 480

December 16, 2015 5:01 PM

AAWWTP

S1B_MCC-D



Online: TCC S1A,B_MCC-C,D

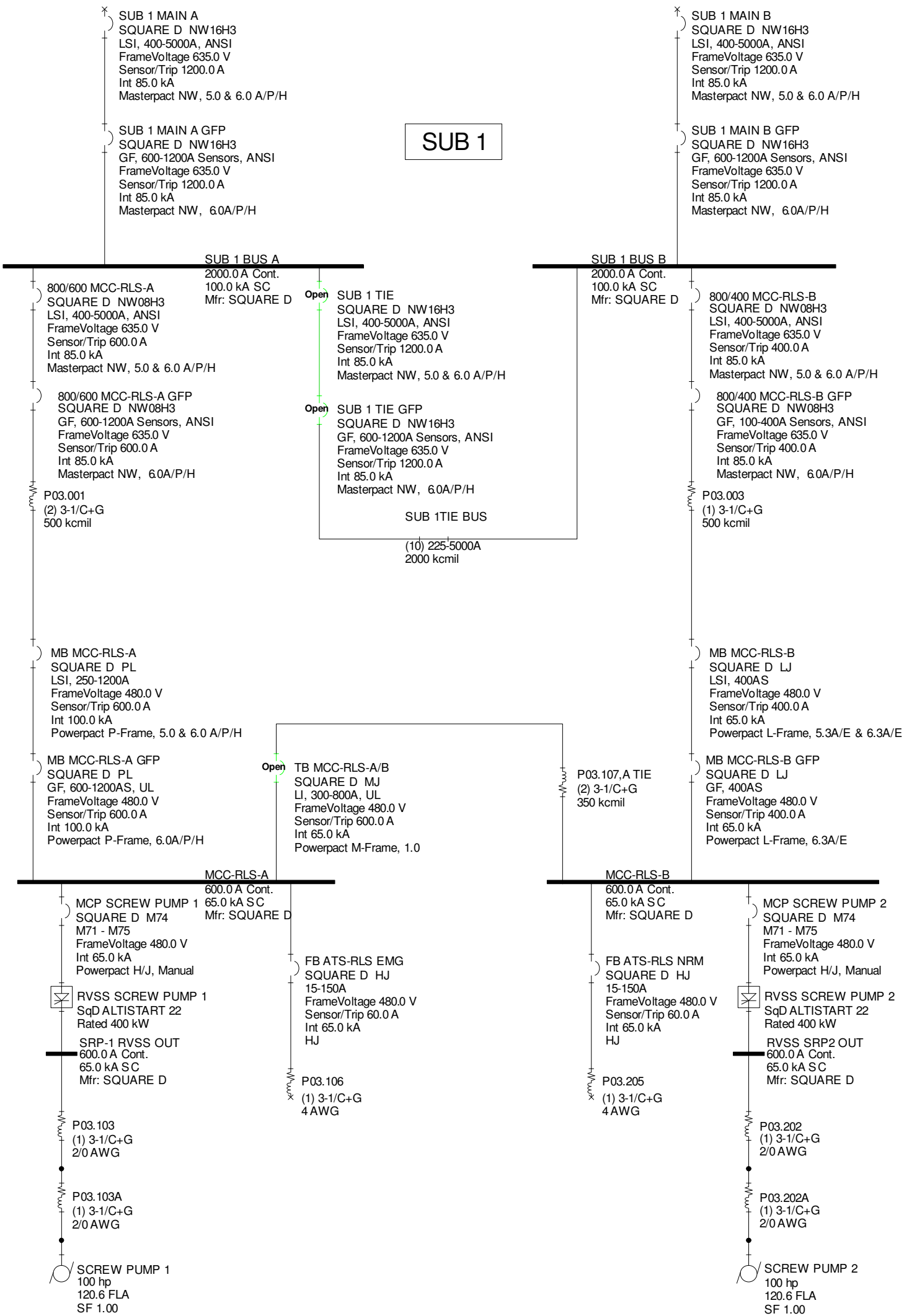
Current Scale x 100

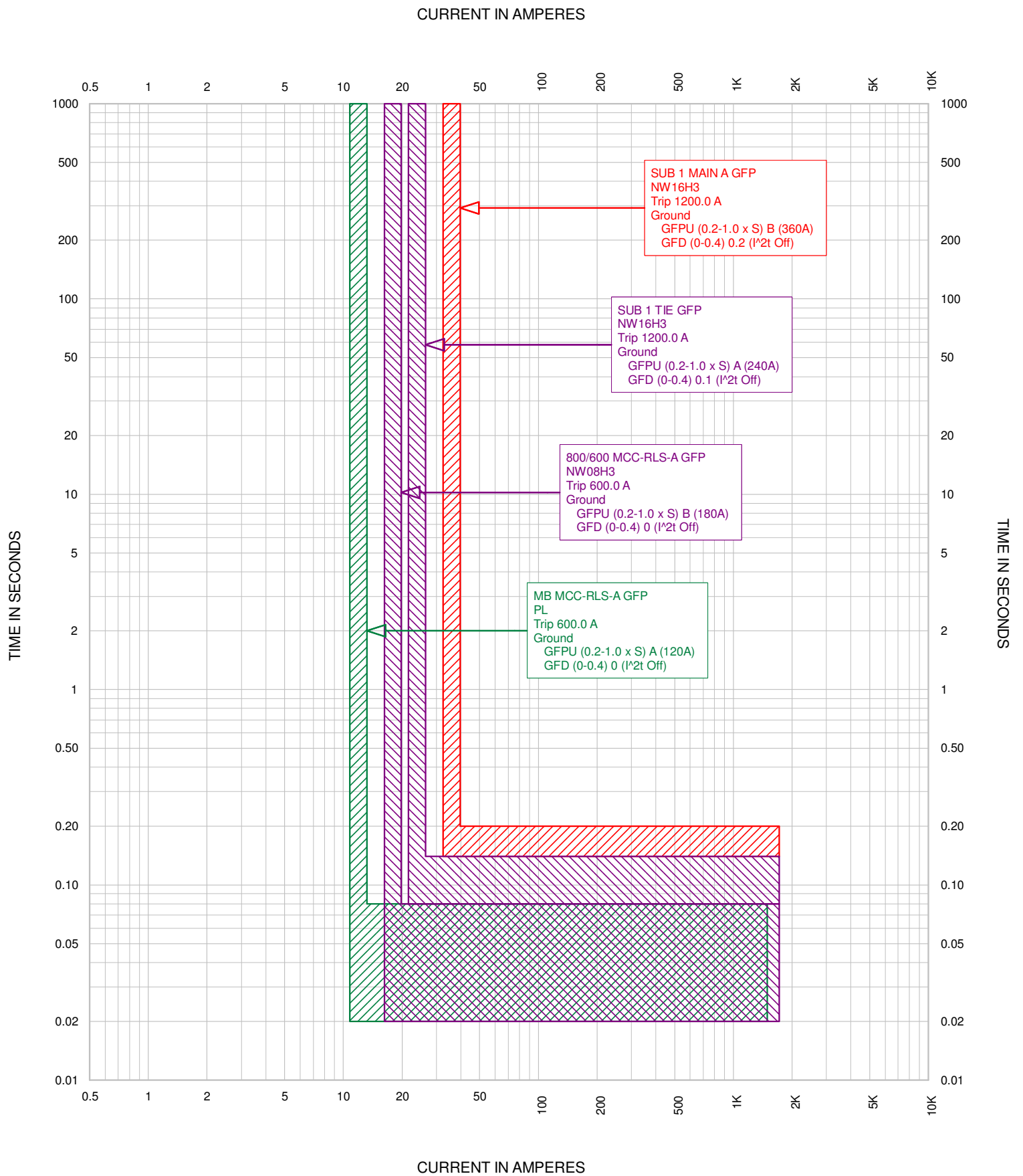
Reference Voltage: 480

December 18, 2015 4:53 PM

AAWWTP

S1B_MCC-D





Online: TCC S1A,B_MCC-RLS-A,B

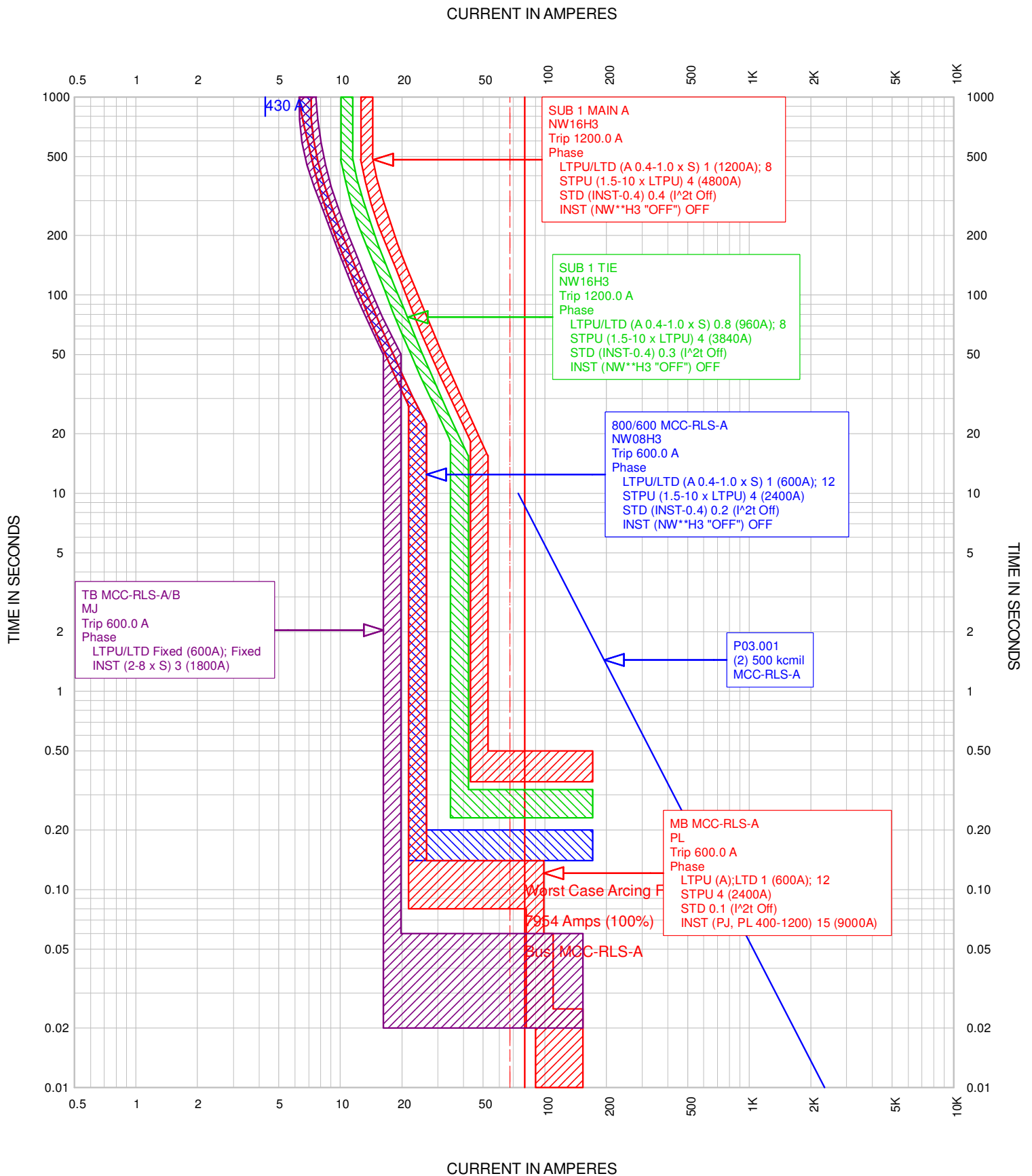
Current Scale x 10

Reference Voltage: 480

May 13, 2015 4:09 PM

AAWWTP

S1A_MCC-RLS-A GFP



Online: TCC S1A,B_MCC-RLS-A,B

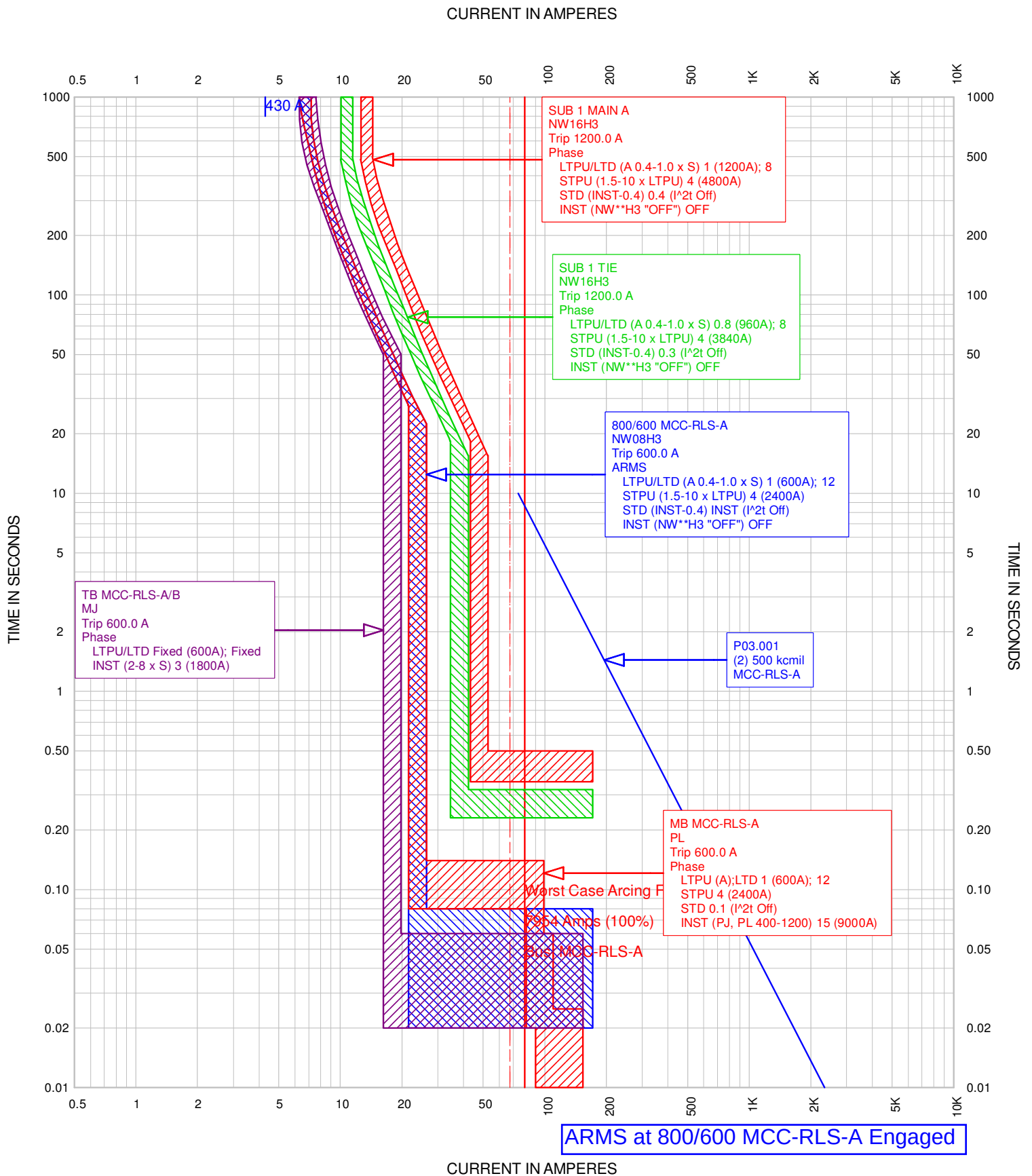
Current Scale x 100

Reference Voltage: 480

December 16, 2015 5:08 PM

AAWWTP

S1A_MCC-RLS-A



Online: TCC S1A,B_MCC-RLS-A,B

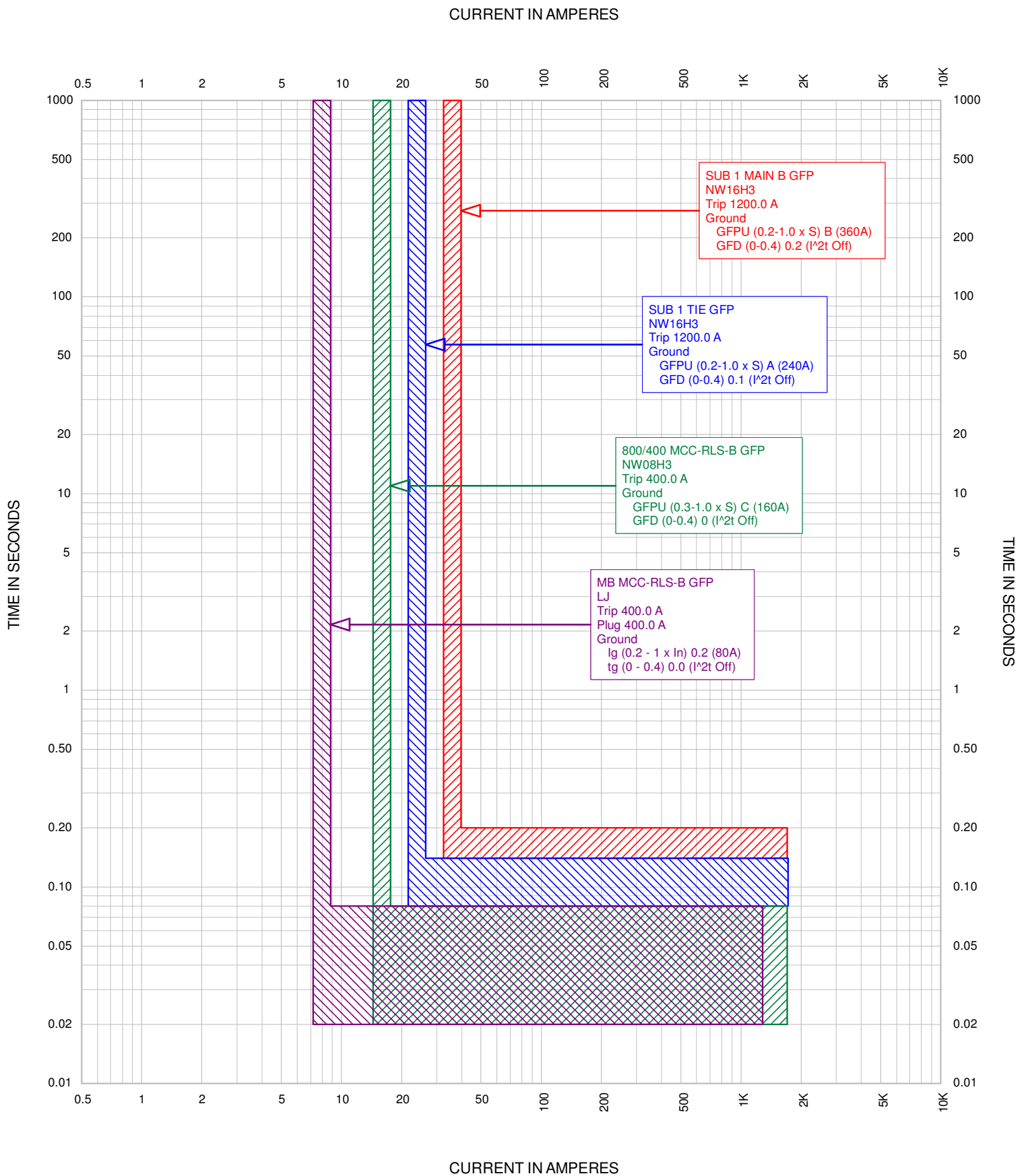
Current Scale x 100

Reference Voltage: 480

December 18, 2015 4:56 PM

AAWWTP

S1A_MCC-RLS-A



Online: TCC S1A,B_MCC-RLS-A,B

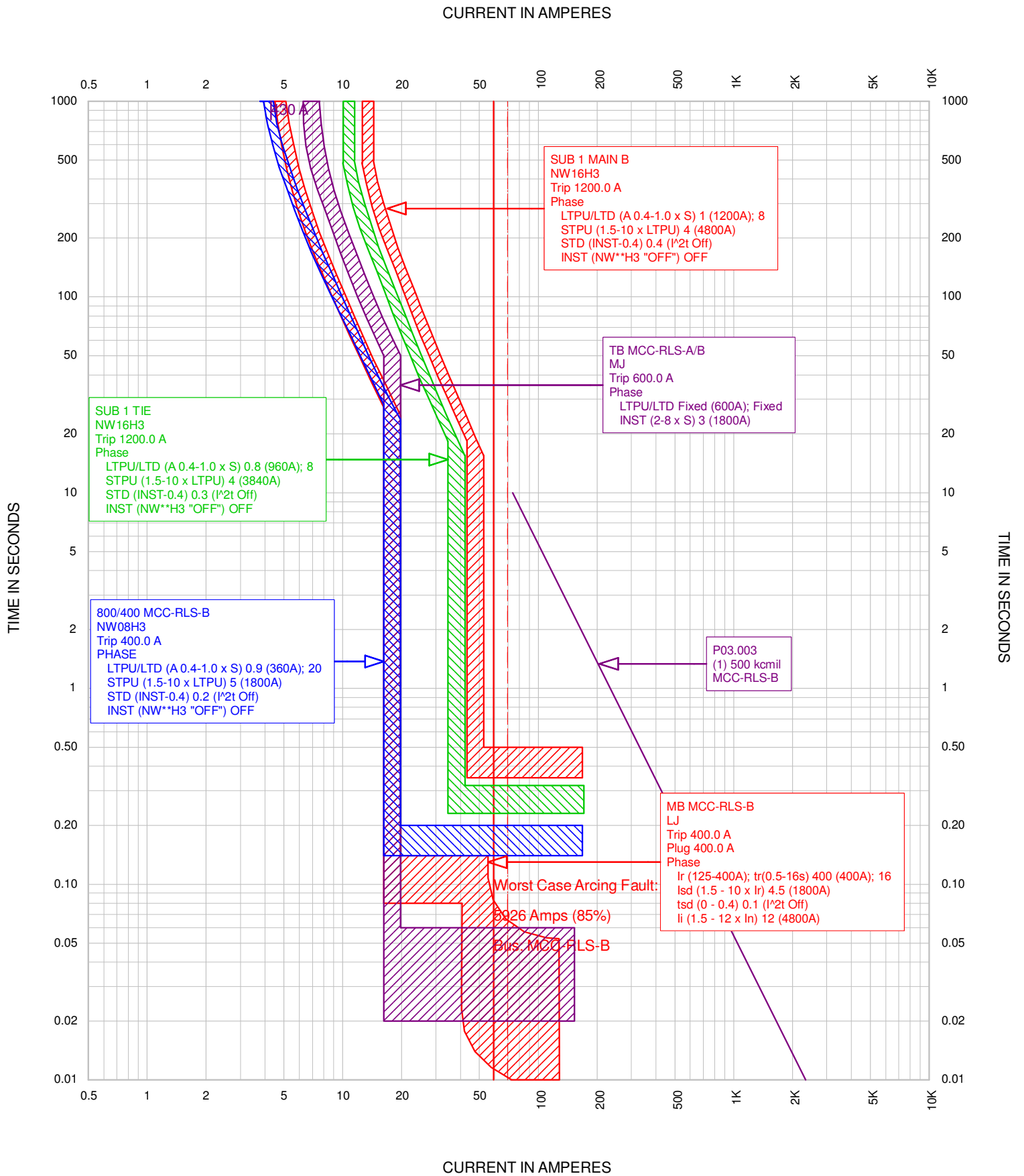
Current Scale x 10

Reference Voltage: 480

May 13, 2015 4:14 PM

AAWWTP

S1B_MCC-RLS-B GFP



Online: TCC S1A,B_MCC-RLS-A,B

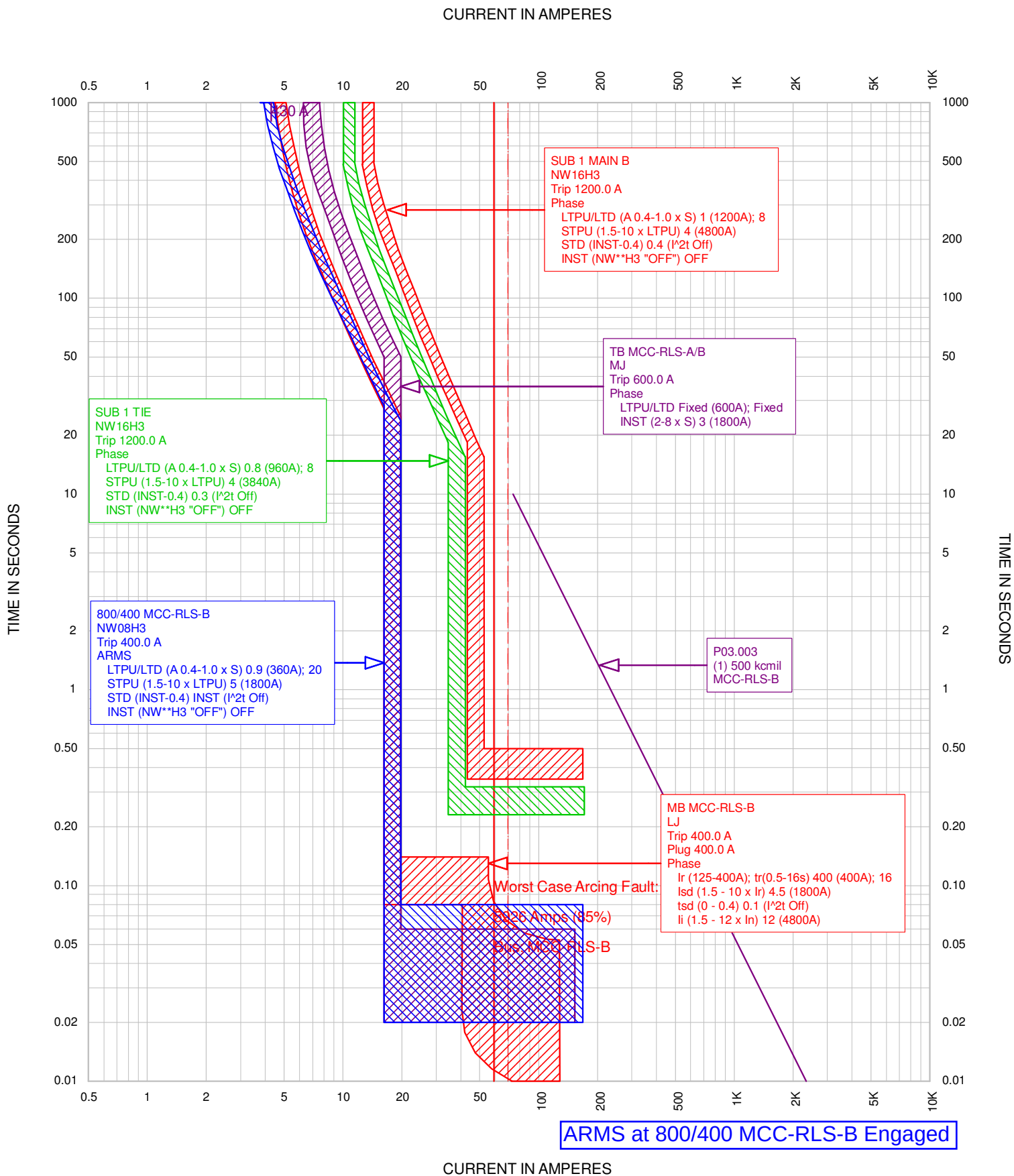
Current Scale x 100

Reference Voltage: 480

December 16, 2015 5:13 PM

AAWWTP

S1B_MCC-RLS-B



Online: TCC S1A,B_MCC-RLS-A,B

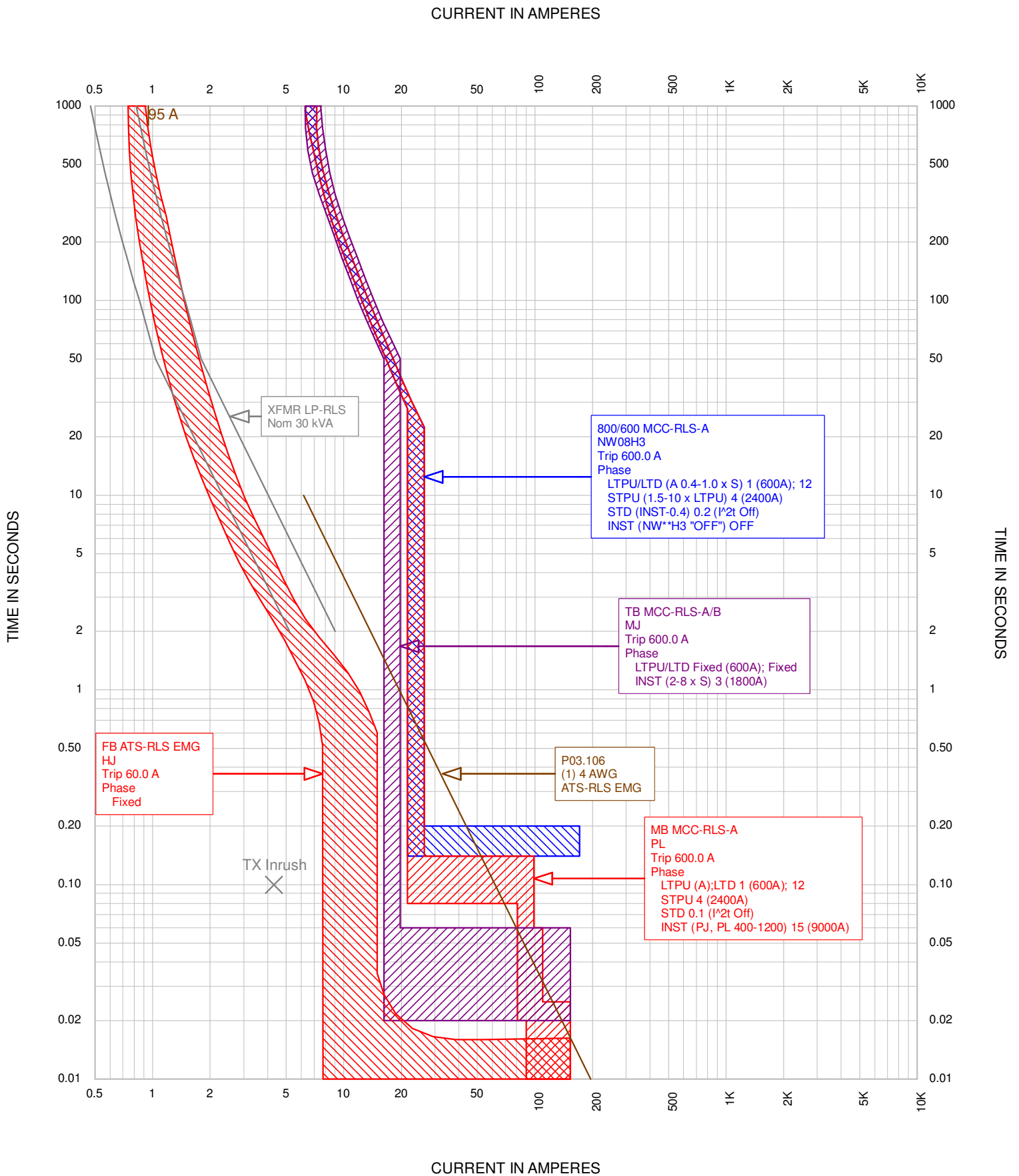
Current Scale x 100

Reference Voltage: 480

December 18, 2015 5:00 PM

AAWWTP

S1B_MCC-RLS-B



Online: TCC S1A,B_MCC-RLS-A,B

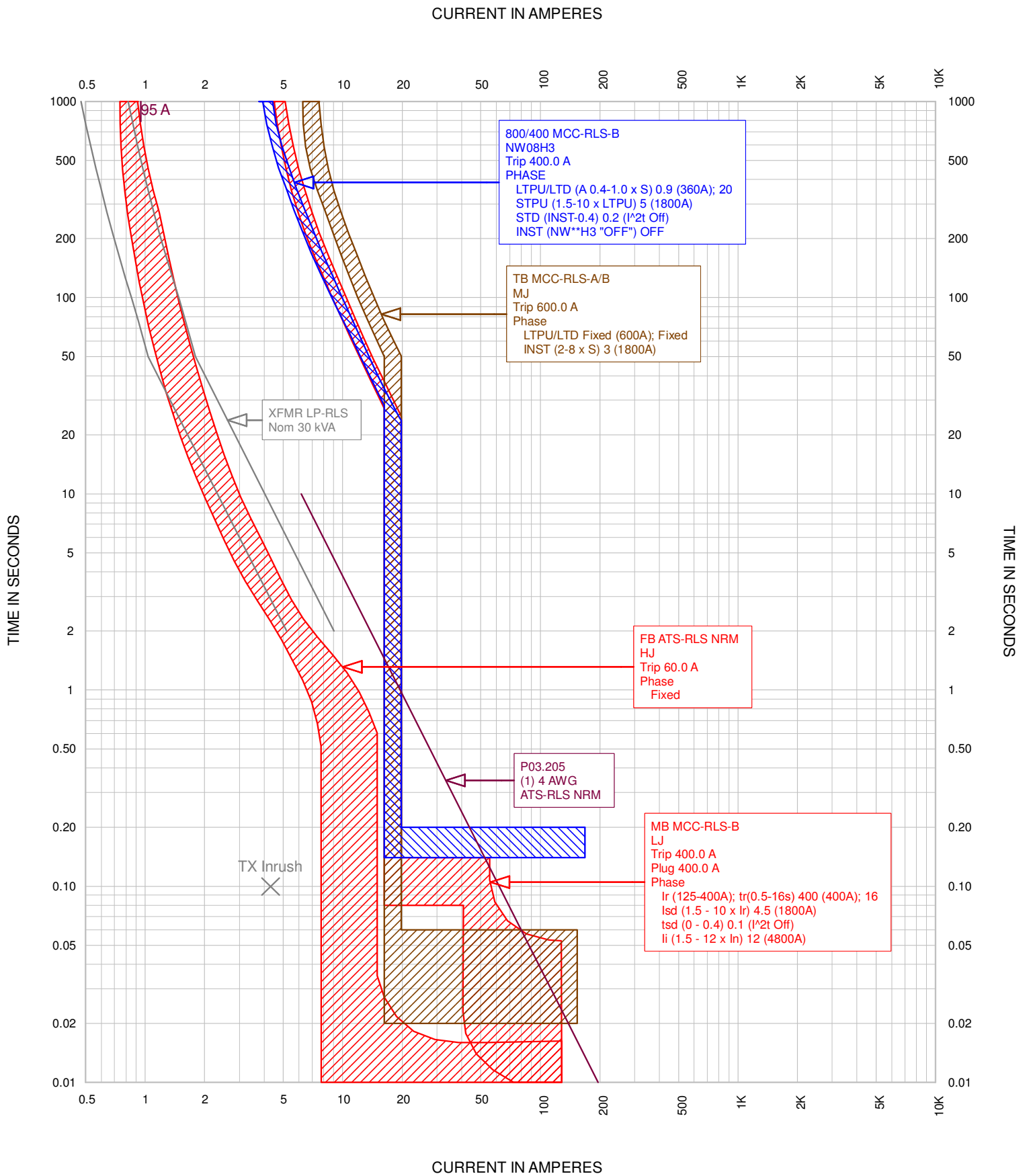
Current Scale x 100

Reference Voltage: 480

December 16, 2015 5:20 PM

AAWWTP

MCC-RLS-A_ATS-RLS-EMG



Online: TCC S1A,B_MCC-RLS-A,B

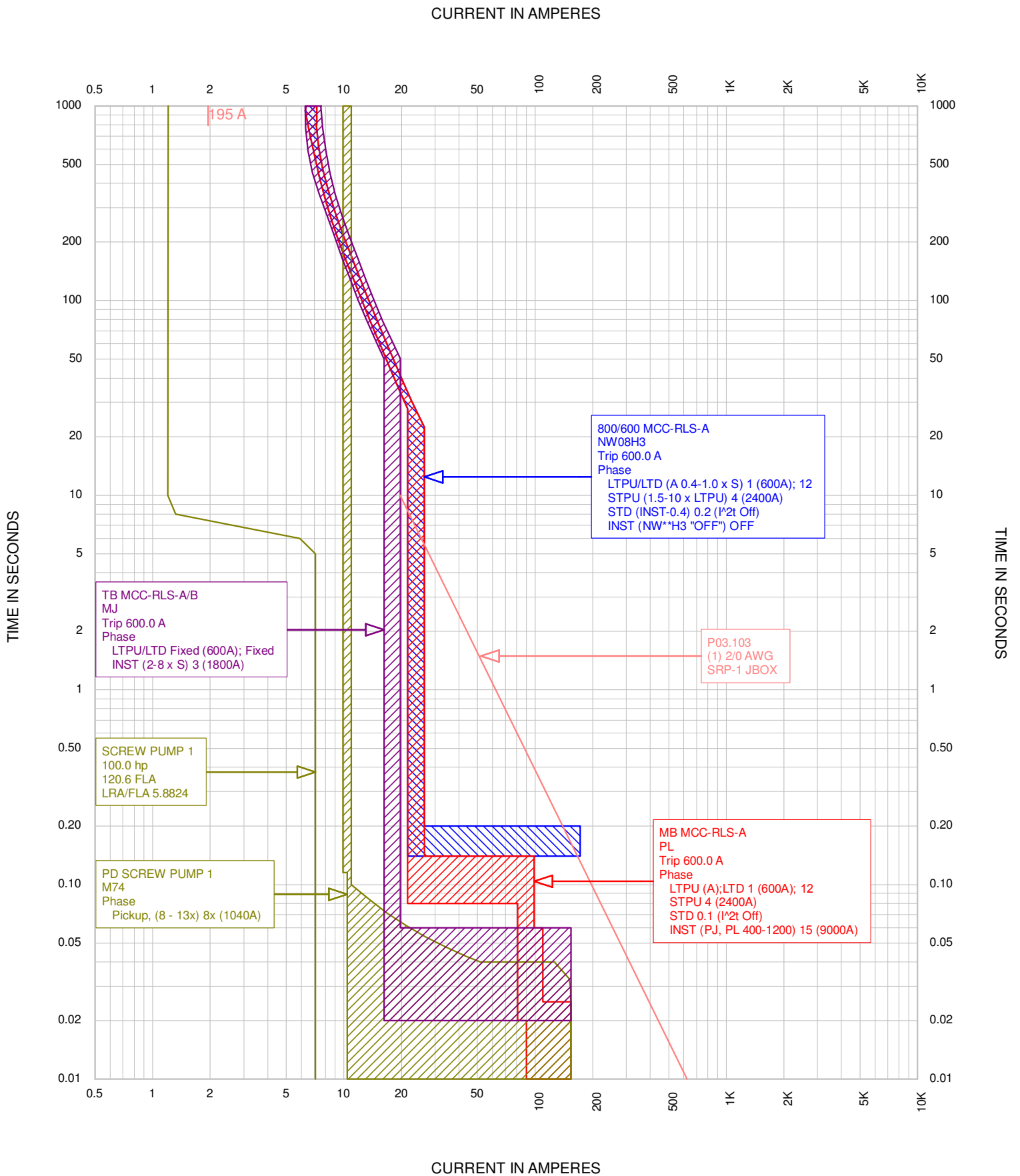
Current Scale x 100

Reference Voltage: 480

December 16, 2015 5:30 PM

AAWWTP

MCC-RLS-B_ATS-RLS-NRM



Online: TCC S1A,B_MCC-RLS-A,B

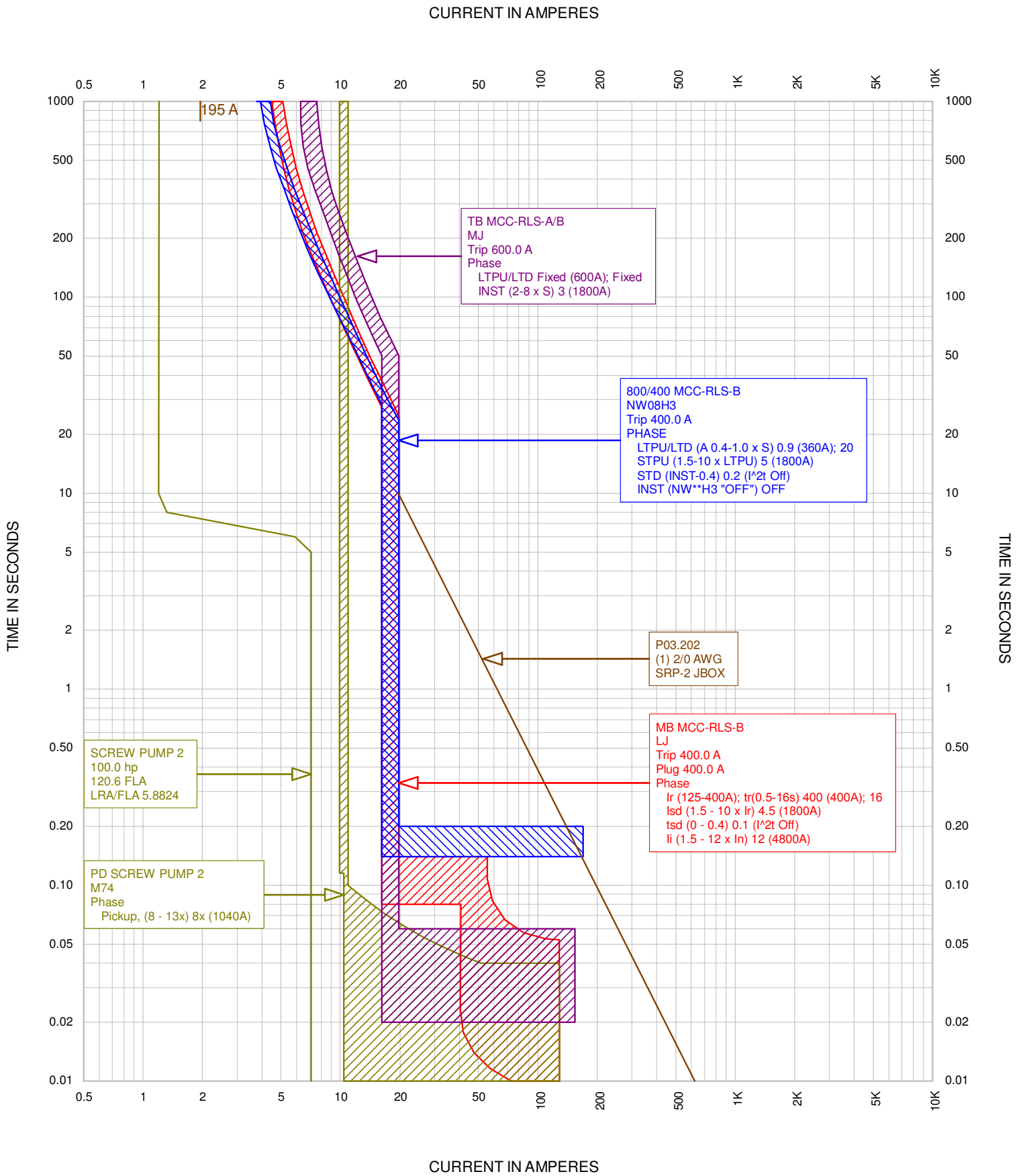
Current Scale x 100

Reference Voltage: 480

December 2, 2015 12:41 PM

AAWWTP

MCC-RLS-A_SP1



Online: TCC S1A,B_MCC-RLS-A,B

Current Scale x 100

Reference Voltage: 480

December 16, 2015 2:05 PM

AAWWTP

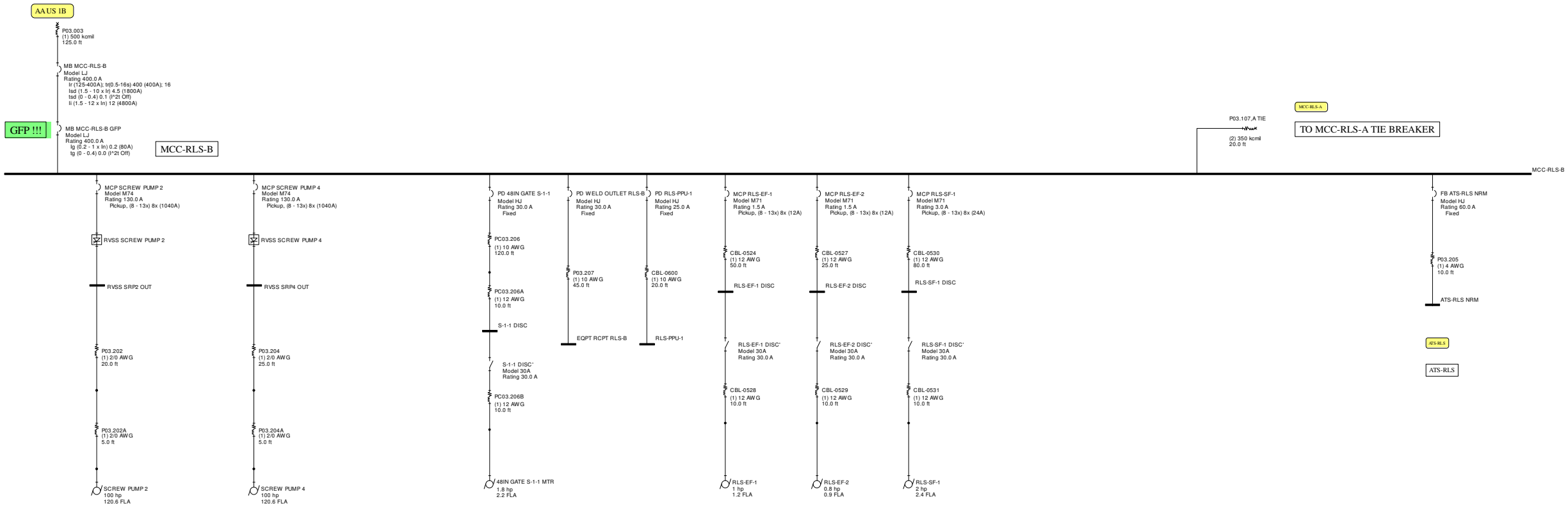
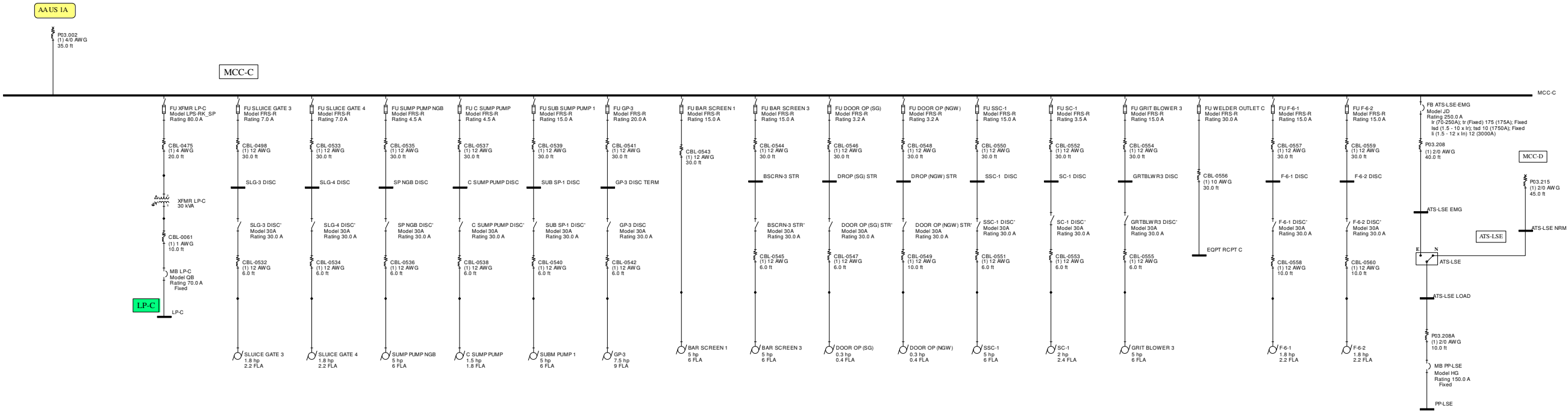
MCC-RLS-B_SP2



ANN ARBOR WASTEWATER TREATMENT PLANT
PLANT FACILITIES RENOVATION
POWER DISTRIBUTION SYSTEM STUDY



AA MCC-D,RLS-A
March 8, 2017
8:47 AM



ANN ARBOR WASTEWATER TREATMENT PLANT
PLANT FACILITIES RENOVATION
POWER DISTRIBUTION SYSTEM STUDY



AA MCC-C,RLS-B

March 8, 2017
8:48 AM

3.4.4 Substation 2:

Online: TCC 52F12,22_S2A,B

TCC: 52F12 GFP

TCC: 52F12_S2A

TCC: 52F22 GFP

TCC: 52F22_S2B

Online: TCC S2A,B_MCC-E,F

TCC: S2A_MCC-E GFP

TCC: S2A_MCC-E_ScrPmp7

TCC: S2A_MCC-E_ScrPmp7 (ARMS Engaged)

TCC: S2B_MCC-F GFP

TCC: S2B_MCC-F_ScrPmp6

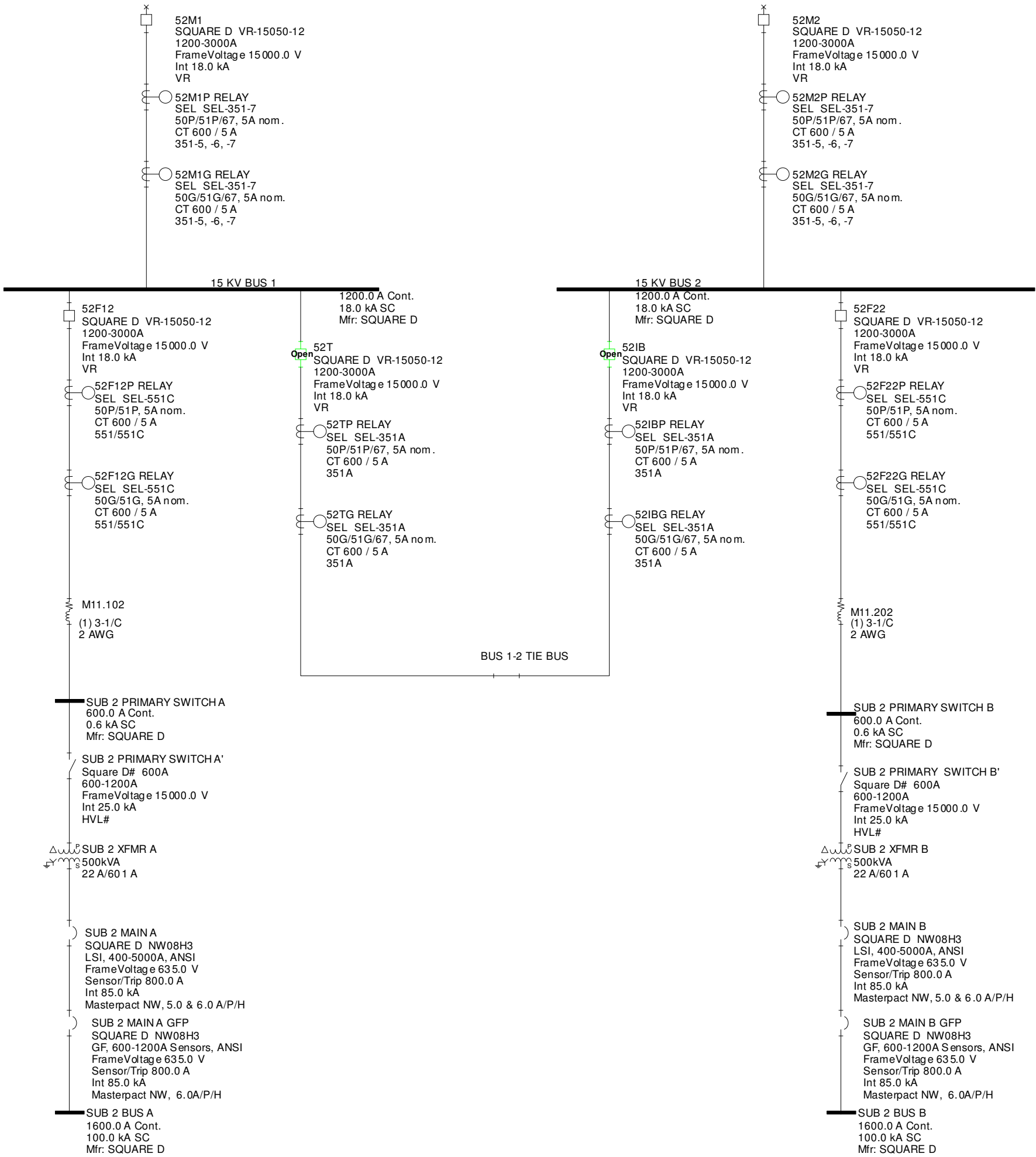
TCC: S2B_MCC-F_ScrPmp6 (ARMS Engaged)

Online: AA MCC-E (for MCP settings)

Online: AA MCC-F (for MCP settings)

x

x



x

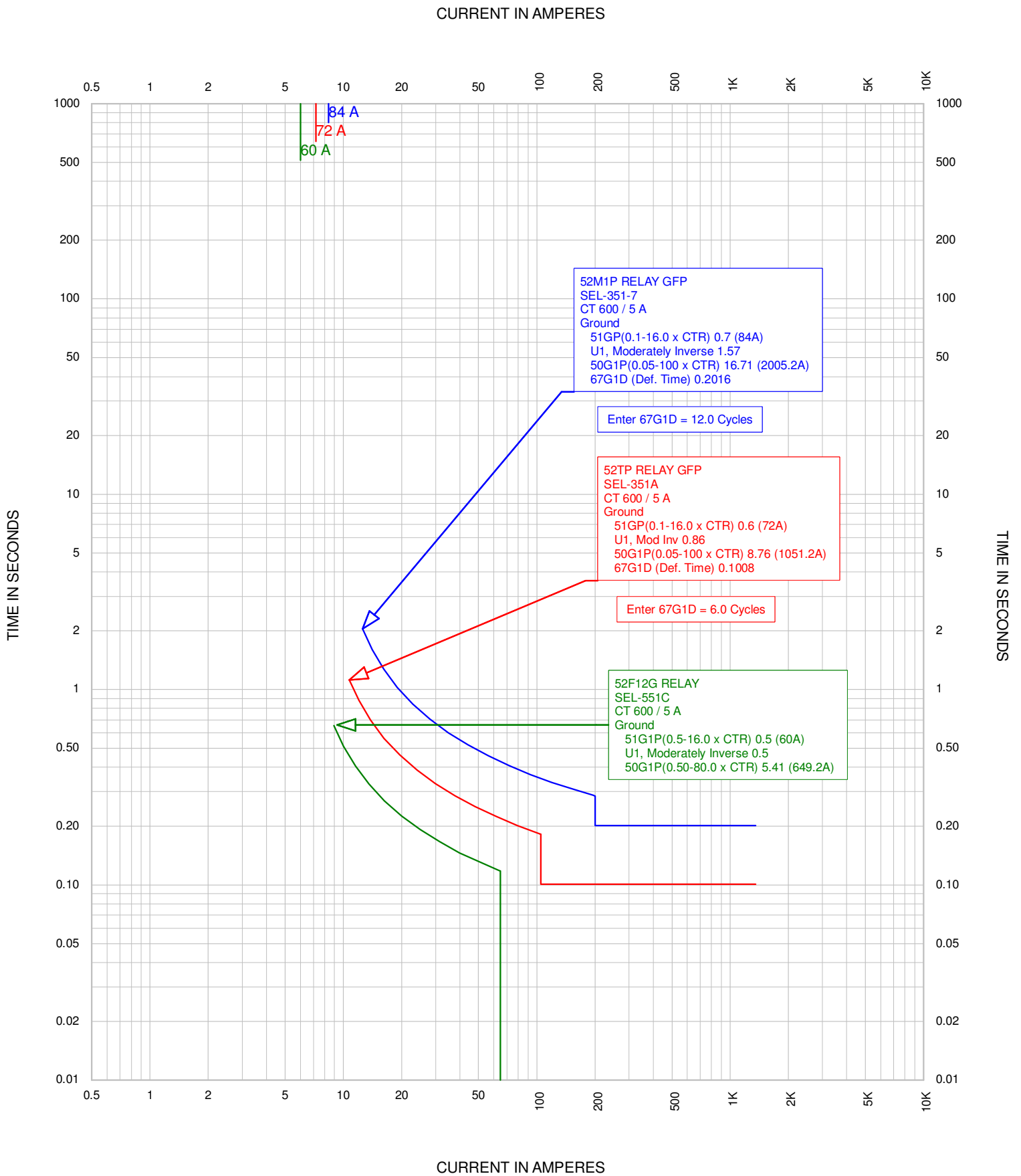
x

Online: TCC 52F12,22_S2A,B

April 1, 2016 3:58 PM

AAWWTP





Online: TCC 52F12,22_S2A,B

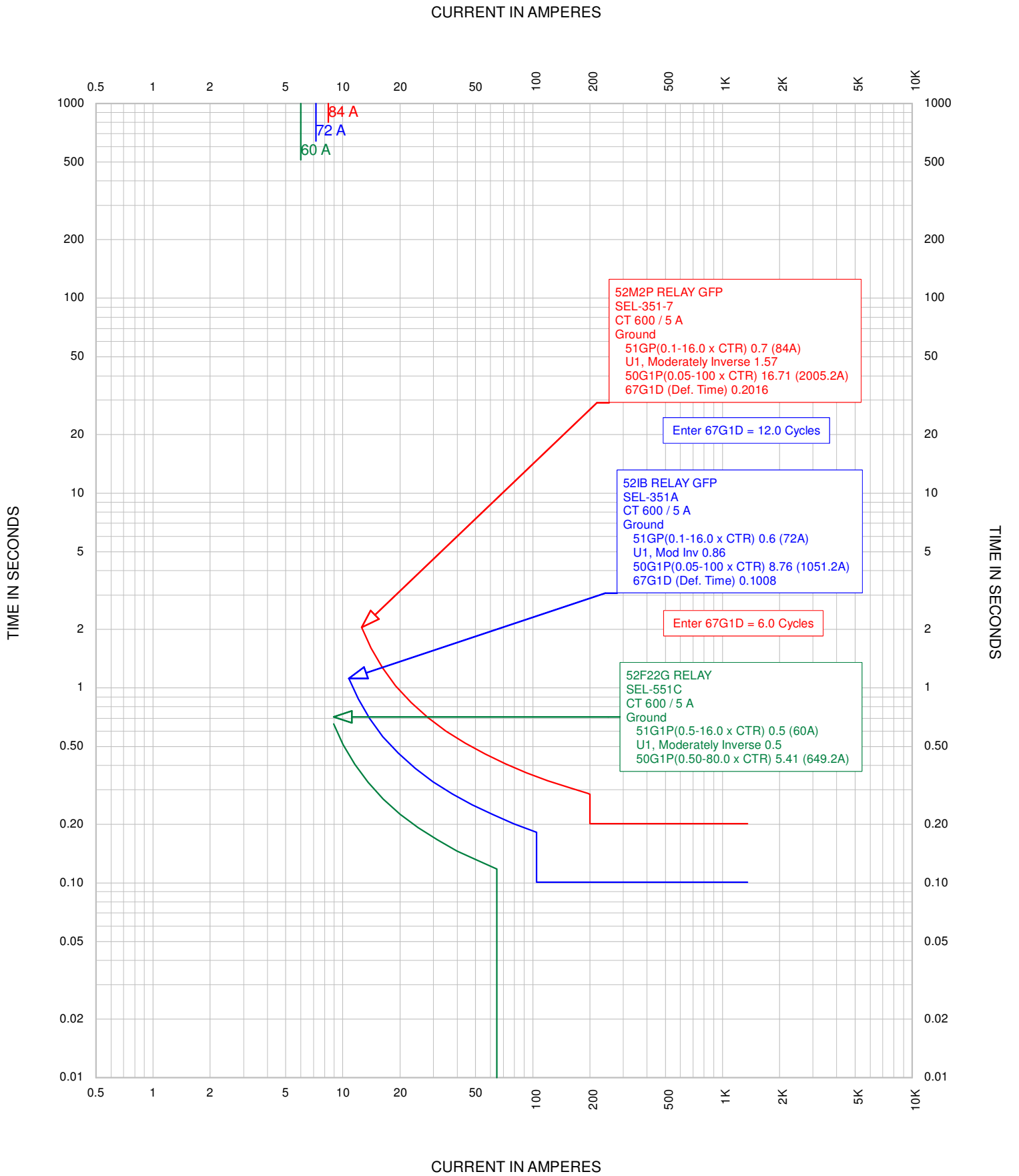
Current Scale x 10

Reference Voltage: 13200

May 20, 2015 3:19 PM

AAWWTP

52F12 GFP



Online: TCC 52F12,22_S2A,B

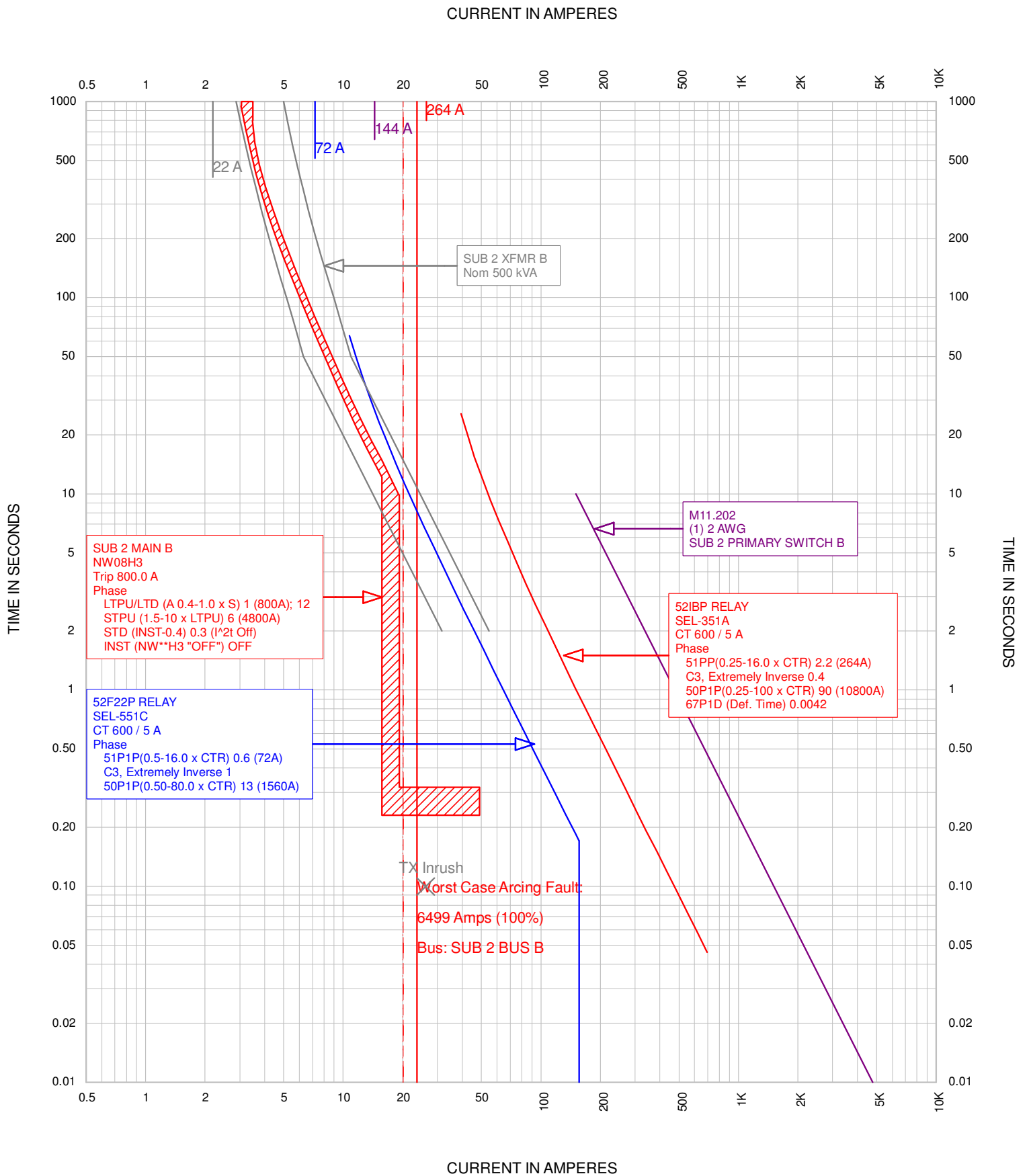
Current Scale x 10

Reference Voltage: 13200

May 20, 2015 3:23 PM

AAWWTP

52F22 GFP



Online: TCC 52F12,22_S2A,B

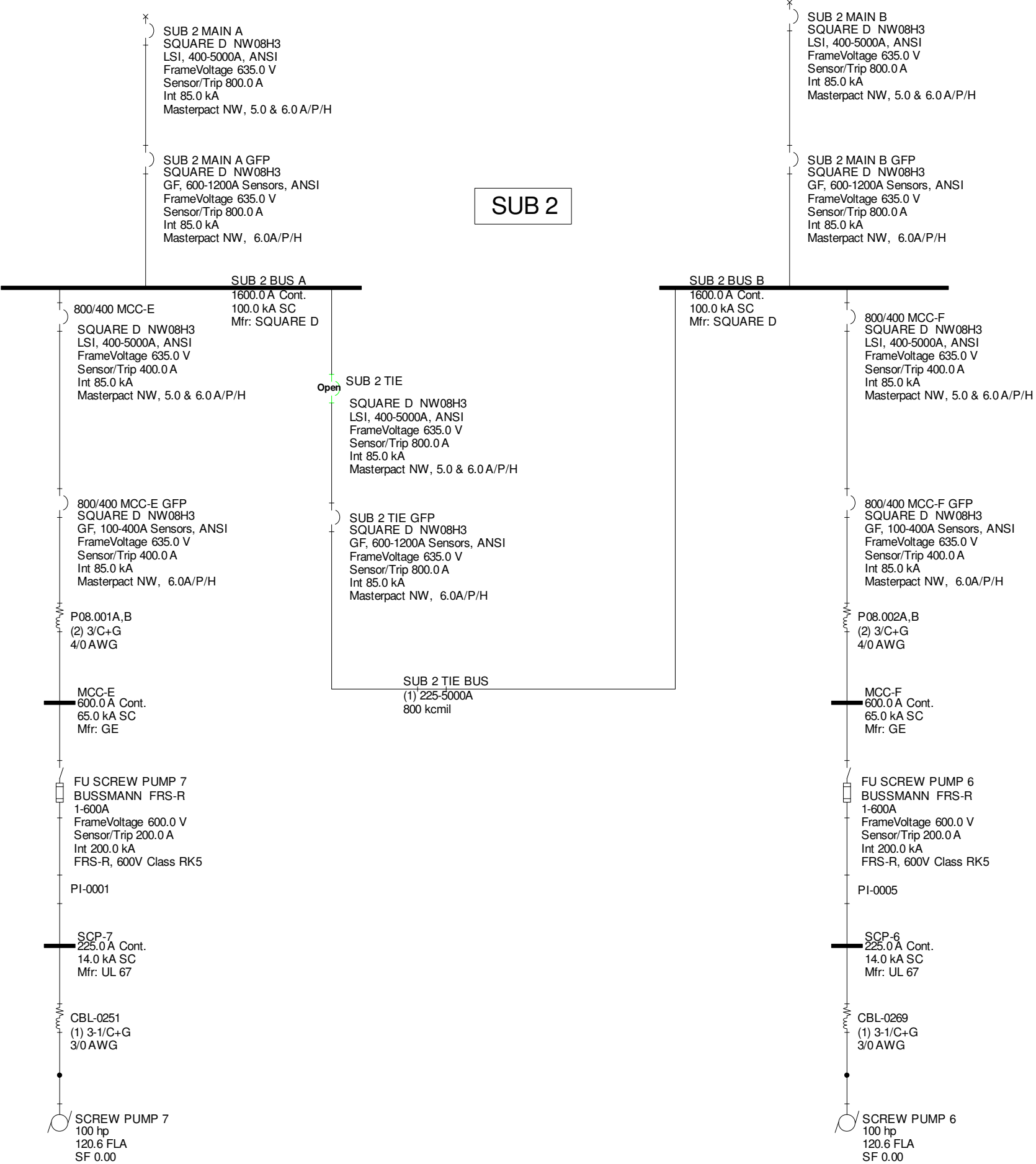
Current Scale x 10

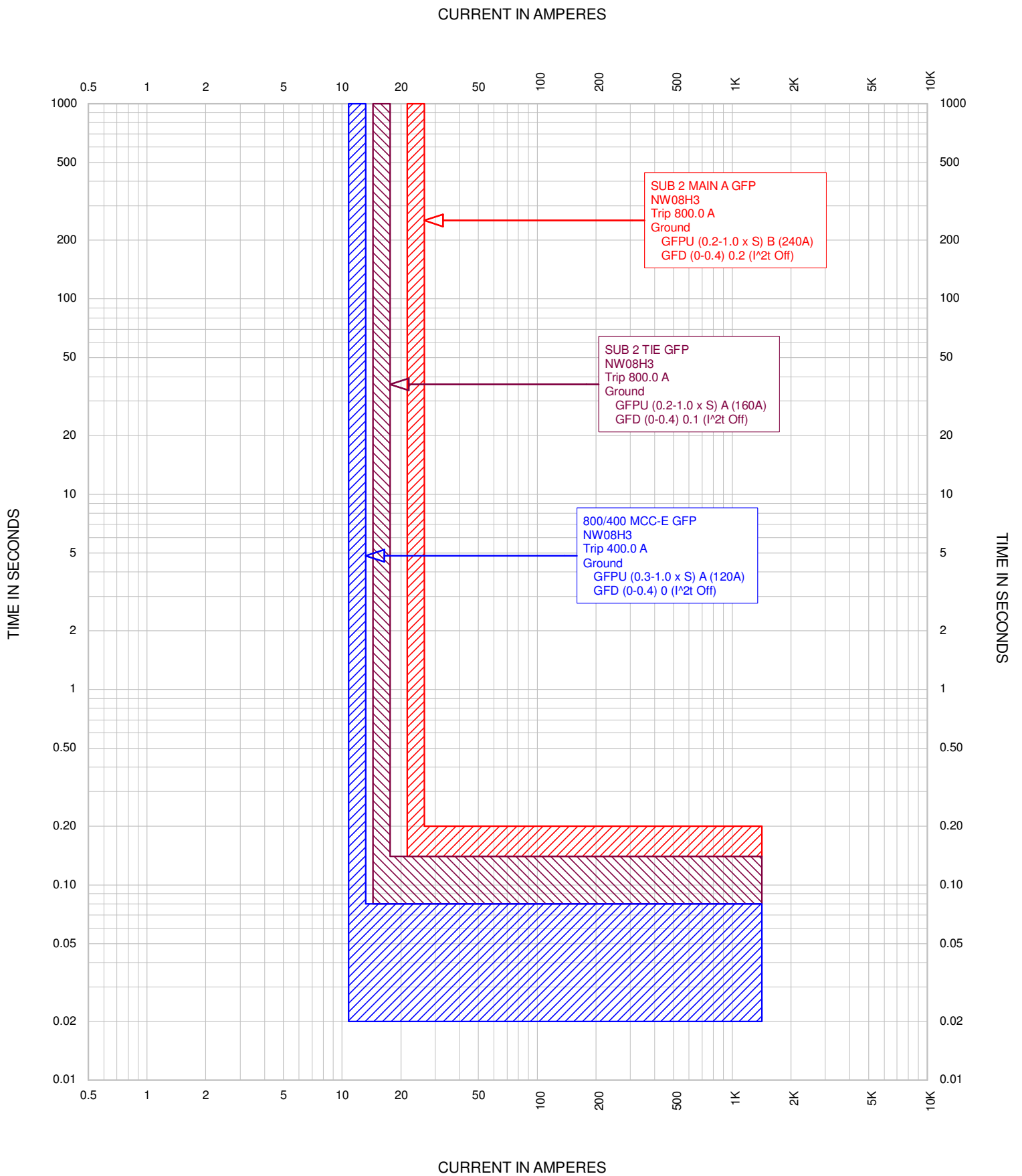
Reference Voltage: 13200

December 16, 2015 5:43 PM

AAWWTP

52F22_S2B





Online: TCC S2A,B_MCC-E,F

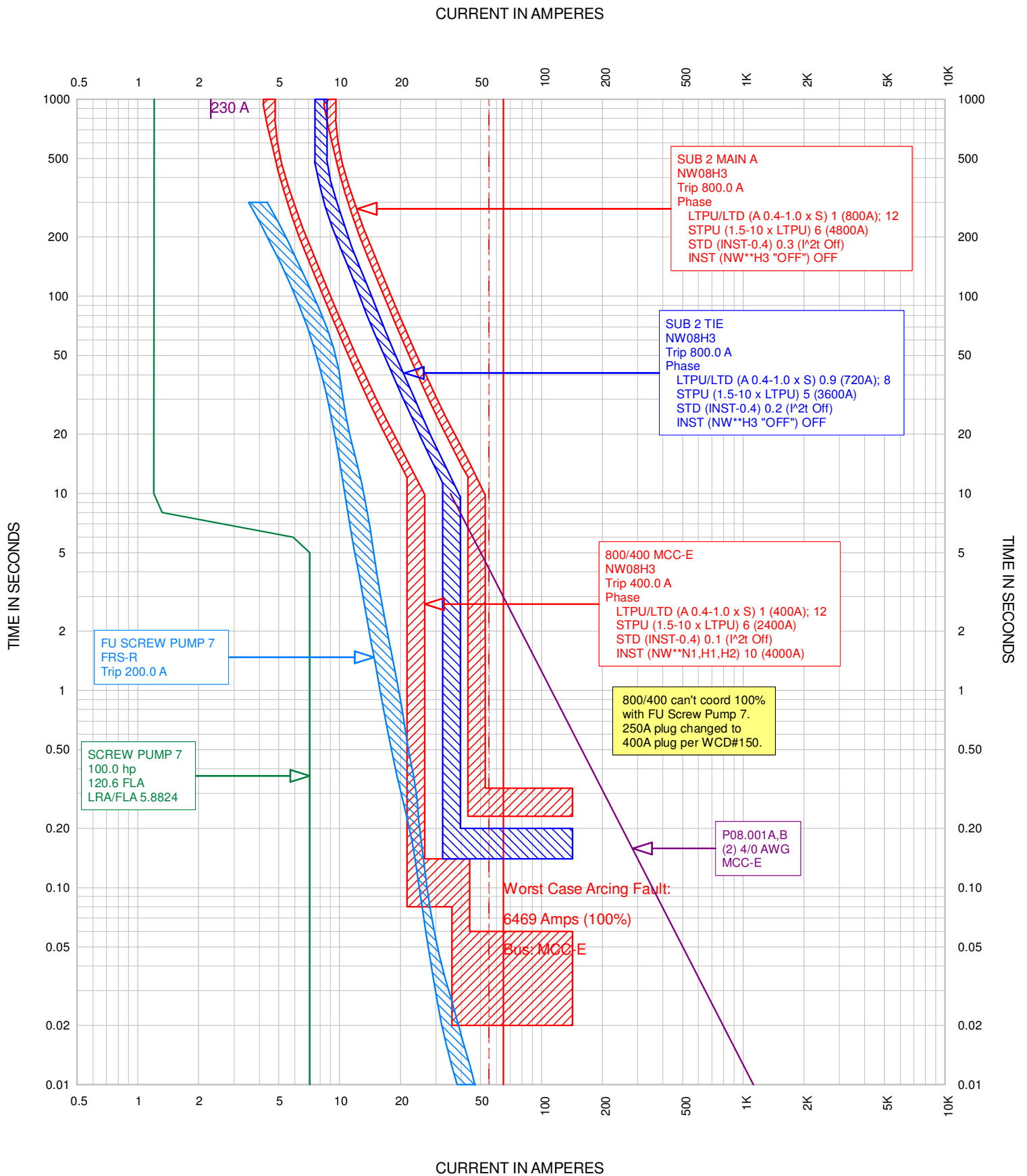
December 17, 2015 4:48 PM

Current Scale x 10

AAWWTP

Reference Voltage: 480

S2A_MCC-E GFP



Online: TCC S2A,B_MCC-E,F

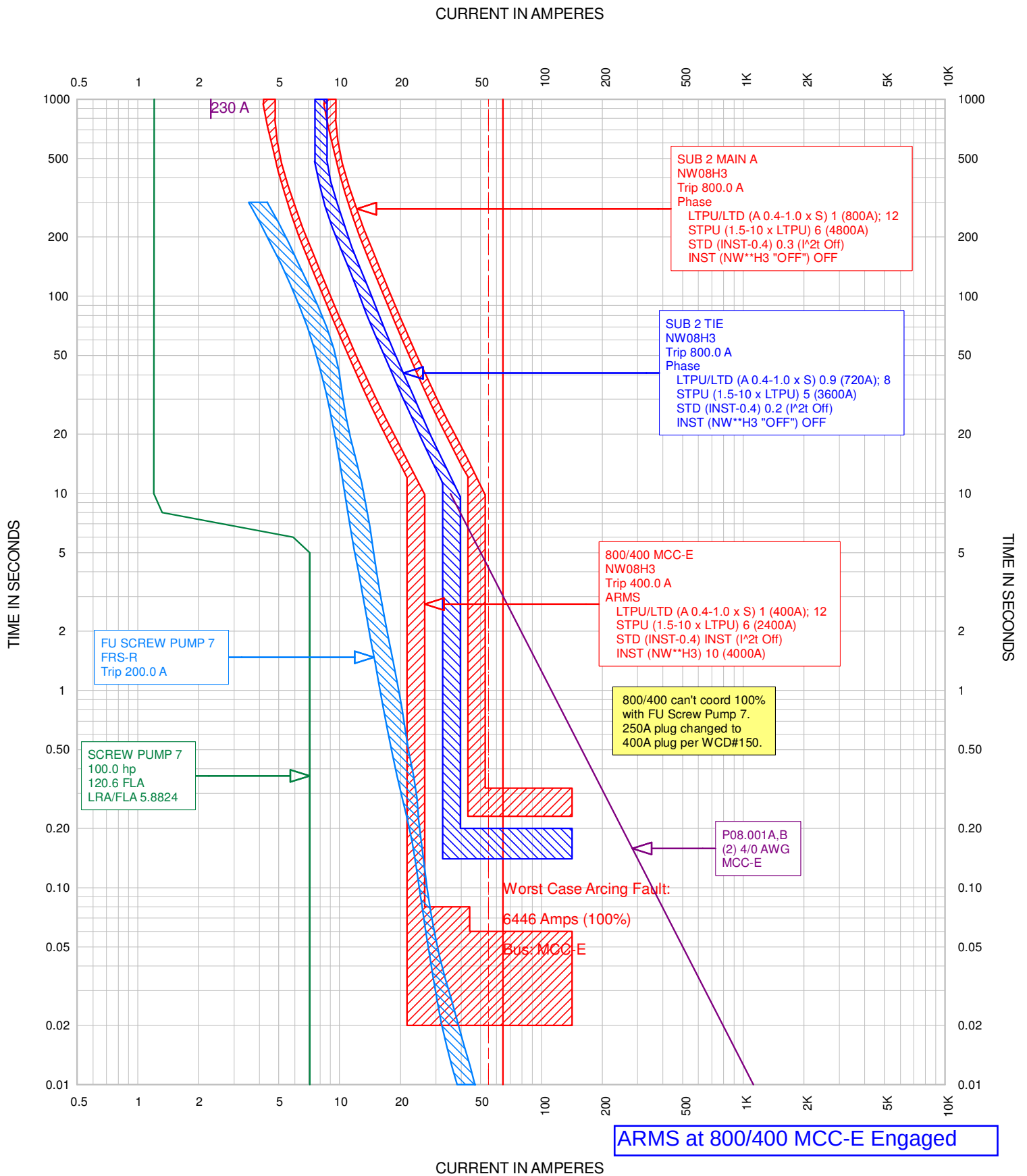
November 20, 2015 1:05 PM

Current Scale x 100

AAWWTP

Reference Voltage: 480

S2A_MCC-E_ScrPmp7



Online: TCC S2A,B_MCC-E,F

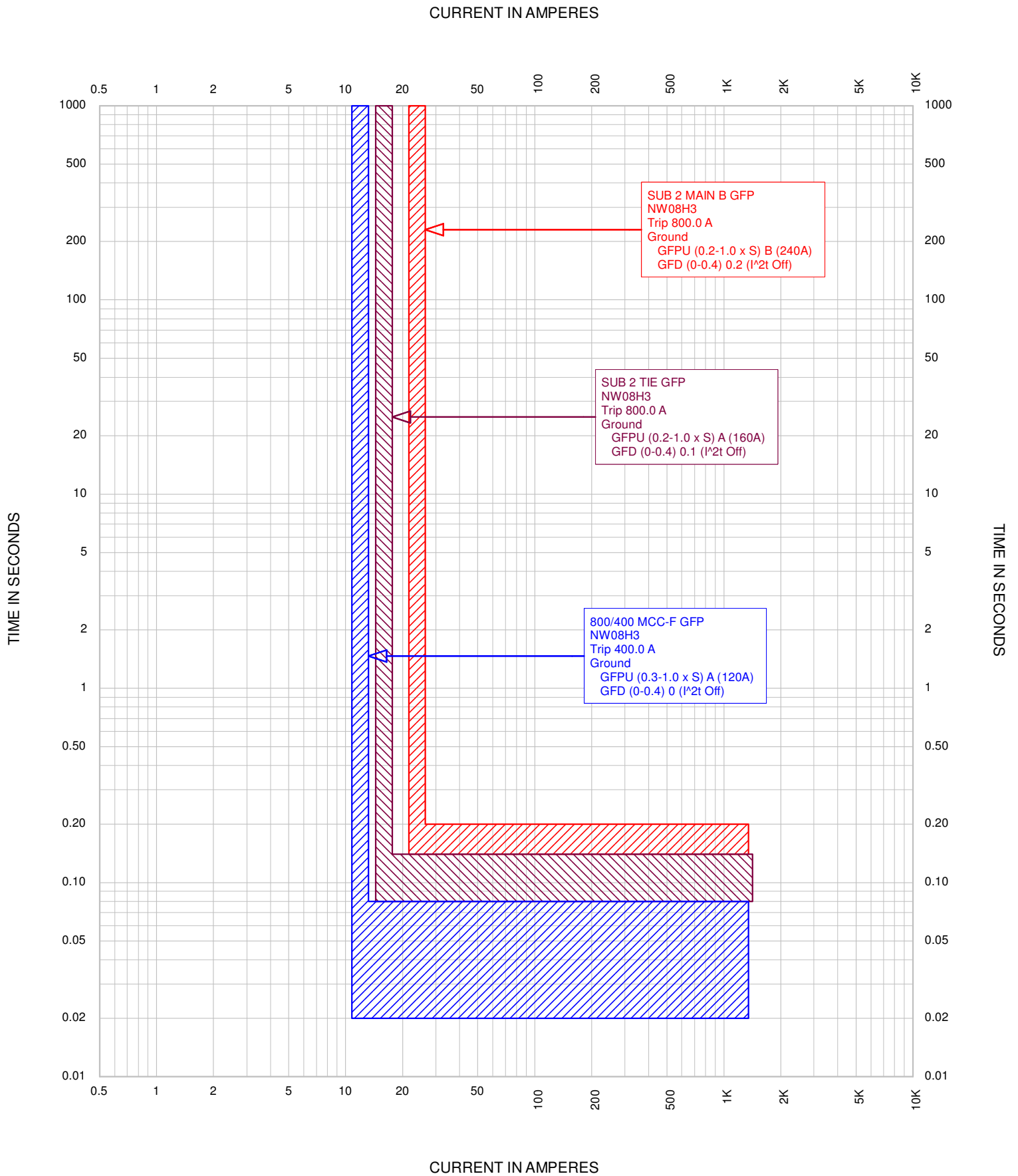
Current Scale x 100

Reference Voltage: 480

December 18, 2015 5:12 PM

AAWWTP

S2A_MCC-E_ScrPmp7



Online: TCC S2A,B_MCC-E,F

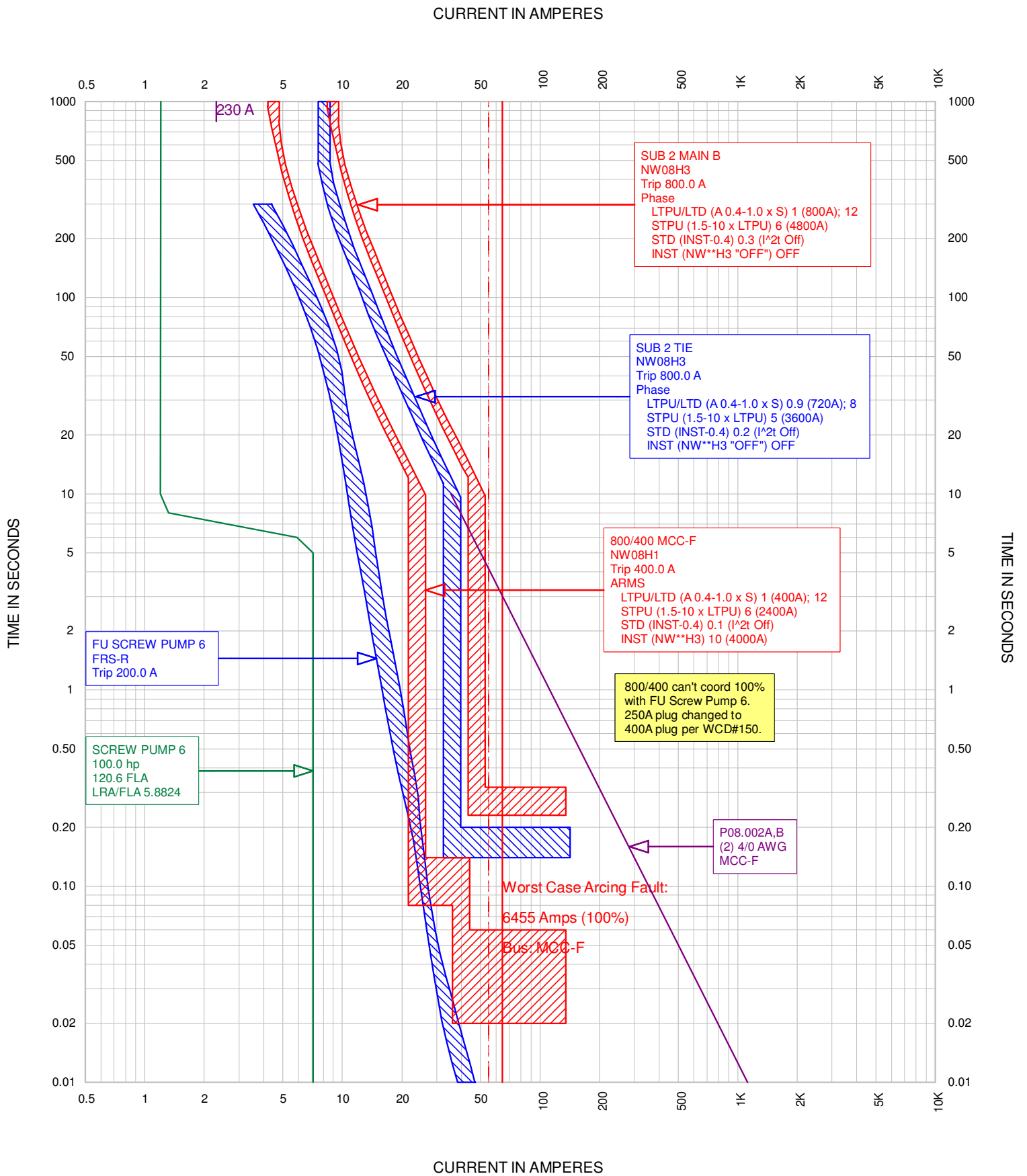
Current Scale x 10

Reference Voltage: 480

December 17, 2015 4:49 PM

AAWWTP

S2B_MCC-F GFD



Online: TCC S2A,B_MCC-E,F

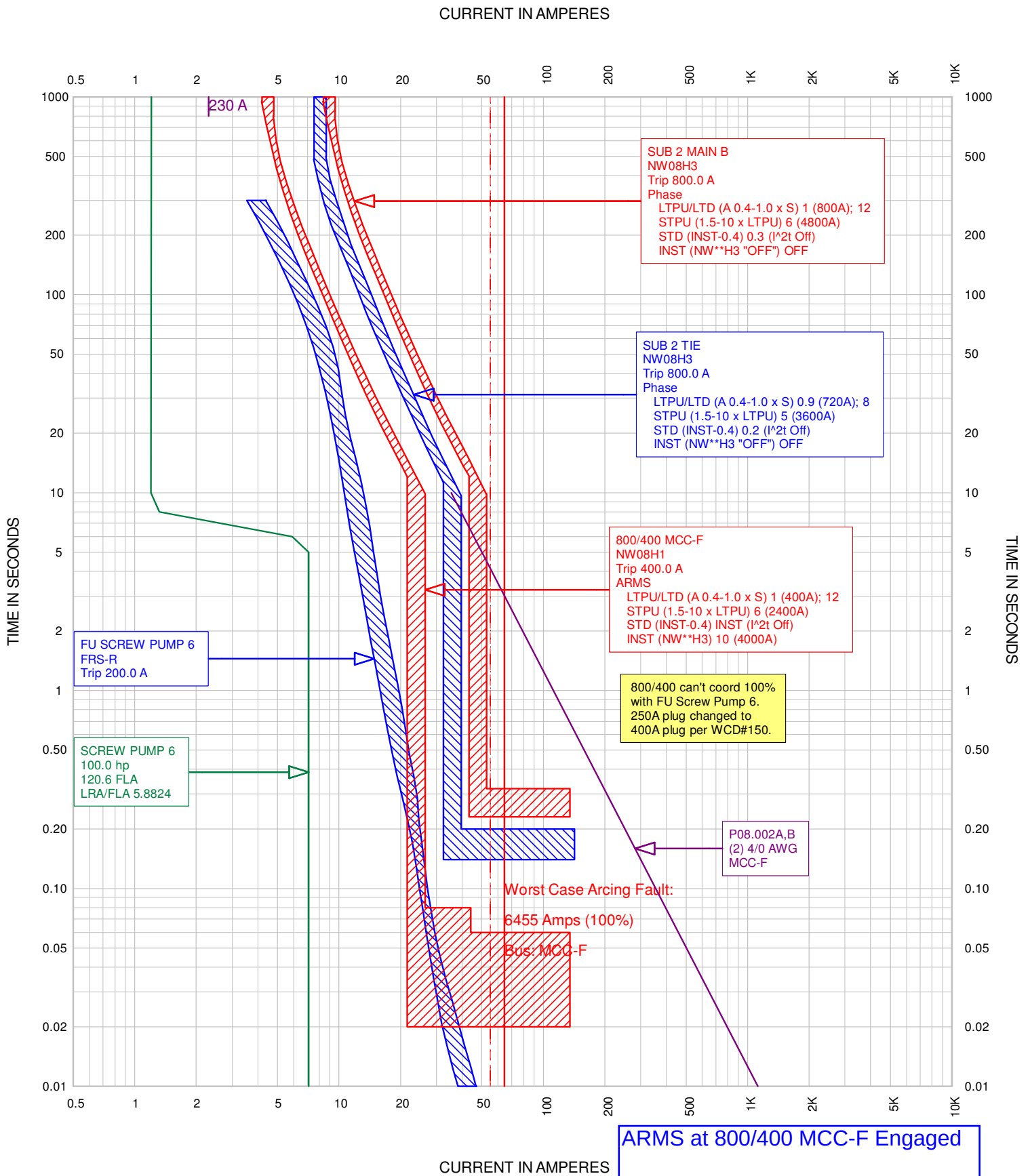
Current Scale x 100

Reference Voltage: 480

December 17, 2015 1:41 PM

AAWWTP

S2B_MCC-F_ScrPmp6



Online: TCC S2A,B_MCC-E,F

December 18, 2015 5:10 PM

Current Scale x 100

AAWWTP

Reference Voltage: 480

S2B_MCC-F_ScrPmp6



ANN ARBOR WASTEWATER TREATMENT PLANT PLANT FACILITIES RENOVATION POWER DISTRIBUTION SYSTEM STUDY



AA MCC-E



ANN ARBOR WASTEWATER TREATMENT PLANT
PLANT FACILITIES RENOVATION
POWER DISTRIBUTION SYSTEM STUDY



AA MCC-E

March 1, 2017, 4:17 PM 137

3.4.5 Substation 3:

Online: TCC 52F13,23_S3A,B

TCC: 52F13 GFP

TCC: 52F13_S3A

TCC: 52F23 GFP

TCC: 52F23_S3B

Online: TCC S3A,B_WBB-A,B

TCC: S3A_WBB-A GFP

TCC: S3A_WBB-A

TCC: S3A_WBB-A (ARMS Engaged)

TCC: S3B_WBB-B GFP

TCC: S3B_WBB-B

TCC: S3B_WBB-B (ARMS Engaged)

TCC: MCC-WBB-A,B_PP-WBB-A-GFP

TCC: MCC-WBB-A_ATS-WBB-EMG

TCC: MCC-WBB-B_ATS-WBB-NRM

TCC: MCC-WBB-A_PAB-W1

TCC: MCC-WBB-A_PAB-W3

TCC: MCC-WBB-B_PAB-W2

Online: TCC S3A,B_WPB-A,B

TCC: S3A_WPB-A GFP

TCC: S3A_WPB-A

TCC: S3A_WPB-A (ARMS Engaged)

TCC: S3B_WPB-B GFP

TCC: S3B_WPB-B

TCC: S3B_WPB-B (ARMS Engaged)

TCC: MCC-WPB-A_ATS-WPB-EMG

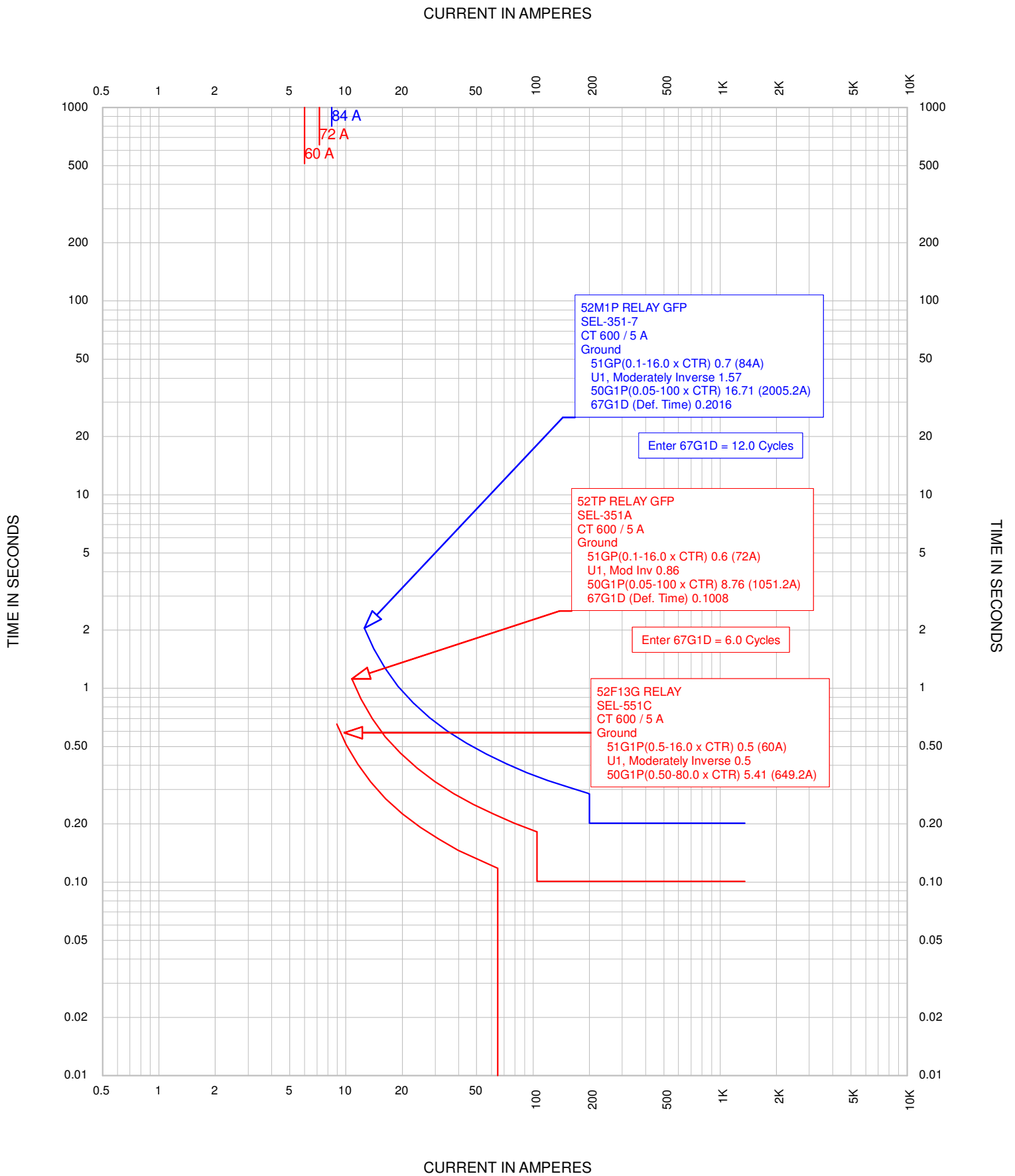
TCC: MCC-WPB-B_ATS-WPB-NRM

Online: AA MCC WBB A (for MCP settings)

Online: AA MCC WBB B (for MCP settings)

Online: AA MCC WPB A (for MCP settings)

Online: AA MCC WPB B (for MCP settings)



Online: TCC 52F13,23_S3A,B

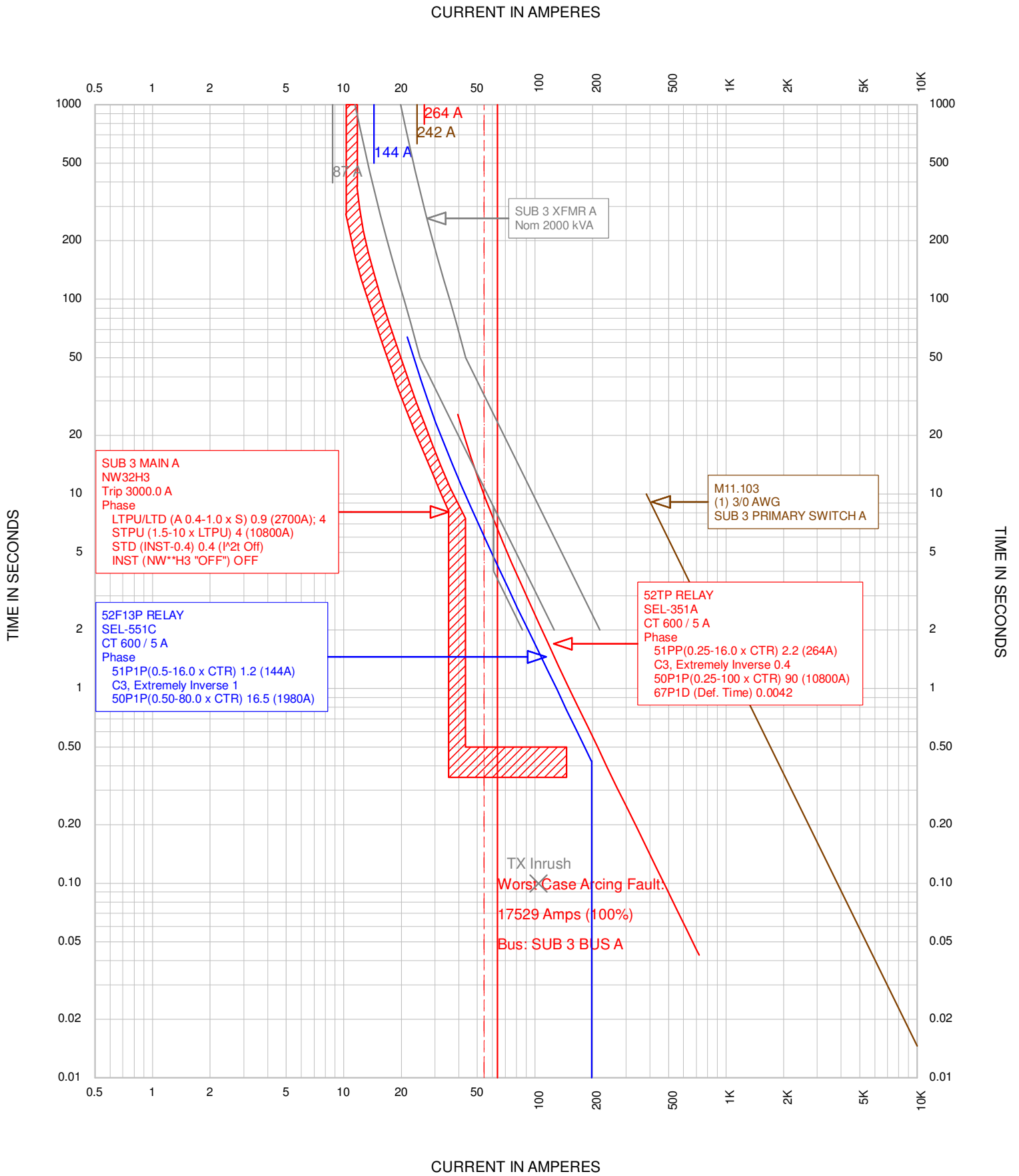
Current Scale x 10

Reference Voltage: 13200

May 20, 2015 12:04 PM

AAWWTP

52F13 GFP



Online: TCC 52F13,23_S3A

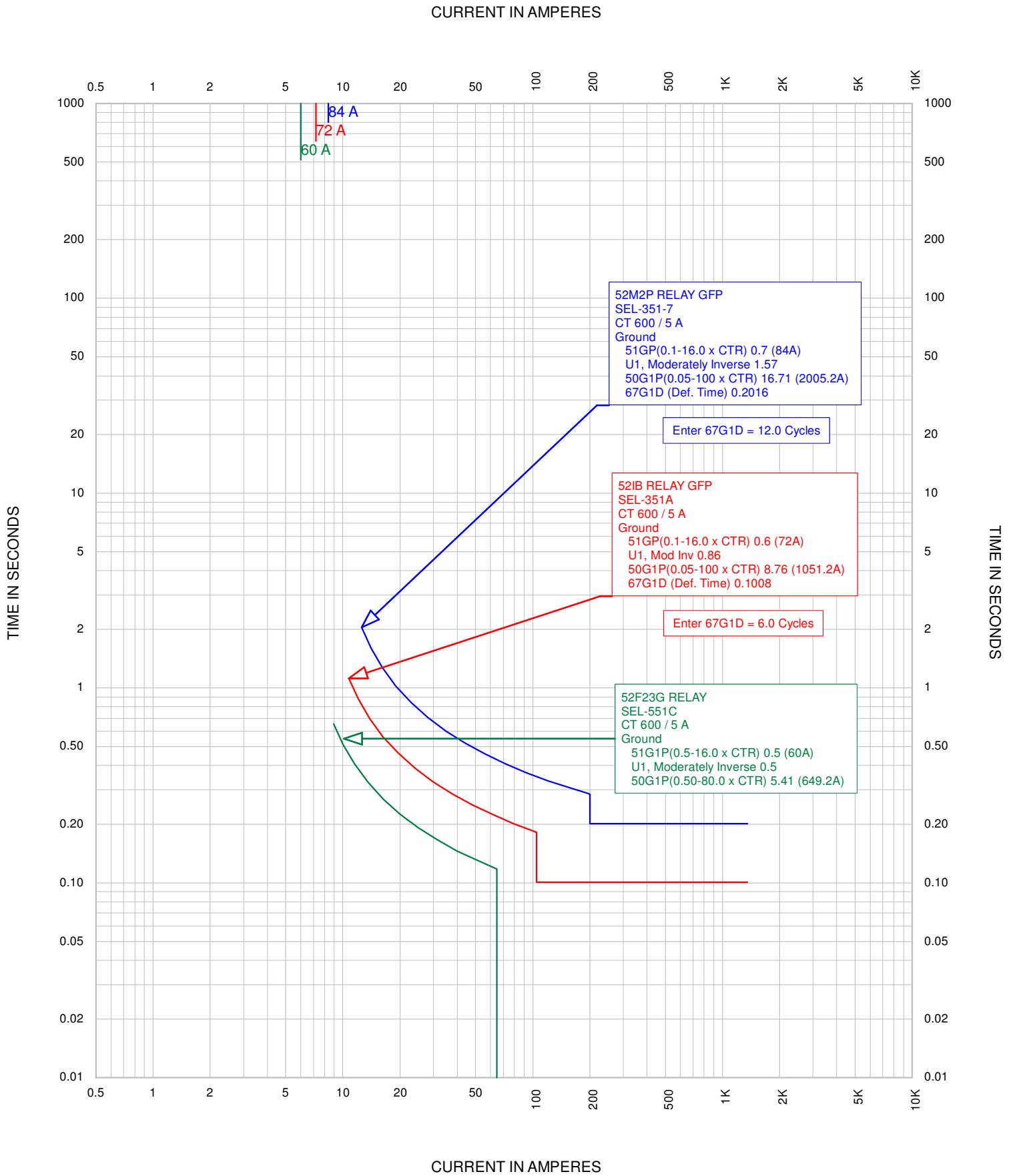
Current Scale x 10

Reference Voltage: 13200

December 17, 2015 2:51 PM

AAWWTP

52F13_S3A



Online: TCC 52F13,23_S3A,B

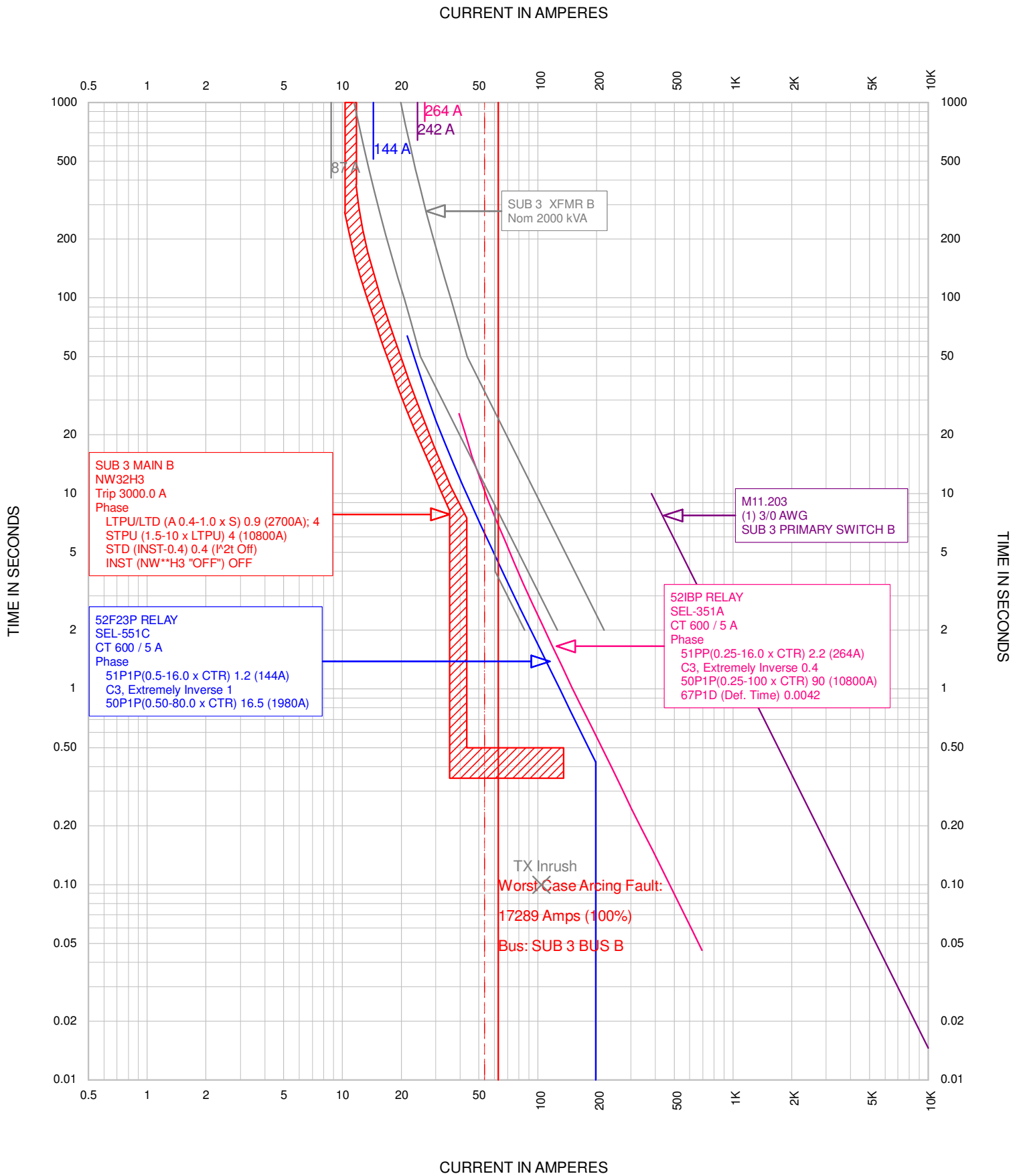
Current Scale x 10

Reference Voltage: 13200

May 20, 2015 12:09 PM

AAWWTP

52F23 GFP



Online: TCC 52F13,23_S3A,B

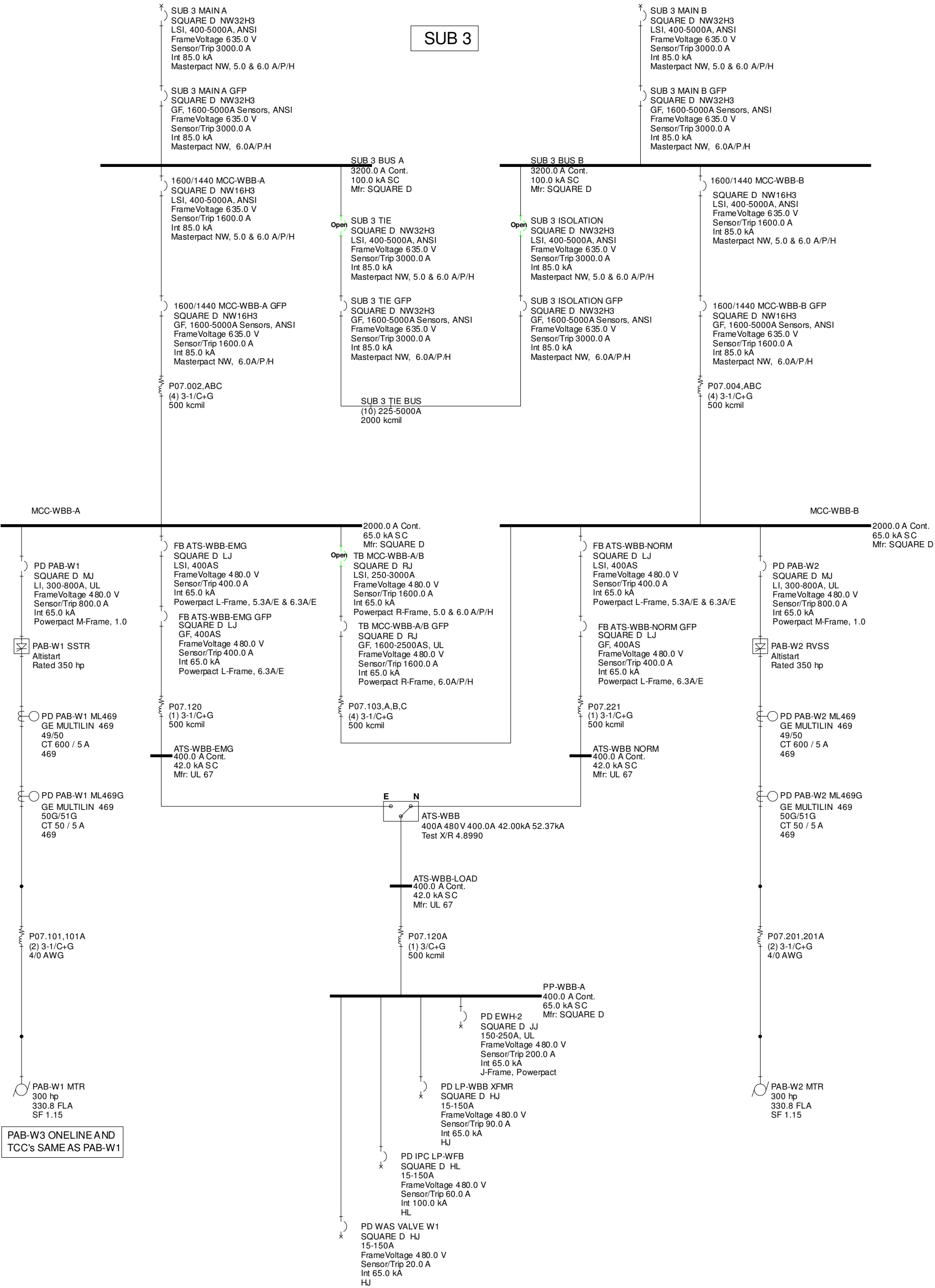
Current Scale x 10

Reference Voltage: 13200

December 17, 2015 2:55 PM

AAWWTP

52F23_S3B

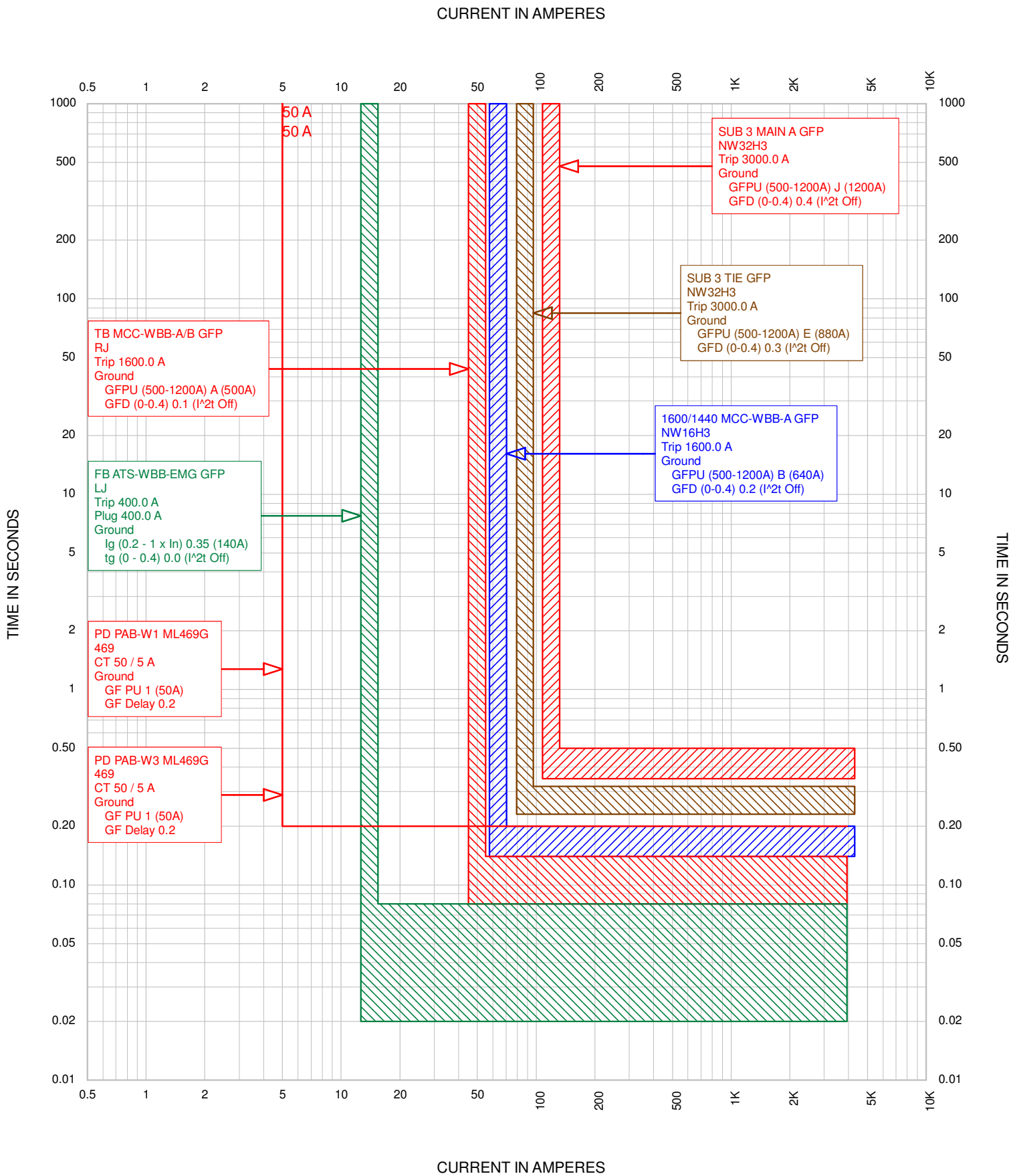


Online: TCC S3A,B_MCC-WBB-A,B

April 1, 2016 5:48 PM

AAWWTP





Online: TCC S3A,B_MCC-WBB-A,B

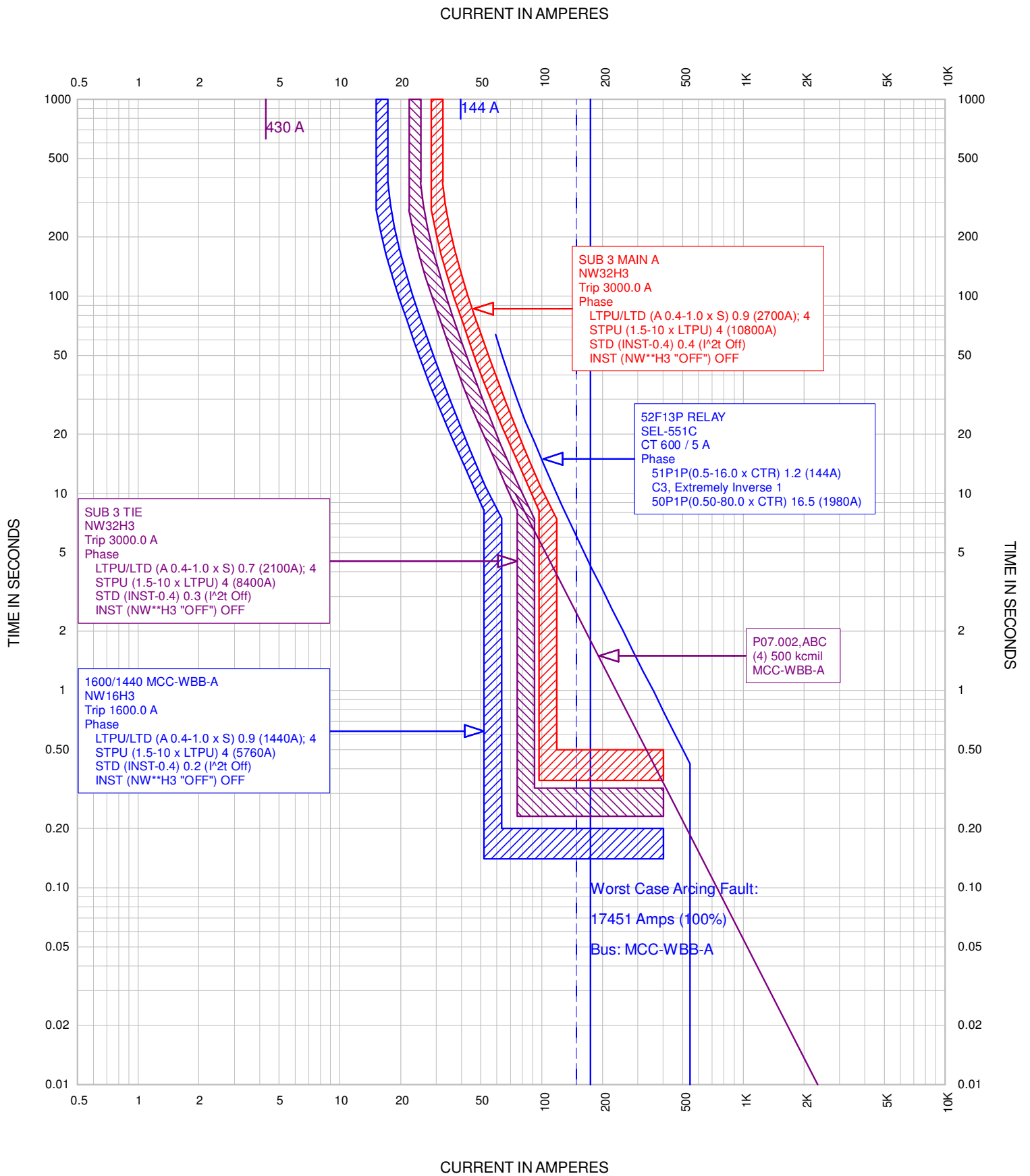
Current Scale x 10

Reference Voltage: 480

May 20, 2015 12:23 PM

AAWWTP

S3A_WBB-A GFP



Online: TCC S3A,B_MCC-WBB-A,B

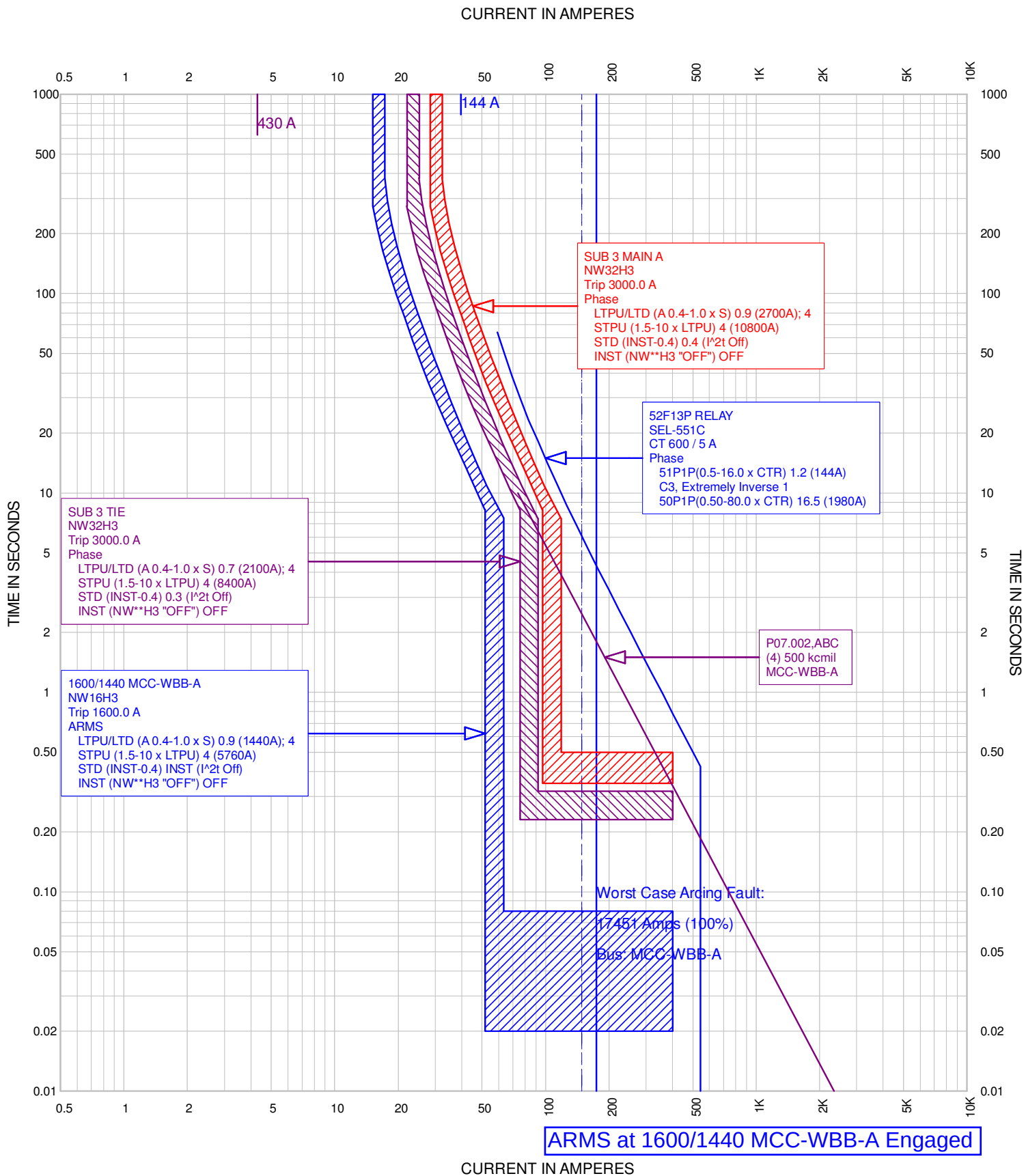
Current Scale x 100

Reference Voltage: 480

December 17, 2015 3:41 PM

AAWWTP

S3A_WBB-A



Online: TCC S3A,B_MCC-WBB-A,B

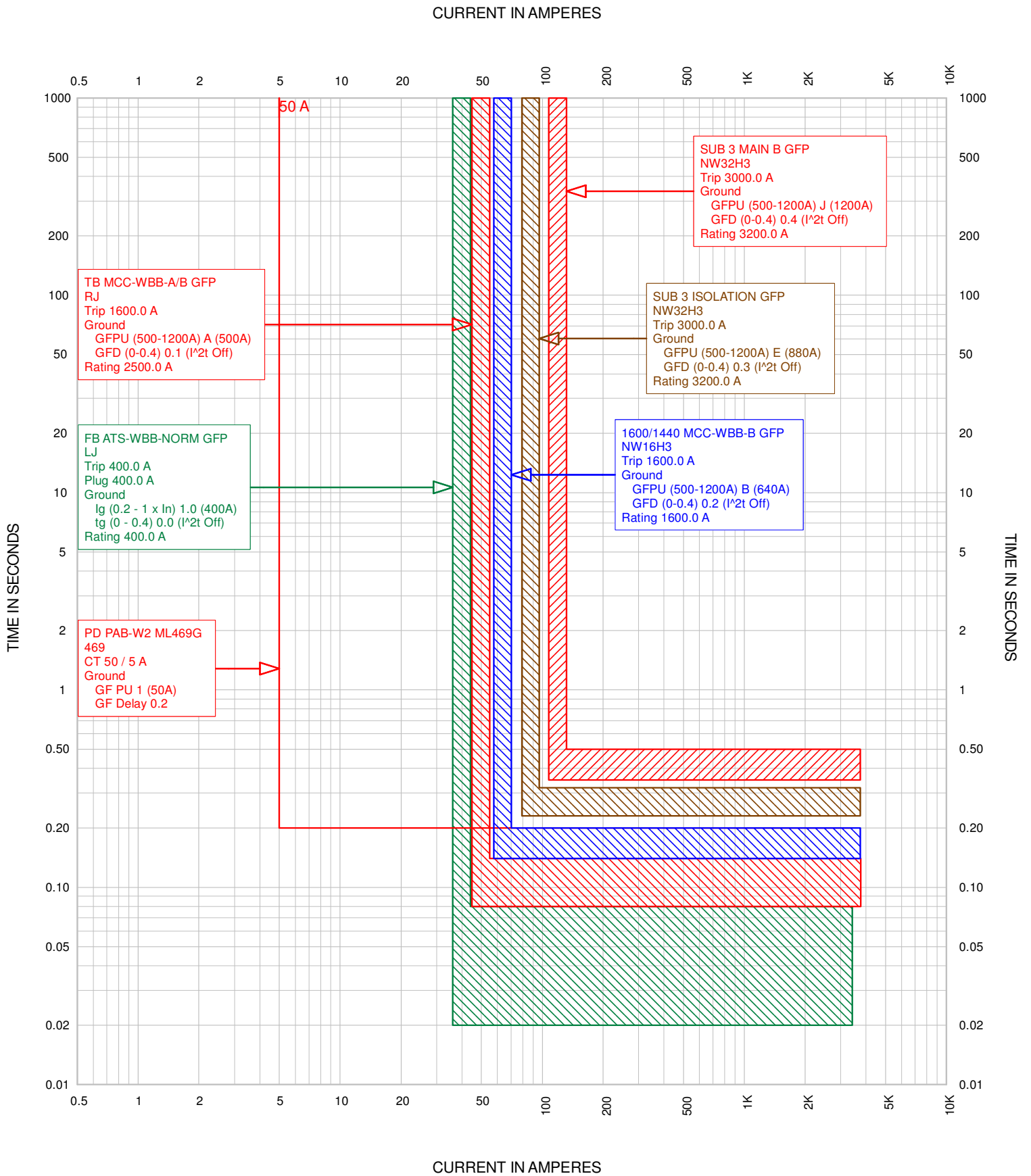
Current Scale x 100

Reference Voltage: 480

December 17, 2015 3:04 PM

AAWWTP

S3A_WBB-A



Online: TCC S3A,B_MCC-WBB-A,B

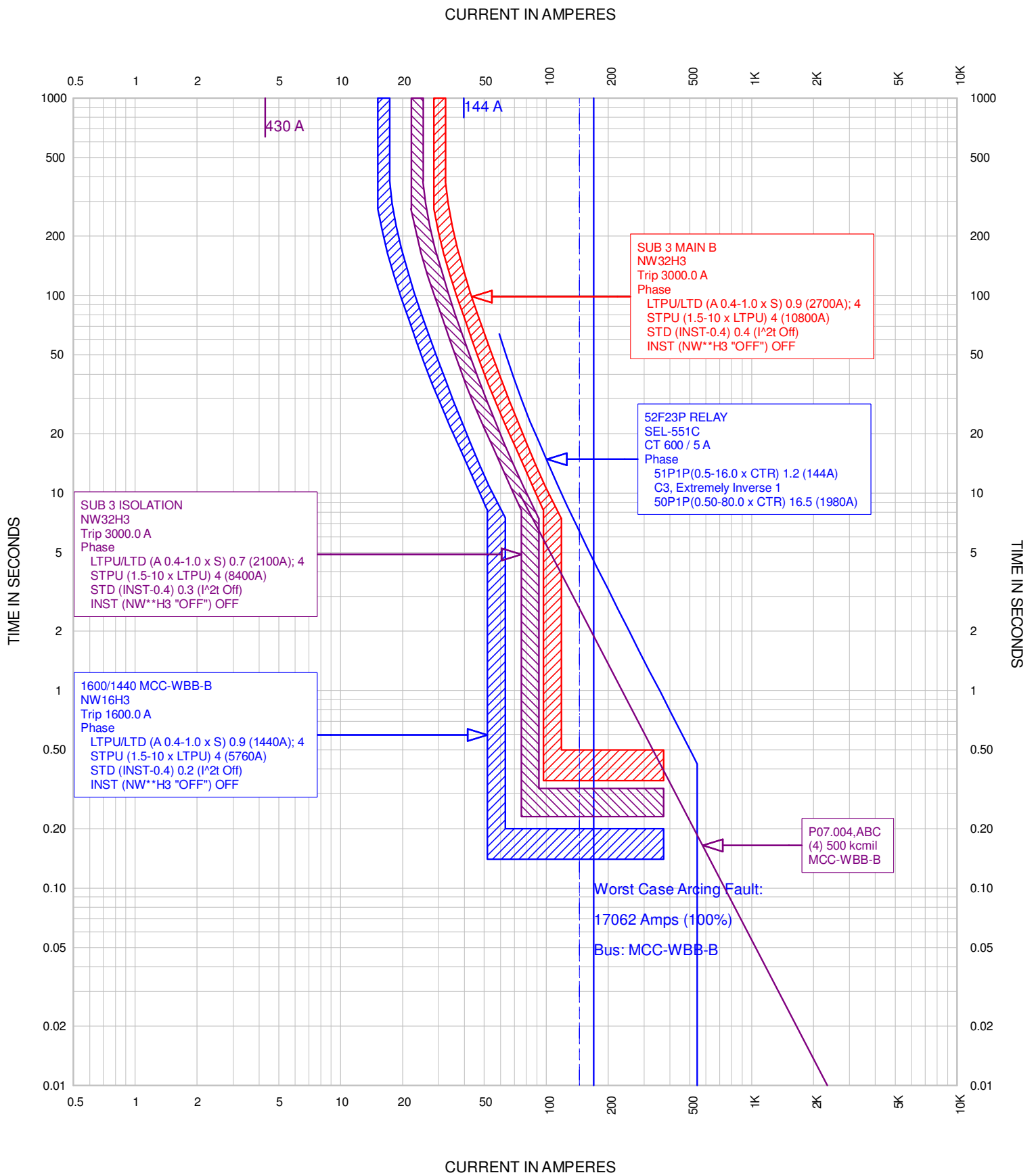
Current Scale x 10

Reference Voltage: 480

March 2, 2017 8:19 AM

AAWWTP

S3B_WBB-B GFP



Online: TCC S3A,B_MCC-WBB-A,B

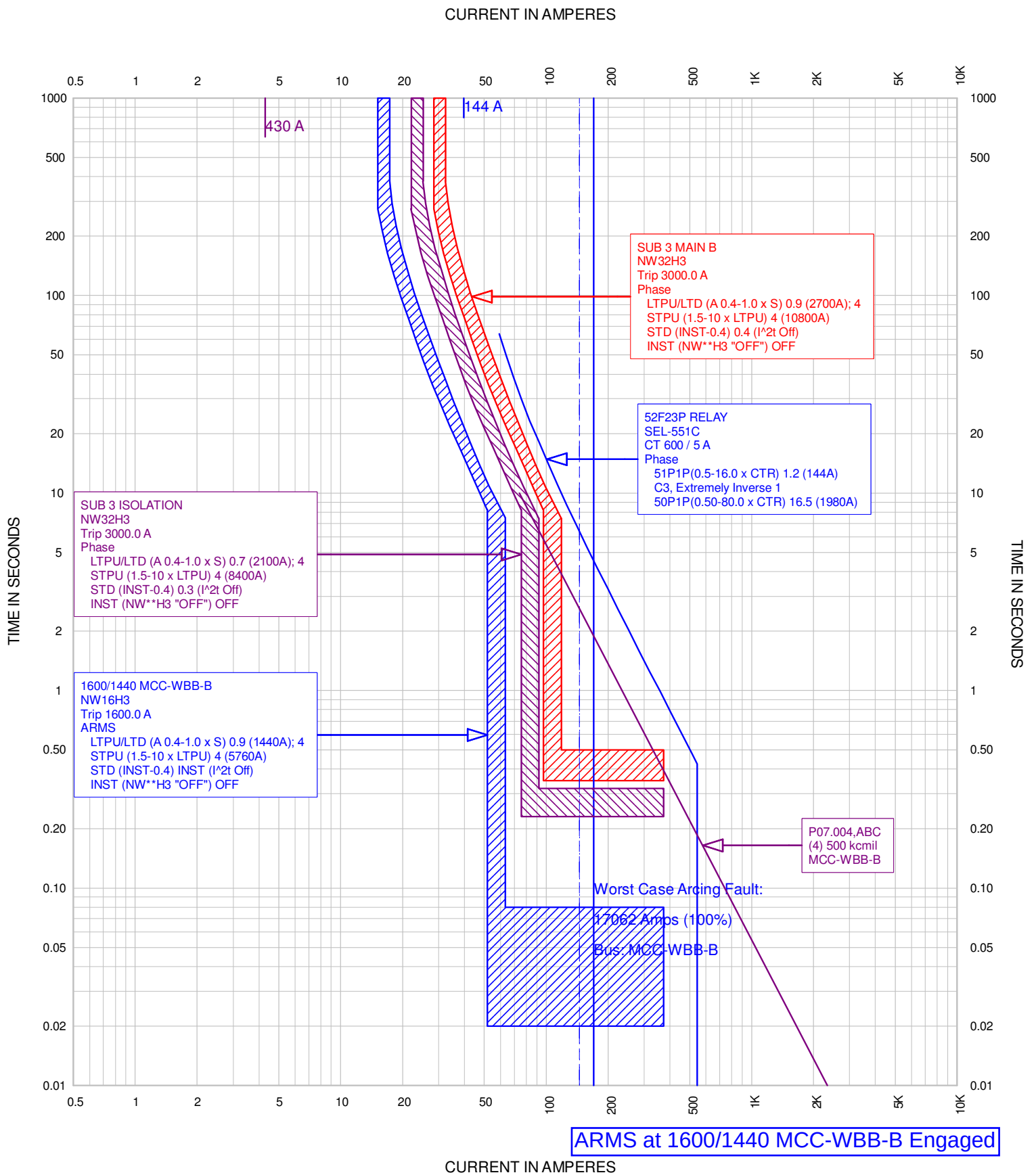
Current Scale x 100

Reference Voltage: 480

December 17, 2015 3:57 PM

AAWWTP

S3B_WBB-B



Online: TCC S3A,B_MCC-WBB-A,B

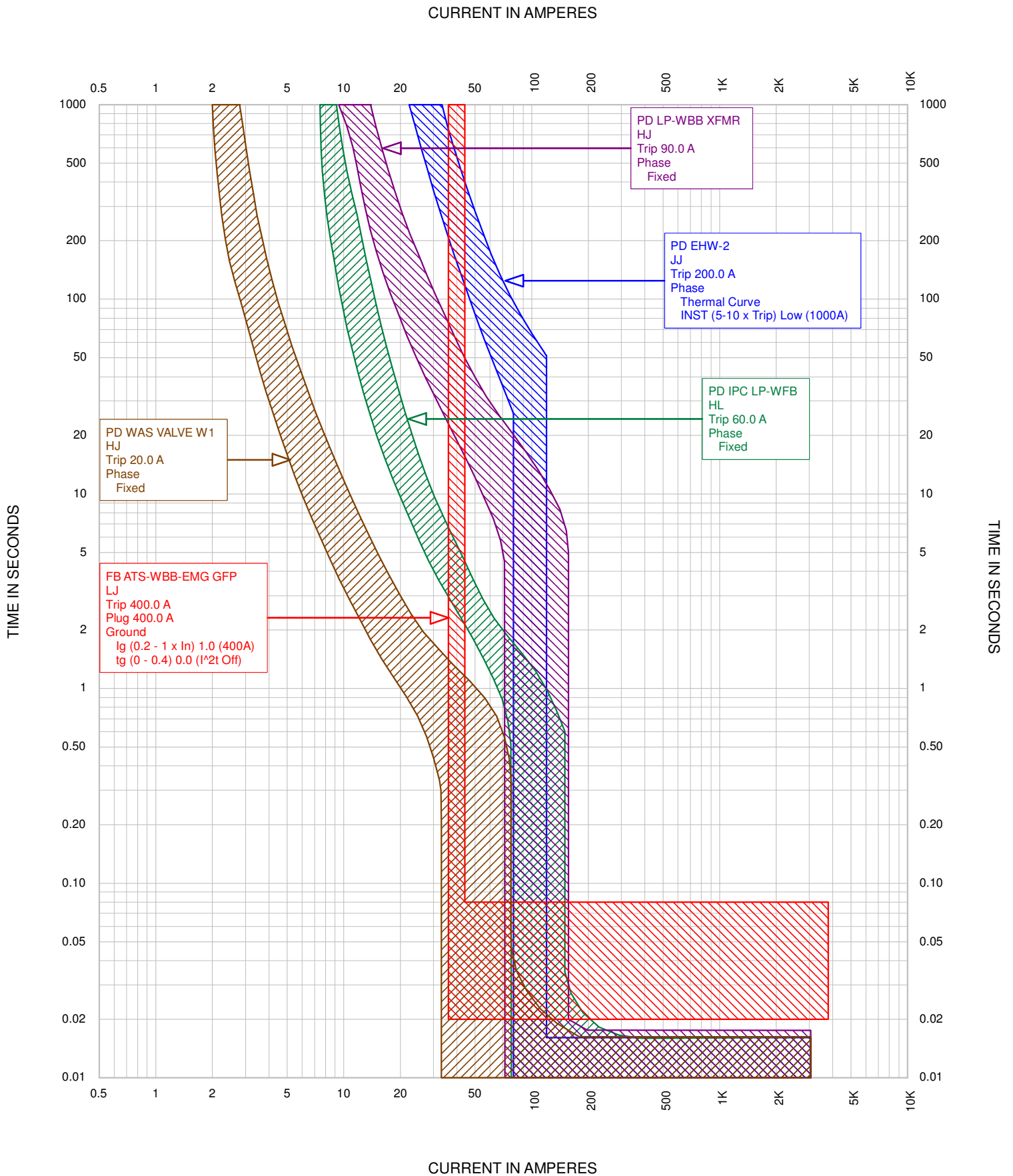
Current Scale x 100

Reference Voltage: 480

December 18, 2015 5:21 PM

AAWWTP

S3B_WBB-B



Online: TCC S3A,B_MCC-WBB-A,B

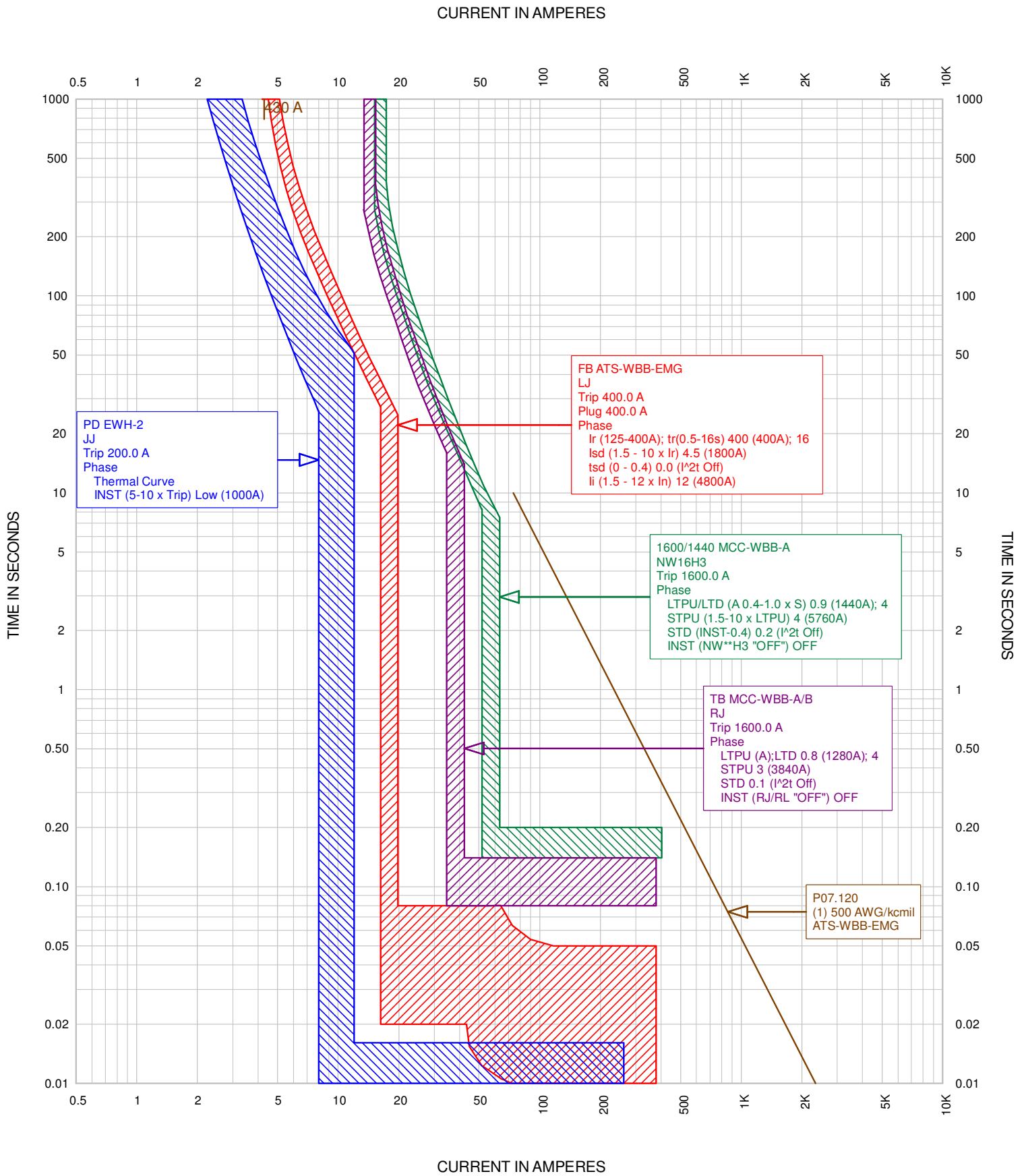
Current Scale x 10

Reference Voltage: 480

September 23, 2015 11:32 AM

AAWWTP

MCC-WBB-A,B_PP-WBB-A GFP



Online: TCC S3A,B_MCC-WBB-A,B

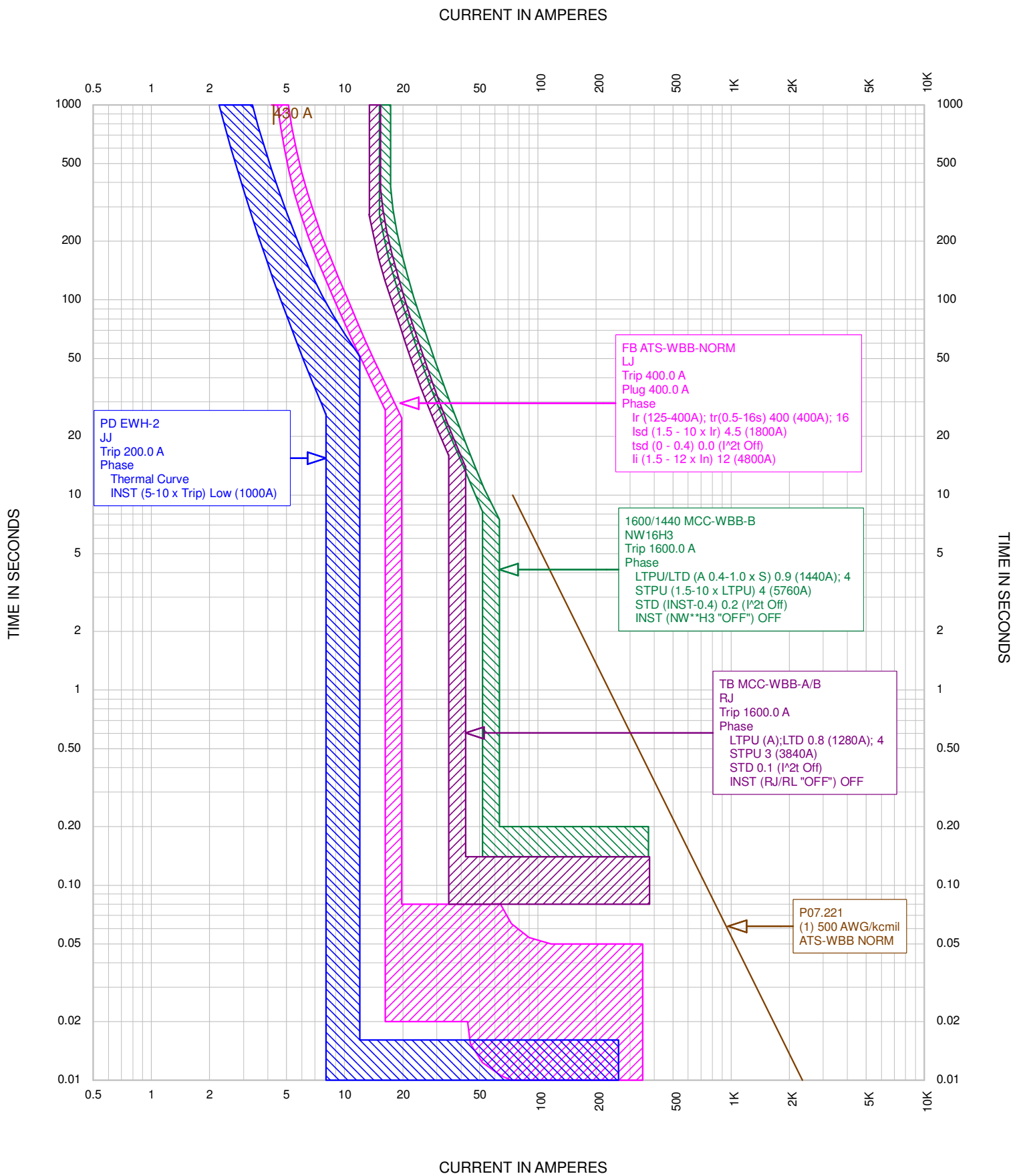
Current Scale x 100

Reference Voltage: 480

April 8, 2015 1:19 PM

AAWWTP

MCC-WBB-A_ATS-WBB-EMG



Online: TCC S3A,B_MCC-WBB-A,B

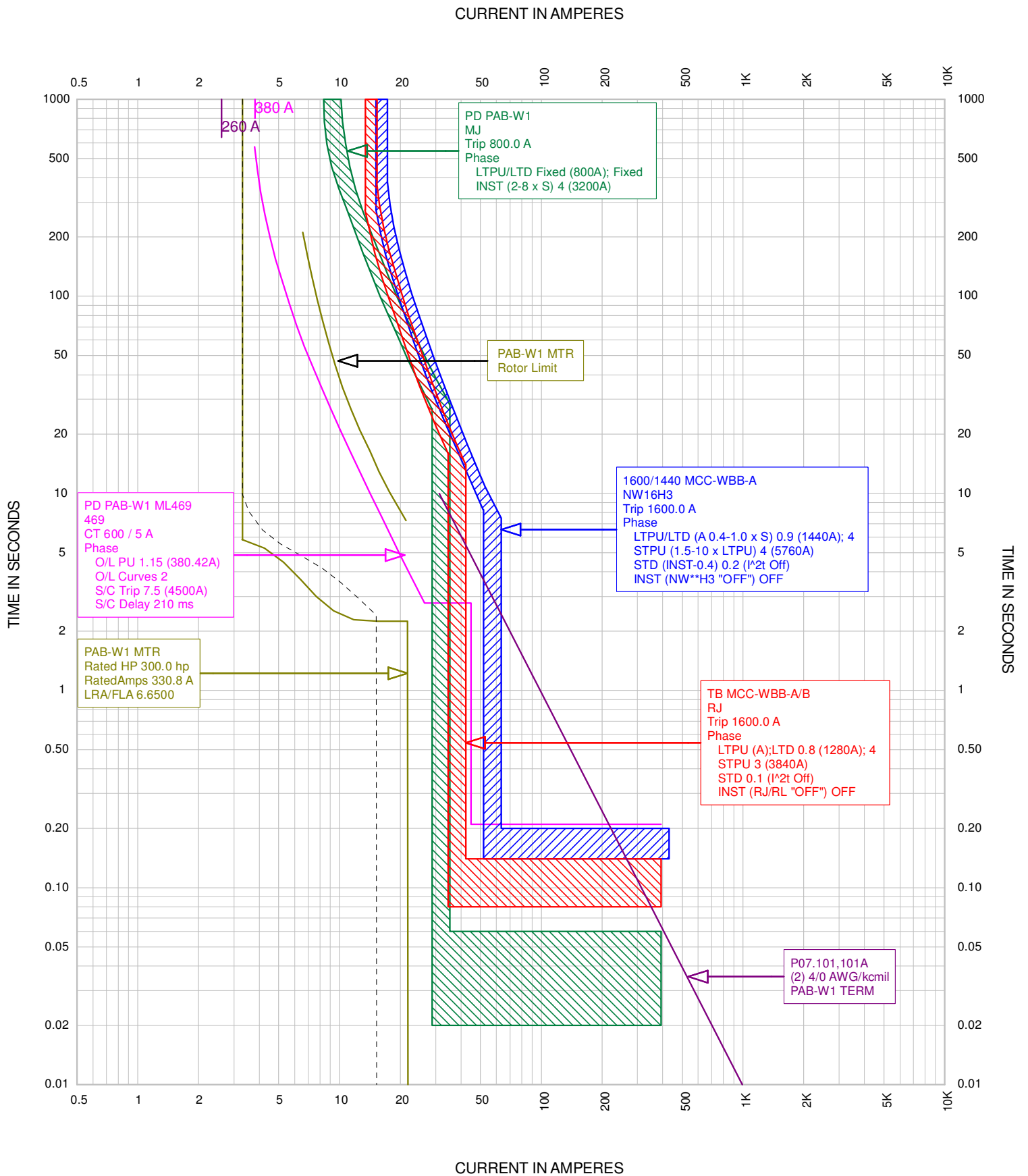
Current Scale x 100

Reference Voltage: 480

April 8, 2015 1:22 PM

AAWWTP

MCC-WBB-B_ATS-WBB-NRM



Online: TCC S3A,B_MCC-WBB-A,B

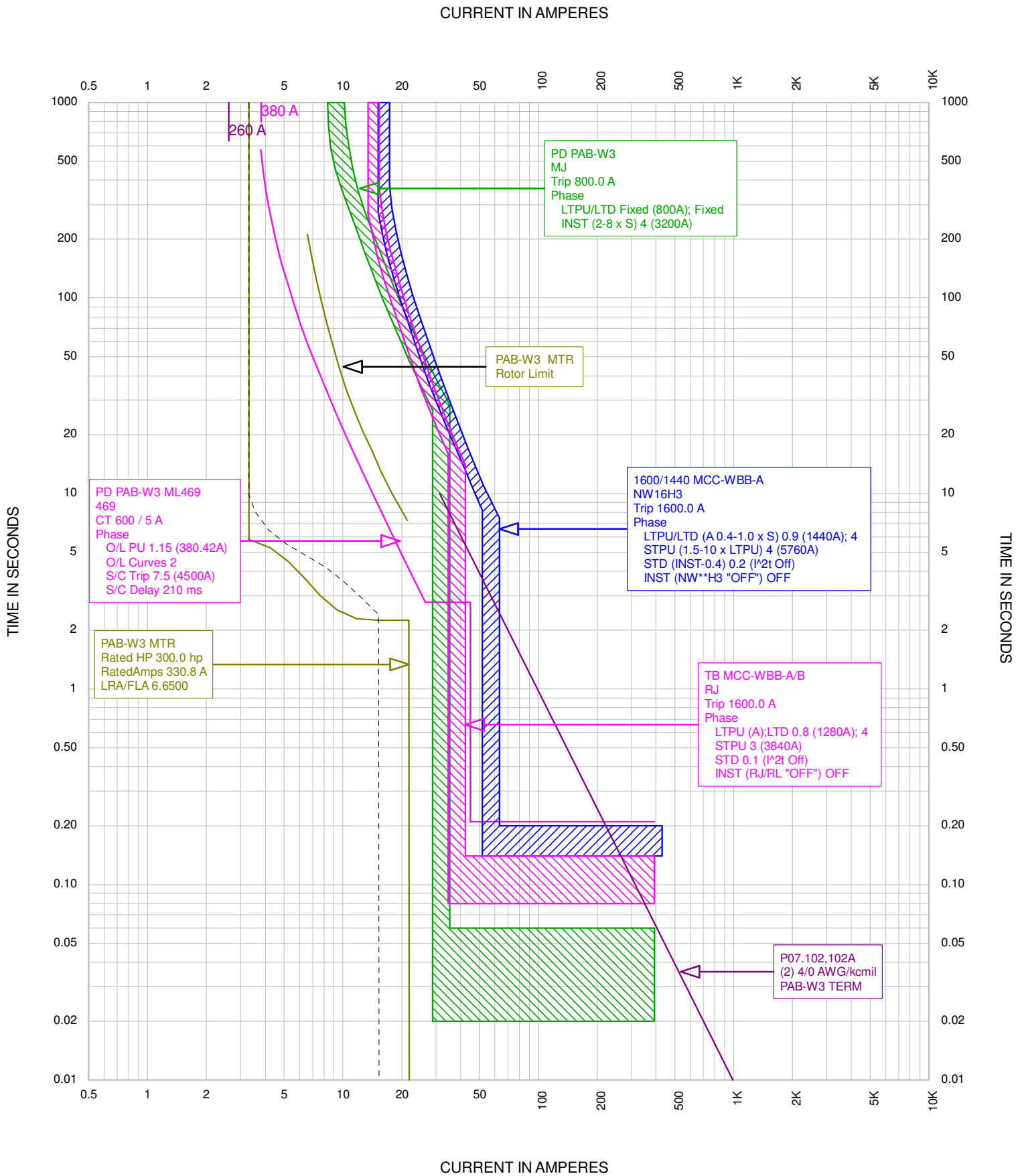
Current Scale x 100

Reference Voltage: 480

May 20, 2015 12:43 PM

AAWWTP

MCC-WBB-A_PAB-W1



Online: TCC S3A,B_MCC-WBB-A,B

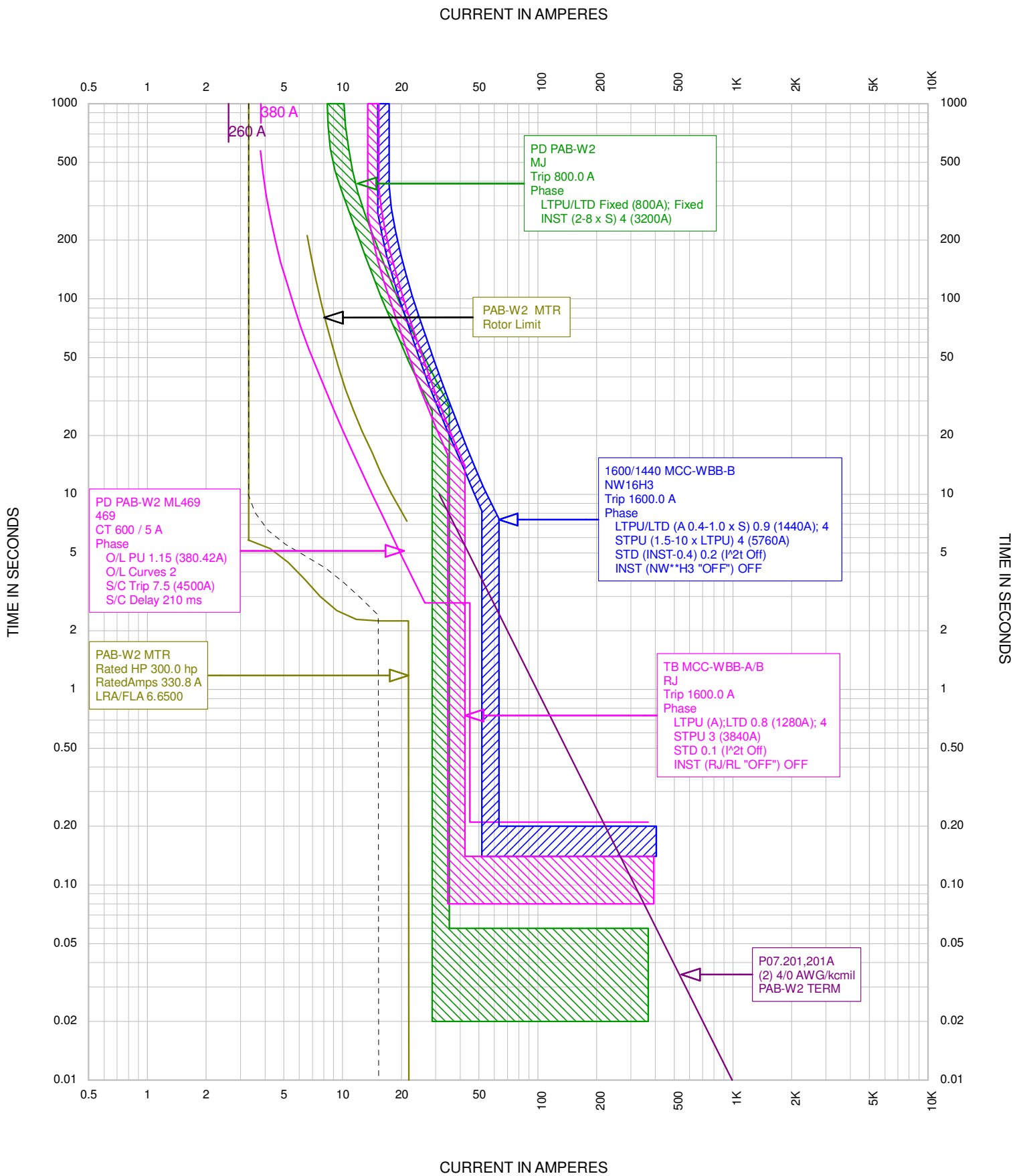
Current Scale x 100

Reference Voltage: 480

May 20, 2015 12:47 PM

AAWWTP

MCC-WBB-A_PAB-W3



Online: TCC S3A,B_MCC-WBB-A,B

Current Scale x 100

Reference Voltage: 480

May 20, 2015 12:50 PM

AAWWTP

MCC-WBB-B_PAB-W2

SUB 3

SUB 3 MAIN A
SQUARE D NW32H3
LSI, 400-5000A, ANSI
FrameVoltage 635.0 V
Sensor/Trip 3000.0 A
Int 85.0 kA
Masterpact NW, 5.0 & 6.0 A/P/H

SUB 3 MAINA GFP
SQUARE D NW32H3
GF, 1600-5000A Sensors, ANSI
FrameVoltage 635.0 V
Sensor/Trip 3000.0 A
Int 85.0 kA
Masterpact NW, 6.0 A/P/H

SUB 3 MAIN B
SQUARE D NW32H3
LSI, 400-5000A, ANSI
FrameVoltage 635.0 V
Sensor/Trip 3000.0 A
Int 85.0 kA
Masterpact NW, 5.0 & 6.0 A/P/H

SUB 3 MAIN B GFP
SQUARE D NW32H3
GF, 1600-5000A Sensors, ANSI
FrameVoltage 635.0 V
Sensor/Trip 3000.0 A
Int 85.0 kA
Masterpact NW, 6.0 A/P/H

SUB 3 BUS A
3200.0 A Cont.
100.0 kA SC
Mfr: SQUARE D

SUB 3 BUS B
3200.0 A Cont.
100.0 kA SC
Mfr: SQUARE D

800/400 MCC-WPB-A
SQUARE D NW08H3
LSI, 400-5000A, ANSI
FrameVoltage 635.0 V
Sensor/Trip 400.0 A
Int 85.0 kA
Masterpact NW, 5.0 & 6.0 A/P/H

800/400 MCC-WPB-A GFP
SQUARE D NW08H3
GF, 100-400A Sensors, ANSI
FrameVoltage 635.0 V
Sensor/Trip 400.0 A
Int 85.0 kA
Masterpact NW, 6.0 A/P/H

P07.001
(1) 3-1/C+G
500 kcmil

MB MCC-WPB-A
SQUARE D LJ
LSI, 400AS
FrameVoltage 480.0 V
Sensor/Trip 400.0 A
Int 65.0 kA
Powerpact L-Frame, 5.3A/E & 6.3A/E

MB MCC-WPB-A GFP
SQUARE D LJ
GF, 400AS
FrameVoltage 480.0 V
Sensor/Trip 400.0 A
Int 65.0 kA
Powerpact L-Frame, 6.3A/E

SUB 3 TIE
SQUARE D NW32H3
LSI, 400-5000A, ANSI
FrameVoltage 635.0 V
Sensor/Trip 3000.0 A
Int 85.0 kA
Masterpact NW, 5.0 & 6.0 A/P/H

SUB 3 TIE GFP
SQUARE D NW32H3
GF, 1600-5000A Sensors, ANSI
FrameVoltage 635.0 V
Sensor/Trip 3000.0 A
Int 85.0 kA
Masterpact NW, 6.0 A/P/H

SUB 3 TIE BUS
(10) 225-5000A
2000 kcmil

SUB 3 ISOLATION
SQUARE D NW32H3
LSI, 400-5000A, ANSI
FrameVoltage 635.0 V
Sensor/Trip 3000.0 A
Int 85.0 kA
Masterpact NW, 5.0 & 6.0 A/P/H

SUB 3 ISOLATION GFP
SQUARE D NW32H3
GF, 1600-5000A Sensors, ANSI
FrameVoltage 635.0 V
Sensor/Trip 3000.0 A
Int 85.0 kA
Masterpact NW, 6.0 A/P/H

800/400 MCC-WPB-B
SQUARE D NW08H3
LSI, 400-5000A, ANSI
FrameVoltage 635.0 V
Sensor/Trip 400.0 A
Int 85.0 kA
Masterpact NW, 5.0 & 6.0 A/P/H

800/400 MCC-WPB-B GFP
SQUARE D NW08H3
GF, 100-400A Sensors, ANSI
FrameVoltage 635.0 V
Sensor/Trip 400.0 A
Int 85.0 kA
Masterpact NW, 6.0 A/P/H

P07.003
(1) 3-1/C+G
500 kcmil

MB MCC-WPB-B
SQUARE D LJ
LSI, 400AS
FrameVoltage 480.0 V
Sensor/Trip 400.0 A
Int 65.0 kA
Powerpact L-Frame, 5.3A/E & 6.3A/E

MB MCC-WPB-B GFP
SQUARE D LJ
GF, 400AS
FrameVoltage 480.0 V
Sensor/Trip 400.0 A
Int 65.0 kA
Powerpact L-Frame, 6.3A/E

MCC-WPB-A
600.0 A Cont.
65.0 kA SC
Mfr: SQUARE D

MCC-WPB-B
600.0 A Cont.
65.0 kA SC
Mfr: SQUARE D

FB ATS-WPB-EMG
SQUARE D HJ
15-150A
FrameVoltage 480.0 V
Sensor/Trip 60.0 A
Int 65.0 kA
HJ

P06.100
(1) 3-1/C+G
4 AWG

ATS-WPB-EMG
150.0 A Cont.
35.0 kA SC

P06.120
(1) 3-1/C+G
500 kcmil

TB MCC-WPB-A/B
SQUARE D LJ
LSI, 400AS
FrameVoltage 480.0 V
Sensor/Trip 400.0 A
Int 65.0 kA
Powerpact L-Frame, 5.3A/E & 6.3A/E

TB MCC-WPB-A/B GFP
SQUARE D LJ
GF, 400AS
FrameVoltage 480.0 V
Sensor/Trip 400.0 A
Int 65.0 kA
Powerpact L-Frame, 6.3A/E

FB ATS-WPB-NORM
SQUARE D HJ
15-150A
FrameVoltage 480.0 V
Sensor/Trip 60.0 A
Int 65.0 kA
HJ

P06.200
(1) 3-1/C+G
4 AWG

ATS-WPB-NORM
150.0 A Cont.
35.0 kA SC

ATS-WPB
150A 480V 150.0A 35.00kA 43.64kA
Test X/R 4.8990

ATS-WPB-LOAD
150.0 A Cont.
35.0 kA SC

P06.100A
(1) 3-1/C+G
4 AWG

XFMR LP-WPB-A
30kVA
36 A/83 A

L06.100
(1) 4-1/C+G
1 AWG

MB LP-WPB-B
SQUARE D QO
15-100A
FrameVoltage 240.0 V
Sensor/Trip 100.0 A
Int 10.0 kA
QO, 3-Pole

LP-WPB-A
100.0 A Cont.
10.0 kA SC
Mfr: SQUARE D

L06.200
(1) 4-1/C+G
1 AWG

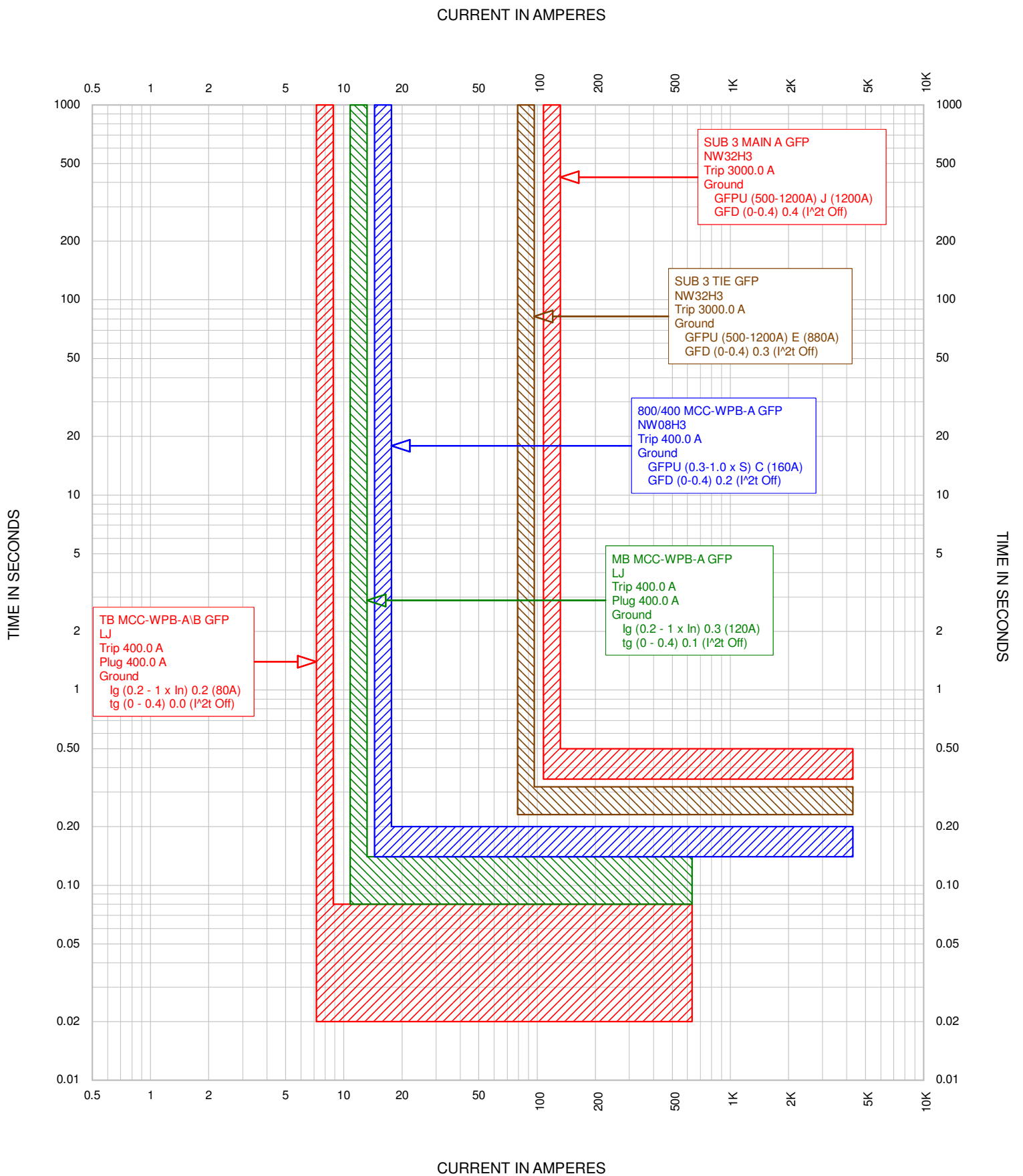
LP-WPB-B
100.0 A Cont.
10.0 kA SC
Mfr: SQUARE D

Online: TCC S3A,B_MCC-WPB-A,B

April 1, 2016 5:56 PM

AAWWTP





Online: TCC S3A,B_MCC-WPB-A,B

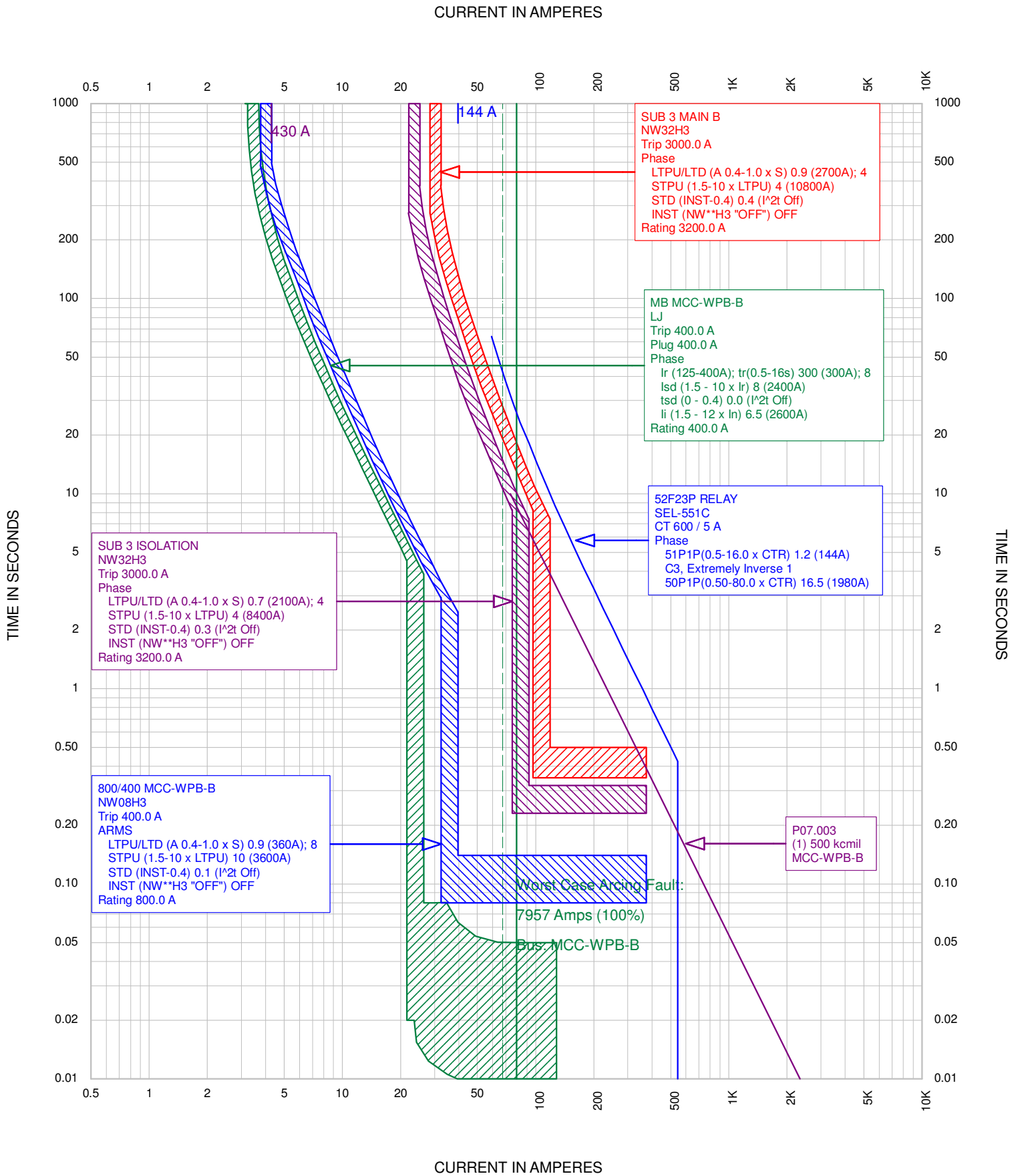
Current Scale x 10

Reference Voltage: 480

May 20, 2015 11:45 AM

AAWWTP

S3A_WPB-A GFP



Online: TCC S3A,B_MCC-WPB-A,B

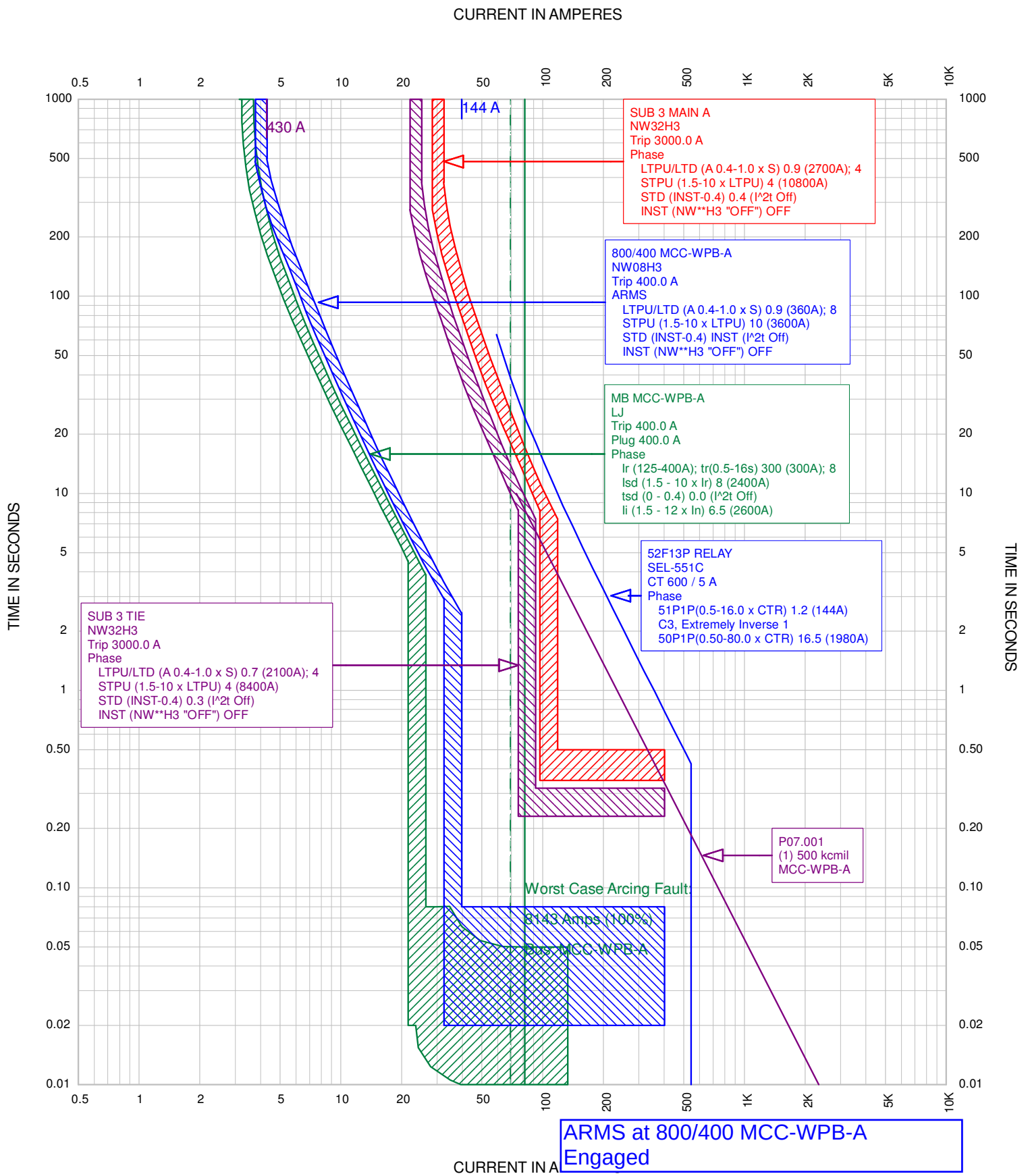
Current Scale x 100

Reference Voltage: 480

March 2, 2017 9:54 AM

AAWWTP

S3B_WPB-B



Online: TCC S3A,B_MCC-WPB-A,B

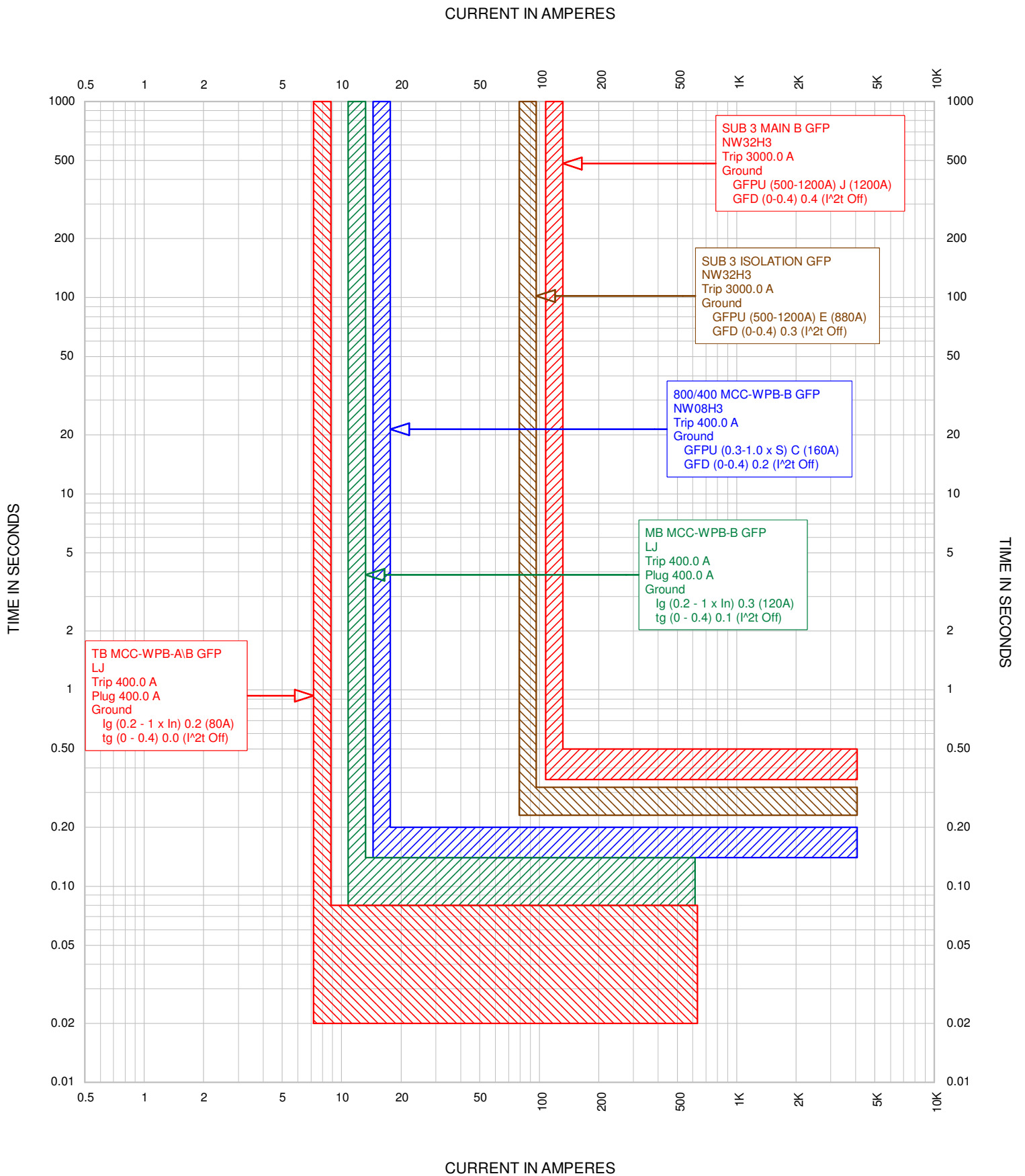
Current Scale x 100

Reference Voltage: 480

December 17, 2015 4:21 PM

AAWWTP

S3A_WPB-A



Online: TCC S3A,B_MCC-WBB-A,B

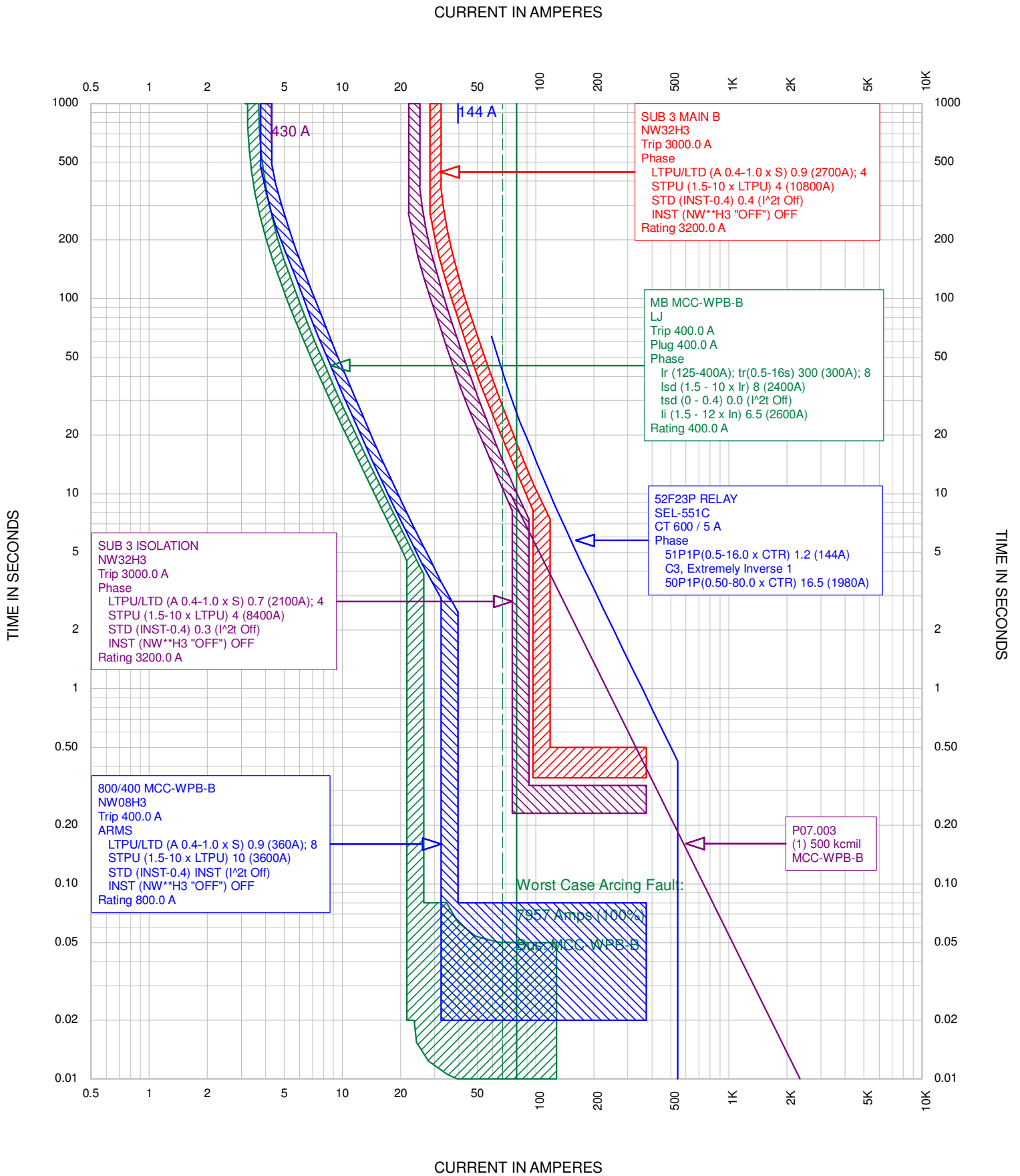
Current Scale x 10

Reference Voltage: 480

May 20, 2015 11:56 AM

AAWWTP

S3B_WPB-B GFP



Online: TCC S3A,B_MCC-WPB-A,B

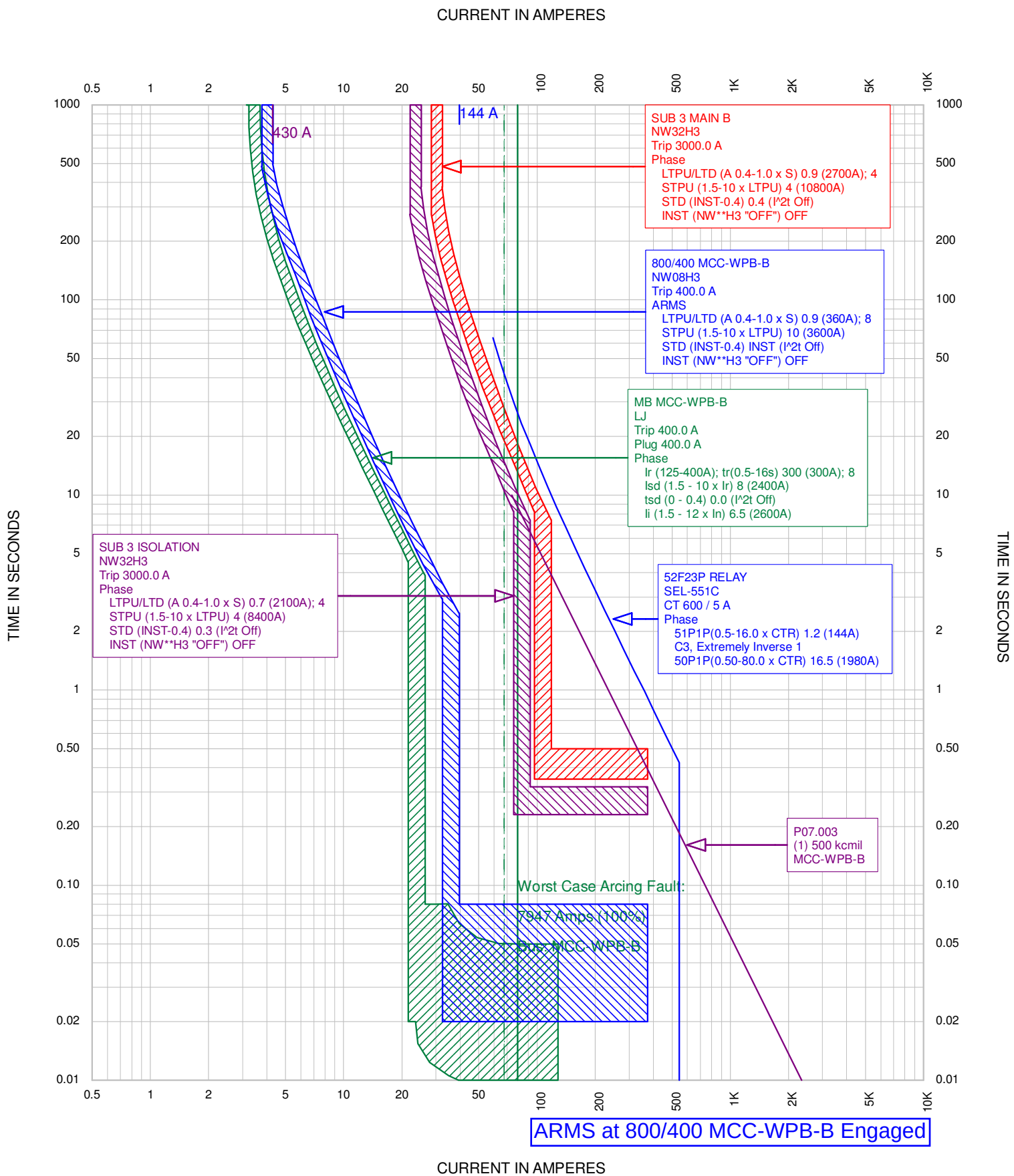
Current Scale x 100

Reference Voltage: 480

March 2, 2017 9:50 AM

AAWWTP

S3B_WPB-B



Online: TCC S3A,B_MCC-WPB-A,B

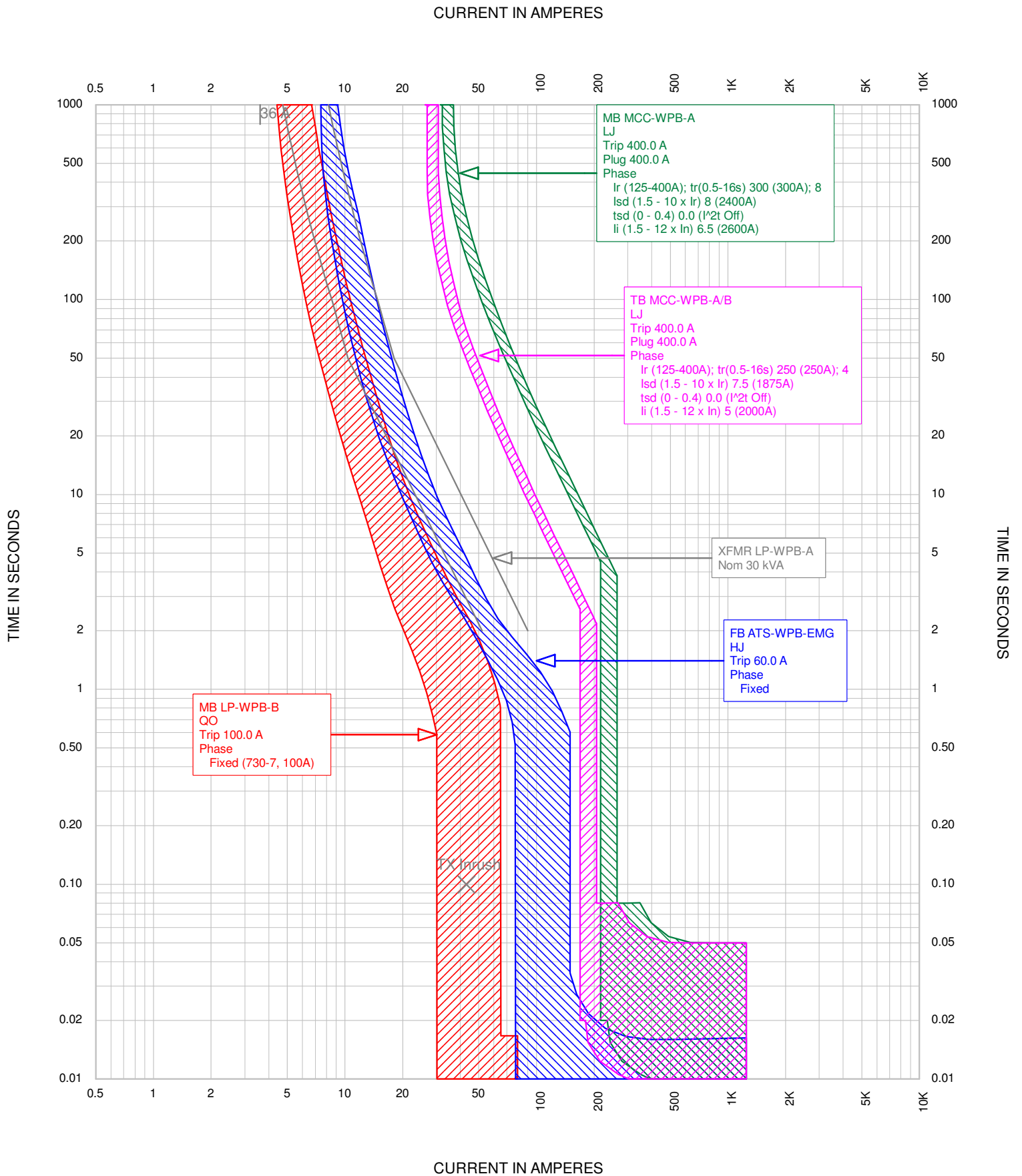
Current Scale x 100

Reference Voltage: 480

December 18, 2015 5:33 PM

AAWWTP

S3B_WPB-B



Online: TCC S3A,B_MCC-WPB-A,B

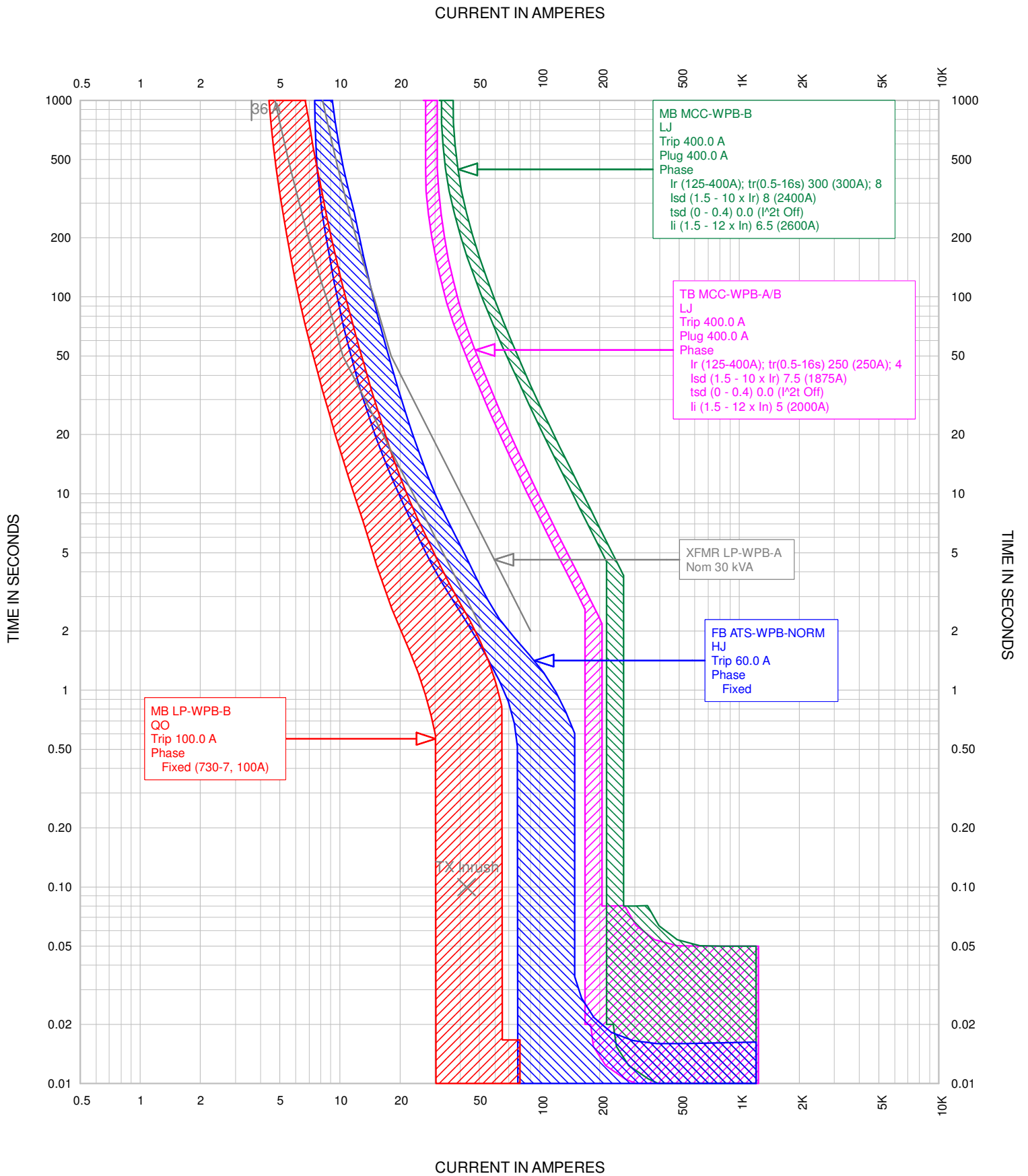
Current Scale x 10

Reference Voltage: 480

April 8, 2015 1:48 PM

AAWWTP

MCC-WPB-A_ATS-WPB-EMG



Online: TCC S3A,B_MCC-WPB-A,B

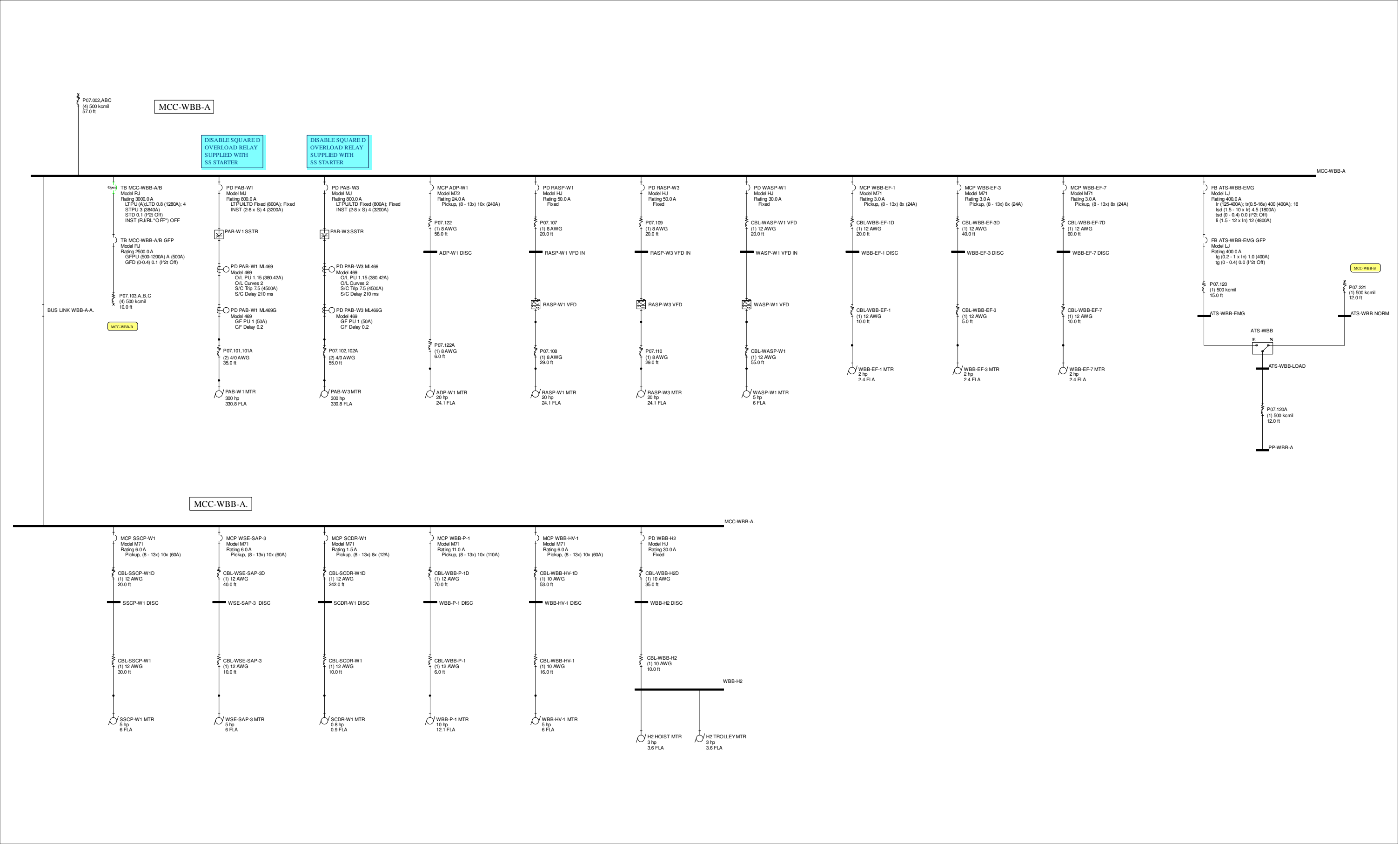
Current Scale x 10

Reference Voltage: 480

April 8, 2015 1:51 PM

AAWWTP

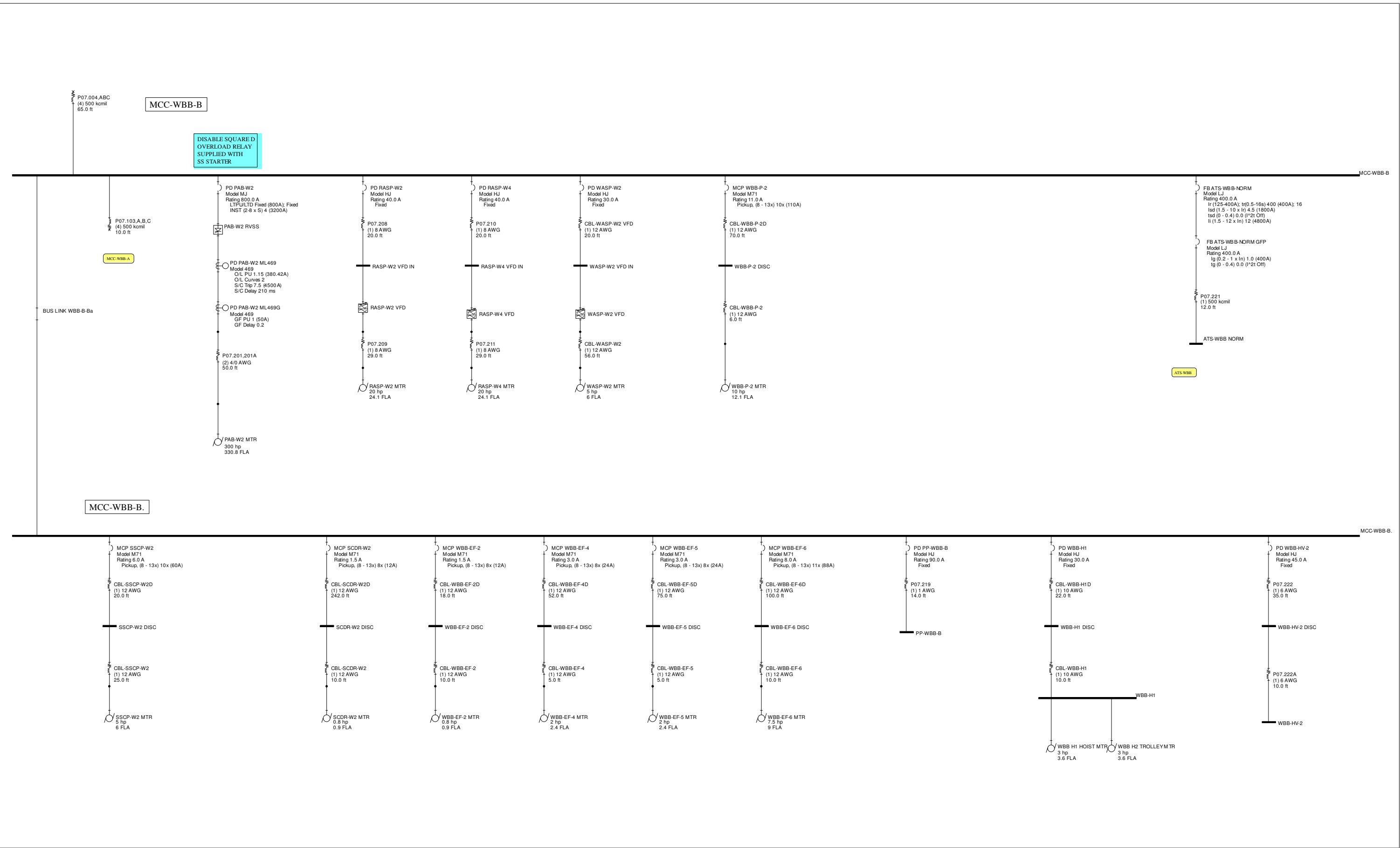
MCC-WPB-B_ATS-WPB-NRM



ANN ARBOR WASTEWATER TREATMENT PLANT
PLANT FACILITIES RENOVATION
POWER DISTRIBUTION SYSTEM STUDY



AA MCC-WBB-A



ANN ARBOR WASTEWATER TREATMENT PLANT
PLANT FACILITIES RENOVATION
POWER DISTRIBUTION SYSTEM STUDY



AA MCC-WBB-B

3.4.6 Substation 4:

Online: TCC 52F14,24_S4A,B

TCC: 52F14 GFP

TCC: 52F14_S4A

TCC: 52F24 GFP

TCC: 52F24_S4B

Online: TCC S4A,B_MCC-M,N

TCC: S4A_MCC-M

TCC: S4A_MCC-M (Recommended)

TCC: S4B_MCC-N

TCC: S4B_MCC-N (Recommended)

Online: TCC S4A,B_MCC-Q,P

TCC: S4A_MCC-Q

TCC: S4A_MCC-Q (Recommended)

TCC: S4B_MCC-P

TCC: S4B_MCC-P (Recommended)

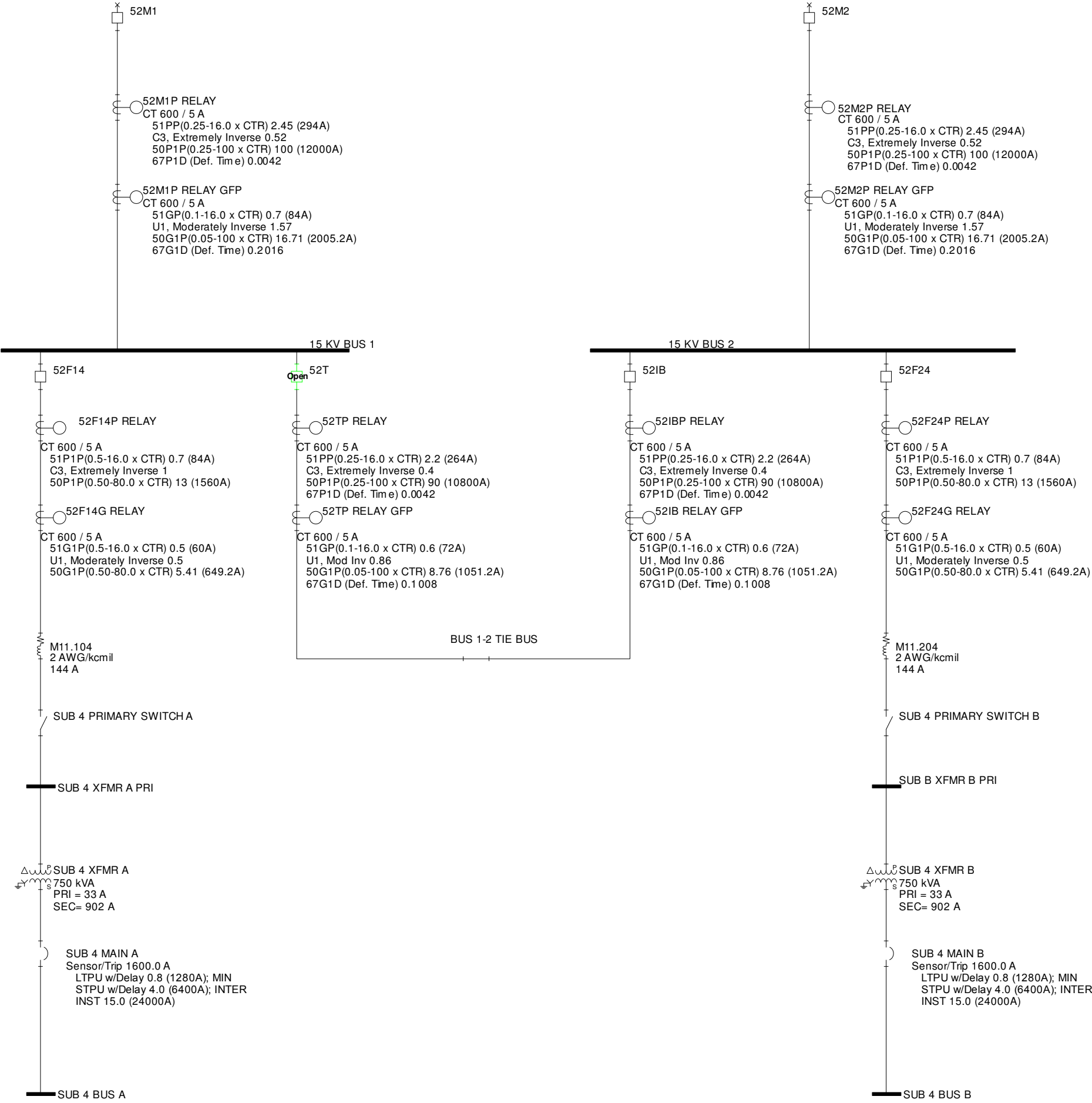
Online: TCC S4A,B_UV-2A,B

TCC: S4B_UV-2A

TCC: S4B_UV-2A (Recommended)

TCC: S4B_UV-2B

TCC: S4B_UV-2B (Recommended)

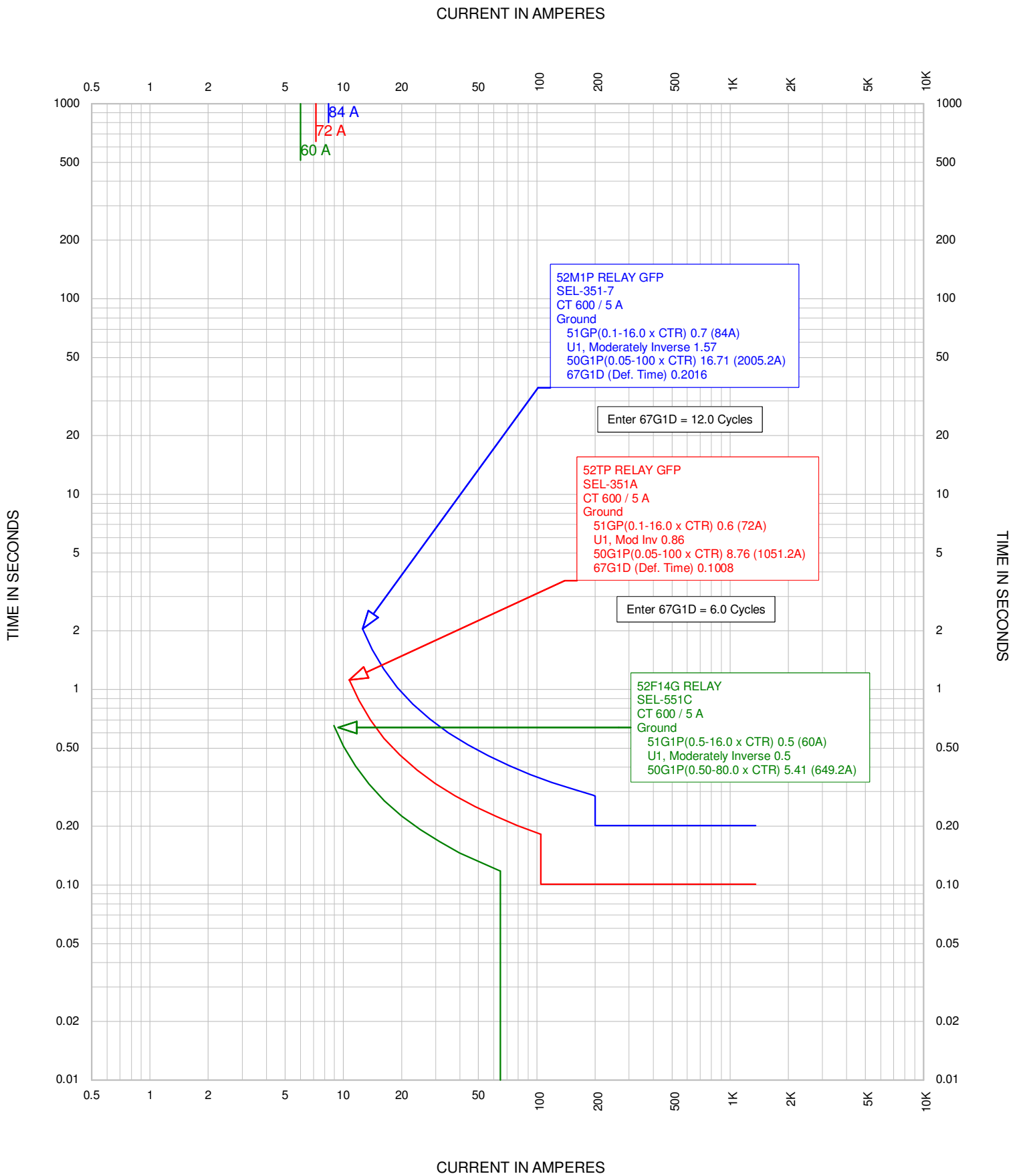


Online: TCC 52F14,24_S4A,B

March 16, 2015 6:22 PM

AAWWTP





Online: TCC 52F14,24_S4A,B

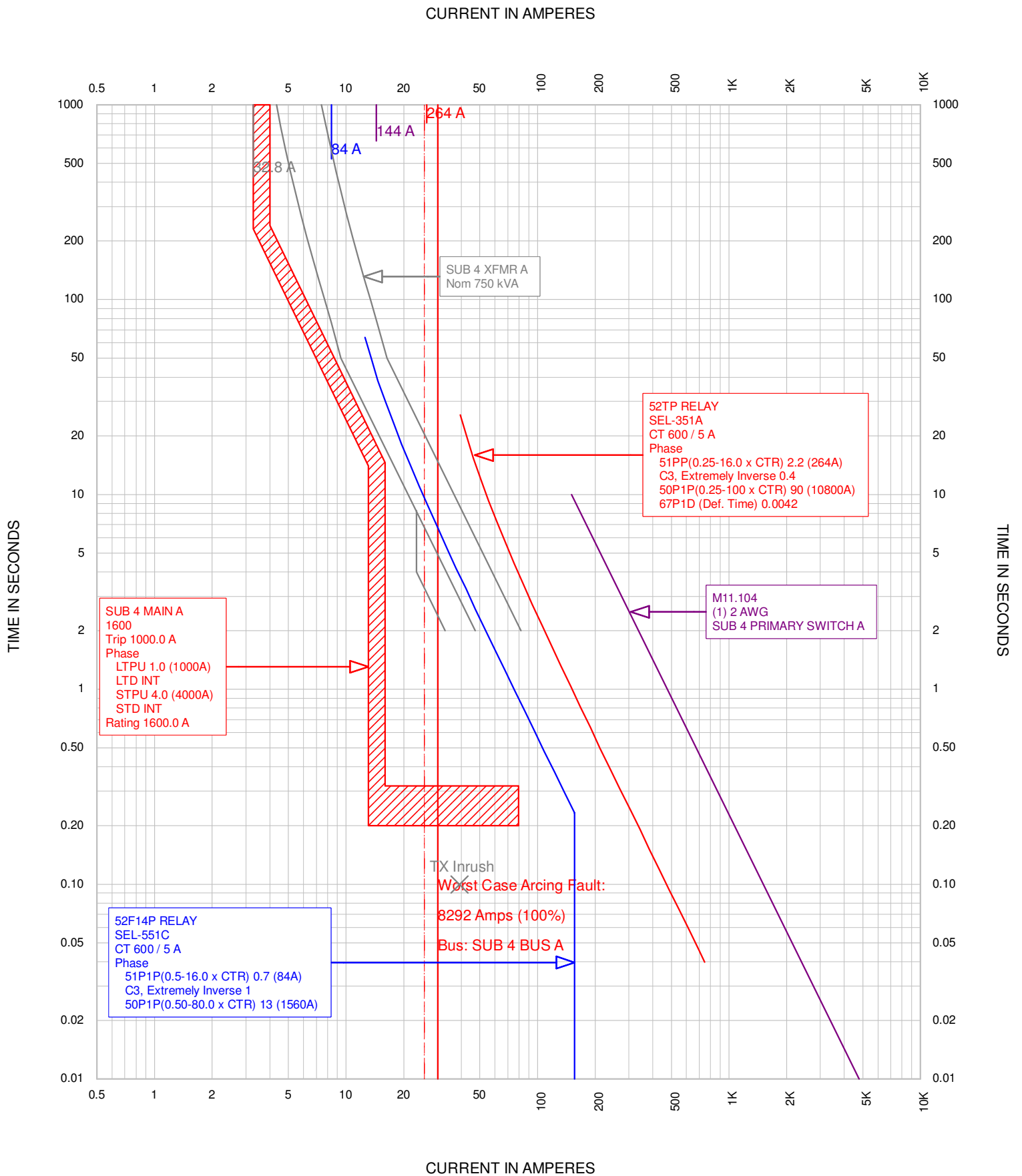
Current Scale x 10

Reference Voltage: 13200

May 21, 2015 3:24 PM

AAWWTP

52F14 GFP



Online: TCC 52F14,24_S4A,B

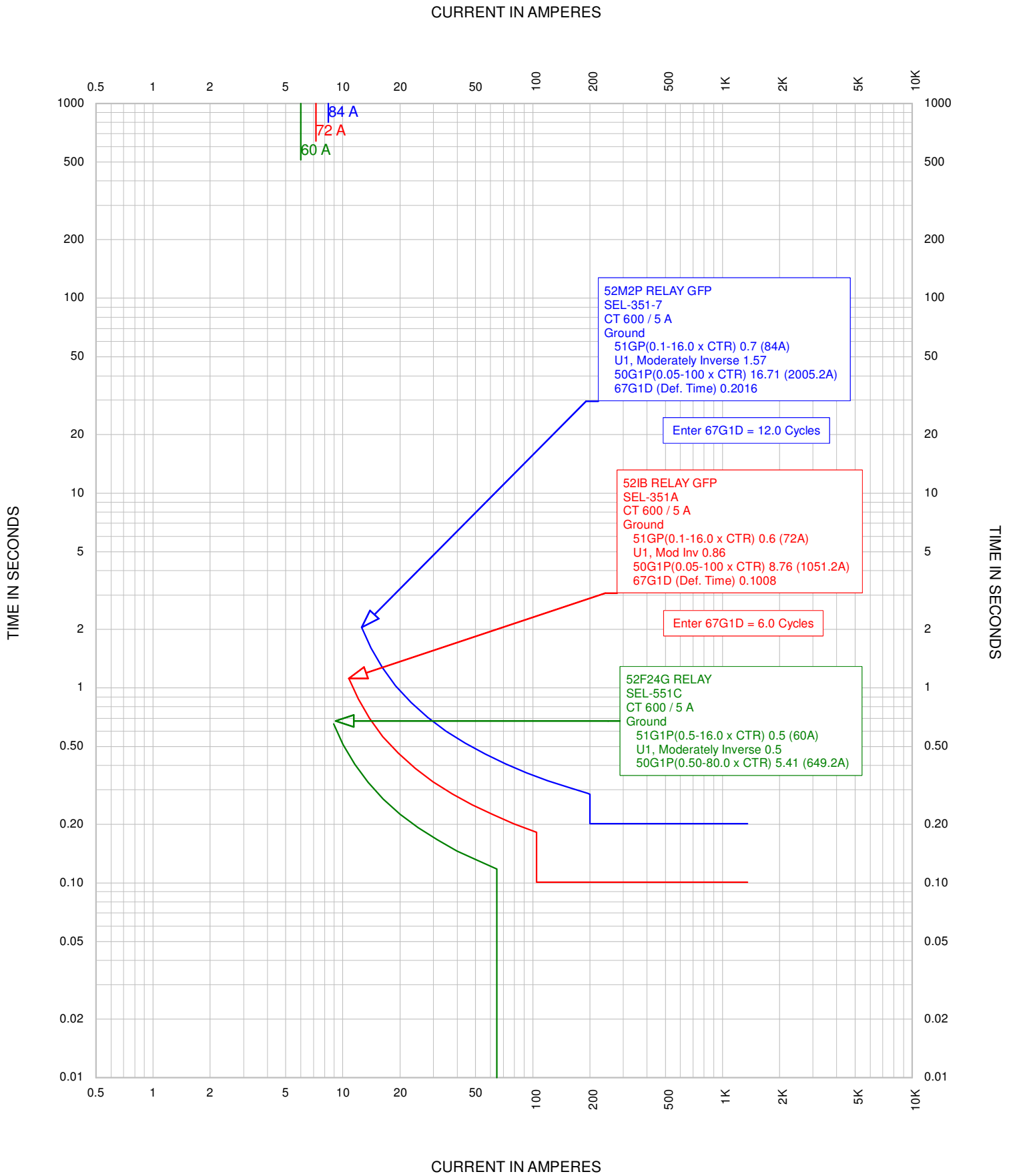
Current Scale x 10

Reference Voltage: 13200

March 2, 2017 11:04 AM

AAWWTP

52F14_S4A



Online: TCC 52F14,24_S4A,B

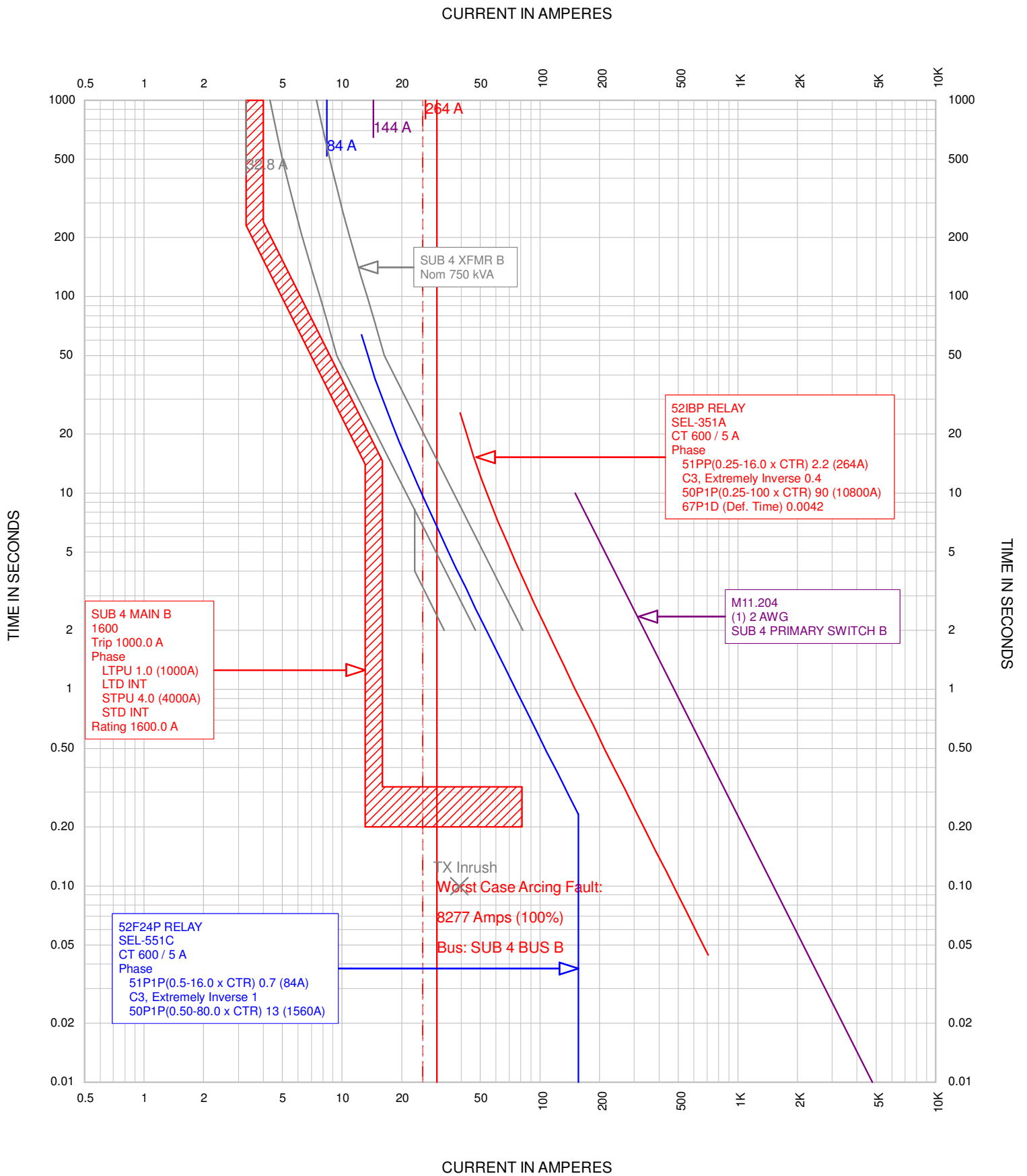
Current Scale x 10

Reference Voltage: 13200

May 21, 2015 4:28 PM

AAWWTP

52F24 GFP



Online: TCC 52F14,24_S4A,B

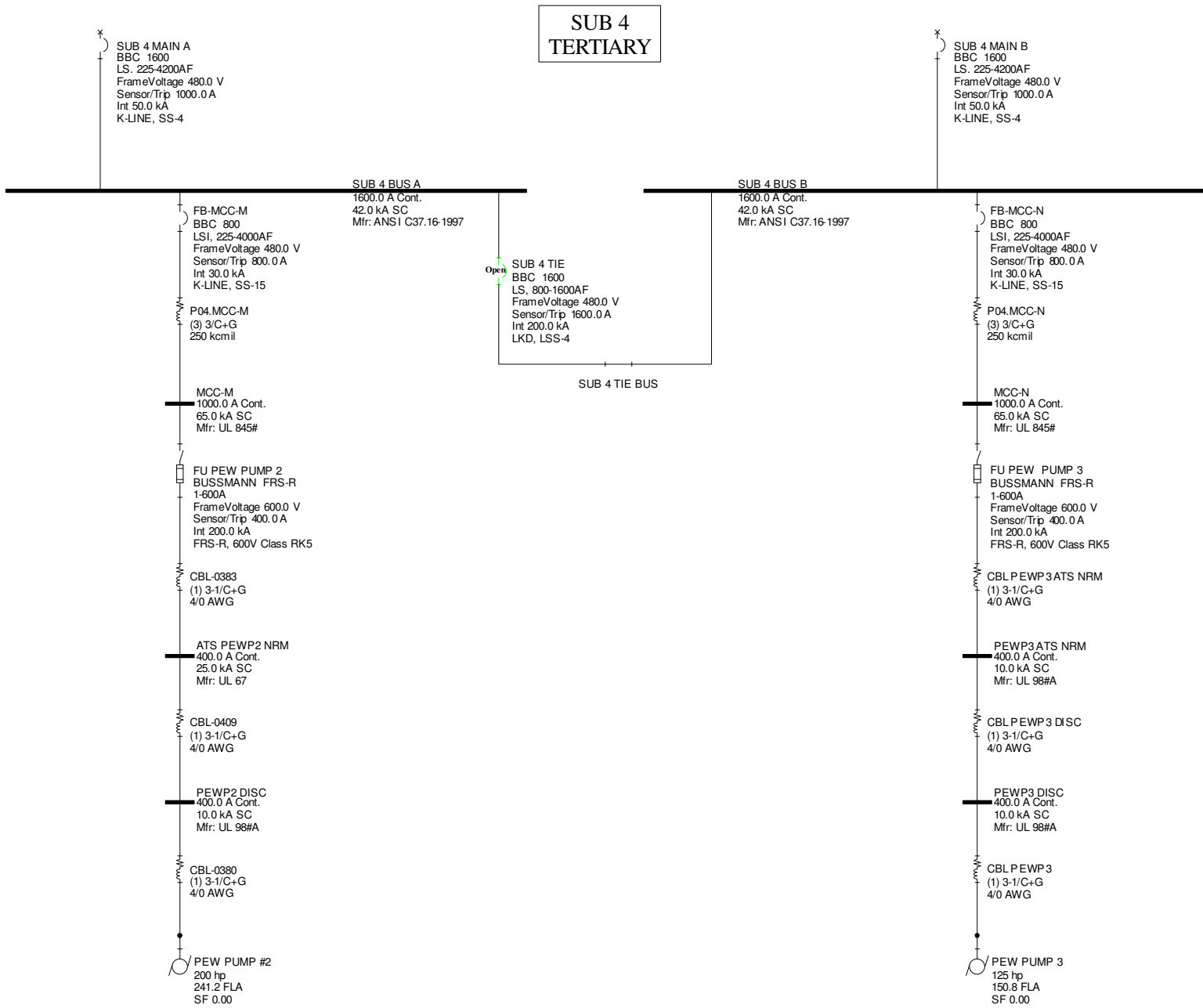
Current Scale x 10

Reference Voltage: 13200

March 2, 2017 11:02 AM

AAWWTP

52F24_S4B

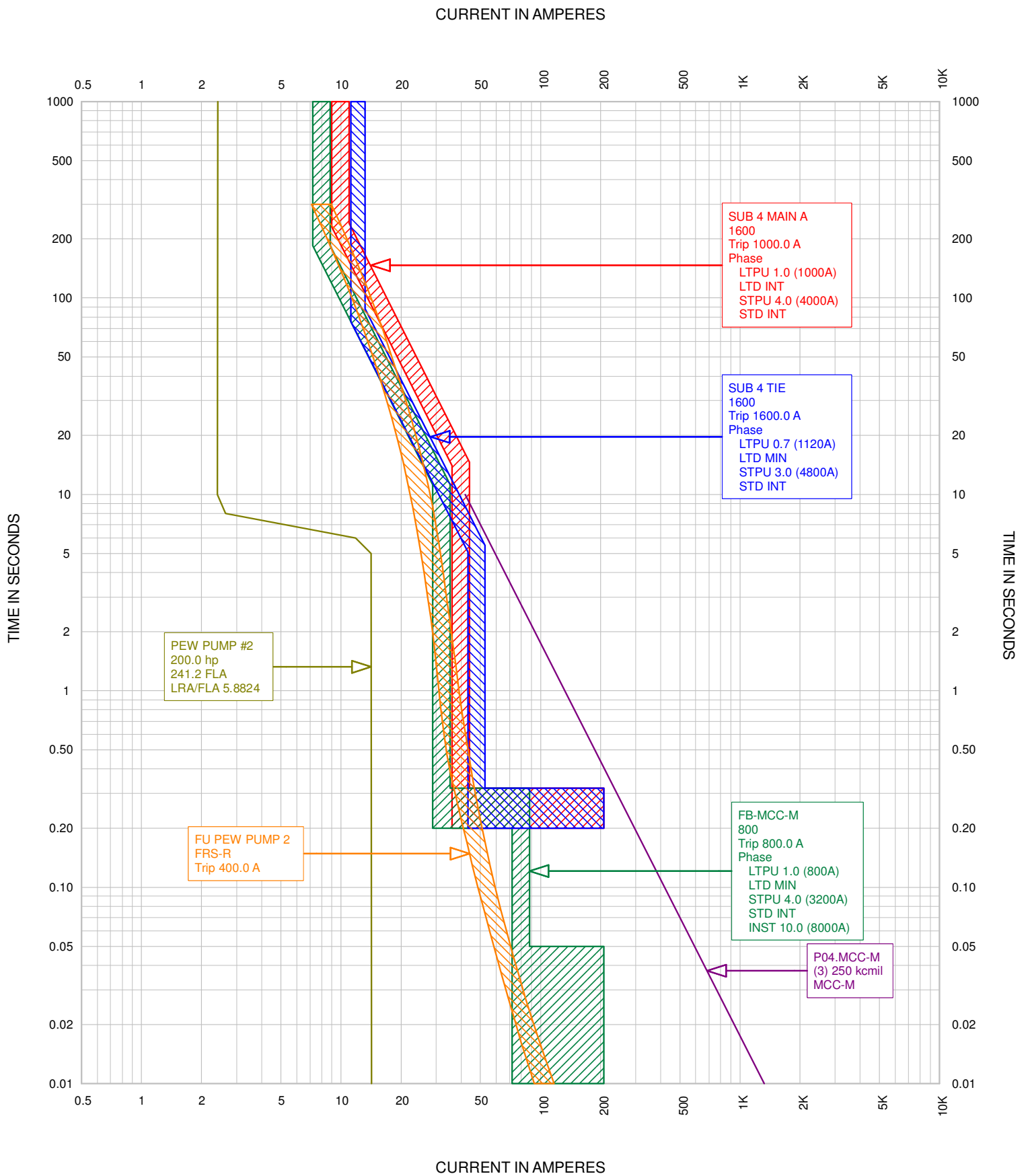


Online: TCC S4A,B_MCC-M,N

March 2, 2017 1:47 PM

AAWWTP





Online: TCC S4A,B_MCC-M,N

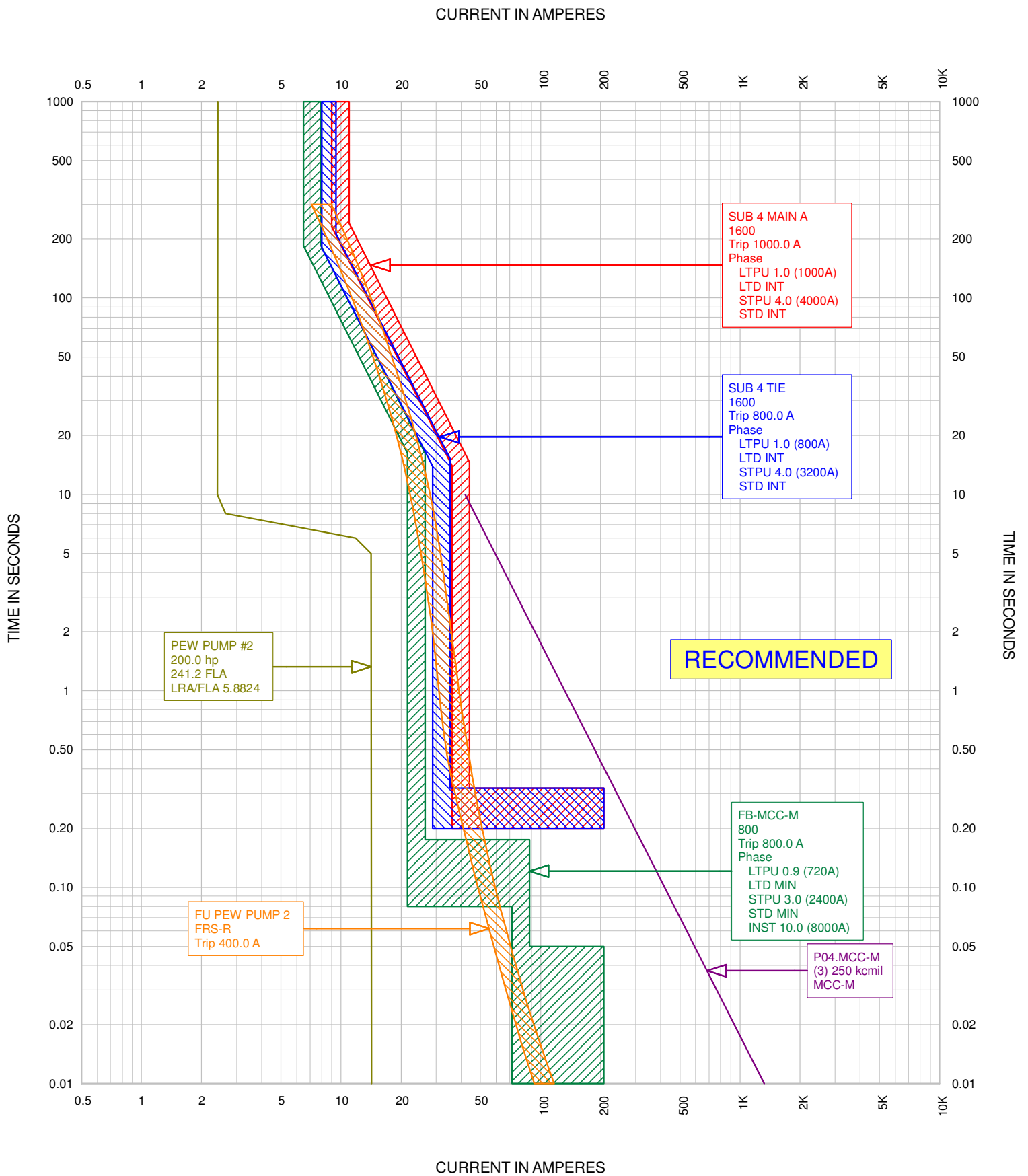
Current Scale x 100

Reference Voltage: 480

January 7, 2016 2:53 PM

AAWWTP

S4A_MCC-M



Online: TCC S4A,B_MCC-M,N

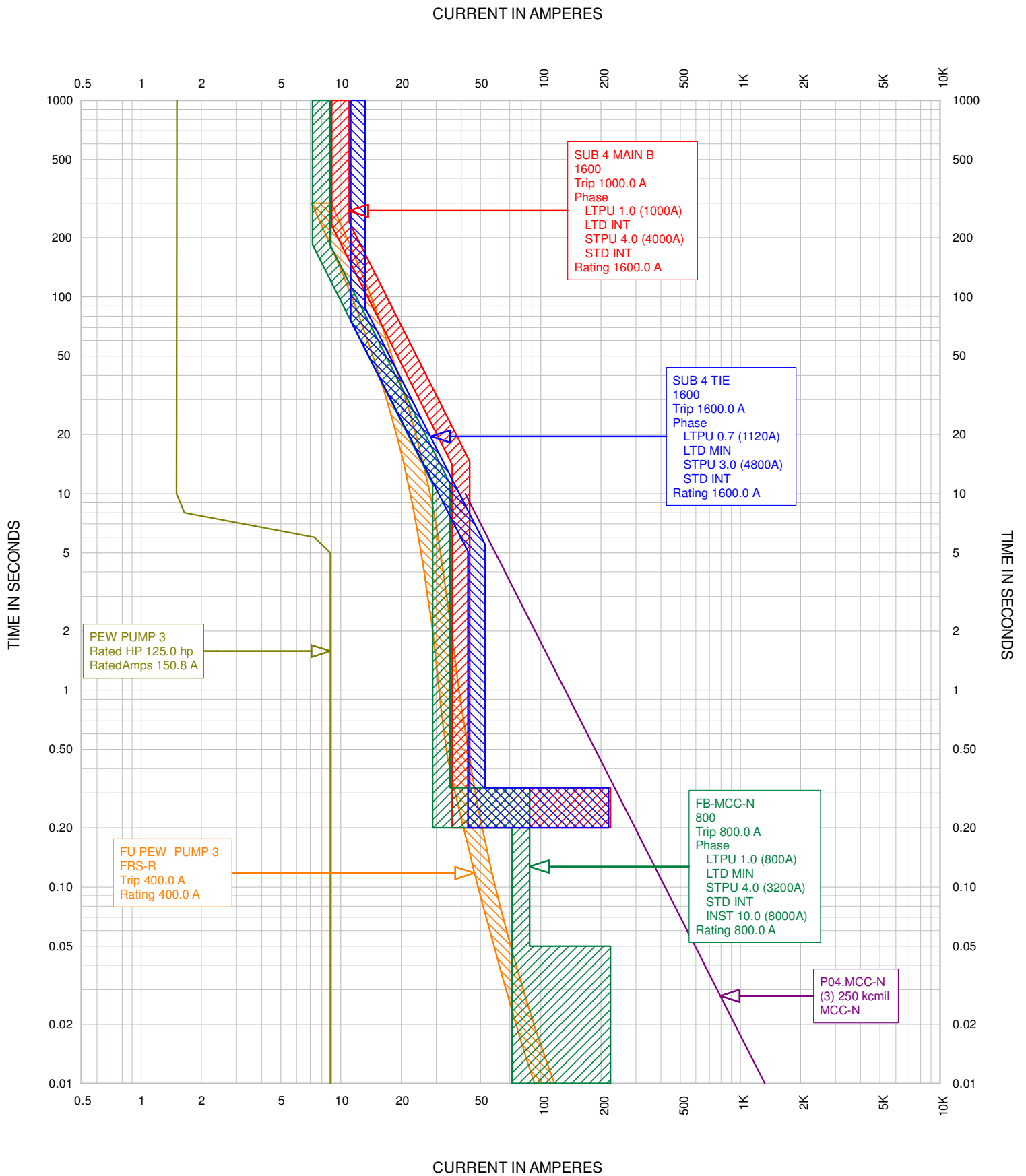
Current Scale x 100

Reference Voltage: 480

January 7, 2016 3:21 PM

AAWWTP

S4A_MCC-M



Online: TCC S4A,B_MCC-M,N

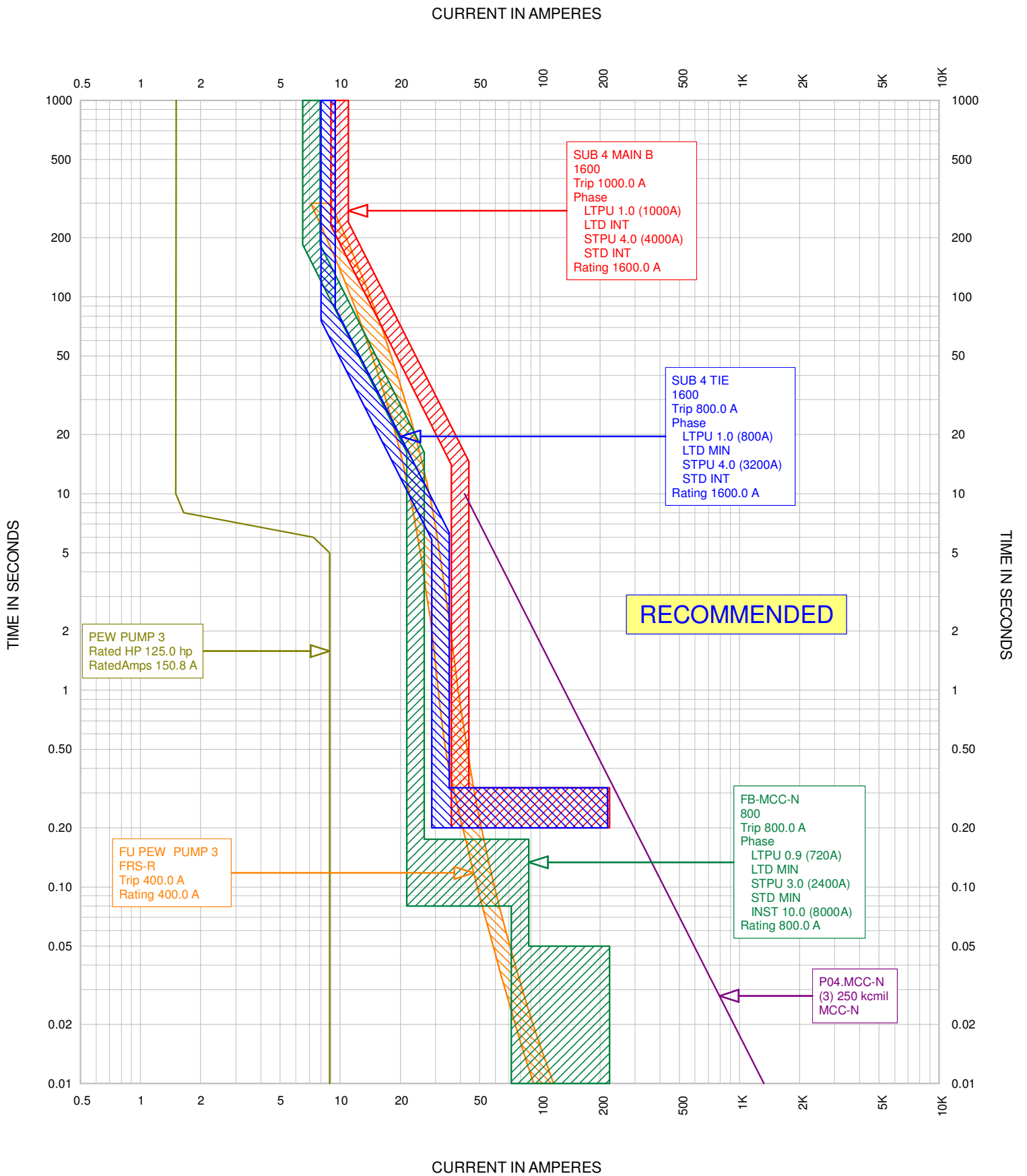
Current Scale x 100

Reference Voltage: 480

March 2, 2017 11:58 AM

AAWWTP

S4B_MCC-N



Online: TCC S4A,B_MCC-M,N

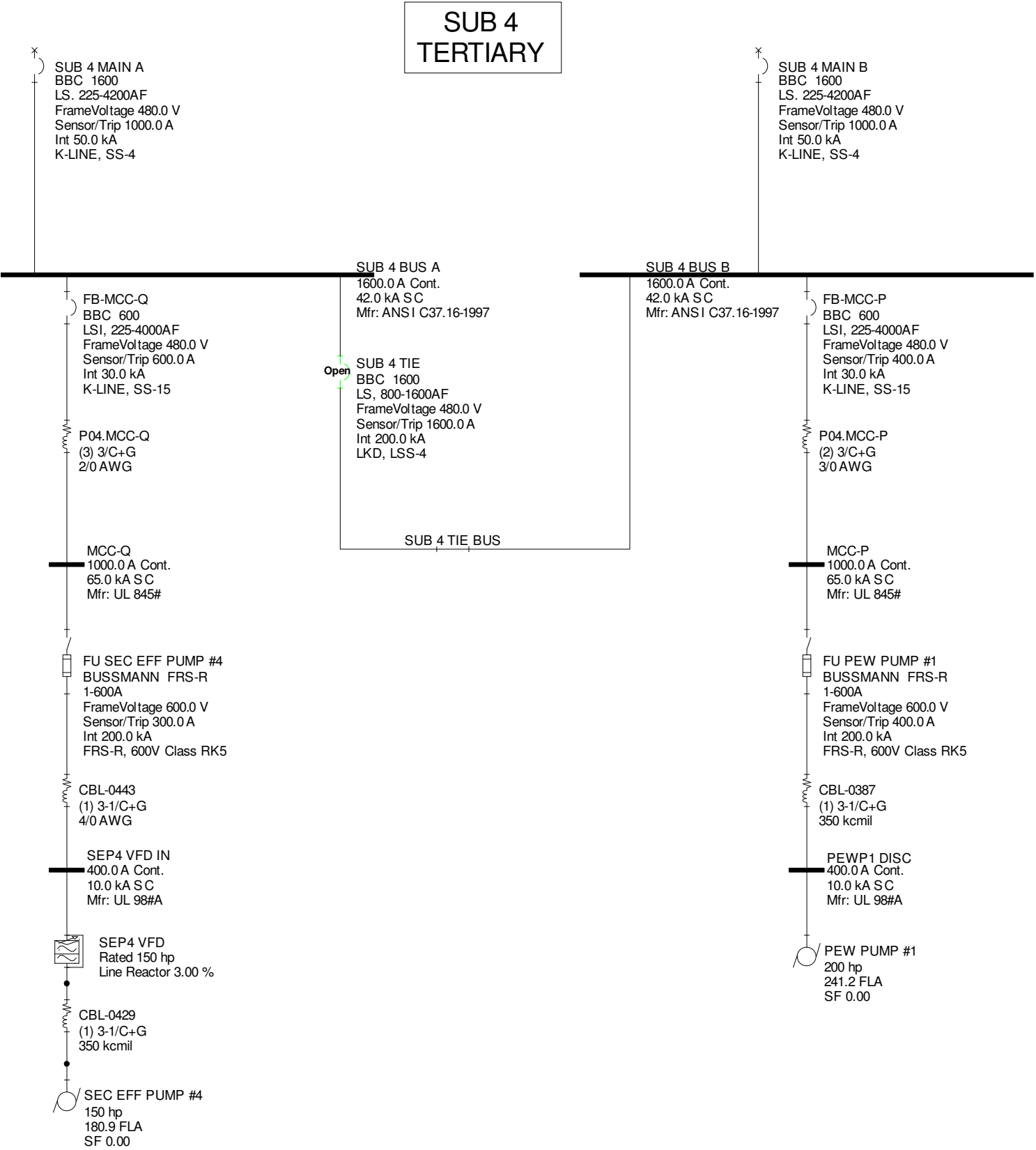
Current Scale x 100

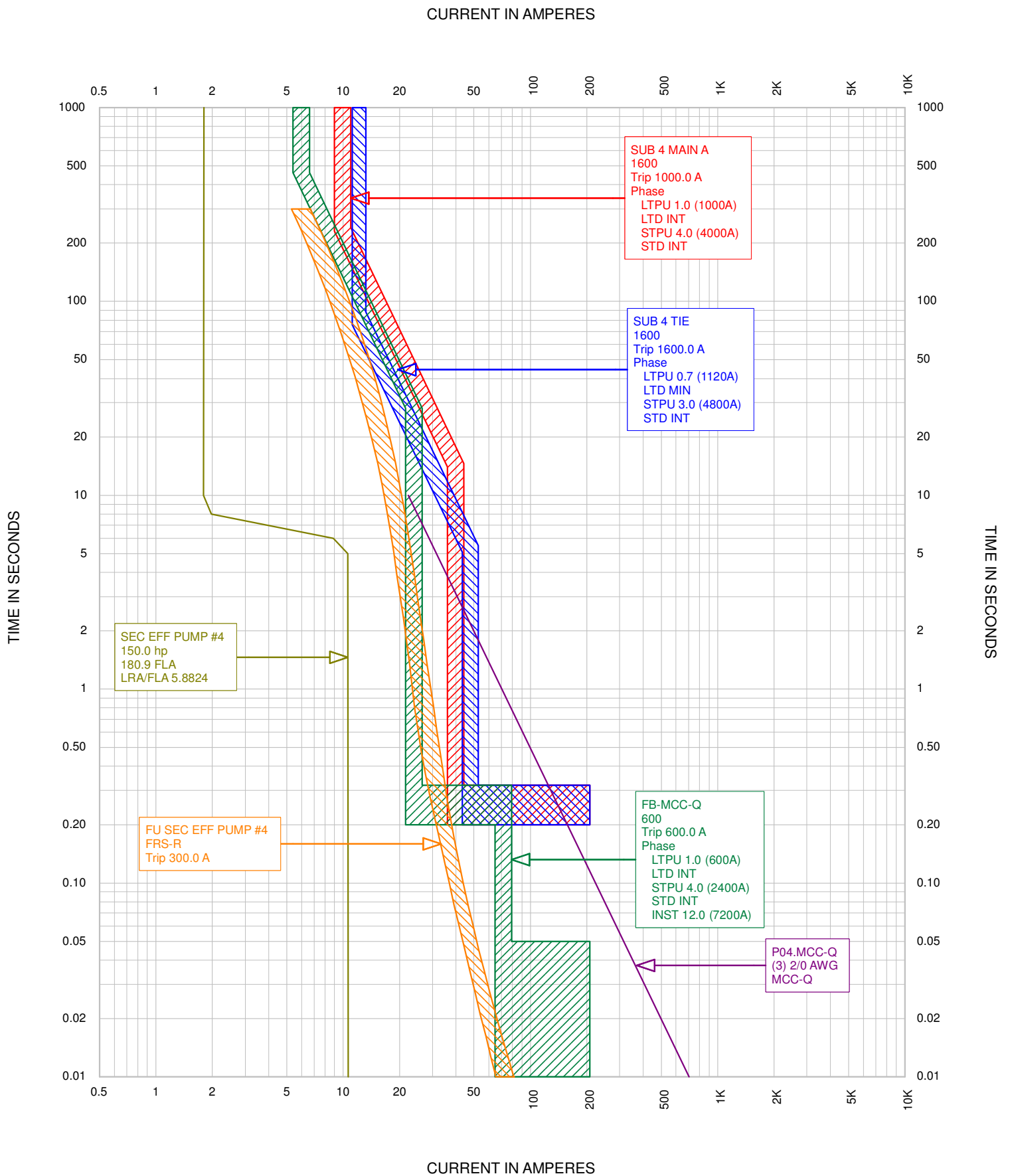
Reference Voltage: 480

March 2, 2017 12:03 PM

AAWWTP

S4B_MCC-N





Online: TCC S4A,B_MCC-Q,P

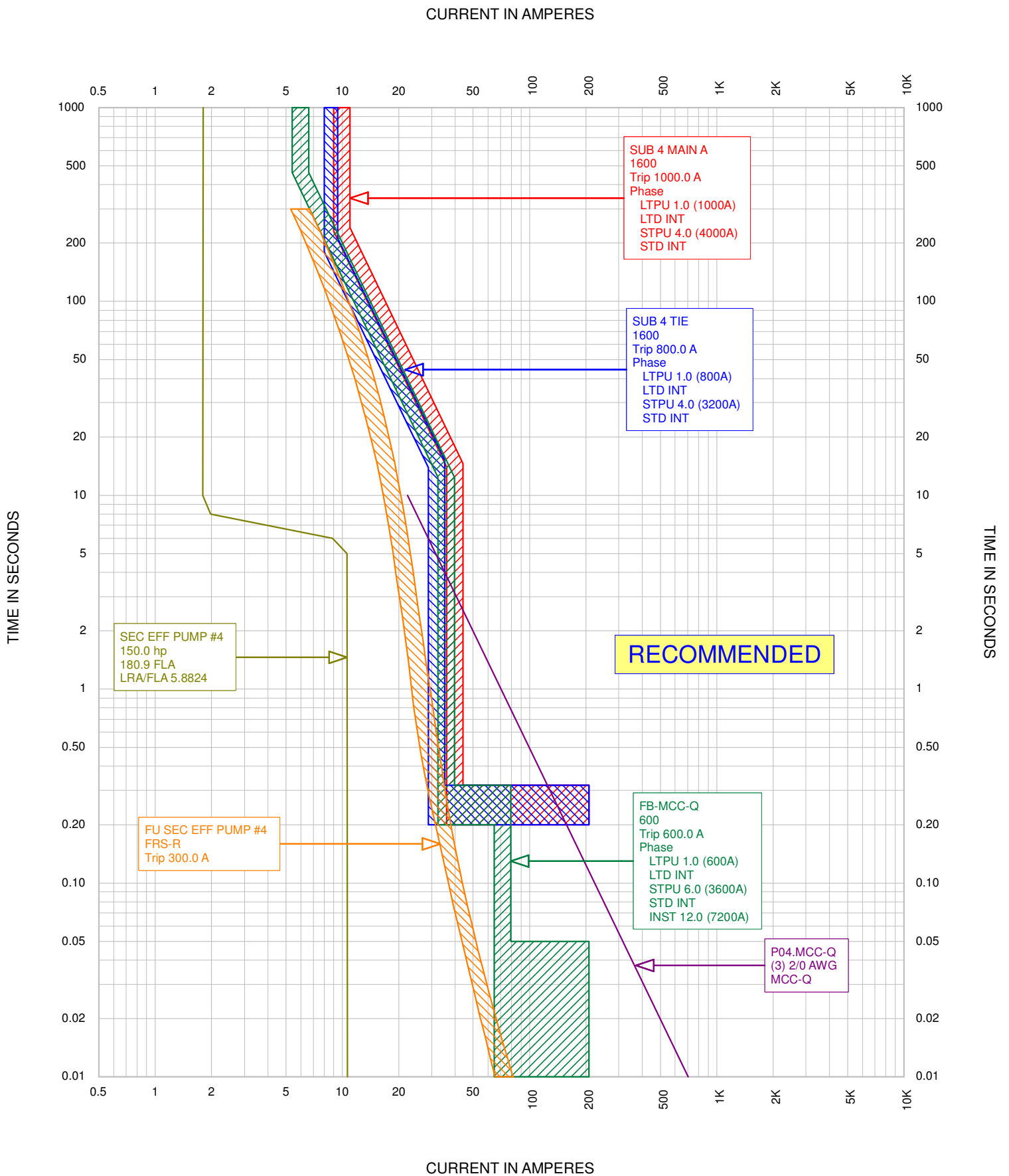
Current Scale x 100

Reference Voltage: 480

January 7, 2016 3:44 PM

AAWWTP

S4A_MCC-Q



Online: TCC S4A,B_MCC-Q,P

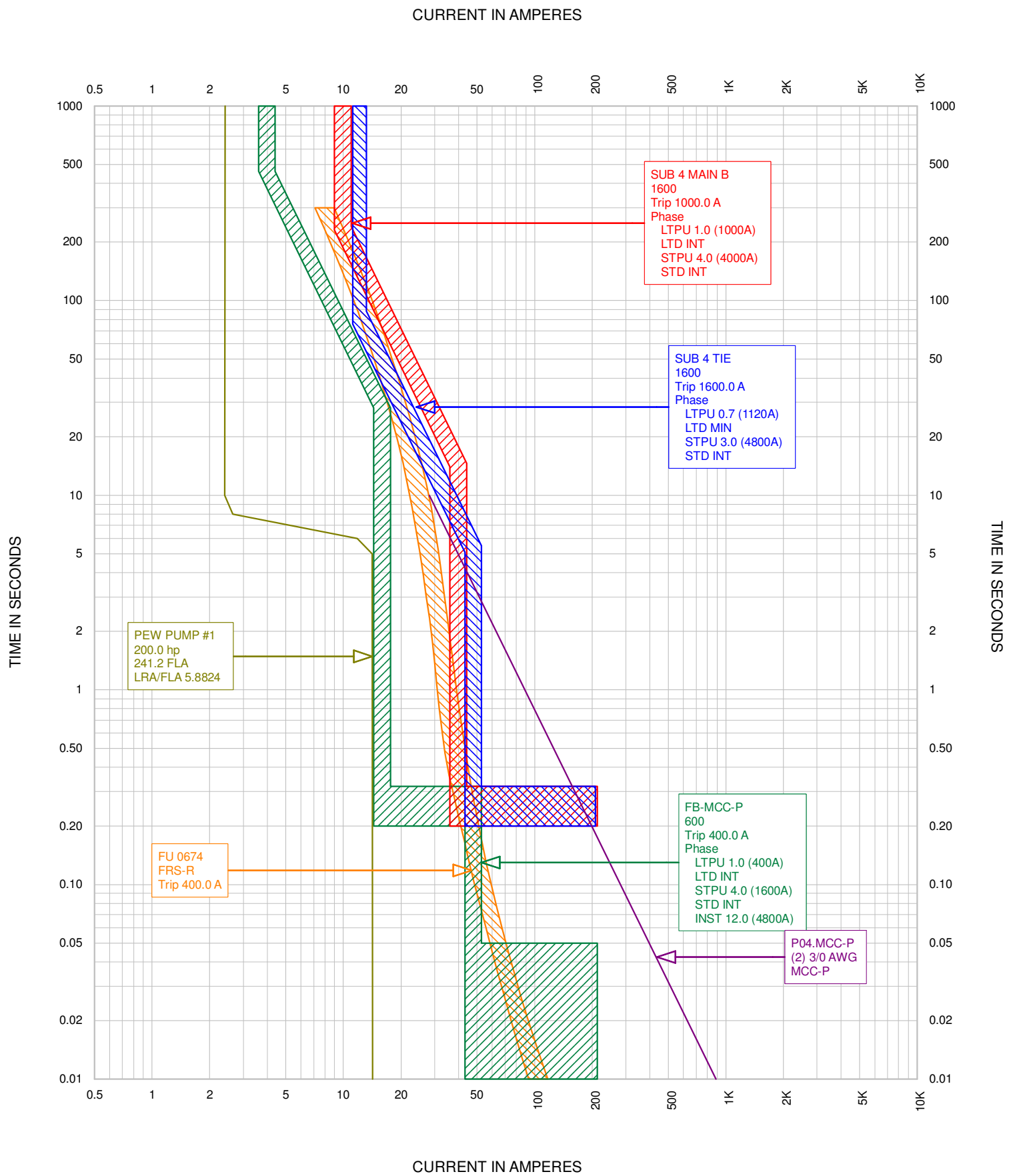
Current Scale x 100

Reference Voltage: 480

January 7, 2016 3:55 PM

AAWWTP

S4A_MCC-Q



Online: TCC S4A,B_MCC-Q,P

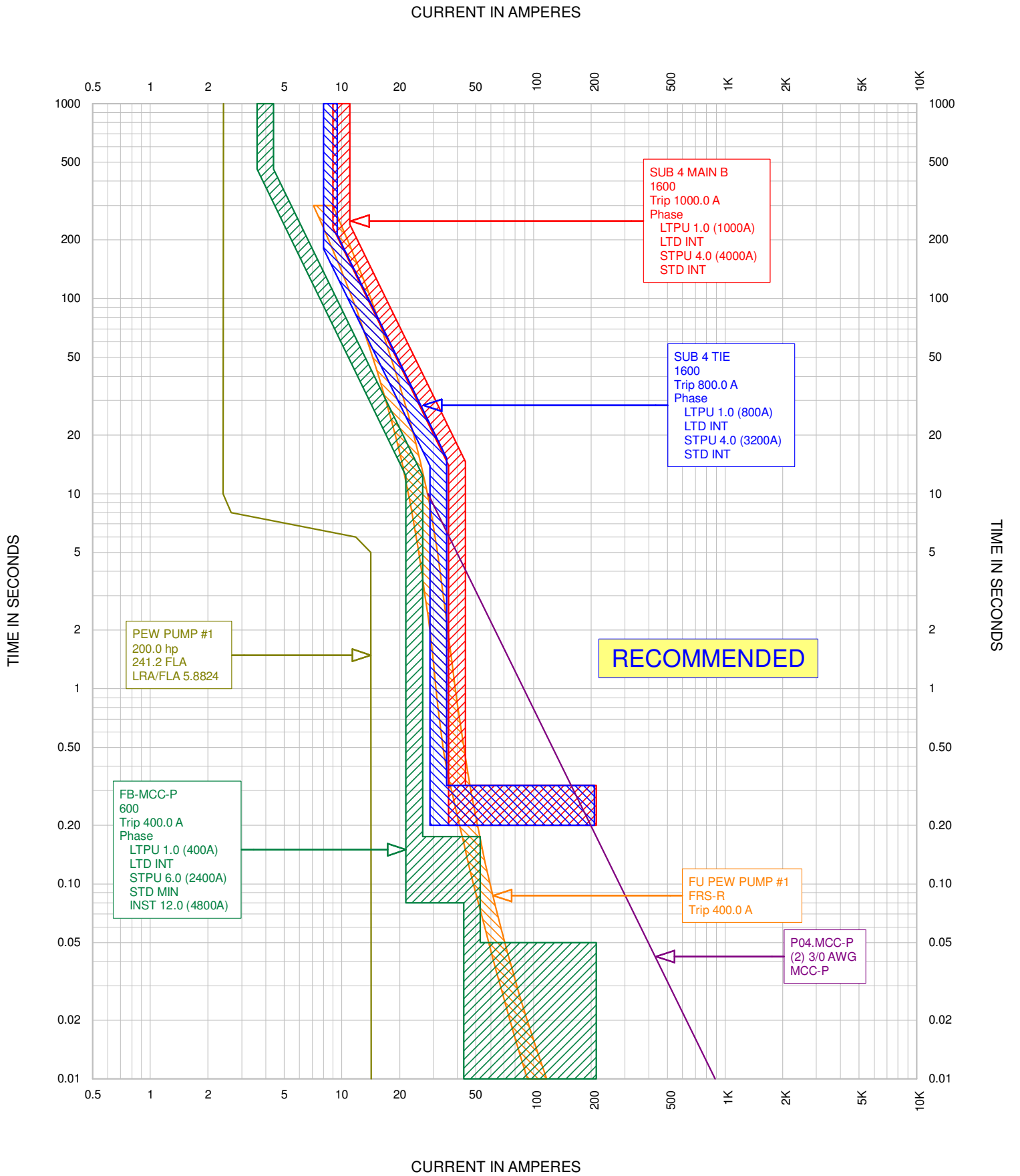
Current Scale x 100

Reference Voltage: 480

January 8, 2016 11:03 AM

AAWWTP

S4B_MCC-P



Online: TCC S4A,B_MCC-Q,P

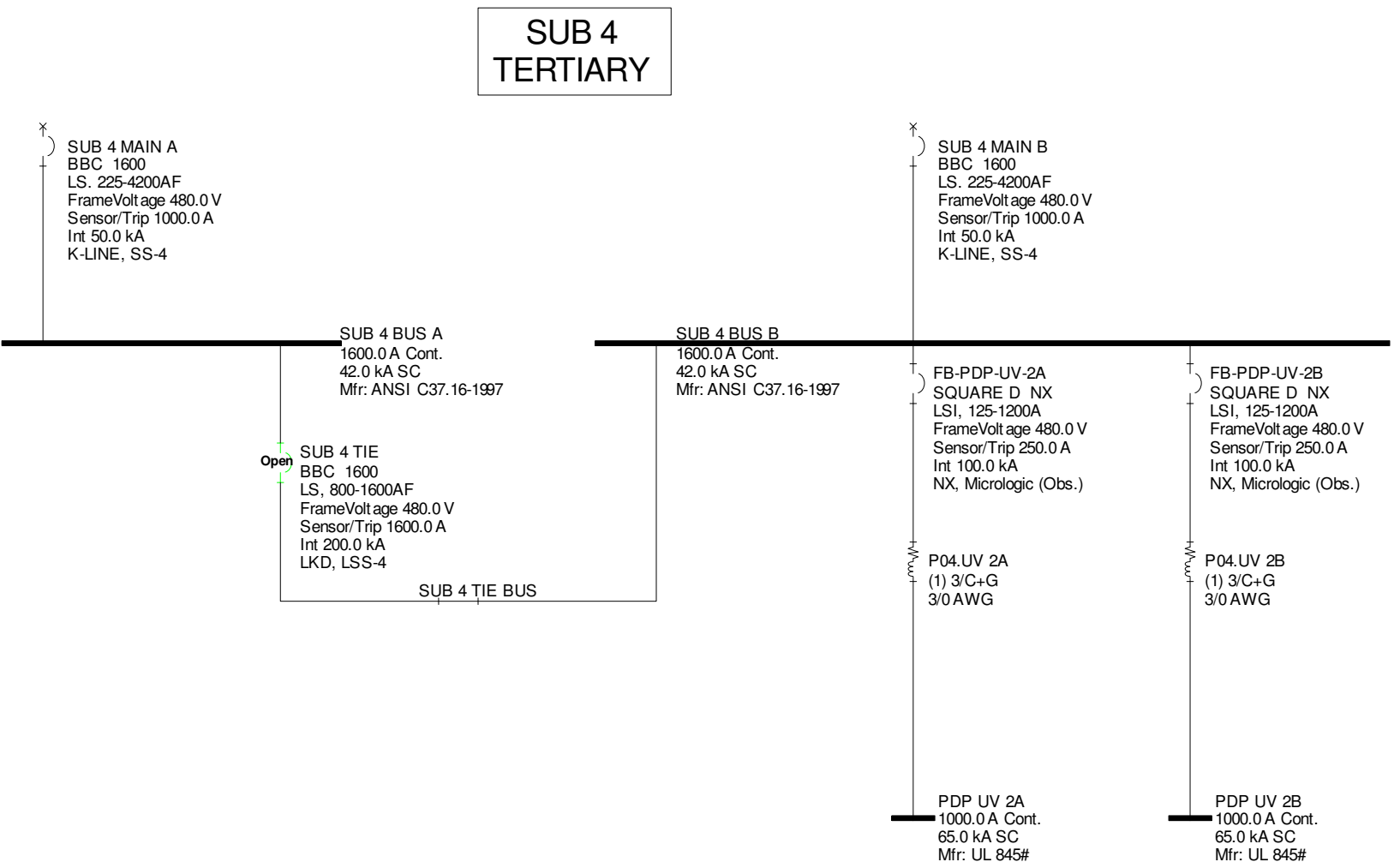
Current Scale x 100

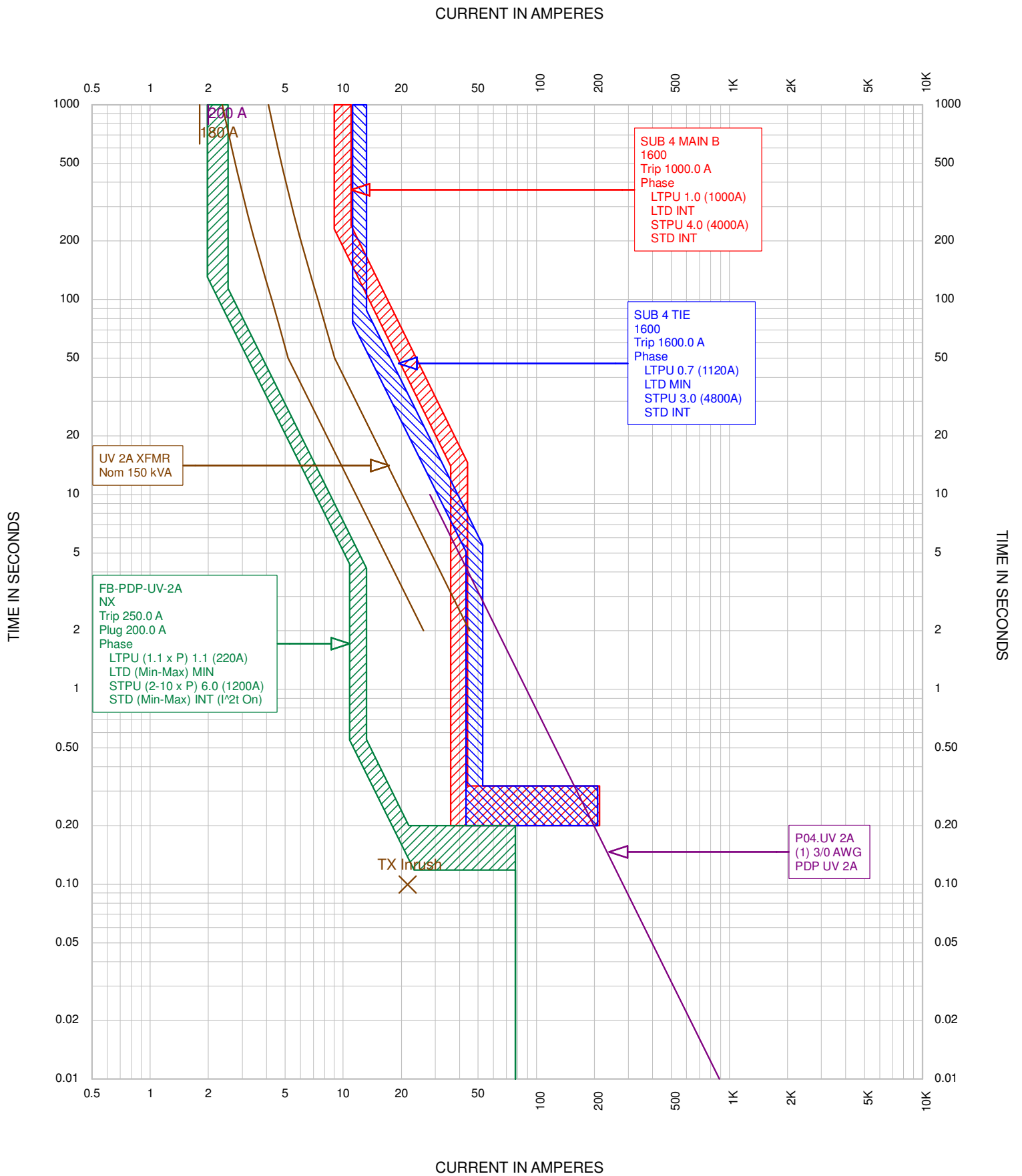
Reference Voltage: 480

January 8, 2016 11:57 AM

AAWWTP

S4B_MCC-P





Online: TCC S4A,B_UV-2A,2B

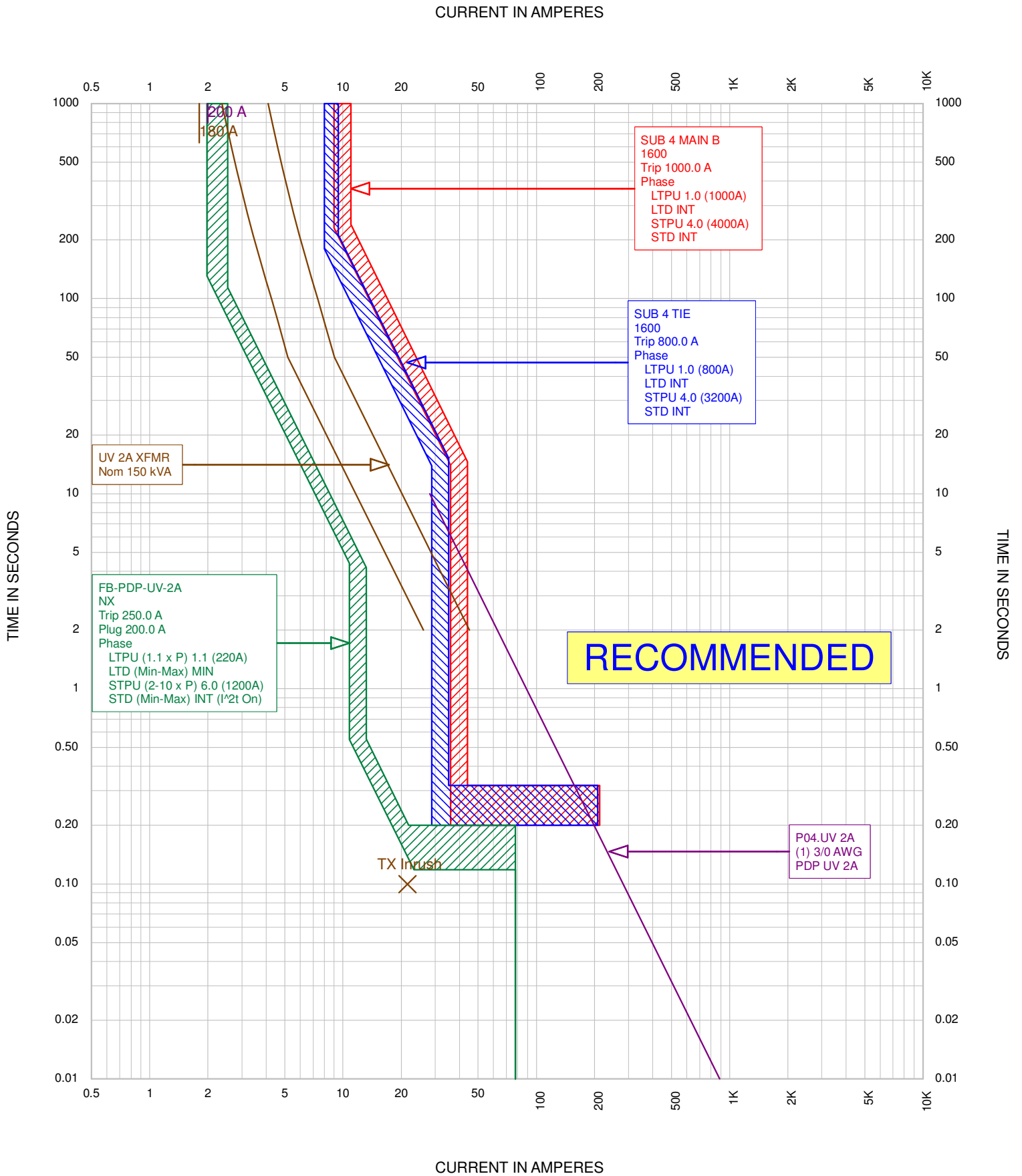
Current Scale x 100

Reference Voltage: 480

January 8, 2016 12:38 PM

AAWWTP

S4B_UV-2A



Online: TCC S4A,B_UV-2A,2B

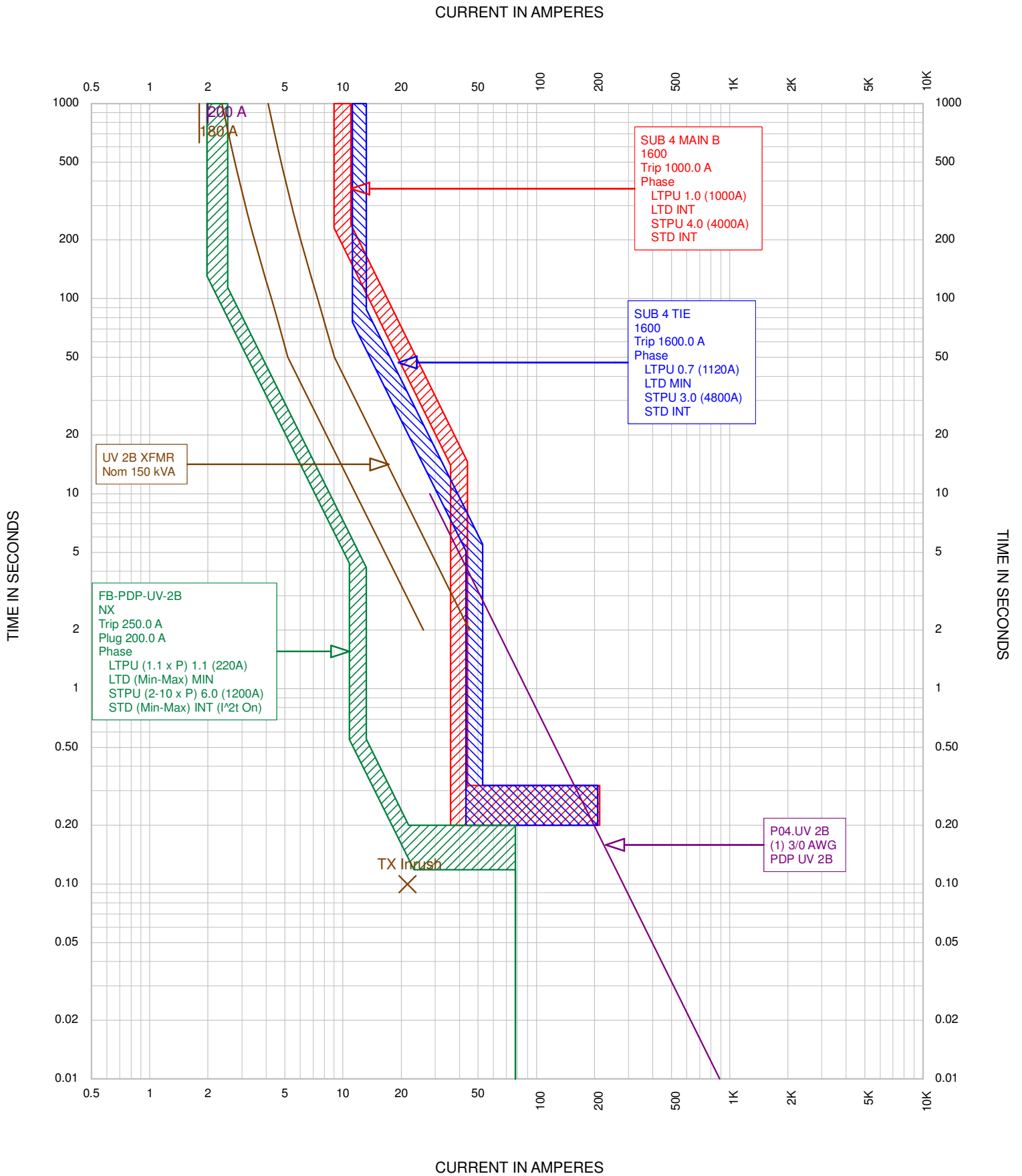
Current Scale x 100

Reference Voltage: 480

January 8, 2016 12:41 PM

AAWWTP

S4B_UV-2A



Online: TCC S4A,B_UV-2A,2B

Current Scale x 100

Reference Voltage: 480

January 8, 2016 1:12 PM

AAWWTP

S4B_UV-2B

3.4.7 Substation 5:

Oneline: TCC 52F15,25_S5A,B

TCC: 52F15 GFP

TCC: 52F15_S5A

TCC: 52F25 GFP

TCC: 52F25_S5B

Oneline: TCC S5A,B_MCC-51A,51B

TCC: S5A_MCC-51A GFP

TCC: S5A_MCC-51A

TCC: S5B_MCC-51B GFP

TCC: S5B_MCC-51B

TCC: MCC-51A

TCC: MCC-51B

Oneline: TCC S5A,B_MCC-52A,52B

TCC: S5A_MCC-52A GFP

TCC: S5A_MCC-52A

TCC: S5B_MCC-52B GFP

TCC: S5B_MCC-52B

TCC: MCC-52A

TCC: MCC-52B

Oneline: TCC S5A,B_MCC-53A,53B

TCC: S5A_MCC-53A GFP

TCC: S5A_MCC-53A

TCC: S5B_MCC-53B GFP

TCC:	S5B_MCC-53B
TCC:	MCC-53A
TCC:	MCC-53B
Online:	TCC S5A,B_MCC-54A,54B
TCC:	S5A_MCC-54A GFP
TCC:	S5A_MCC-54A
TCC:	S5B_MCC-54B GFP
TCC:	S5B_MCC-54B
TCC:	MCC-54A
TCC:	MCC-54B
Online:	TCC S5A,B_MCC-55A,55B
TCC:	S5A_MCC-55A GFP
TCC:	S5A_MCC-55A
TCC:	S5B_MCC-55B GFP
TCC:	S5B_MCC-55B
TCC:	MCC-55A
TCC:	MCC-55B
Online:	TCC S5A,B_MCC-56A,56B
TCC:	S5A_MCC-56A GFP
TCC:	S5A_MCC-56A
TCC:	S5B_MCC-56B GFP
TCC:	S5B_MCC-56B
TCC:	MCC-56A
TCC:	MCC-56B

Online: TCC S5A,B_VFD-CFG1,2,3

TCC: S5A_ VFD-CFG1 GFP

TCC: S5A_ VFD-CFG1

TCC: S5B_ VFD-CFG2 GFP

TCC: S5B_ VFD-CFG2

TCC: S5B_ VFD-CFG3 GFP

TCC: S5B_ VFD-CFG3

Online: TCC S5A,B_MCC-R,S

TCC: S5A_MCC-R GFP

TCC: S5A_MCC-R

TCC: S5B_MCC-S GFP

TCC: S5A_MCC-S

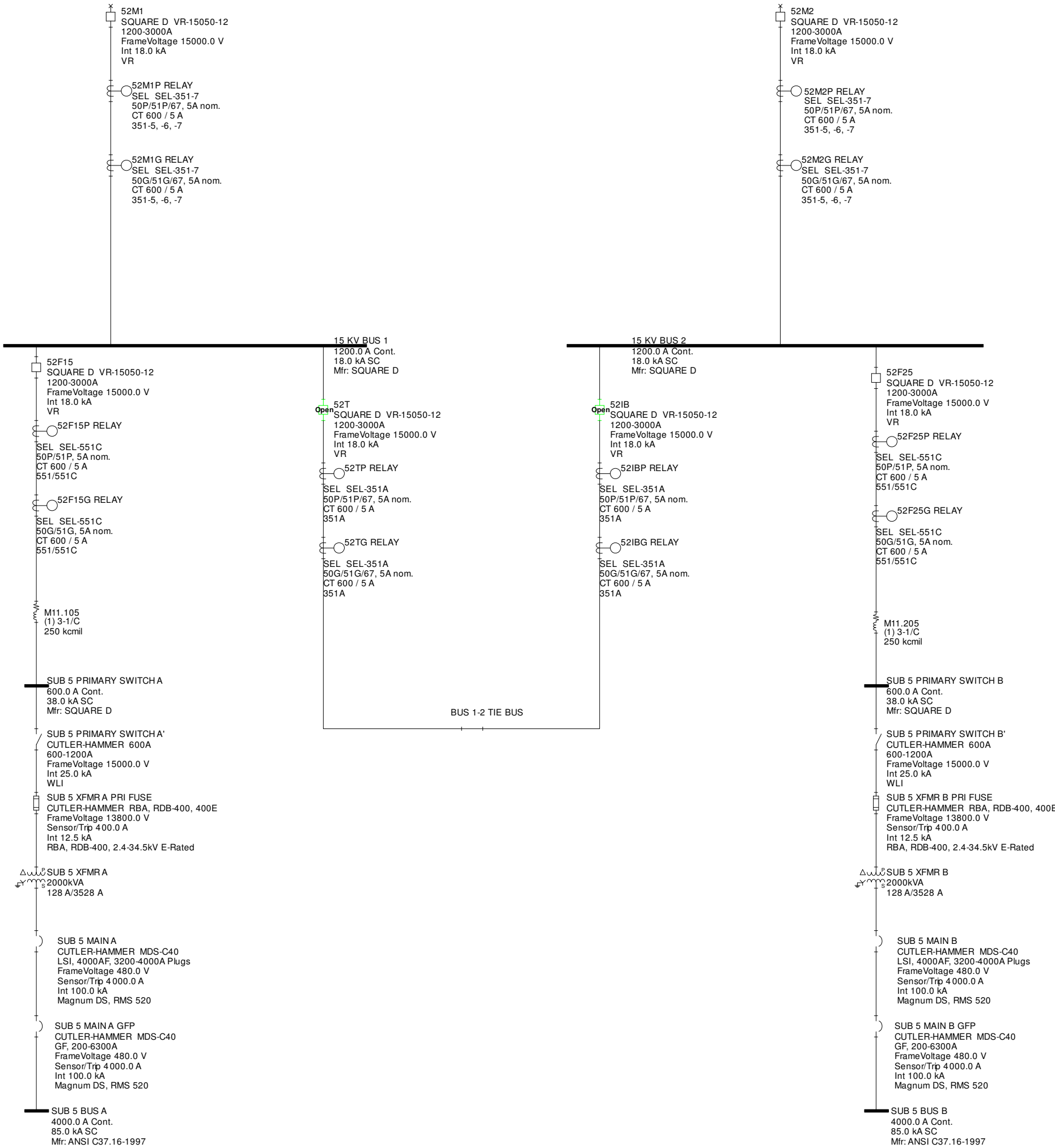
Online: TCC S5A,B_MCC-XA,XB

TCC: S5A_MCC-XA GFP

TCC: S5B_MCC-XA

TCC: S5A_MCC-XB GFP

TCC: S5B_MCC-XB

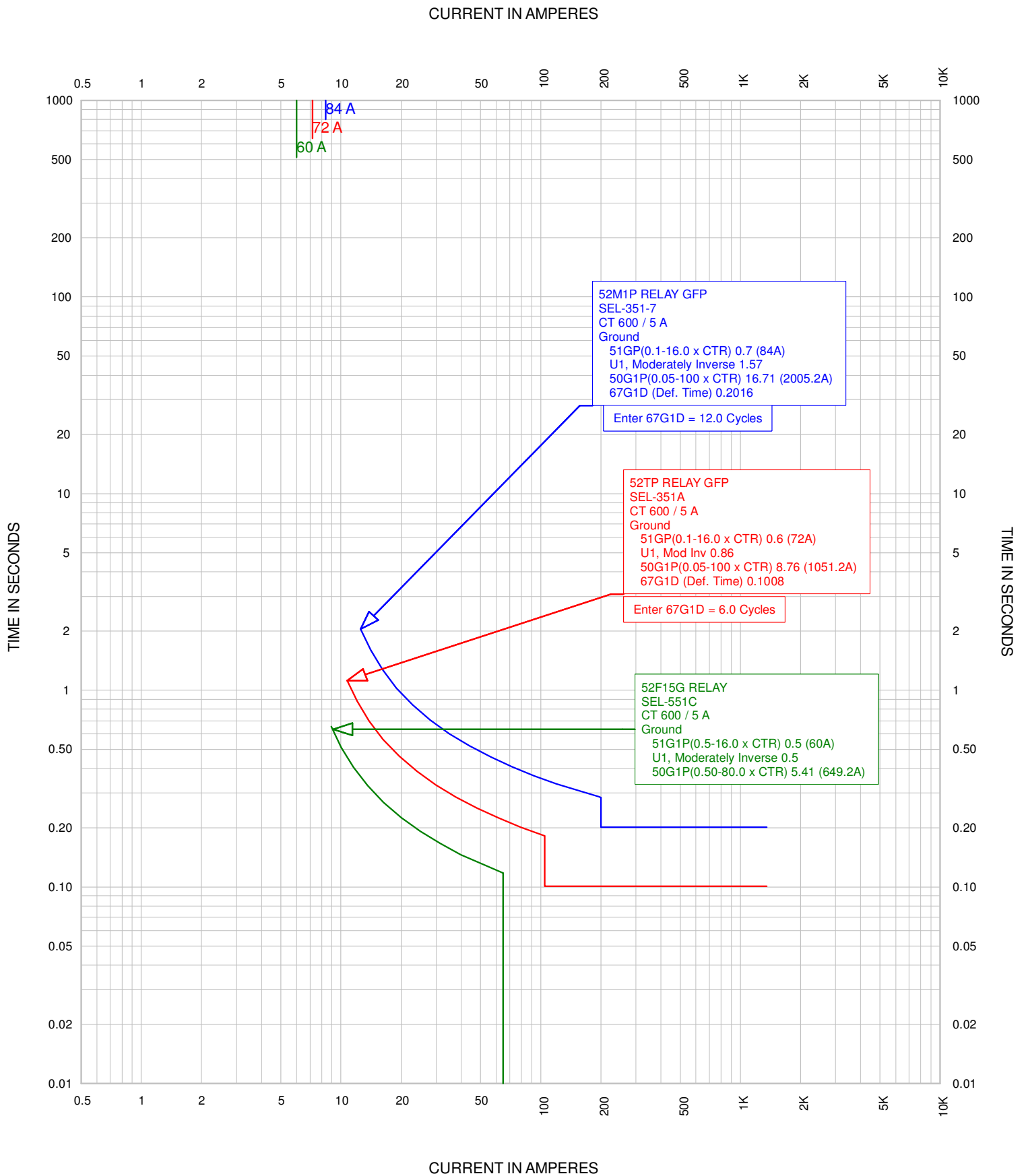


Oneline: TCC 52F15,25_S5A,B

April 4, 2016 3:49 PM

AAWWTP





Online: TCC 52F15,25_S5A,B

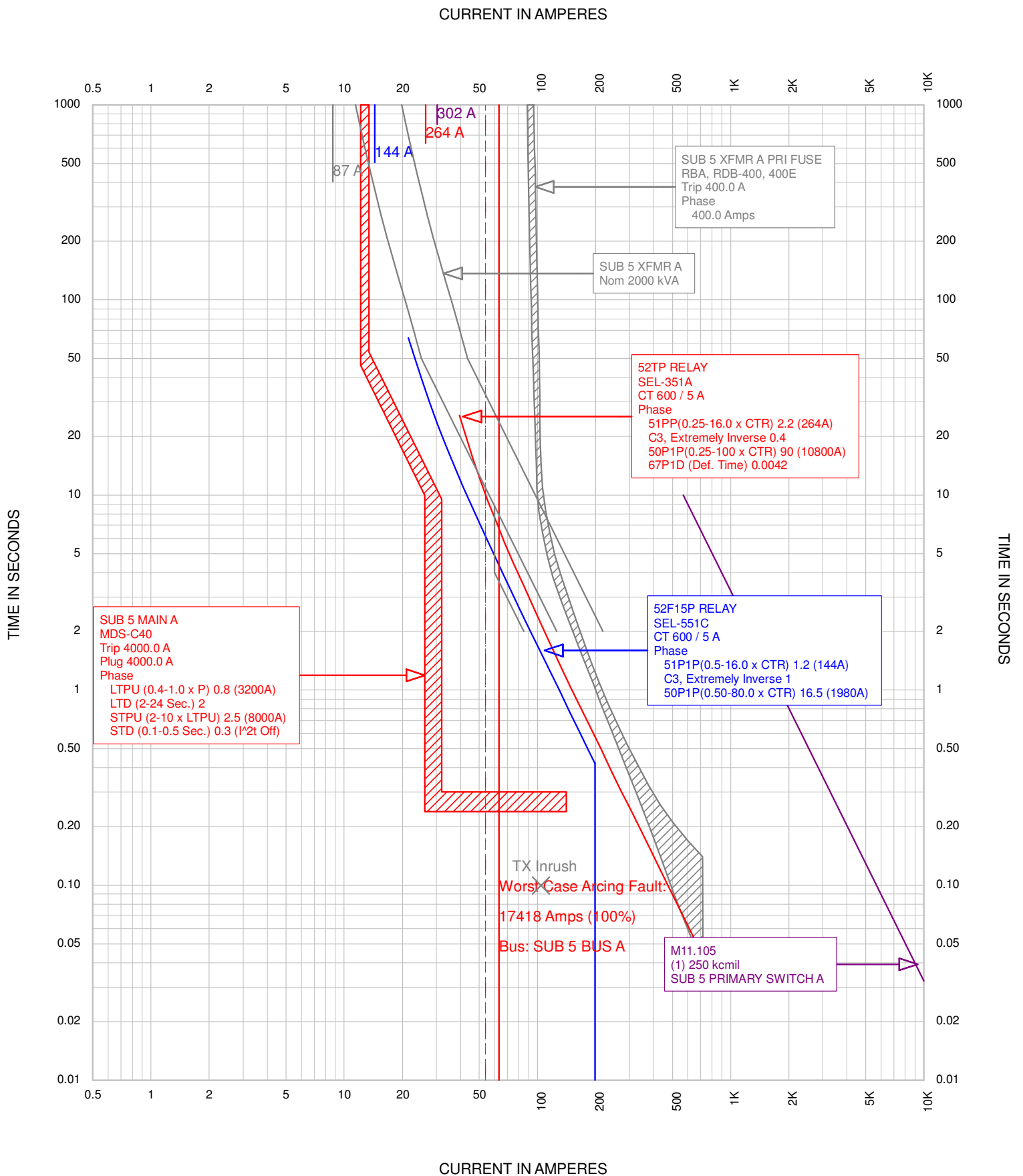
Current Scale x 10

Reference Voltage: 13200

May 22, 2015 11:12 AM

AAWWTP

52F15 GFP



Online: TCC 52F15,25_S5A,B

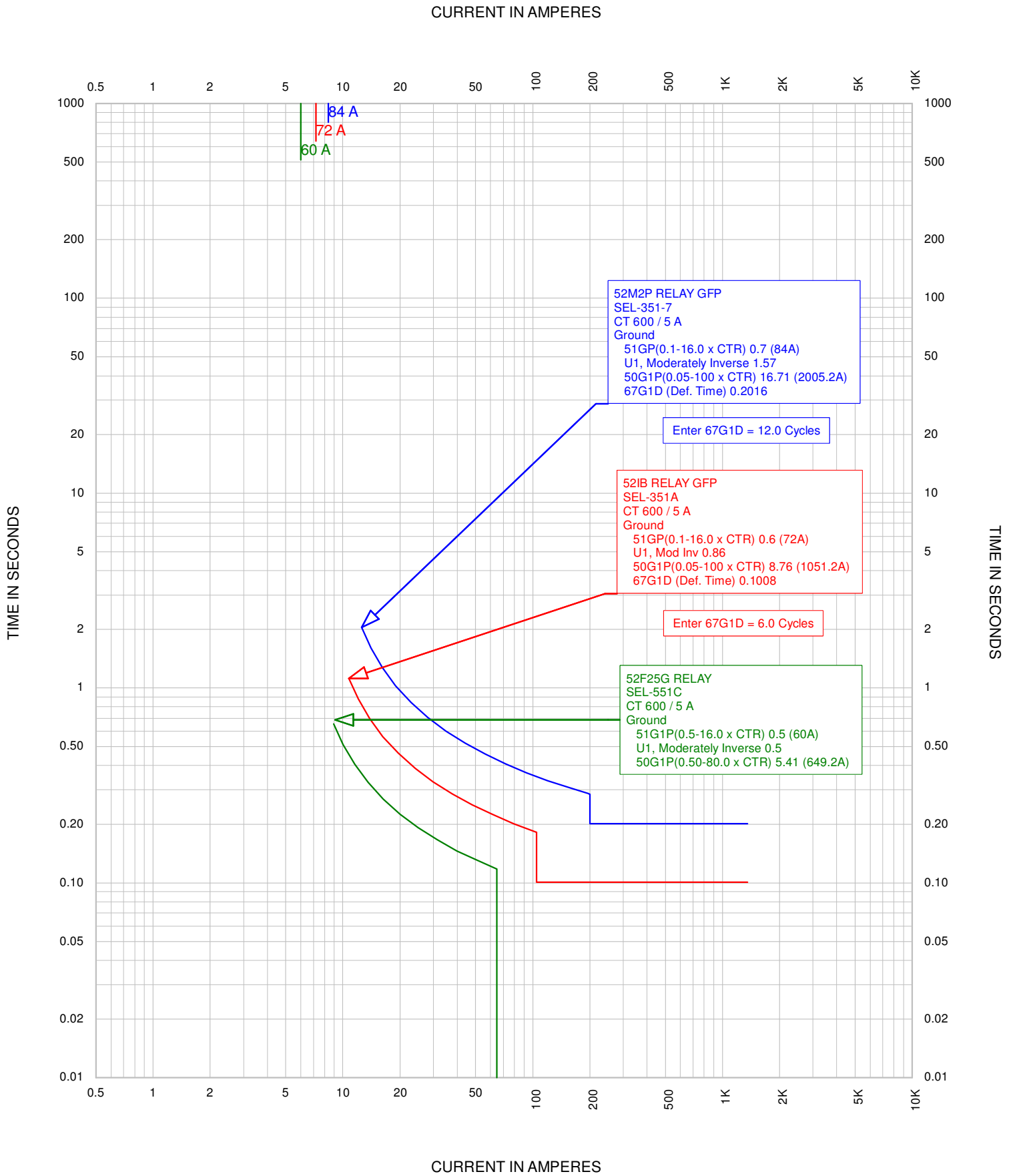
Current Scale x 10

Reference Voltage: 13200

December 18, 2015 5:44 PM

AAWWTP

52F15_S5A



Online: TCC 52F15,25_S5A,B

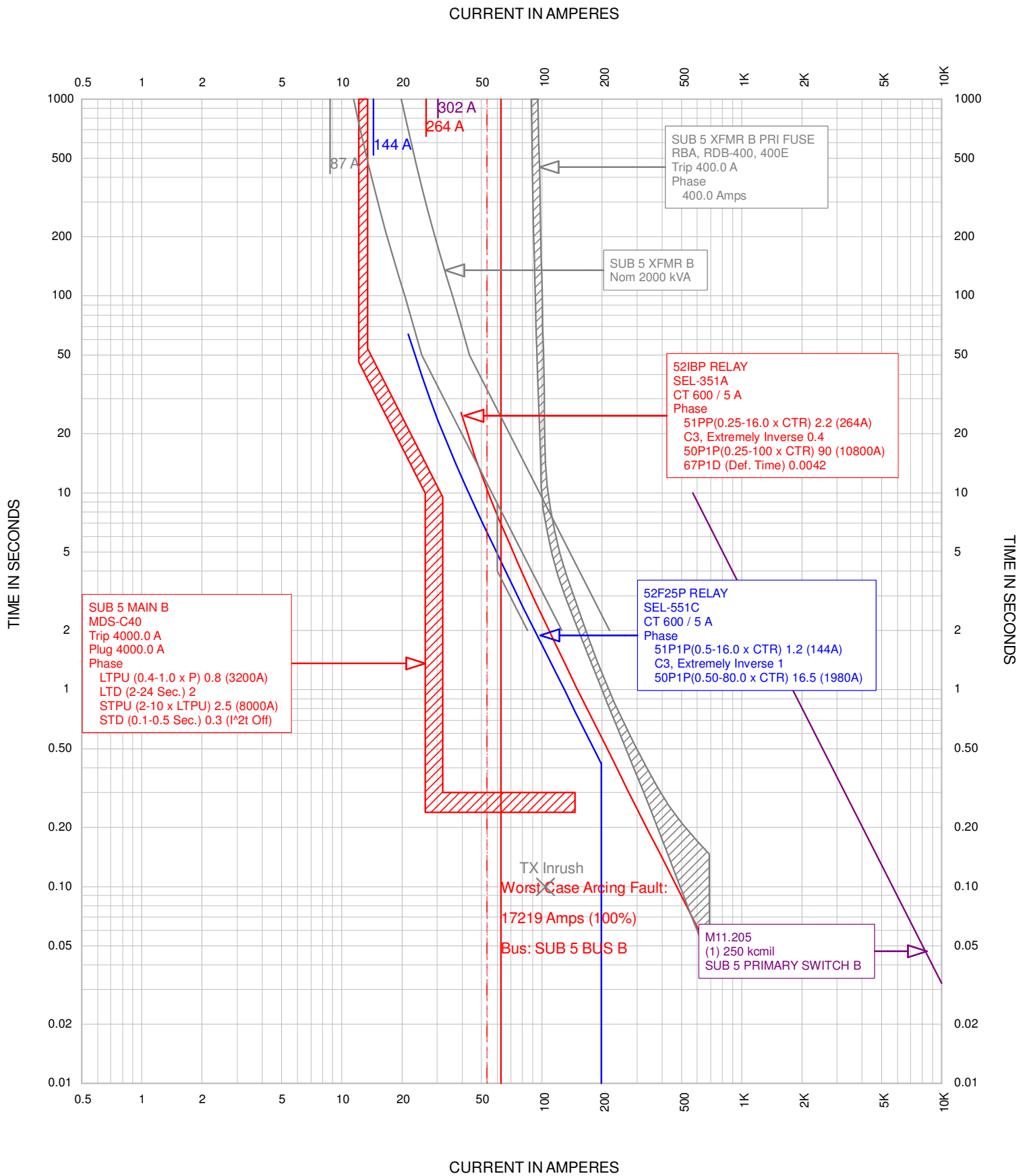
Current Scale x 10

Reference Voltage: 13200

May 22, 2015 11:20 AM

AAWWTP

52F25 GFP



Online: TCC 52F15,25_S5A,B

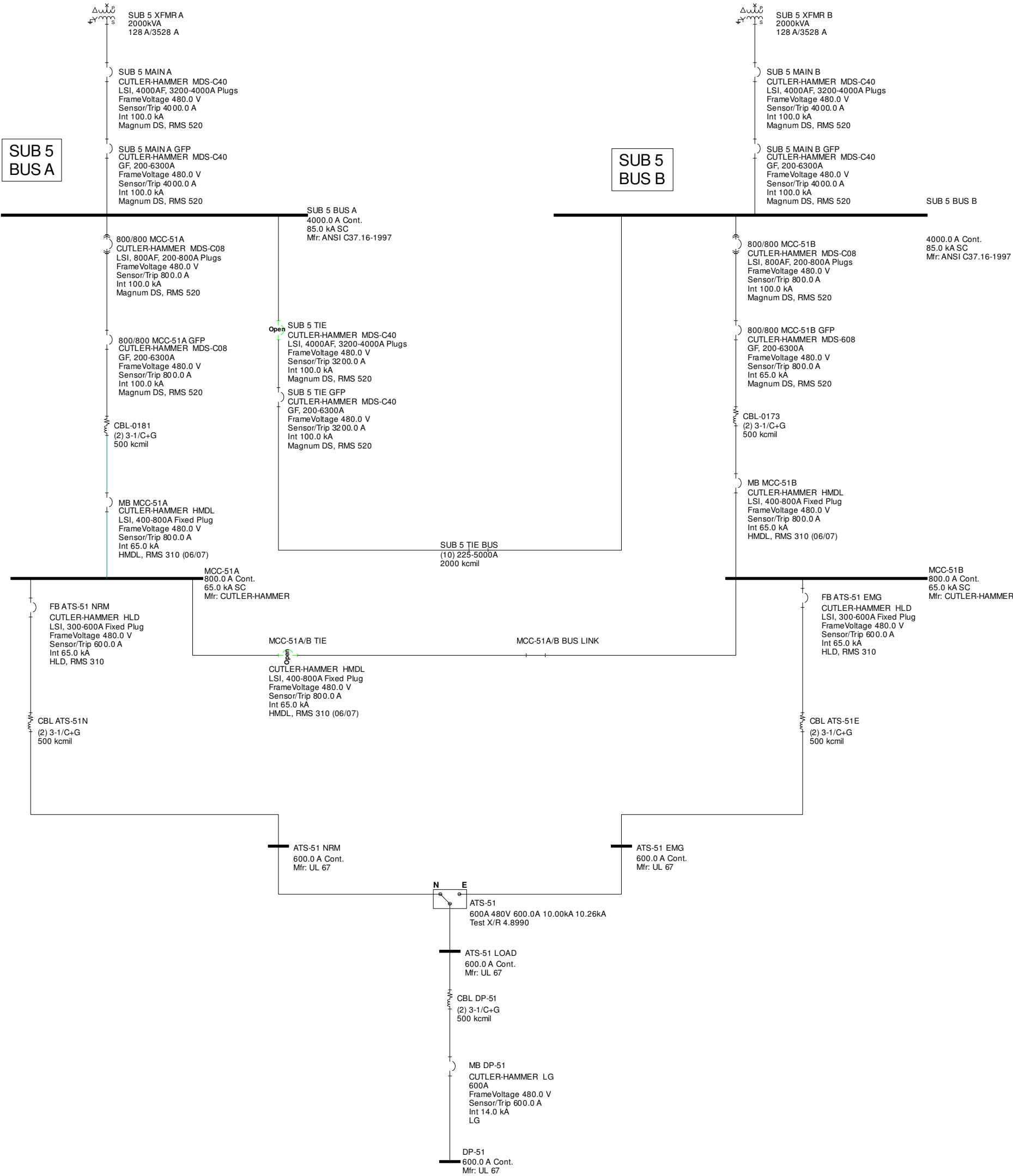
Current Scale x 10

Reference Voltage: 13200

December 18, 2015 5:55 PM

AAWWTP

52F25_S5B

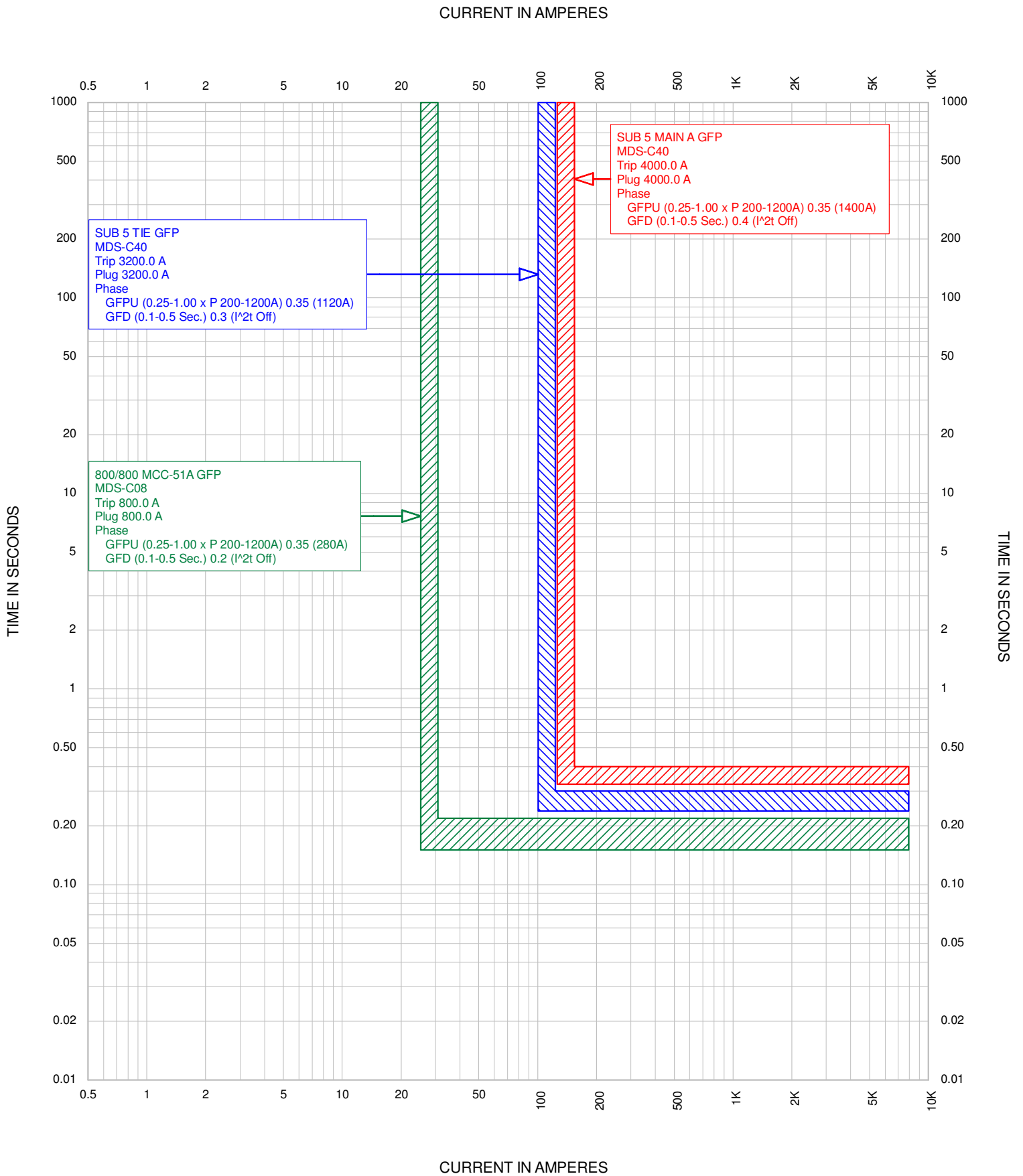


Online: TCC S5A,B_MCC-51A,51B

April 4, 2016 3:53 PM

AAWWTP





Online: TCC_S5A,B_MCC-51A,51B

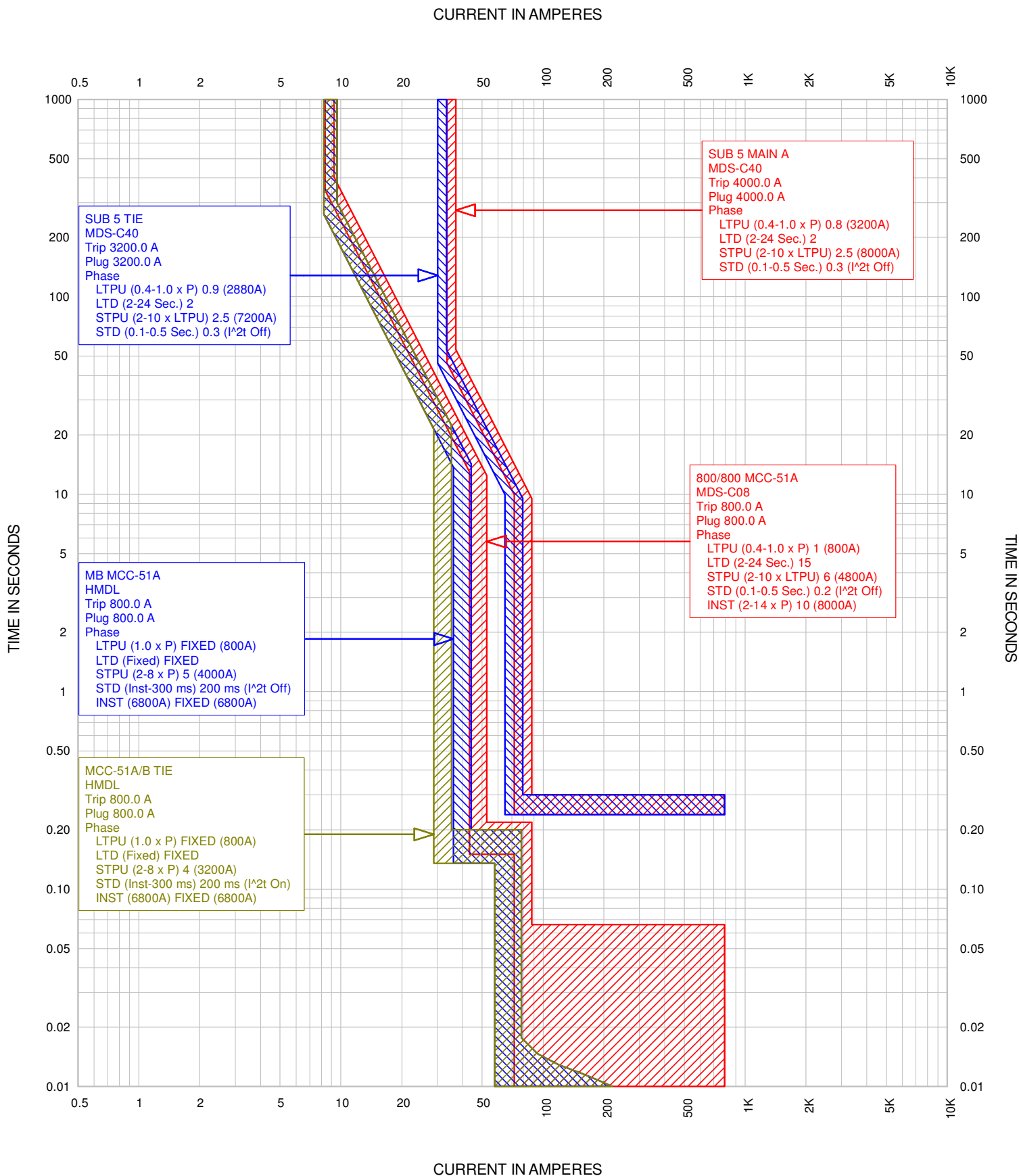
Current Scale x 10

Reference Voltage: 480

September 30, 2015 1:48 PM

AAWWTP

S5A_MCC-51A GFP



Online: TCC S5A,B_MCC-51A,51B

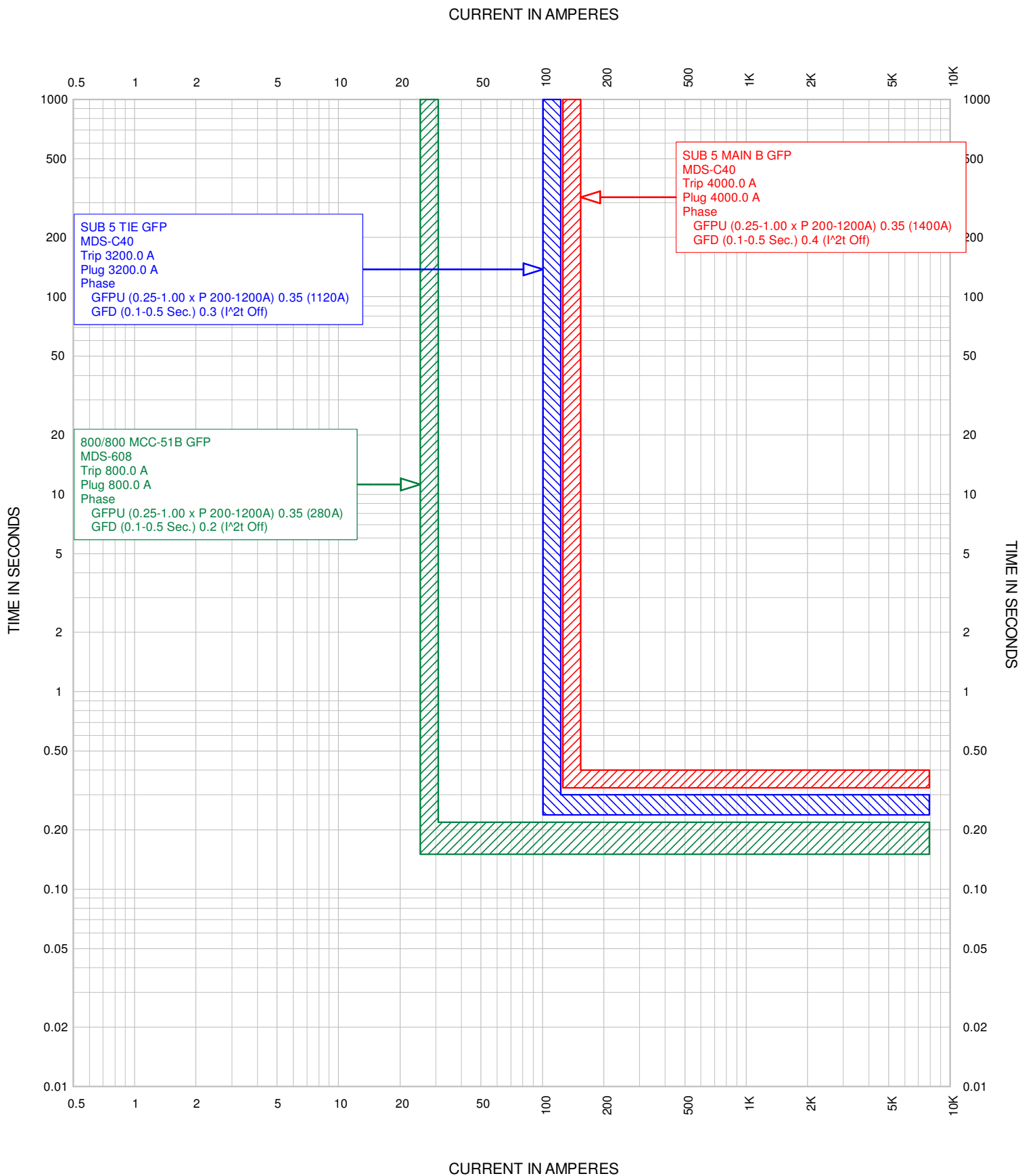
Current Scale x 100

Reference Voltage: 480

October 1, 2015 2:30 PM

AAWWTP

S5A_MCC-51A



Online: TCC_S5A,B_MCC-51A,51B

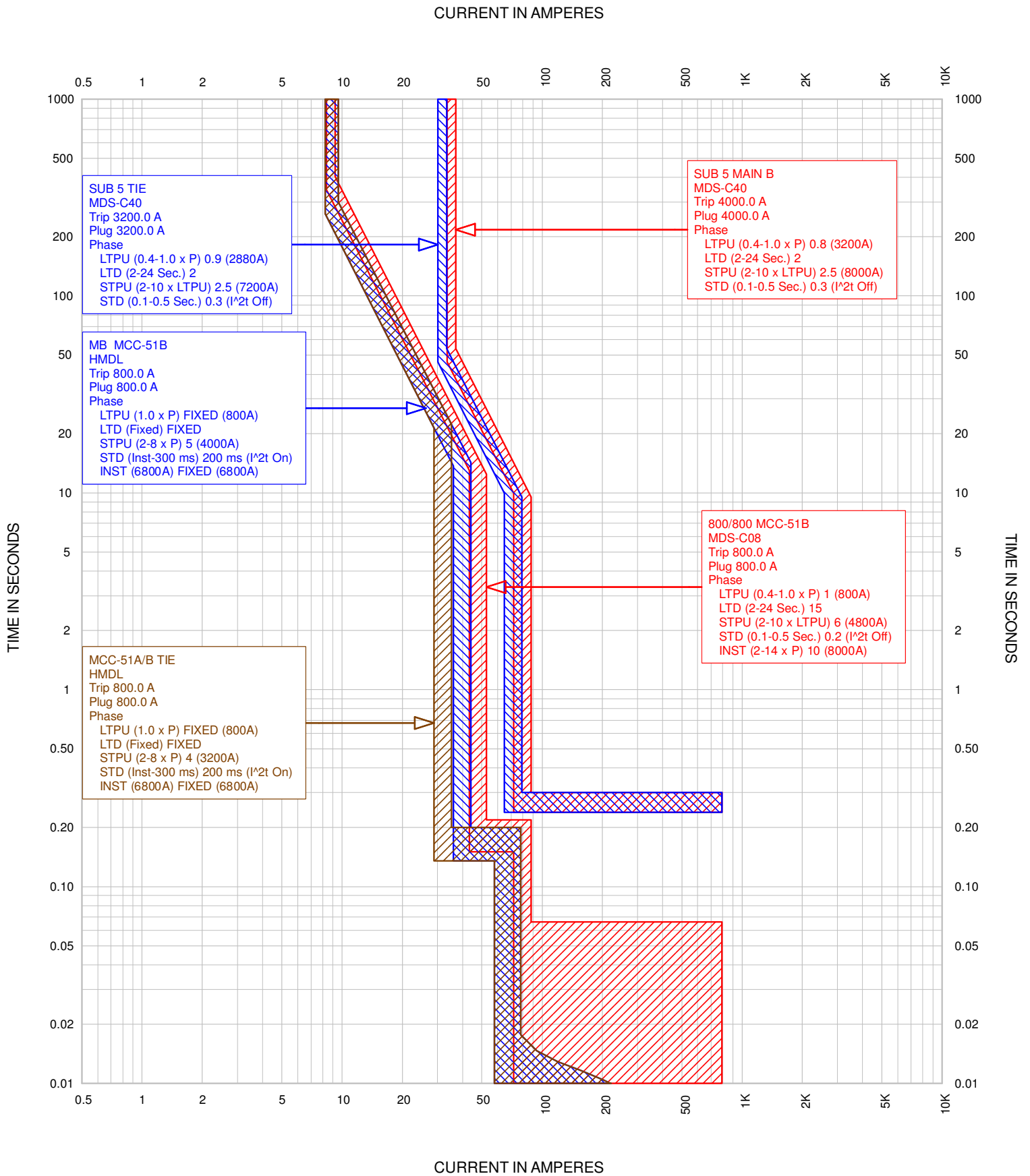
Current Scale x 10

Reference Voltage: 480

October 1, 2015 2:43 PM

AAWWTP

S5B_MCC-51B GFP



Online: TCC S5A,B_MCC-51A,51B

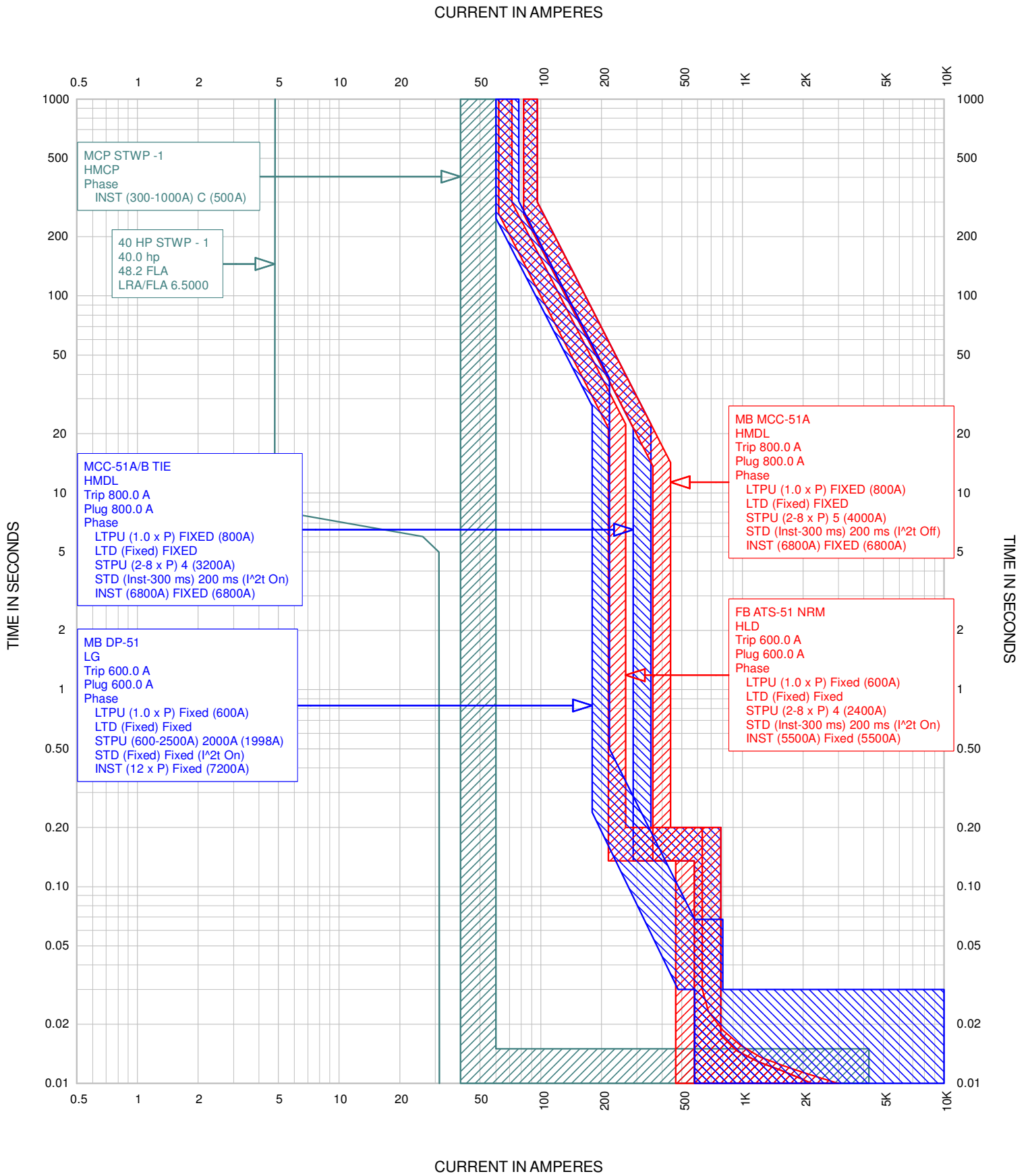
Current Scale x 100

Reference Voltage: 480

October 1, 2015 2:54 PM

AAWWTP

S5B_MCC-51B



Online: TCC_S5A,B_MCC-51A,51B

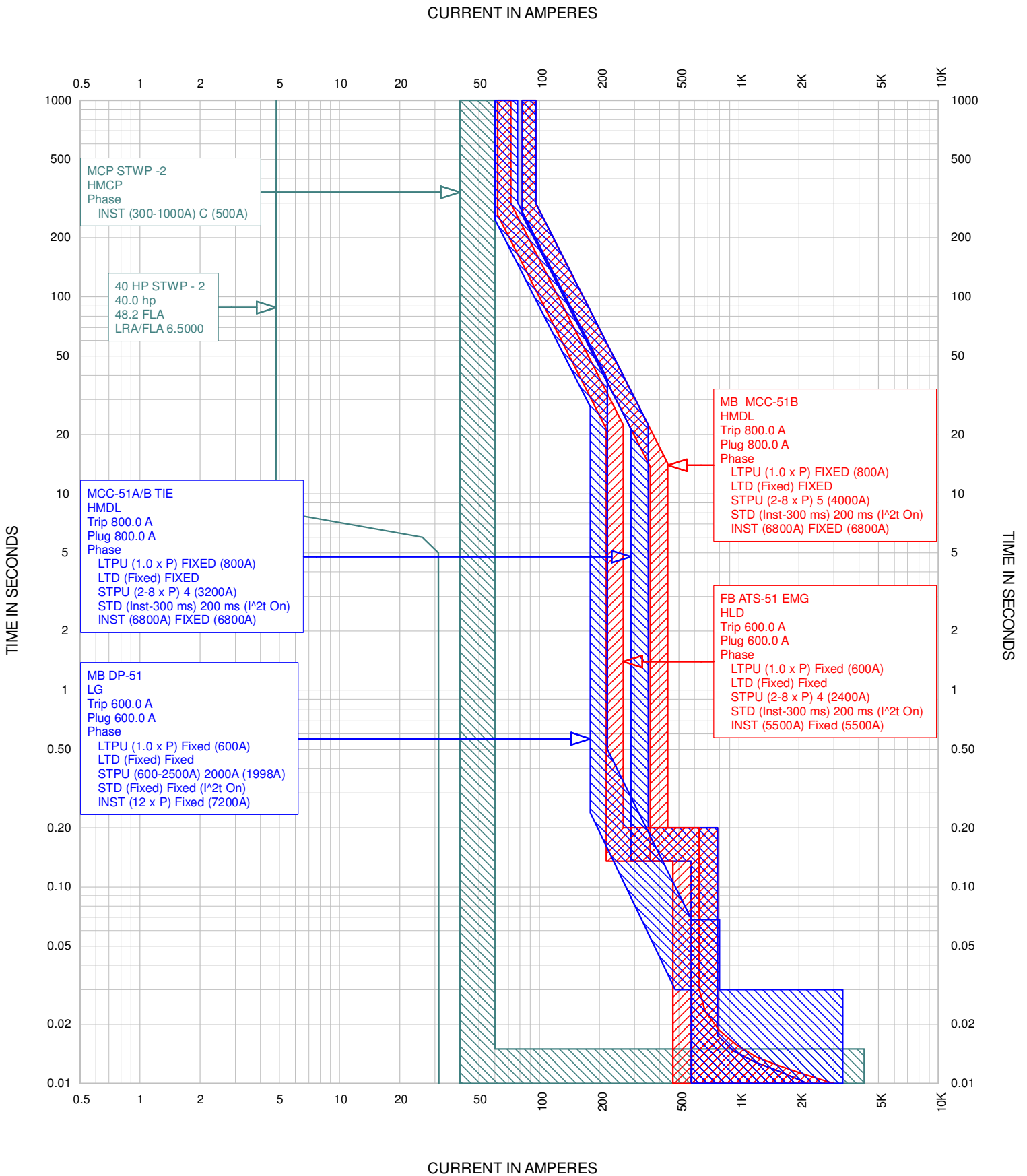
Current Scale x 10

Reference Voltage: 480

October 2, 2015 3:47 PM

AAWWTP

MCC-51A



Online: TCC_S5A,B_MCC-51A,51B

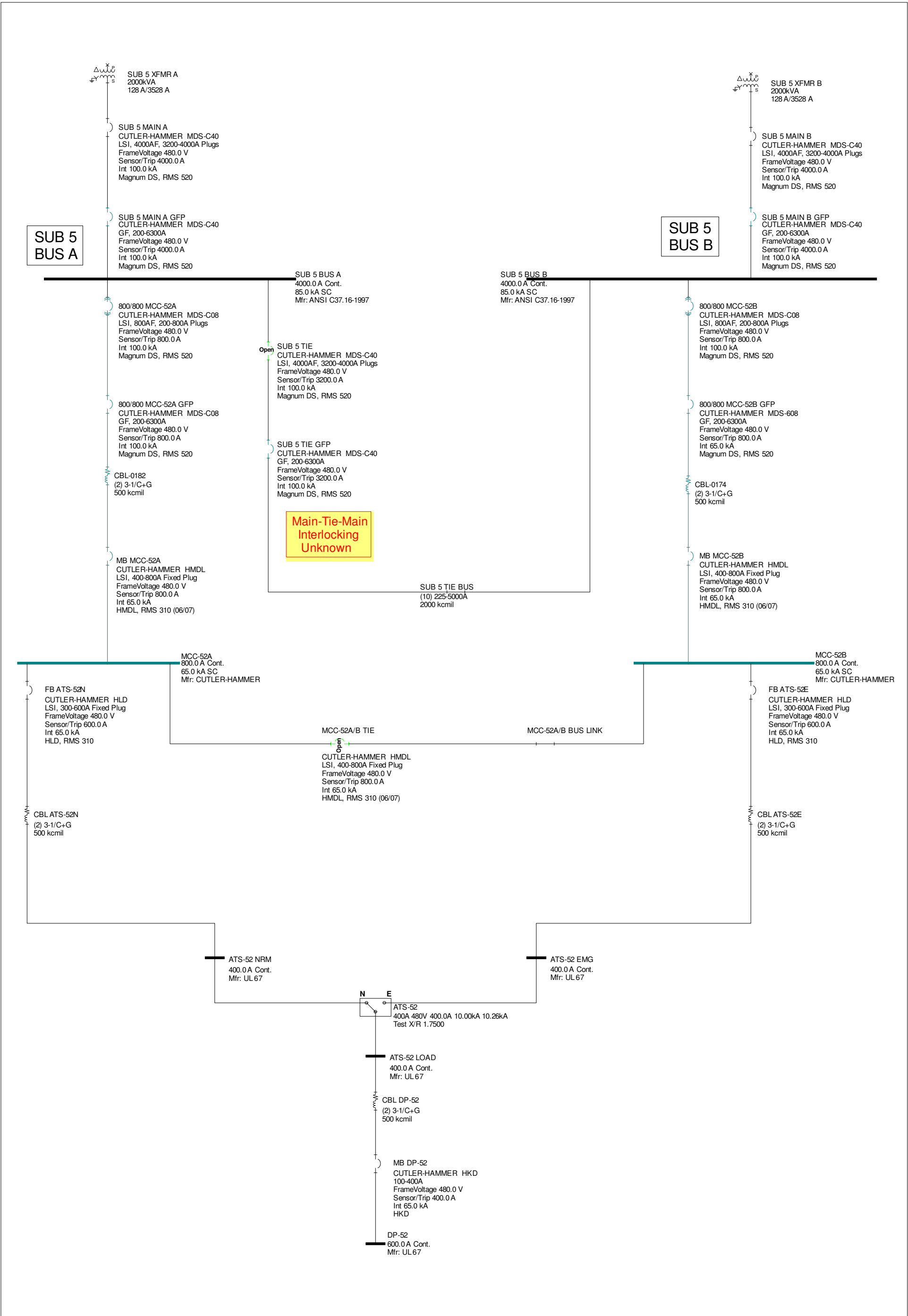
Current Scale x 10

Reference Voltage: 480

October 2, 2015 3:57 PM

AAWWTP

MCC-51B

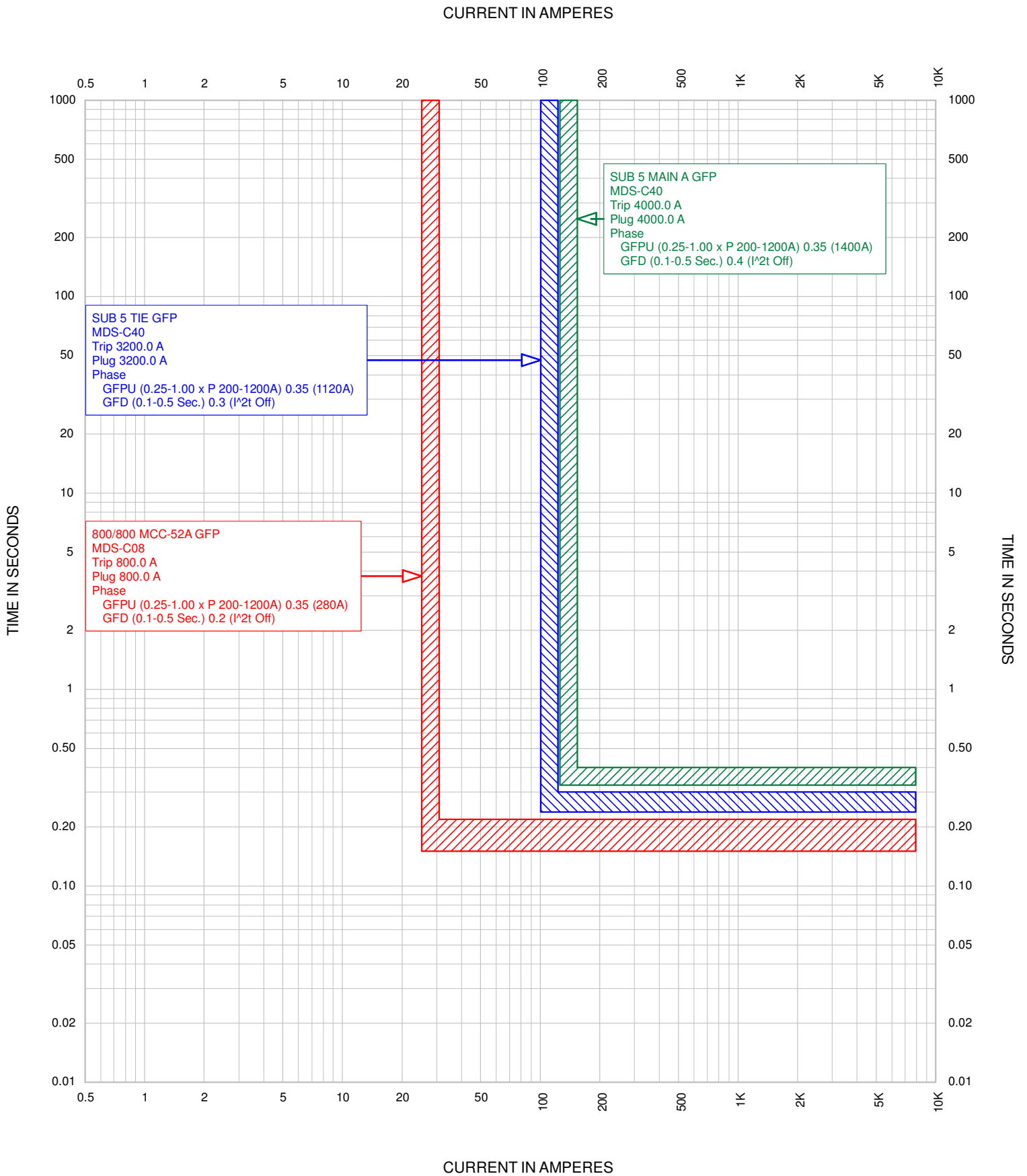


Online: TCC S5A,B_MCC-52A,52B

April 4, 2016 3:56 PM

AAWWTP





Online: TCC_S5A,B_MCC-52A,52B

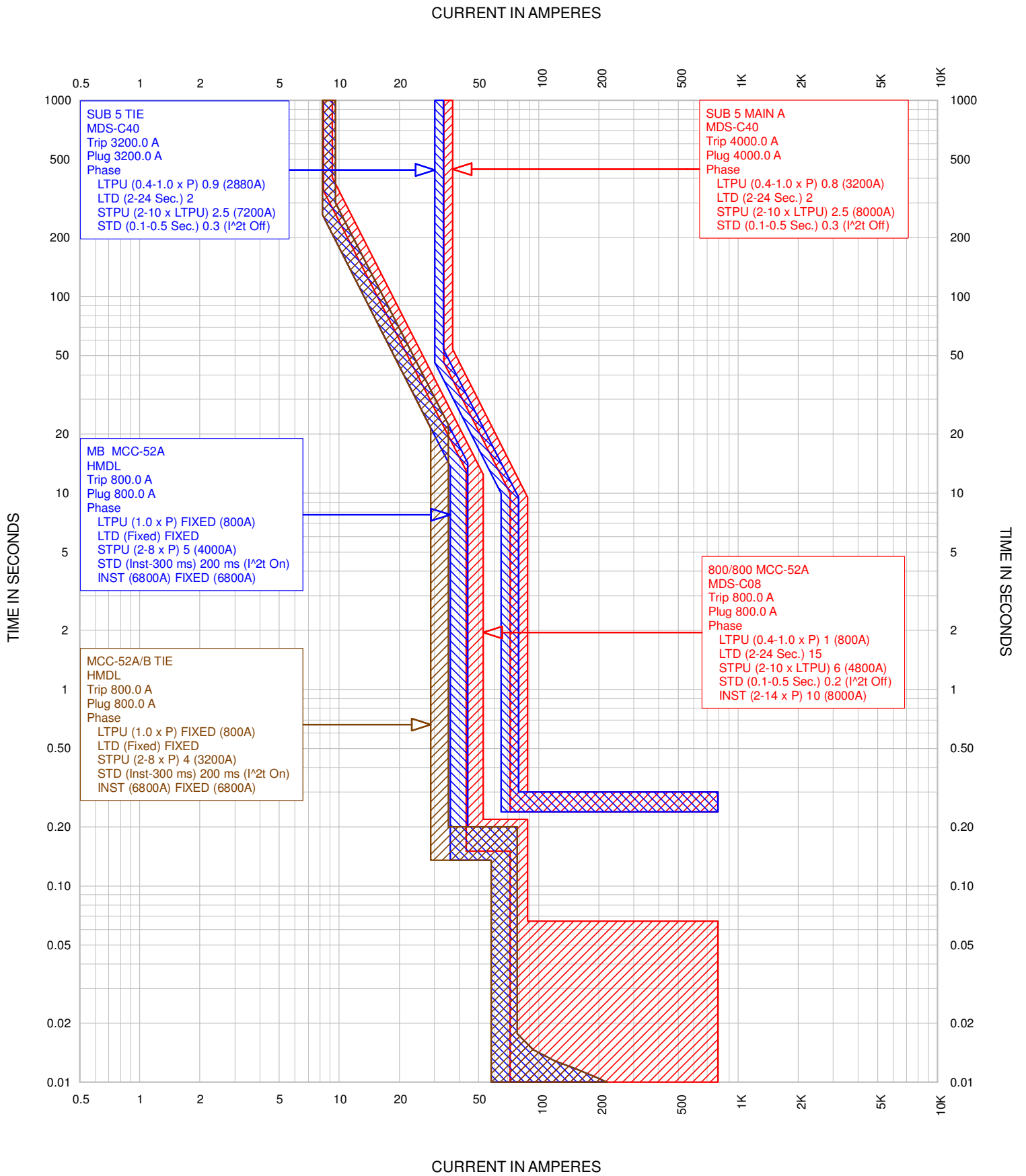
Current Scale x 10

Reference Voltage: 480

October 1, 2015 2:59 PM

AAWWTP

S5A_MCC-52A GFP



Online: TCC S5A,B_MCC-52A,52B

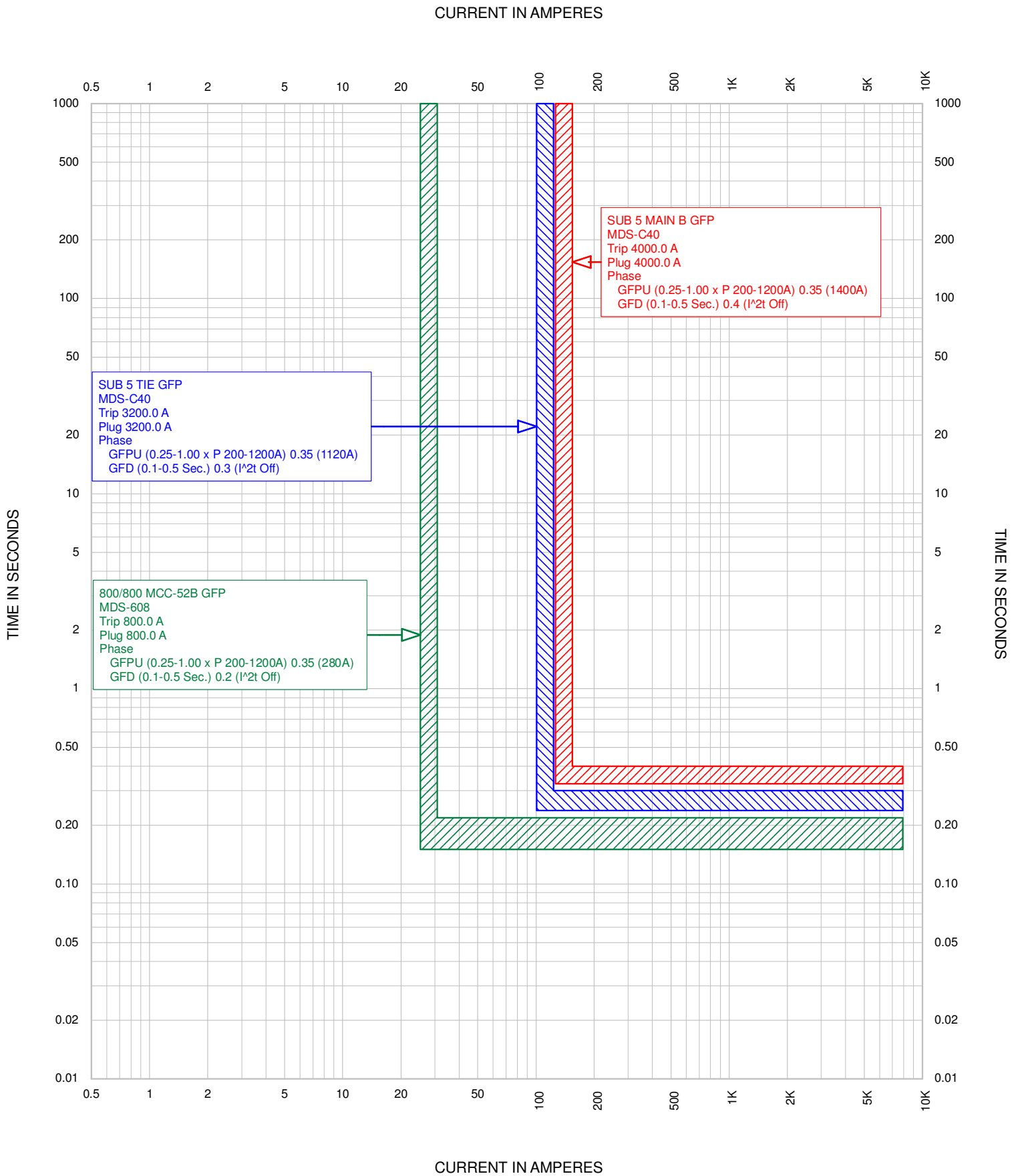
Current Scale x 100

Reference Voltage: 480

October 1, 2015 3:00 PM

AAWWTP

S5A_MCC-52A



Online: TCC_S5A,B_MCC-52A,52B

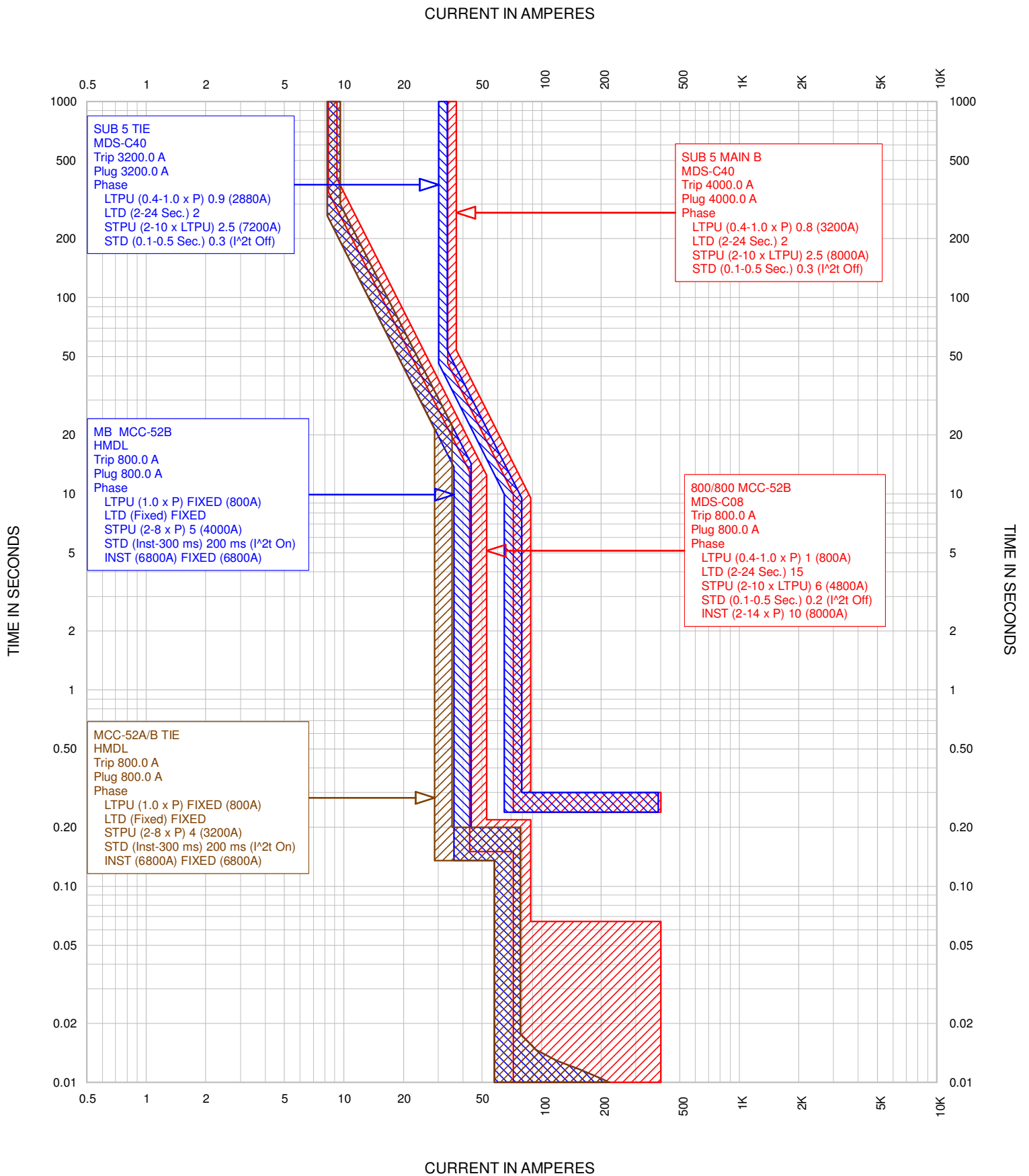
Current Scale x 10

Reference Voltage: 480

October 1, 2015 3:02 PM

AAWWTP

S5B_MCC-52B GFP



Online: TCC S5A,B_MCC-52A,52B

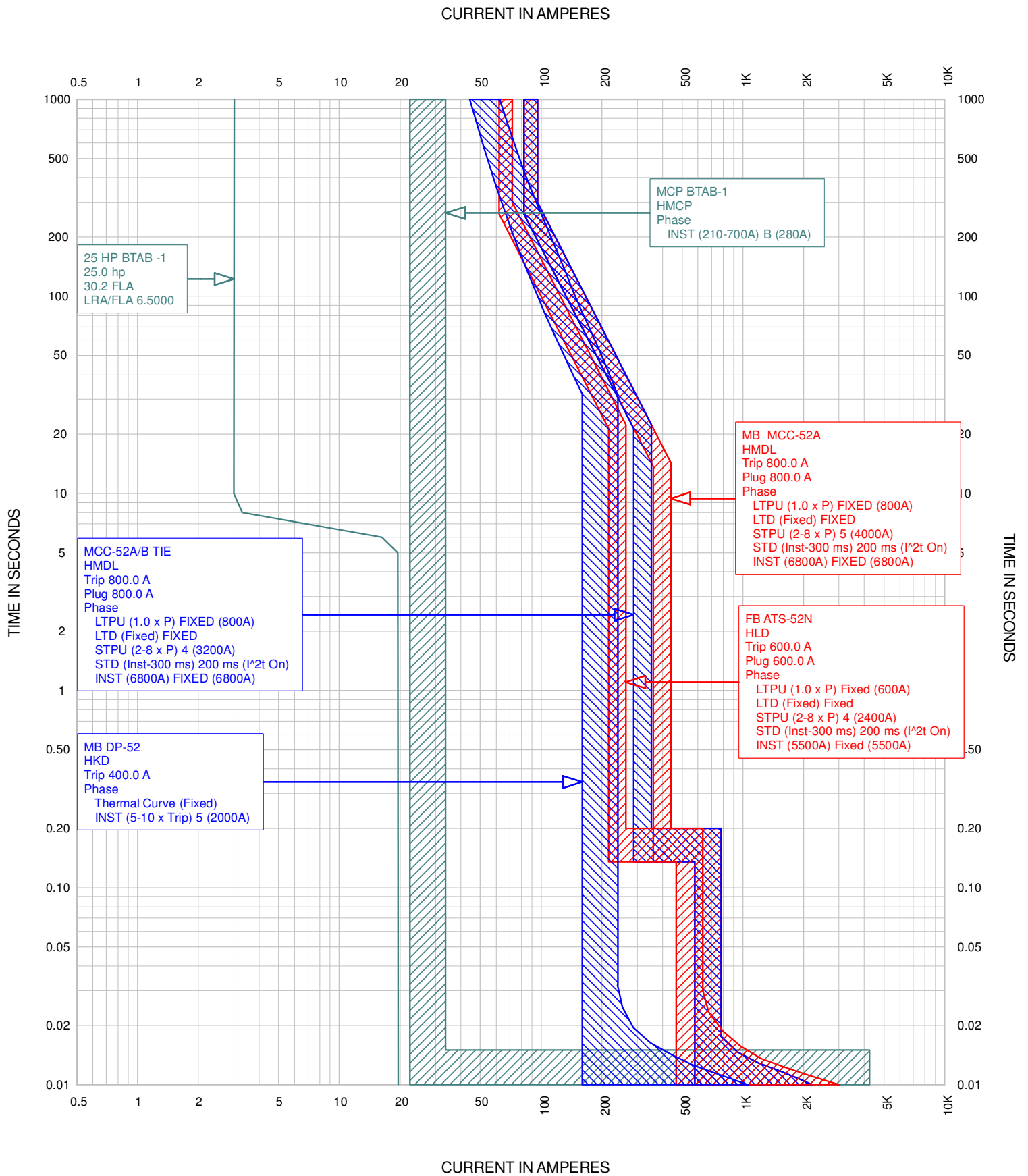
Current Scale x 100

Reference Voltage: 480

February 15, 2016 5:46 PM

AAWWTP

S5B_MCC-52B



Online: TCC_S5A,B_MCC-52A,52B

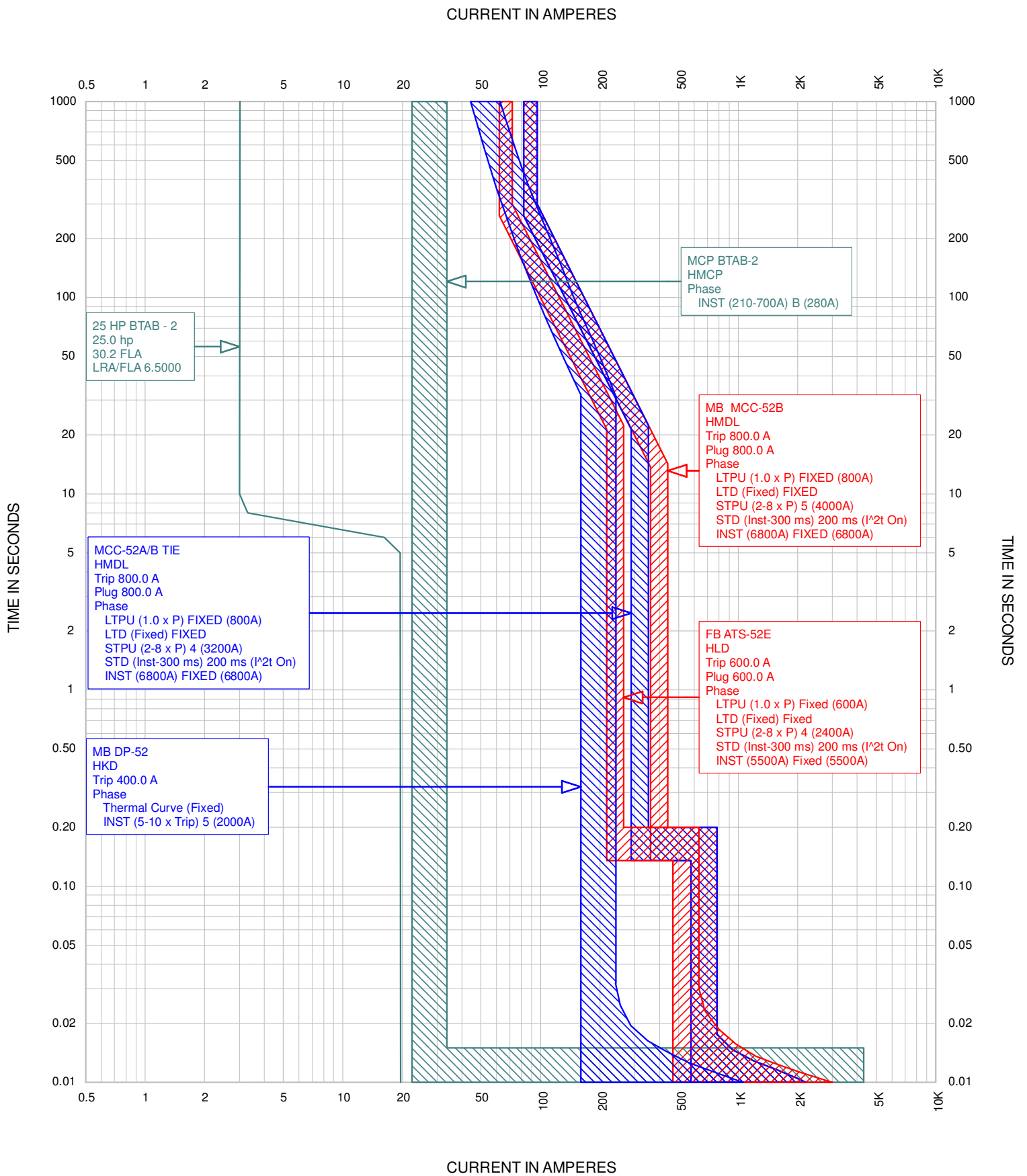
Current Scale x 10

Reference Voltage: 480

October 2, 2015 4:04 PM

AAWWTP

MCC-52A



Online: TCC_S5A,B_MCC-52A,52B

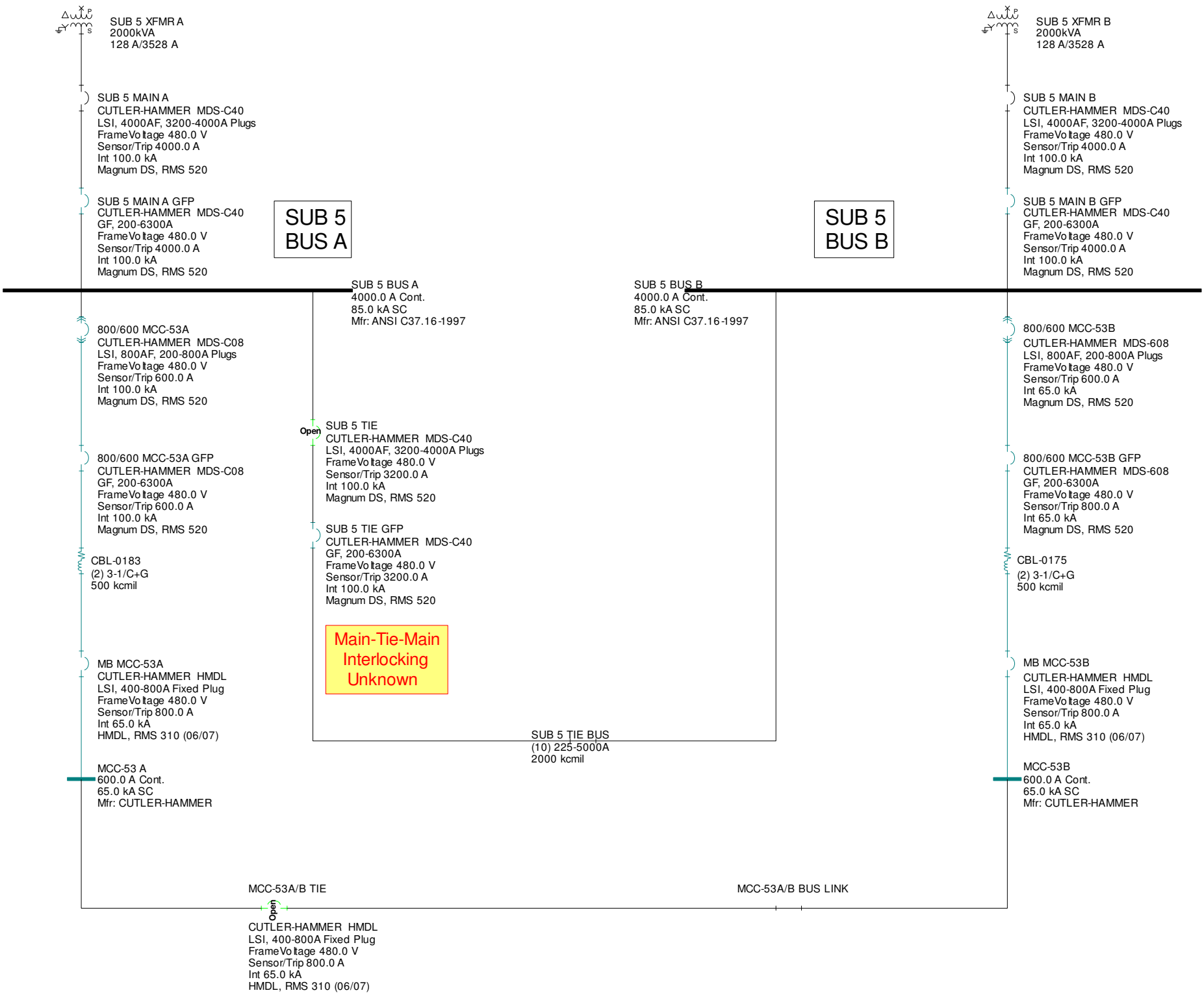
Current Scale x 10

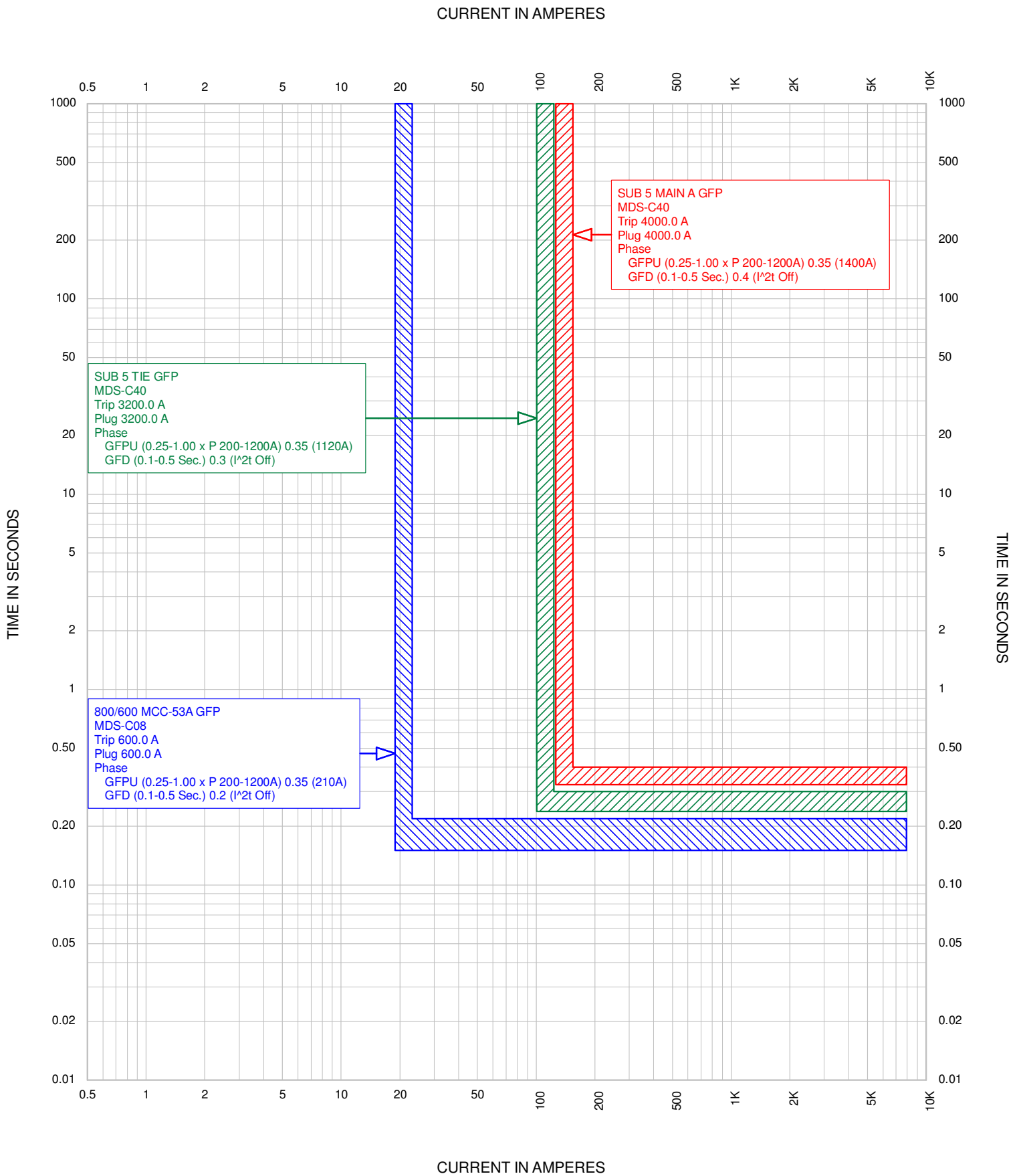
Reference Voltage: 480

October 2, 2015 4:08 PM

AAWWTP

MCC-52B





Online: TCC_S5A,B_MCC-53A,53B

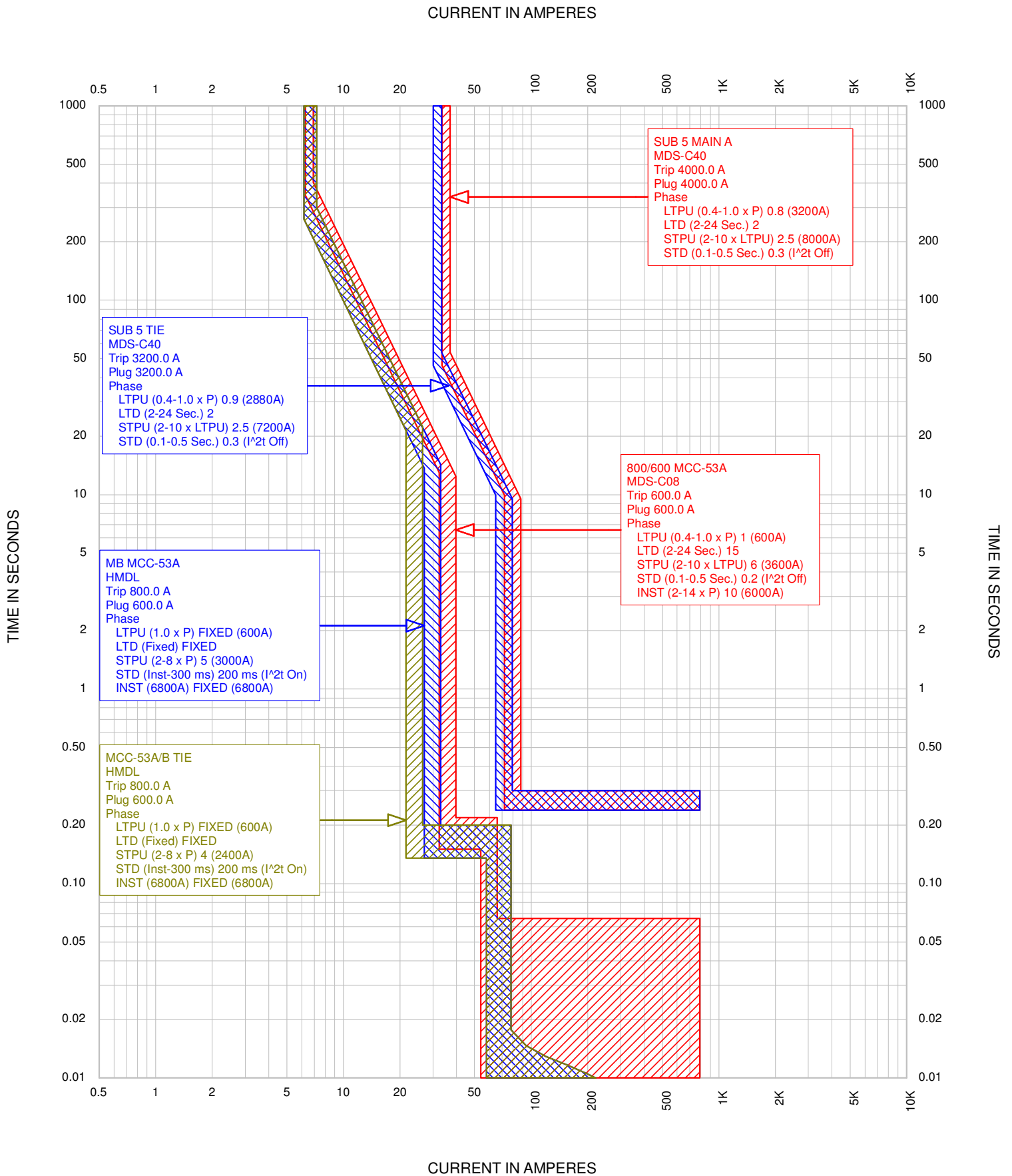
Current Scale x 10

Reference Voltage: 480

October 1, 2015 3:54 PM

AAWWTP

S5A_MCC-53A GFP



Online: TCC S5A,B_MCC-53A,53B

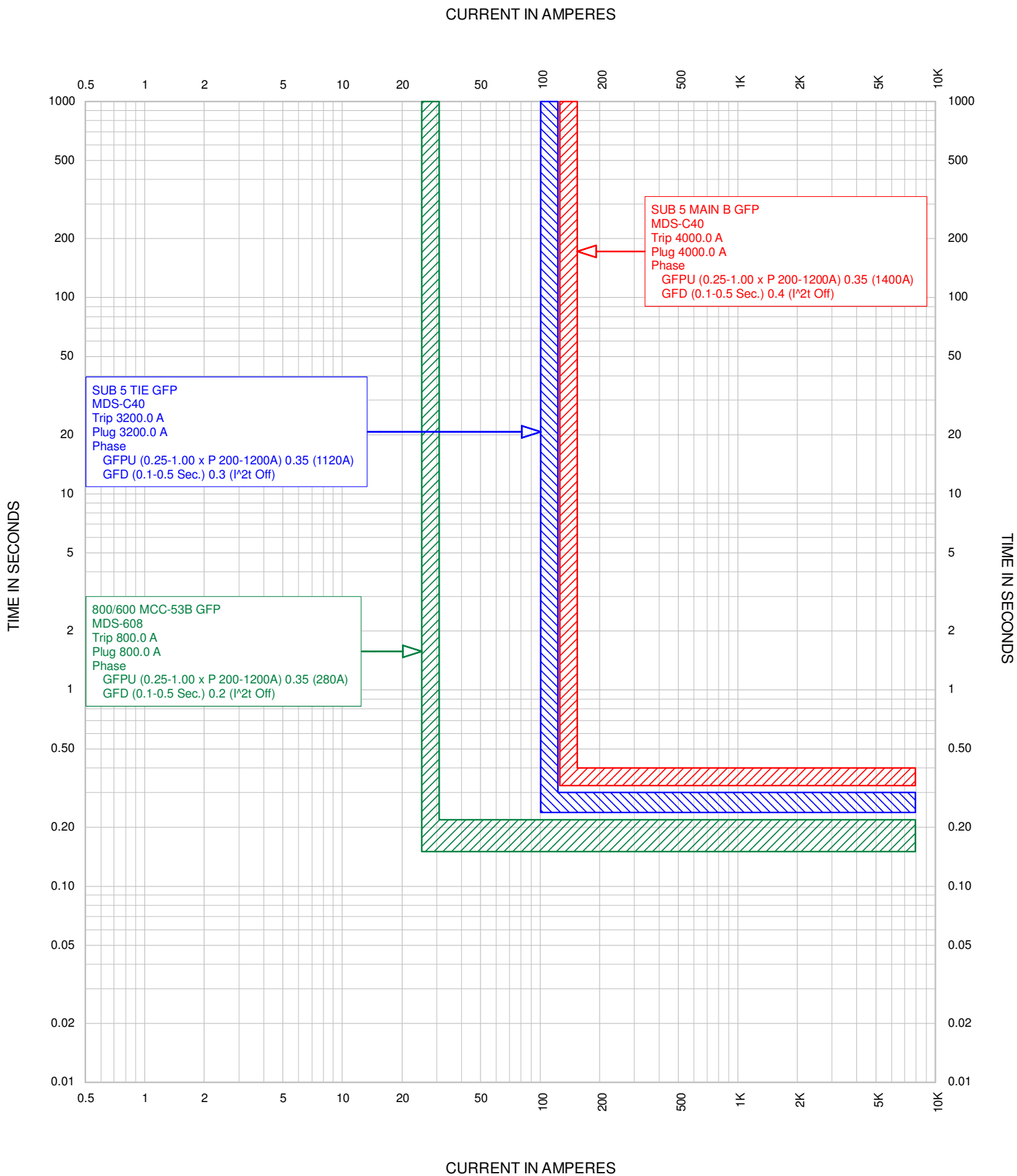
Current Scale x 100

Reference Voltage: 480

October 1, 2015 3:57 PM

AAWWTP

S5A_MCC-53A



Online: TCC_S5A,B_MCC-53A,53B

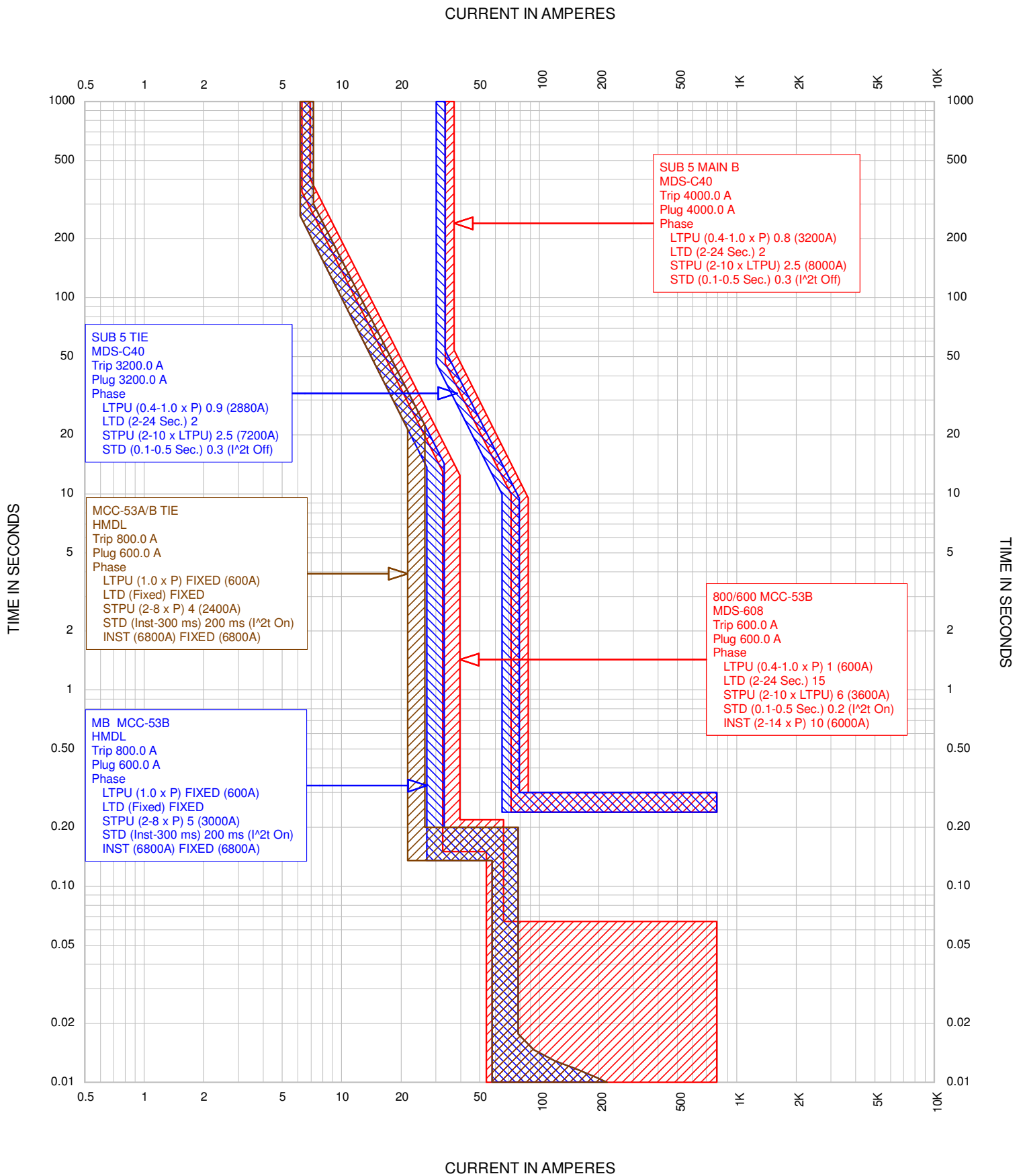
October 1, 2015 4:04 PM

Current Scale x 10

AAWWTP

Reference Voltage: 480

S5B_MCC-53B GFP



Online: TCC S5A,B_MCC-53A,53B

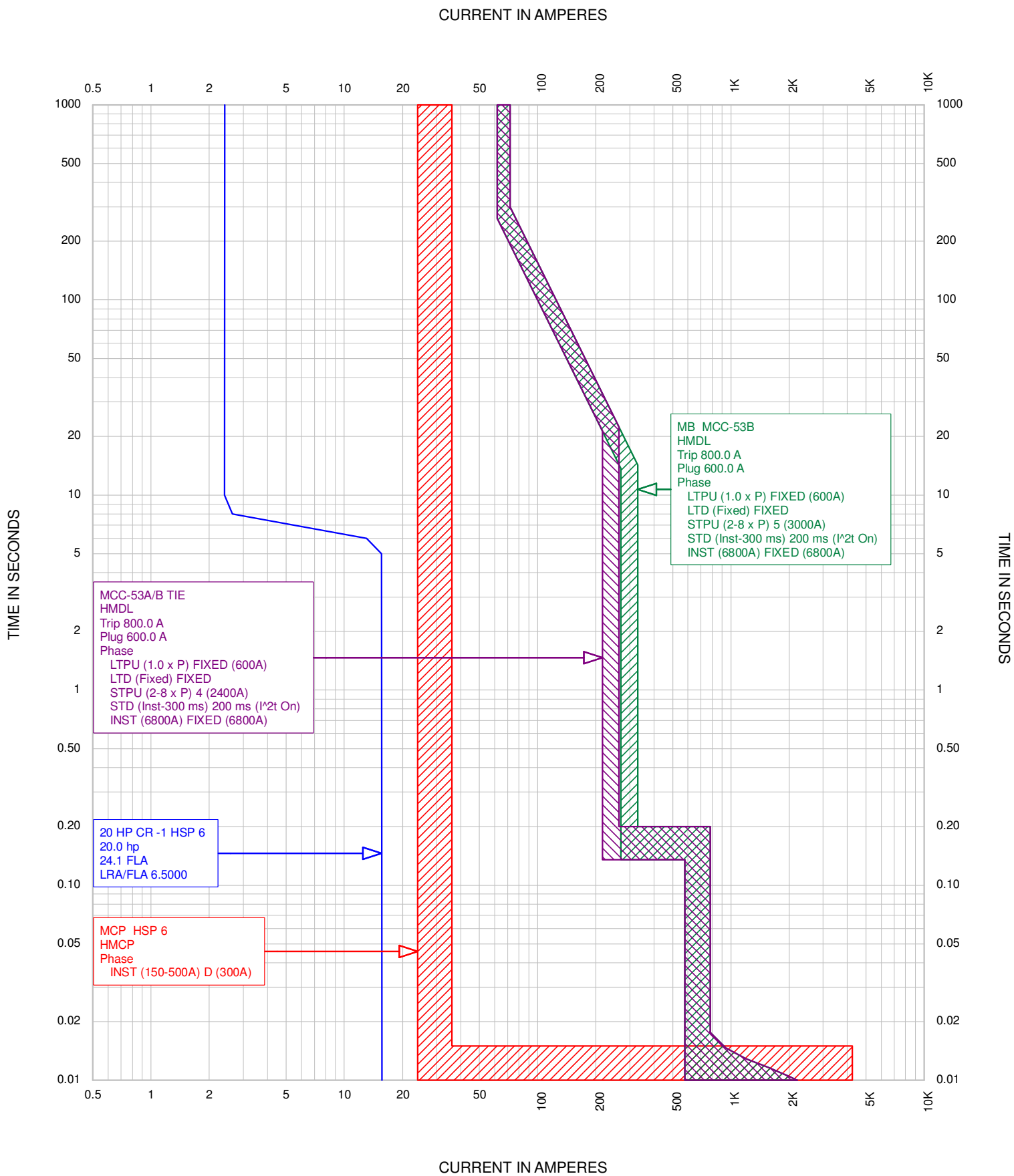
Current Scale x 100

Reference Voltage: 480

October 1, 2015 4:09 PM

AAWWTP

S5B_MCC-53B



Online: TCC_S5A,B_MCC-53A,53B

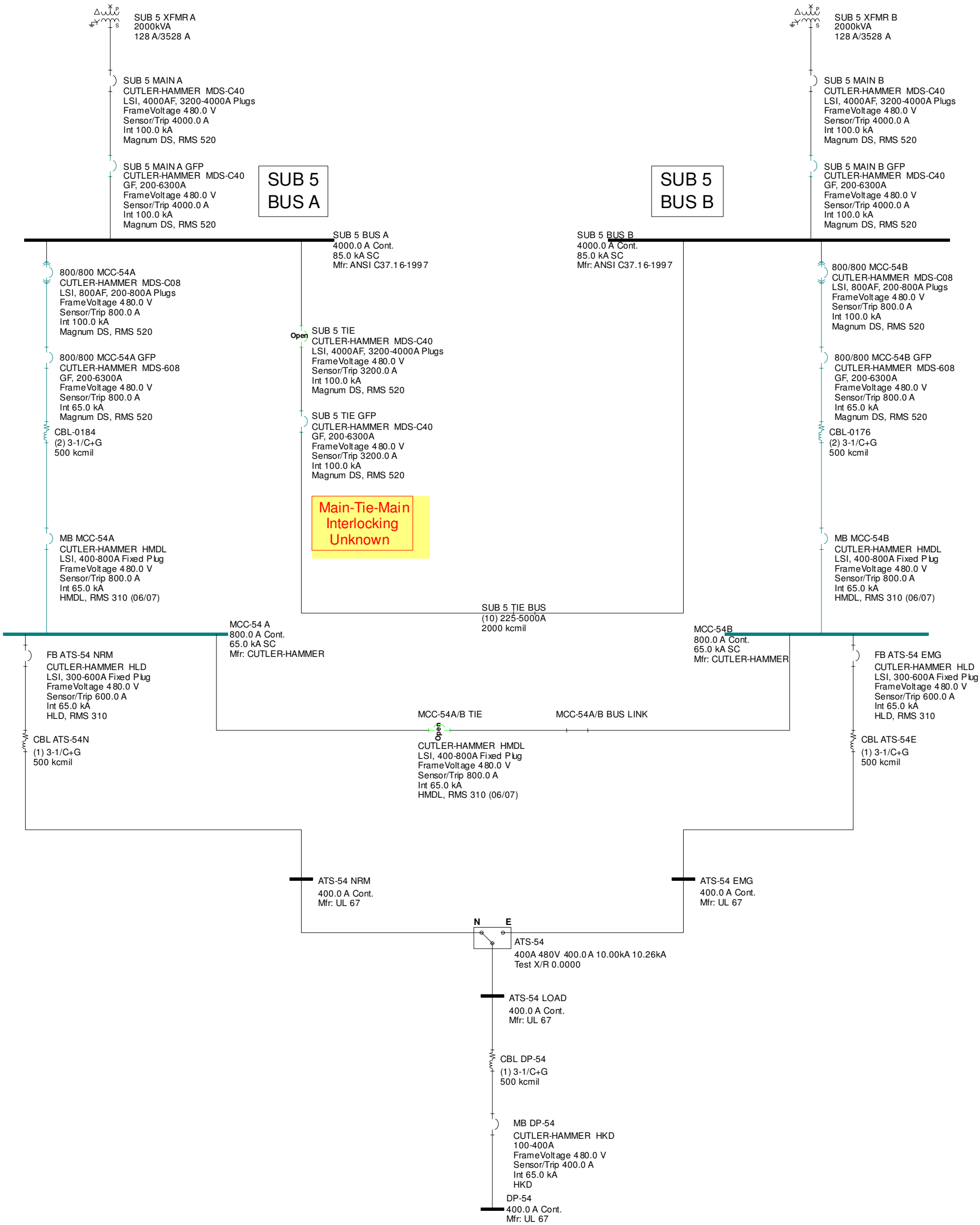
Current Scale x 10

Reference Voltage: 480

October 1, 2015 4:17 PM

AAWWTP

MCC-53B

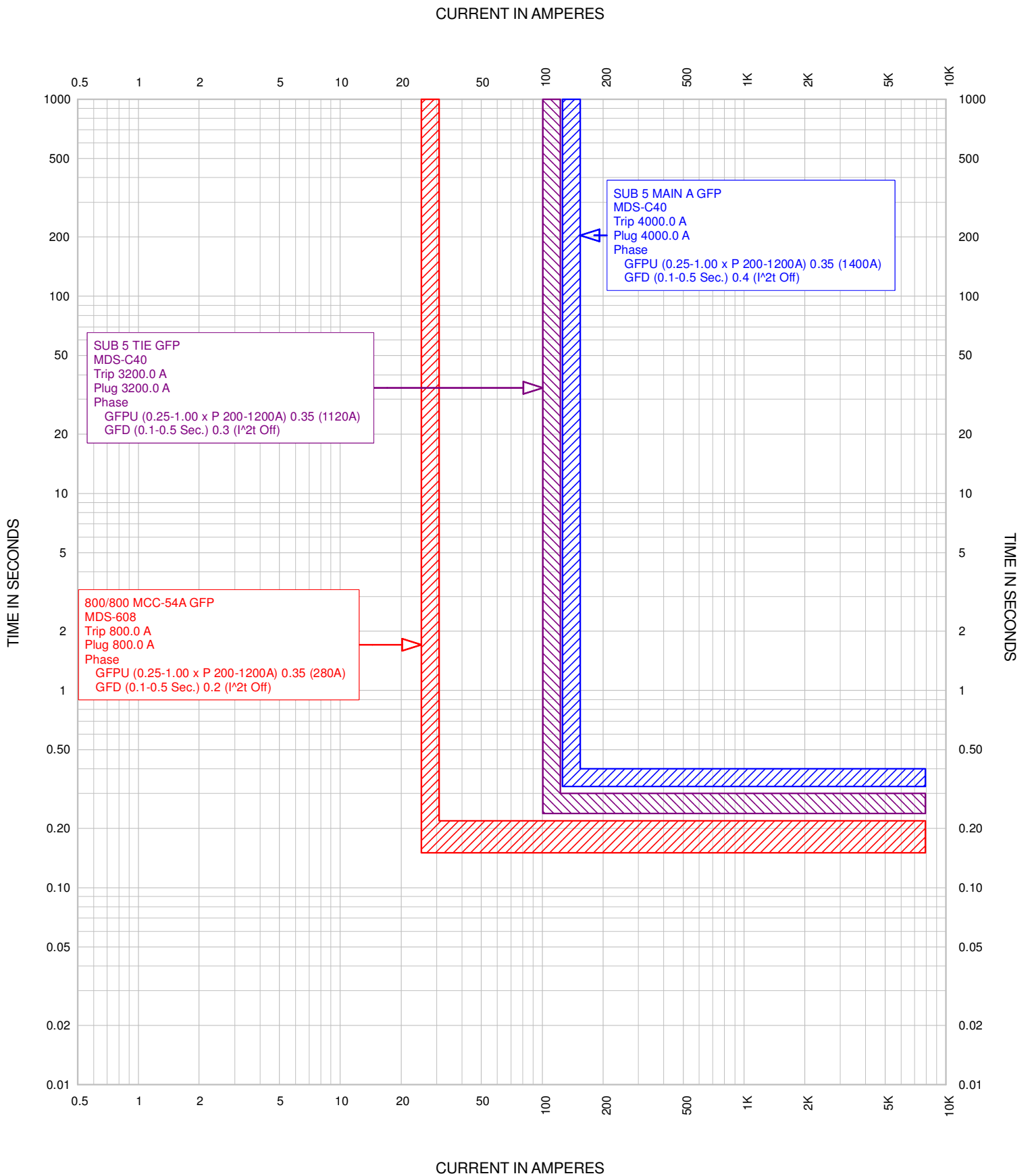


Online: TCC S5A,B_MCC-54A,54B

April 4, 2016 4:22 PM

AAWWTP





Online: TCC_S5A,B_MCC-54A,54B

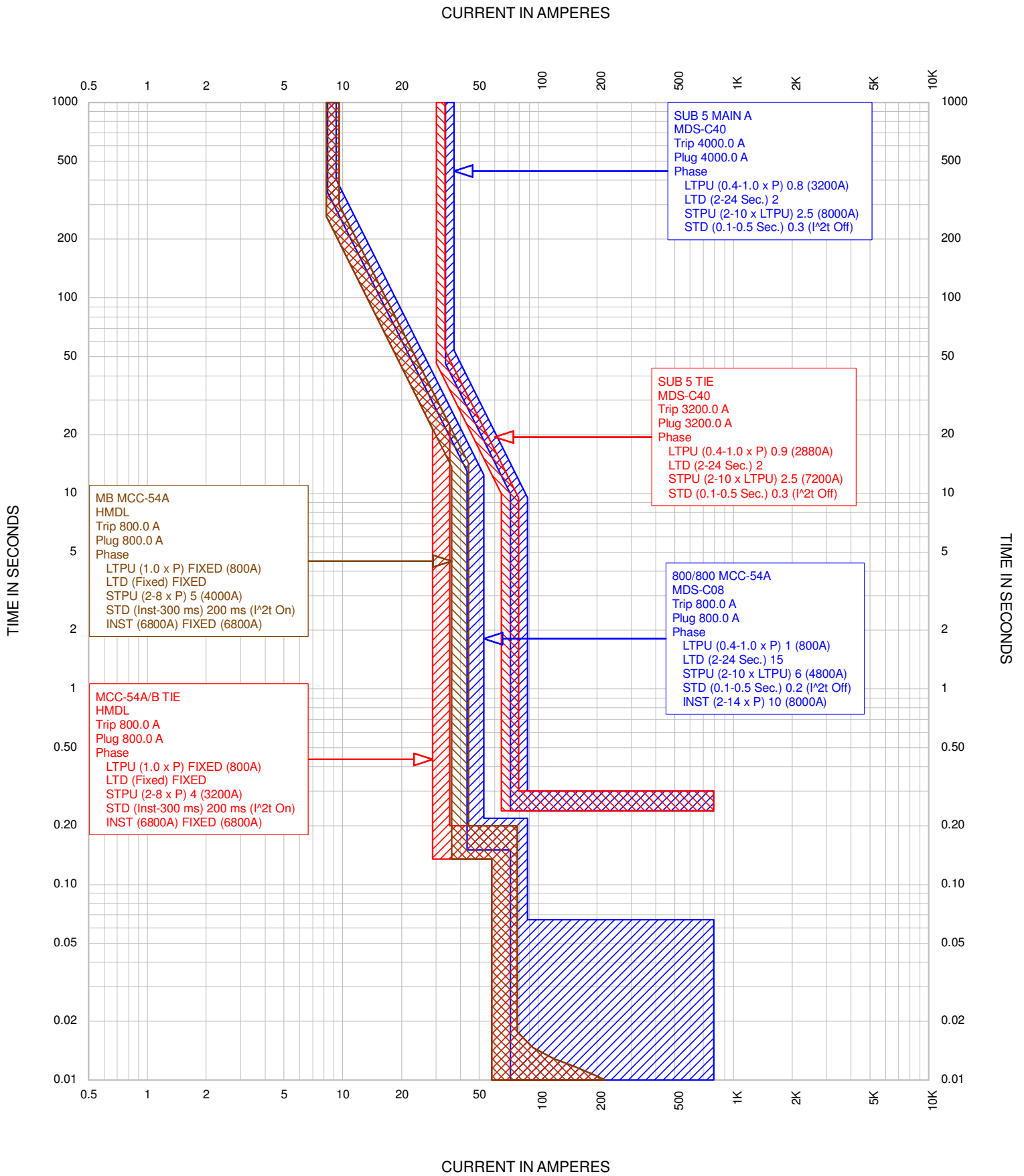
Current Scale x 10

Reference Voltage: 480

October 1, 2015 4:19 PM

AAWWTP

S5A_MCC-54A GFP



Online:

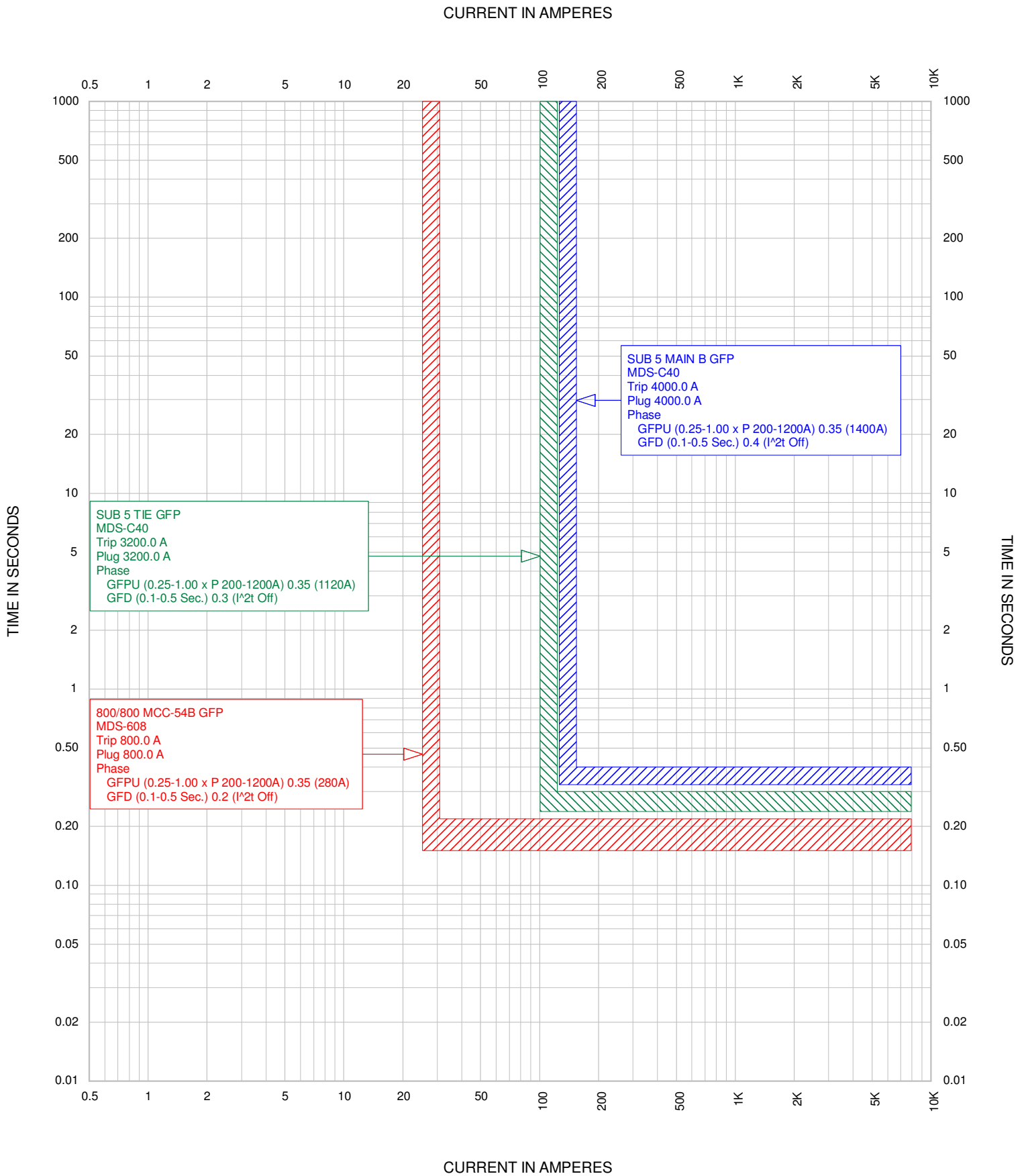
October 1, 2015 4:21 PM

Current Scale x 100

AAWWTP

Reference Voltage: 480

S5A_MCC-54A



Online: TCC_S5A,B_MCC-54A,54B

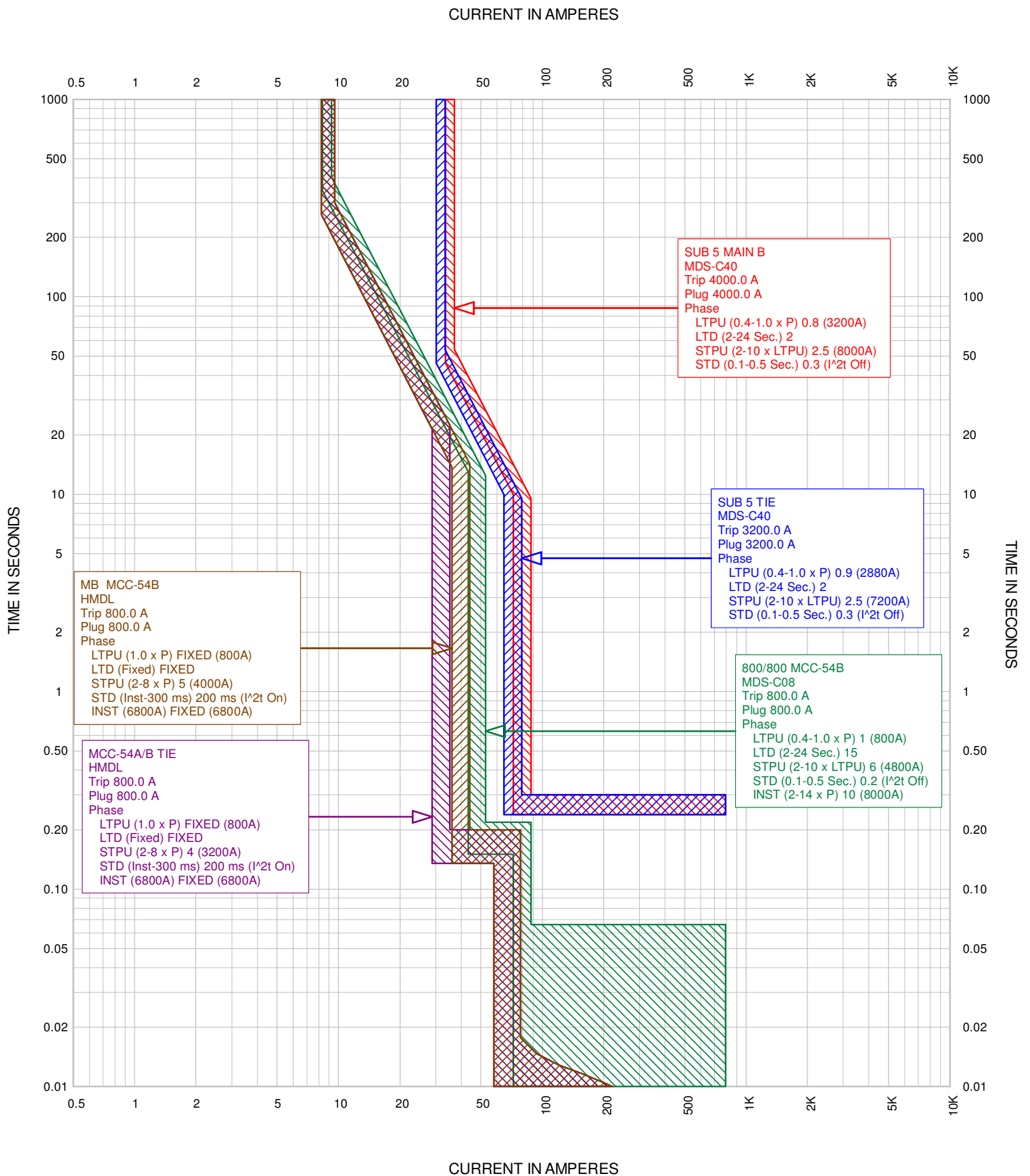
Current Scale x 10

Reference Voltage: 480

October 1, 2015 4:23 PM

AAWWTP

S5B_MCC-54B GFP



Online: TCC S5A,B_MCC-54A,54B

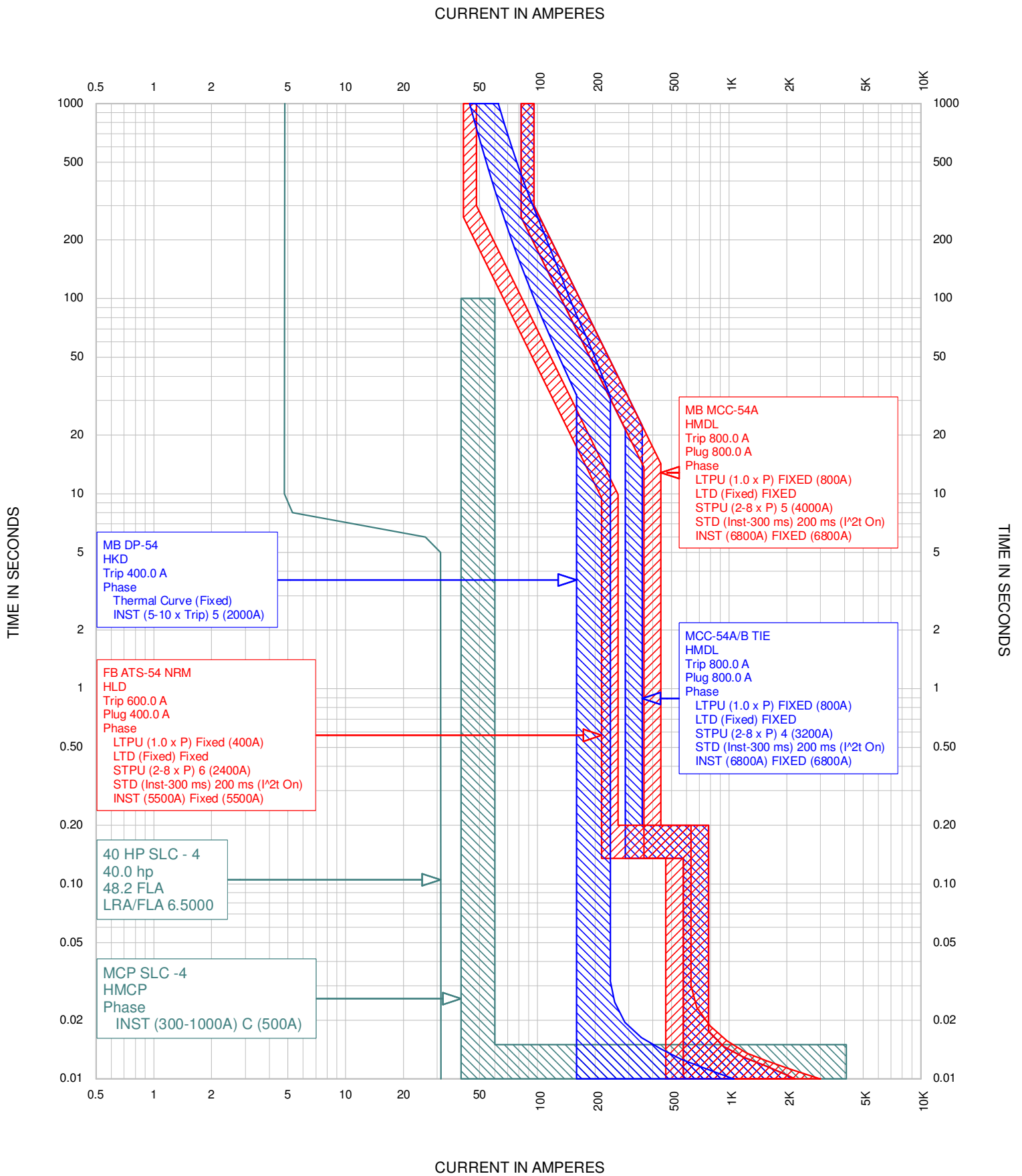
Current Scale x 100

Reference Voltage: 480

October 1, 2015 4:28 PM

AAWWTP

S5B_MCC-54B



Online: TCC_S5A,B_MCC-54A,54B

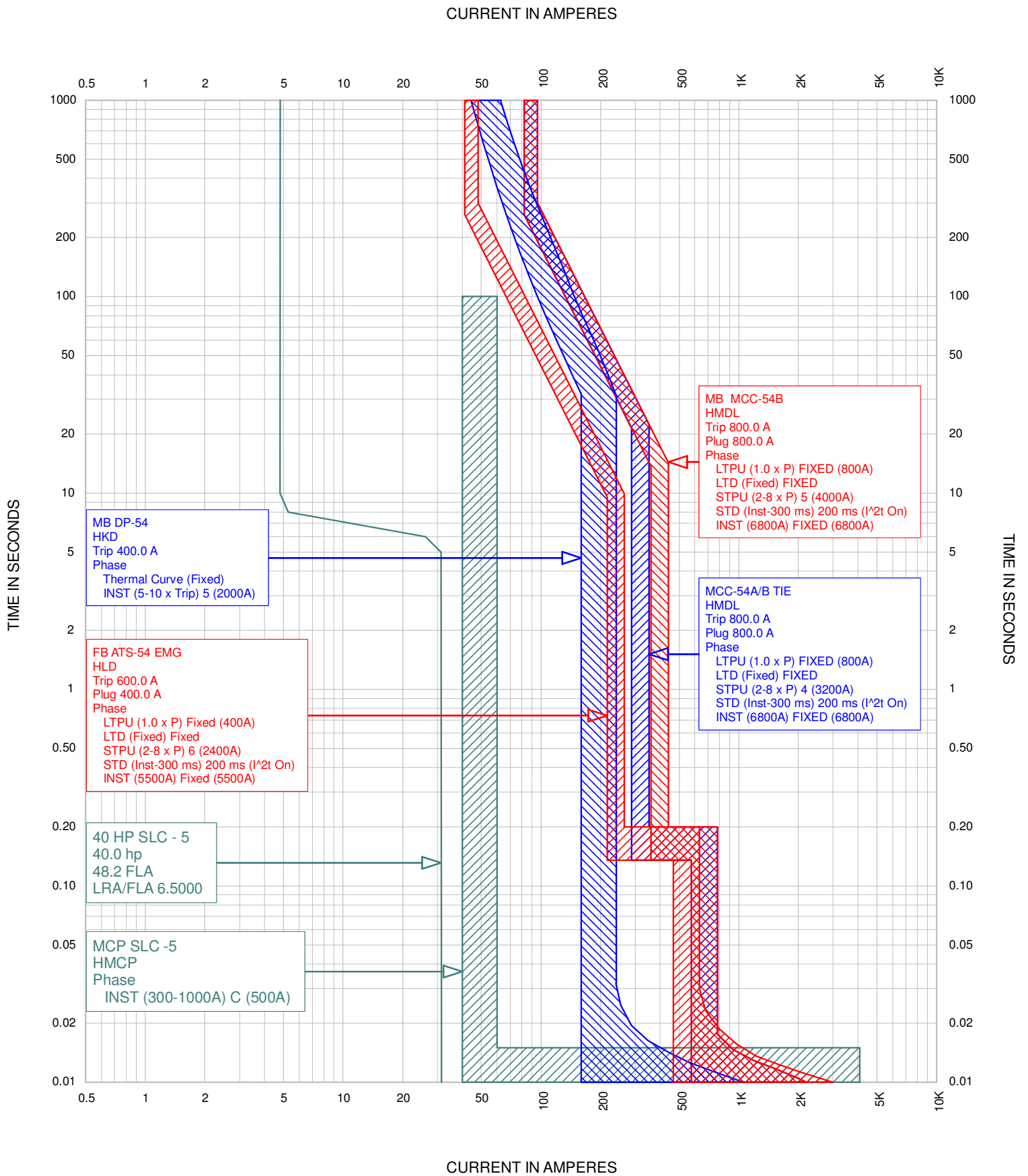
Current Scale x 10

Reference Voltage: 480

October 2, 2015 4:26 PM

AAWWTP

MCC-54A



Online: TCC_S5A,B_MCC-54A,54B

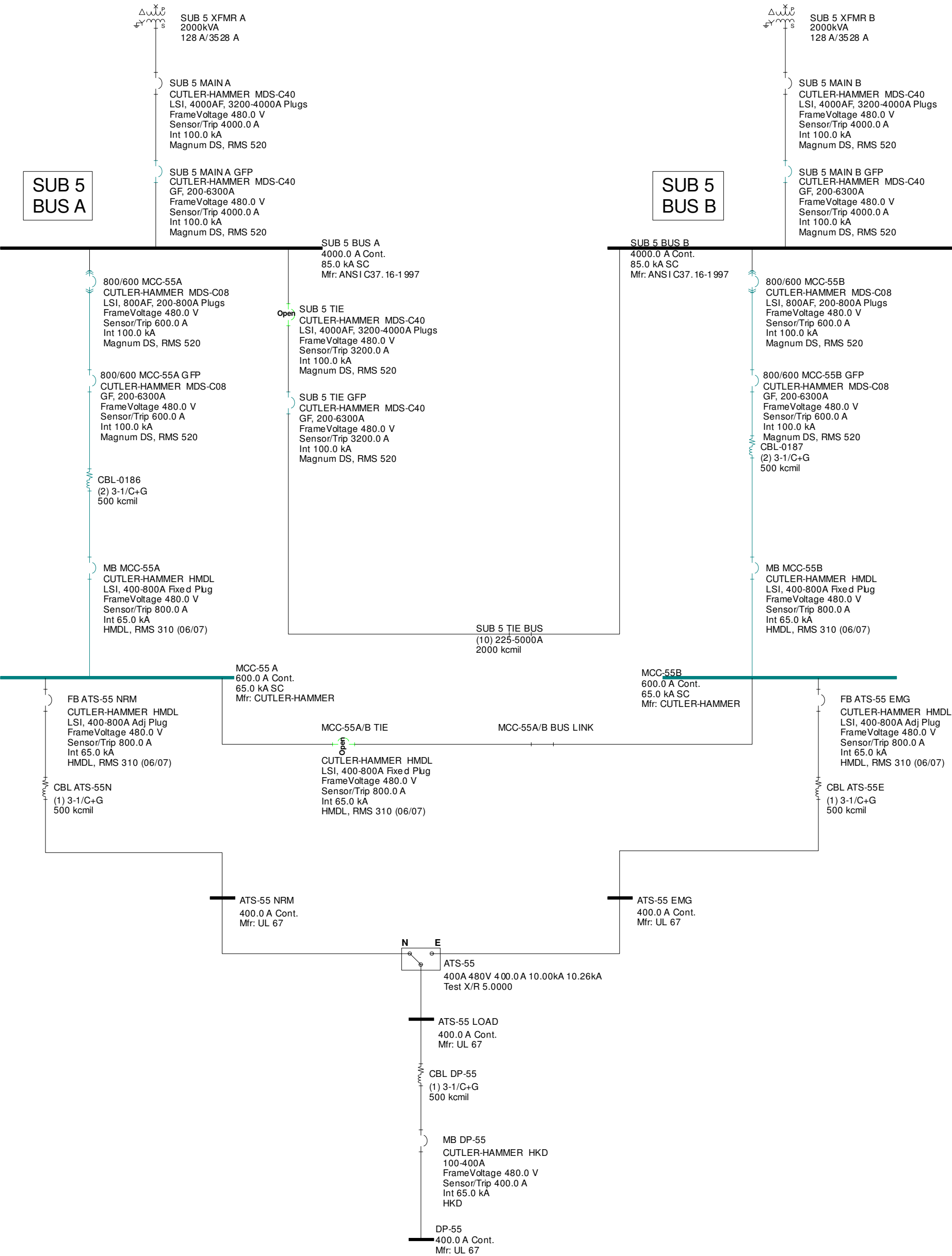
Current Scale x 10

Reference Voltage: 480

October 2, 2015 4:24 PM

AAWWTP

MCC-54B

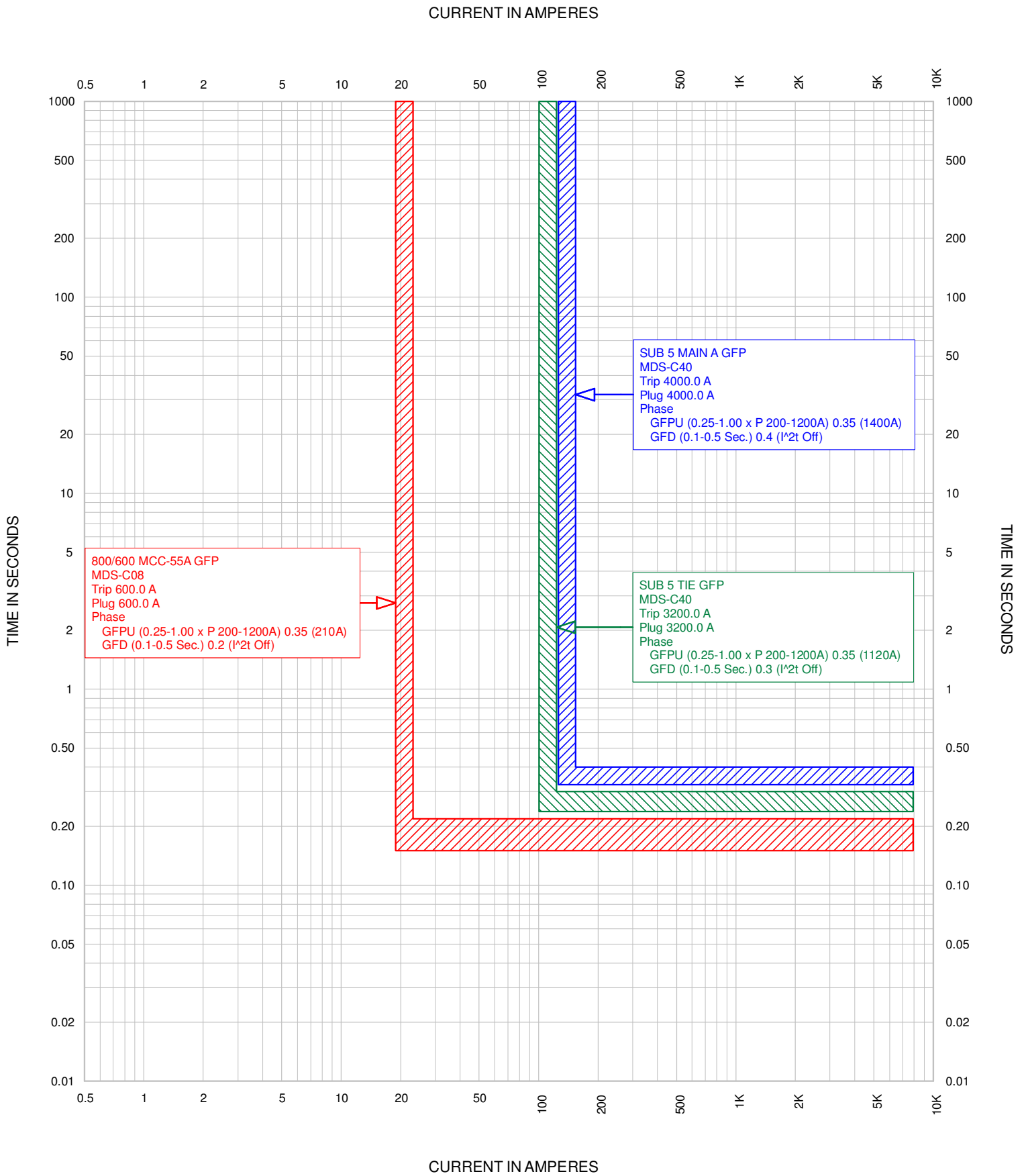


Online: TCC S5A,B_MCC-55A,55B

April 4, 2016 4:27 PM

AAWWTP





Online: TCC_S5A,B_MCC-55A,55B

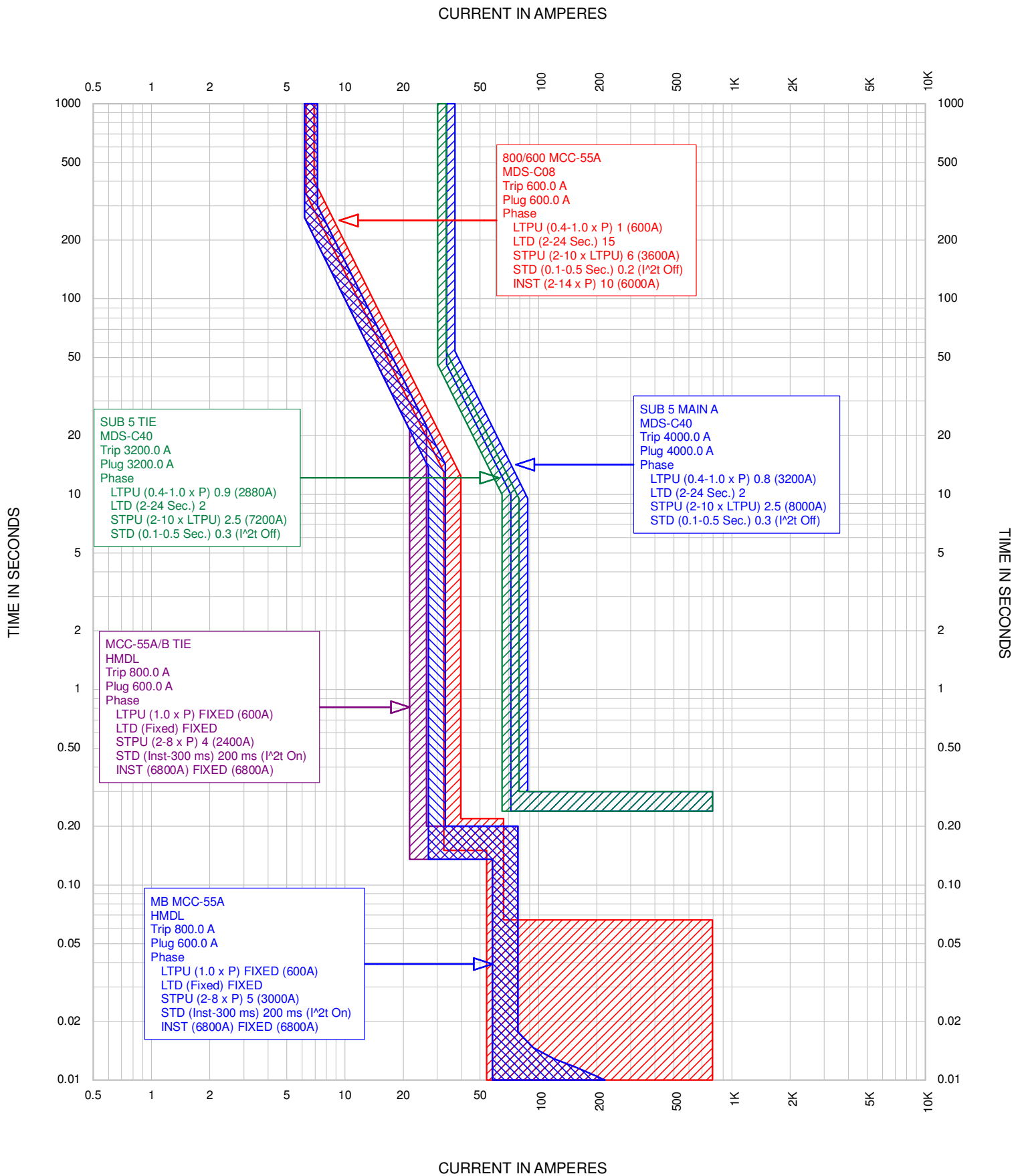
Current Scale x 10

Reference Voltage: 480

October 1, 2015 4:32 PM

AAWWTP

S5A_MCC-55A GFP



Online: TCC S5A,B_MCC-55A,55B

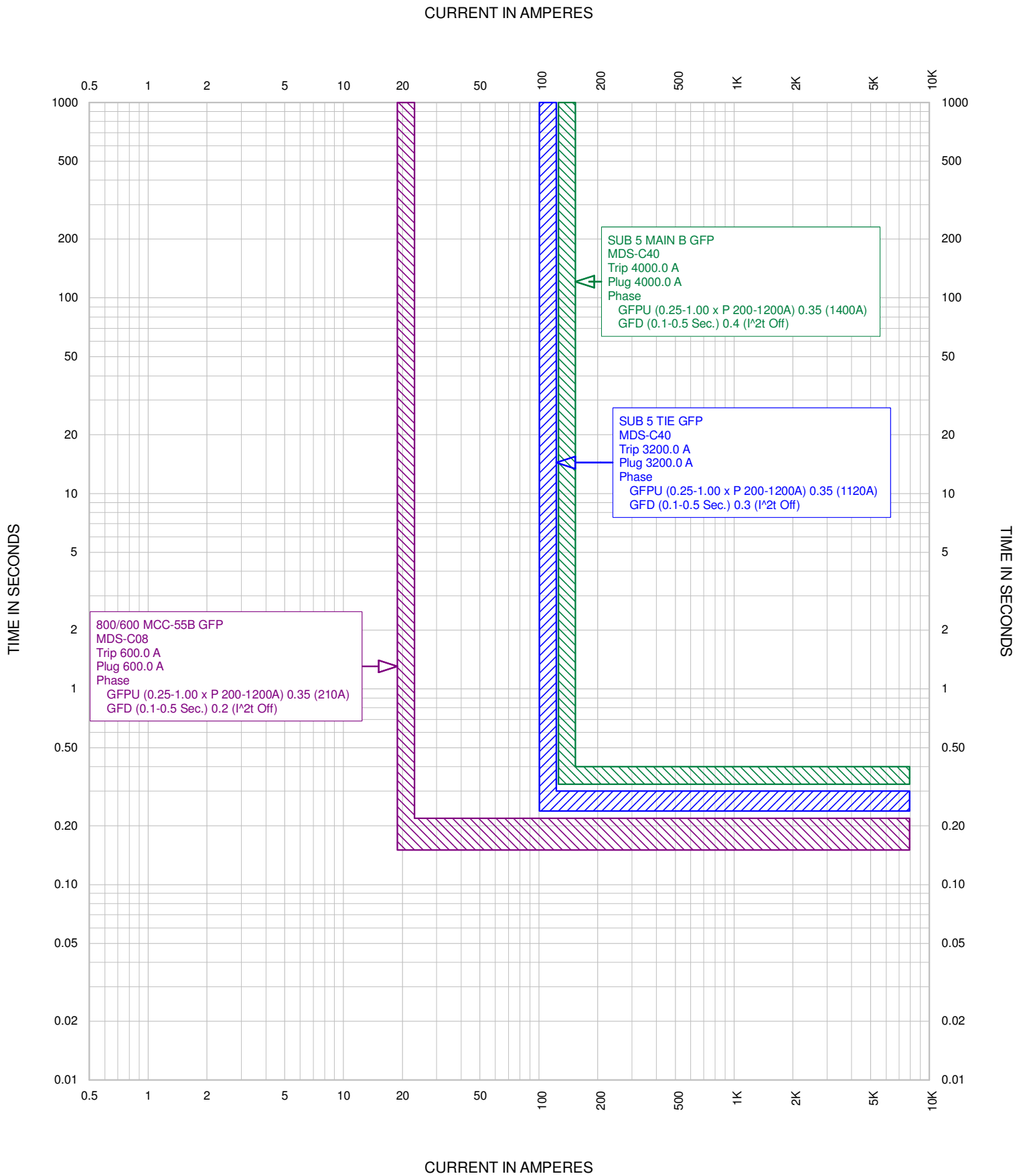
Current Scale x 100

Reference Voltage: 480

October 1, 2015 4:36 PM

AAWWTP

S5A_MCC-55A



Online: TCC_S5A,B_MCC-55A,55B

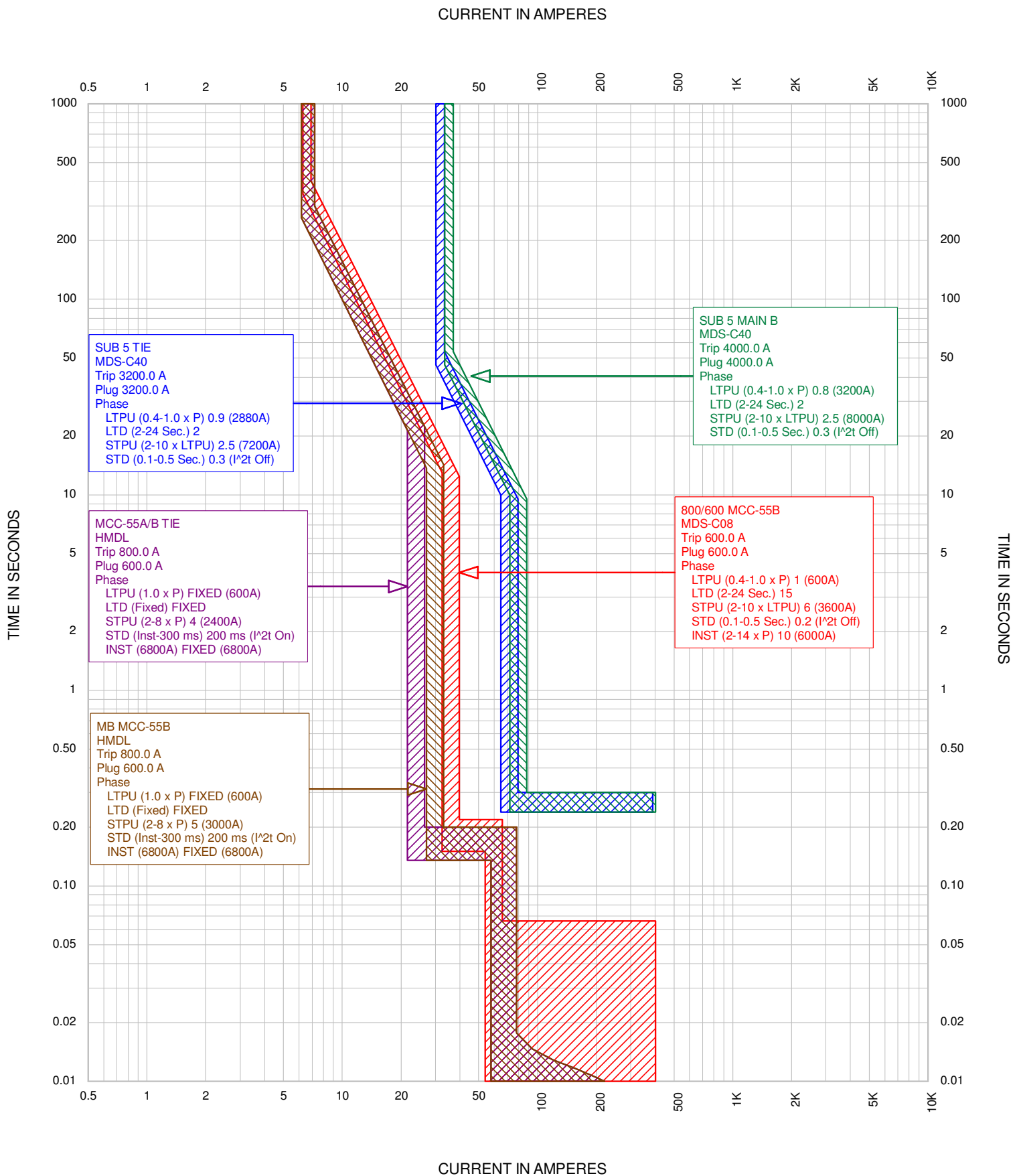
Current Scale x 10

Reference Voltage: 480

October 1, 2015 4:37 PM

AAWWTP

S5B_MCC-55B GFP



Online: TCC S5A,B_MCC-55A,55B

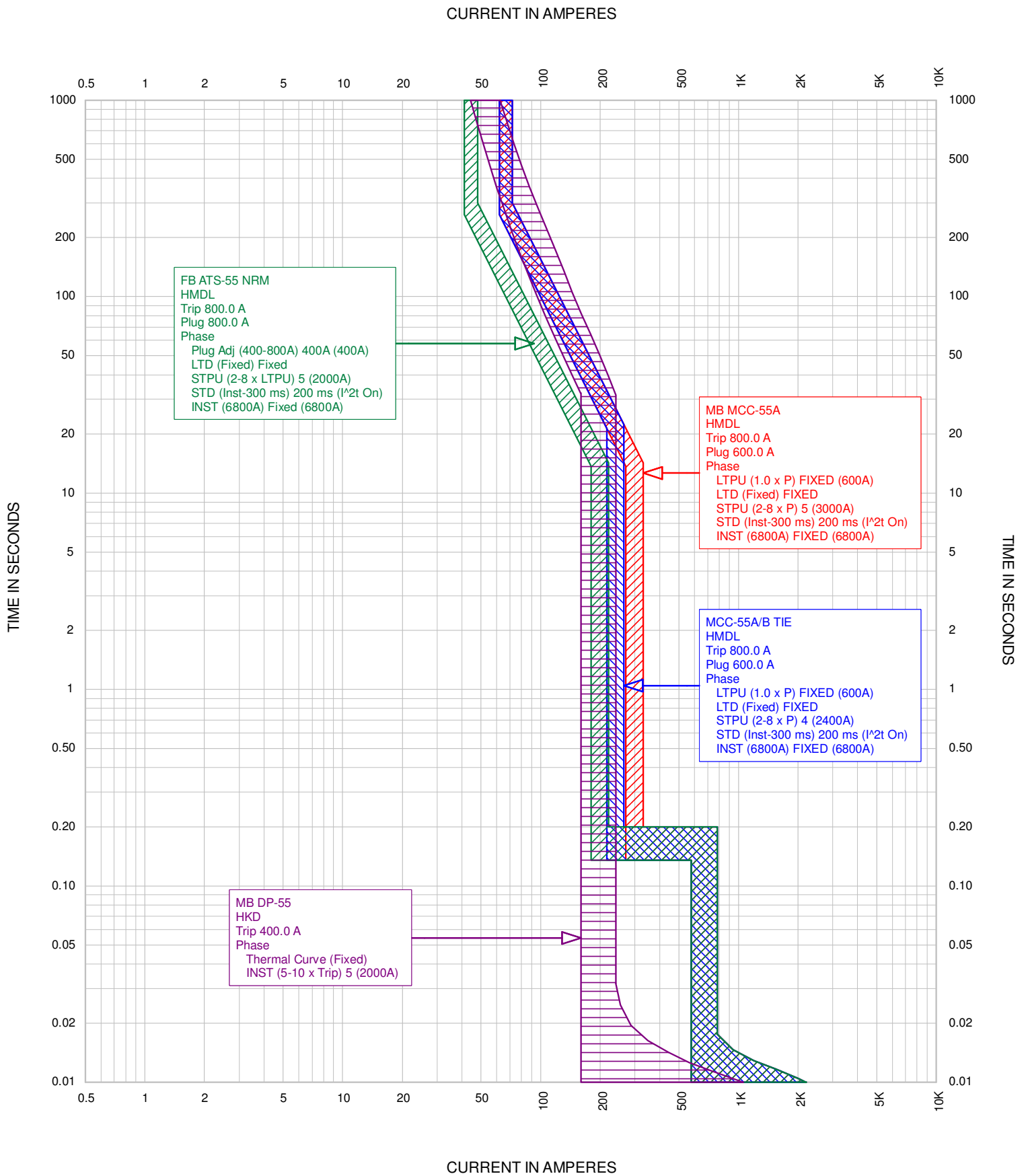
Current Scale x 100

Reference Voltage: 480

February 17, 2016 10:28 AM

AAWWTP

S5B_MCC-55B



Online: TCC S5A,B_MCC-55A,55B

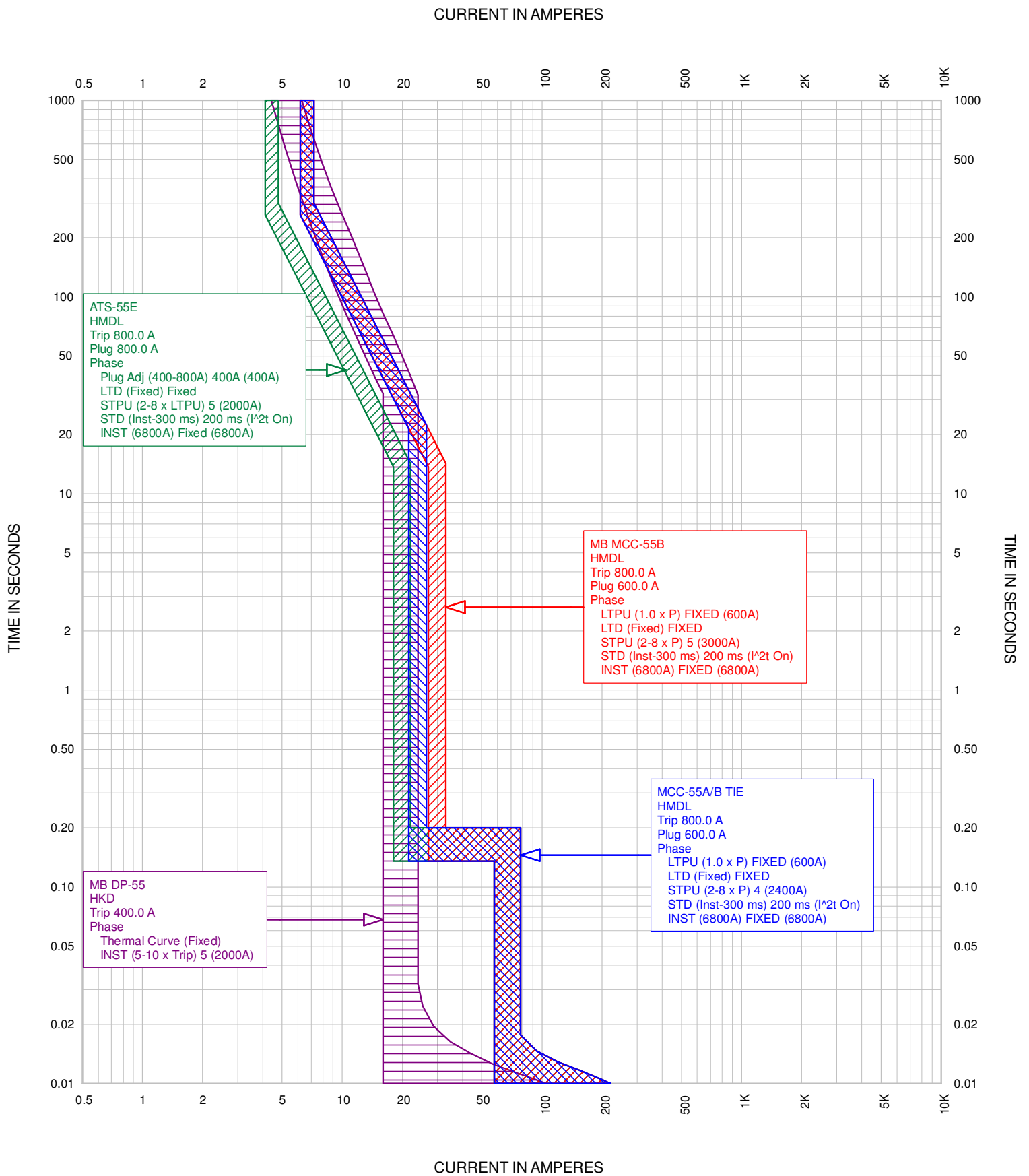
Current Scale x 10

Reference Voltage: 480

October 2, 2015 4:32 PM

AAWWTP

MCC-55A



Online: TCC S5A,B_MCC-55A,55B

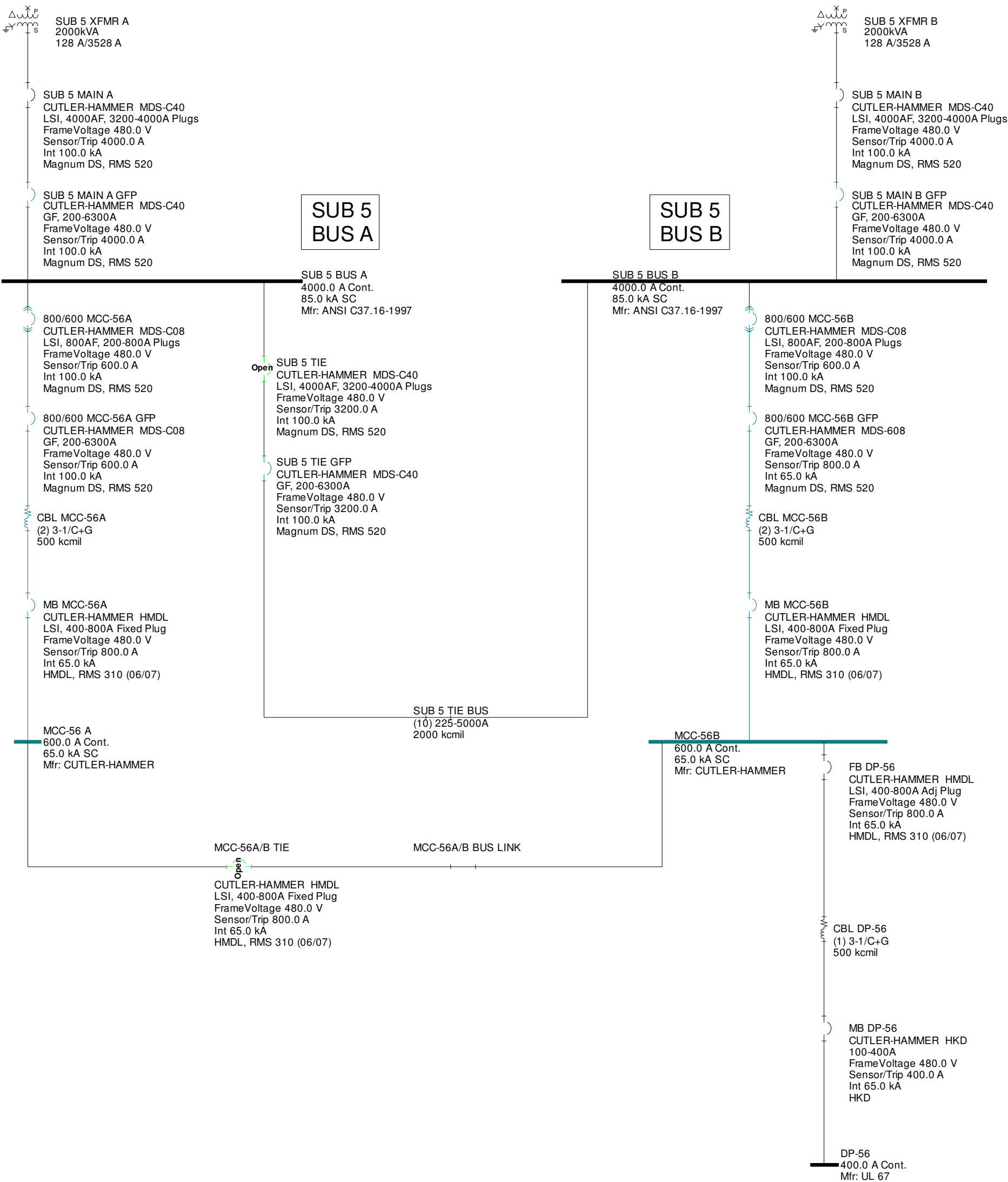
Current Scale x 100

Reference Voltage: 480

October 2, 2015 10:50 AM

AAWWTP

MCC-55B

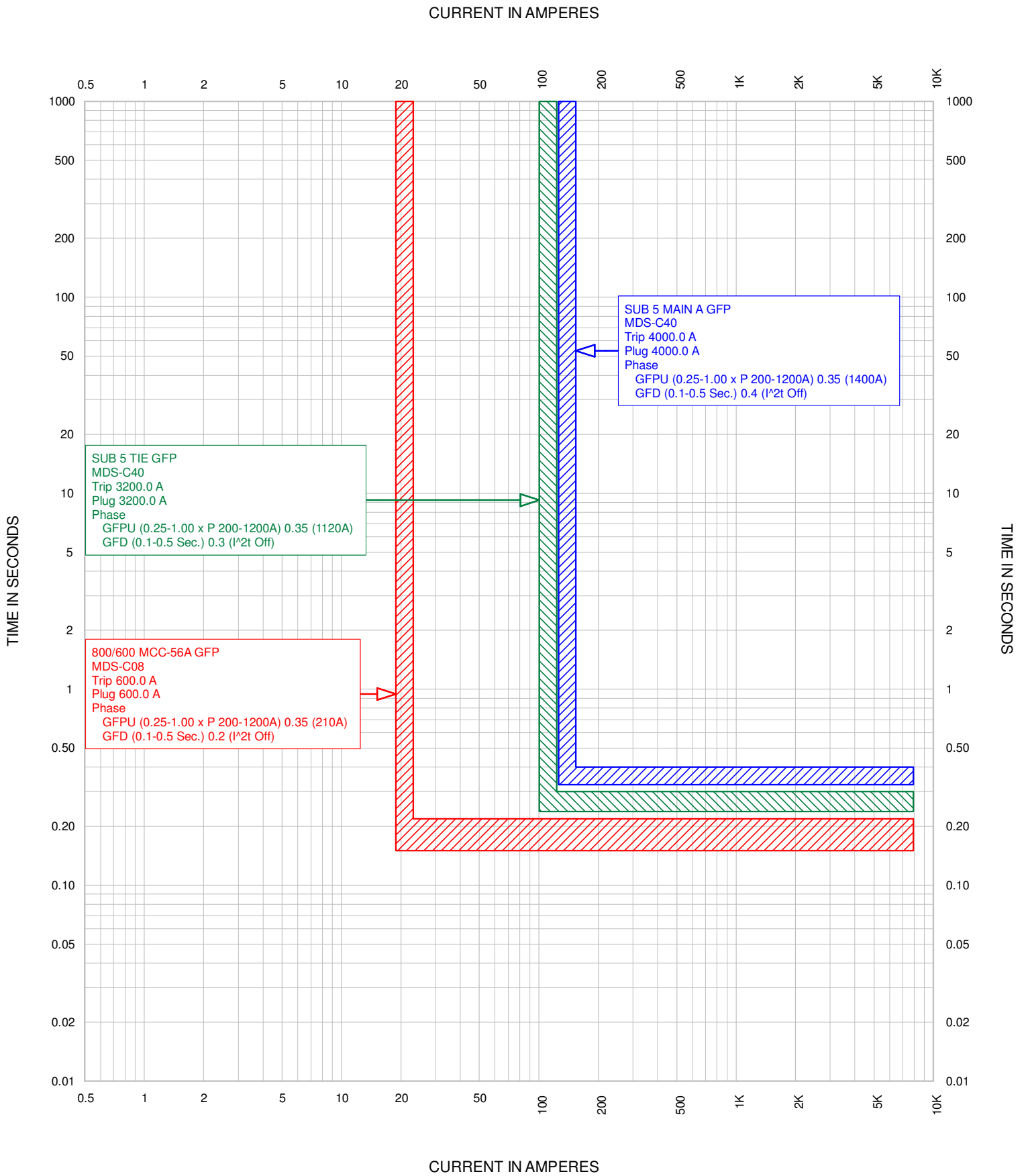


Online: TCC S5A,B_MCC-56A,56B

April 4, 2016 4:33 PM

AAWWTP





Online: TCC_S5A,B_MCC-56A,56B

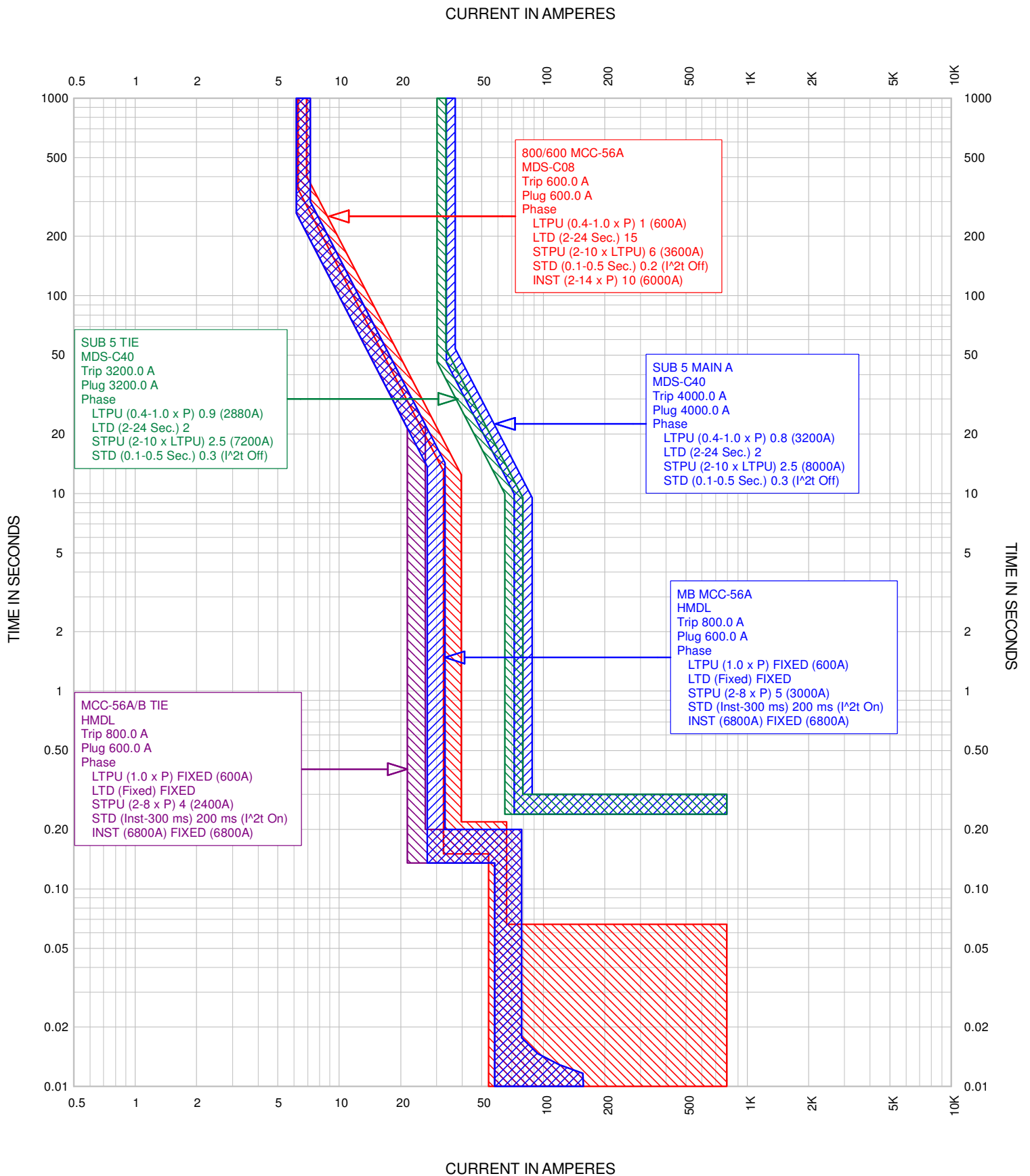
Current Scale x 10

Reference Voltage: 480

October 2, 2015 4:48 PM

AAWWTP

S5A_MCC-56A GFP



Online: TCC S5A,B_MCC-56A,56B

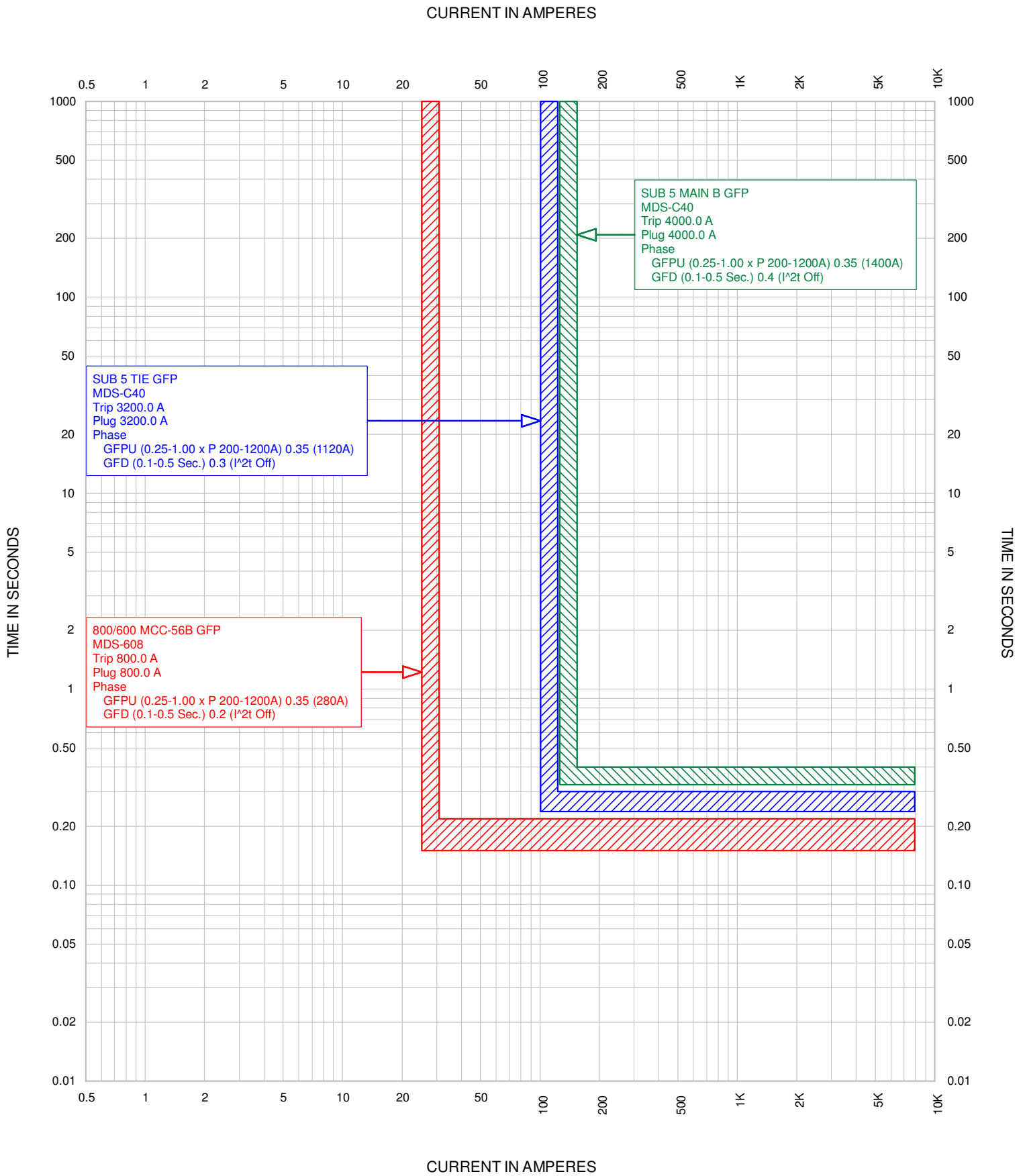
Current Scale x 100

Reference Voltage: 480

October 2, 2015 4:56 PM

AAWWTP

S5A_MCC-56A



Online: TCC_S5A,B_MCC-56A,56B

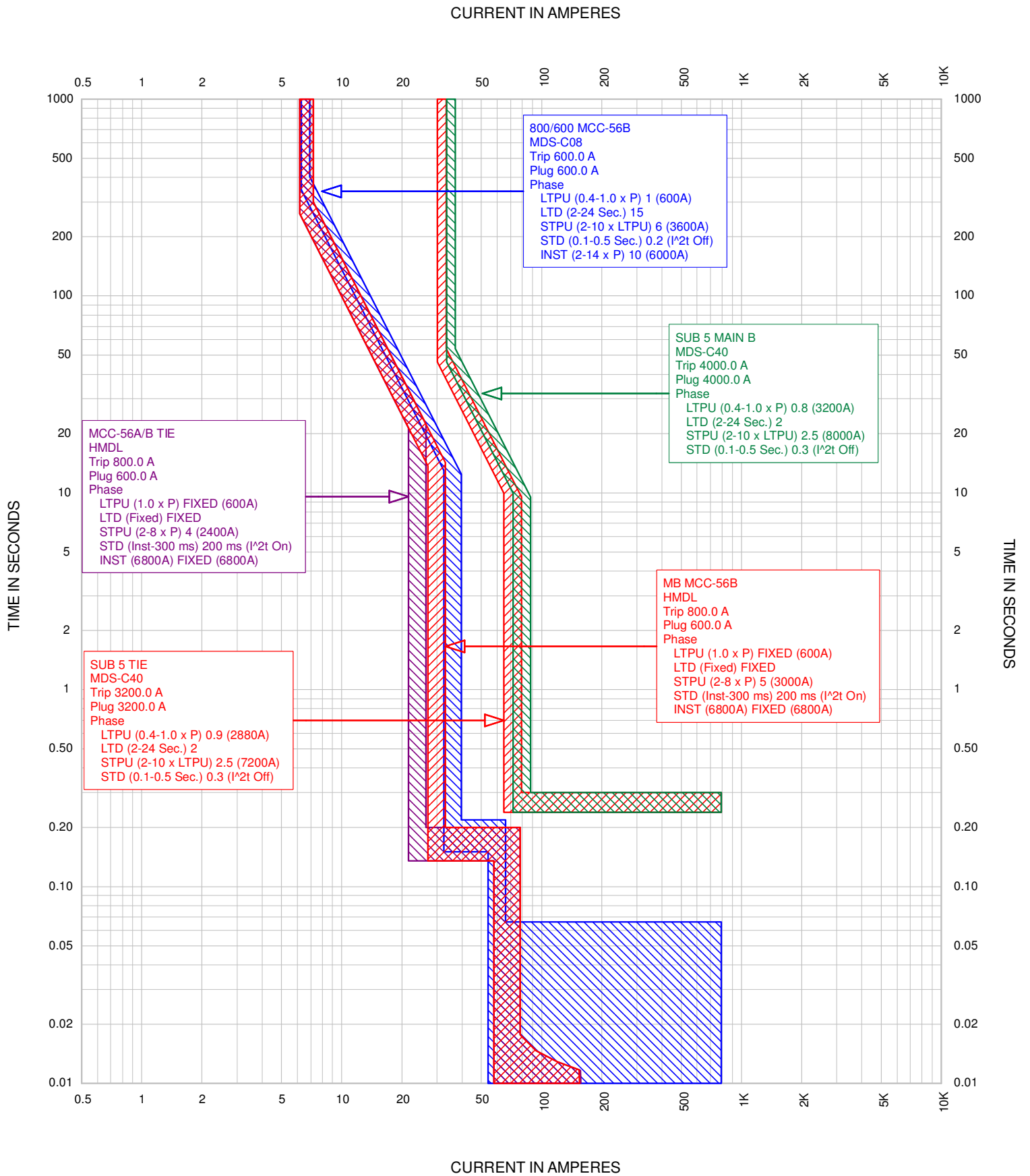
Current Scale x 10

Reference Voltage: 480

October 2, 2015 4:58 PM

AAWWTP

S5B_MCC-56B GFP



Online: TCC S5A,B_MCC-56A,56B

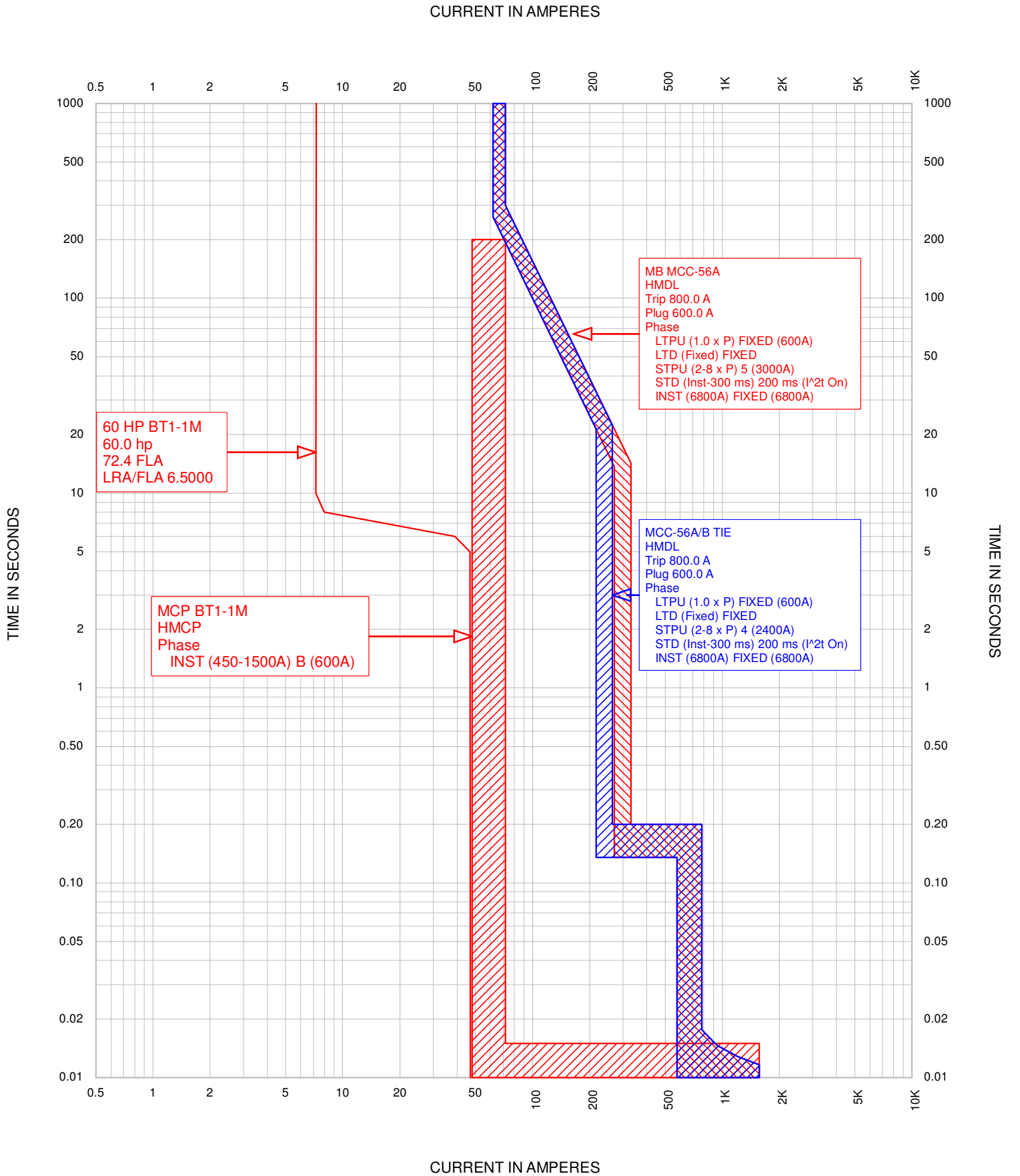
Current Scale x 100

Reference Voltage: 480

October 2, 2015 4:59 PM

AAWWTP

S5B_MCC-56B



Online: TCC_S5A,B_MCC-56A,56B

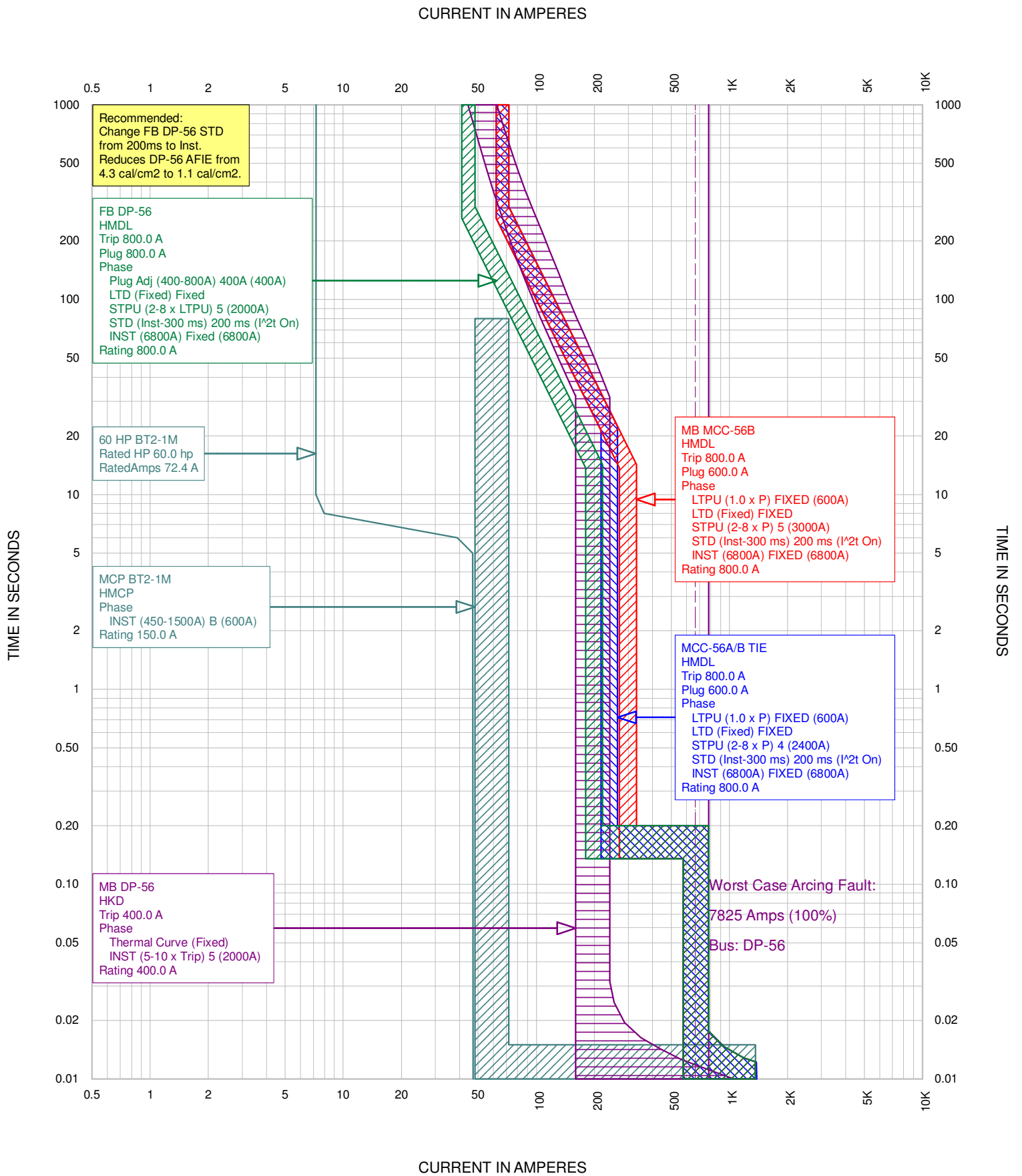
Current Scale x 10

Reference Voltage: 480

October 2, 2015 5:01 PM

AAWWTP

MCC-56A



Online: TCC_S5A,B_MCC-56A,56B

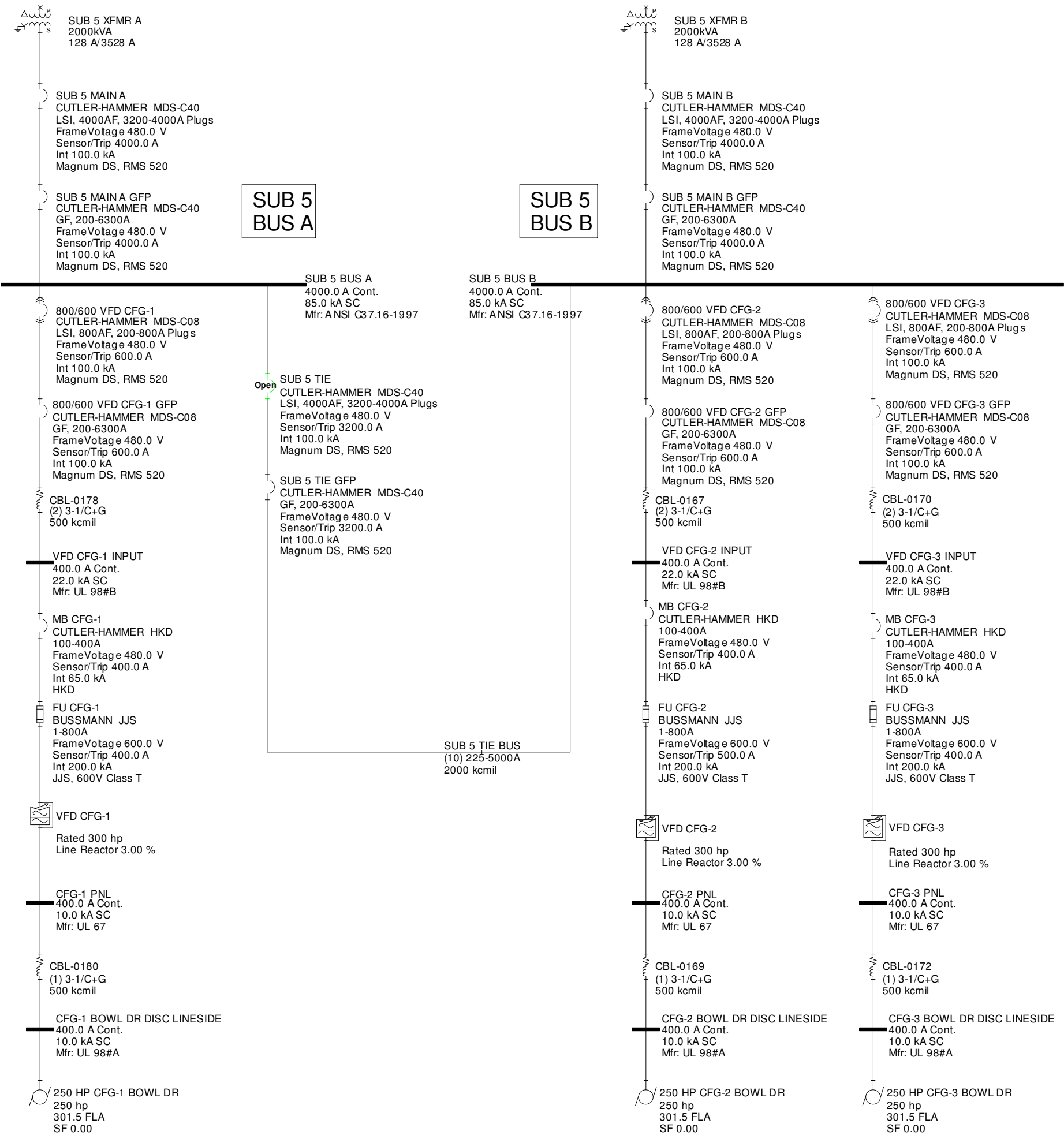
Current Scale x 10

Reference Voltage: 480

March 10, 2017 3:26 PM

AAWWTP

MCC-56B

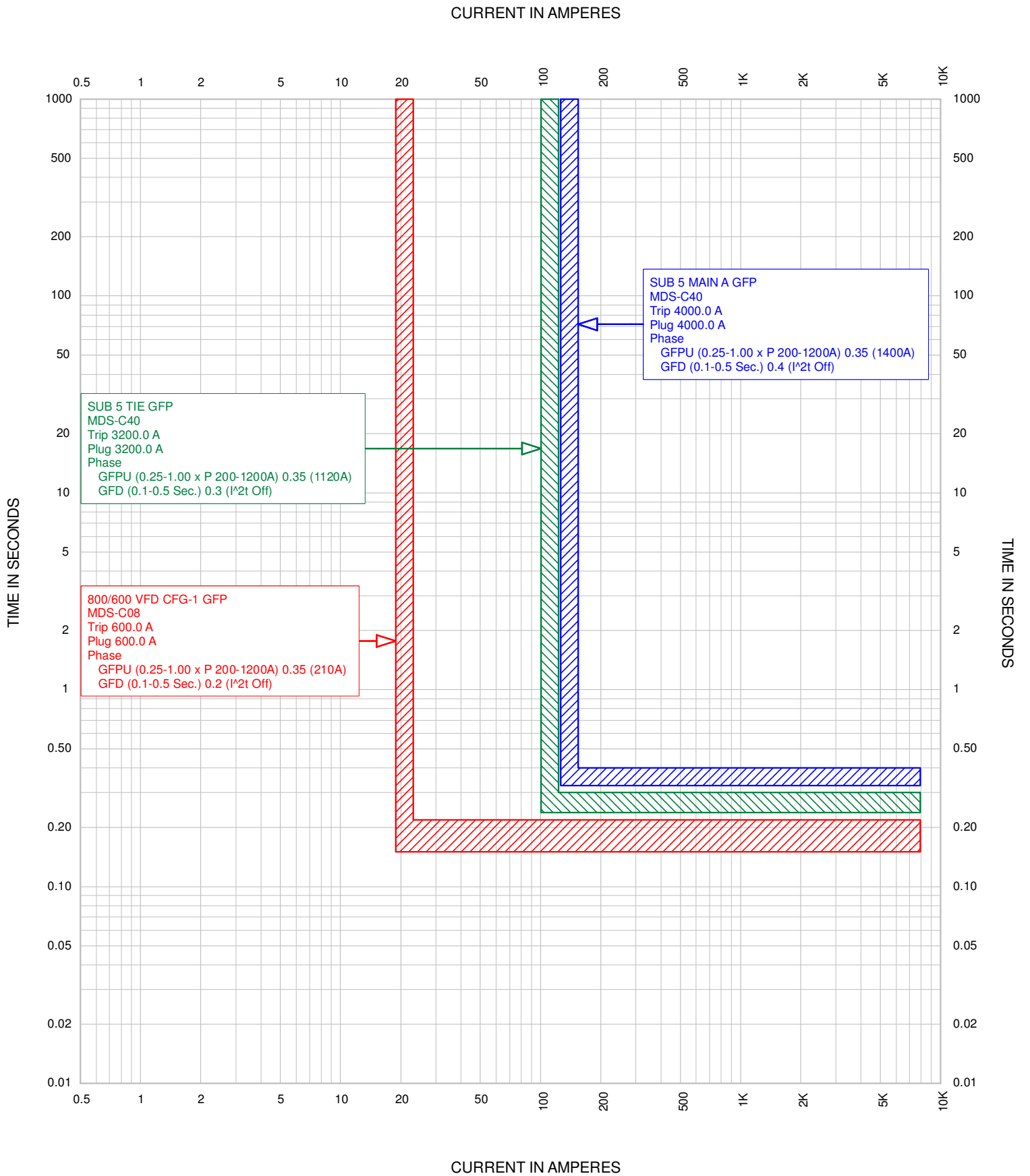


Online: TCC S5A,B_VFD-CFG1,2,3

April 4, 2016 4:43 PM

AAWWTP





Online: TCC S5A,B_VFD-CFG-1,2,3

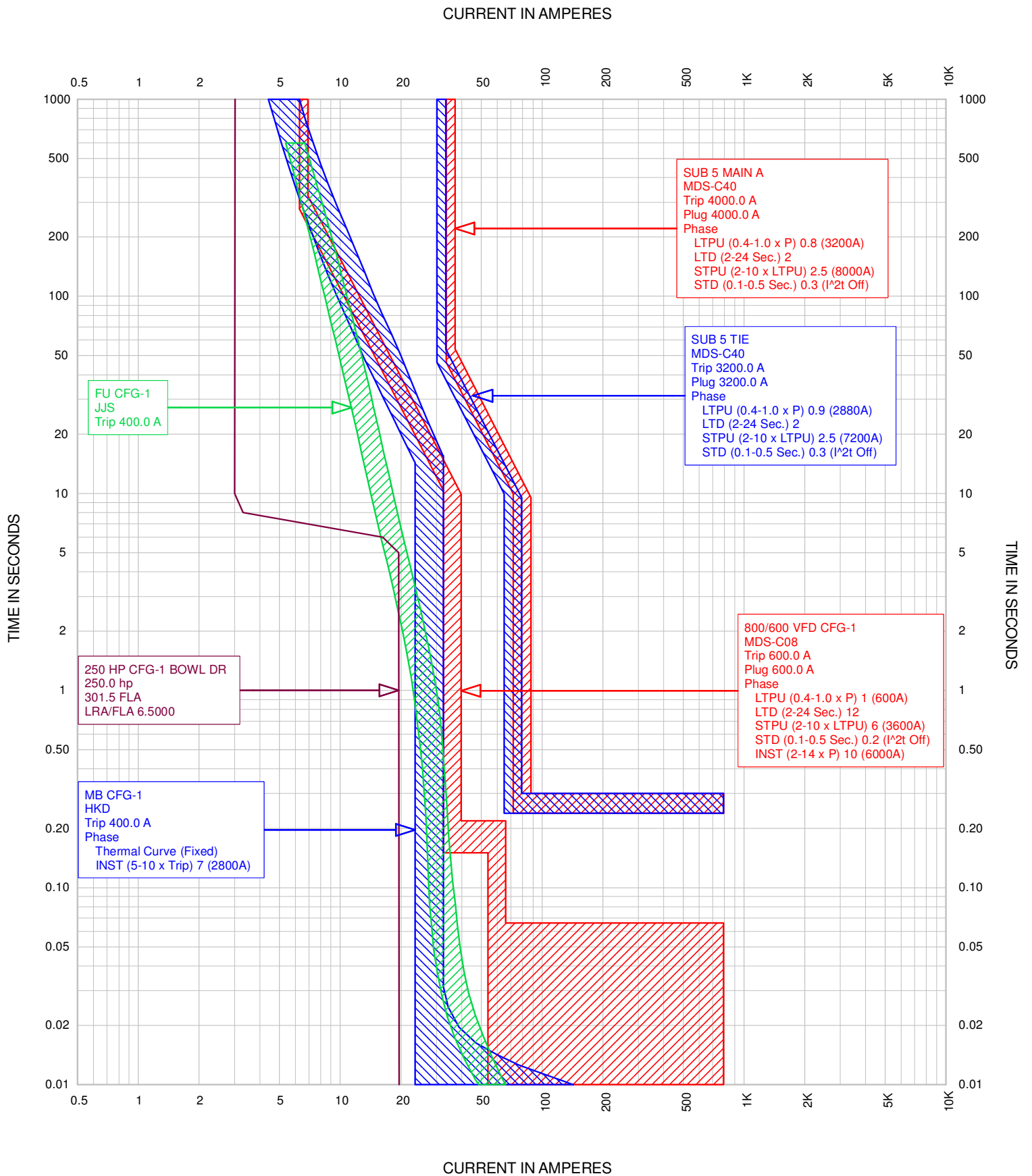
Current Scale x 10

Reference Voltage: 480

October 2, 2015 5:04 PM

AAWWTP

S5A_VFD CFG-1 GFP



Online: TCC S5A,B_VFD-CFG-1,2,3

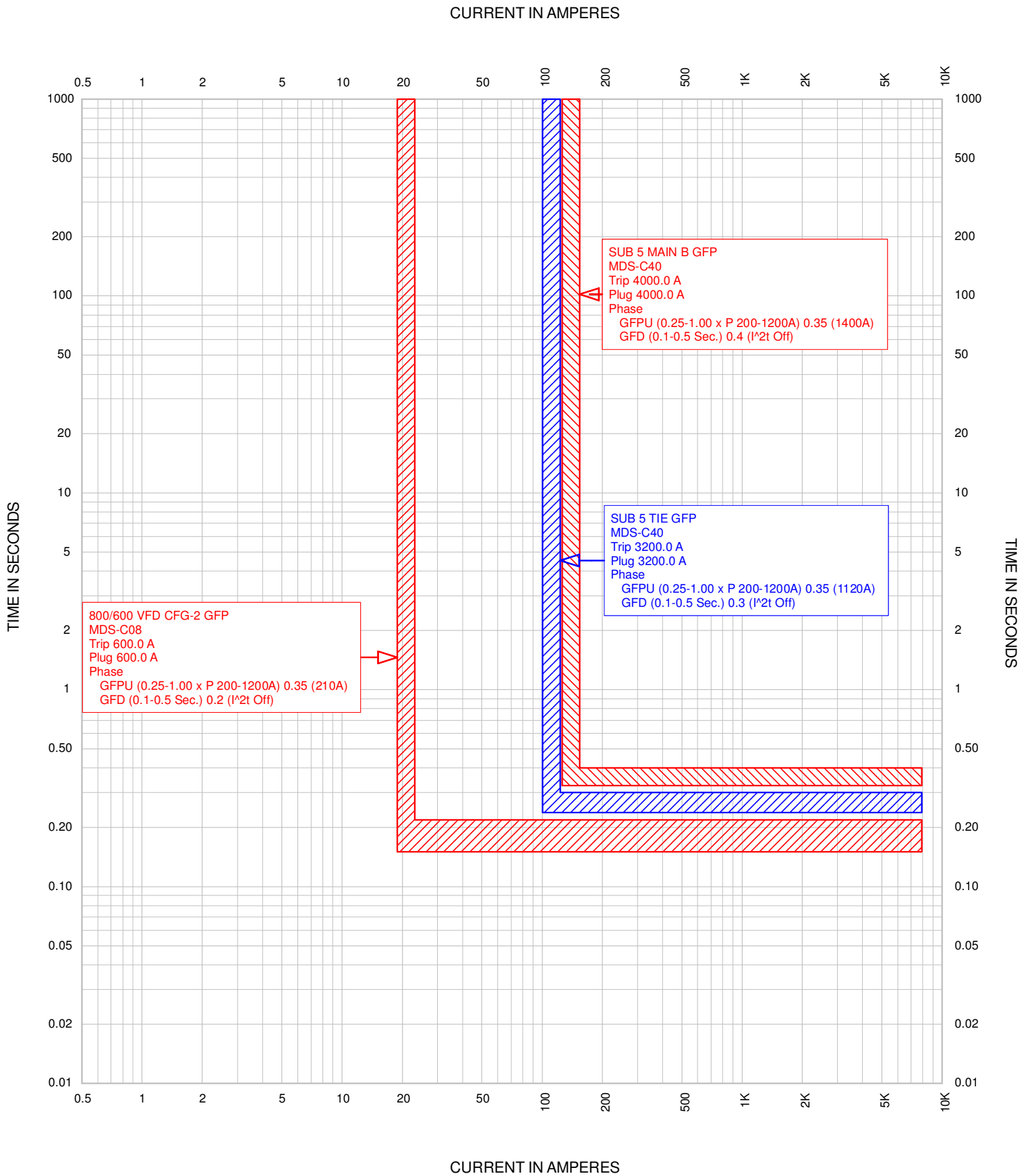
Current Scale x 100

Reference Voltage: 480

October 2, 2015 5:06 PM

AAWWTP

S5A_VFD CFG-1



Online: TCC S5A,B_VFD-CFG-1,2,3

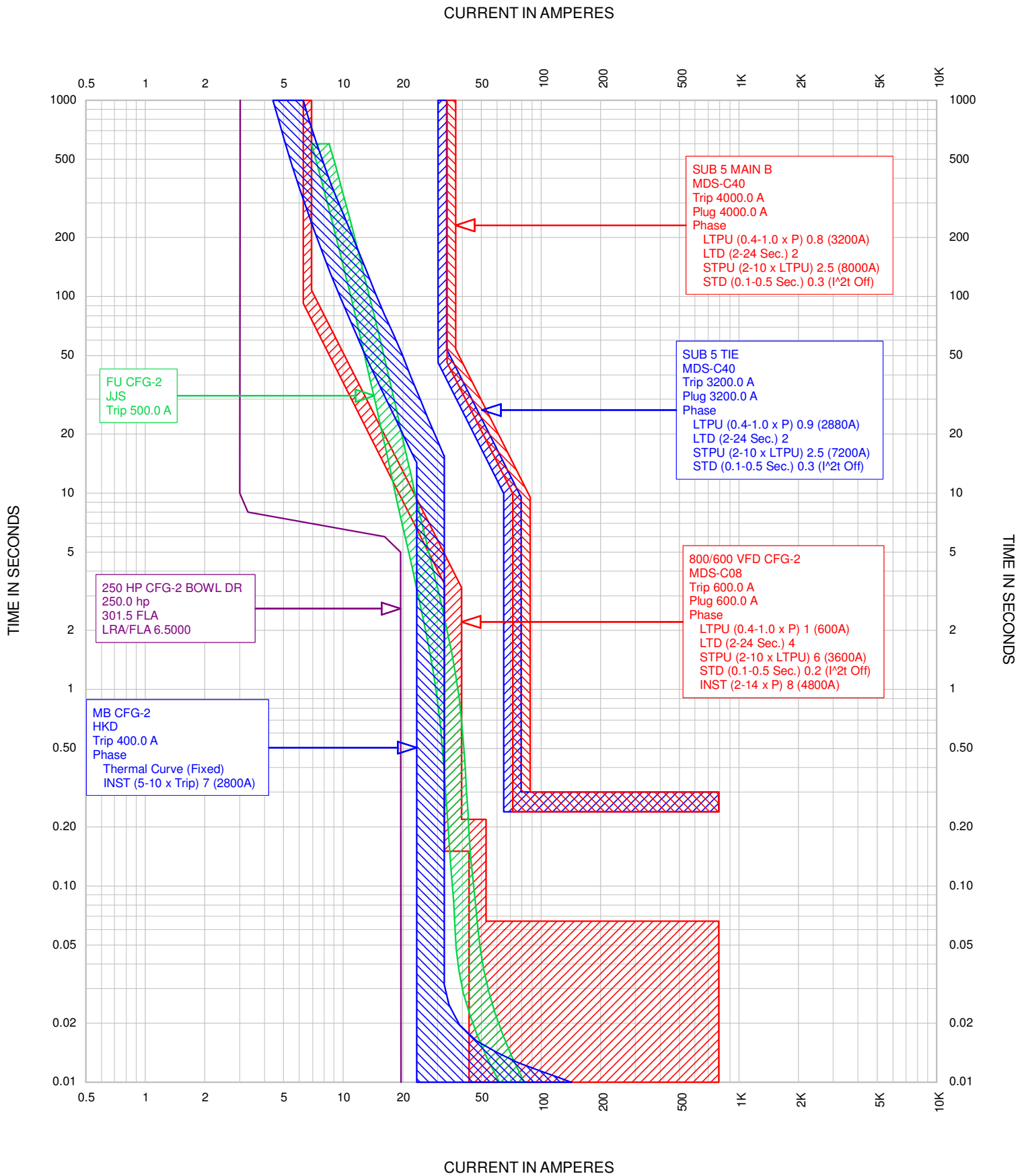
Current Scale x 10

Reference Voltage: 480

October 2, 2015 5:07 PM

AAWWTP

S5B_VFD CFG-2 GFP



Online: TCC S5A,B_VFD-CFG1,2,3

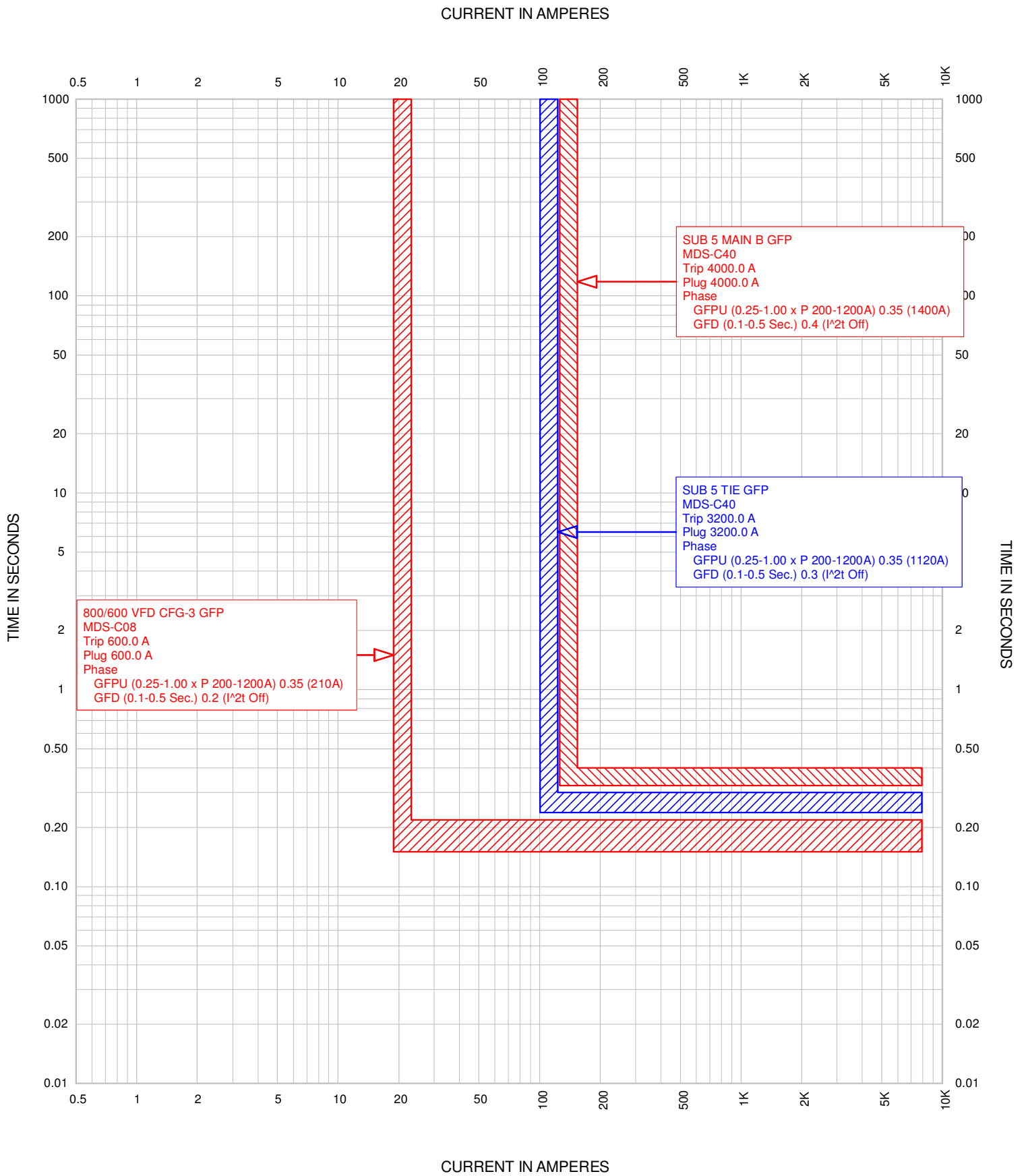
Current Scale x 100

Reference Voltage: 480

October 2, 2015 5:09 PM

AAWWTP

S5B_VFD CFG-2



Online: TCC S5A,B_VFD-CFG-1,2,3

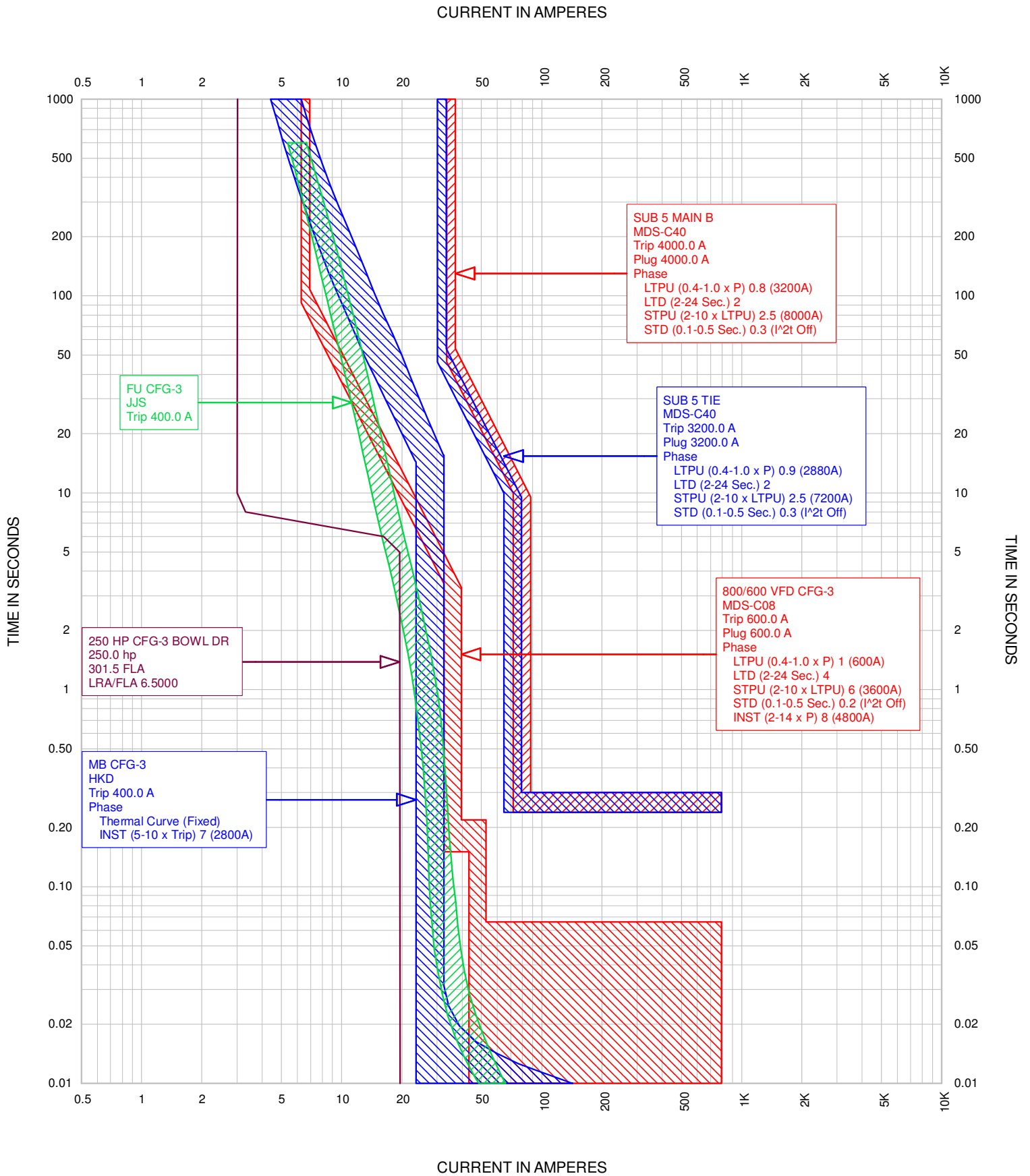
Current Scale x 10

Reference Voltage: 480

October 2, 2015 5:10 PM

AAWWTP

S5B_VFD CFG-3 GFP



Online: TCC S5A,B_VFD-CFG1,2,3

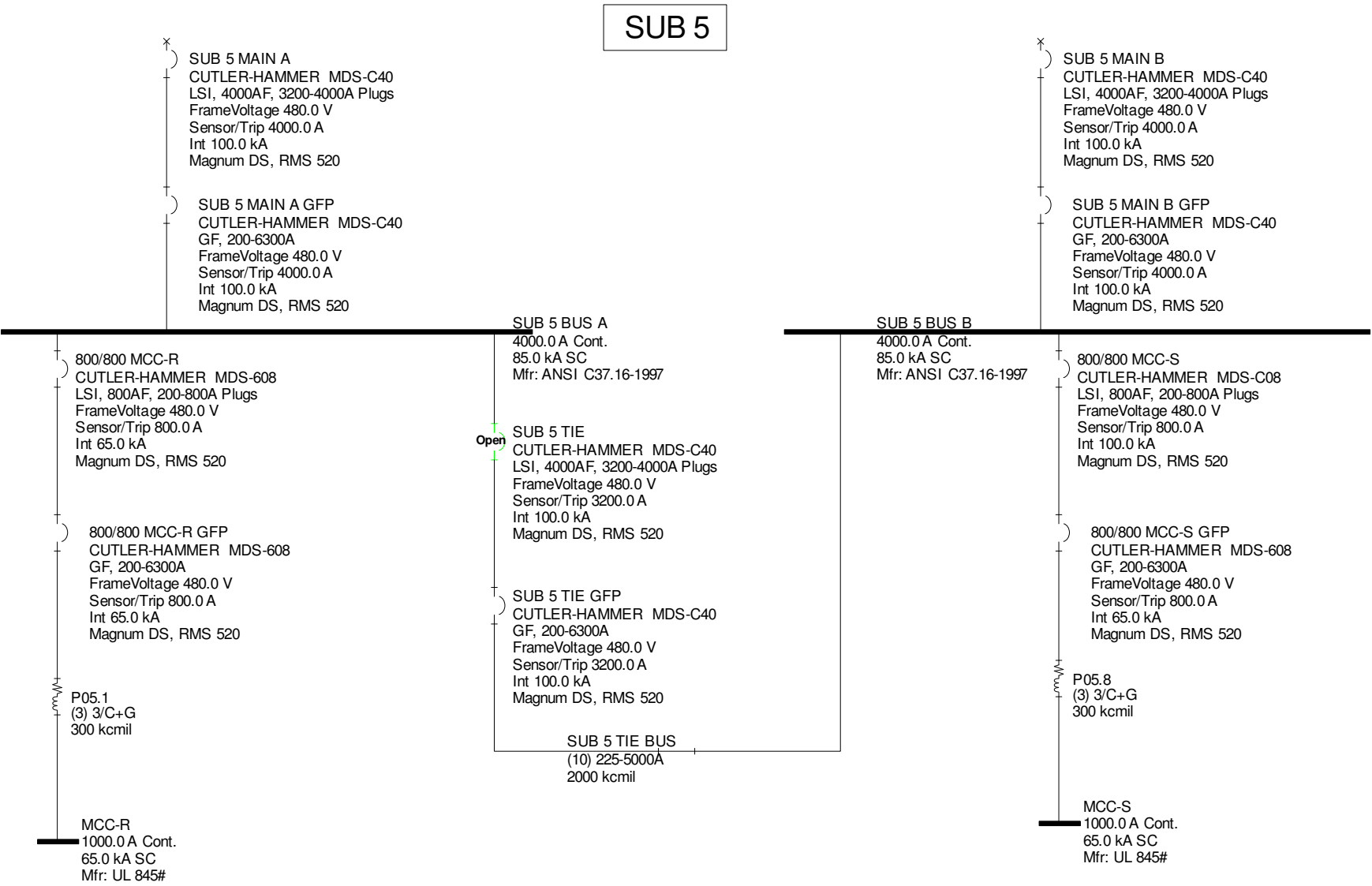
Current Scale x 100

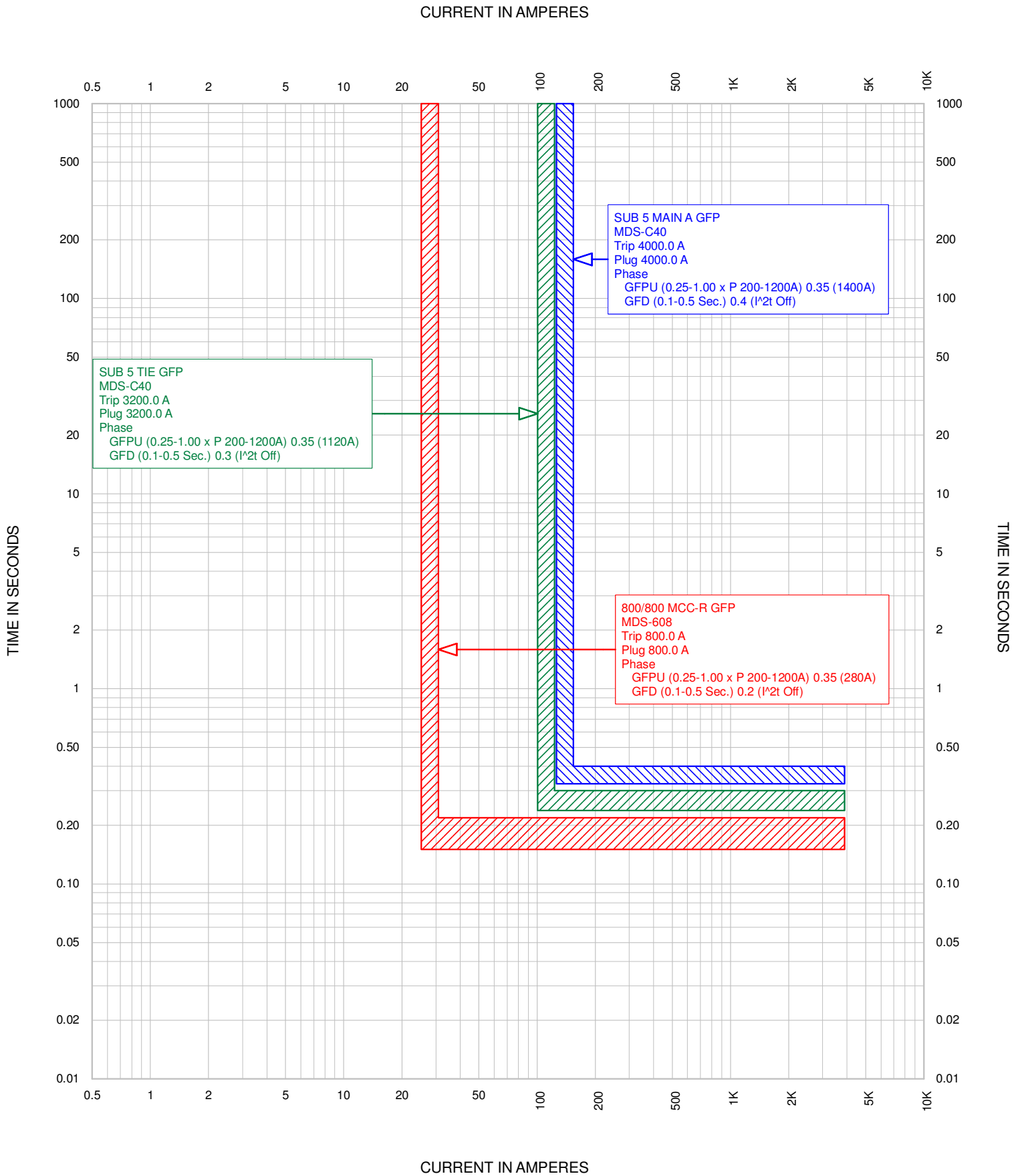
Reference Voltage: 480

October 2, 2015 5:12 PM

AAWWTP

S5B_VFD CFG-3





Online: TCC S5A,B_MCC-R,S

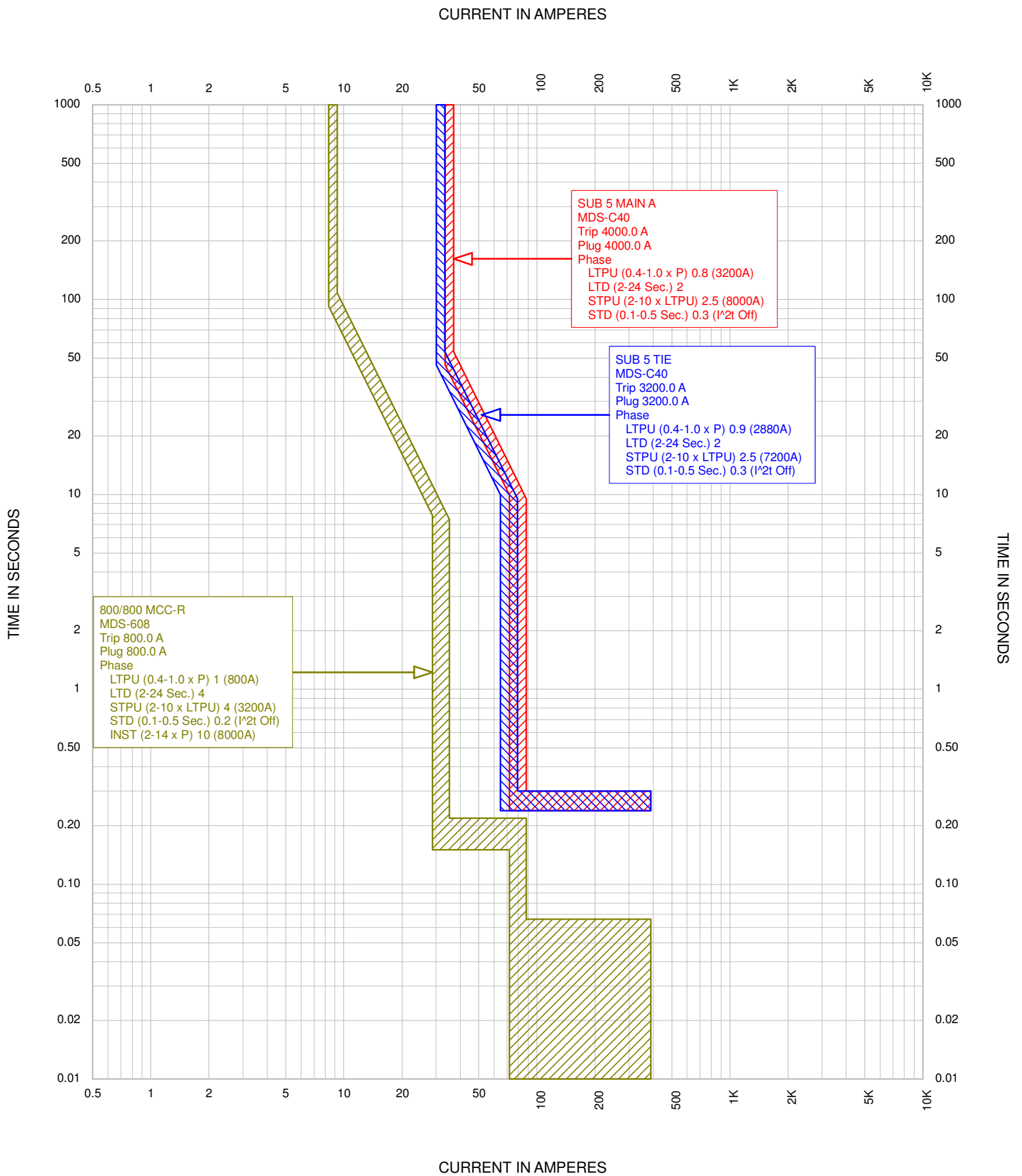
February 16, 2016 11:31 AM

Current Scale x 10

AAWWTP

Reference Voltage: 480

S5A_MCC-R GFP



Online: TCC S5A,B_MCC-R,S

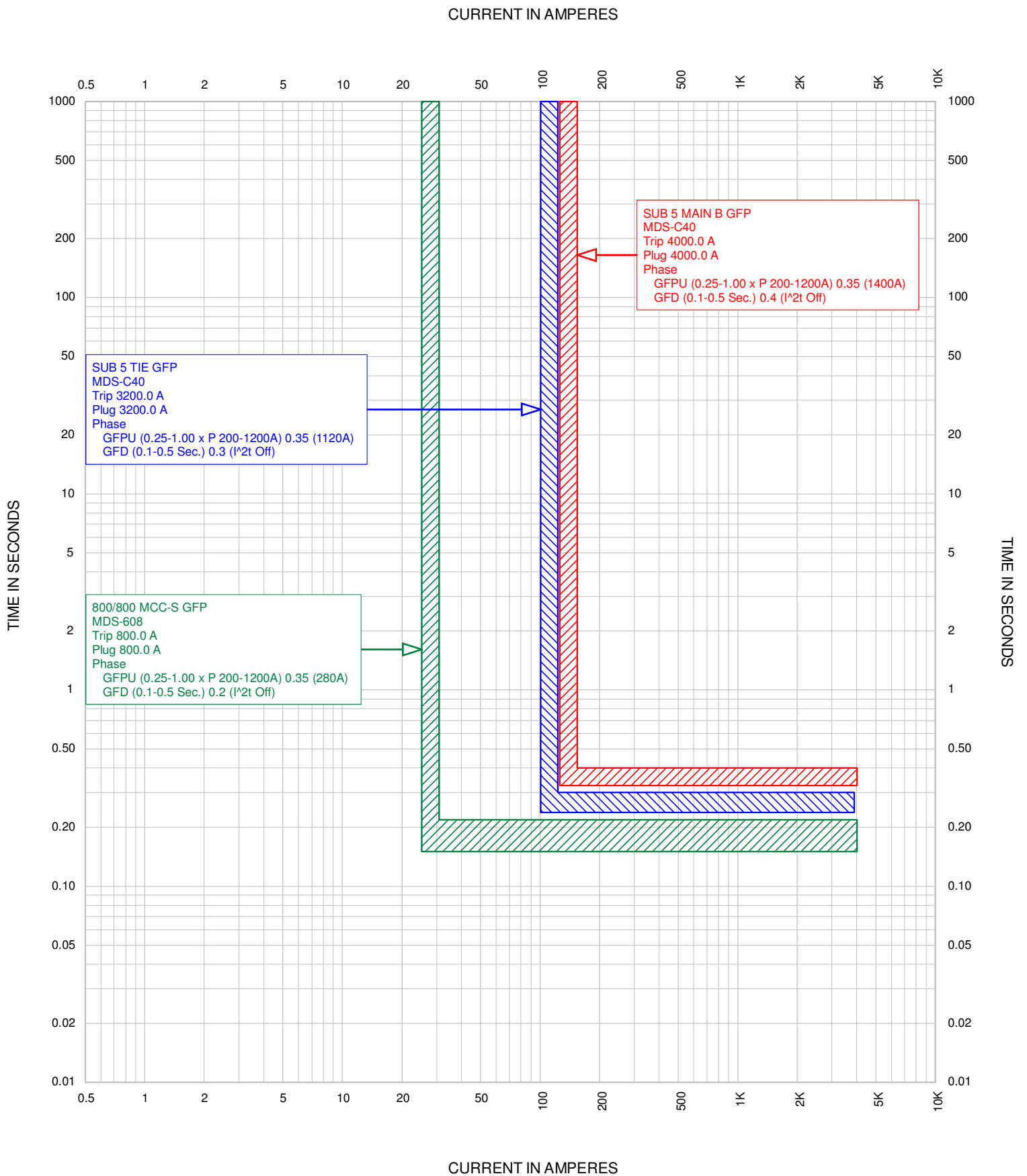
Current Scale x 100

Reference Voltage: 480

February 15, 2016 6:39 PM

AAWWTP

S5A_MCC-R



Online: TCC S5A,B_MCC-R,S

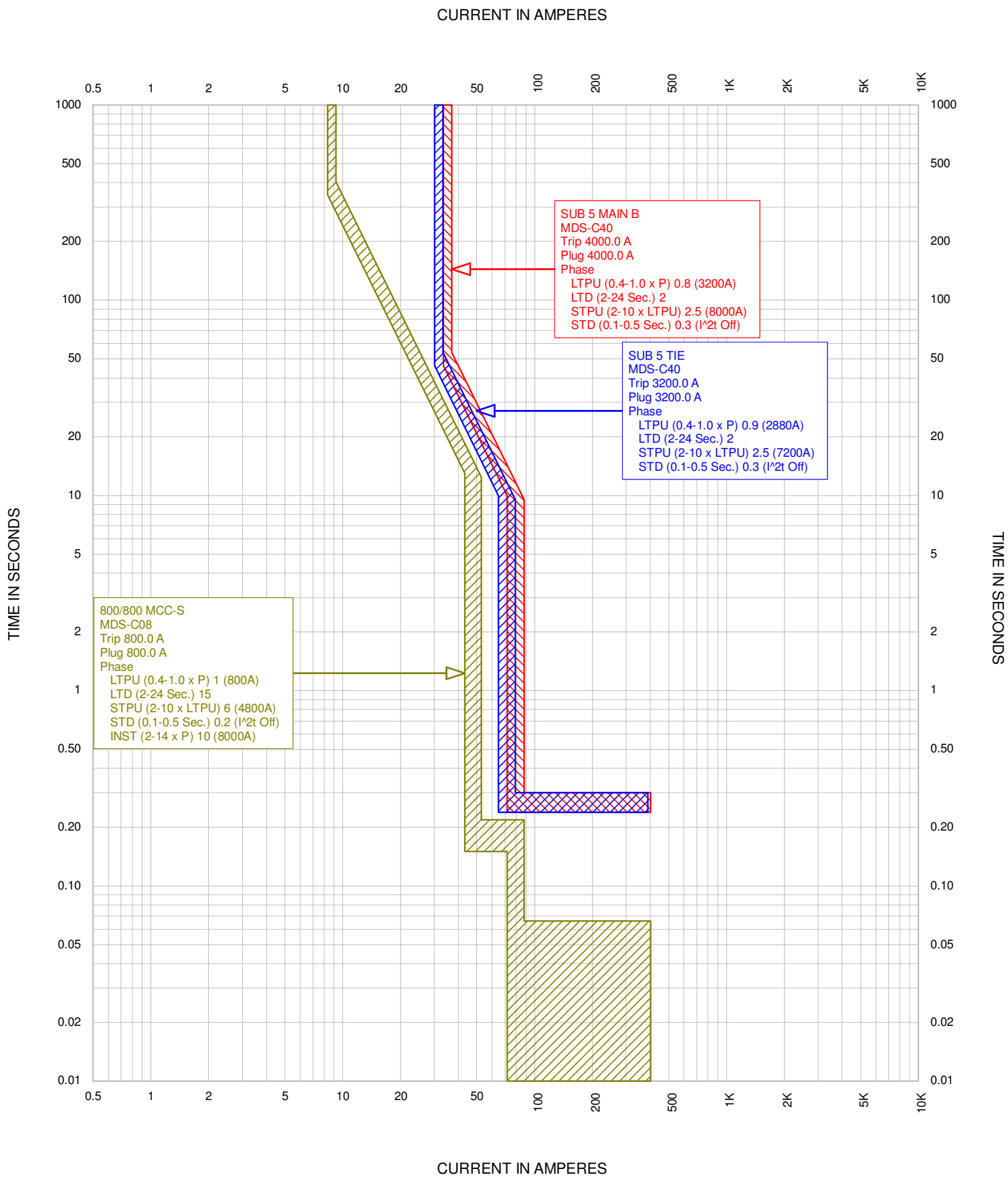
Current Scale x 10

Reference Voltage: 480

February 16, 2016 12:04 PM

AAWWTP

S5B_MCC-S GFP



Online: TCC S5A,B_MCC-R,S

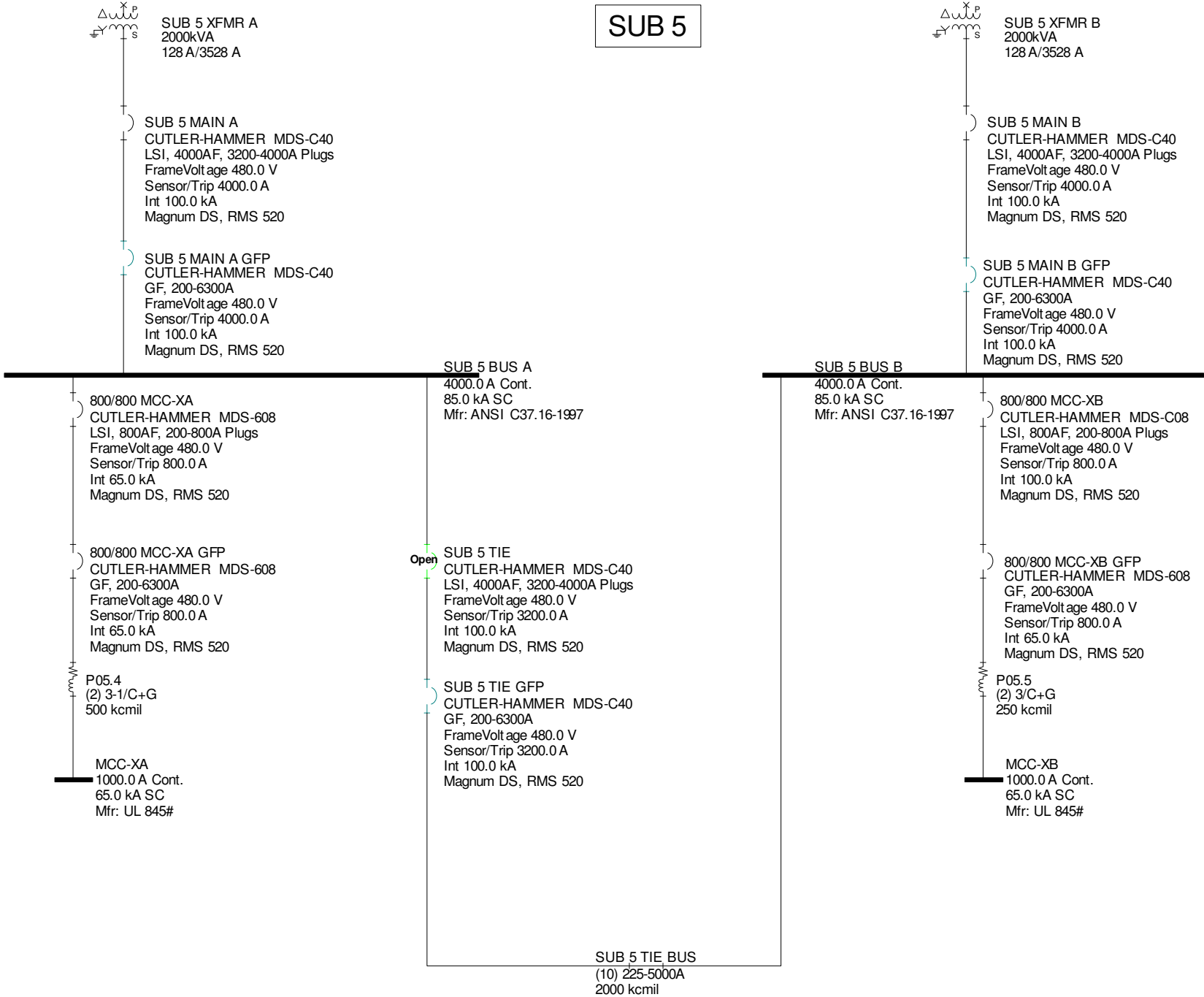
Current Scale x 100

Reference Voltage: 480

February 15, 2016 6:41 PM

AAWWTP

S5B_MCC-S

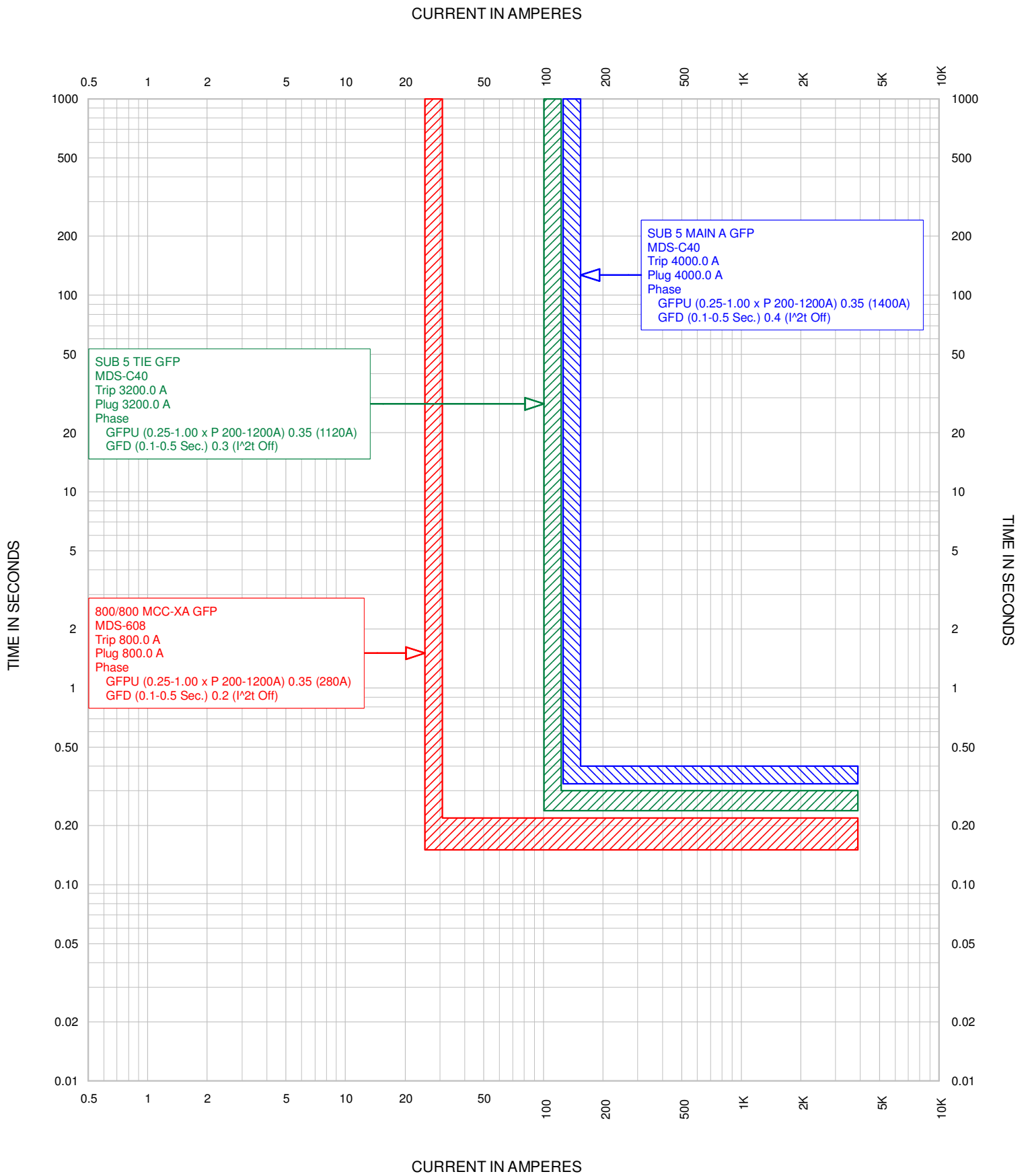


Online: TCC S5A,B_MCC-XA,XB

April 4, 2016 4:54 PM

AAWWTP





Online: TCC S5A,B_MCC-XA,XB

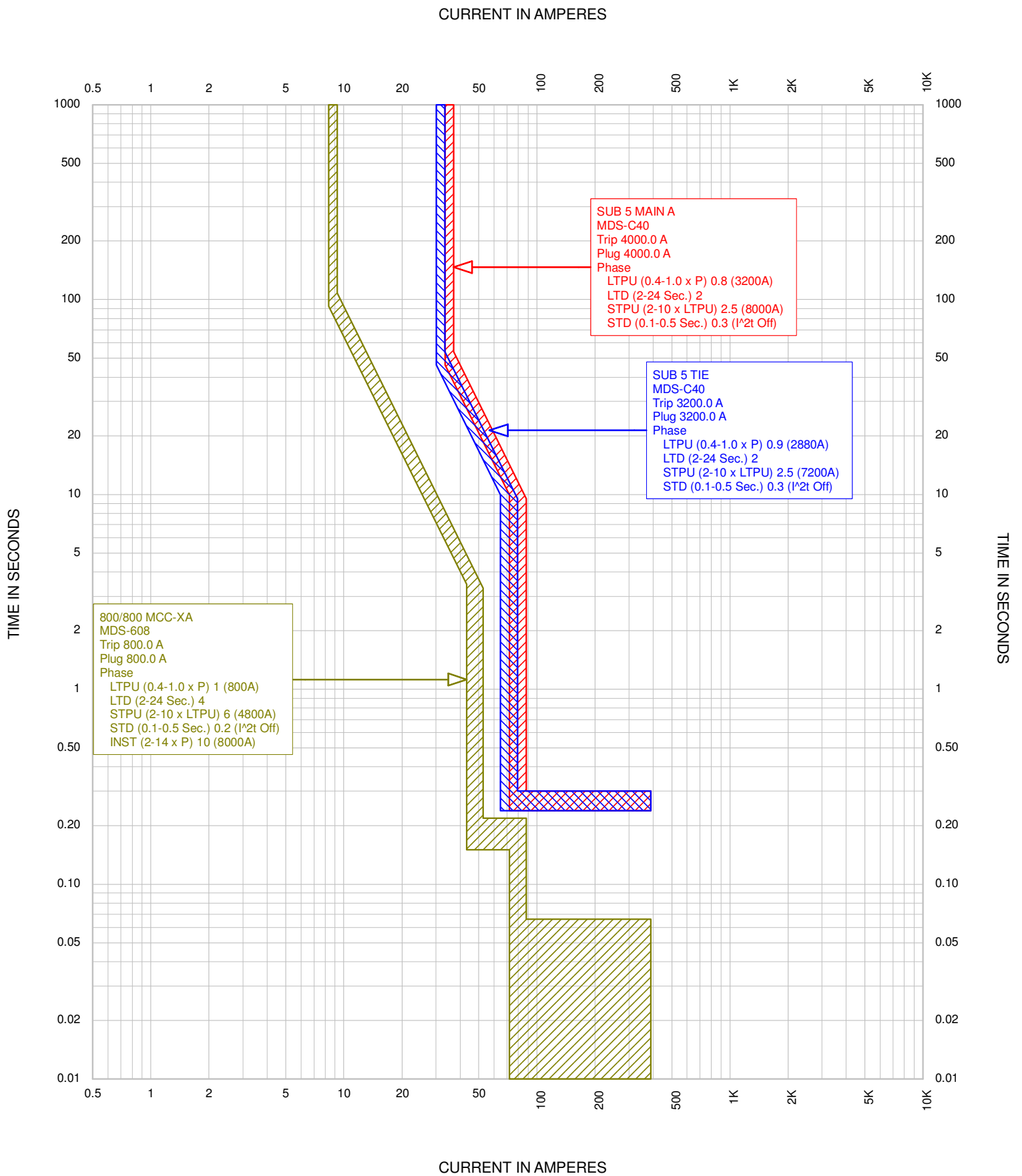
Current Scale x 10

Reference Voltage: 480

February 16, 2016 12:11 PM

AAWWTP

S5A_MCC-XA GFP



Online: TCC S5A,B_MCC-XA,XB

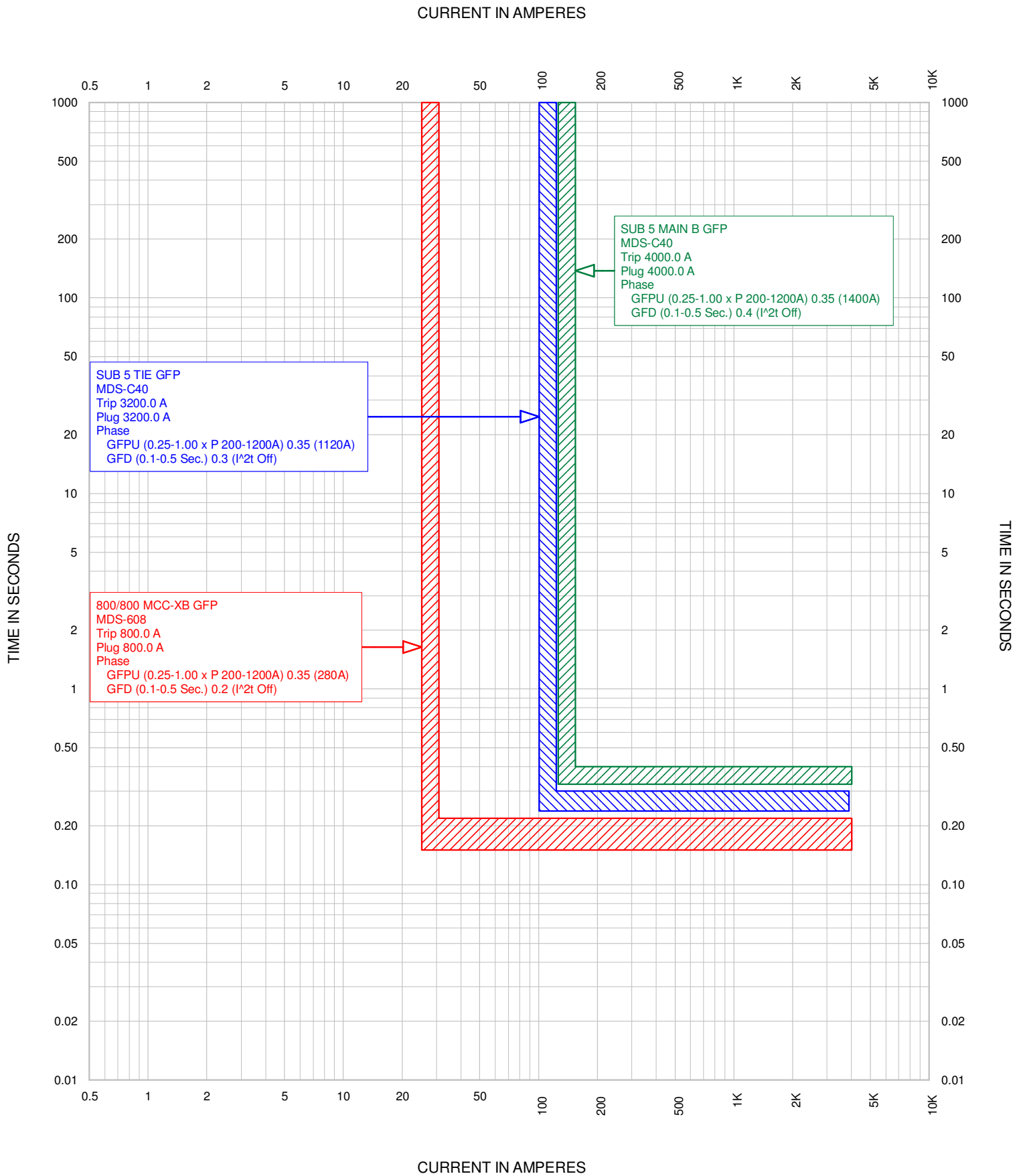
Current Scale x 100

Reference Voltage: 480

February 16, 2016 11:37 AM

AAWWTP

S5A_MCC-XA



Online: TCC S5A,B_MCC-XA,XB

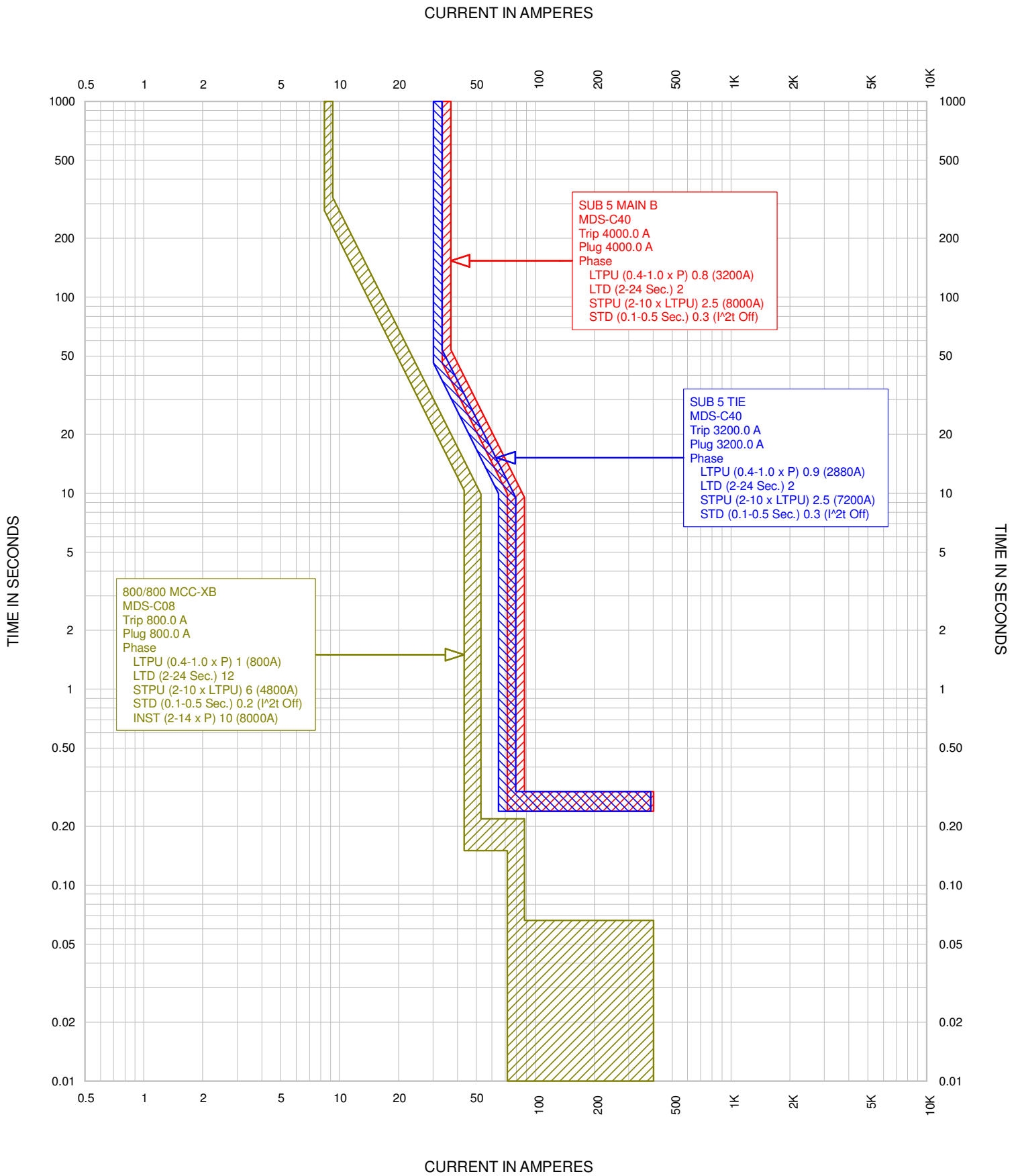
February 16, 2016 12:17 PM

Current Scale x 10

AAWWTP

Reference Voltage: 480

S5B_MCC-XB GFP



Online: TCC S5A,B_MCC-XA,XB

Current Scale x 100

Reference Voltage: 480

February 16, 2016 11:39 AM

AAWWTP

S5B_MCC-XB

3.4.8 Substation 6:

Online: TCC S6A,B_MCC-EBB-A,B

TCC: S6A_MCC-EBB-A GFP

TCC: S6A_MCC-EBB-A

TCC: S6A_MCC-EBB-A (ARMS Engaged)

TCC: S6B_MCC-EBB-B GFP

TCC: S6B_MCC-EBB-B

TCC: S6B_MCC-EBB-B (ARMS Engaged)

Online: TCC S6A,B_MCC-EPB-A,BC

TCC: S6A_MCC-EPB-A GFP

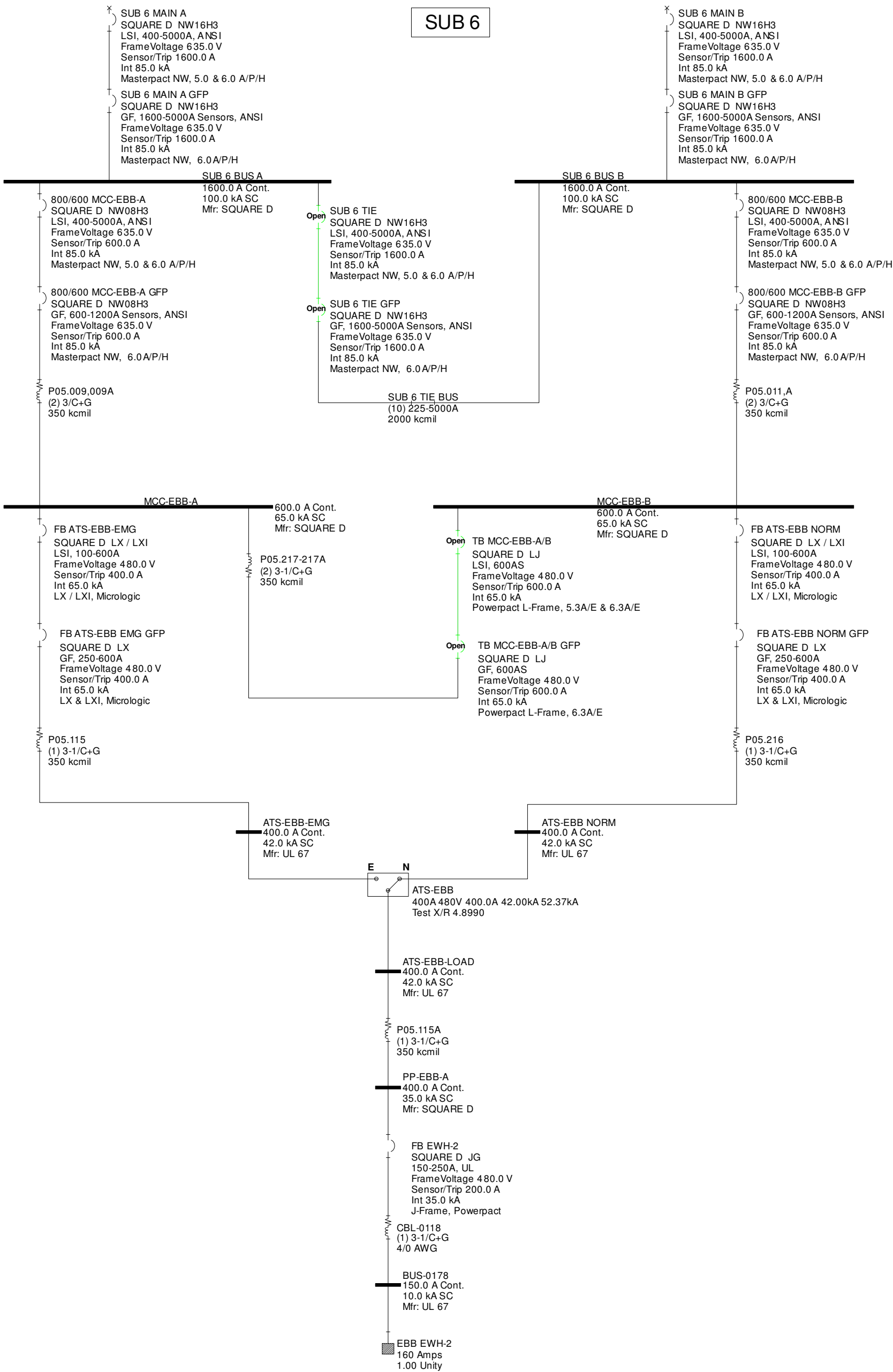
TCC: S6A_MCC-EPB-A

TCC: S6A_MCC-EPB-A (ARMS Engaged)

TCC: S6B_MCC-EPB-B GFP

TCC: S6B_MCC-EPB-B

TCC: S6B_MCC-EPB-B (ARMS Engaged)

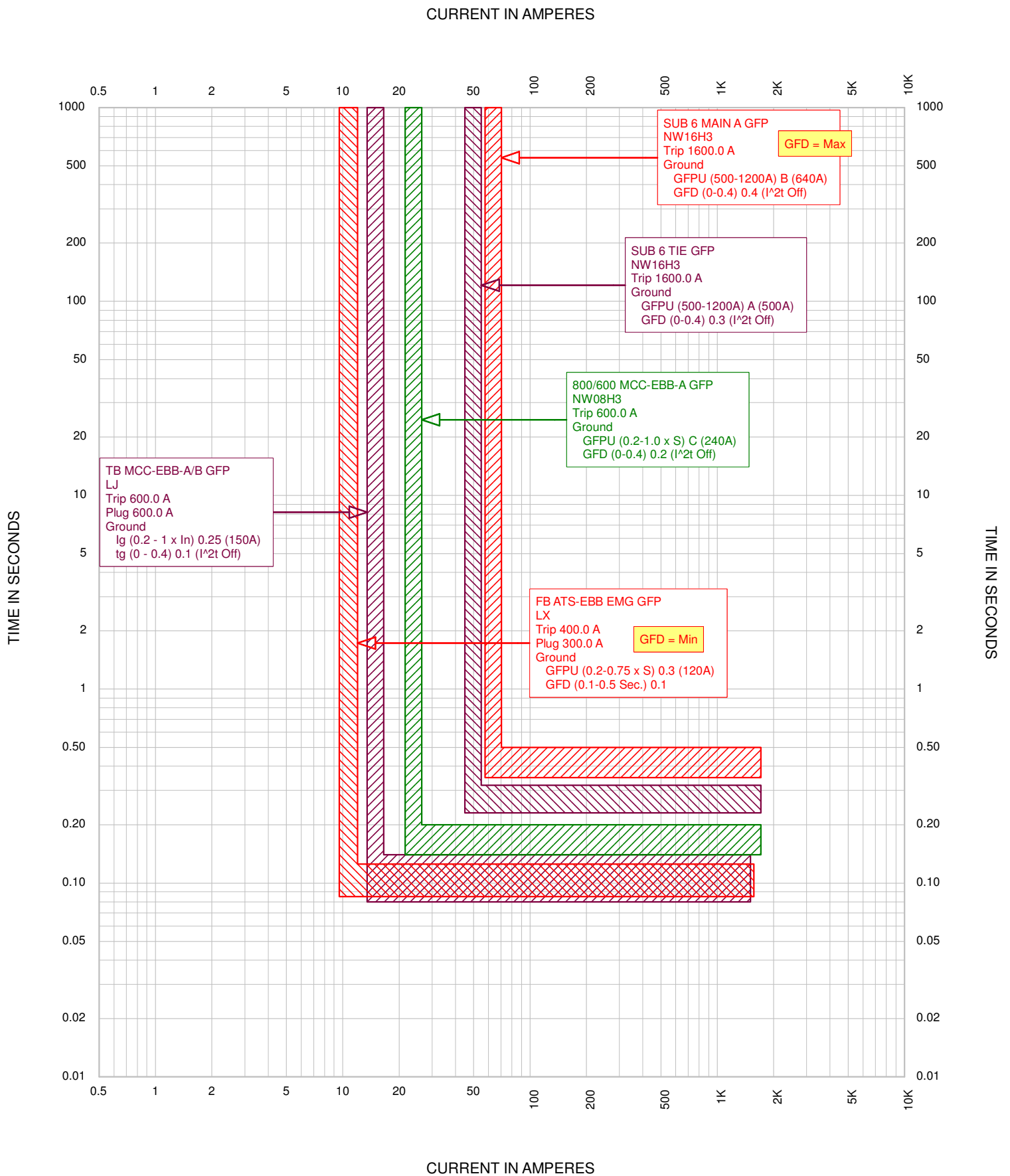


Online: TCC S6A,B_MCC-EBB-A,B

April 4, 2016 5:07 PM

AAWWTP





Online: TCC S6A,B_MCC-EBB-A,B

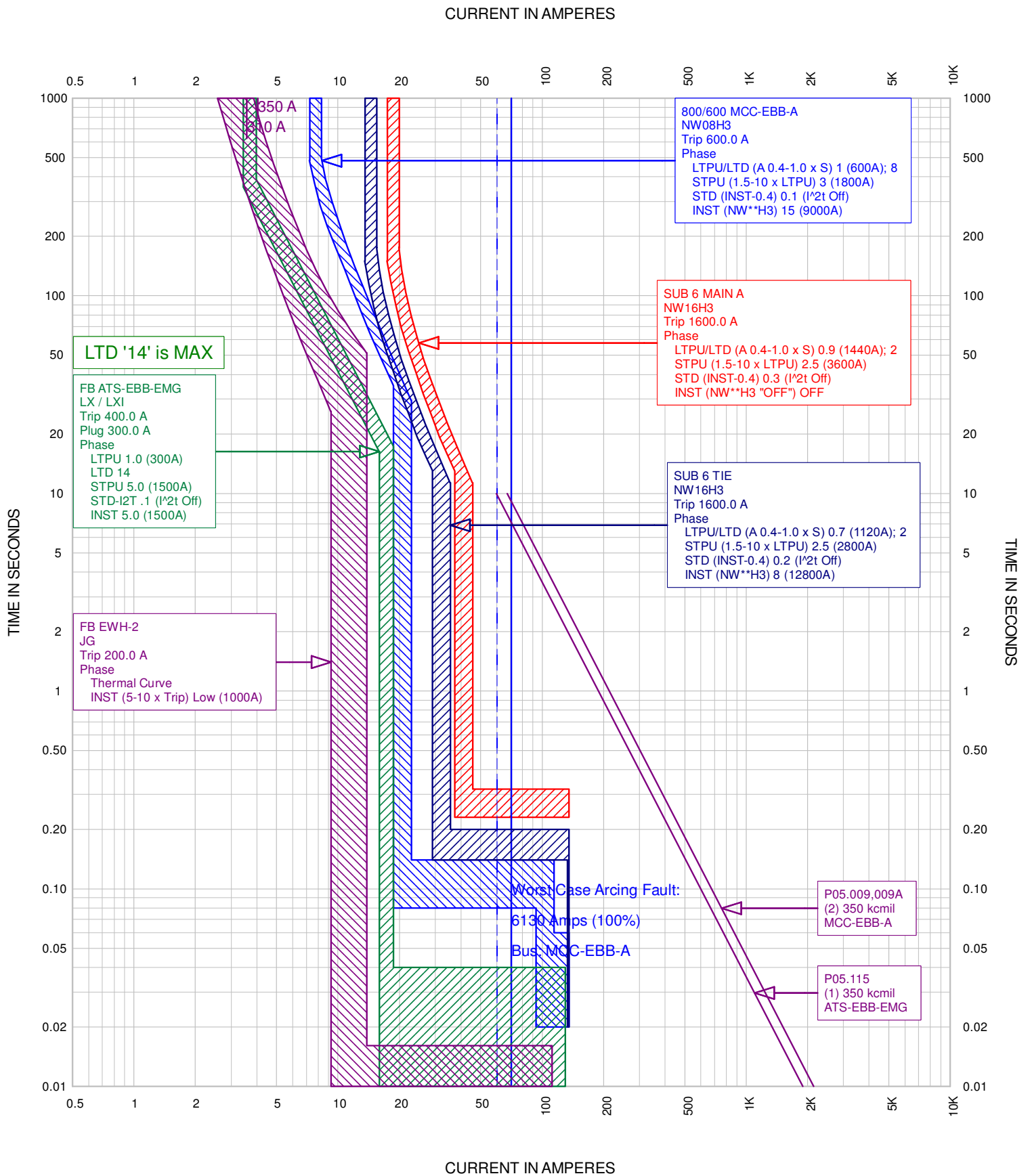
Current Scale x 10

Reference Voltage: 480

May 22, 2015 2:22 PM

AAWWTP

S6A_MCC-EBB-A GFP



Online: TCC S6A,B_MCC-EBB-A,B

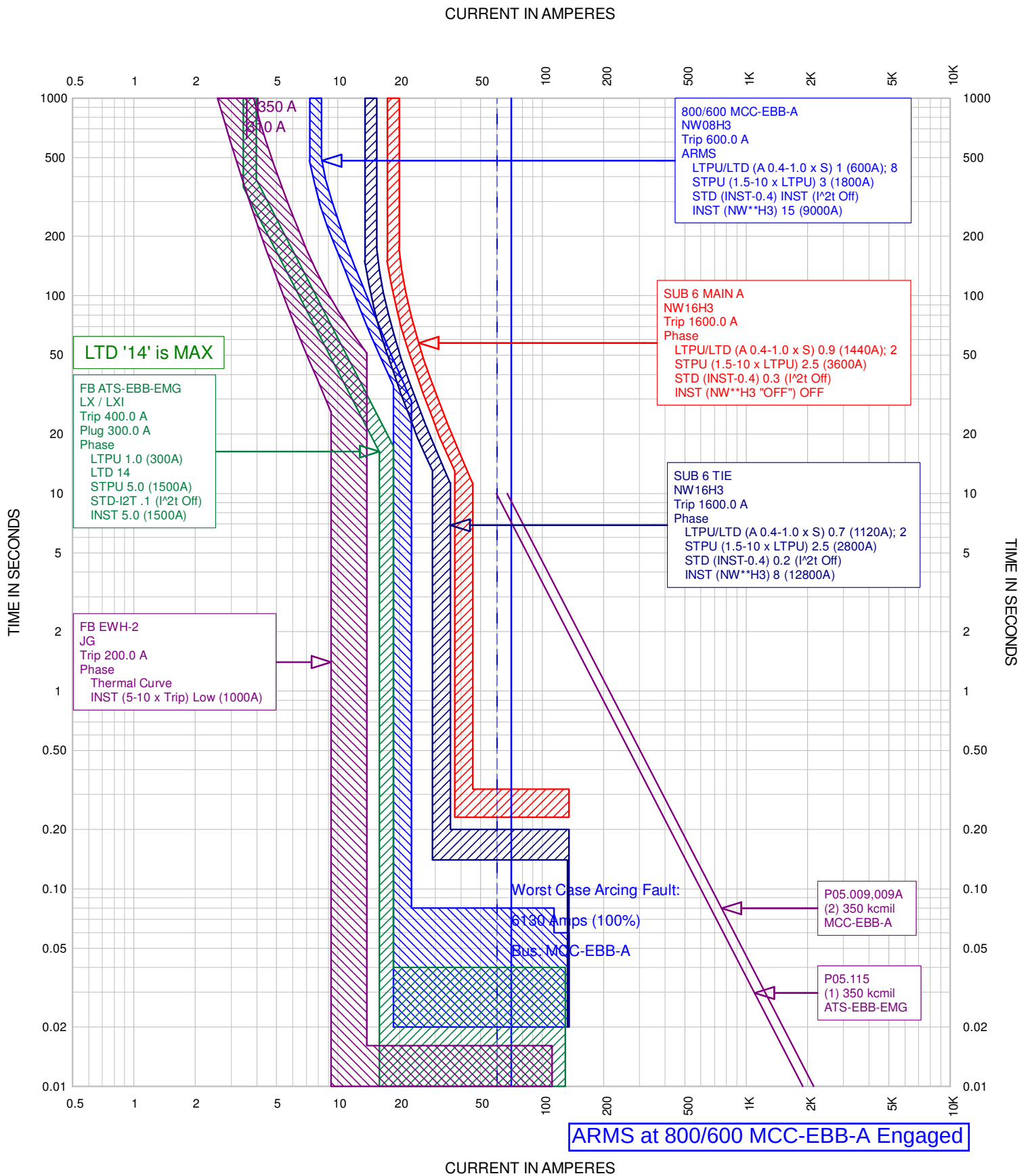
Current Scale x 10

Reference Voltage: 4160

December 22, 2015 3:18 PM

AAWWTP

S6A_MCC-EBB-A



Online: TCC S6A,B_MCC-EBB-A,B

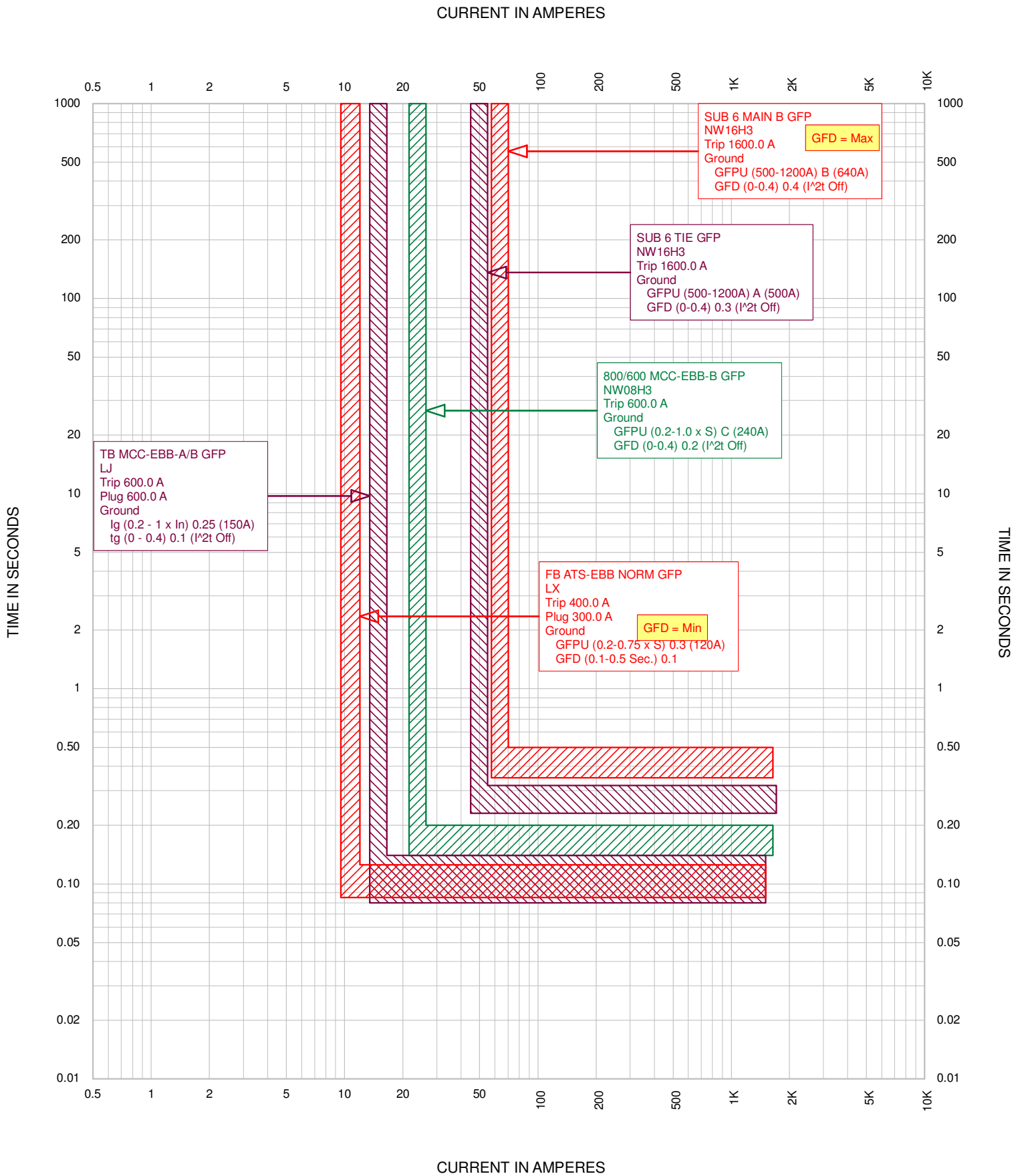
Current Scale x 10

Reference Voltage: 4160

December 22, 2015 3:16 PM

AAWWTP

S6A_MCC-EBB-A



Online: TCC S6A,B_MCC-EBB-A,B

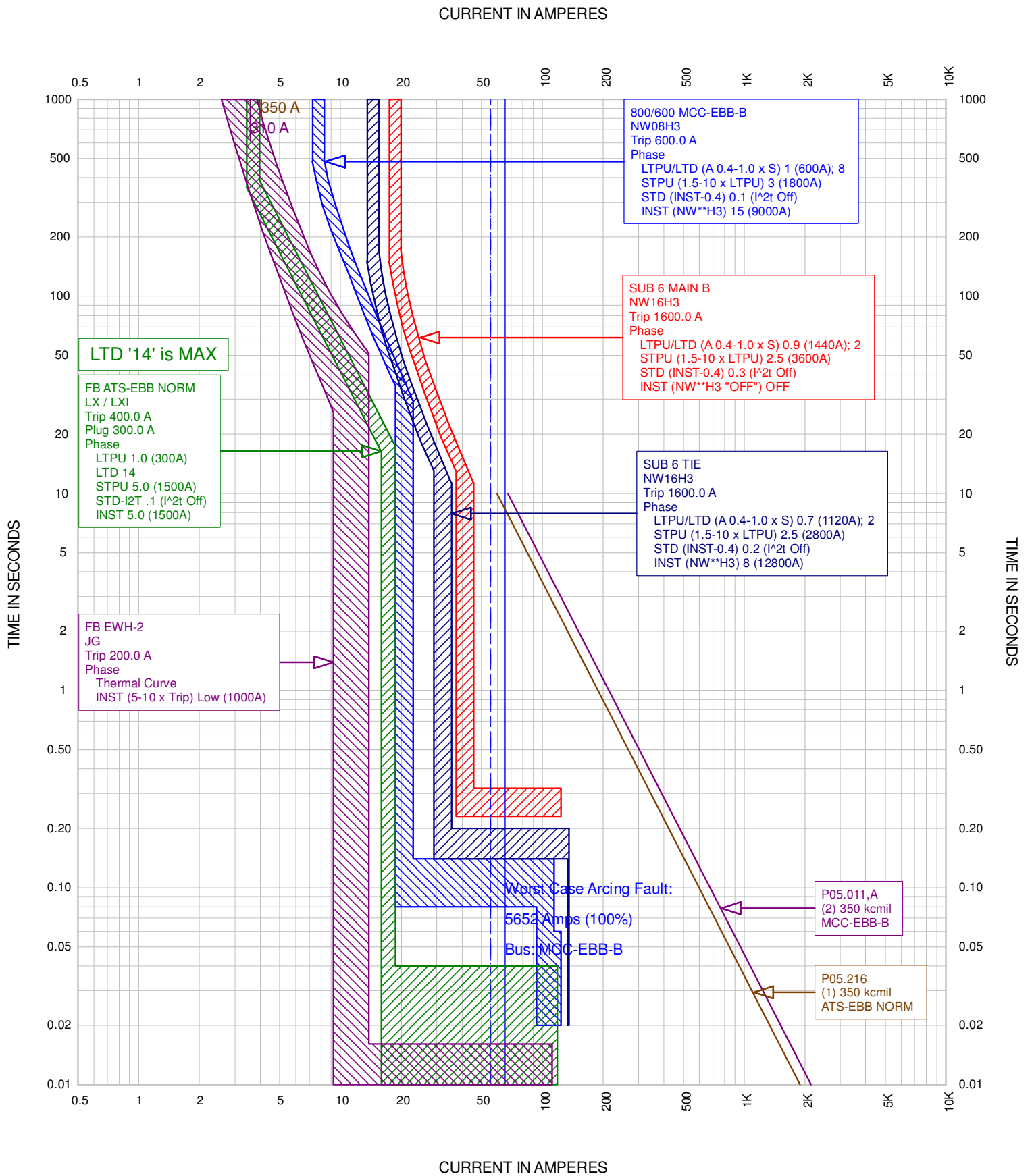
Current Scale x 10

Reference Voltage: 480

May 22, 2015 2:35 PM

AAWWTP

S6B_MCC-EBB-B GFP



Online: TCC S6A,B_MCC-EBB-A,B

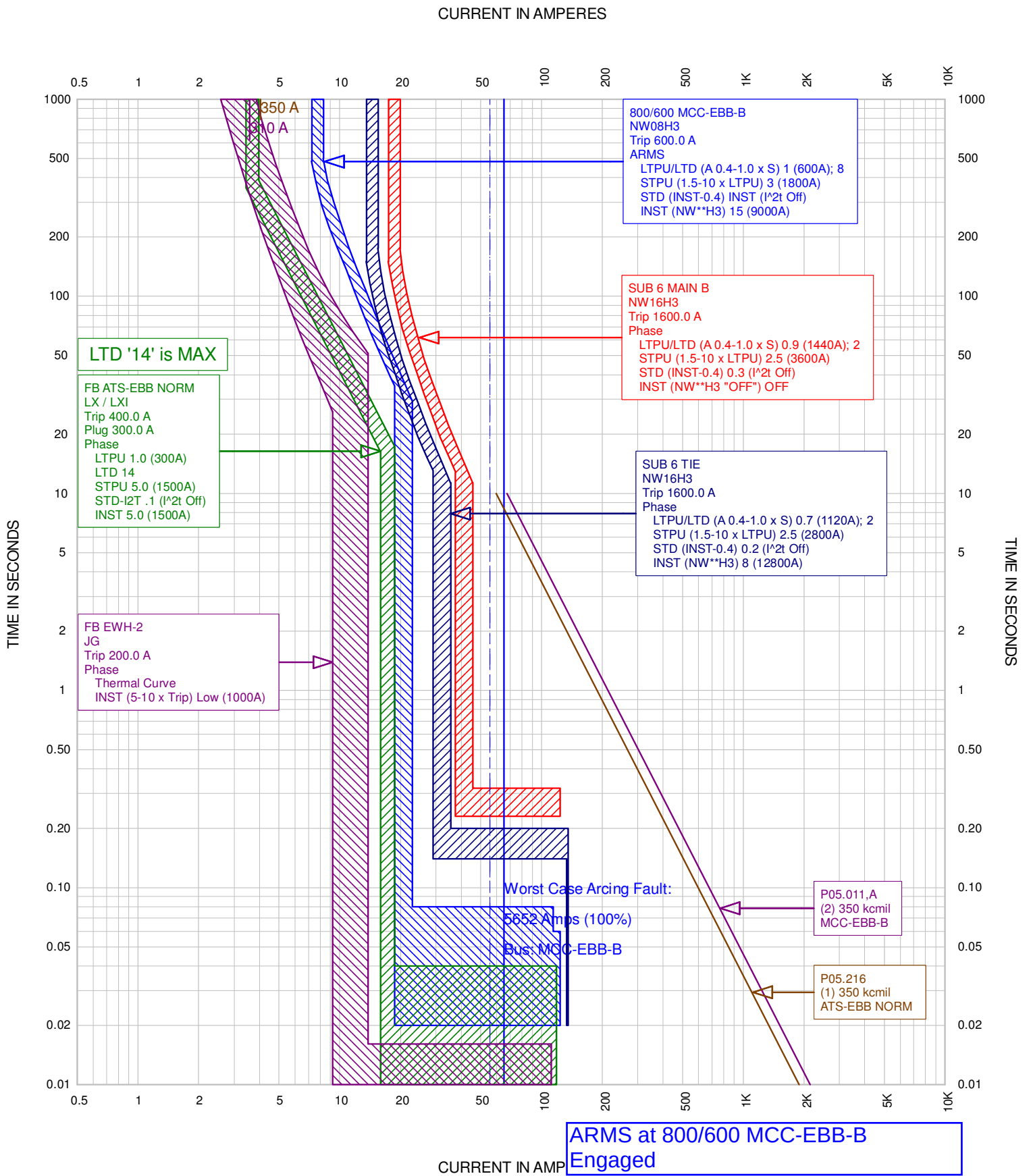
Current Scale x 10

Reference Voltage: 4160

December 22, 2015 3:22 PM

AAWWTP

S6B_MCC-EBB-B



Online: TCC S6A,B_MCC-EBB-A,B

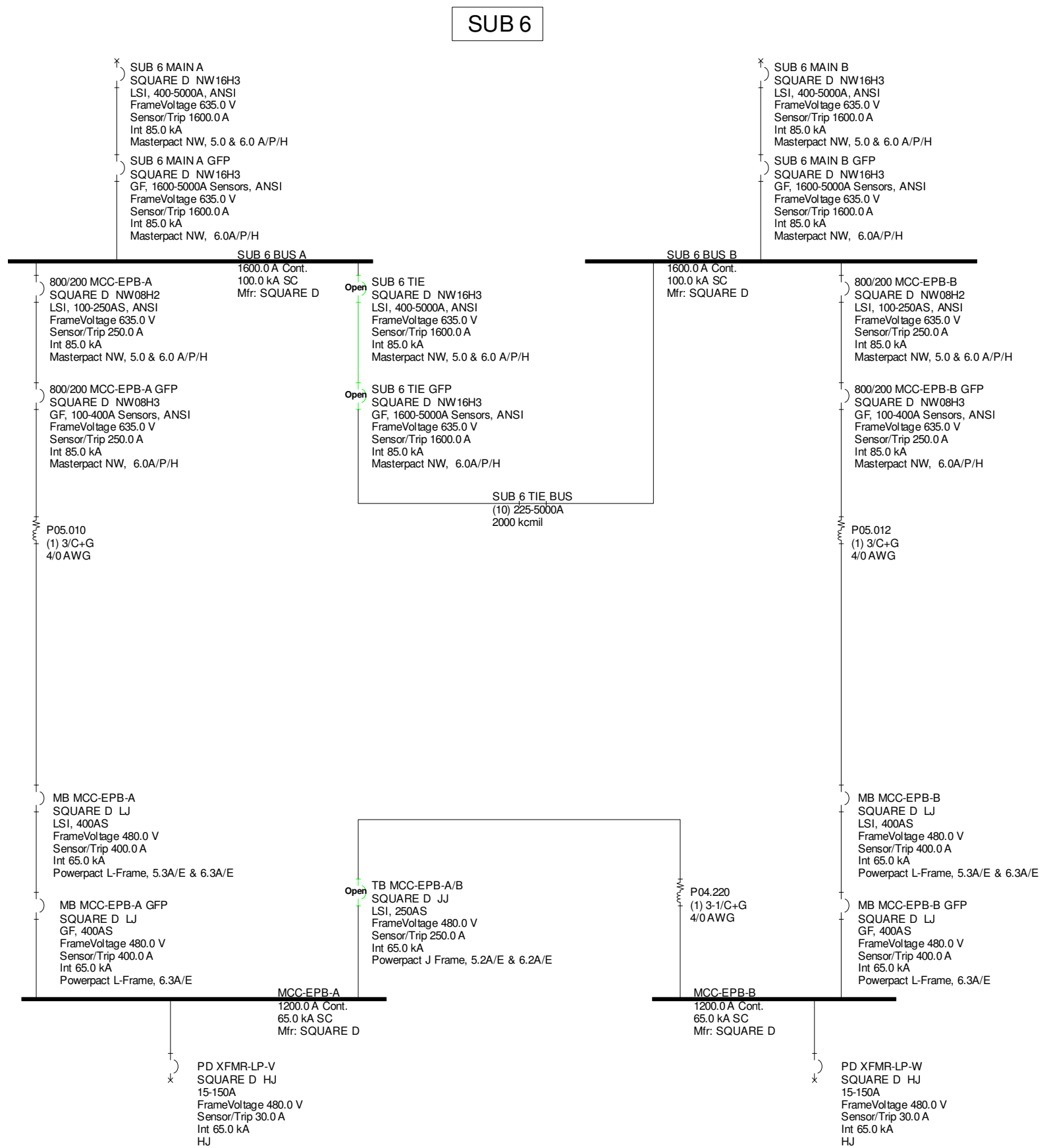
Current Scale x 10

Reference Voltage: 4160

December 22, 2015 3:21 PM

AAWWTP

S6B_MCC-EBB-B

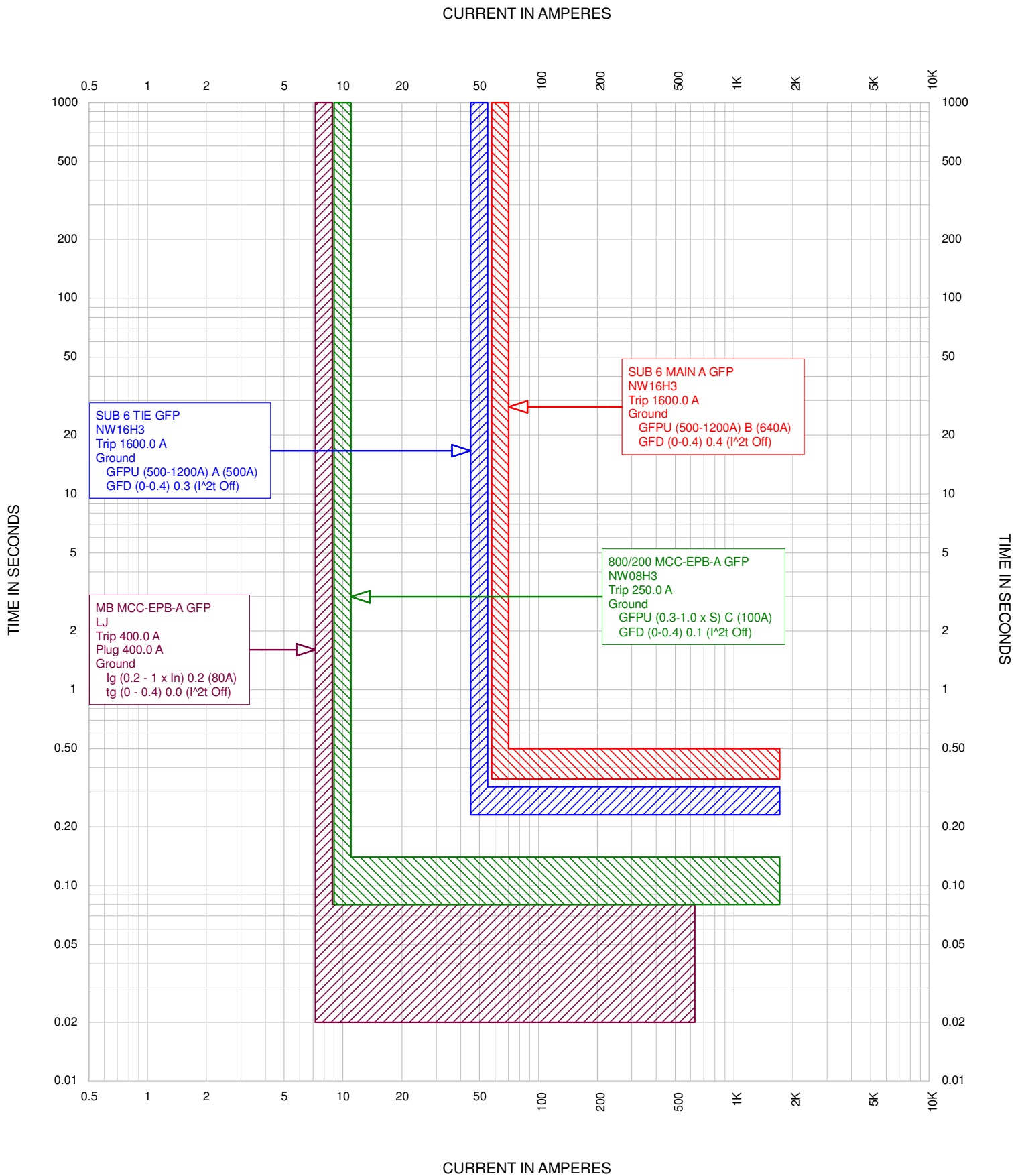


Online: TCC S6A,B_MCC-EPB-A,B

April 4, 2016 5:14 PM

AAWWTP





Online: TCC S6A,B_MCC-EPB-A,B

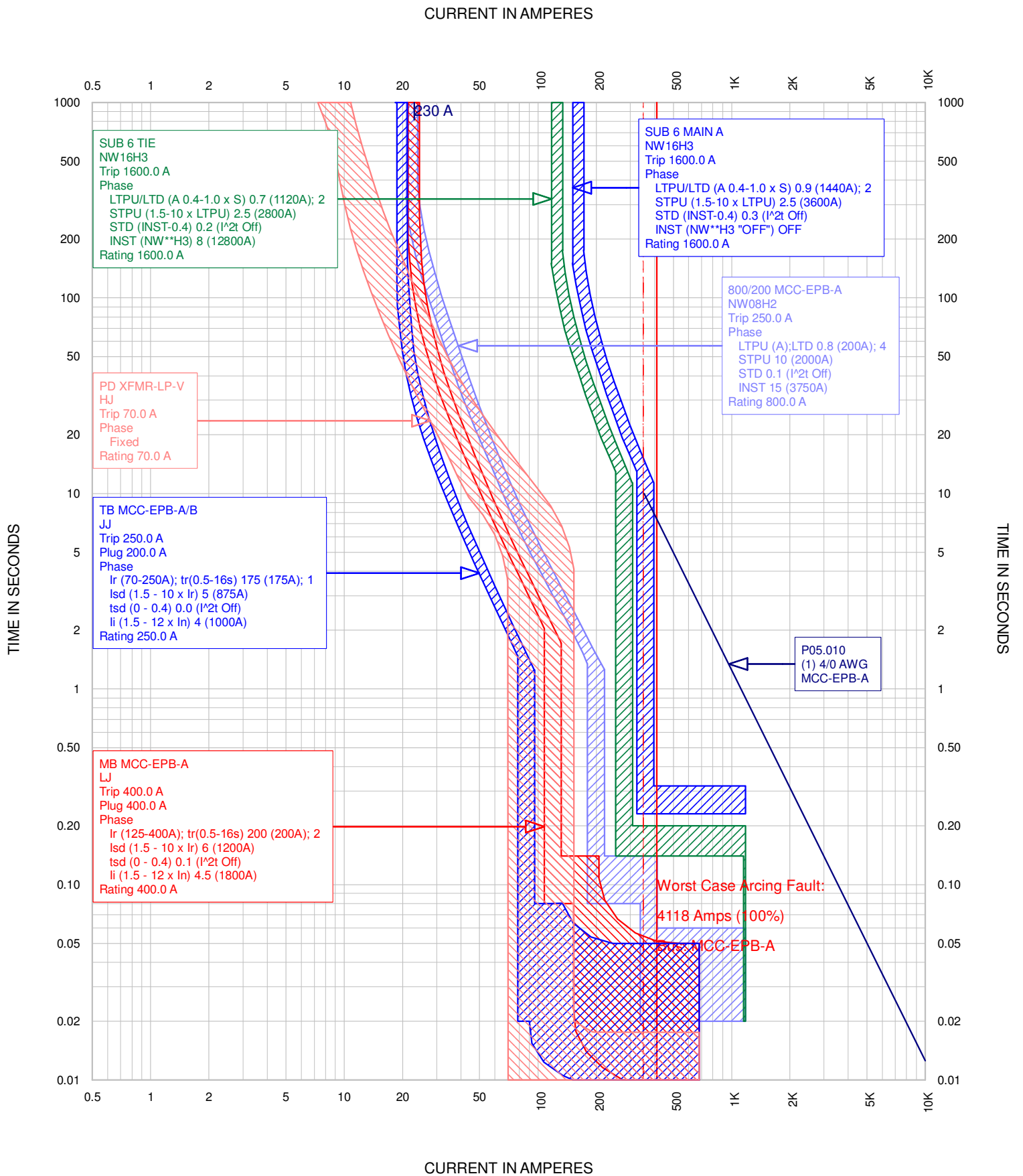
Current Scale x 10

Reference Voltage: 480

May 22, 2015 2:59 PM

AAWWTP

S6A_MCC-EPB-A GFP



Online: TCC S6A,B_MCC-EPB-A,B

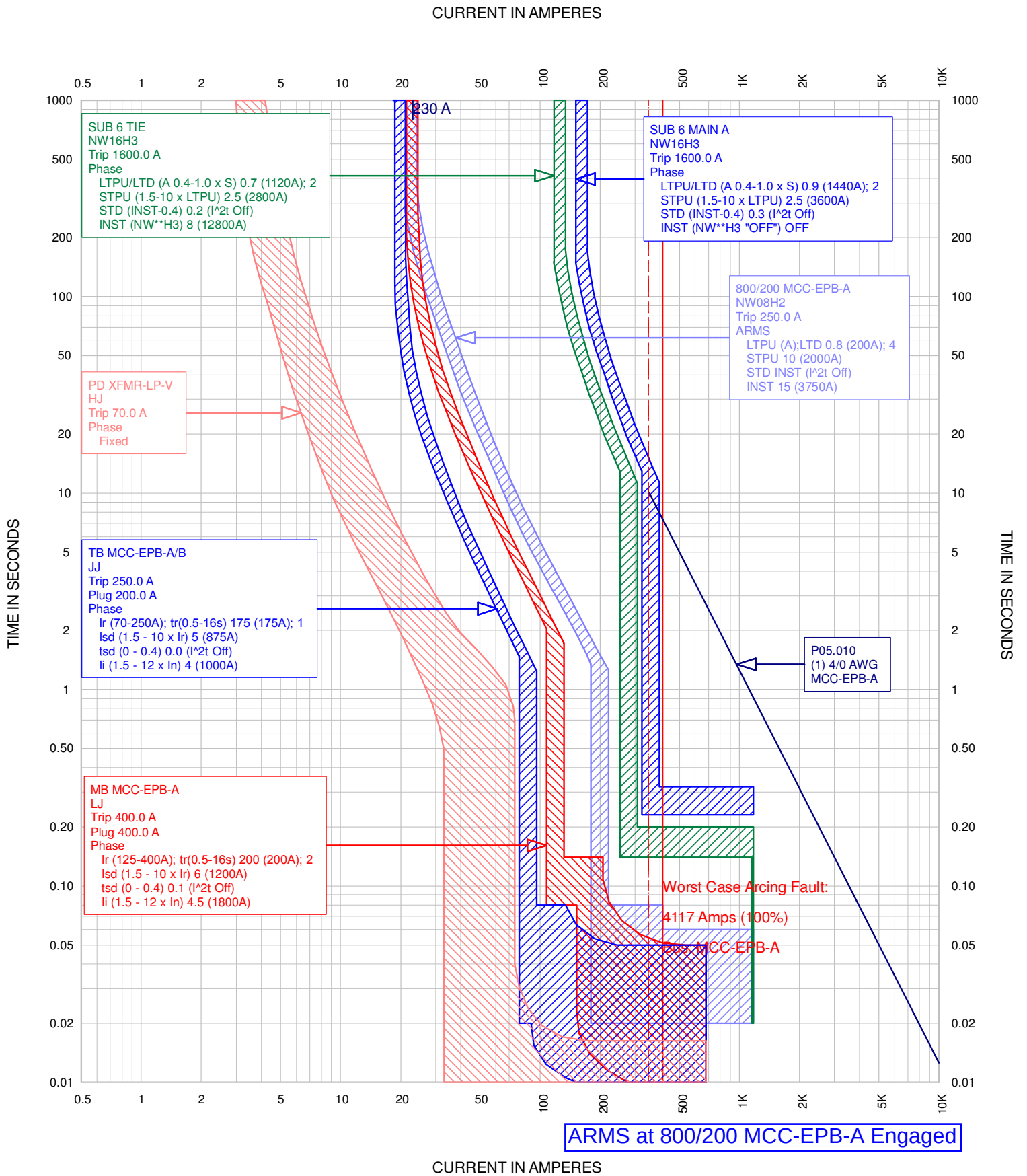
Current Scale x 10

Reference Voltage: 480

March 2, 2017 10:56 PM

AAWWTP

S6A_MCC-EPB-A



Online: TCC S6A,B_MCC-EPB-A,B

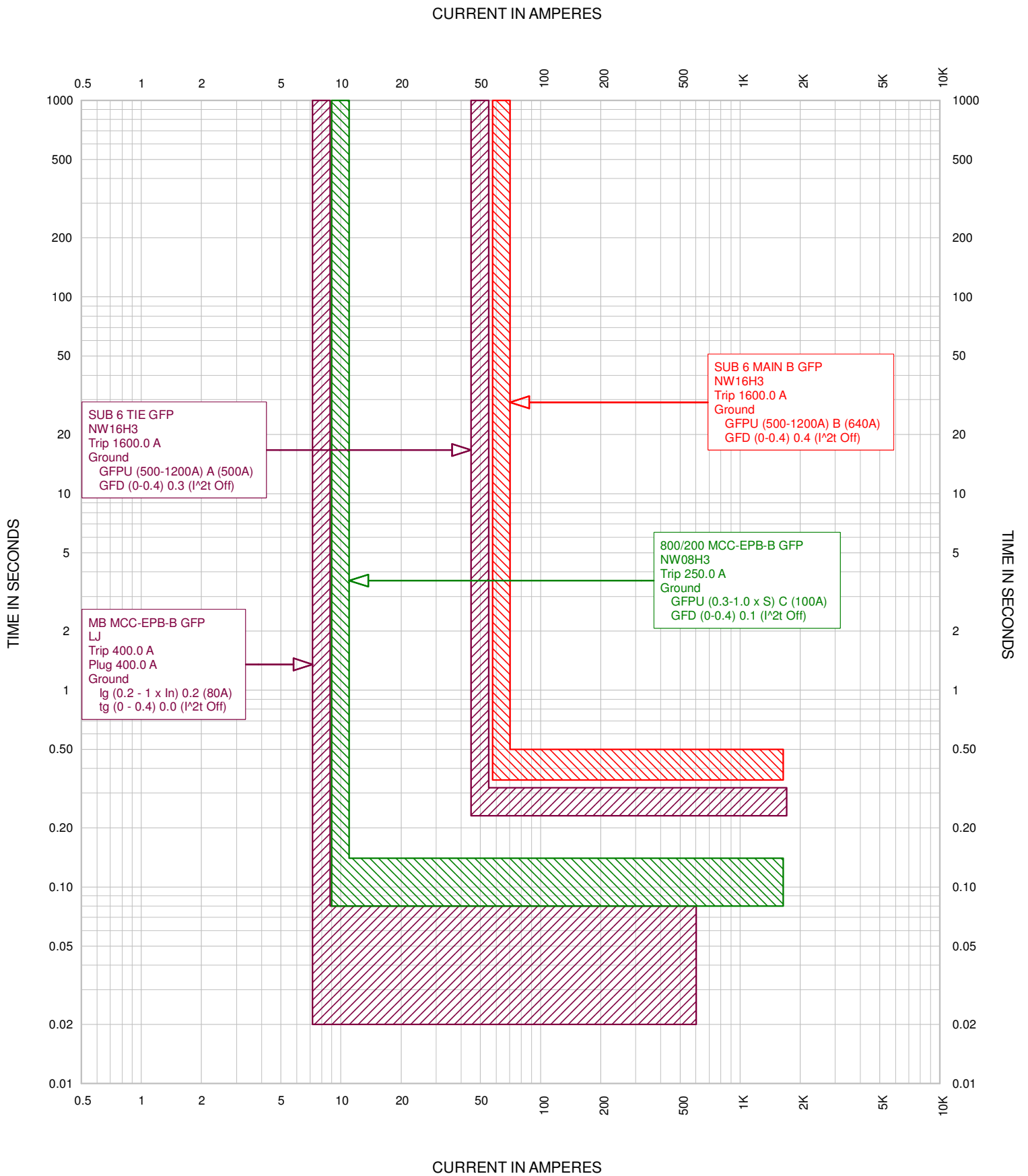
Current Scale x 10

Reference Voltage: 480

December 22, 2015 3:43 PM

AAWWTP

S6A_MCC-EPB-A



Online: TCC S6A,B_MCC-EPB-A,B

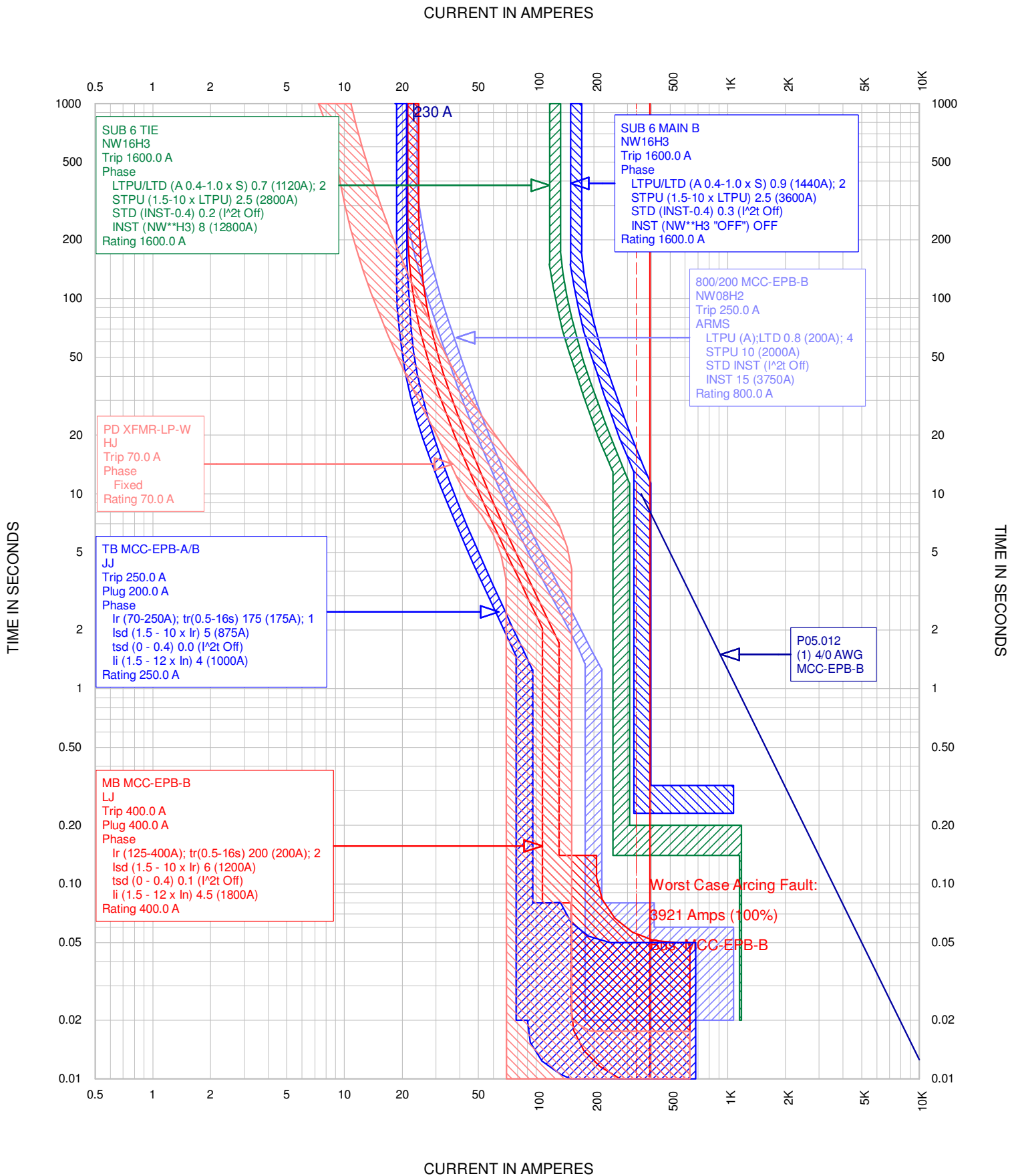
Current Scale x 10

Reference Voltage: 480

May 22, 2015 3:07 PM

AAWWTP

S6B_MCC-EPB-B GFP



Online: TCC S6A,B_MCC-EPB-A,B

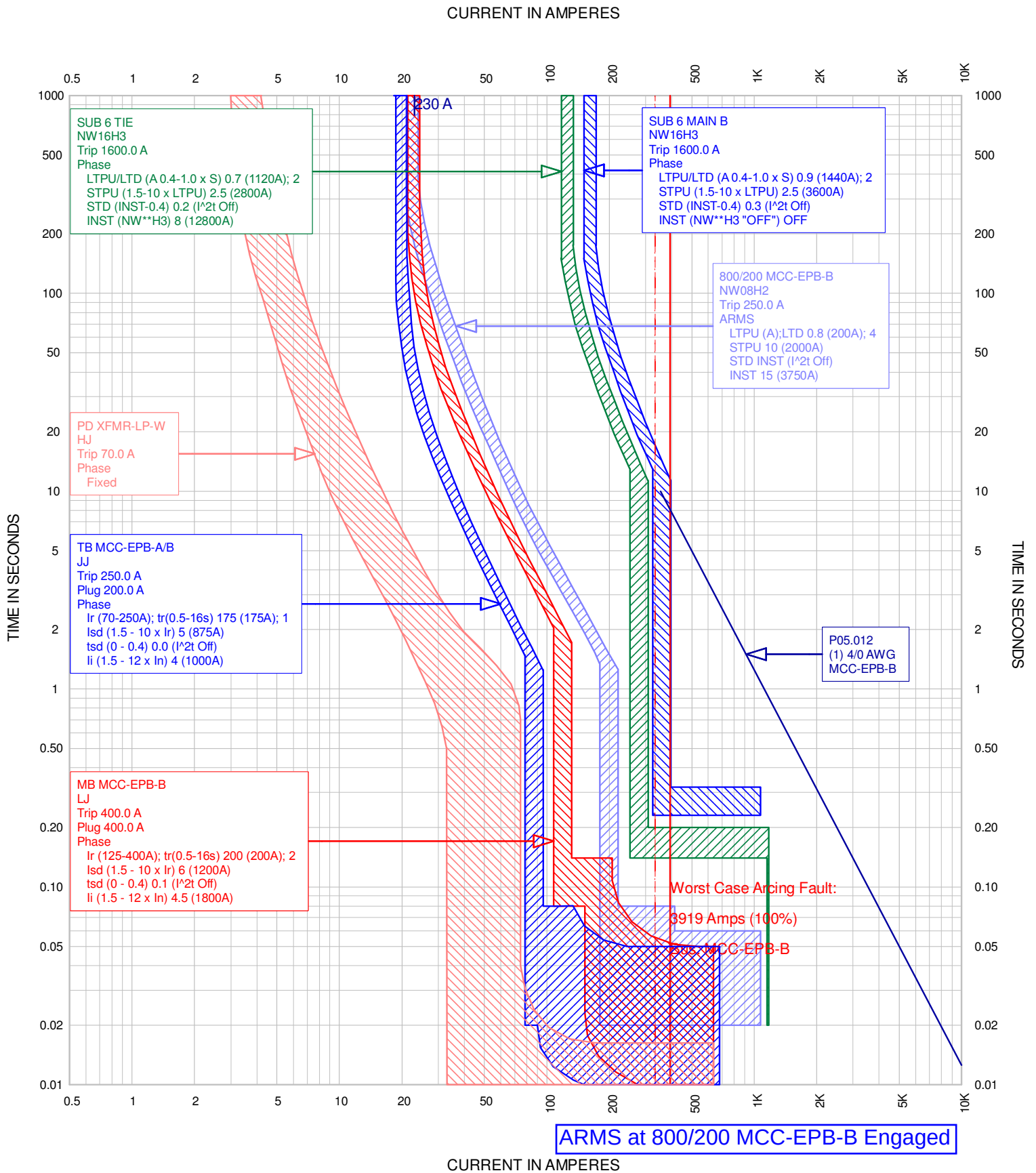
Current Scale x 10

Reference Voltage: 480

March 2, 2017 11:09 PM

AAWWTP

S6B_MCC-EPB-B



Online: TCC S6A,B_MCC-EPB-A,B

Current Scale x 10

Reference Voltage: 480

December 22, 2015 3:55 PM

AAWWTP

S6B_MCC-EPB-B

3.4.9 Substation 7:

Online: TCC 52F17,27_S7A,B

TCC: 52F17 GFP

TCC: 52F17_S7A

TCC: 52F27 GFP

TCC: 52F27_S7B

Online: TCC S7A,B_MCC-ADM-A

TCC: S7A_ATS-ADM-A-EMG GFP

TCC: S7A_ATS-ADM-A-EMG

TCC: S7A_ATS-ADM-A-EMG (ARMS Engaged)

TCC: S7B_ATS-ADM-A-NRM GFP

TCC: S7B_ATS-ADM-A-NRM

TCC: S7B_ATS-ADM-A-NRM (ARMS Engaged)

Online: TCC MCC-ADM-A LOADS

TCC: MCC-ADM-A_ELEVATOR GFP

TCC: MCC-ADM-A_ELEVATOR

TCC: MCC-ADM-A_LP-ADM-1 GFP

TCC: MCC-ADM-A_LP-ADM-1

TCC: MCC-ADM-A_LP-ADM-2 GFP

TCC: MCC-ADM-A_LP-ADM-2

TCC: MCC-ADM-A_PP-ADM-1 GFP

TCC: MCC-ADM-A_PP-ADM-1,2

TCC: MCC-ADM-A_SWP1 GFP

TCC: MCC-ADM-A_SWP1

Online: TCC S7A,B_MCC-CEB-A,B

TCC: S7A_ATS-CEB-EMG GFP

TCC: S7A_ATS-CEB-EMG

TCC: S7A_ATS-CEB-EMG (ARMS Engaged)

TCC: S7B_ATS-CEB-NRM GFP

TCC: S7B_ATS-CEB-NRM

TCC: S7B_ATS-CEB-NRM (ARMS Engaged)

TCC: MCC-CEB-A_LP-CEB-A

TCC: MCC-CEB-B_LP-CEB-A

Online: TCC S7A,B_UV-1A,B_PP-MTB

TCC: S7A_UV-1A GFP

TCC: S7A_UV-1A

TCC: S7A_UV-1A (ARMS Engaged)

TCC: S7B_UV-1B GFP

TCC: S7B_UV-1B

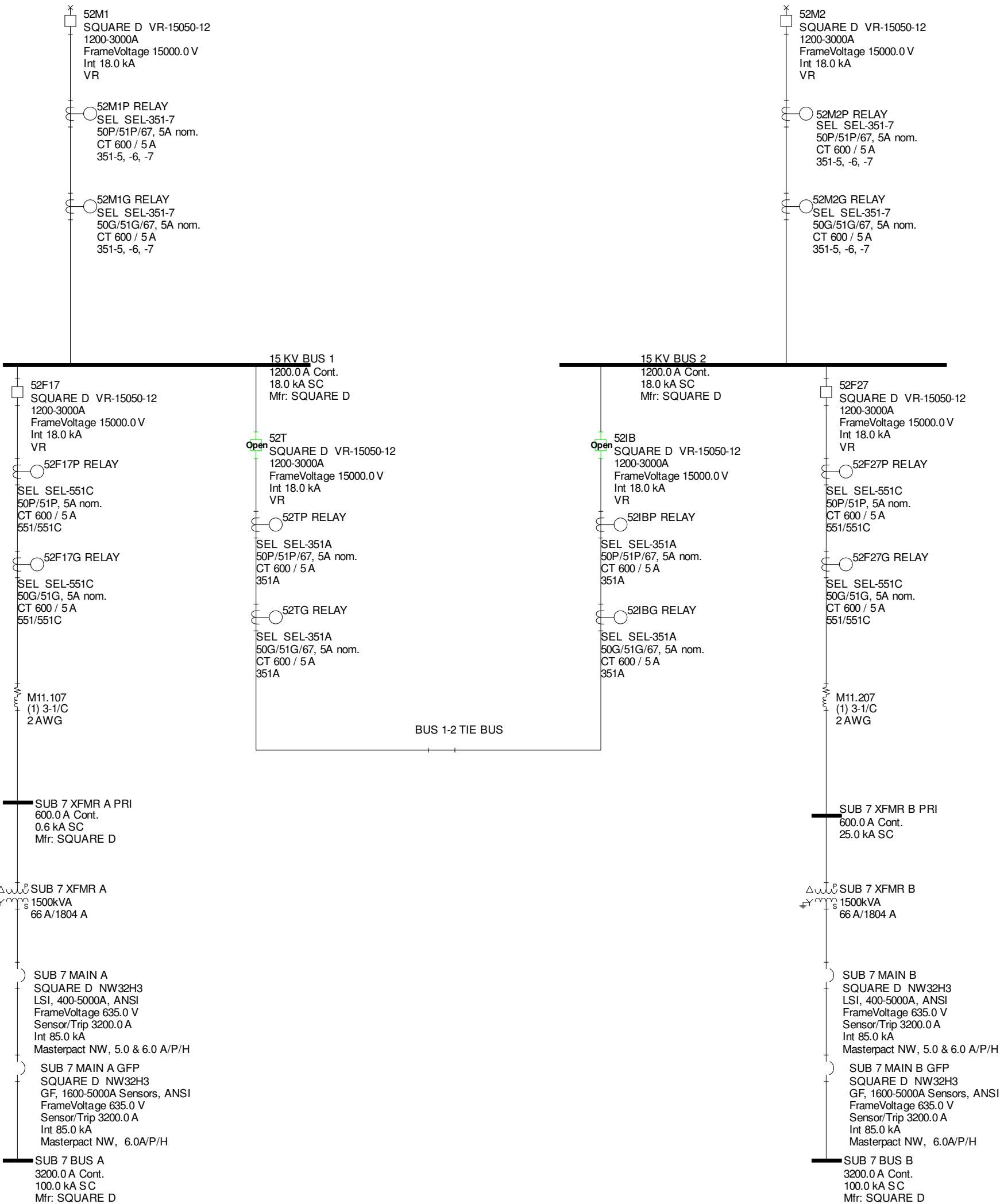
TCC: S7B_UV-1B (ARMS Engaged)

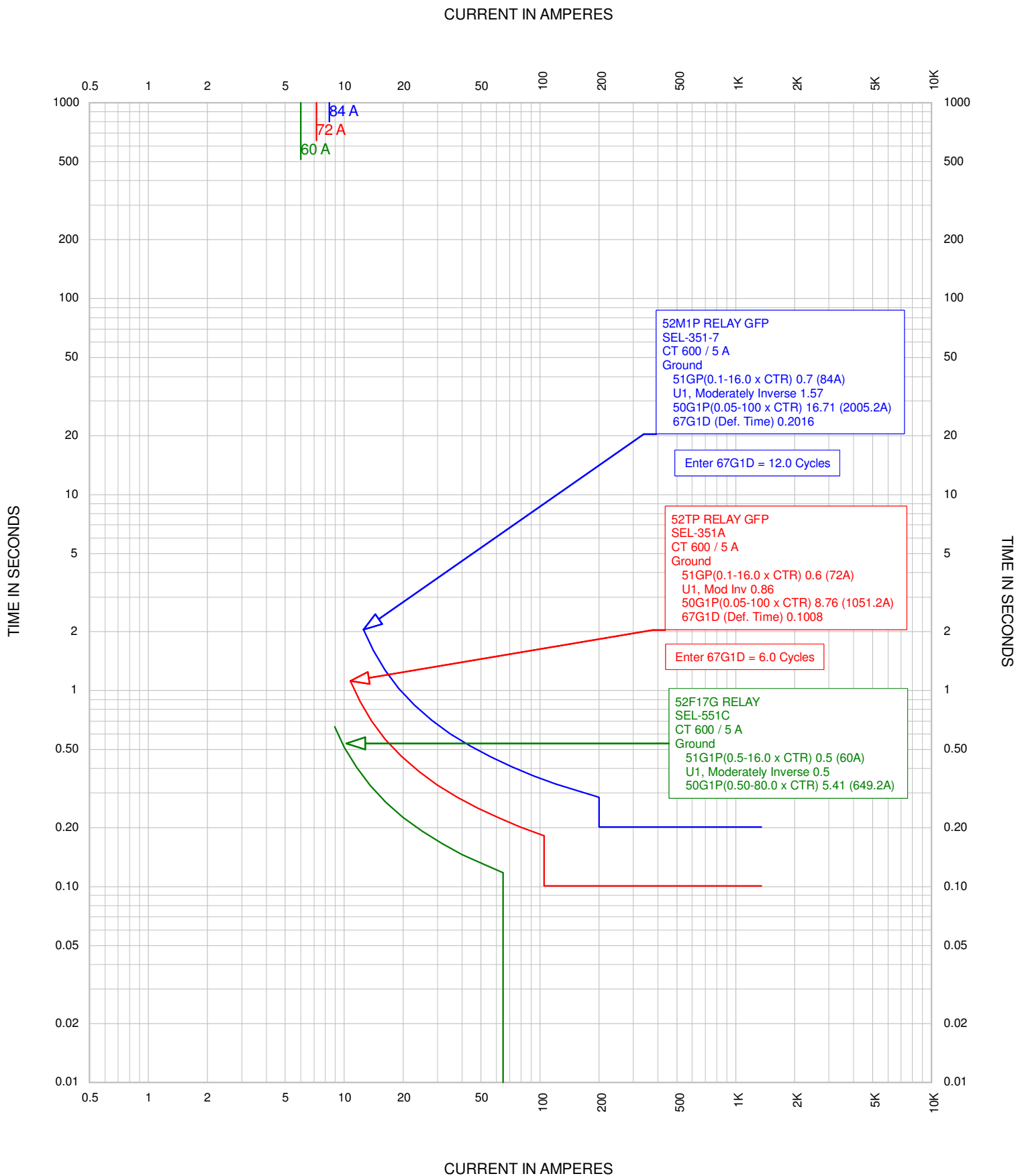
TCC: S7B_PP-MTB

TCC: S7B_PP-MTB (ARMS Engaged)

Online: AA MCC-ADM-A (for MCP settings)

Online: AA MCC-CEB-A,B (for MCP settings)





Online: TCC 52F17,27_S7A,B

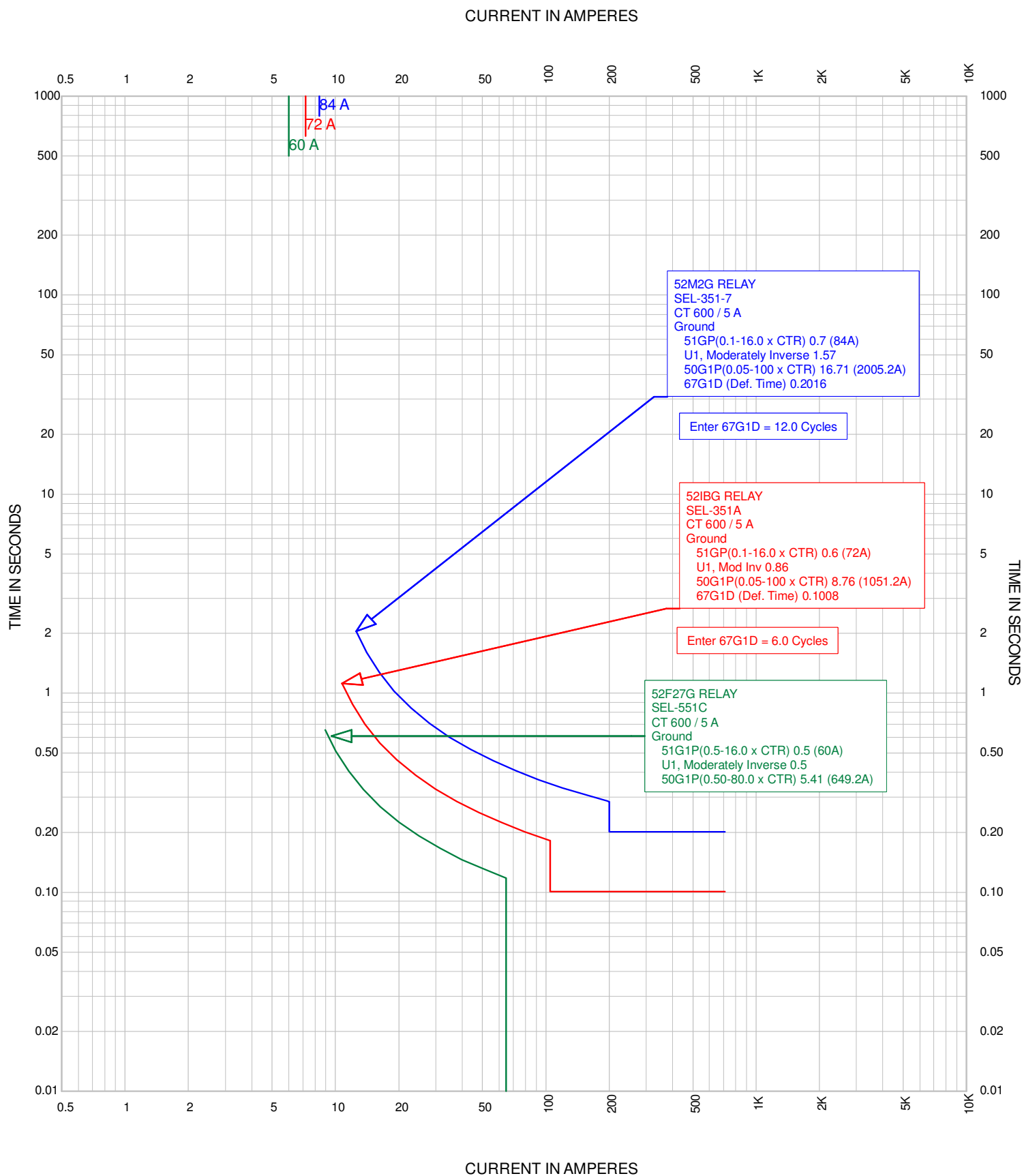
Current Scale x 10

Reference Voltage: 13200

May 22, 2015 11:35 AM

AAWWTP

52F17 GFP



Online: TCC 52F17,27_S7A,B

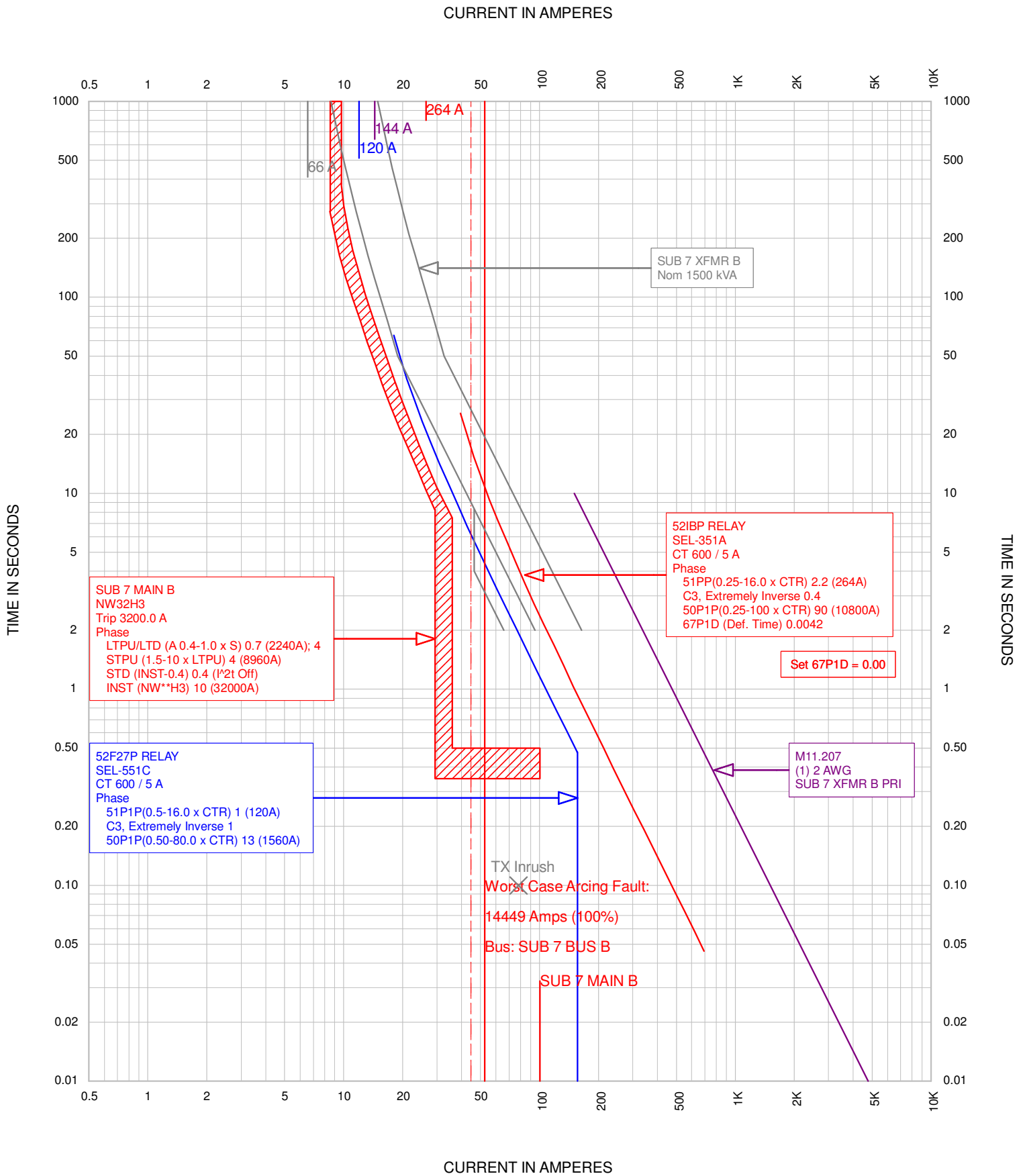
Current Scale x 10

Reference Voltage: 13200

March 3, 2017 8:01 AM

AAWWTP

52F27 GFP



Online: TCC 52F17,27_S7A,B

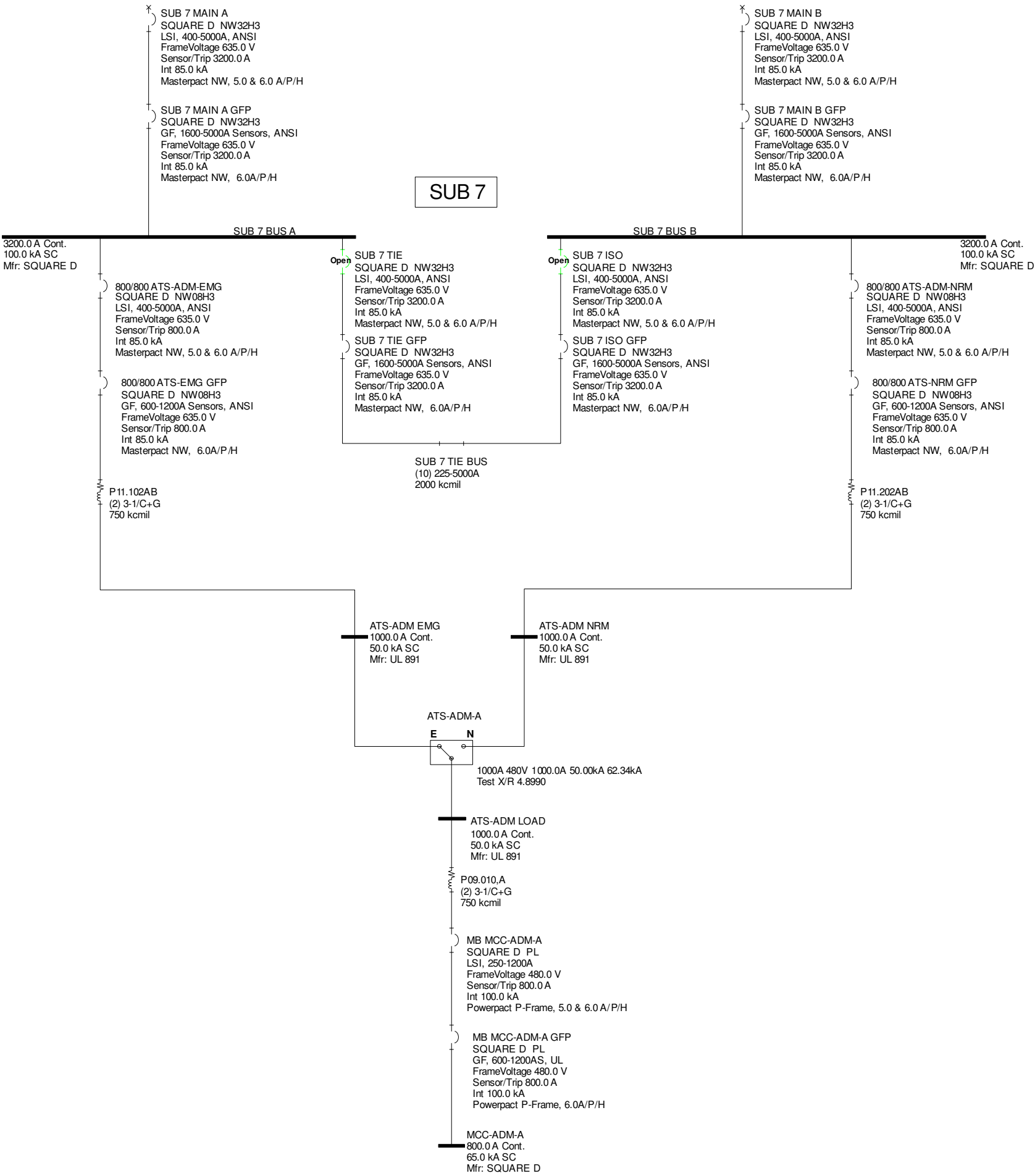
Current Scale x 10

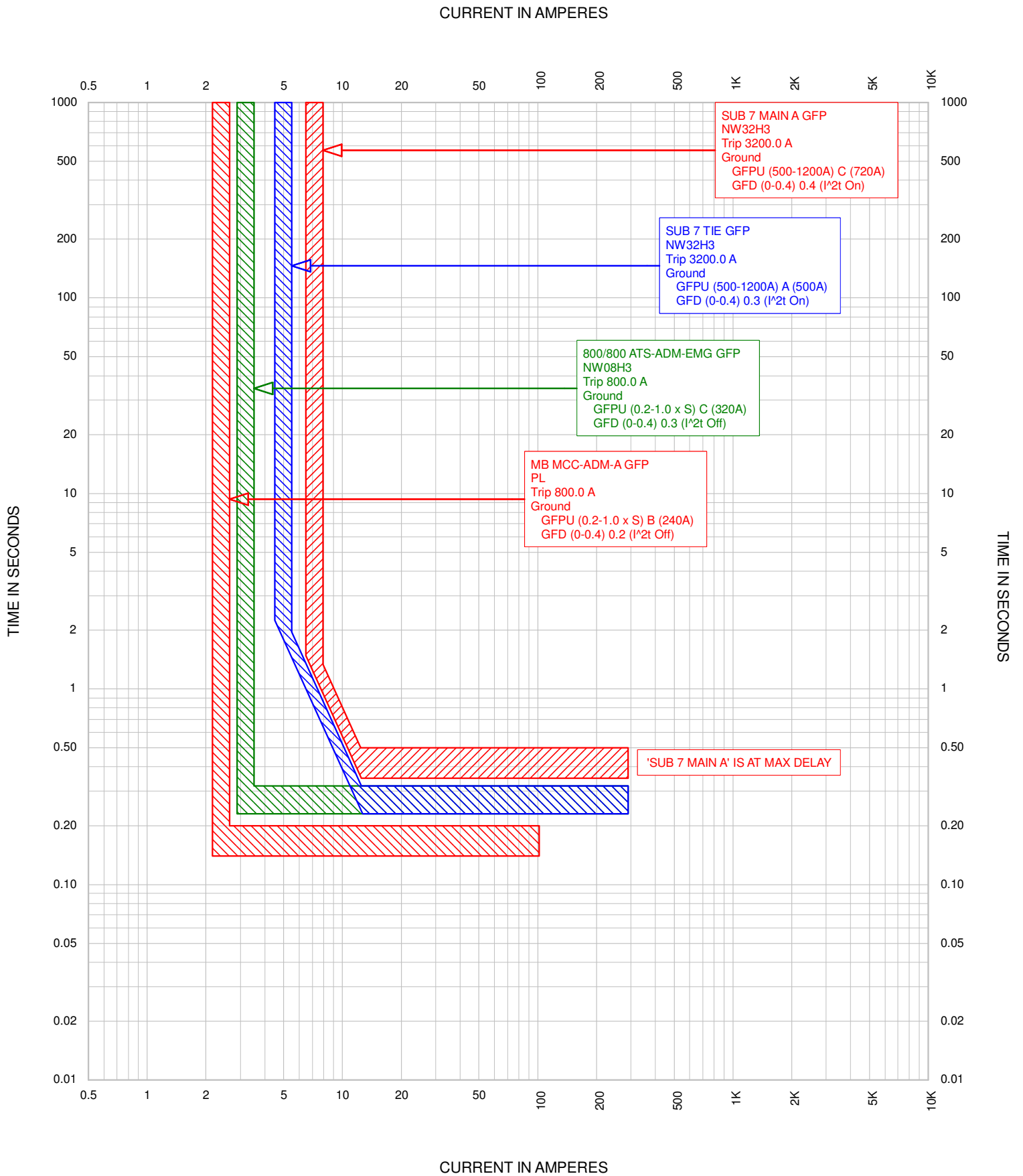
Reference Voltage: 13200

February 11, 2016 5:40 PM

AAWWTP

52F27_S7B





Online: TCC S7A,B_MCC-ADM-A

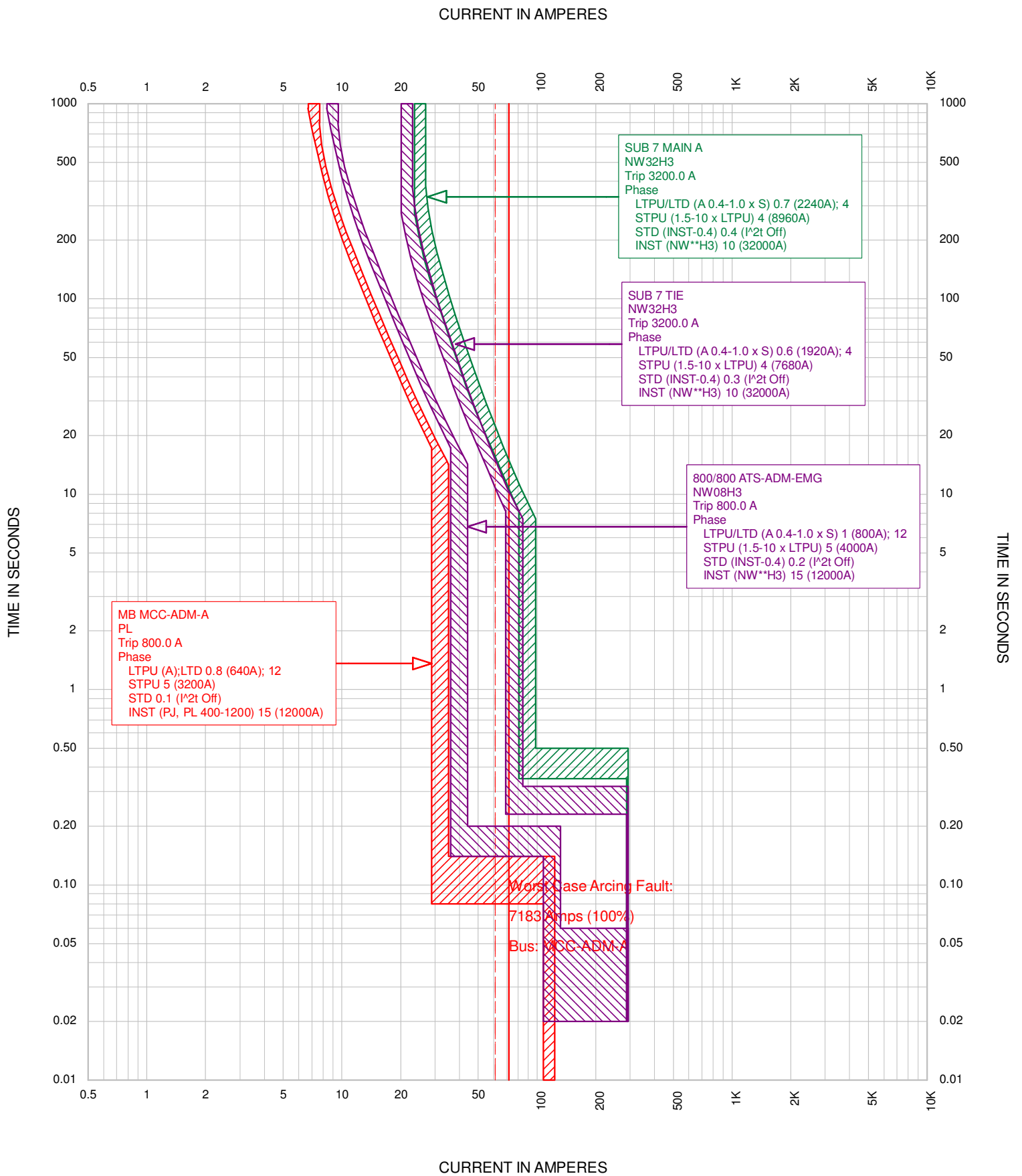
Current Scale x 100

Reference Voltage: 480

May 22, 2015 4:01 PM

AAWWTP

S7A_ATS-ADM-A-EMG GFP



Online: TCC S7A,B_MCC-ADM-A

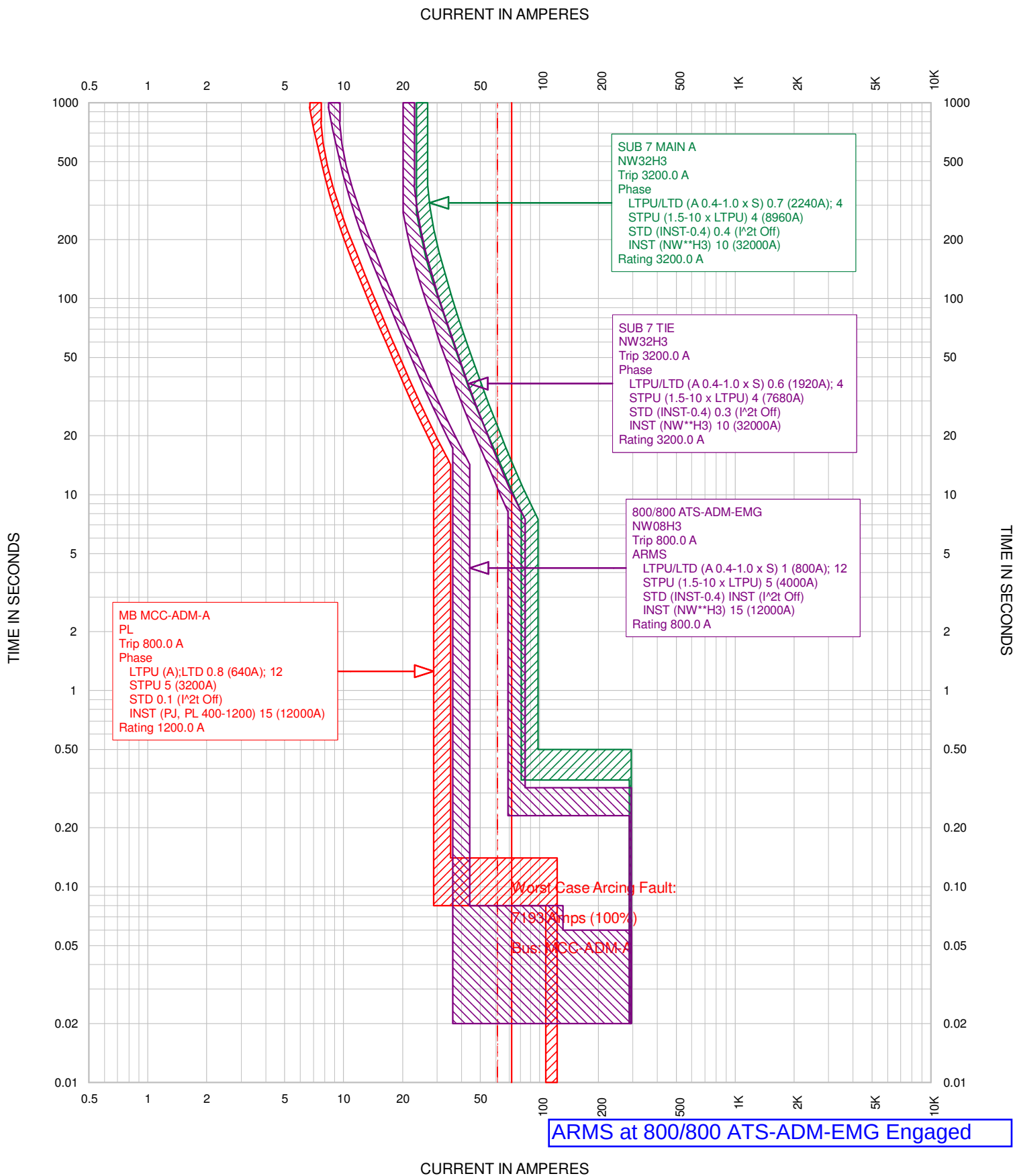
Current Scale x 100

Reference Voltage: 480

February 11, 2016 5:23 PM

AAWWTP

S7A_ATS-ADM-A-EMG



Online: TCC S7A,B_MCC-ADM-A

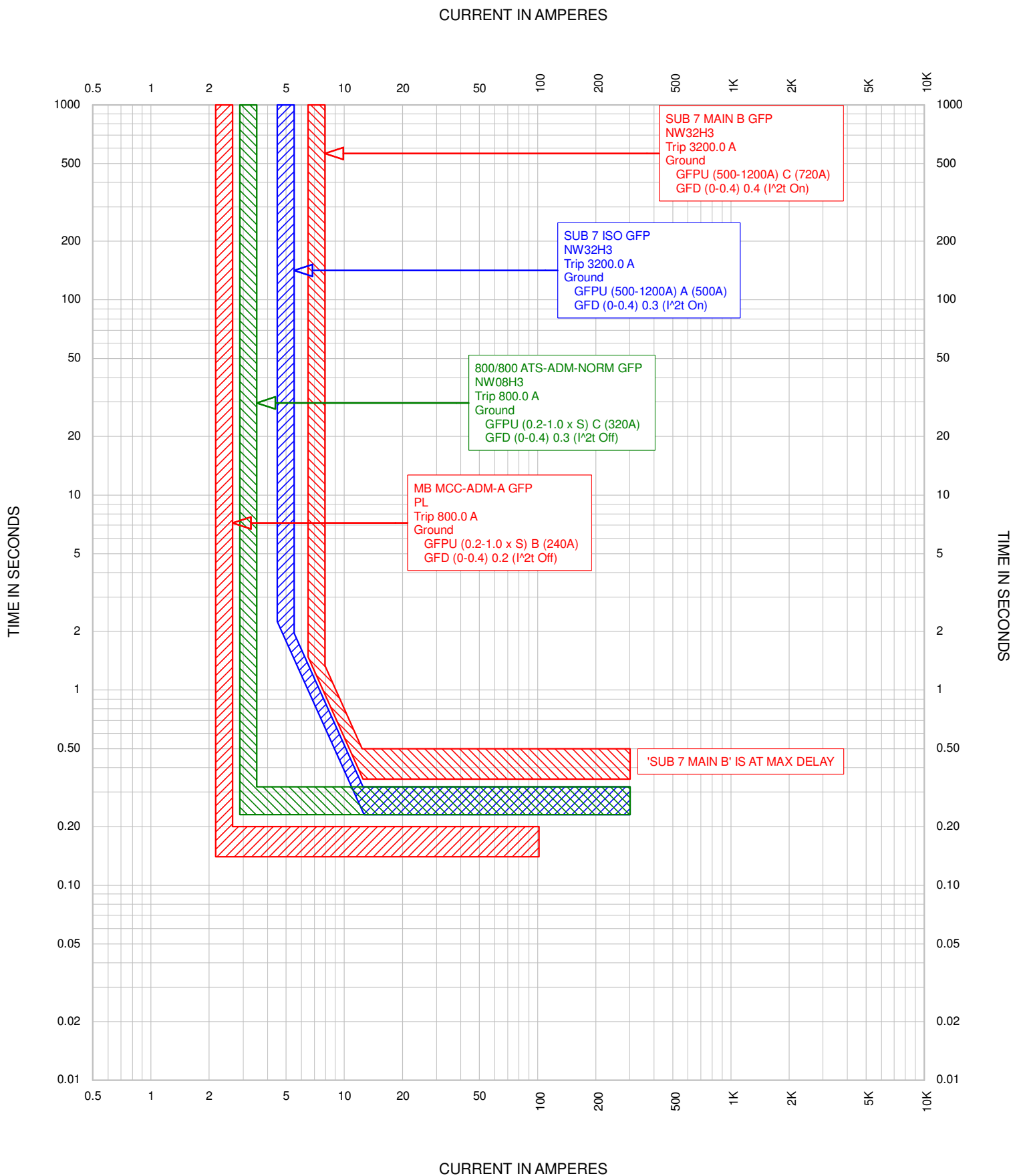
Current Scale x 100

Reference Voltage: 480

March 10, 2017 3:38 PM

AAWWTP

S7A_ATS-ADM-A-EMG



Online: TCC S7A,B_MCC-ADM-A

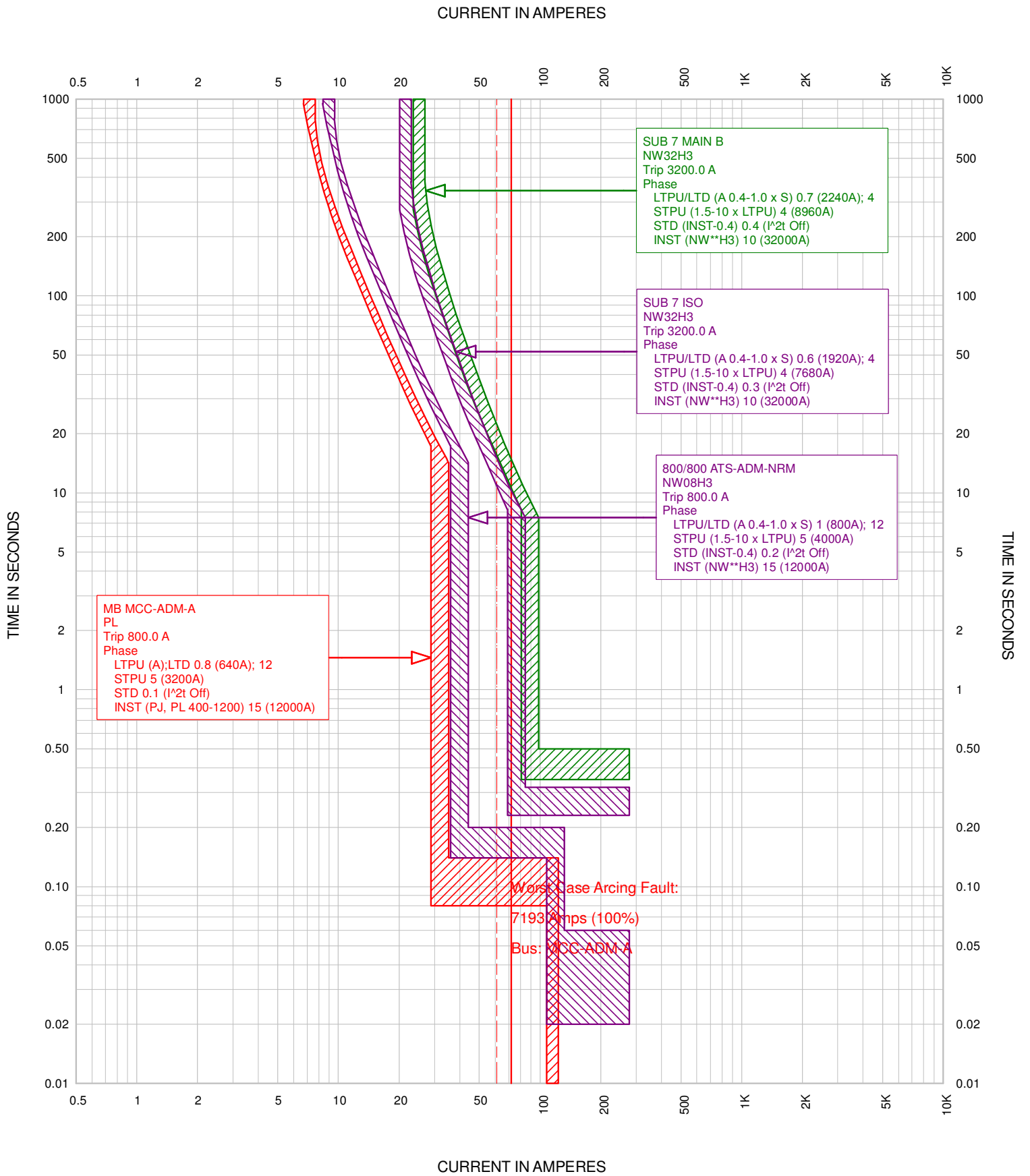
Current Scale x 100

Reference Voltage: 480

May 22, 2015 4:10 PM

AAWWTP

S7B_ATS-ADM-A-NRM GFP



Online: TCC S7A,B_MCC-ADM-A

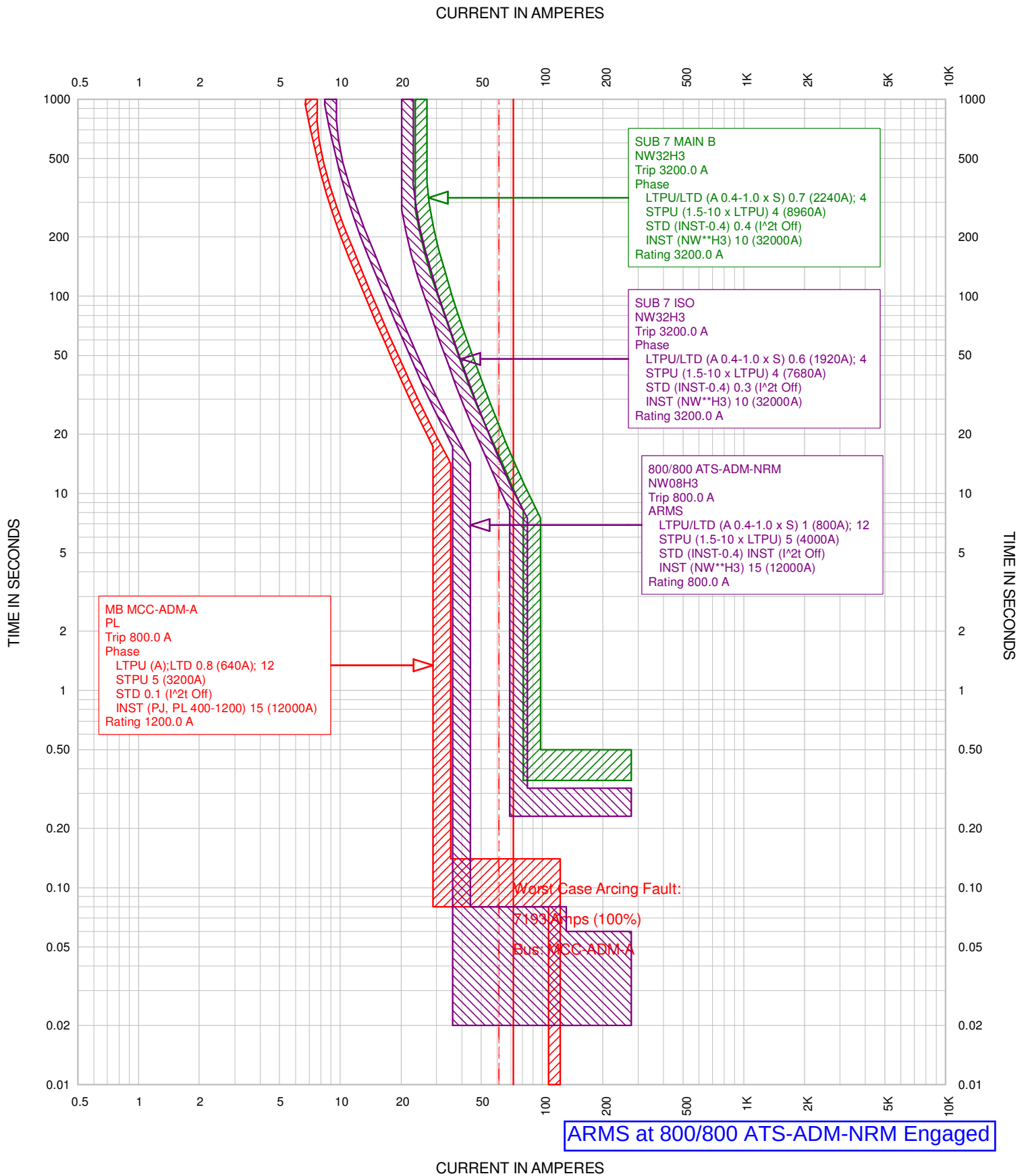
March 17, 2016 2:38 PM

Current Scale x 100

AAWWTP

Reference Voltage: 480

S7B_ATS-ADM-A-NRM



Online: TCC S7A,B_MCC-ADM-A

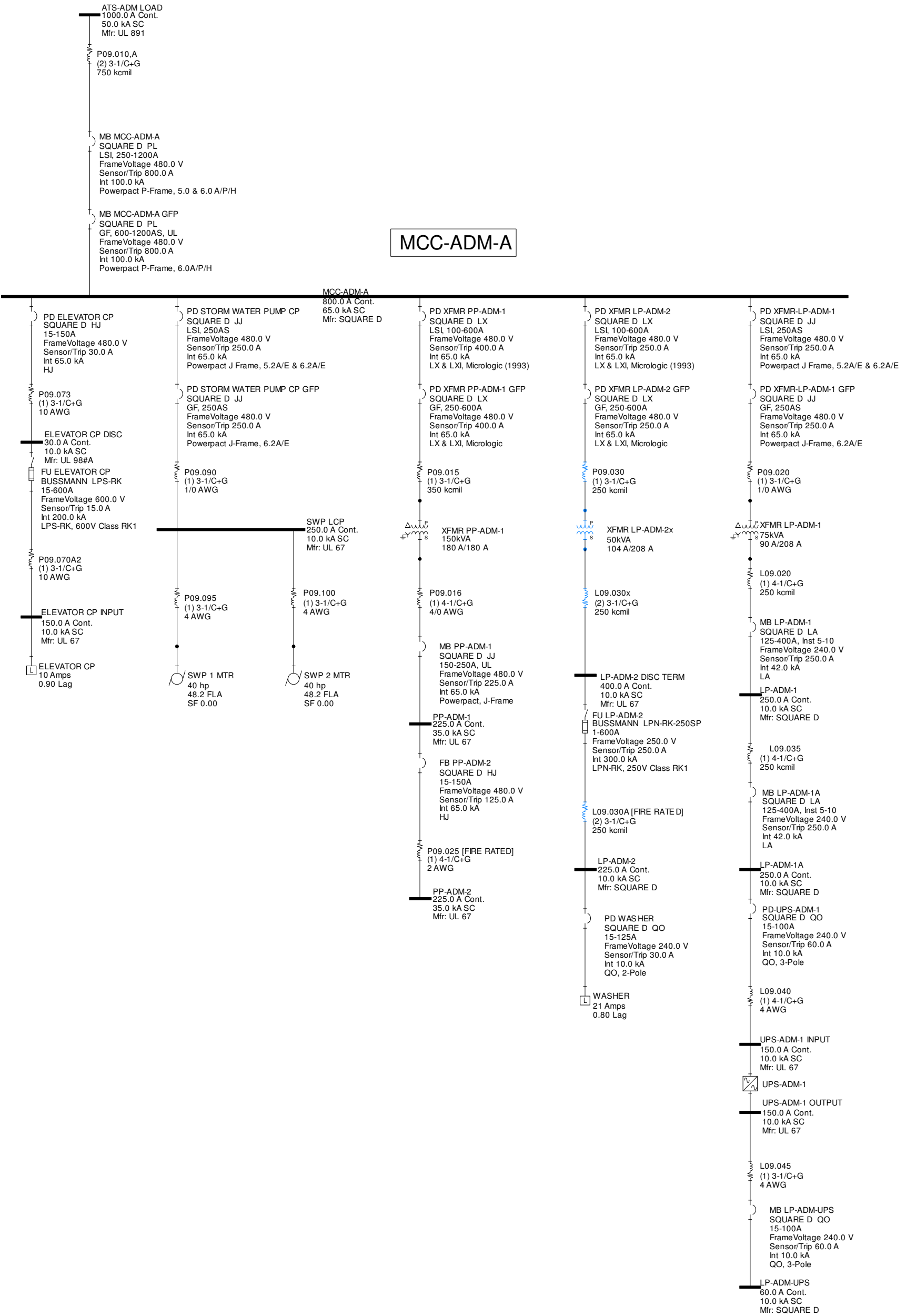
March 12, 2017 10:58 PM

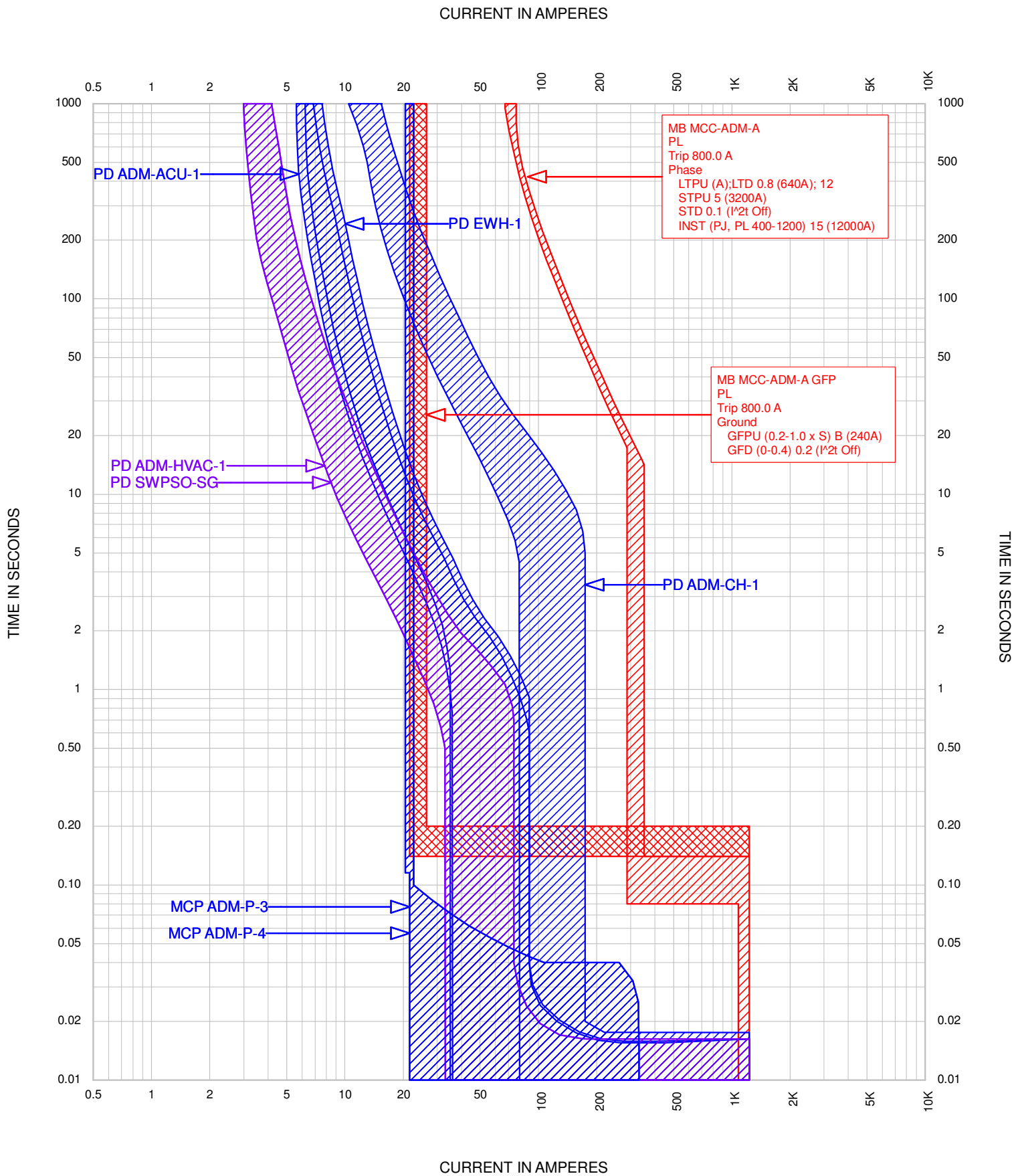
Current Scale x 100

AAWWTP

Reference Voltage: 480

S7B_ATS-ADM-A-NRM





Online: TCC MCC-ADM-A_LOADS

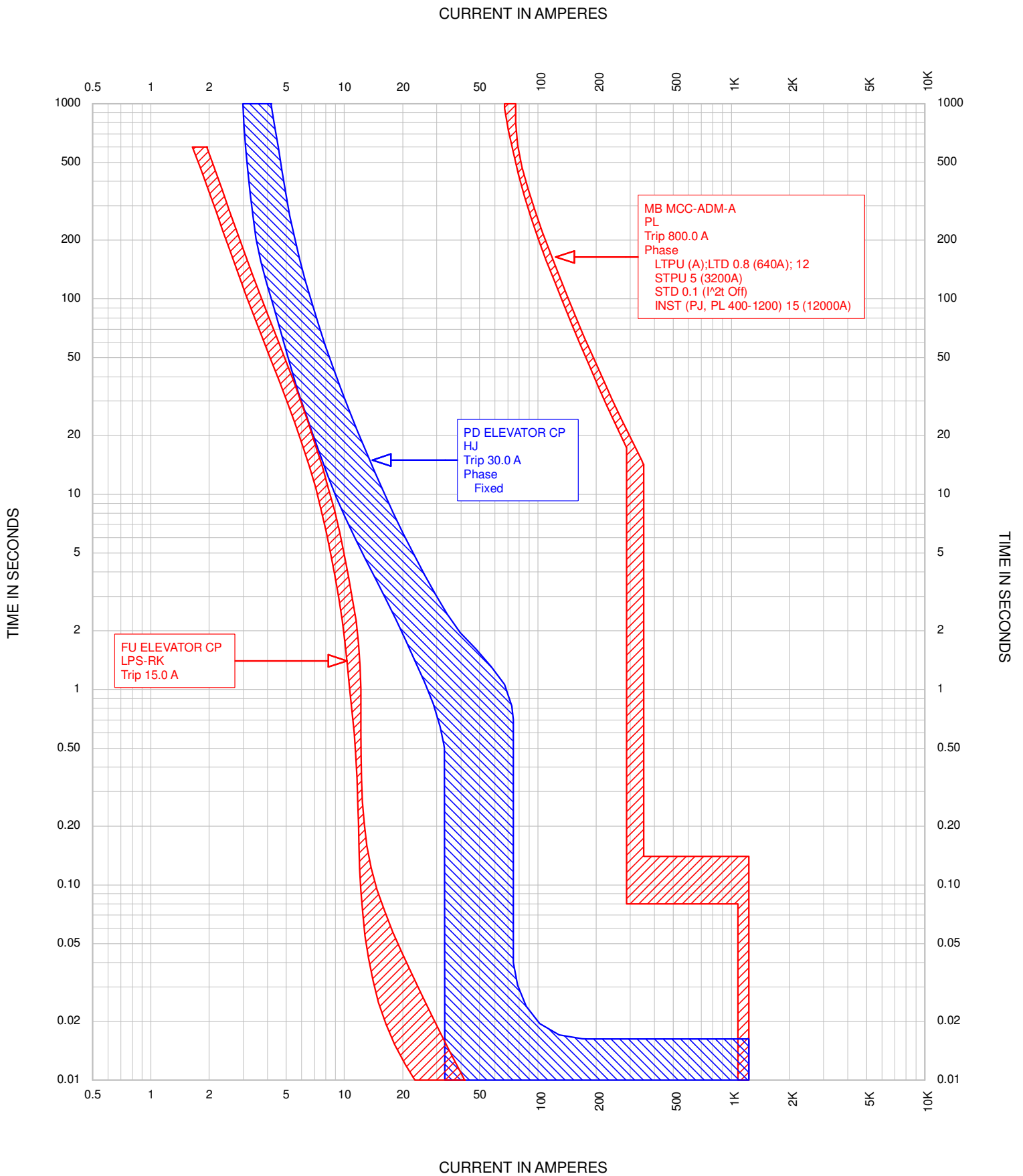
Current Scale x 10

Reference Voltage: 480

February 9, 2016 2:24 PM

AAWWTP

MCC-ADM-A_ELEVATOR GFP



Online: TCC MCC-ADM-A_LOADS

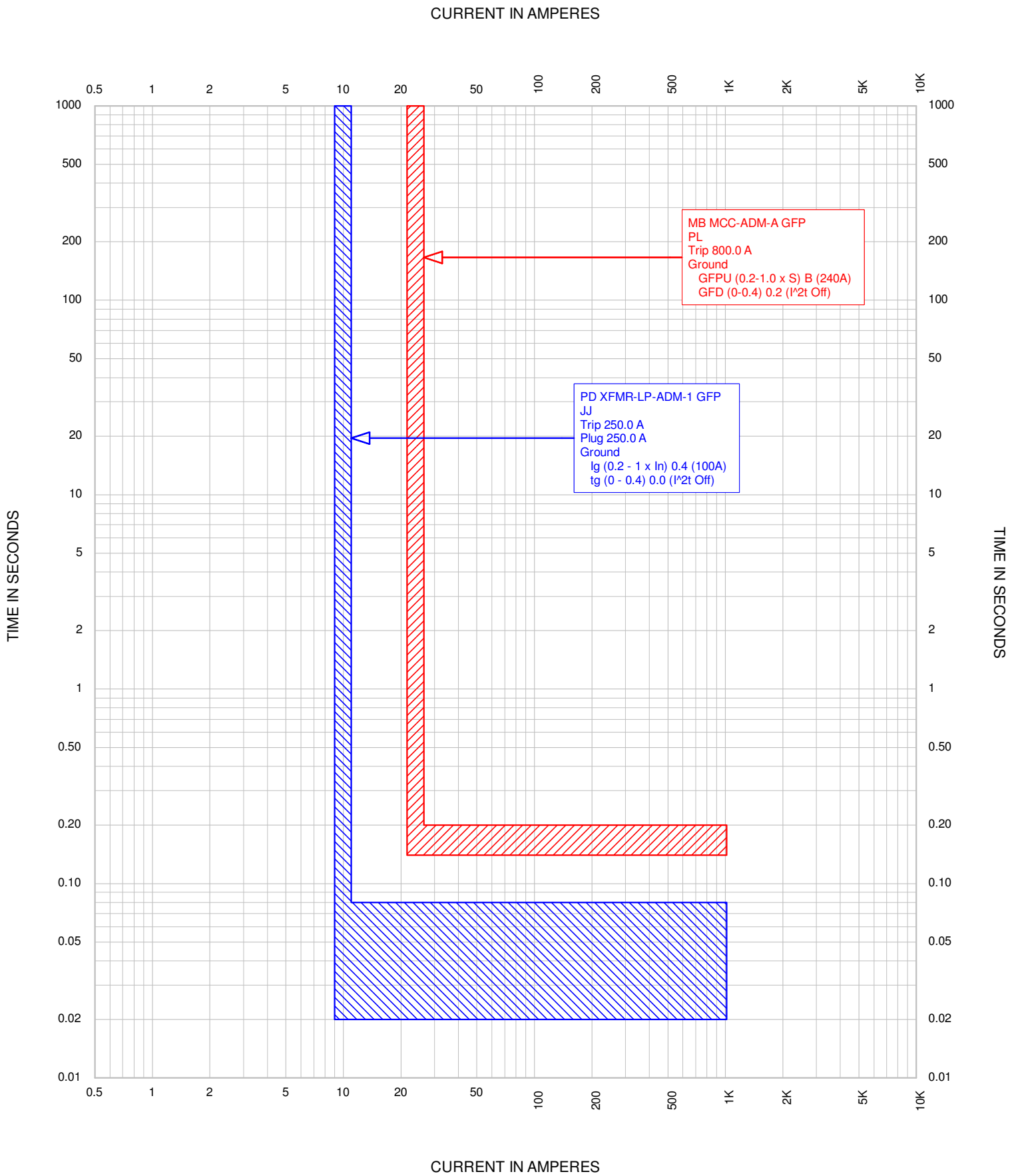
Current Scale x 10

Reference Voltage: 480

February 11, 2016 12:05 PM

AAWWTP

MCC-ADM-A_ELEVATOR



Online: TCC MCC-ADM-A_LOADS

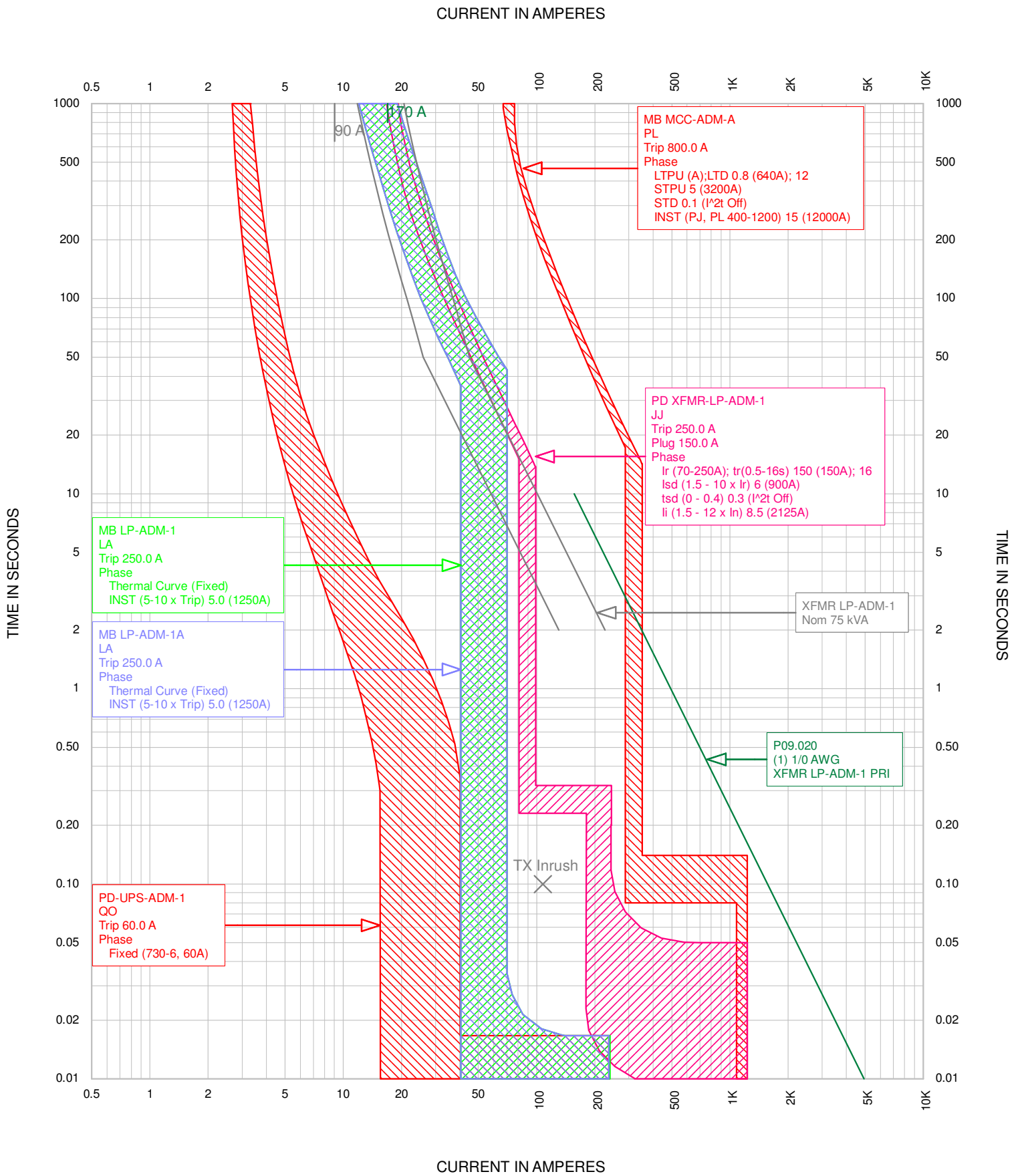
Current Scale x 10

Reference Voltage: 480

May 26, 2015 11:30 AM

AAWWTP

MCC-ADM-A_LP-ADM-1 GFP



Online: TCC MCC-ADM-A_LOADS

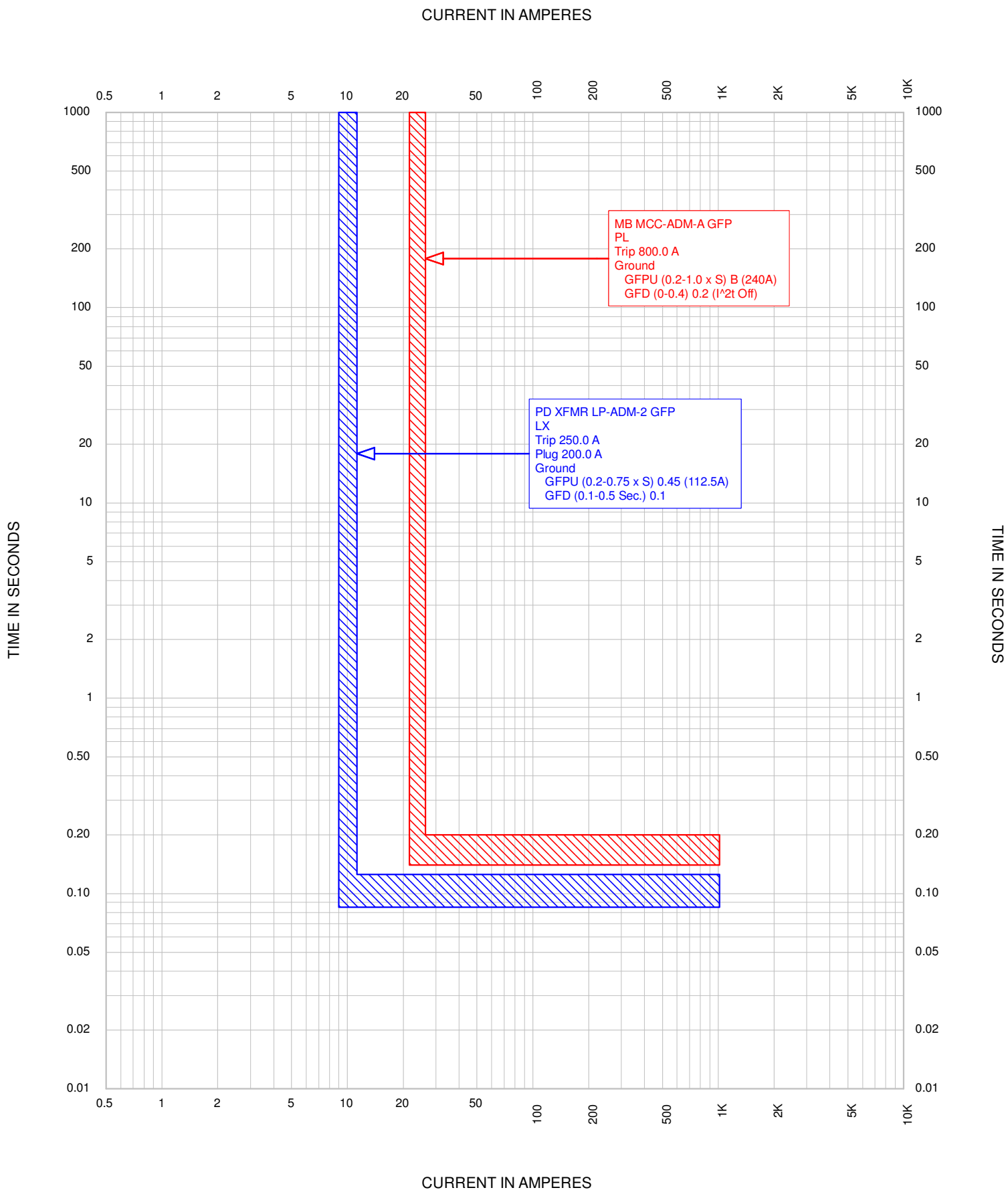
Current Scale x 10

Reference Voltage: 480

February 11, 2016 12:09 PM

AAWWTP

MCC-ADM-A_LP-ADM-1



Online: TCC MCC-ADM-A_LOADS

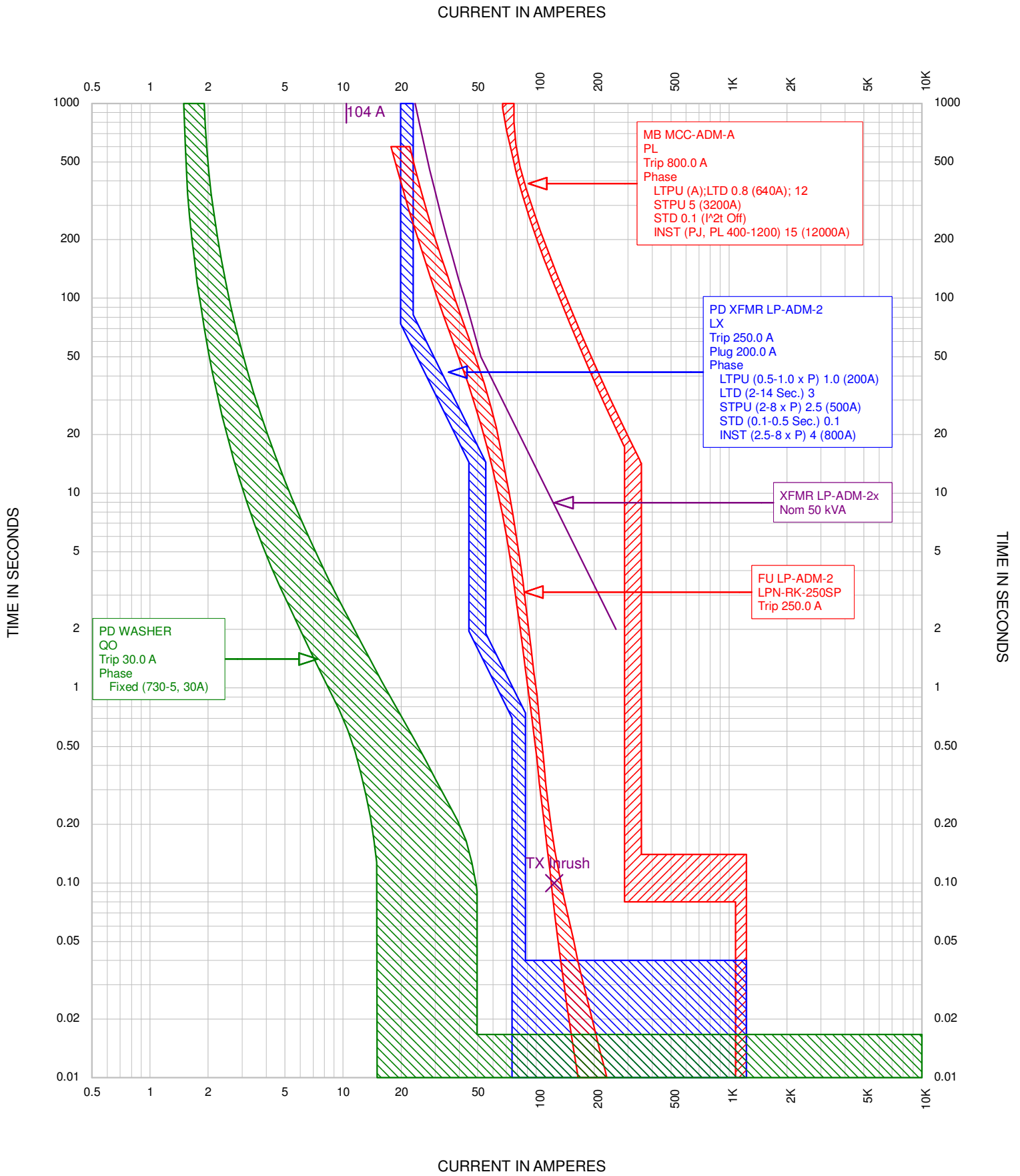
Current Scale x 10

Reference Voltage: 480

May 22, 2015 4:56 PM

AAWWTP

MCC-ADM-A_LP-ADM-2 GFP



Online: TCC MCC-ADM-A_LOADS

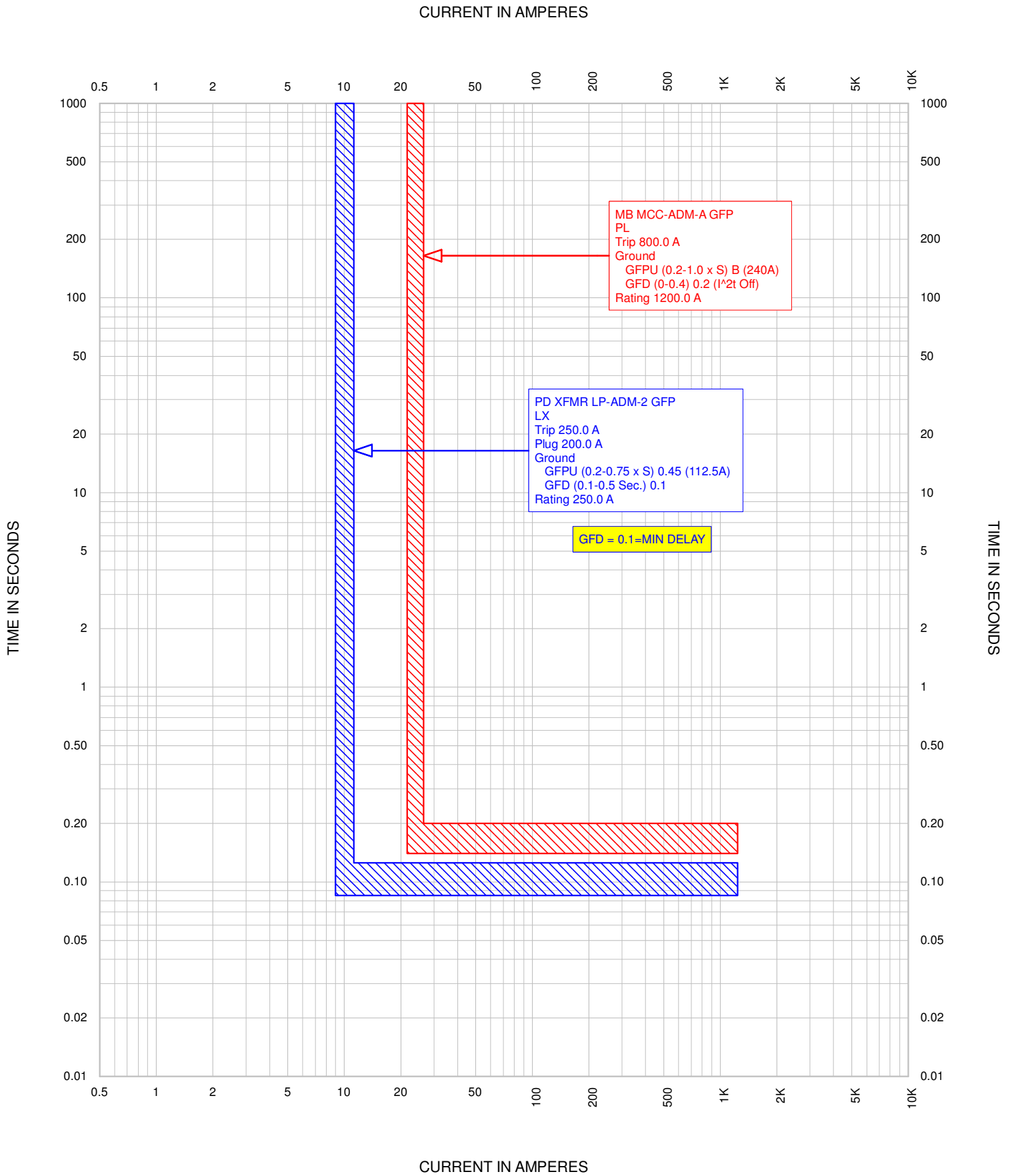
Current Scale x 10

Reference Voltage: 480

February 11, 2016 12:13 PM

AAWWTP

MCC-ADM-A_LP-ADM-2



Online: TCC MCC-ADM-A_LOADS

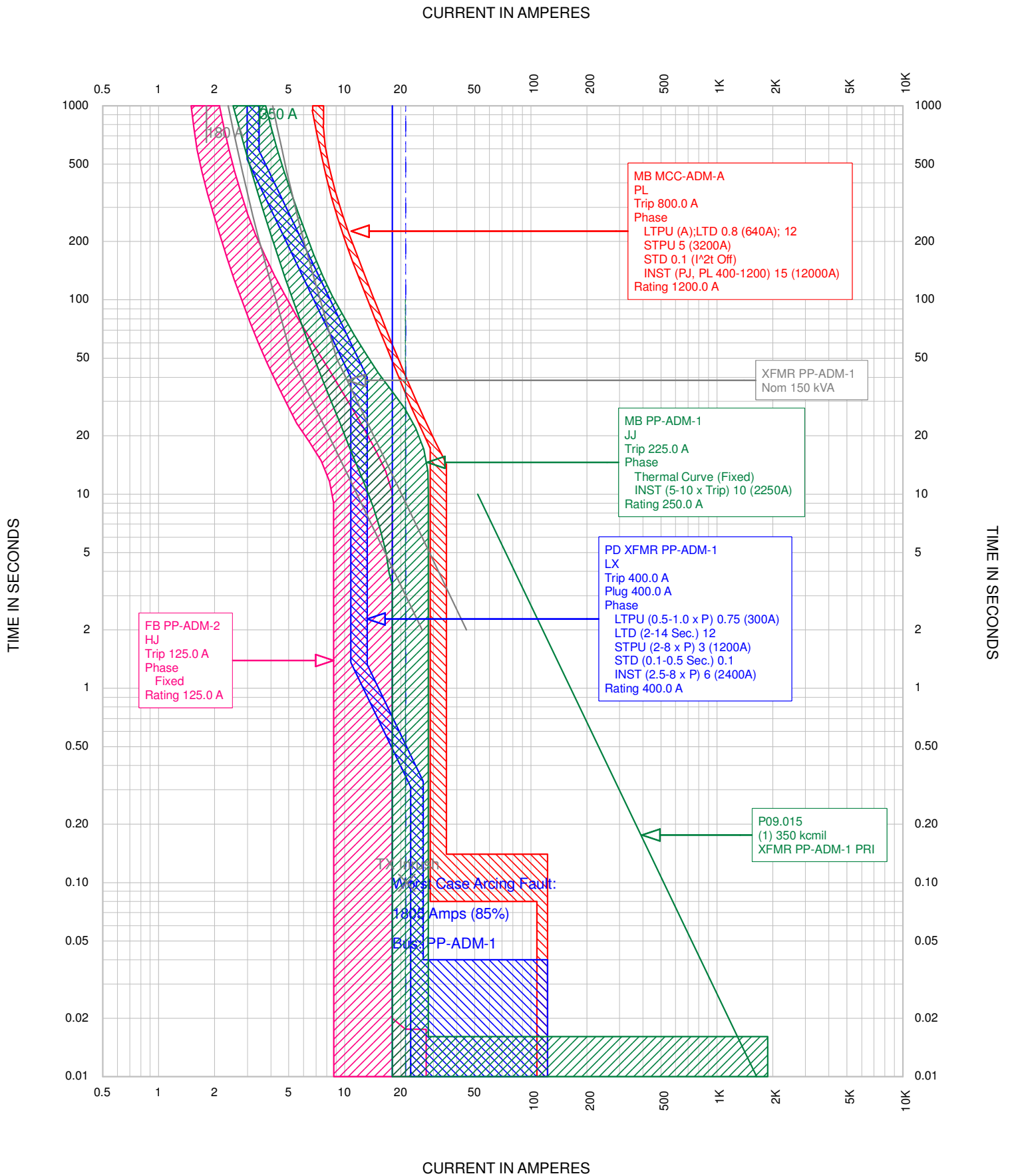
Current Scale x 10

Reference Voltage: 480

March 3, 2017 9:45 AM

AAWWTP

MCC-ADM-A_LP-ADM-2 GFP



Online: TCC MCC-ADM-A_LOADS

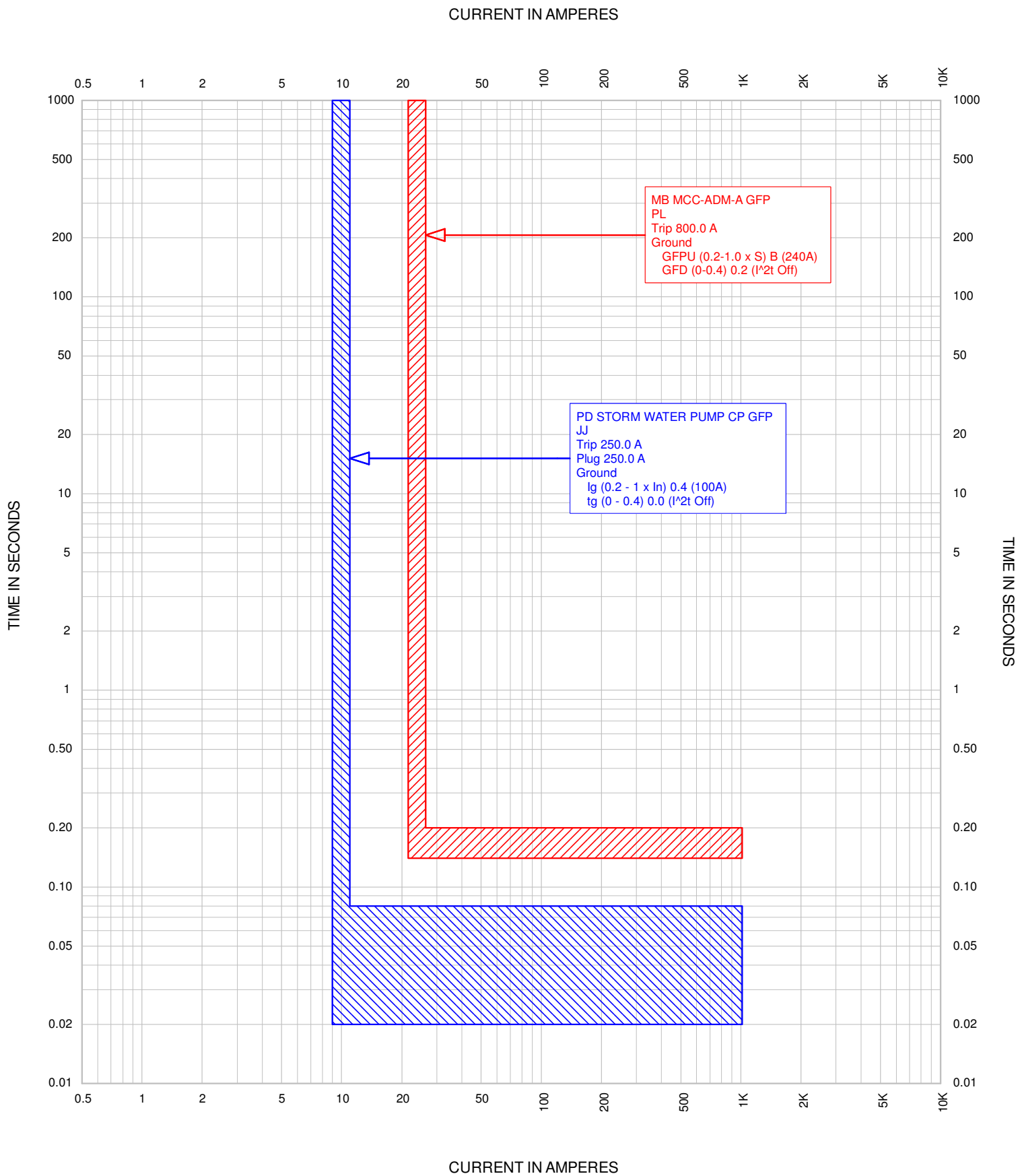
Current Scale x 100

Reference Voltage: 480

March 3, 2017 10:36 AM

AAWWTP

MCC-ADM-A_PP-ADM-1,2



Online: TCC MCC-ADM-A_LOADS

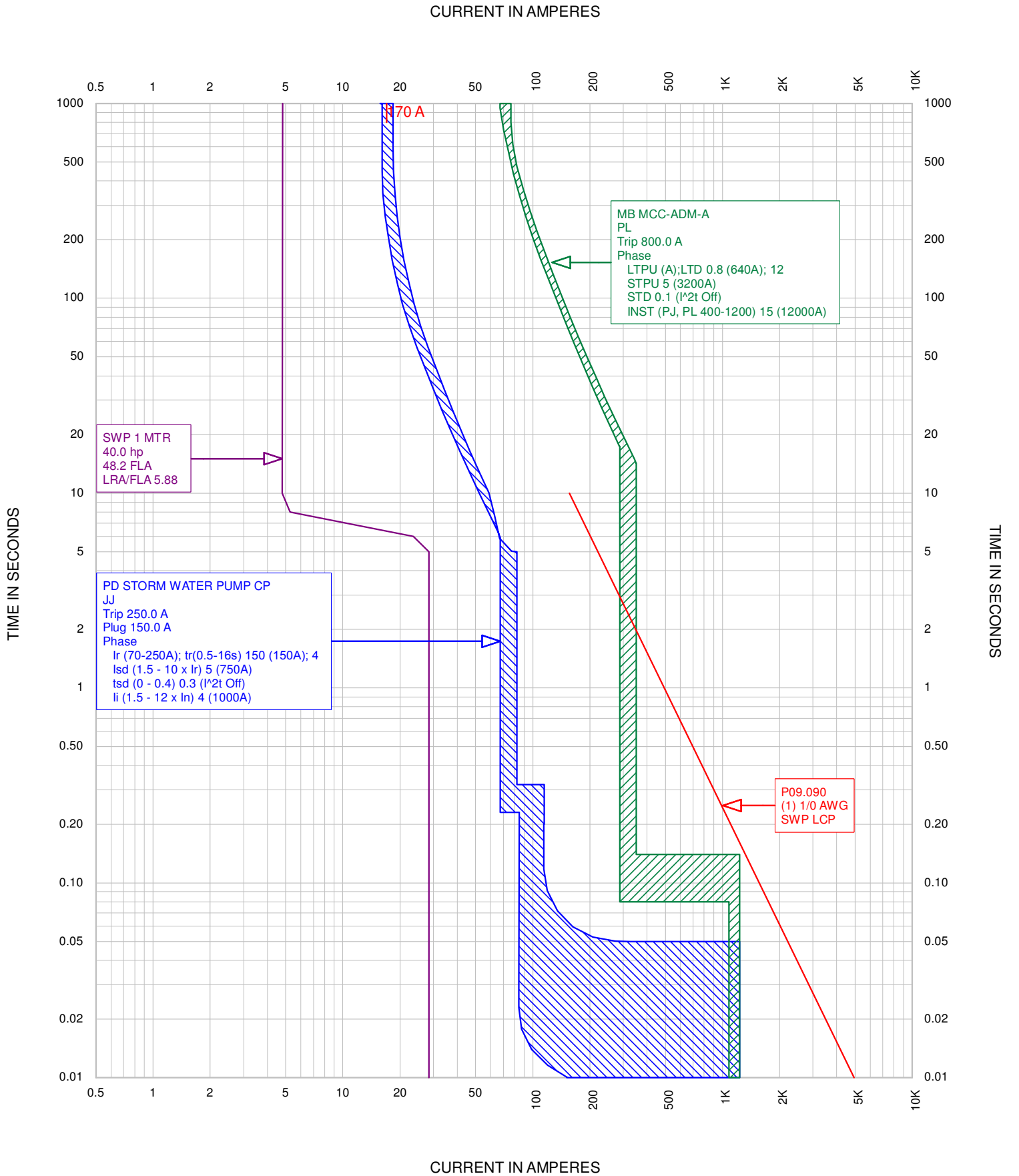
Current Scale x 10

Reference Voltage: 480

May 22, 2015 5:04 PM

AAWWTP

MCC-ADM-A_SWP1 GFP



Online: TCC MCC-ADM-A_LOADS

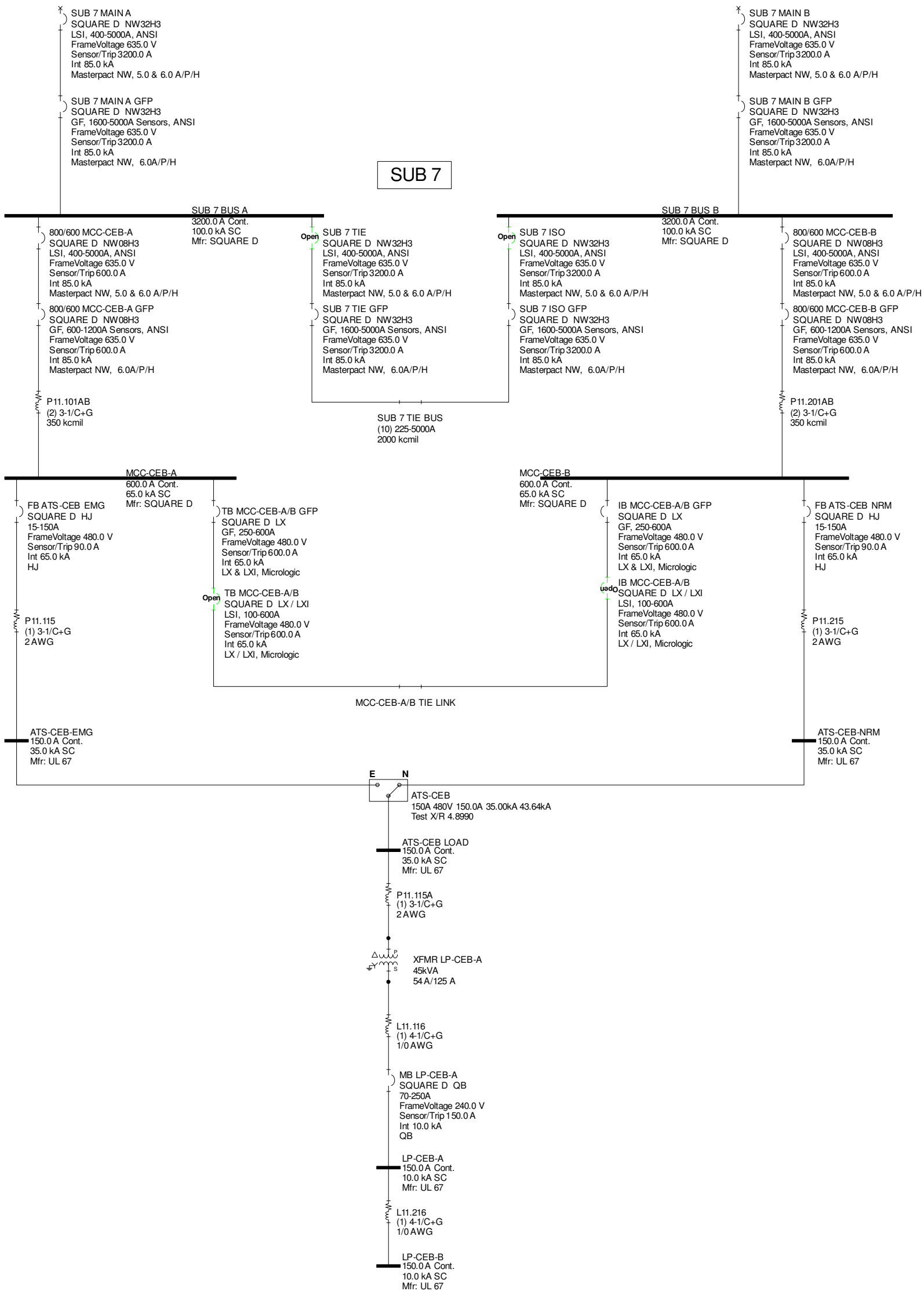
Current Scale x 10

Reference Voltage: 480

February 12, 2016 4:45 PM

AAWWTP

MCC-ADM-A_SWP1

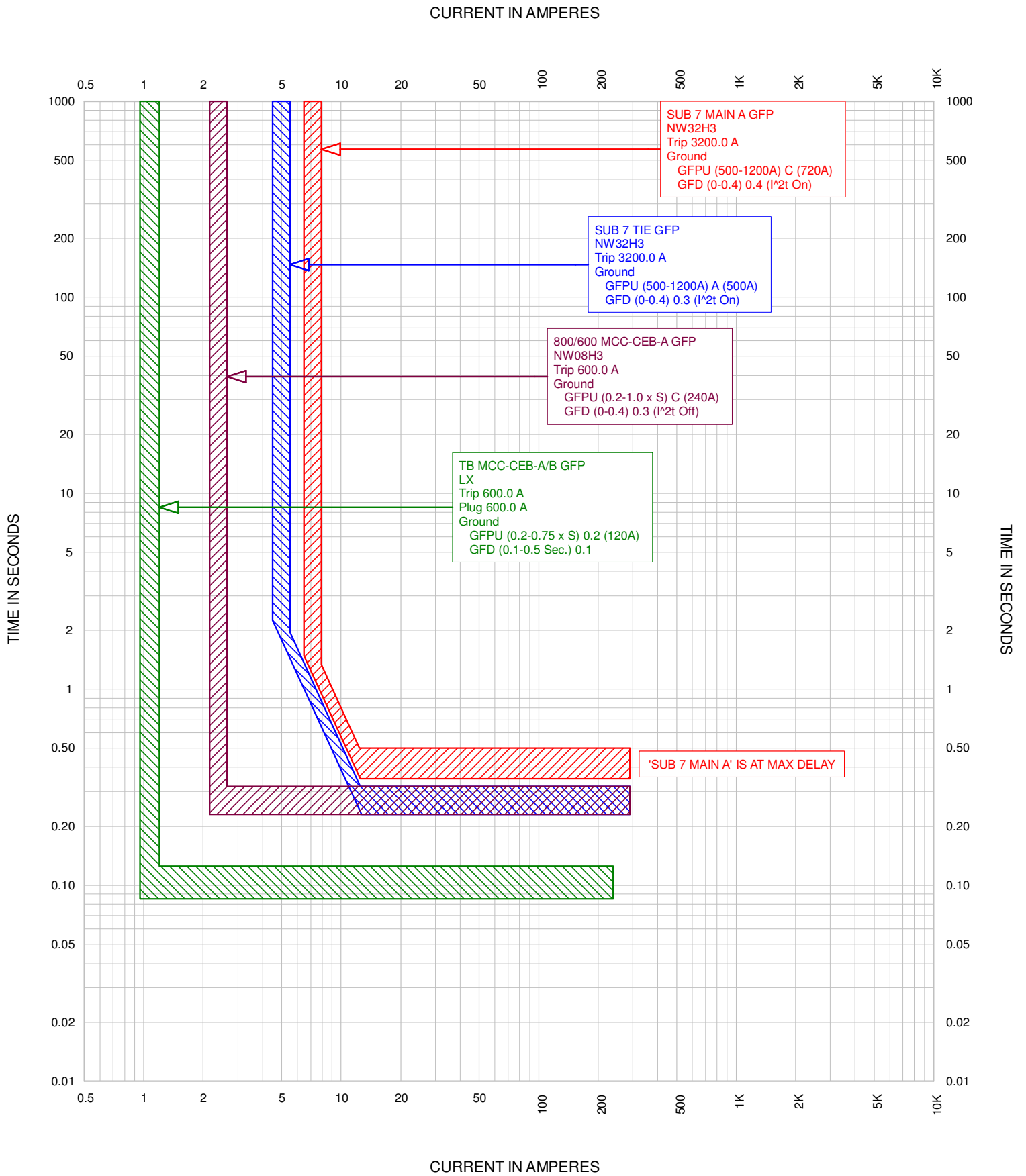


Online: TCC S7A,B_MCC-CEB-A,B

April 4, 2016 6:10 PM

AAWWTP





Online: TCC S7A,B_MCC-CEB-A,B

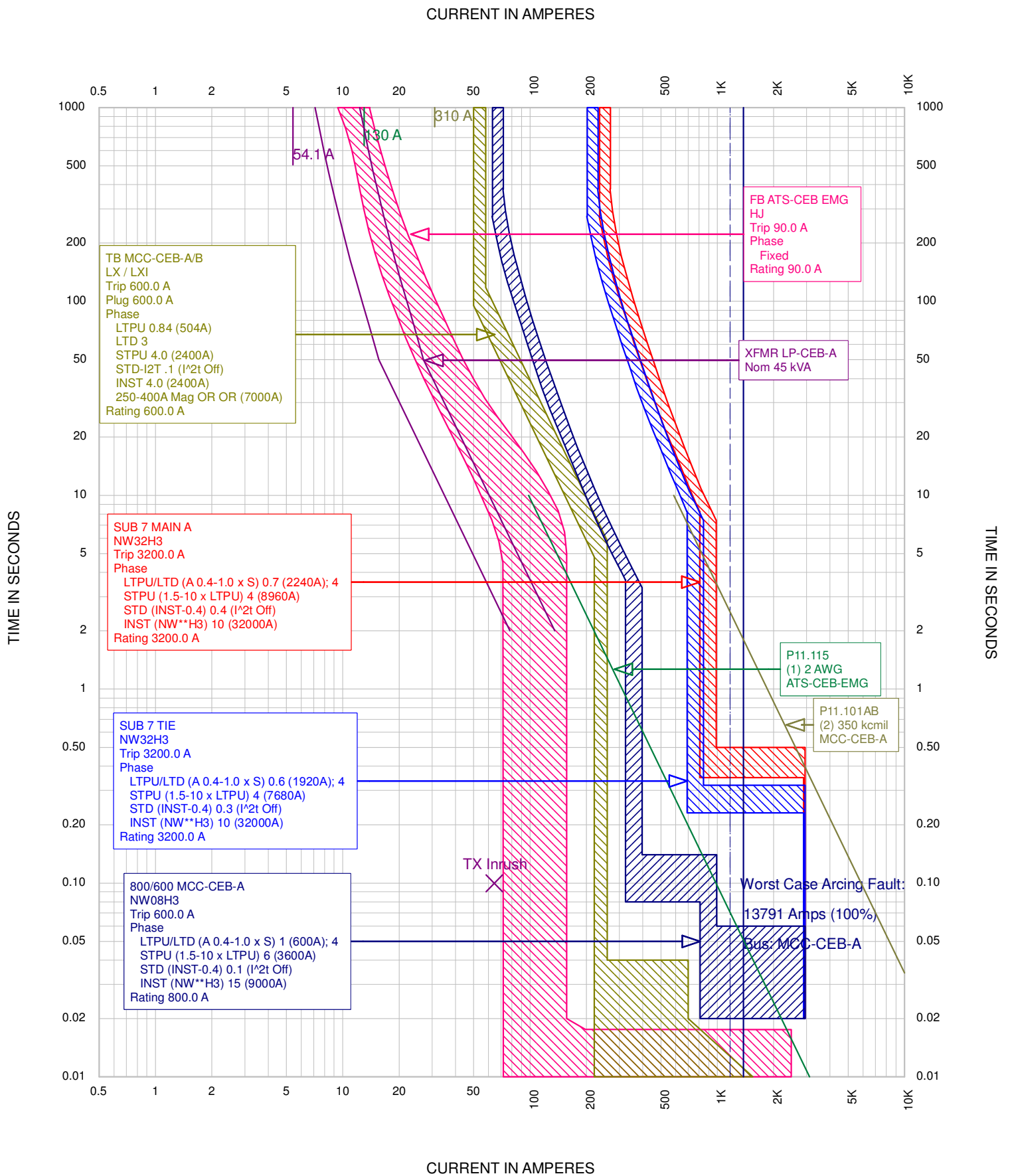
Current Scale x 100

Reference Voltage: 480

May 22, 2015 5:12 PM

AAWWTP

S7A_ATS-CEB-EMG GFP



Online: TCC S7A,B_MCC-CEB-A,B

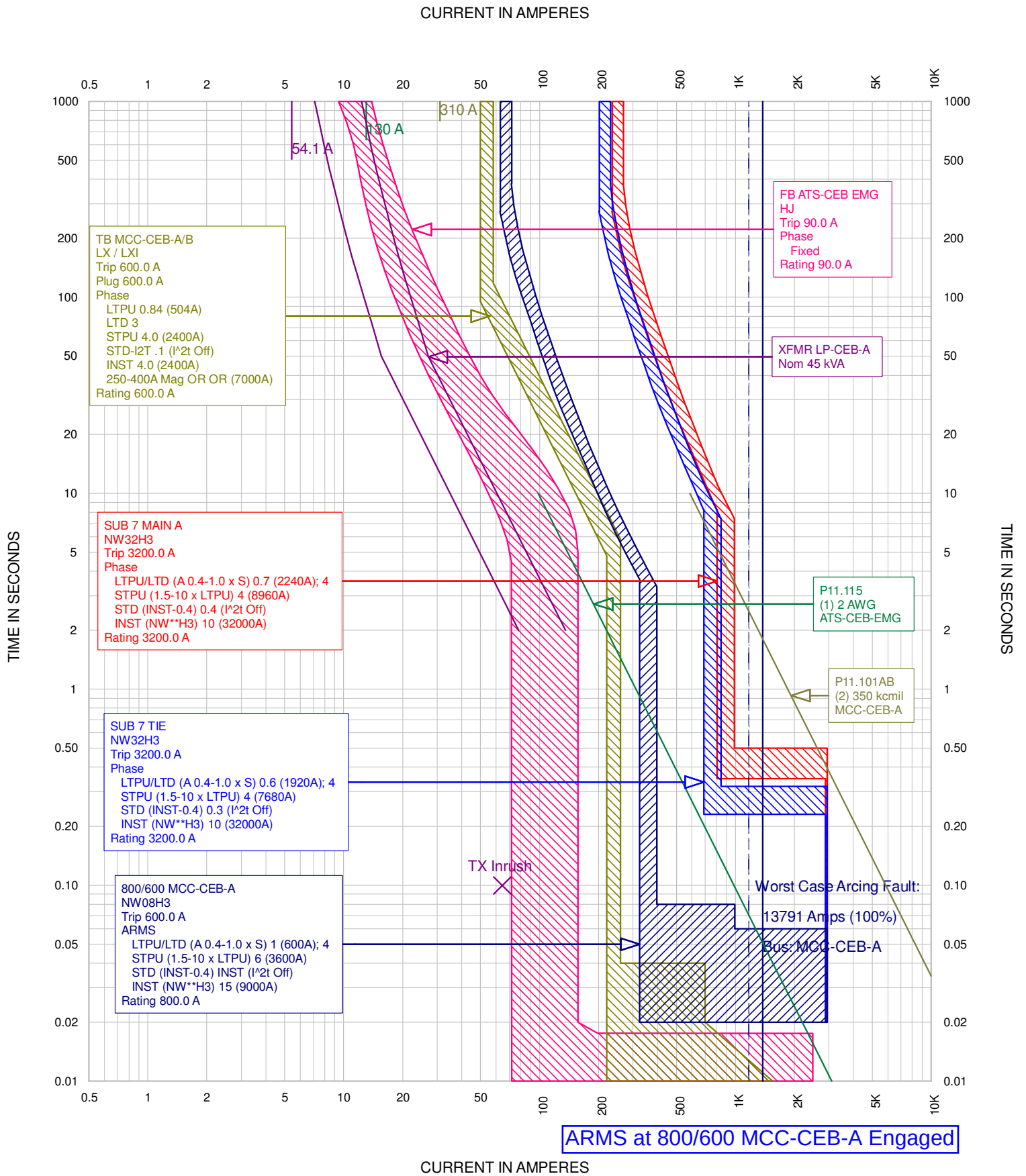
Current Scale x 10

Reference Voltage: 480

March 3, 2017 11:47 AM

AAWWTP

S7A_ATS-CEB-EMG



Online: TCC S7A,B_MCC-CEB-A,B

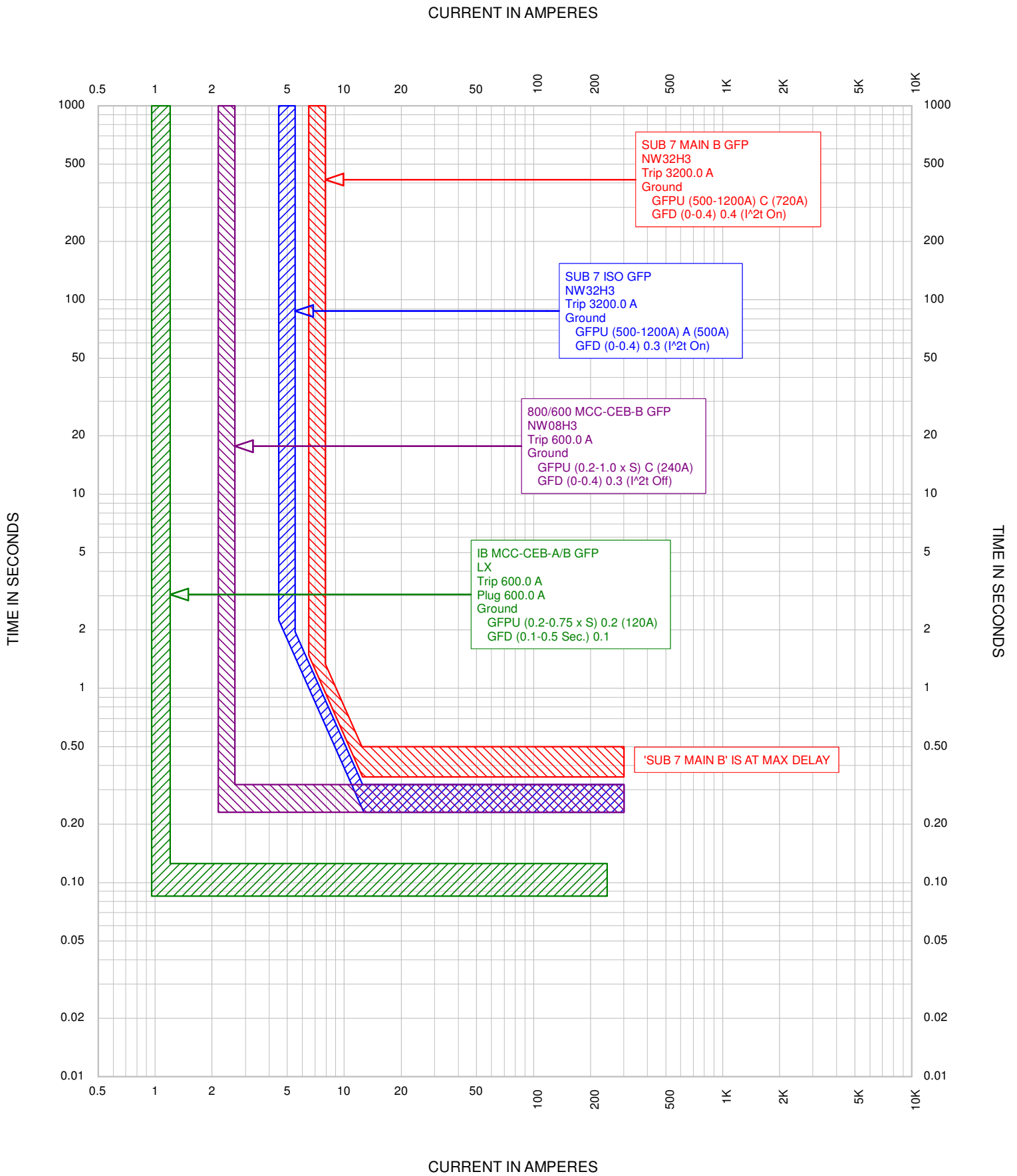
Current Scale x 10

Reference Voltage: 480

March 12, 2017 9:03 PM

AAWWTP

S7A_ATS-CEB-EMG



Online: TCC S7A,B_MCC-CEB-A,B

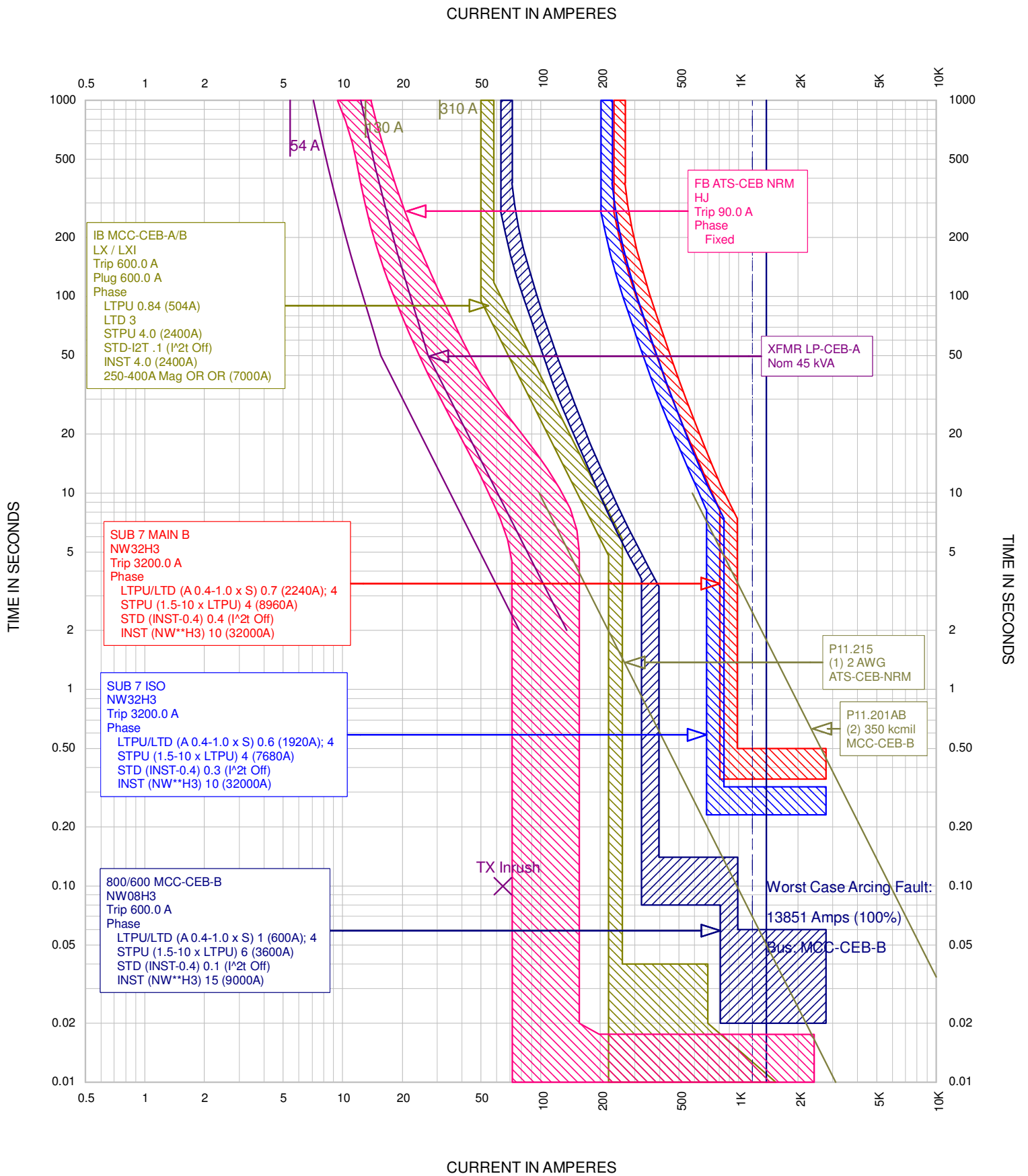
Current Scale x 100

Reference Voltage: 480

May 22, 2015 5:20 PM

AAWWTP

S7B_ATS-CEB-NRM GFP



Online: TCC S7A,B_MCC-CEB-A,B

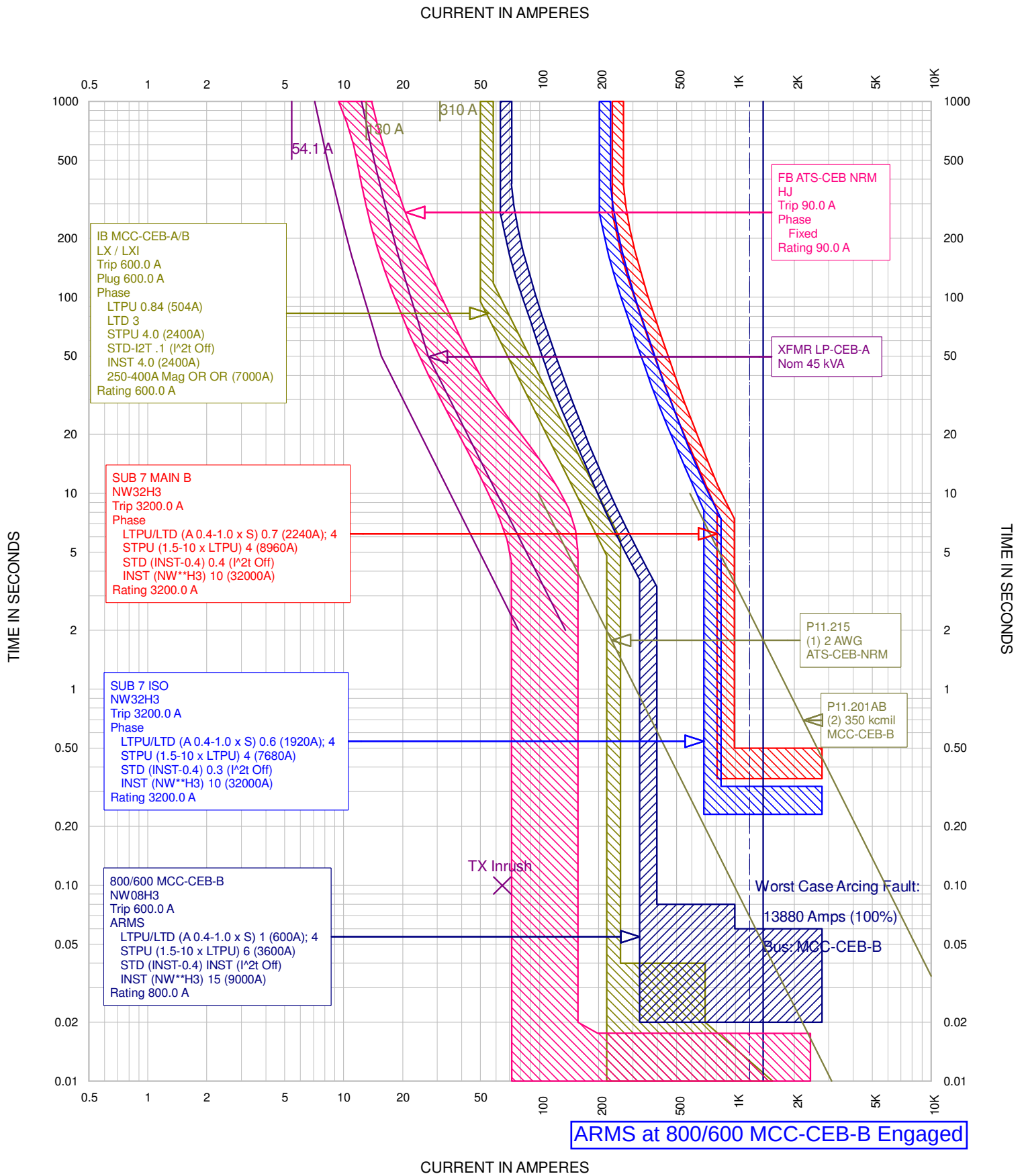
Current Scale x 10

Reference Voltage: 480

February 12, 2016 5:13 PM

AAWWTP

S7B_ATS-CEB-NRM



Online: TCC S7A,B_MCC-CEB-A,B

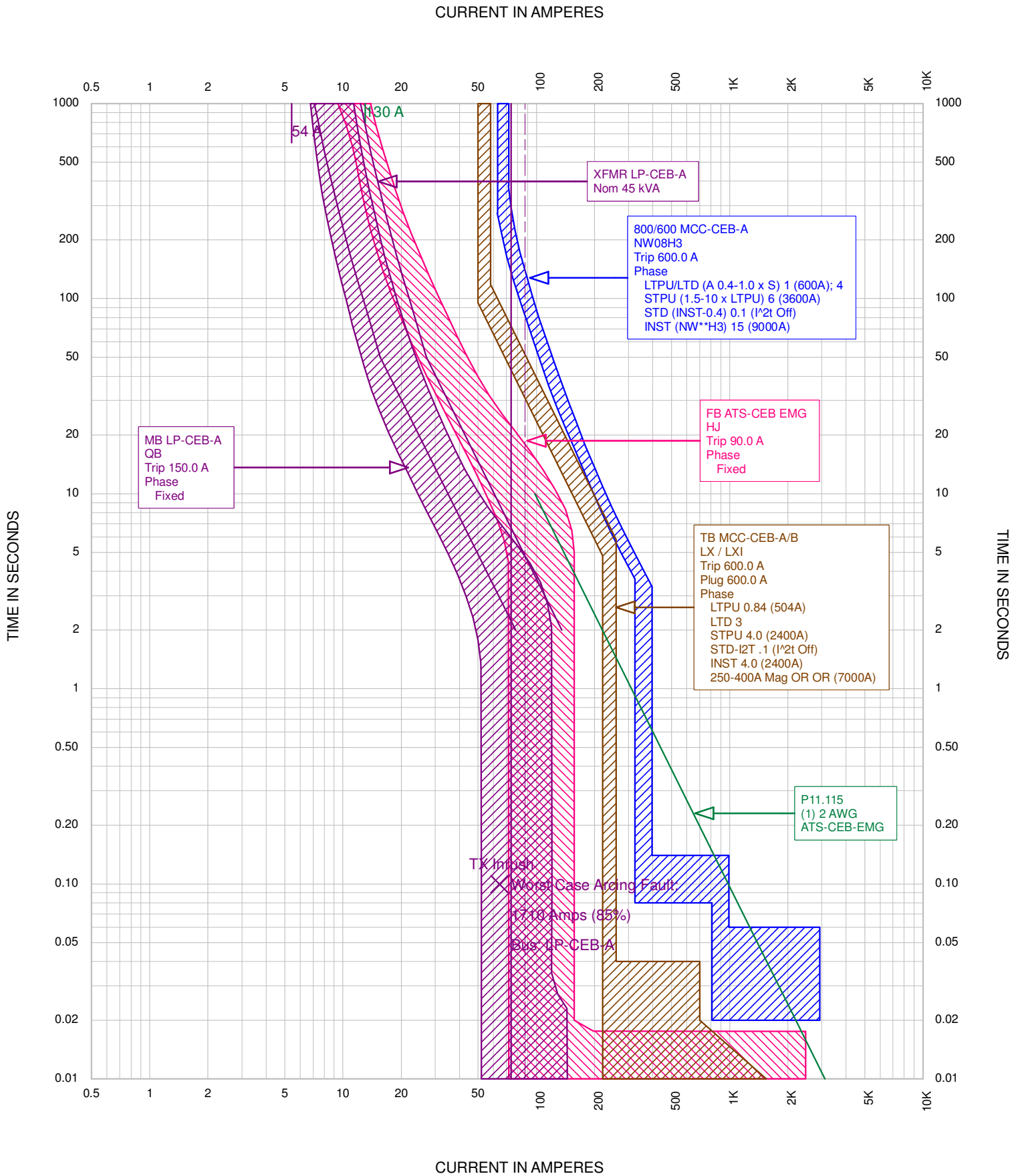
Current Scale x 10

Reference Voltage: 480

March 12, 2017 9:28 PM

AAWWTP

S7B_ATS-CEB-NRM



Online: TCC S7A,B_MCC-CEB-A,B

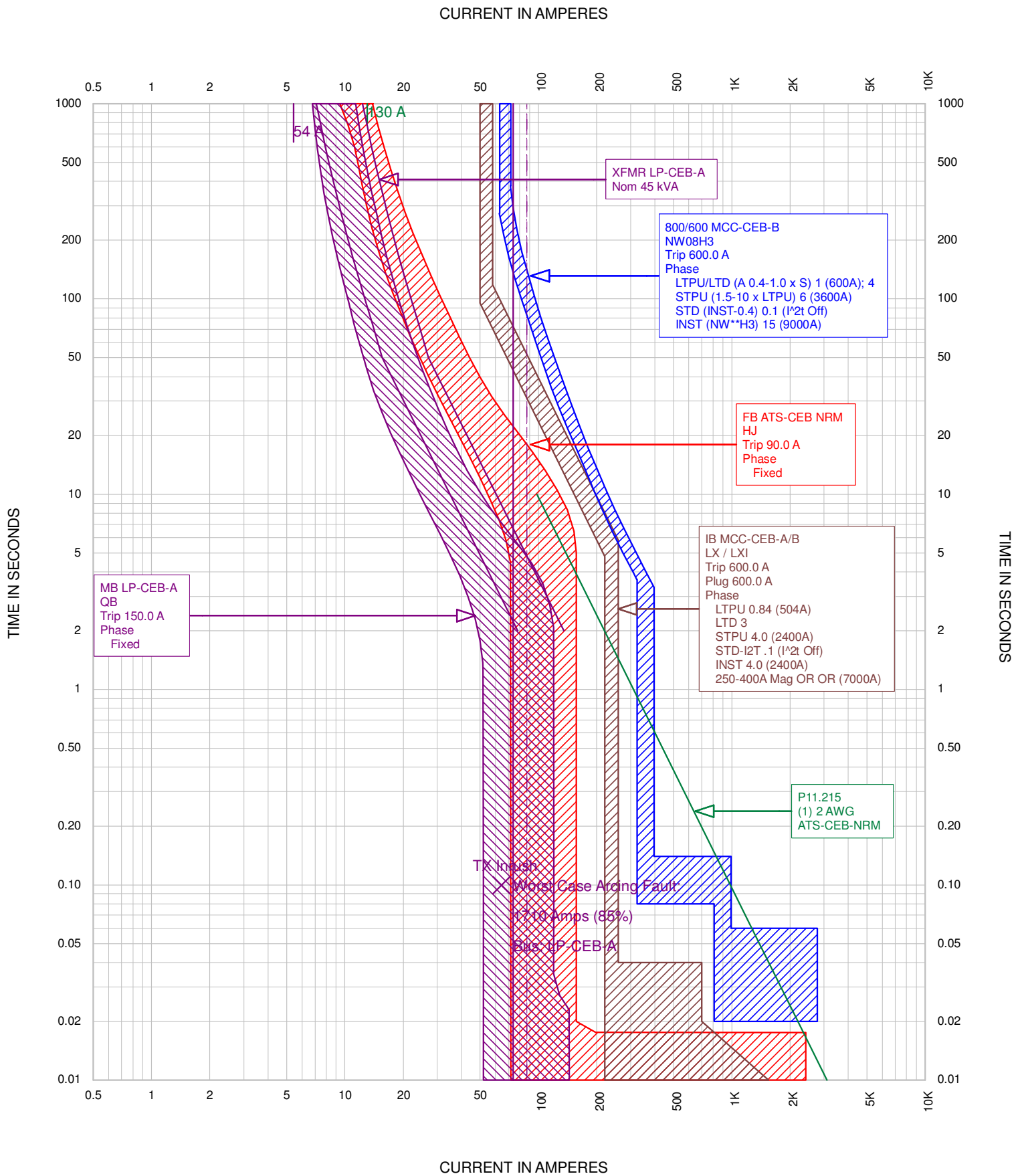
Current Scale x 10

Reference Voltage: 480

February 12, 2016 5:31 PM

AAWWTP

MCC-CEB-A_LP-CEB-A



Online: TCC S7A,B_MCC-CEB-A,B

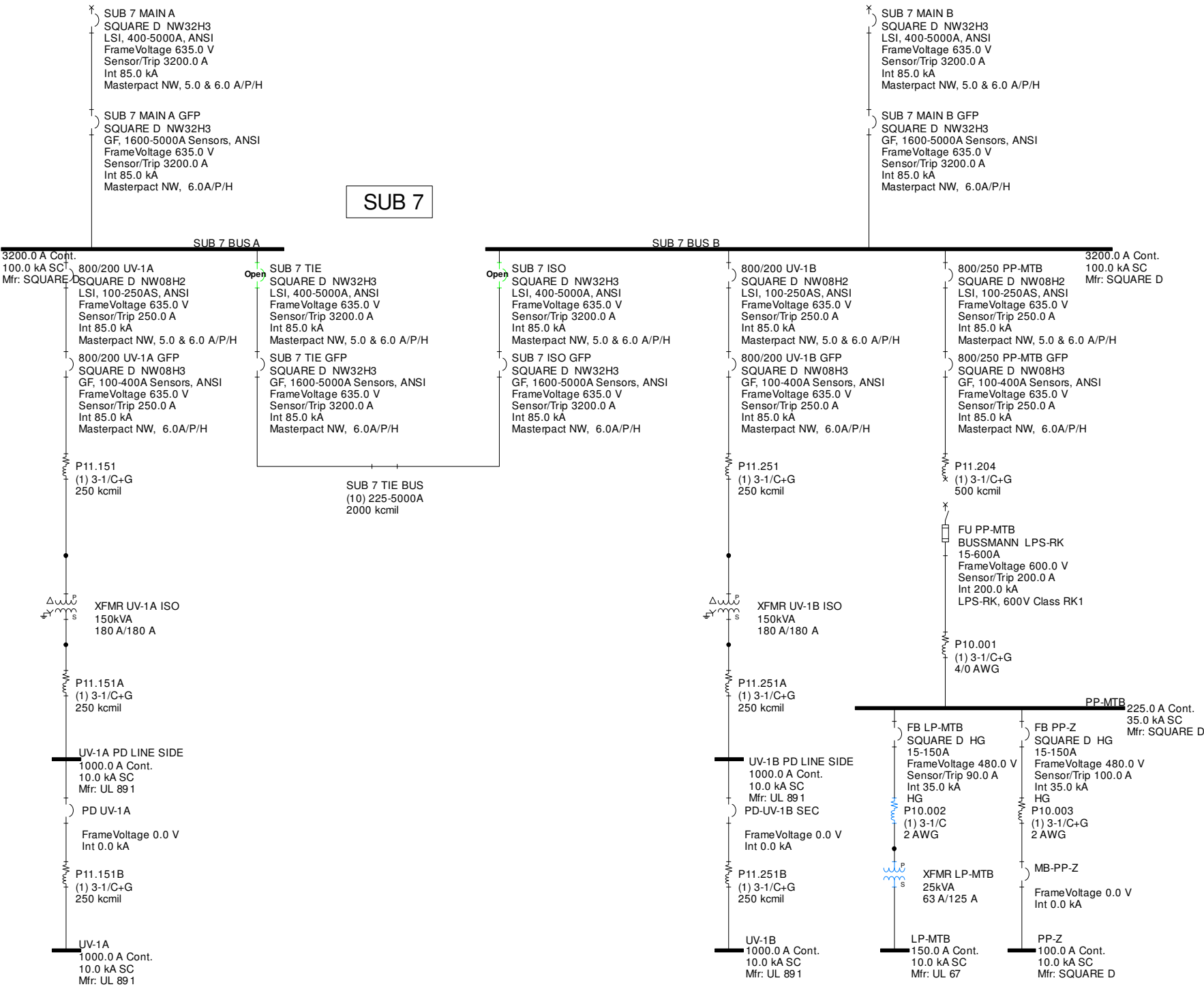
Current Scale x 10

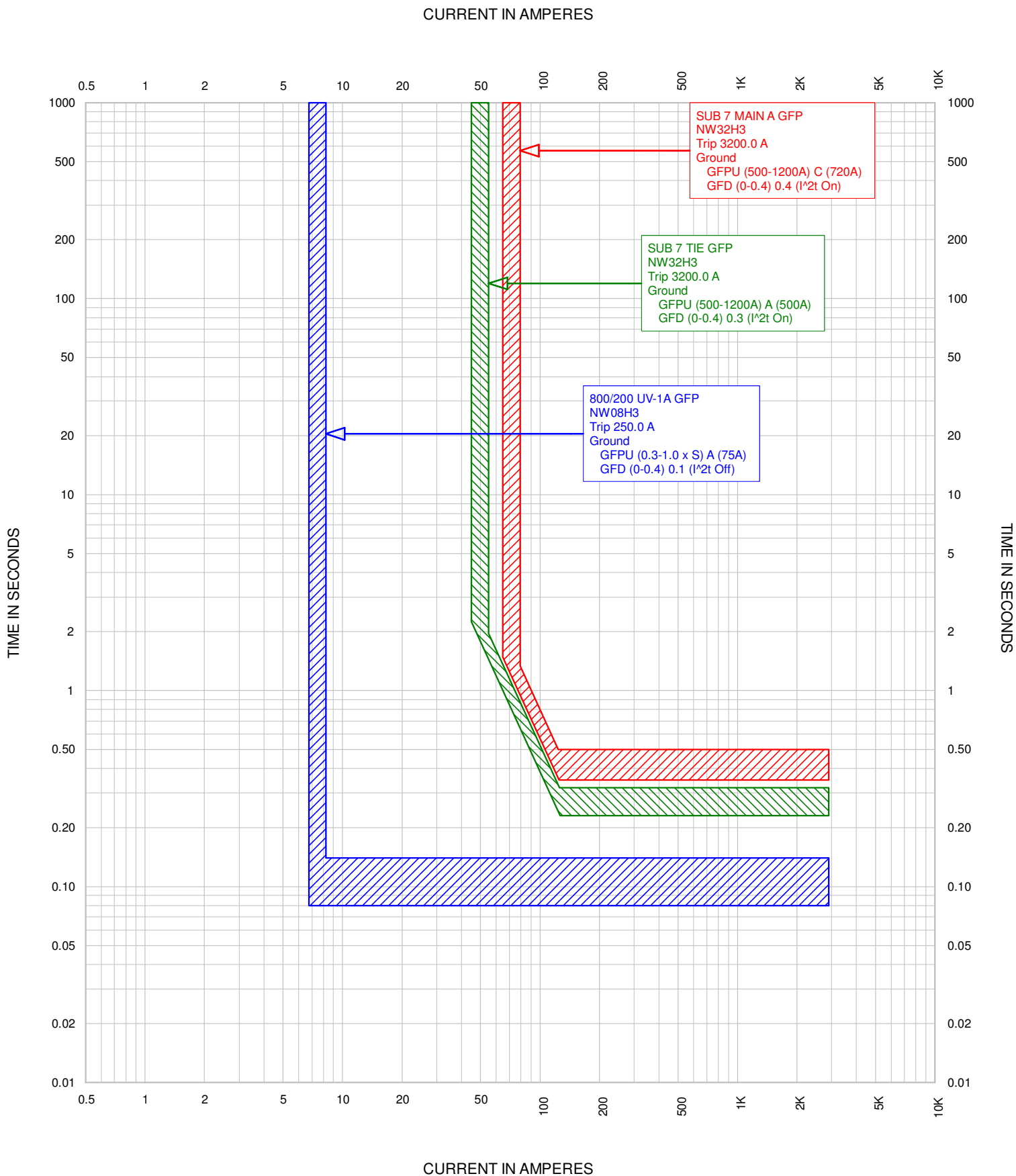
Reference Voltage: 480

February 12, 2016 5:34 PM

AAWWTP

MCC-CEB-B_LP-CEB-A





Online: TCC S7A,B_UV-1A,B_PP-MTB

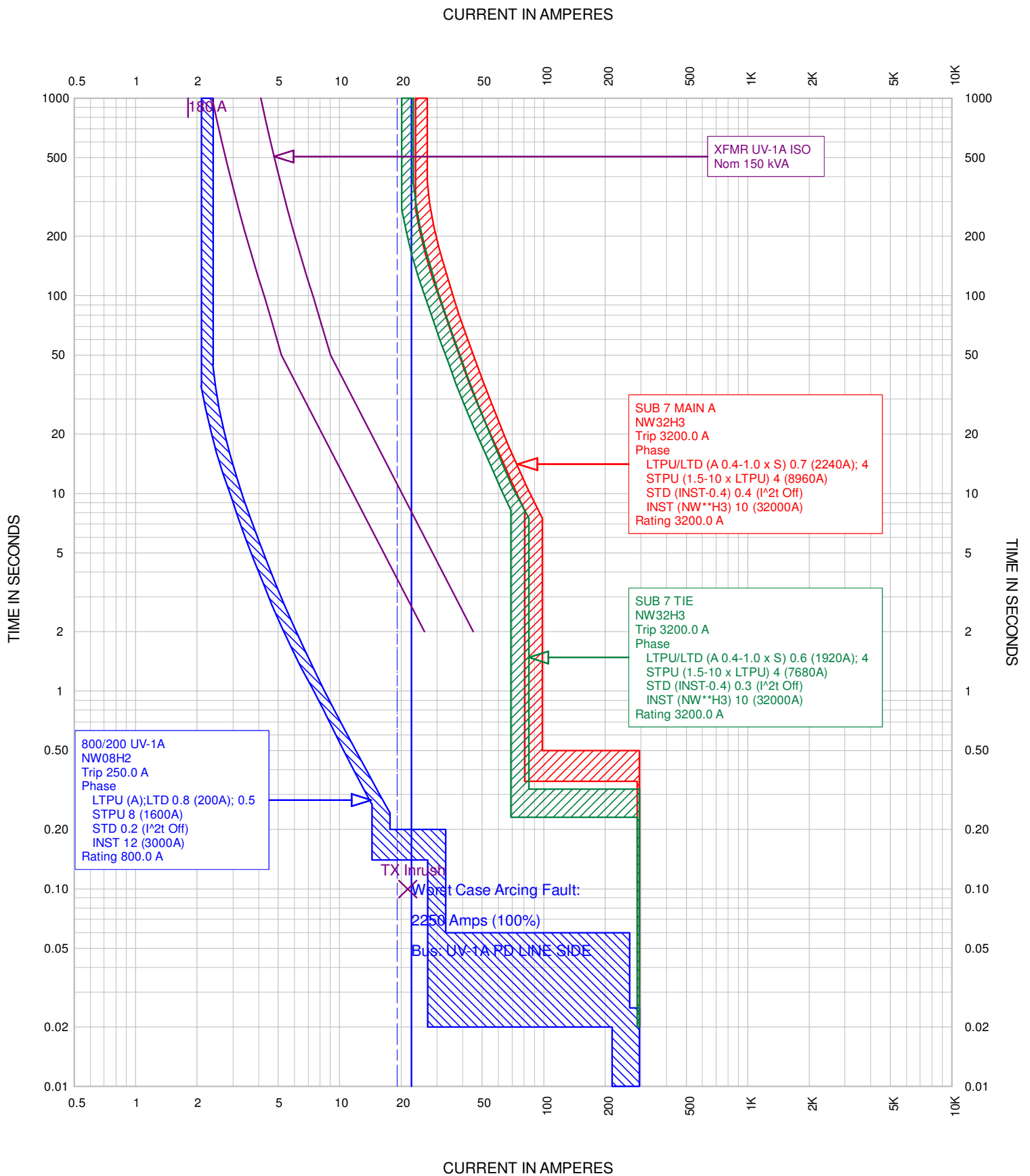
Current Scale x 10

Reference Voltage: 480

May 22, 2015 5:25 PM

AAWWTP

S7A_UV-1A GFP



Online: TCC S7A,B_UV-1A,B_PP-MTB

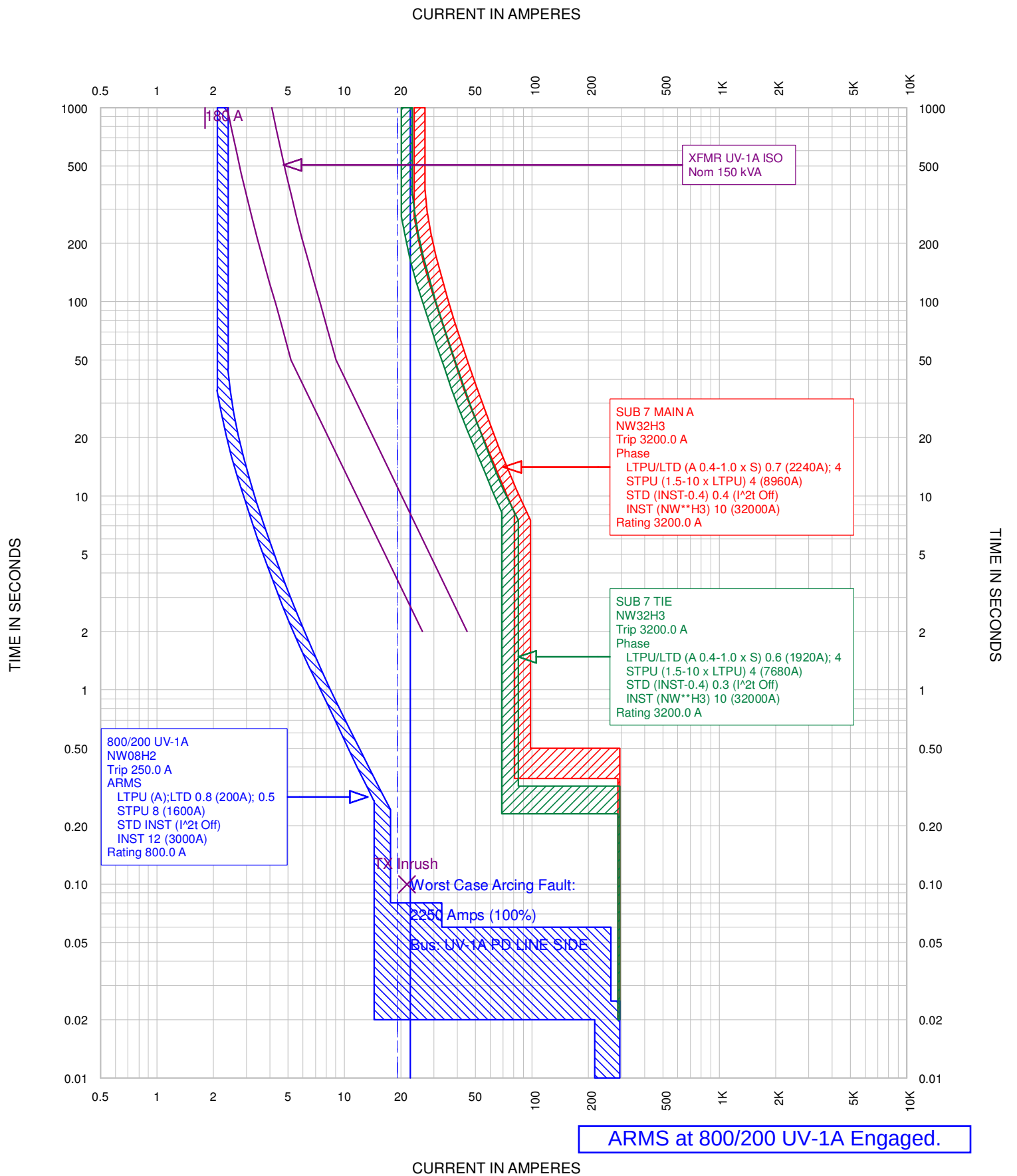
Current Scale x 100

Reference Voltage: 480

March 3, 2017 1:47 PM

AAWWTP

S7A_UV-1A



Online: TCC S7A,B_UV-1A,B_PP-MTB

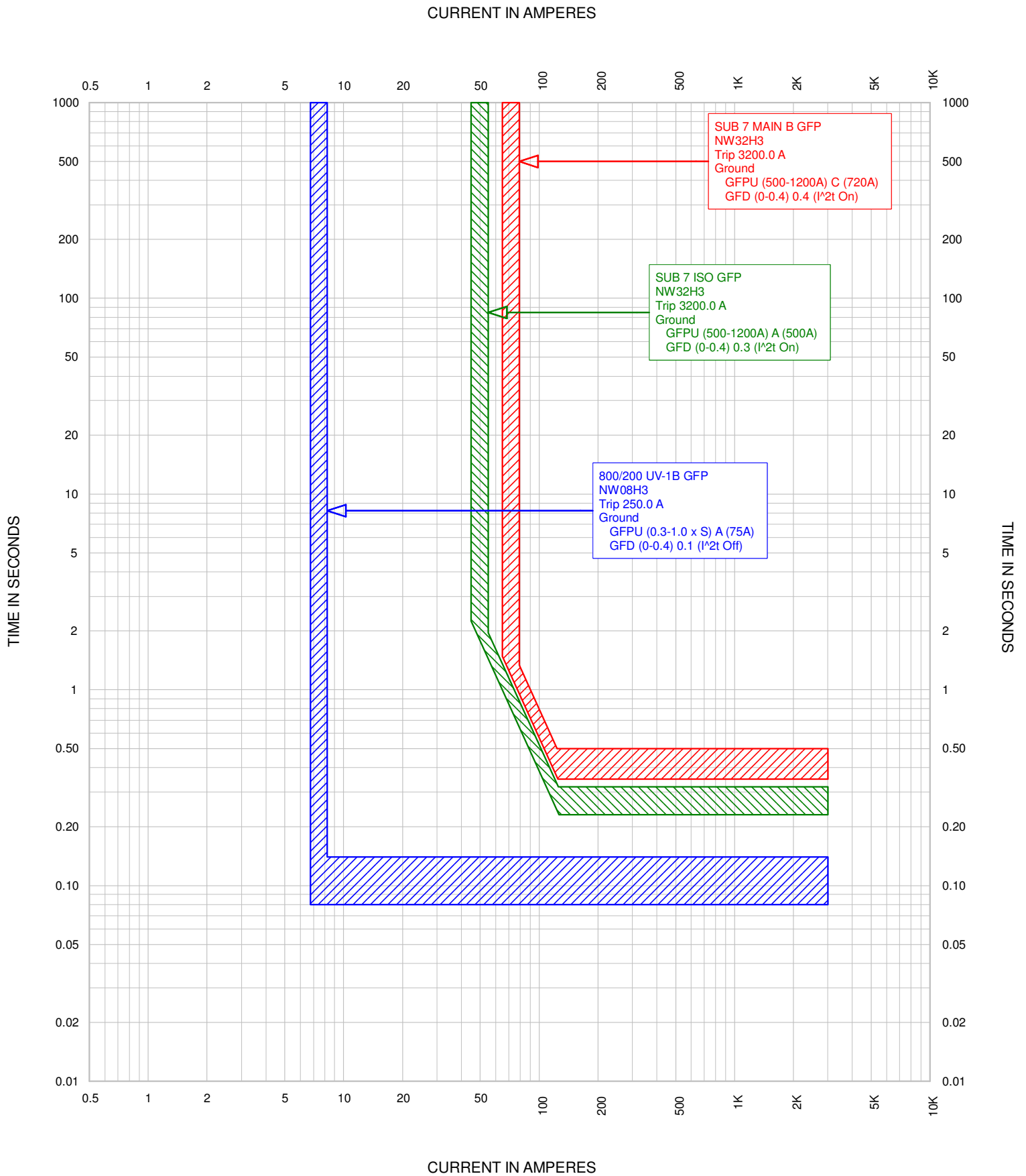
Current Scale x 100

Reference Voltage: 480

March 12, 2017 9:49 PM

AAWWTP

S7A_UV-1A



Online: TCC S7A,B_UV-1A,B_PP-MTB

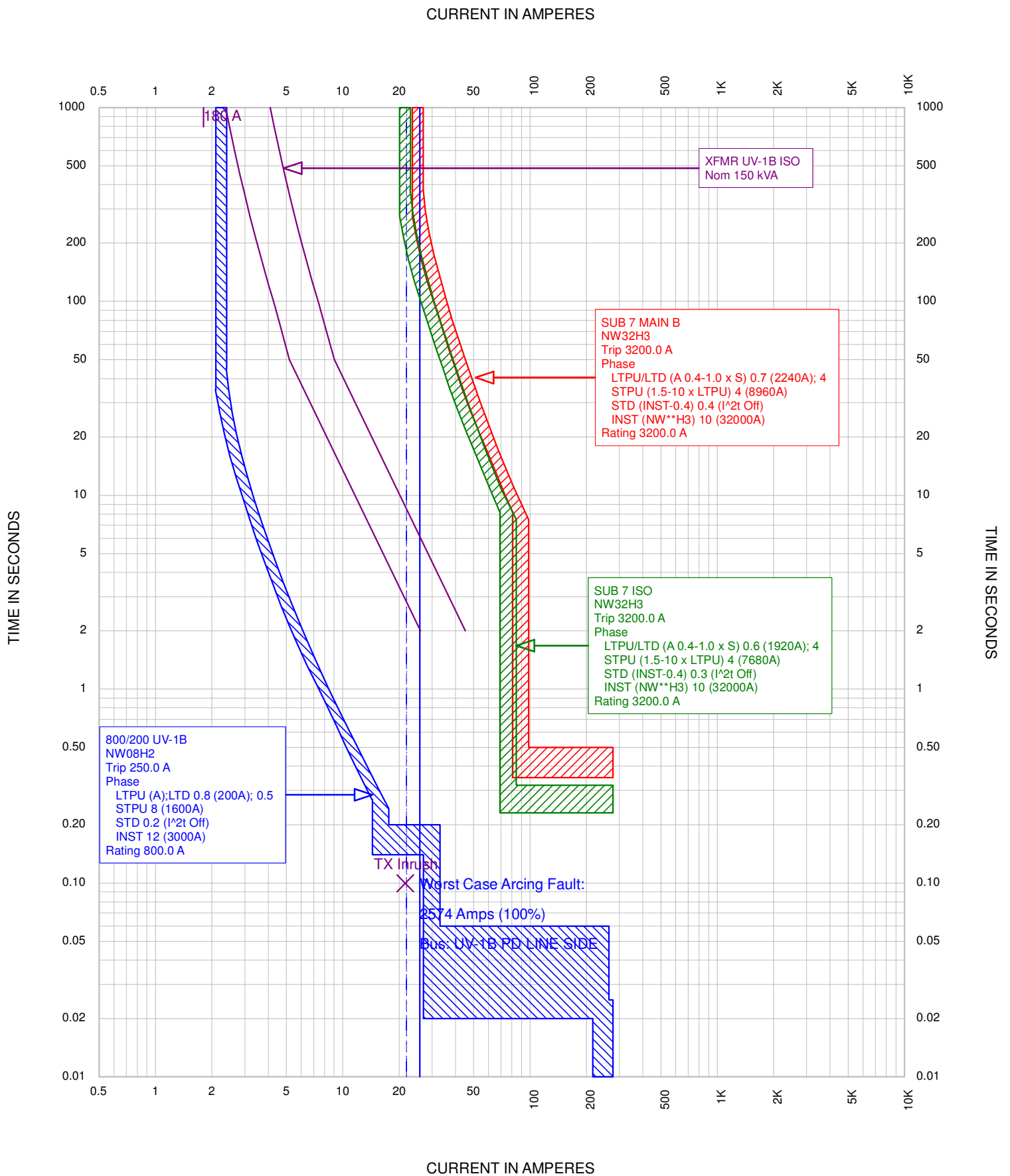
Current Scale x 10

Reference Voltage: 480

May 22, 2015 5:29 PM

AAWWTP

S7B_UV-1B GFP



Online: TCC S7A,B_UV-1A,B_PP-MTB

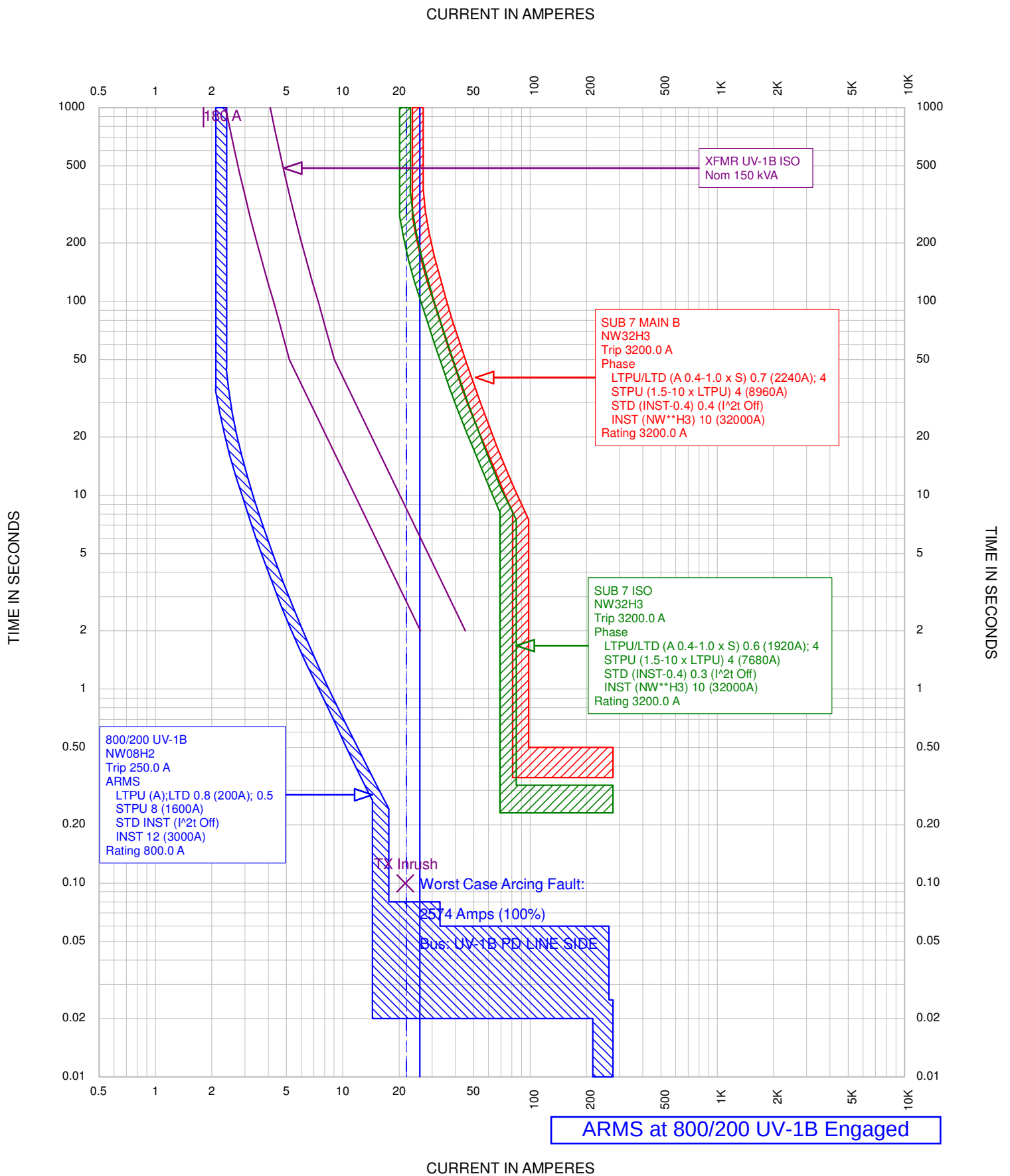
Current Scale x 100

Reference Voltage: 480

March 12, 2017 10:27 PM

AAWWTP

S7B_UV-1B



Online: TCC S7A,B_UV-1A,B_PP-MTB

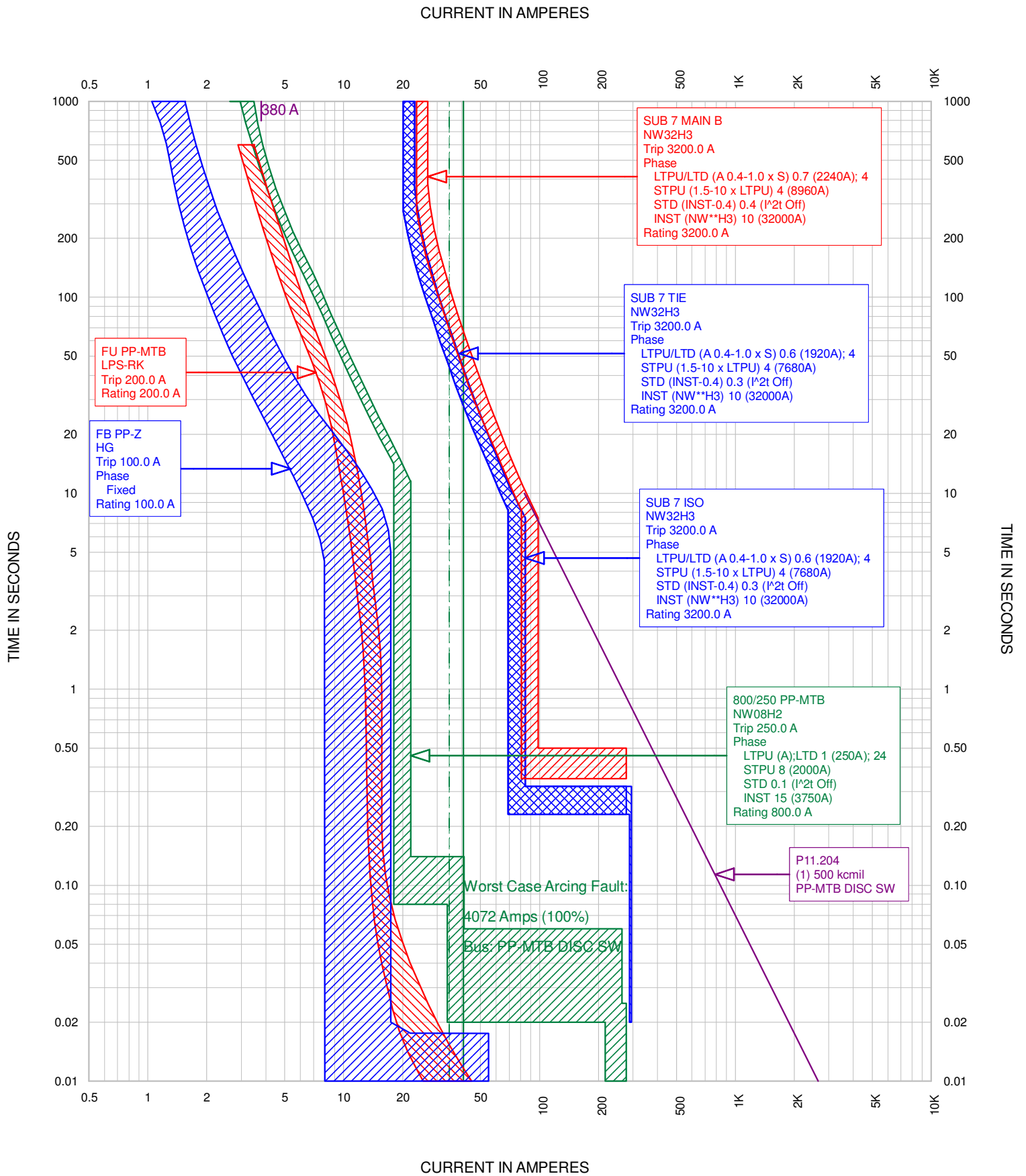
Current Scale x 100

Reference Voltage: 480

March 12, 2017 10:30 PM

AAWWTP

S7B_UV-1B



Online:

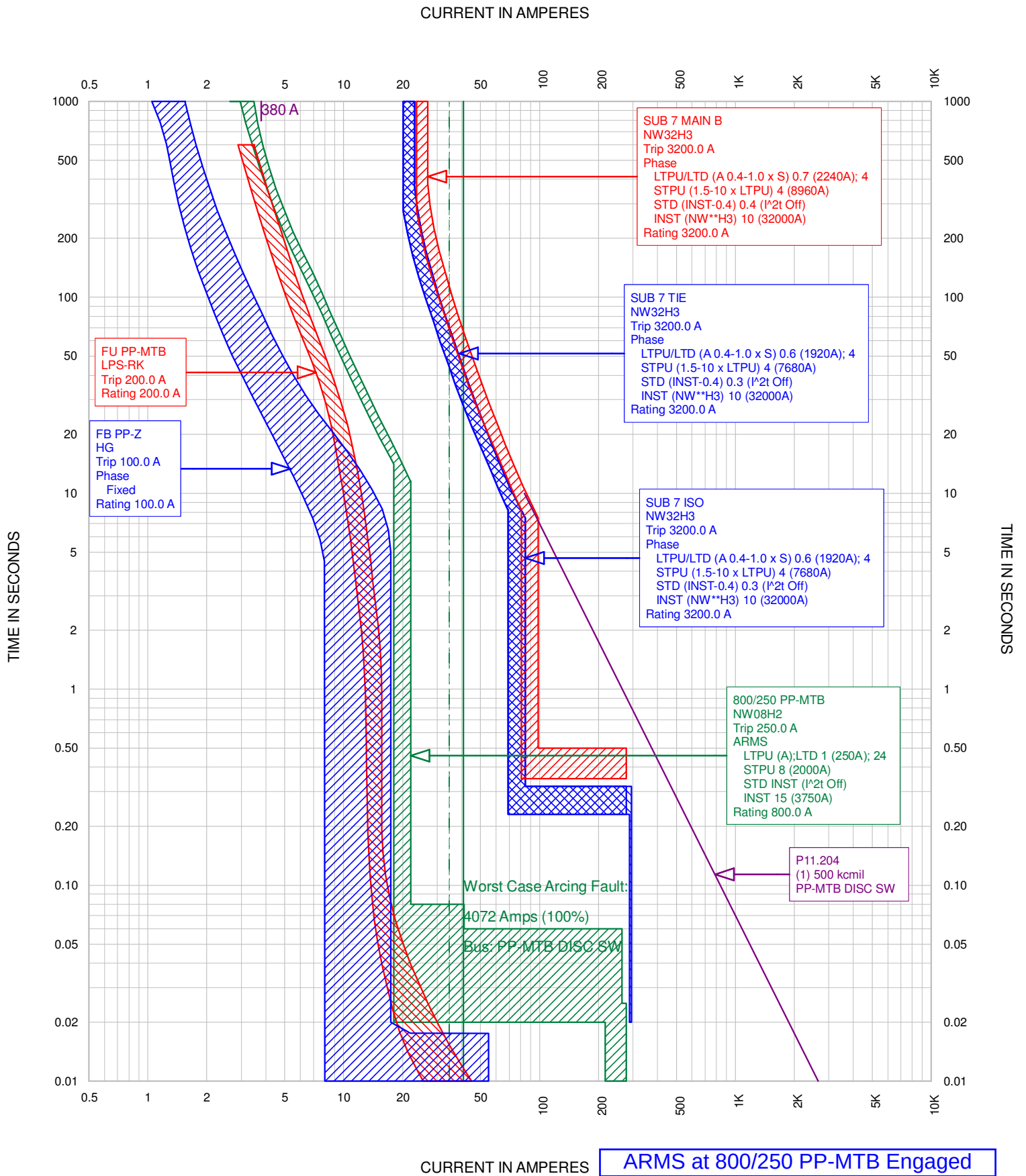
March 12, 2017 10:35 PM

Current Scale x 100

AAWWTP

Reference Voltage: 480

S7B_PP-MTB



Online:

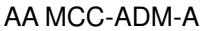
March 12, 2017 10:35 PM

Current Scale x 100

AAWWTP

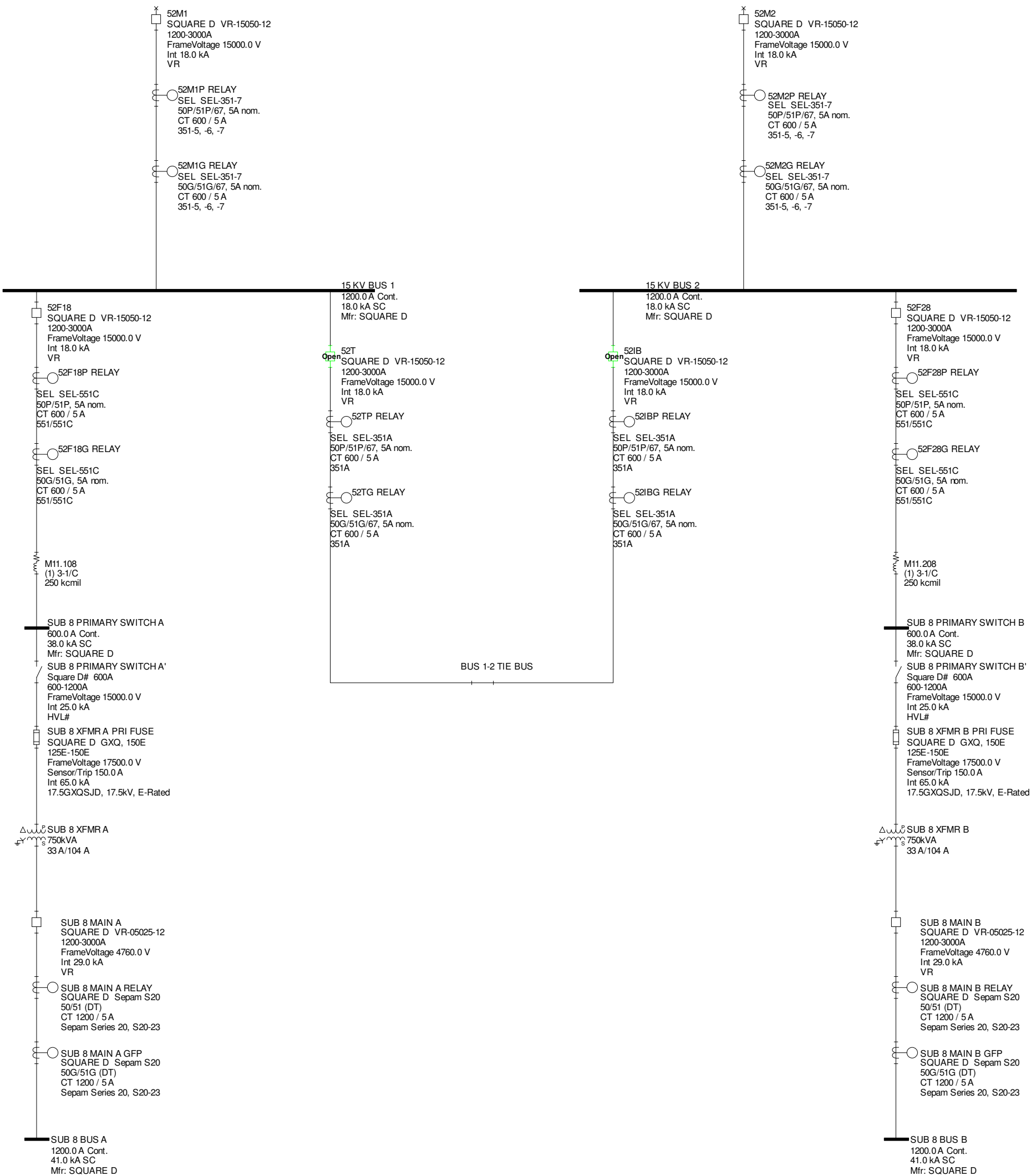
Reference Voltage: 480

S7B_PP-MTB



3.4.10 Substation 8:

Online:	TCC 52F18,28_S8A,B
TCC:	52F18 GFP
TCC:	52F18_S8A
TCC:	52F28 GFP
TCC:	52F28_S8B
Online:	TCC S8A,B_PAB-E1,2,3
TCC:	S8A_PAB-E1 GFP
TCC:	S8A_PAB-E1
TCC:	S8A_PAB-E3 GFP
TCC:	S8A_PAB-E3
TCC:	S8B_PAB-E2 GFP
TCC:	S8B_PAB-E2
Online:	TCC S8A,B_S6A,B
TCC:	S8A_S6A GFP
TCC:	S8A_S6A
TCC:	S8B_S6B GFP
TCC:	S8B_S6B

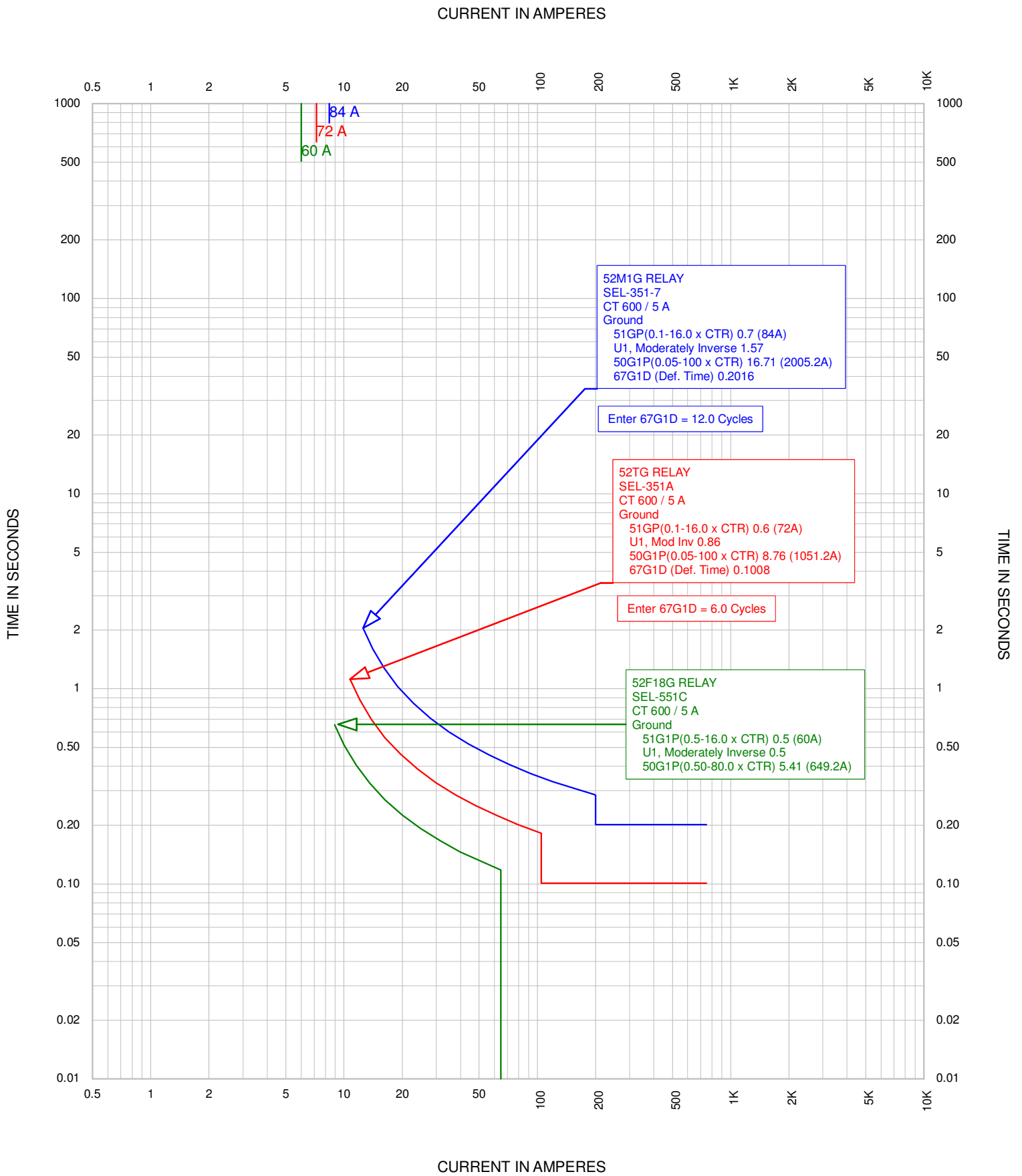


Online: TCC 52F18,28_S8A,B

April 4, 2016 6:29 PM

AAWWTP





Online: TCC 52F18,28_S8A,B

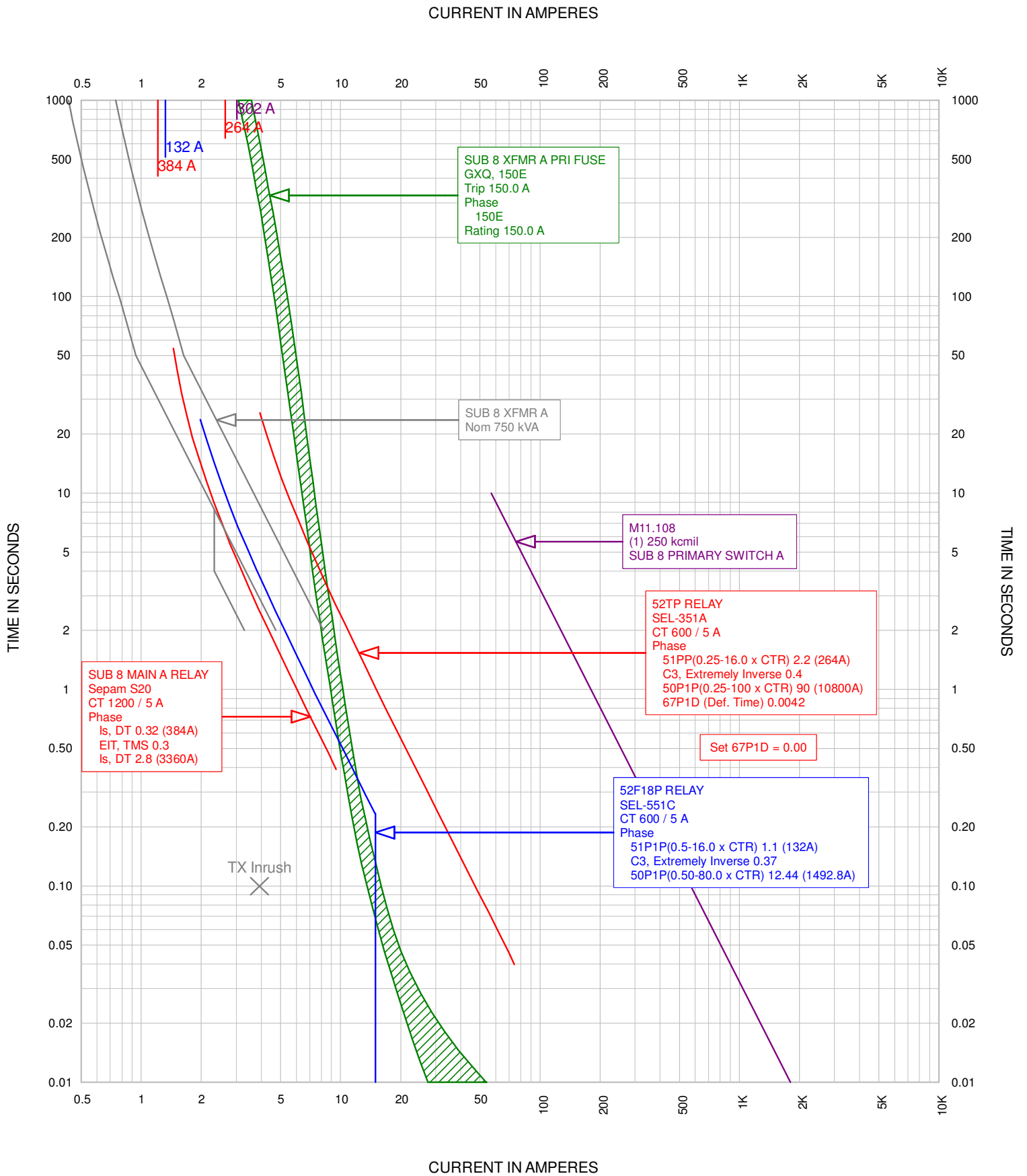
Current Scale x 10

Reference Voltage: 13200

March 3, 2017 3:00 PM

AAWWTP

52F18 GFP



Online: TCC 52F18,28_S8A,B

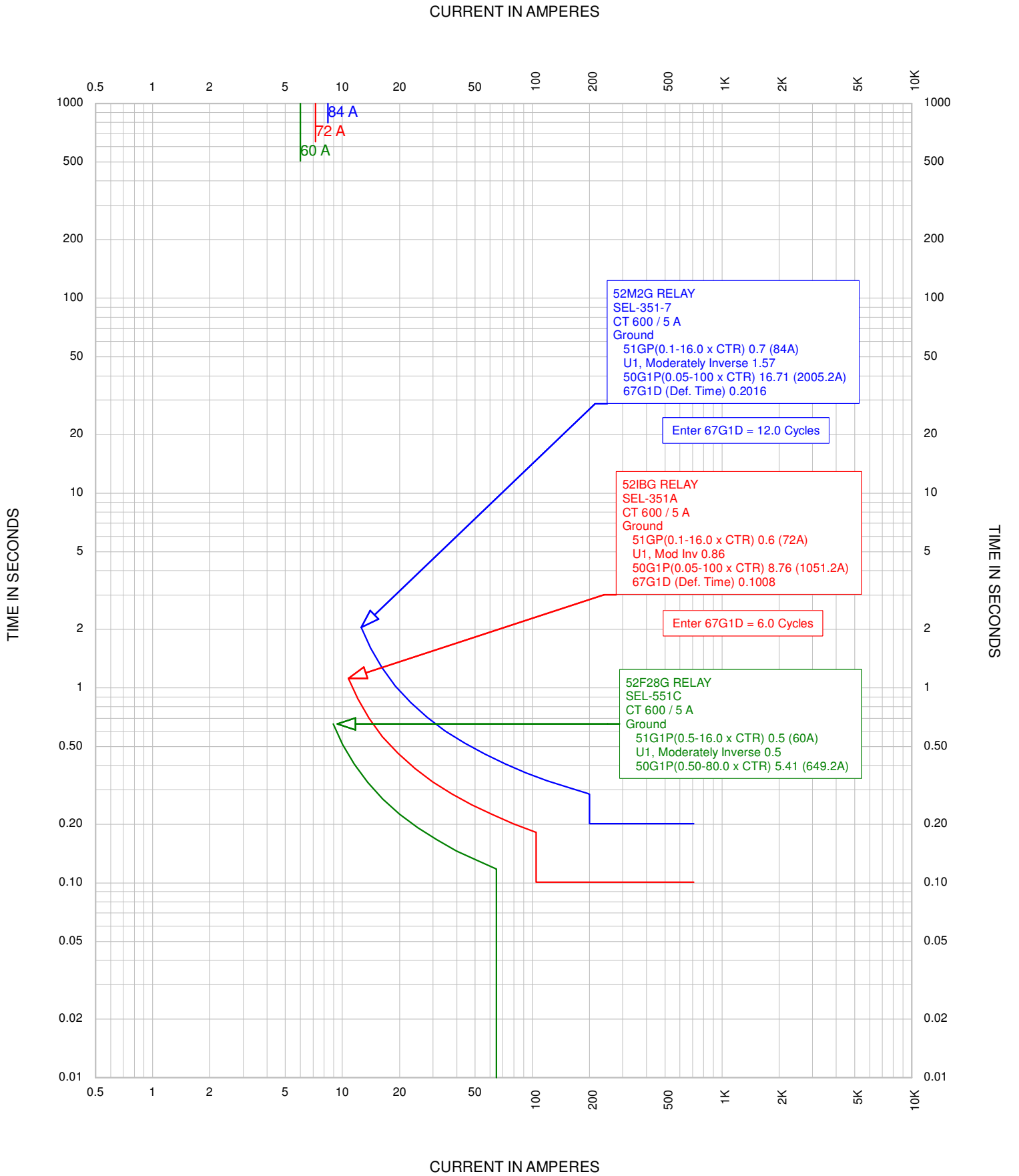
Current Scale x 100

Reference Voltage: 13200

March 3, 2017 3:01 PM

AAWWTP

52F18_S8A



Online: TCC 52F18,28_S8A,B

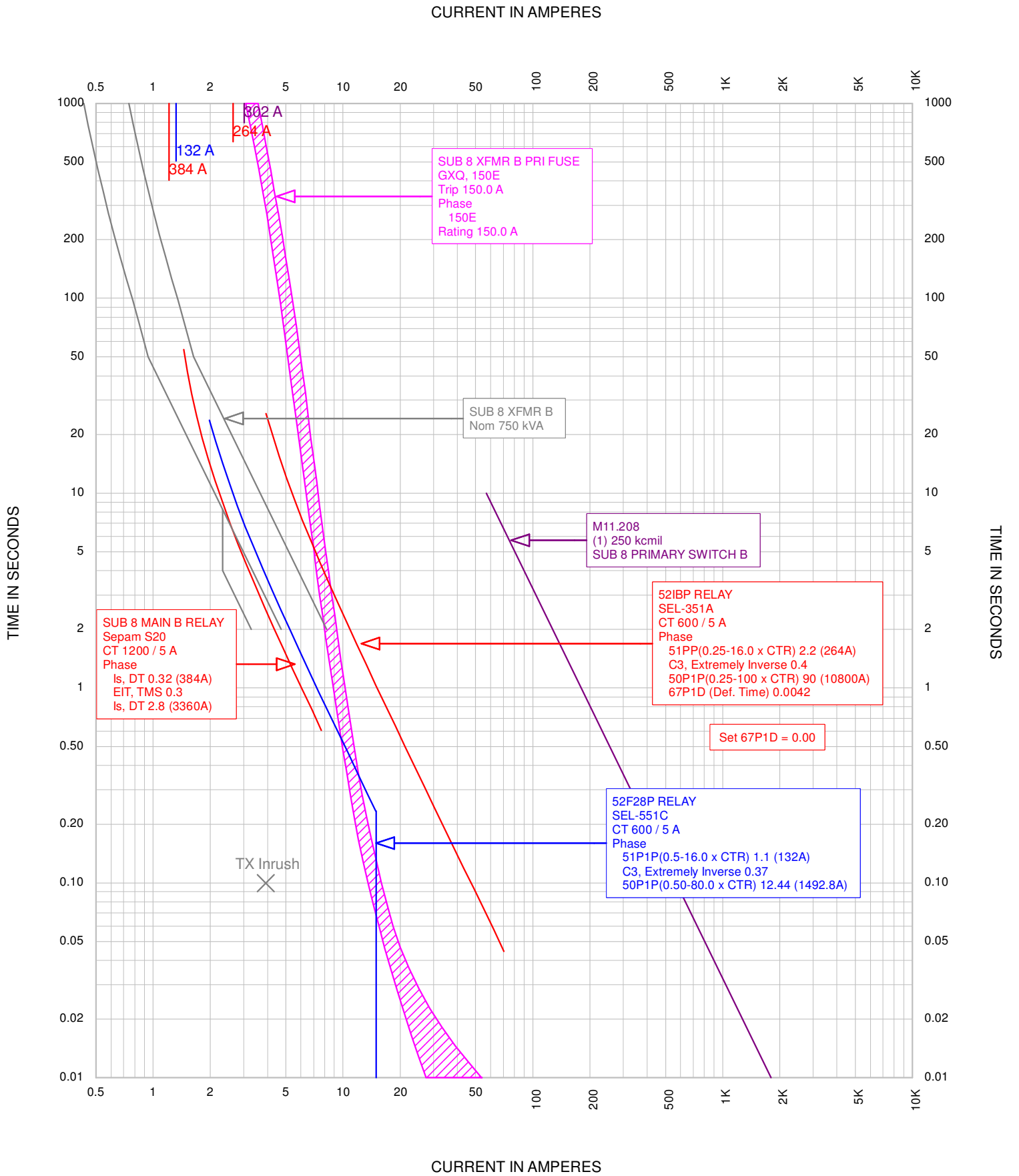
Current Scale x 10

Reference Voltage: 13200

March 3, 2017 3:16 PM

AAWWTP

52F28 GFP



Online: TCC 52F18,28_S8A,B

Current Scale x 100

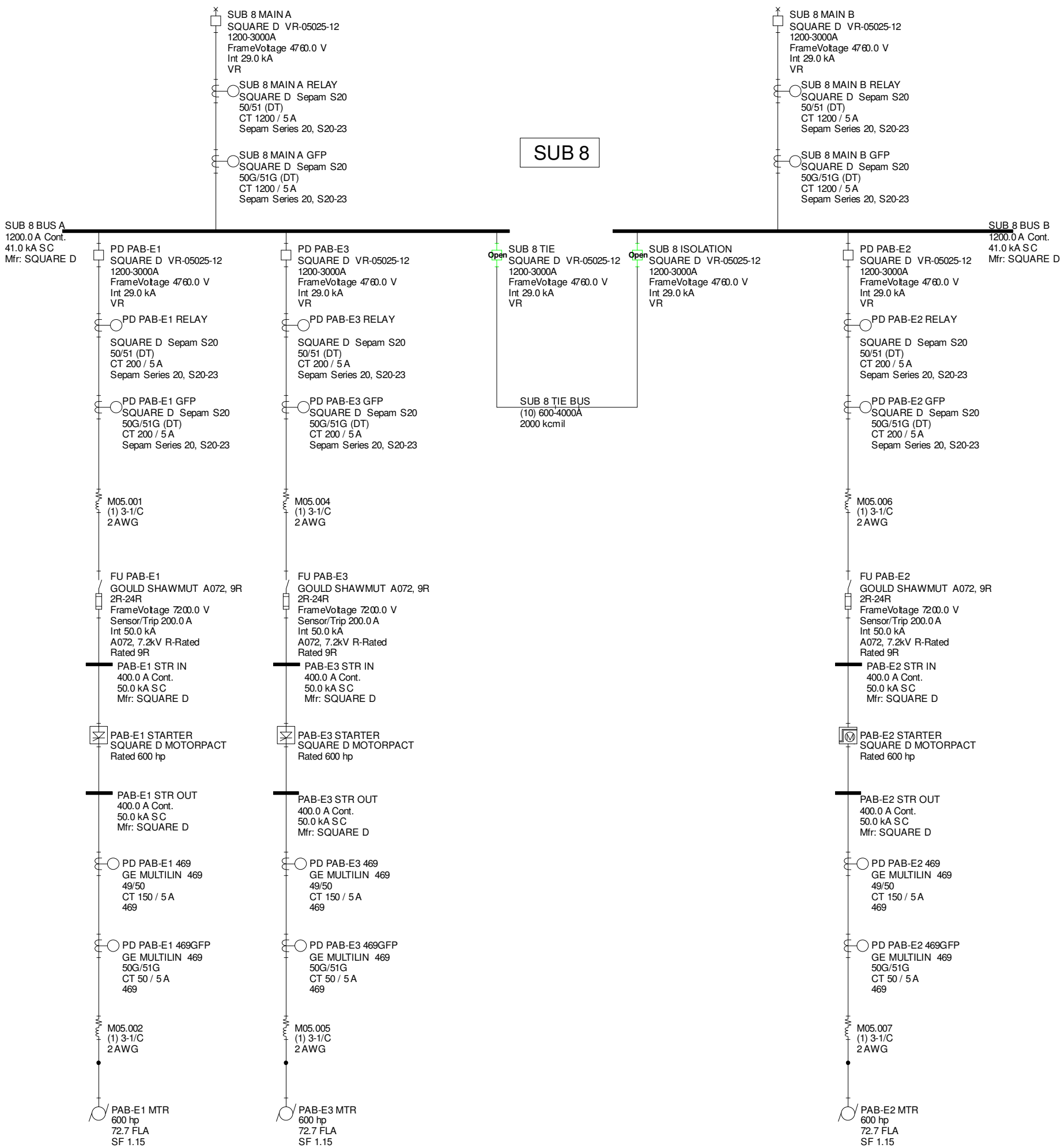
Reference Voltage: 13200

March 3, 2017 3:09 PM

AAWWTP

52F28_S8B

x



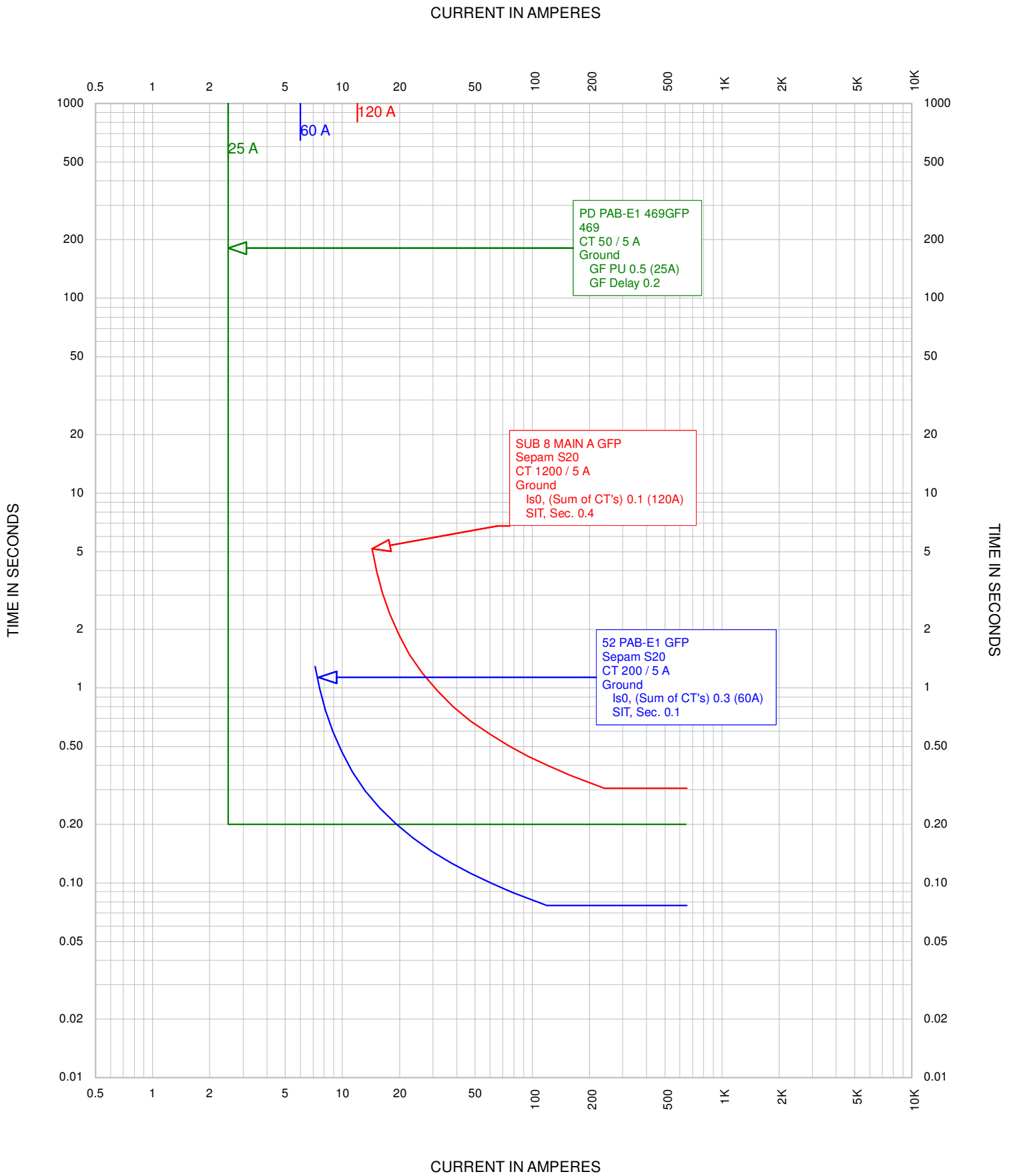
x

Online: TCC S8A,B_PAB-E1,2,3

April 4, 2016 6:44 PM

AAWWTP





Online: TCC S8A,B_PAB-E1,2,3

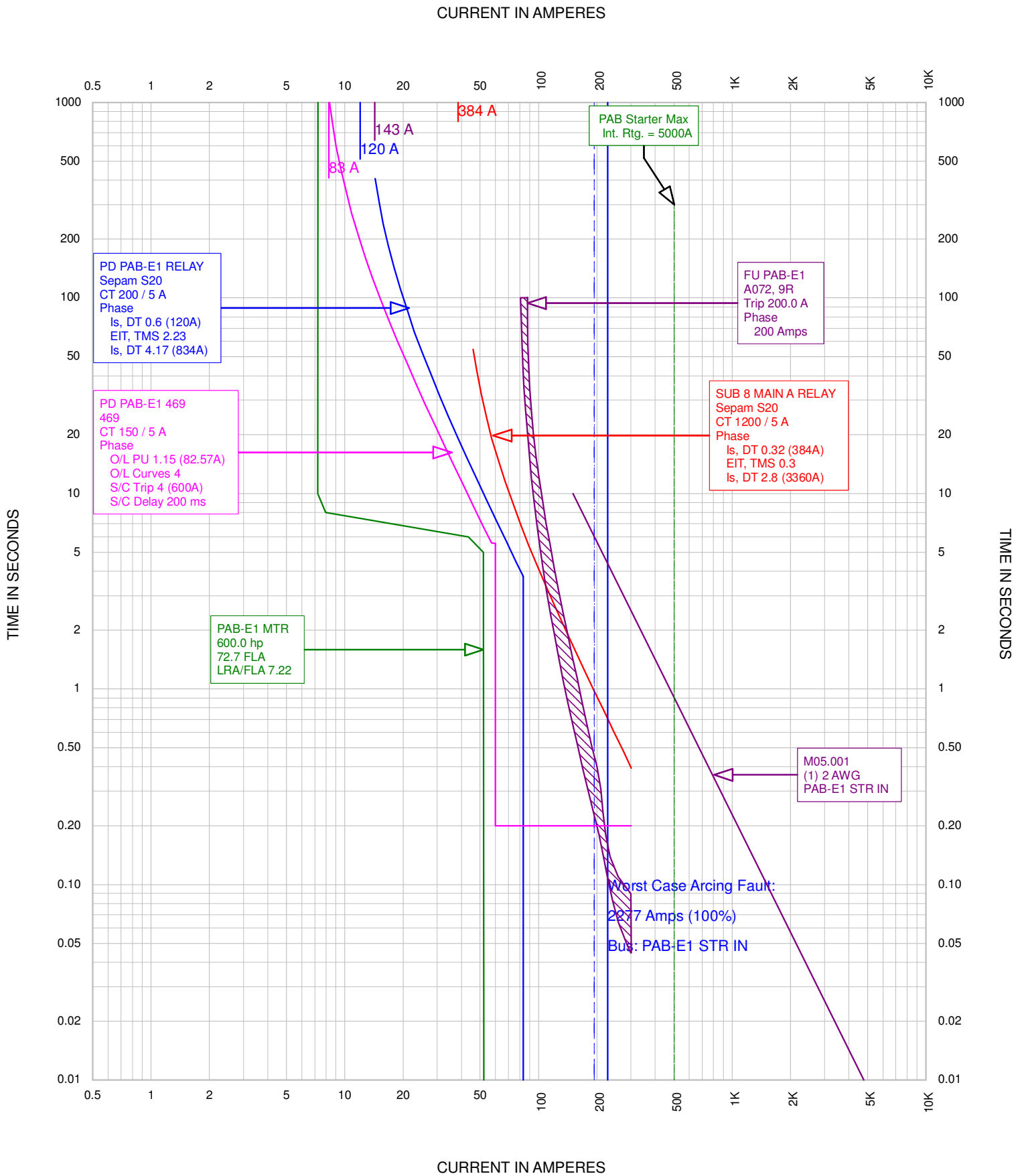
Current Scale x 10

Reference Voltage: 4160

May 22, 2015 5:35 PM

AAWWTP

S8A_PAB-E1 GFP



Online: TCC S8A,B_PAB-E1,2,3

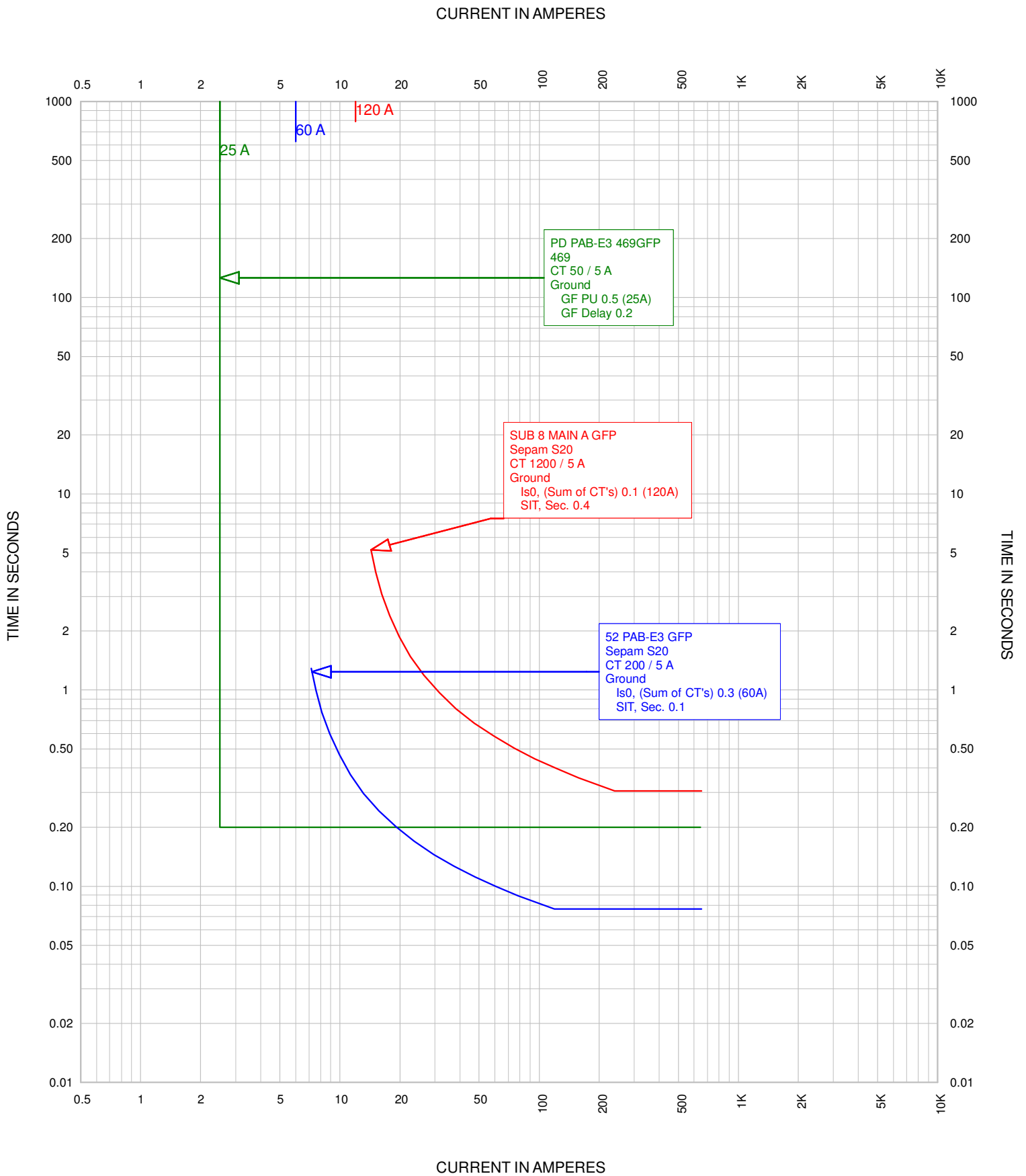
Current Scale x 10

Reference Voltage: 4160

February 15, 2016 2:25 PM

AAWWTP

S8A_PAB-E1



Online: TCC S8A,B_PAB-E1,2,3

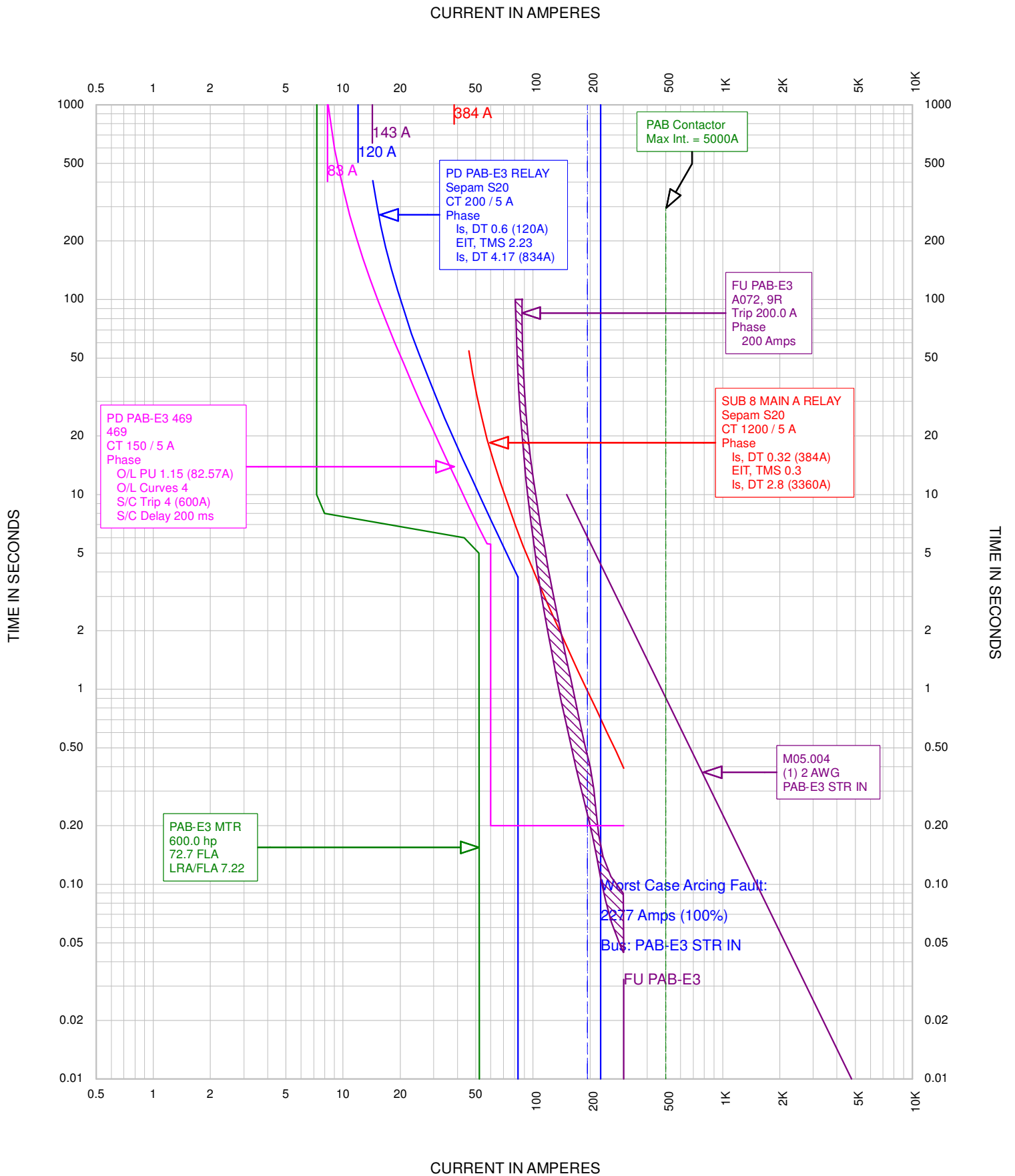
Current Scale x 10

Reference Voltage: 4160

May 22, 2015 5:42 PM

AAWWTP

S8A_PAB-E3 GFP



Online: TCC S8A,B_PAB-E1,2,3

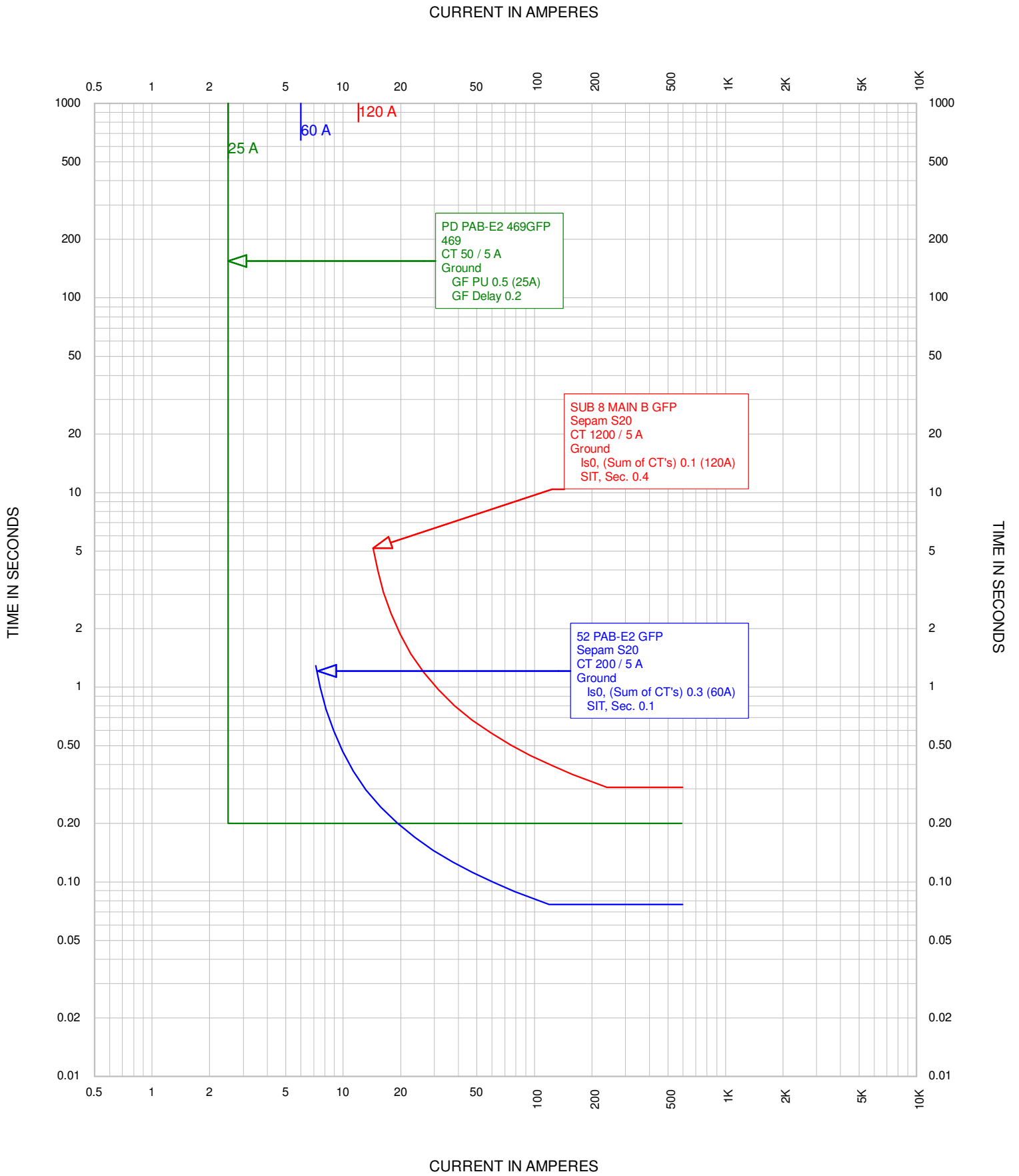
Current Scale x 10

Reference Voltage: 4160

February 15, 2016 2:30 PM

AAWWTP

S8A_PAB-E3



Online: TCC S8A,B_S6A,B

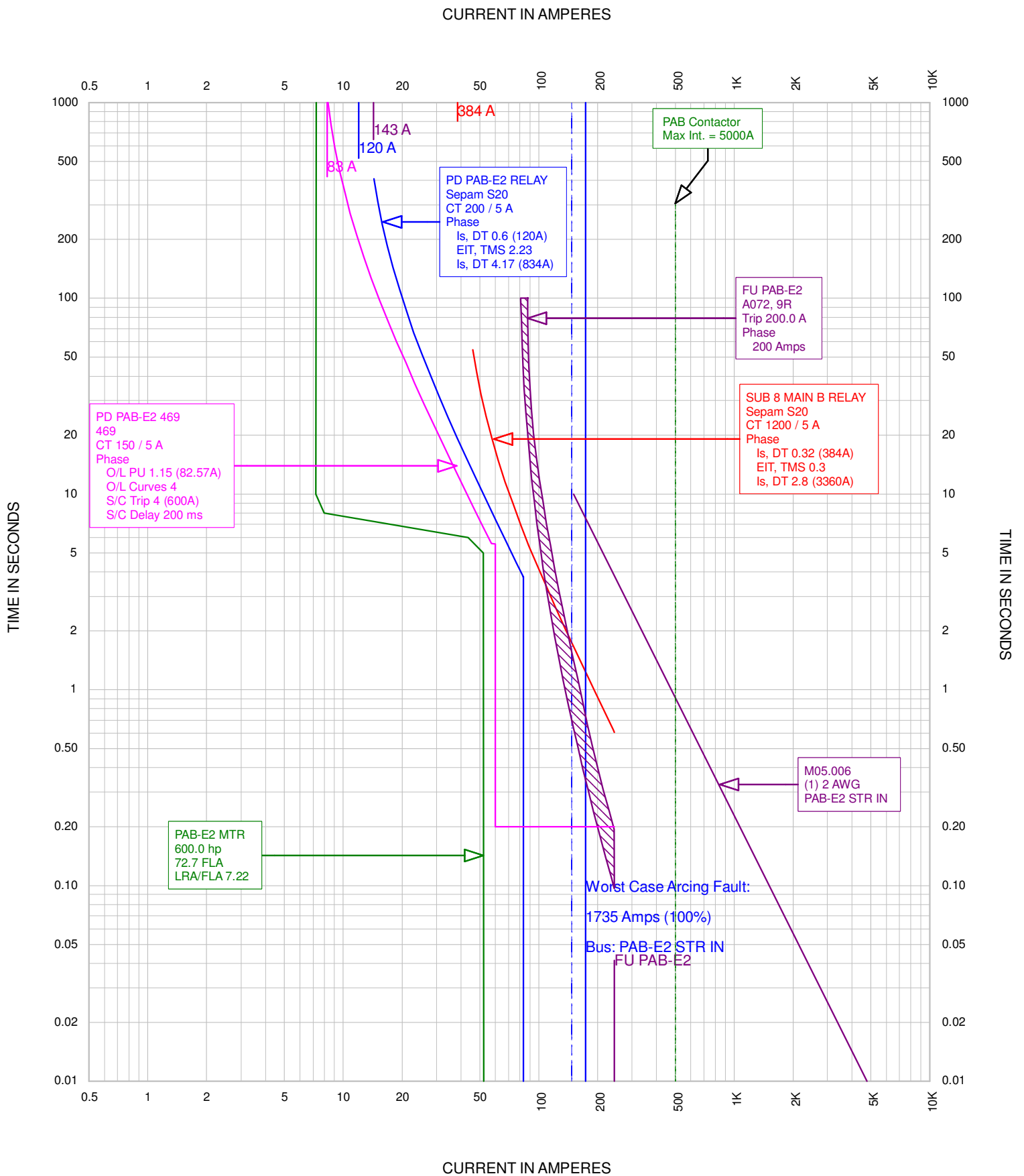
Current Scale x 10

Reference Voltage: 4160

May 22, 2015 5:46 PM

AAWWTP

S8B_PAB-E2 GFP



Online: TCC S8A,B_PAB-E1,2,3

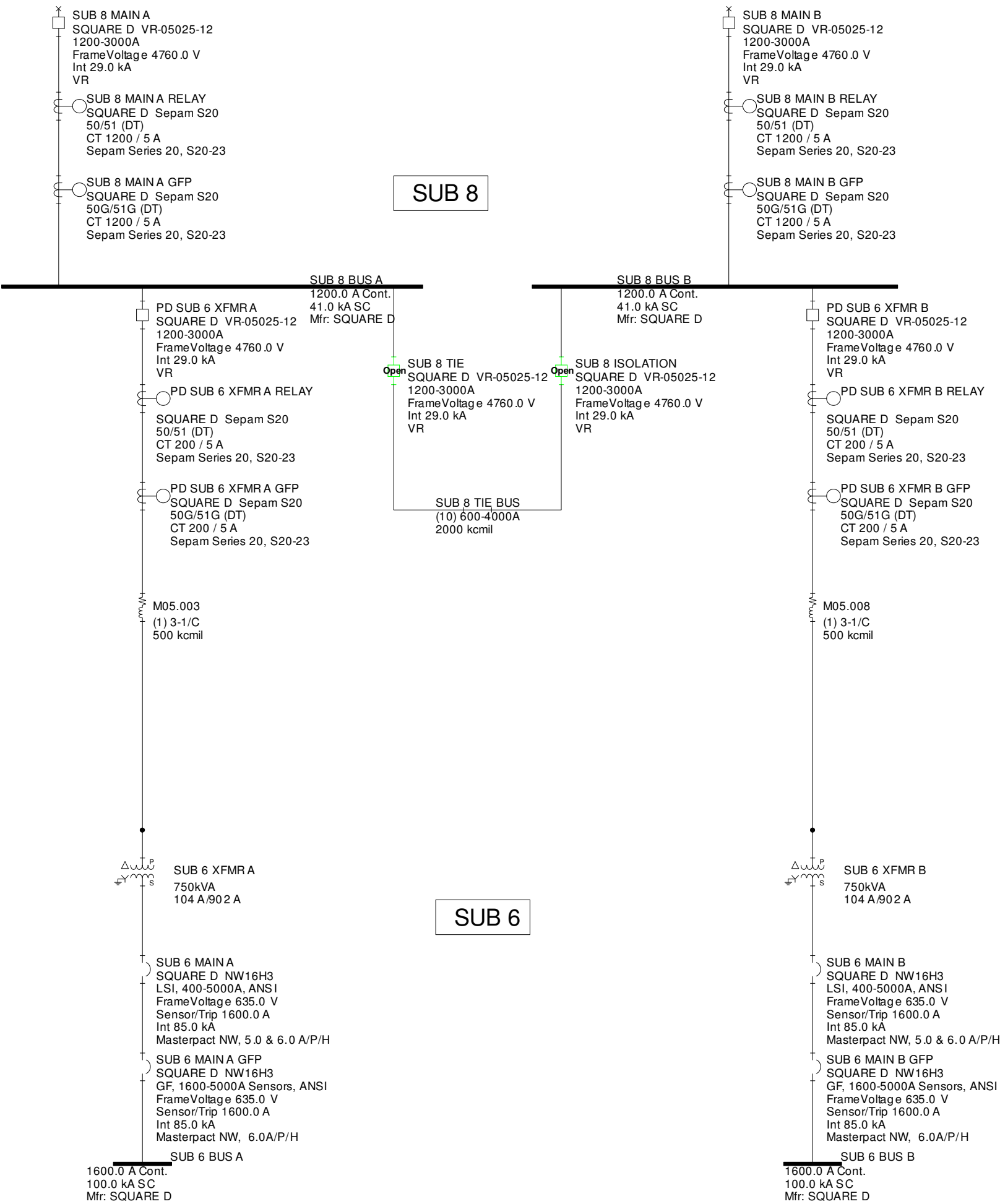
Current Scale x 10

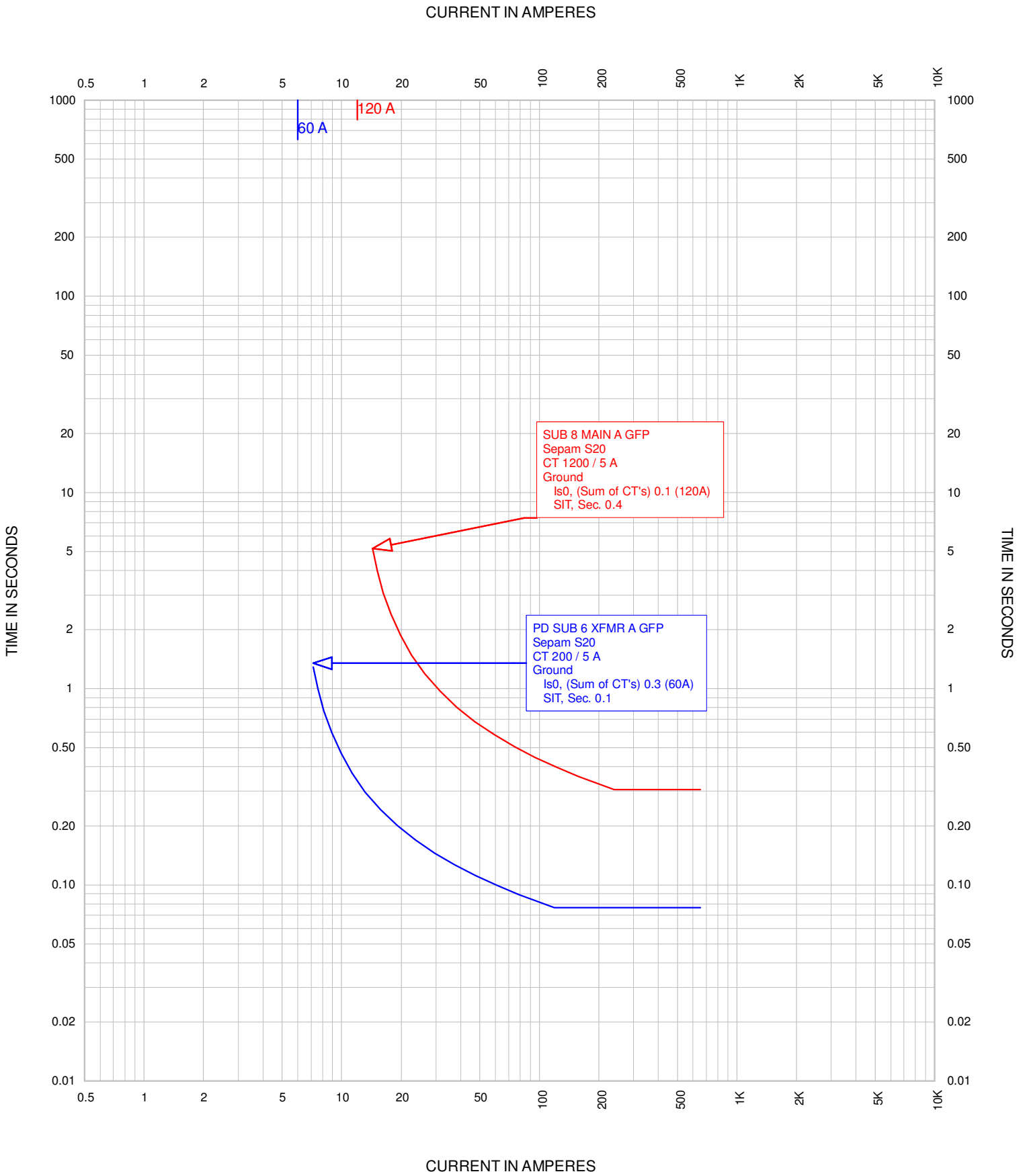
Reference Voltage: 4160

February 15, 2016 2:36 PM

AAWWTP

S8B_PAB-E2





Online: TCC S8A,B_S6A,B

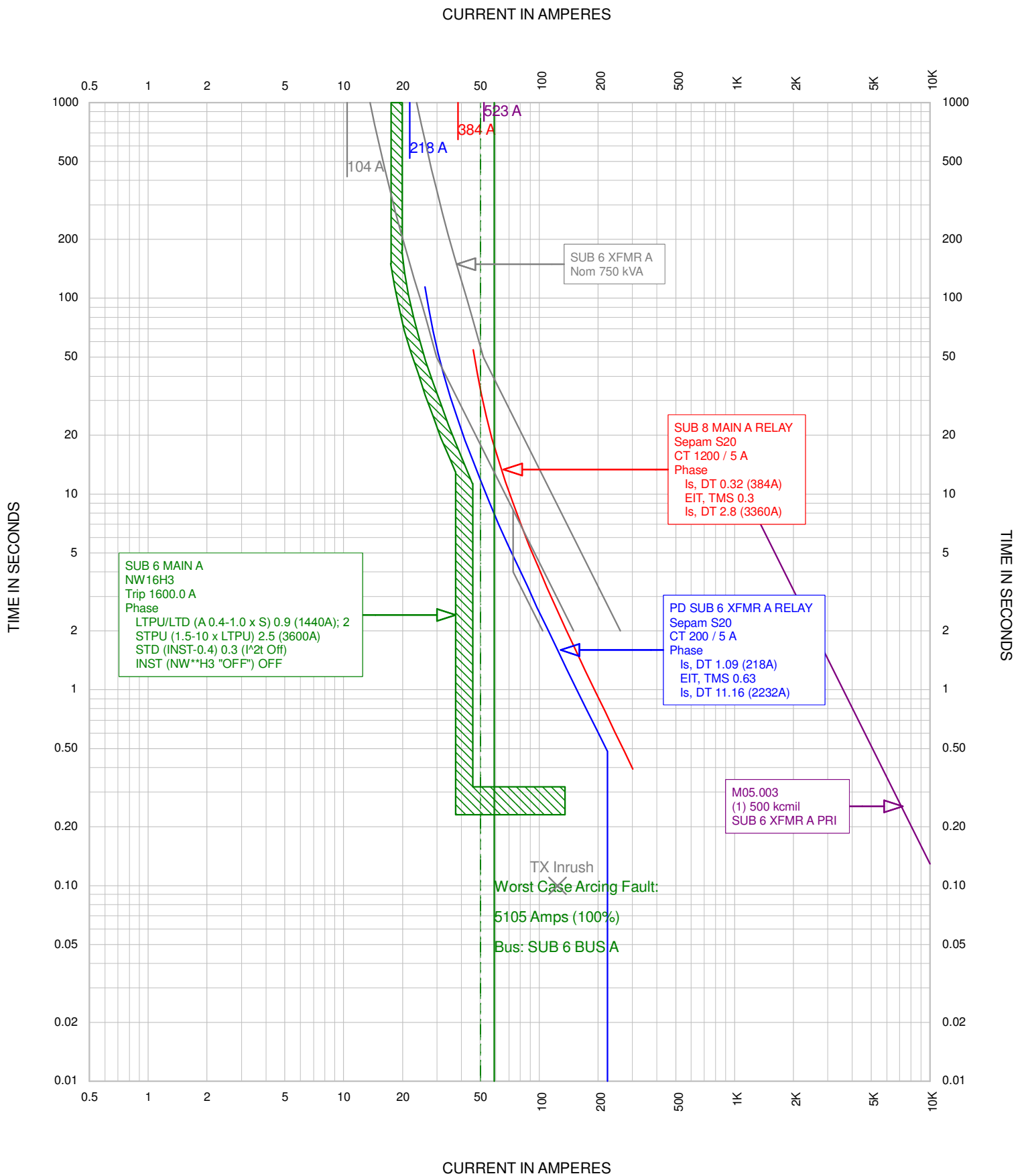
Current Scale x 10

Reference Voltage: 4160

May 22, 2015 5:48 PM

AAWWTP

S8A_S6A GFP



Online: TCC S8A,B_S6A,B

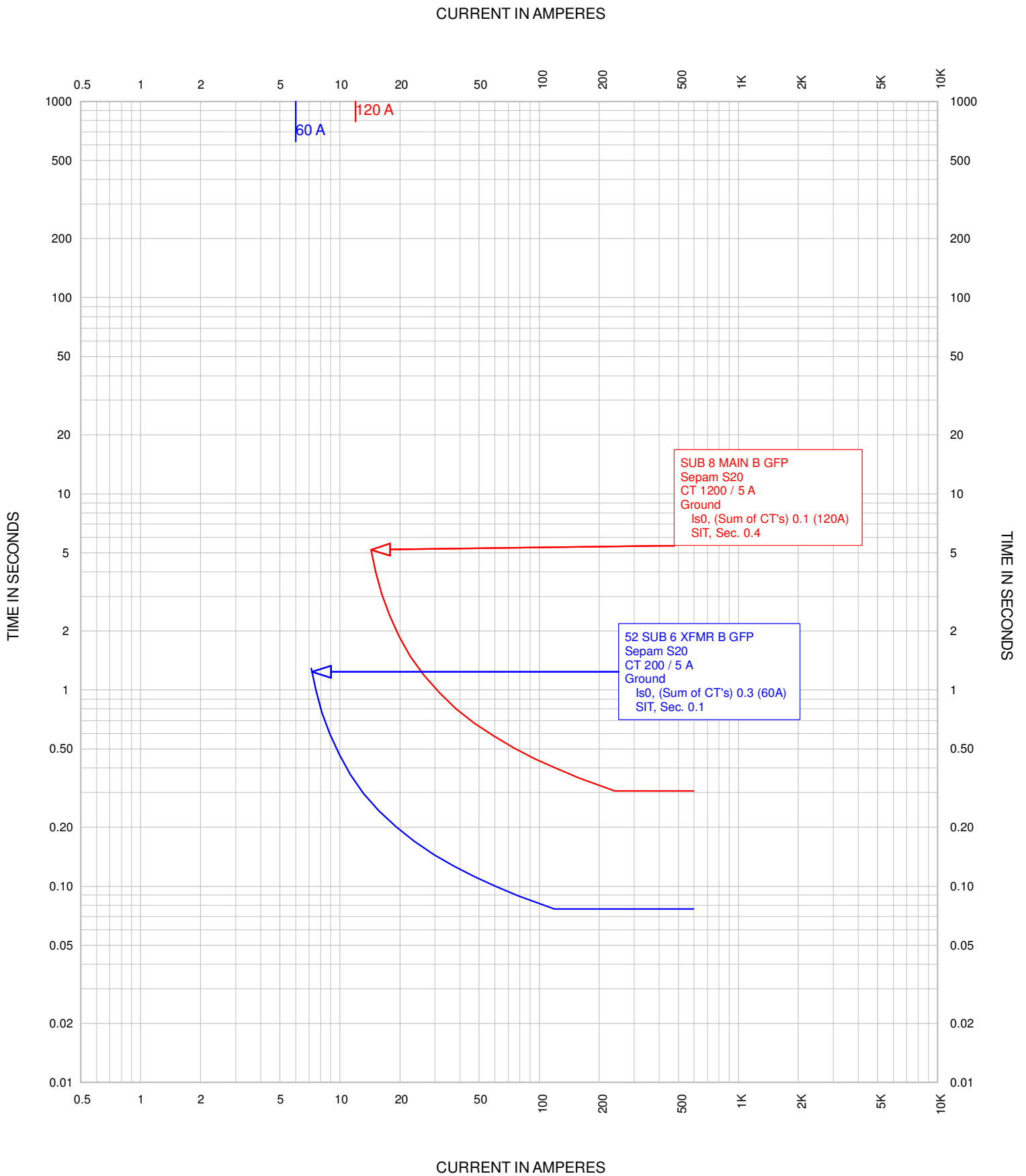
February 15, 2016 3:09 PM

Current Scale x 10

AAWWTP

Reference Voltage: 4160

S8A_S6A



Online: TCC S8A,B_S6A,B

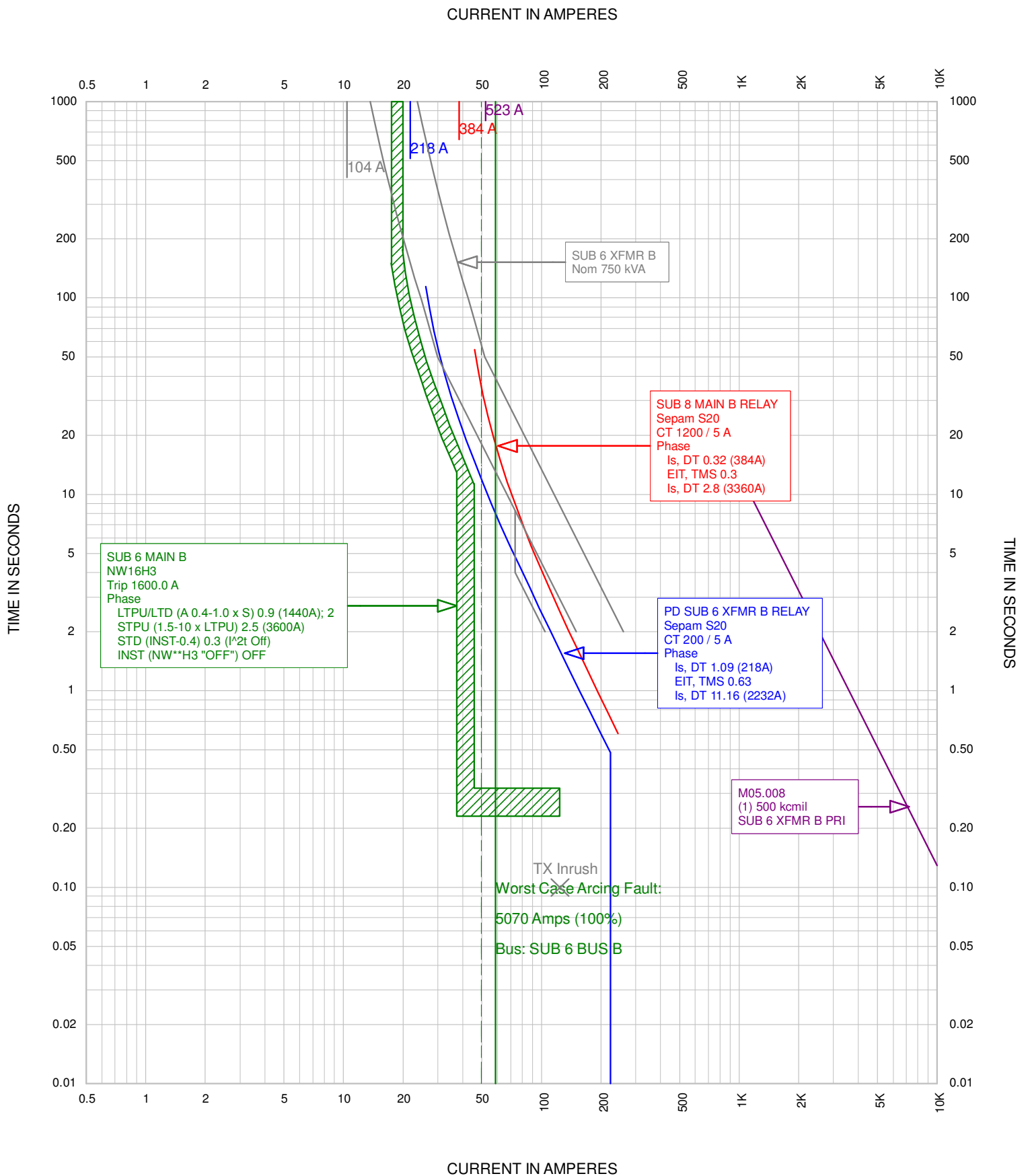
Current Scale x 10

Reference Voltage: 4160

May 22, 2015 5:52 PM

AAWWTP

S8B_S6B GFP



Online: TCC S8A,B_S6A,B

Current Scale x 10

Reference Voltage: 4160

February 15, 2016 3:17 PM

AAWWTP

S8B_S6B

CHAPTER 4

PROTECTIVE DEVICE SETTINGS

Project: SKMmodel 112015
ANN ARBOR WASTEWATER TREATMENT PLANT
PLANT FACILITIES RENOVATION
POWER DISTRIBUTION SYSTEM STUDY
AAWWTP

High Voltage Fuses

Prot Dev	Func Name	Connected Bus	Voltage	Manufacturer	Type	Description	Cartridge	Cartridge Size	Trip
FU DTE North	Phase	DTE NORTH	13,200	S&C	SM-5, 25kV E-Rated	15E-300E Slow Speed	SM-5, 300E	300	300
FU DTE South	Phase	DTE SOUTH	13,200	S&C	SM-5, 25kV E-Rated	15E-300E Slow Speed	SM-5, 300E	300	300
FU PAB-E1	Phase	PAB-E1 STR IN	4,160	GOULD SHAWMUT	A072, 7.2kV R-Rated	2R-24R	A072, 9R	200	200
FU PAB-E2	Phase	PAB-E2 STR IN	4,160	GOULD SHAWMUT	A072, 7.2kV R-Rated	2R-24R	A072, 9R	200	200
FU PAB-E3	Phase	PAB-E3 STR IN	4,160	GOULD SHAWMUT	A072, 7.2kV R-Rated	2R-24R	A072, 9R	200	200
SUB 5 XFMR A PRI FUSE	Phase	SUB 5 PRIMARY	13,200	CUTLER-HAMMER	RBA, RDB-400, 2.4-34.5kV E-Rated	3E-400E Standard Speed	RBA, RDB-400, 400E	400	400
SUB 5 XFMR B PRI FUSE	Phase	SUB 5 PRIMARY	13,200	CUTLER-HAMMER	RBA, RDB-400, 2.4-34.5kV E-Rated	3E-400E Standard Speed	RBA, RDB-400, 400E	400	400
SUB 8 XFMR A PRI FUSE	Phase	SUB 8 PRIMARY	13,200	SQUARE D	17.5GXQSJD, 17.5kV, E-Rated	125E-150E	GXQ, 150E	150	150
SUB 8 XFMR B PRI FUSE	Phase	SUB 8 PRIMARY	13,200	SQUARE D	17.5GXQSJD, 17.5kV, E-Rated	125E-150E	GXQ, 150E	150	150

Project: SKMmodel 112015
ANN ARBOR WASTEWATER TREATMENT PLANT
PLANT FACILITIES RENOVATION
POWER DISTRIBUTION SYSTEM STUDY
AAWWTP

Low Voltage Fuses

Prot Dev	Func Name	Connected Bus	Voltage	Manufacturer	Type	Description	Cartridge	Cartridge Size	Trip
FU 0502	Phase	MCC-F	480	BUSSMANN	LPS-RK_SP, 600V Class RK1	1-600A	LPS-RK_SP	80	80
FU 0519	Phase	MCC-F.	480	BUSSMANN	LPS-RK_SP, 600V Class RK1	1-600A	LPS-RK_SP	2	2
FU 0521	Phase	MCC-F	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	20	20
FU 0523	Phase	MCC-F..	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	90	90
FU 0525	Phase	MCC-F	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU 0527	Phase	MCC-F	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	3	3
FU 0528	Phase	MCC-F	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	6	6
FU 0530	Phase	MCC-F.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	3	3
FU 0535	Phase	MCC-F	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	7	7
FU 0536	Phase	MCC-F	480	BUSSMANN	FRS-R, 600V Class	1-600A	FRS-R	7	7

FU 0542	Phase	MCC-F..	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	90	90
FU 0546	Phase	MCC-F	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	200	200
FU 0548	Phase	MCC-F	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	125	125
FU 0551	Phase	MCC-F..	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU 0553	Phase	MCC-F.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	2	2
FU 0554	Phase	MCC-F	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	7	7
FU 0555	Phase	MCC-F.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	2	2
FU 0557	Phase	MCC-F..	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	12	12
FU 0559	Phase	MCC-F.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	30	30
FU 0560	Phase	MCC-F	480	BUSSMANN	LPS-RK_SP, 600V Class RK1	1-600A	LPS-RK_SP	125	125
FU 0562	Phase	MCC-F	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	7	7
FU 0563	Phase	MCC-F	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	7	7
FU 0564	Phase	MCC-F	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	7	7
FU 0565	Phase	MCC-F..	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	7	7
FU 0566	Phase	MCC-F..	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	7	7
FU 0573	Phase	MCC-F.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	90	90

FU 0574	Phase	MCC-F.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	9	9
FU 0575	Phase	MCC-F.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	18	18
FU 0576	Phase	MCC-F.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	10	10
FU 0577	Phase	MCC-F..	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	7	7
FU 0578	Phase	MCC-F..	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	7	7
FU 0645	Phase	MCC-M	480	BUSSMANN	LPS-RK_SP, 600V Class RK1	1-600A	LPS-RK_SP	80	80
FU 0646	Phase	MCC-M.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU 0652	Phase	MCC-M	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	60	60
FU 0654	Phase	MCC-M	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU 0656	Phase	MCC-M	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU 0657	Phase	MCC-M	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU 0659	Phase	MCC-M	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU 0660	Phase	MCC-M.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	20	20
FU 0662	Phase	MCC-M.	480	BUSSMANN	LPS-RK_SP, 600V Class RK1	1-600A	LPS-RK_SP	20	20
FU 0663	Phase	MCC-M.	480	BUSSMANN	LPS-RK_SP, 600V Class RK1	1-600A	LPS-RK_SP	30	30
FU 0664	Phase	MCC-M.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15

FU 0665	Phase	MCC-M.	480	BUSSMANN	LPS-RK_SP, 600V Class RK1	1-600A	LPS-RK_SP	30	30
FU 0668	Phase	MCC-M.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	200	200
FU 0670	Phase	MCC-M.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	20	20
FU 0677	Phase	MCC-P	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	300	300
FU 0679	Phase	MCC-P	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU 0681	Phase	MCC-P	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	20	20
FU 0682	Phase	MCC-P	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU 0683	Phase	MCC-P	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	20	20
FU 0685	Phase	MCC-P	480	BUSSMANN	LPS-RK_SP, 600V Class RK1	1-600A	LPS-RK_SP	2	2
FU 0687	Phase	MCC-P	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	40	40
FU 0688	Phase	MCC-P	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU 0689	Phase	MCC-P	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU 0691	Phase	MCC-P	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	20	20
FU 0693	Phase	MCC-P	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU 0695	Phase	MCC-P	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	20	20
FU 0697	Phase	MCC-P	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15

FU 0699	Phase	MCC-N.	480	BUSSMANN	LPS-RK_SP, 600V Class RK1	1-600A	LPS-RK_SP	125	125
FU 0711	Phase	MCC-N	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU 0712	Phase	MCC-N.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	20	20
FU 0715	Phase	MCC-N.	480	BUSSMANN	LPS-RK_SP, 600V Class RK1	1-600A	LPS-RK_SP	30	30
FU 0716	Phase	MCC-N.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU 0722	Phase	MCC-N.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU 0730	Phase	MCC-N.	480	BUSSMANN	LPS-RK_SP, 600V Class RK1	1-600A	LPS-RK_SP	40	40
FU 0731	Phase	MCC-N.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU 0733	Phase	MCC-N.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU 0734	Phase	MCC-Q	480	BUSSMANN	LPS-RK_SP, 600V Class RK1	1-600A	LPS-RK_SP	125	125
FU 0739	Phase	MCC-Q	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU 0741	Phase	MCC-Q	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	20	20
FU 0743	Phase	MCC-Q	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	30	30
FU 0745	Phase	MCC-Q	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU 0746	Phase	MCC-Q	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU 0747	Phase	MCC-Q	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15

FU 0748	Phase	MCC-Q	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU 0749	Phase	MCC-Q	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	20	20
FU 0750	Phase	MCC-Q	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	20	20
FU 0751	Phase	MCC-Q	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	20	20
FU 0753	Phase	MCC-Q	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU 0754	Phase	MCC-Q	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU 0756	Phase	MCC-Q	480	BUSSMANN	LPS-RK_SP, 600V Class RK1	1-600A	LPS-RK_SP	20	20
FU 0904	Phase	MCC-EE	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	18	18
FU 0905	Phase	MCC-EE	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	3	3
FU 0906	Phase	MCC-EE	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	3	3
FU 0907	Phase	MCC-EE	480	BUSSMANN	LPS-RK_SP, 600V Class RK1	1-600A	LPS-RK_SP	20	20
FU 0908	Phase	MCC-EE	480	BUSSMANN	LPS-RK_SP, 600V Class RK1	1-600A	LPS-RK_SP	30	30
FU 0909	Phase	MCC-EE	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	35	35
FU 0911	Phase	MCC-EE	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	35	35
FU 0917	Phase	MCC-FF	480	BUSSMANN	LPS-RK_SP, 600V Class RK1	1-600A	LPS-RK_SP	90	90
FU 0918	Phase	MCC-FF	480	BUSSMANN	LPS-RK_SP, 600V Class RK1	1-600A	LPS-RK_SP	20	20

FU 0919	Phase	MCC-FF	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	2	2
FU 0920	Phase	MCC-FF	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	35	35
FU 0922	Phase	MCC-FF	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	35	35
FU 5-5-2	Phase	MCC-D.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU ADM ACU-1	Phase	ADM ACU1 DISC	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	45	45
FU ADM-ACCU-1	Phase	ADM ACCU1 DISC	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	20	20
FU ADM-CH-1	Phase	ADM-CH-1 DISC	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	90	90
FU AIR COMP 1	Phase	MCC-E.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	9	9
FU ATS-PP-UV- NRM	Phase	MCC-P	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	60	60
FU BACKWASH PUMP 2	Phase	MCC-N	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	200	200
FU BAR SCREEN 1	Phase	MCC-C	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU BAR SCREEN 2	Phase	MCC-D.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU BAR SCREEN 3	Phase	MCC-C	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU BASIN INFL GATE 1	Phase	MCC-E	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	7	7
FU BASIN INFL GATE 3	Phase	MCC-E	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	7	7
FU BASIN OUT GATE 1	Phase	MCC-E.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	7	7

FU BASIN OUT GATE 3	Phase	MCC-E.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	7	7
FU C SUMP PUMP	Phase	MCC-C	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	5	5
FU CFG-1	Phase	VFD CFG-1 INPUT	480	BUSSMANN	JJS, 600V Class T	1-800A	JJS	400	400
FU CFG-2	Phase	VFD CFG-2 INPUT	480	BUSSMANN	JJS, 600V Class T	1-800A	JJS	500	500
FU CFG-3	Phase	VFD CFG-3 INPUT	480	BUSSMANN	JJS, 600V Class T	1-800A	JJS	400	400
FU CHANNEL AIR BLOWER	Phase	MCC-D.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	20	20
FU CP70 EMG TERM	Phase	MCC-N.	480	BUSSMANN	LPS-RK_SP, 600V Class RK1	1-600A	LPS-RK_SP	20	20
FU CROSS COLL 1	Phase	MCC-E	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	6	6
FU CROSS COLL 3	Phase	MCC-E	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	6	6
FU D SUMP PUMP 2	Phase	MCC-D	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	5	5
FU DOOR OP (NGW)	Phase	MCC-C	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	3	3
FU DOOR OP (SG)	Phase	MCC-C	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	3	3
FU DOOR OPERATOR	Phase	MCC-D	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	3	3
FU E SUMP PUMP 1	Phase	MCC-E	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU E. PLANT THR VALVE	Phase	MCC-D	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	3	3
FU EF-3,4,1	Phase	MCC-N	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15

FU ELEVATOR CP	Phase	ELEVATOR CP DISC	480	BUSSMANN	LPS-RK, 600V Class RK1	15-600A	LPS-RK	20	15
FU EQ INFL GATE 1	Phase	MCC-E..	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	7	7
FU EQ INFL GATE 10	Phase	MCC-E..	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	7	7
FU EQ INFL GATE 11	Phase	MCC-E..	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	7	7
FU EQ INFL GATE 12	Phase	MCC-E..	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	7	7
FU EQ INFL GATE 2	Phase	MCC-E..	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	7	7
FU EQ INFL GATE 3	Phase	MCC-E..	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	7	7
FU EQ INFL GATE 4	Phase	MCC-E..	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	7	7
FU EQ INFL GATE 9	Phase	MCC-E..	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	7	7
FU EQ RET VALVE 1	Phase	MCC-E.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	12	12
FU EQ RET VALVE 2	Phase	MCC-E.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	12	12
FU F-5-1	Phase	MCC-D.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU F-6-1	Phase	MCC-C	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU F-6-2	Phase	MCC-C	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU FLOOR DRN SP 4	Phase	MCC-N	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU GP-3	Phase	MCC-C	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	20	20

FU GRIT BLOWER 2	Phase	MCC-D.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU GRIT BLOWER 3	Phase	MCC-C	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU GRIT DEWATER UNIT 1	Phase	MCC-D.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU GRIT DEWATER UNIT 2	Phase	MCC-D.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU GRIT SLURRY PUMP 1	Phase	MCC-D.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	20	20
FU GRIT SLURRY PUMP 2	Phase	MCC-D.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	20	20
FU GRIT SLURRY PUMP 4	Phase	MCC-D.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	20	20
FU HEAT RECOVERY UNIT	Phase	MCC-D.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU HOIST D	Phase	MCC-D.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU HP PEW PUMP 1	Phase	MCC-E.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	200	200
FU JIB CRANES	Phase	MCC-D	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	20	20
FU LP-ADM-2	Phase	LP-ADM-2 DISC TERM	240	BUSSMANN	LPN-RK, 250V Class RK1	1-600A	LPN-RK-250SP	250	250
FU MCC-EE	Phase	MCC-E	480	BUSSMANN	LPS-RK_SP, 600V Class RK1	1-600A	LPS-RK_SP	125	125
FU MP PEW PUMP 1	Phase	MCC-E.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	125	125
FU PEW PUMP 3	Phase	MCC-N	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	400	400
FU PEW PUMP #1	Phase	MCC-P	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	400	400

FU PEW PUMP 2	Phase	MCC-M	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	400	400
FU PP-MTB	Phase	PP-MTB DISC SW	480	BUSSMANN	LPS-RK, 600V Class RK1	15-600A	LPS-RK	200	200
FU RB DRAIN PUMP 2	Phase	MCC-E	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	90	90
FU RB DRAIN PUMP 4	Phase	MCC-E	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	90	90
FU RET BSN RF CV	Phase	MCC-E.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	2	2
FU SC-1	Phase	MCC-C	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	4	4
FU SCREEN COMP SC-2	Phase	MCC-D	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	4	4
FU SCREEN COMP SC-3	Phase	MCC-D	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	4	4
FU SCREENINGS CONV	Phase	MCC-D	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	4	4
FU SCREW CONV 3	Phase	MCC-D	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU SCREW PUMP 6	Phase	MCC-F	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	200	200
FU SCREW PUMP 7	Phase	MCC-E	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	200	200
FU SCREW PUMP 8	Phase	MCC-E	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	200	200
FU SEC EFF PUMP #3	Phase	MCC-P	480	BUSSMANN	LPS-RK_SP, 600V Class RK1	1-600A	LPS-RK_SP	300	300
FU SEC EFF PUMP #4	Phase	MCC-Q	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	300	300
FU SEC EFF PUMP 1	Phase	MCC-M	480	BUSSMANN	LPS-RK_SP, 600V Class RK1	1-600A	LPS-RK_SP	300	300

FU SEC EFF PUMP 2	Phase	MCC-N	480	BUSSMANN	LPS-RK_SP, 600V Class RK1	1-600A	LPS-RK_SP	300	300
FU SEC EFF PUMP 5	Phase	MCC-M	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	300	300
FU SEC EFF PUMP 6	Phase	MCC-N	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	300	300
FU SECURITY GATE	Phase	MCC-E.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	30	30
FU SEPTIC PUMP	Phase	MCC-D.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	35	35
FU SLUDGE COLL 1	Phase	MCC-E	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	3	3
FU SLUDGE COLL 3	Phase	MCC-E	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	3	3
FU SLUDGE PUMP 1	Phase	MCC-E.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU SLUDGE PUMP 2	Phase	MCC-E.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU SLUICE GATE 3	Phase	MCC-C	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	7	7
FU SLUICE GATE 4	Phase	MCC-C	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	7	7
FU SLUICE GATE 5	Phase	MCC-D.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	7	7
FU SSC-1	Phase	MCC-C	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU SSC-2	Phase	MCC-D	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU SUB SUMP PUMP 1	Phase	MCC-C	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU SUB SUMP PUMP 2	Phase	MCC-D	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	5	5

FU SUMP PUMP NGB	Phase	MCC-C	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	5	5
FU WELD RCPT E	Phase	MCC-E.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	30	30
FU WELDER OUTLET C	Phase	MCC-C	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	30	30
FU WELDER OUTLET D	Phase	MCC-D.	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	30	30
FU WPSE GATE E MTR	Phase	MCC-N	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	15	15
FU WWRD PUMP 2	Phase	MCC-N	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	60	60
FU XFMR LP-C	Phase	MCC-C	480	BUSSMANN	LPS-RK_SP, 600V Class RK1	1-600A	LPS-RK_SP	80	80
FU XFMR LP-D PRI	Phase	MCC-D.	480	BUSSMANN	LPS-RK_SP, 600V Class RK1	1-600A	LPS-RK_SP	80	80
FU XFMR-LP-E	Phase	MCC-E	480	BUSSMANN	LPS-RK_SP, 600V Class RK1	1-600A	LPS-RK_SP	80	80
FU XFMR-LP-FF	Phase	MCC-FF	480	BUSSMANN	FRS-R, 600V Class RK5	1-600A	FRS-R	18	18

Project: SKMmodel 022616
Scenario: Base Project
ANN ARBOR WASTEWATER TREATMENT PLANT
PLANT FACILITIES RENOVATION
POWER DISTRIBUTION SYSTEM STUDY
AAWWTP

Ground Fault

Prot Dev	Function	Connected Bus	Voltage	Manufacturer	Description	Frame Desc.	Frame	Sensor	Segments	
1600/1440 MCC-WBB-A GFP	Ground	SUB 3 BUS A	480	SQUARE D	GF, 1600-5000A Sensors, ANSI	NW16H3	1,600	1,600	GFPU (500-1200A) B	GFD (0-0.4) 0.2 I2T Out
1600/1440 MCC-WBB-B GFP	Ground	SUB 3 BUS B	480	SQUARE D	GF, 1600-5000A Sensors, ANSI	NW16H3	1,600	1,600	GFPU (500-1200A) B	GFD (0-0.4) 0.2 I2T Out
800/200 MCC-C GFP	Ground	SUB 1 BUS A	480	SQUARE D	GF, 100-400A Sensors, ANSI	NW08H3	800	250	GFPU (0.3-1.0 x S) C	GFD (0-0.4) 0 I2T Out
800/200 MCC-D GFP	Ground	SUB 1 BUS B	480	SQUARE D	GF, 100-400A Sensors, ANSI	NW08H3	800	250	GFPU (0.3-1.0 x S) C	GFD (0-0.4) 0 I2T Out
800/200 MCC-EPB-A GFP	Ground	SUB 6 BUS A	480	SQUARE D	GF, 100-400A Sensors, ANSI	NW08H3	800	250	GFPU (0.3-1.0 x S) C	GFD (0-0.4) 0.1 I2T Out
800/200 MCC-EPB-B GFP	Ground	SUB 6 BUS B	480	SQUARE D	GF, 100-400A Sensors, ANSI	NW08H3	800	250	GFPU (0.3-1.0 x S) C	GFD (0-0.4) 0.1 I2T Out
800/200 UV-1A GFP	Ground	SUB 7 BUS A	480	SQUARE D	GF, 100-400A Sensors, ANSI	NW08H3	800	250	GFPU (0.3-1.0 x S) A	GFD (0-0.4) 0.1 I2T Out
800/200 UV-1B GFP	Ground	SUB 7 BUS B	480	SQUARE D	GF, 100-400A Sensors, ANSI	NW08H3	800	250	GFPU (0.3-1.0 x S) A	GFD (0-0.4) 0.1 I2T Out
800/250 PP-MTB GFP	Ground	SUB 7 BUS B	480	SQUARE D	GF, 100-400A Sensors, ANSI	NW08H3	800	250	GFPU (0.3-1.0 x S) A	GFD (0-0.4) 0.1 I2T Out
800/400 MCC-E GFP	Ground	SUB 2 BUS A	480	SQUARE D	GF, 100-400A Sensors, ANSI	NW08H3	800	400	GFPU (0.3-1.0 x S) A	GFD (0-0.4) 0 I2T Out
800/400 MCC-F GFP	Ground	SUB 2 BUS B	480	SQUARE D	GF, 100-400A Sensors, ANSI	NW08H3	800	400	GFPU (0.3-1.0 x S) A	GFD (0-0.4) 0 I2T Out
800/400 MCC-RLS-B GFP	Ground	SUB 1 BUS B	480	SQUARE D	GF, 100-400A Sensors, ANSI	NW08H3	800	400	GFPU (0.3-1.0 x S) C	GFD (0-0.4) 0 I2T Out
800/400 MCC-WPB-A GFP	Ground	SUB 3 BUS A	480	SQUARE D	GF, 100-400A Sensors, ANSI	NW08H3	800	400	GFPU (0.3-1.0 x S) C	GFD (0-0.4) 0.2 I2T Out
800/400 MCC-WPB-B GFP	Ground	SUB 3 BUS B	480	SQUARE D	GF, 100-400A Sensors, ANSI	NW08H3	800	400	GFPU (0.3-1.0 x S) C	GFD (0-0.4) 0.2 I2T Out
800/600 MCC-53A GFP	Phase	SUB 5 BUS A	480	CUTLER-HAMMER	GF, 200-6300A	MDS-C08	800	600	GFPU (0.25-1.00 x P 200-1200A) 0.35	GFD (0.1-0.5 Sec.) 0.2 I2T Out
800/600 MCC-53B GFP	Phase	SUB 5 BUS B	480	CUTLER-HAMMER	GF, 200-6300A	MDS-608	800	800	GFPU (0.25-1.00 x P 200-1200A) 0.35	GFD (0.1-0.5 Sec.) 0.2 I2T Out
800/600 MCC-55A GFP	Phase	SUB 5 BUS A	480	CUTLER-HAMMER	GF, 200-6300A	MDS-C08	800	600	GFPU (0.25-1.00 x P 200-1200A) 0.35	GFD (0.1-0.5 Sec.) 0.2 I2T Out
800/600 MCC-55B GFP	Phase	SUB 5 BUS B	480	CUTLER-HAMMER	GF, 200-6300A	MDS-C08	800	600	GFPU (0.25-1.00 x P 200-1200A) 0.35	GFD (0.1-0.5 Sec.) 0.2 I2T Out
800/600 MCC-56A GFP	Phase	SUB 5 BUS A	480	CUTLER-HAMMER	GF, 200-6300A	MDS-C08	800	600	GFPU (0.25-1.00 x P 200-1200A) 0.35	GFD (0.1-0.5 Sec.) 0.2 I2T Out
800/600 MCC-56B GFP	Phase	SUB 5 BUS B	480	CUTLER-HAMMER	GF, 200-6300A	MDS-608	800	800	GFPU (0.25-1.00 x P 200-1200A) 0.35	GFD (0.1-0.5 Sec.) 0.2 I2T Out
800/600 MCC-CEB-A GFP	Ground	SUB 7 BUS A	480	SQUARE D	GF, 600-1200A Sensors, ANSI	NW08H3	800	600	GFPU (0.2-1.0 x S) C	GFD (0-0.4) 0.3 I2T Out
800/600 MCC-CEB-B GFP	Ground	SUB 7 BUS B	480	SQUARE D	GF, 600-1200A Sensors, ANSI	NW08H3	800	600	GFPU (0.2-1.0 x S) C	GFD (0-0.4) 0.3 I2T Out
800/600 MCC-EBB-A GFP	Ground	SUB 6 BUS A	480	SQUARE D	GF, 600-1200A Sensors, ANSI	NW08H3	800	600	GFPU (0.2-1.0 x S) C	GFD (0-0.4) 0.2 I2T Out
800/600 MCC-EBB-B GFP	Ground	SUB 6 BUS B	480	SQUARE D	GF, 600-1200A Sensors, ANSI	NW08H3	800	600	GFPU (0.2-1.0 x S) C	GFD (0-0.4) 0.2 I2T Out
800/600 MCC-RLS-A GFP	Ground	SUB 1 BUS A	480	SQUARE D	GF, 600-1200A Sensors, ANSI	NW08H3	800	600	GFPU (0.2-1.0 x S) B	GFD (0-0.4) 0 I2T Out
800/600 VFD CFG-1 GFP	Phase	SUB 5 BUS A	480	CUTLER-HAMMER	GF, 200-6300A	MDS-C08	800	600	GFPU (0.25-1.00 x P 200-1200A) 0.35	GFD (0.1-0.5 Sec.) 0.2 I2T Out
800/600 VFD CFG-2 GFP	Phase	SUB 5 BUS B	480	CUTLER-HAMMER	GF, 200-6300A	MDS-C08	800	600	GFPU (0.25-1.00 x P 200-1200A) 0.35	GFD (0.1-0.5 Sec.) 0.2 I2T Out
800/600 VFD CFG-3 GFP	Phase	SUB 5 BUS B	480	CUTLER-HAMMER	GF, 200-6300A	MDS-C08	800	600	GFPU (0.25-1.00 x P 200-1200A) 0.35	GFD (0.1-0.5 Sec.) 0.2 I2T Out
800/800 ATS-EMG GFP	Ground	SUB 7 BUS A	480	SQUARE D	GF, 600-1200A Sensors, ANSI	NW08H3	800	800	GFPU (0.2-1.0 x S) C	GFD (0-0.4) 0.3 I2T Out
800/800 ATS-NRM GFP	Ground	SUB 7 BUS B	480	SQUARE D	GF, 600-1200A Sensors, ANSI	NW08H3	800	800	GFPU (0.2-1.0 x S) C	GFD (0-0.4) 0.3 I2T Out
800/800 MCC-51A GFP	Phase	SUB 5 BUS A	480	CUTLER-HAMMER	GF, 200-6300A	MDS-C08	800	800	GFPU (0.25-1.00 x P 200-1200A) 0.35	GFD (0.1-0.5 Sec.) 0.2 I2T Out
800/800 MCC-51B GFP	Phase	SUB 5 BUS B	480	CUTLER-HAMMER	GF, 200-6300A	MDS-608	800	800	GFPU (0.25-1.00 x P 200-1200A) 0.35	GFD (0.1-0.5 Sec.) 0.2 I2T Out
800/800 MCC-52A GFP	Phase	SUB 5 BUS A	480	CUTLER-HAMMER	GF, 200-6300A	MDS-C08	800	800	GFPU (0.25-1.00 x P 200-1200A) 0.35	GFD (0.1-0.5 Sec.) 0.2 I2T Out

800/800 MCC-52B GFP	Phase	SUB 5 BUS B	480	CUTLER-HAMMER	GF, 200-6300A	MDS-608	800	800	GFP (0.25-1.00 x P 200-1200A) 0.35	GFD (0.1-0.5 Sec.) 0.2 I2T Out
800/800 MCC-54A GFP	Phase	SUB 5 BUS A	480	CUTLER-HAMMER	GF, 200-6300A	MDS-608	800	800	GFP (0.25-1.00 x P 200-1200A) 0.35	GFD (0.1-0.5 Sec.) 0.2 I2T Out
800/800 MCC-54B GFP	Phase	SUB 5 BUS B	480	CUTLER-HAMMER	GF, 200-6300A	MDS-608	800	800	GFP (0.25-1.00 x P 200-1200A) 0.35	GFD (0.1-0.5 Sec.) 0.2 I2T Out
800/800 MCC-R GFP	Phase	SUB 5 BUS A	480	CUTLER-HAMMER	GF, 200-6300A	MDS-608	800	800	GFP (0.25-1.00 x P 200-1200A) 0.35	GFD (0.1-0.5 Sec.) 0.2 I2T Out
800/800 MCC-S GFP	Phase	SUB 5 BUS B	480	CUTLER-HAMMER	GF, 200-6300A	MDS-608	800	800	GFP (0.25-1.00 x P 200-1200A) 0.35	GFD (0.1-0.5 Sec.) 0.2 I2T Out
800/800 MCC-XA GFP	Phase	SUB 5 BUS A	480	CUTLER-HAMMER	GF, 200-6300A	MDS-608	800	800	GFP (0.25-1.00 x P 200-1200A) 0.35	GFD (0.1-0.5 Sec.) 0.2 I2T Out
800/800 MCC-XB GFP	Phase	SUB 5 BUS B	480	CUTLER-HAMMER	GF, 200-6300A	MDS-608	800	800	GFP (0.25-1.00 x P 200-1200A) 0.35	GFD (0.1-0.5 Sec.) 0.2 I2T Out
FB ATS-EBB EMG GFP	Ground	MCC-EBB-A	480	SQUARE D	GF, 250-600A	LX	400	400	GFP (0.2-0.75 x S) 0.3	GFD (0.1-0.5 Sec.) 0.1 0.13
FB ATS-EBB NORM GFP	Ground	MCC-EBB-B	480	SQUARE D	GF, 250-600A	LX	400	400	GFP (0.2-0.75 x S) 0.3	GFD (0.1-0.5 Sec.) 0.1 0.13
FB ATS-WBB-EMG GFP	Ground	MCC-WBB-A	480	SQUARE D	GF, 400AS	LJ	400	400	Ig (0.2 - 1 x In) 1.0	tg (0 - 0.4) 0.0 I2T Out
FB ATS-WBB-NORM GFP	Ground	MCC-WBB-B	480	SQUARE D	GF, 400AS	LJ	400	400	Ig (0.2 - 1 x In) 1.0	tg (0 - 0.4) 0.0 I2T Out
IB MCC-CEB-A/B GFP	Ground	MCC-CEB-B	480	SQUARE D	GF, 250-600A	LX	600	600	GFP (0.2-0.75 x S) 0.2	GFD (0.1-0.5 Sec.) 0.1 0.13
MB MCC-ADM-A GFP	Ground	MCC-ADM-A	480	SQUARE D	GF, 600-1200AS, UL	PL	1,200	800	GFP (0.2-1.0 x S) B	GFD (0-0.4) 0.2 I2T Out
MB MCC-EPB-A GFP	Ground	MCC-EPB-A	480	SQUARE D	GF, 400AS	LJ	400	400	Ig (0.2 - 1 x In) 0.2	tg (0 - 0.4) 0.0 I2T Out
MB MCC-EPB-B GFP	Ground	MCC-EPB-B	480	SQUARE D	GF, 400AS	LJ	400	400	Ig (0.2 - 1 x In) 0.2	tg (0 - 0.4) 0.0 I2T Out
MB MCC-RLS-A GFP	Ground	MCC-RLS-A	480	SQUARE D	GF, 600-1200AS, UL	PL	1,200	600	GFP (0.2-1.0 x S) A	GFD (0-0.4) 0 I2T Out
MB MCC-RLS-B GFP	Ground	MCC-RLS-B	480	SQUARE D	GF, 400AS	LJ	400	400	Ig (0.2 - 1 x In) 0.2	tg (0 - 0.4) 0.0 I2T Out
MB MCC-WPB-A GFP	Ground	MCC-WPB-A	480	SQUARE D	GF, 400AS	LJ	400	400	Ig (0.2 - 1 x In) 0.3	tg (0 - 0.4) 0.1 I2T Out
MB MCC-WPB-B GFP	Ground	MCC-WPB-B	480	SQUARE D	GF, 400AS	LJ	400	400	Ig (0.2 - 1 x In) 0.3	tg (0 - 0.4) 0.1 I2T Out
PD STORM WATER PUMP CP GFP	Ground	MCC-ADM-A	480	SQUARE D	GF, 250AS	JJ	250	250	Ig (0.2 - 1 x In) 0.4	tg (0 - 0.4) 0.0 I2T Out
PD XFMR LP-ADM-2 GFP	Ground	MCC-ADM-A	480	SQUARE D	GF, 250-600A	LX	250	250	GFP (0.2-0.75 x S) 0.45	GFD (0.1-0.5 Sec.) 0.1 0.13
PD XFMR PP-ADM-1 GFP	Ground	MCC-ADM-A	480	SQUARE D	GF, 250-600A	LX	400	400	GFP (0.2-0.75 x S) 0.42	GFD (0.1-0.5 Sec.) 0.1 0.13
PD XFMR-LP-ADM-1 GFP	Ground	MCC-ADM-A	480	SQUARE D	GF, 250AS	JJ	250	250	Ig (0.2 - 1 x In) 0.4	tg (0 - 0.4) 0.0 I2T Out
SUB 1 MAIN A GFP	Ground	SUB 1 BUS A	480	SQUARE D	GF, 600-1200A Sensors, ANSI	NW16H3	1,600	1,200	GFP (0.2-1.0 x S) B	GFD (0-0.4) 0.2 I2T Out
SUB 1 MAIN B GFP	Ground	SUB 1 BUS B	480	SQUARE D	GF, 600-1200A Sensors, ANSI	NW16H3	1,600	1,200	GFP (0.2-1.0 x S) B	GFD (0-0.4) 0.2 I2T Out
SUB 1 TIE GFP	Ground	SUB 1 BUS A	480	SQUARE D	GF, 600-1200A Sensors, ANSI	NW16H3	1,600	1,200	GFP (0.2-1.0 x S) A	GFD (0-0.4) 0.1 I2T Out
SUB 2 MAIN A GFP	Ground	SUB 2 BUS A	480	SQUARE D	GF, 600-1200A Sensors, ANSI	NW08H3	800	800	GFP (0.2-1.0 x S) B	GFD (0-0.4) 0.2 I2T Out
SUB 2 MAIN B GFP	Ground	SUB 2 BUS B	480	SQUARE D	GF, 600-1200A Sensors, ANSI	NW08H3	800	800	GFP (0.2-1.0 x S) B	GFD (0-0.4) 0.2 I2T Out
SUB 2 TIE GFP	Ground	SUB 2 BUS A	480	SQUARE D	GF, 600-1200A Sensors, ANSI	NW08H3	800	800	GFP (0.2-1.0 x S) A	GFD (0-0.4) 0.1 I2T Out
SUB 3 ISOLATION GFP	Ground	SUB 3 BUS B	480	SQUARE D	GF, 1600-5000A Sensors, ANSI	NW32H3	3,200	3,000	GFP (500-1200A) E	GFD (0-0.4) 0.3 I2T Out
SUB 3 MAIN A GFP	Ground	SUB 3 BUS A	480	SQUARE D	GF, 1600-5000A Sensors, ANSI	NW32H3	3,200	3,000	GFP (500-1200A) J	GFD (0-0.4) 0.4 I2T Out
SUB 3 MAIN B GFP	Ground	SUB 3 BUS B	480	SQUARE D	GF, 1600-5000A Sensors, ANSI	NW32H3	3,200	3,000	GFP (500-1200A) J	GFD (0-0.4) 0.4 I2T Out
SUB 3 TIE GFP	Ground	SUB 3 BUS A	480	SQUARE D	GF, 1600-5000A Sensors, ANSI	NW32H3	3,200	3,000	GFP (500-1200A) E	GFD (0-0.4) 0.3 I2T Out
SUB 5 MAIN A GFP	Phase	SUB 5 BUS A	480	CUTLER-HAMMER	GF, 200-6300A	MDS-C40	4,000	4,000	GFP (0.25-1.00 x P 200-1200A) 0.35	GFD (0.1-0.5 Sec.) 0.4 I2T Out
SUB 5 MAIN B GFP	Phase	SUB 5 BUS B	480	CUTLER-HAMMER	GF, 200-6300A	MDS-C40	4,000	4,000	GFP (0.25-1.00 x P 200-1200A) 0.35	GFD (0.1-0.5 Sec.) 0.4 I2T Out
SUB 5 TIE GFP	Phase	SUB 5 BUS A	480	CUTLER-HAMMER	GF, 200-6300A	MDS-C40	4,000	3,200	GFP (0.25-1.00 x P 200-1200A) 0.35	GFD (0.1-0.5 Sec.) 0.3 I2T Out
SUB 6 MAIN A GFP	Ground	SUB 6 BUS A	480	SQUARE D	GF, 1600-5000A Sensors, ANSI	NW16H3	1,600	1,600	GFP (500-1200A) B	GFD (0-0.4) 0.4 I2T Out
SUB 6 MAIN B GFP	Ground	SUB 6 BUS B	480	SQUARE D	GF, 1600-5000A Sensors, ANSI	NW16H3	1,600	1,600	GFP (500-1200A) B	GFD (0-0.4) 0.4 I2T Out
SUB 6 TIE GFP	Ground	SUB 6 BUS A	480	SQUARE D	GF, 1600-5000A Sensors, ANSI	NW16H3	1,600	1,600	GFP (500-1200A) A	GFD (0-0.4) 0.3 I2T Out
SUB 7 ISO GFP	Ground	SUB 7 BUS B	480	SQUARE D	GF, 1600-5000A Sensors, ANSI	NW32H3	3,200	3,200	GFP (500-1200A) A	GFD (0-0.4) 0.3 I2T In
SUB 7 MAIN A GFP	Ground	SUB 7 BUS A	480	SQUARE D	GF, 1600-5000A Sensors, ANSI	NW32H3	3,200	3,200	GFP (500-1200A) C	GFD (0-0.4) 0.4 I2T In
SUB 7 MAIN B GFP	Ground	SUB 7 BUS B	480	SQUARE D	GF, 1600-5000A Sensors, ANSI	NW32H3	3,200	3,200	GFP (500-1200A) C	GFD (0-0.4) 0.4 I2T In
SUB 7 TIE GFP	Ground	SUB 7 BUS A	480	SQUARE D	GF, 1600-5000A Sensors, ANSI	NW32H3	3,200	3,200	GFP (500-1200A) A	GFD (0-0.4) 0.3 I2T In
TB MCC-CEB-A/B GFP	Ground	MCC-CEB-A	480	SQUARE D	GF, 250-600A	LX	600	600	GFP (0.2-0.75 x S) 0.2	GFD (0.1-0.5 Sec.) 0.1 0.13
TB MCC-EBB-A/B GFP	Ground	MCC-EBB-B	480	SQUARE D	GF, 600AS	LJ	600	600	Ig (0.2 - 1 x In) 0.25	tg (0 - 0.4) 0.1 I2T Out
TB MCC-WBB-A/B GFP	Ground	MCC-WBB-A	480	SQUARE D	GF, 1600-2500AS, UL	RJ	2,500	1,600	GFP (500-1200A) A	GFD (0-0.4) 0.1 I2T Out
TB MCC-WPB-A/B GFP	Ground	MCC-WPB-A	480	SQUARE D	GF, 400AS	LJ	400	400	Ig (0.2 - 1 x In) 0.2	tg (0 - 0.4) 0.0 I2T Out

ADJUSTABLE LOW VOLTAGE CIRCUIT BREAKER SETTINGS

DESIGNATION				FRAME				TRIP UNIT					
Location/Name	Frame Amps	AIC kA	MFR	TYPE MODEL	Amps Sensor/Plug		Description	TYPE/MODEL	SETTINGS				
Function Name								LT/GF PU	LTD/GFD I^2T	STPU	SD TIME / SD I2T	INST P.U.	
<u>DP-51, MB DP-51</u>													
Phase	600	14	CUTLER-HAMMER	LG	600	600	600A	LG	Fixed (600A)	Fixed	2000A (1998A)	Fixed (I^2t On)	Fixed (7200A)
<u>MCC-51A, FB ATS-51 NRM</u>													
Phase	600	65	CUTLER-HAMMER	HLD	600	600	LSI, 300-600A Fixed Plug	HLD, RMS 310	Fixed (600A)	Fixed	4 (2400A)	200 ms (I^2t On)	Fixed (5500A)
<u>MCC-51A, MB MCC-51A</u>													
Phase	800	65	CUTLER-HAMMER	HMDL	800	800	LSI, 400-800A Fixed Plug	HMDL, RMS 310 (06/07)	FIXED (800A)	FIXED	5 (4000A)	200 ms (I^2t On)	FIXED (6800A)
<u>MCC-51A, MCC-51A/B TIE</u>													
Phase	800	65	CUTLER-HAMMER	HMDL	800	800	LSI, 400-800A Fixed Plug	HMDL, RMS 310 (06/07)	FIXED (800A)	FIXED	4 (3200A)	200 ms (I^2t On)	FIXED (6800A)
<u>MCC-51B, FB ATS-51 EMG</u>													
Phase	600	65	CUTLER-HAMMER	HLD	600	600	LSI, 300-600A Fixed Plug	HLD, RMS 310	Fixed (600A)	Fixed	4 (2400A)	200 ms (I^2t On)	Fixed (5500A)
<u>MCC-51B, MB MCC-51B</u>													
Phase	800	65	CUTLER-HAMMER	HMDL	800	800	LSI, 400-800A Fixed Plug	HMDL, RMS 310 (06/07)	FIXED (800A)	FIXED	5 (4000A)	200 ms (I^2t On)	FIXED (6800A)

MCC-52A, FB ATS-52N

Phase	600	65	CUTLER-HAMMER	HLD	600	600	LSI, 300-600A Fixed Plug	HLD, RMS 310	Fixed (600A)	Fixed	4 (2400A)	200 ms (I ² t On)	Fixed (5500A)
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MCC-52A, MB MCC-52A

Phase	800	65	CUTLER-HAMMER	HMDL	800	800	LSI, 400-800A Fixed Plug	HMDL, RMS 310 (06/07)	FIXED (800A)	FIXED	5 (4000A)	200 ms (I ² t On)	FIXED (6800A)
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MCC-52A, MCC-52A/B TIE

Phase	800	65	CUTLER-HAMMER	HMDL	800	800	LSI, 400-800A Fixed Plug	HMDL, RMS 310 (06/07)	FIXED (800A)	FIXED	4 (3200A)	200 ms (I ² t On)	FIXED (6800A)
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MCC-52B, FB ATS-52E

Phase	600	65	CUTLER-HAMMER	HLD	600	600	LSI, 300-600A Fixed Plug	HLD, RMS 310	Fixed (600A)	Fixed	4 (2400A)	200 ms (I ² t On)	Fixed (5500A)
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MCC-52B, MB MCC-52B

Phase	800	65	CUTLER-HAMMER	HMDL	800	800	LSI, 400-800A Fixed Plug	HMDL, RMS 310 (06/07)	FIXED (800A)	FIXED	5 (4000A)	200 ms (I ² t On)	FIXED (6800A)
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MCC-53 A, MB MCC-53A

Phase	800	65	CUTLER-HAMMER	HMDL	800	600	LSI, 400-800A Fixed Plug	HMDL, RMS 310 (06/07)	FIXED (600A)	FIXED	5 (3000A)	200 ms (I ² t On)	FIXED (6800A)
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**MCC-53 A, MCC-53A/B
TIE**

Phase	800	65	CUTLER-HAMMER	HMDL	800	600	LSI, 400-800A Fixed Plug	HMDL, RMS 310 (06/07)	FIXED (600A)	FIXED	4 (2400A)	200 ms (I ² t On)	FIXED (6800A)
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MCC-53B, MB MCC-53B

Phase	800	65	CUTLER-HAMMER	HMDL	800	600	LSI, 400-800A Fixed Plug	HMDL, RMS 310 (06/07)	FIXED (600A)	FIXED	5 (3000A)	200 ms (I ² t On)	FIXED (6800A)
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**MCC-54 A, FB ATS-54
NRM**

Phase	600	65	CUTLER-HAMMER	HLD	600	400	LSI, 300-600A Fixed Plug	HLD, RMS 310	Fixed (400A)	Fixed	6 (2400A)	200 ms (I ² t On)	Fixed (5500A)
<u>MCC-54 A, MB MCC-54A</u>													
Phase	800	65	CUTLER-HAMMER	HMDL	800	800	LSI, 400-800A Fixed Plug	HMDL, RMS 310 (06/07)	FIXED (800A)	FIXED	5 (4000A)	200 ms (I ² t On)	FIXED (6800A)
<u>MCC-54 A, MCC-54A/B TIE</u>													
Phase	800	65	CUTLER-HAMMER	HMDL	800	800	LSI, 400-800A Fixed Plug	HMDL, RMS 310 (06/07)	FIXED (800A)	FIXED	4 (3200A)	200 ms (I ² t On)	FIXED (6800A)
<u>MCC-54B, FB ATS-54 EMG</u>													
Phase	600	65	CUTLER-HAMMER	HLD	600	400	LSI, 300-600A Fixed Plug	HLD, RMS 310	Fixed (400A)	Fixed	6 (2400A)	200 ms (I ² t On)	Fixed (5500A)
<u>MCC-54B, MB MCC-54B</u>													
Phase	800	65	CUTLER-HAMMER	HMDL	800	800	LSI, 400-800A Fixed Plug	HMDL, RMS 310 (06/07)	FIXED (800A)	FIXED	5 (4000A)	200 ms (I ² t On)	FIXED (6800A)
<u>MCC-55 A, FB ATS-55 NRM</u>													
Phase	800	65	CUTLER-HAMMER	HMDL	800	800	LSI, 400-800A Adj Plug	HMDL, RMS 310 (06/07)	400A (400A)	Fixed	5 (2000A)	200 ms (I ² t On)	Fixed (6800A)
<u>MCC-55 A, MB MCC-55A</u>													
Phase	800	65	CUTLER-HAMMER	HMDL	800	600	LSI, 400-800A Fixed Plug	HMDL, RMS 310 (06/07)	FIXED (600A)	FIXED	5 (3000A)	200 ms (I ² t On)	FIXED (6800A)
<u>MCC-55 A, MCC-55A/B TIE</u>													
Phase	800	65	CUTLER-HAMMER	HMDL	800	600	LSI, 400-800A Fixed Plug	HMDL, RMS 310 (06/07)	FIXED (600A)	FIXED	4 (2400A)	200 ms (I ² t On)	FIXED (6800A)
<u>MCC-55B, FB ATS-55 EMG</u>													
Phase	800	65	CUTLER-HAMMER	HMDL	800	800	LSI, 400-800A Adj Plug	HMDL, RMS 310 (06/07)	400A (400A)	Fixed	5 (2000A)	200 ms (I ² t On)	Fixed (6800A)

MCC-55B, MB MCC-55B

Phase	800	65	CUTLER-HAMMER	HMDL	800	600	LSI, 400-800A Fixed Plug	HMDL, RMS 310 (06/07)	FIXED (600A)	FIXED	5 (3000A)	200 ms (I ² t On)	FIXED (6800A)
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MCC-56 A, MB MCC-56A

Phase	800	65	CUTLER-HAMMER	HMDL	800	600	LSI, 400-800A Fixed Plug	HMDL, RMS 310 (06/07)	FIXED (600A)	FIXED	5 (3000A)	200 ms (I ² t On)	FIXED (6800A)
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**MCC-56 A, MCC-56A/B
TIE**

Phase	800	65	CUTLER-HAMMER	HMDL	800	600	LSI, 400-800A Fixed Plug	HMDL, RMS 310 (06/07)	FIXED (600A)	FIXED	4 (2400A)	200 ms (I ² t On)	FIXED (6800A)
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MCC-56B, FB DP-56

Phase	800	65	CUTLER-HAMMER	HMDL	800	800	LSI, 400-800A Adj Plug	HMDL, RMS 310 (06/07)	400A (400A)	Fixed	5 (2000A)	200 ms (I ² t On)	Fixed (6800A)
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MCC-56B, MB MCC-56B

Phase	800	65	CUTLER-HAMMER	HMDL	800	600	LSI, 400-800A Fixed Plug	HMDL, RMS 310 (06/07)	FIXED (600A)	FIXED	5 (3000A)	200 ms (I ² t On)	FIXED (6800A)
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**MCC-ADM-A, MB MCC-
ADM-A**

Phase	1,200	100	SQUARE D	PL	800	0	LSI, 250-1200A	Powerpact P- Frame, 5.0 & 6.0 A/P/H	0.8	12	5 (3200A)	0.1 (I ² t Off)	15 (12000A)
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**MCC-ADM-A, PD STORM
WATER PUMP CP**

Phase	250	65	SQUARE D	JJ	250	150	LSI, 250AS	Powerpact J Frame, 5.2A/E & 6.2A/E	150	4	5 (750A)	0.3 (I ² t Off)	4 (1000A)
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**MCC-ADM-A, PD XFMR
LP-ADM-2**

Phase	250	65	SQUARE D	LX	250	200	LSI, 100-600A	LX & LXI, Micrologic (1993)	1.0 (200A)	3	2.5 (500A)	0.1	4 (800A)
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MCC-ADM-A, PD XFMR

PP-ADM-1

Phase	400	65	SQUARE D	LX	400	400	LSI, 100-600A	LX & LXI, Micrologic (1993)	0.75 (300A)	12	3 (1200A)	0.1	6 (2400A)
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**MCC-ADM-A, PD XFMR-
LP-ADM-1**

Phase	250	65	SQUARE D	JJ	250	150	LSI, 250AS	Powerpact J Frame, 5.2A/E & 6.2A/E	150	16	6 (900A)	0.3 (I ² t Off)	8.5 (2125A)
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**MCC-C, FB ATS-LSE-
EMG**

Phase	250	18	SQUARE D	JD	250	250	LSI, 250AS	PowerPact J- Frame, 3.2S	175	Fixed	10	Fixed	12 (3000A)
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**MCC-CEB-A, TB MCC-
CEB-A/B**

Phase	600	65	SQUARE D	LX / LXI	600	600	LSI, 100-600A	LX / LXI, Micrologic	0.84 (504A)	3	4.0 (2400A)	.1 (I ² t Off)	4.0 (2400A)
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**MCC-CEB-B, IB MCC-CEB-
A/B**

Phase	600	65	SQUARE D	LX / LXI	600	600	LSI, 100-600A	LX / LXI, Micrologic	0.84 (504A)	3	4.0 (2400A)	.1 (I ² t Off)	4.0 (2400A)
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MCC-D, FB ATS-LSE-NRM

Phase	250	65	SQUARE D	JJ	250	250	LSI, 250AS	PowerPact J- Frame, 3.2S	175	Fixed	10	Fixed	12 (3000A)
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**MCC-EBB-A, FB ATS-EBB-
EMG**

Phase	400	65	SQUARE D	LX / LXI	400	300	LSI, 100-600A	LX / LXI, Micrologic	1.0 (300A)	14	5.0 (1500A)	.1 (I ² t Off)	5.0 (1500A)
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**MCC-EBB-B, FB ATS-EBB-
NORM**

Phase	400	65	SQUARE D	LX / LXI	400	300	LSI, 100-600A	LX / LXI, Micrologic	1.0 (300A)	14	5.0 (1500A)	.1 (I ² t Off)	5.0 (1500A)
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MCC-EBB-B, TB MCC-

EBB-A/B

Phase	600	65	SQUARE D	LJ	600	600	LSI, 600AS	Powerpact L- Frame, 5.3A/E & 6.3A/E	600	0.5	1.5 (900A)	0.0 (I ² t Off)	1.5 (900A)
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**MCC-EPB-A, MB MCC-
EPB-A**

Phase	400	65	SQUARE D	LJ	400	400	LSI, 400AS	Powerpact L- Frame, 5.3A/E & 6.3A/E	200	2	6 (1200A)	0.1 (I ² t Off)	4.5 (1800A)
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**MCC-EPB-A, TB MCC-
EPB-A/B**

Phase	250	65	SQUARE D	JJ	250	200	LSI, 250AS	Powerpact J Frame, 5.2A/E & 6.2A/E	175	1	5 (875A)	0.0 (I ² t Off)	4 (1000A)
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**MCC-EPB-B, MB MCC-
EPB-B**

Phase	400	65	SQUARE D	LJ	400	400	LSI, 400AS	Powerpact L- Frame, 5.3A/E & 6.3A/E	200	2	6 (1200A)	0.1 (I ² t Off)	4.5 (1800A)
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**MCC-RLS-A, MB MCC-
RLS-A**

Phase	1,200	100	SQUARE D	PL	600	0	LSI, 250-1200A	Powerpact P- Frame, 5.0 & 6.0 A/P/H	1	12	4 (2400A)	0.1 (I ² t Off)	15 (9000A)
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**MCC-RLS-A, TB MCC-
RLS-A/B**

Phase	800	65	SQUARE D	MJ	600	0	LI, 300-800A, UL	Powerpact M- Frame, 1.0	Fixed	Fixed			3 (1800A)
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**MCC-RLS-B, MB MCC-
RLS-B**

Phase	400	65	SQUARE D	LJ	400	400	LSI, 400AS	Powerpact L- Frame, 5.3A/E & 6.3A/E	400	16	4.5 (1800A)	0.1 (I ² t Off)	12 (4800A)
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MCC-WBB-A, FB ATS-

WBB-EMG

Phase	400	65	SQUARE D	LJ	400	400	LSI, 400AS	Powerpact L- Frame, 5.3A/E & 6.3A/E	400	16	4.5 (1800A)	0.0 (I^2t Off)	12 (4800A)
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MCC-WBB-A, PD PAB-W1

Phase	800	65	SQUARE D	MJ	800	0	LI, 300-800A, UL	Powerpact M- Frame, 1.0	Fixed	Fixed			4 (3200A)
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MCC-WBB-A, PD PAB-W3

Phase	800	65	SQUARE D	MJ	800	0	LI, 300-800A, UL	Powerpact M- Frame, 1.0	Fixed	Fixed			4 (3200A)
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**MCC-WBB-A, TB MCC-
WBB-A/B**

Phase	3,000	65	SQUARE D	RJ	1,600	0	LSI, 250-3000A	Powerpact R- Frame, 5.0 & 6.0 A/P/H	0.8	4	3 (3840A)	0.1 (I^2t Off)	OFF
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**MCC-WBB-B, FB ATS-
WBB-NORM**

Phase	400	65	SQUARE D	LJ	400	400	LSI, 400AS	Powerpact L- Frame, 5.3A/E & 6.3A/E	400	16	4.5 (1800A)	0.0 (I^2t Off)	12 (4800A)
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MCC-WBB-B, PD PAB-W2

Phase	800	65	SQUARE D	MJ	800	0	LI, 300-800A, UL	Powerpact M- Frame, 1.0	Fixed	Fixed			4 (3200A)
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**MCC-WPB-A, MB MCC-
WPB-A**

Phase	400	65	SQUARE D	LJ	400	400	LSI, 400AS	Powerpact L- Frame, 5.3A/E & 6.3A/E	300	8	8 (2400A)	0.0 (I^2t Off)	6.5 (2600A)
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**MCC-WPB-A, TB MCC-
WPB-A/B**

...	400	65	SQUARE D	LJ	400	400	LSI, 400AS	Powerpact L- Frame, 5.3A/E & 6.3A/E	250	4	7.5 (1875A)	0.0 (I^2t Off)	5 (2000A)
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Phase								Frame, 5.3A/E & 6.3A/E					
<u>MCC-WPB-B, MB MCC-WPB-B</u>													
Phase	400	65	SQUARE D	LJ	400	400	LSI, 400AS	Powerpact L- Frame, 5.3A/E & 6.3A/E	300	8	8 (2400A)	0.0 (I^2t Off)	6.5 (2600A)
<u>PP-MTB, MB-EF -1</u>													
<u>PP-Z, MB-PP-Z</u>													
<u>SUB 1 BUS A, 800/200 MCC-C</u>													
Phase	800	85	SQUARE D	NW08H2	250	0	LSI, 100-250AS, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	0.9	24	10 (2250A)	0.2 (I^2t Off)	OFF
ARMS	800	85	SQUARE D	NW08H2	250	0	LSI, 100-250AS, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	0.9	24	10 (2250A)	INST (I^2t Off)	OFF
<u>SUB 1 BUS A, 800/600 MCC-RLS-A</u>													
Phase	800	85	SQUARE D	NW08H3	600	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	1	12	4 (2400A)	0.2 (I^2t Off)	OFF
ARMS	800	85	SQUARE D	NW08H3	600	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	1	12	4 (2400A)	INST (I^2t Off)	OFF
<u>SUB 1 BUS A, SUB 1 MAIN A</u>													
Phase	1,600	85	SQUARE D	NW16H3	1,200	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	1	8	4 (4800A)	0.4 (I^2t Off)	OFF
<u>SUB 1 BUS A, SUB 1 TIE</u>													
Phase	1,600	85	SQUARE D	NW16H3	1,200	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	0.8	8	4 (3840A)	0.3 (I^2t Off)	OFF
<u>SUB 1 BUS B, 800/200 MCC-D</u>													
--	800	85	SQUARE D	NW08H2	250	0	LSI, 100-250AS,	Masterpact NW,	0.9	24	10 (2250A)	0.2 (I^2t Off)	OFF

Phase	800	85	SQUARE D	NW08H2	250	0	ANSI LSI, 100-250AS, ANSI	5.0 & 6.0 A/P/H Masterpact NW, 5.0 & 6.0 A/P/H	0.9	24	10 (2250A)	INST (I^2t Off)	OFF
ARMS													
<u>SUB 1 BUS B, 800/400</u> <u>MCC-RLS-B</u>													
PHASE	800	85	SQUARE D	NW08H3	400	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	0.9	20	5 (1800A)	0.2 (I^2t Off)	OFF
ARMS	800	85	SQUARE D	NW08H3	400	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	0.9	20	5 (1800A)	INST (I^2t Off)	OFF
<u>SUB 1 BUS B, SUB 1</u> <u>MAIN B</u>													
Phase	1,600	85	SQUARE D	NW16H3	1,200	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	1	8	4 (4800A)	0.4 (I^2t Off)	OFF
<u>SUB 2 BUS A, 800/400</u> <u>MCC-E</u>													
Phase	800	85	SQUARE D	NW08H3	400	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	1	12	6 (2400A)	0.1 (I^2t Off)	10 (4000A)
ARMS	800	85	SQUARE D	NW08H3	400	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	1	12	6 (2400A)	INST (I^2t Off)	10 (4000A)
<u>SUB 2 BUS A, SUB 2</u> <u>MAIN A</u>													
Phase	800	85	SQUARE D	NW08H3	800	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	1	12	6 (4800A)	0.3 (I^2t Off)	OFF
<u>SUB 2 BUS A, SUB 2 TIE</u>													
Phase	800	85	SQUARE D	NW08H3	800	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	0.9	8	5 (3600A)	0.2 (I^2t Off)	OFF
<u>SUB 2 BUS B, 800/400</u> <u>MCC-F</u>													
Phase	800	85	SQUARE D	NW08H3	400	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	1	12	6 (2400A)	0.1 (I^2t Off)	10 (4000A)
ARMS	800	65	SQUARE D	NW08H1	400	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	1	12	6 (2400A)	INST (I^2t Off)	10 (4000A)
<u>SUB 2 BUS B, SUB 2</u> <u>MAIN B</u>													
Phase	800	85	SQUARE D	NW08H3	800	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	1	12	6 (4800A)	0.3 (I^2t Off)	OFF
<u>SUB 3 BUS A, 1600/1440</u>													

MCC-WBB-A

Phase	1,600	85	SQUARE D	NW16H3	1,600	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	0.9	4	4 (5760A)	0.2 (I^2t Off)	OFF
ARMS	1,600	85	SQUARE D	NW16H3	1,600	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	0.9	4	4 (5760A)	INST (I^2t Off)	OFF

SUB 3 BUS A, 800/400
MCC-WPB-A

PHASE	800	85	SQUARE D	NW08H3	400	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	0.9	8	10 (3600A)	0.1 (I^2t Off)	OFF
ARMS	800	85	SQUARE D	NW08H3	400	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	0.9	8	10 (3600A)	INST (I^2t Off)	OFF

SUB 3 BUS A, SUB 3
MAIN A

Phase	3,200	85	SQUARE D	NW32H3	3,000	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	0.9	4	4 (10800A)	0.4 (I^2t Off)	OFF
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SUB 3 BUS A, SUB 3 TIE

Phase	3,200	85	SQUARE D	NW32H3	3,000	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	0.7	4	4 (8400A)	0.3 (I^2t Off)	OFF
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SUB 3 BUS B, 1600/1440
MCC-WBB-B

Phase	1,600	85	SQUARE D	NW16H3	1,600	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	0.9	4	4 (5760A)	0.2 (I^2t Off)	OFF
ARMS	1,600	85	SQUARE D	NW16H3	1,600	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	0.9	4	4 (5760A)	INST (I^2t Off)	OFF

SUB 3 BUS B, 800/400
MCC-WPB-B

PHASE	800	85	SQUARE D	NW08H3	400	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	0.9	8	10 (3600A)	0.1 (I^2t Off)	OFF
ARMS	800	85	SQUARE D	NW08H3	400	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	0.9	8	10 (3600A)	INST (I^2t Off)	OFF

SUB 3 BUS B, SUB 3
ISOLATION

Phase	3,200	85	SQUARE D	NW32H3	3,000	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	0.7	4	4 (8400A)	0.3 (I^2t Off)	OFF
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SUB 3 BUS B, SUB 3
MAIN B

Phase	3,200	85	SQUARE D	NW32H3	3,000	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	0.9	4	4 (10800A)	0.4 (I ² t Off)	OFF
<u>SUB 4 BUS A, FB-MCC-M</u>													
Phase	800	30	BBC	800	800	0	LSI, 225-4000AF	K-LINE, SS-15	1.0 (800A)	MIN	4.0 (3200A)	INT	10.0 (8000A)
<u>SUB 4 BUS A, FB-MCC-Q</u>													
Phase	600	30	BBC	600	600	0	LSI, 225-4000AF	K-LINE, SS-15	1.0 (600A)	INT	6.0 (3600A)	INT	12.0 (7200A)
<u>SUB 4 BUS A, SUB 4 MAIN A</u>													
Phase	1,600	50	BBC	1600	1,000	0	LS, 225-4200AF	K-LINE, SS-4	1.0 (1000A)	INT	4.0 (4000A)	INT	
<u>SUB 4 BUS A, SUB 4 TIE</u>													
Phase	1,600	200	BBC	1600	1,600	0	LS, 800-1600AF	LKD, LSS-4	0.7 (1120A)	MIN	3.0 (4800A)	INT	
<u>SUB 4 BUS B, FB-MCC-N</u>													
Phase	800	30	BBC	800	800	0	LSI, 225-4000AF	K-LINE, SS-15	1.0 (800A)	MIN	4.0 (3200A)	INT	10.0 (8000A)
<u>SUB 4 BUS B, FB-MCC-P</u>													
Phase	600	30	BBC	600	400	0	LSI, 225-4000AF	K-LINE, SS-15	1.0 (400A)	INT	4.0 (1600A)	INT	12.0 (4800A)
<u>SUB 4 BUS B, FB-PDP-UV-2A</u>													
Phase	250	100	SQUARE D	NX	250	200	LSI, 125-1200A	NX, Micrologic (Obs.)	1.1 (220A)	MIN	6.0 (1200A)	INT (I ² t On)	
<u>SUB 4 BUS B, FB-PDP-UV-2B</u>													
Phase	250	100	SQUARE D	NX	250	200	LSI, 125-1200A	NX, Micrologic (Obs.)	1.1 (220A)	MIN	6.0 (1200A)	INT (I ² t On)	
<u>SUB 4 BUS B, SUB 4</u>													

MAIN B

Phase	1,600	50	BBC	1600	1,000	0	LS. 225-4200AF	K-LINE, SS-4	1.0 (1000A)	INT	4.0 (4000A)	INT
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**SUB 5 BUS A, 800/600
MCC-53A**

Phase	800	100	CUTLER-HAMMER	MDS-C08	600	600	LSI, 800AF, 200-800A Plugs	Magnum DS, RMS 520	1 (600A)	15	6 (3600A)	0.2 (I^2t Off)	10 (6000A)
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**SUB 5 BUS A, 800/600
MCC-55A**

Phase	800	100	CUTLER-HAMMER	MDS-C08	600	600	LSI, 800AF, 200-800A Plugs	Magnum DS, RMS 520	1 (600A)	15	6 (3600A)	0.2 (I^2t Off)	10 (6000A)
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**SUB 5 BUS A, 800/600
MCC-56A**

Phase	800	100	CUTLER-HAMMER	MDS-C08	600	600	LSI, 800AF, 200-800A Plugs	Magnum DS, RMS 520	1 (600A)	15	6 (3600A)	0.2 (I^2t Off)	10 (6000A)
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**SUB 5 BUS A, 800/600
VFD CFG-1**

Phase	800	100	CUTLER-HAMMER	MDS-C08	600	600	LSI, 800AF, 200-800A Plugs	Magnum DS, RMS 520	1 (600A)	12	6 (3600A)	0.2 (I^2t Off)	10 (6000A)
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**SUB 5 BUS A, 800/800
MCC-51A**

Phase	800	100	CUTLER-HAMMER	MDS-C08	800	800	LSI, 800AF, 200-800A Plugs	Magnum DS, RMS 520	1 (800A)	15	6 (4800A)	0.2 (I^2t Off)	10 (8000A)
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**SUB 5 BUS A, 800/800
MCC-52A**

Phase	800	100	CUTLER-HAMMER	MDS-C08	800	800	LSI, 800AF, 200-800A Plugs	Magnum DS, RMS 520	1 (800A)	15	6 (4800A)	0.2 (I^2t Off)	10 (8000A)
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**SUB 5 BUS A, 800/800
MCC-54A**

Phase	800	100	CUTLER-HAMMER	MDS-C08	800	800	LSI, 800AF, 200-800A Plugs	Magnum DS, RMS 520	1 (800A)	15	6 (4800A)	0.2 (I^2t Off)	10 (8000A)
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**SUB 5 BUS A, 800/800
MCC-R**

Phase	800	65	CUTLER-HAMMER	MDS-608	800	800	LSI, 800AF, 200-800A Plugs	Magnum DS, RMS 520	1 (800A)	4	4 (3200A)	0.2 (I^2t Off)	10 (8000A)
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Phase			HAMMER				800A Plugs	RMS 520					
<u>SUB 5 BUS A, 800/800</u> <u>MCC-XA</u>													
Phase	800	65	CUTLER-HAMMER	MDS-608	800	800	LSI, 800AF, 200-800A Plugs	Magnum DS, RMS 520	1 (800A)	4	6 (4800A)	0.2 (I ² t Off)	10 (8000A)
<u>SUB 5 BUS A, SUB 5</u> <u>MAIN A</u>													
Phase	4,000	100	CUTLER-HAMMER	MDS-C40	4,000	4,000	LSI, 4000AF, 3200-4000A Plugs	Magnum DS, RMS 520	0.8 (3200A)	2	2.5 (8000A)	0.3 (I ² t Off)	
<u>SUB 5 BUS A, SUB 5 TIE</u>													
Phase	4,000	100	CUTLER-HAMMER	MDS-C40	3,200	3,200	LSI, 4000AF, 3200-4000A Plugs	Magnum DS, RMS 520	0.9 (2880A)	2	2.5 (7200A)	0.3 (I ² t Off)	
<u>SUB 5 BUS B, 800/600</u> <u>MCC-53B</u>													
Phase	800	65	CUTLER-HAMMER	MDS-608	600	600	LSI, 800AF, 200-800A Plugs	Magnum DS, RMS 520	1 (600A)	15	6 (3600A)	0.2 (I ² t On)	10 (6000A)
<u>SUB 5 BUS B, 800/600</u> <u>MCC-55B</u>													
Phase	800	100	CUTLER-HAMMER	MDS-C08	600	600	LSI, 800AF, 200-800A Plugs	Magnum DS, RMS 520	1 (600A)	15	6 (3600A)	0.2 (I ² t Off)	10 (6000A)
<u>SUB 5 BUS B, 800/600</u> <u>MCC-56B</u>													
Phase	800	100	CUTLER-HAMMER	MDS-C08	600	600	LSI, 800AF, 200-800A Plugs	Magnum DS, RMS 520	1 (600A)	15	6 (3600A)	0.2 (I ² t Off)	10 (6000A)
<u>SUB 5 BUS B, 800/600</u> <u>VFD CFG-2</u>													
Phase	800	100	CUTLER-HAMMER	MDS-C08	600	600	LSI, 800AF, 200-800A Plugs	Magnum DS, RMS 520	1 (600A)	4	6 (3600A)	0.2 (I ² t Off)	8 (4800A)
<u>SUB 5 BUS B, 800/600</u> <u>VFD CFG-3</u>													
Phase	800	100	CUTLER-HAMMER	MDS-C08	600	600	LSI, 800AF, 200-800A Plugs	Magnum DS, RMS 520	1 (600A)	4	6 (3600A)	0.2 (I ² t Off)	8 (4800A)

SUB 5 BUS B, 800/800
MCC-51B

Phase	800	100	CUTLER-HAMMER	MDS-C08	800	800	LSI, 800AF, 200-800A Plugs	Magnum DS, RMS 520	1 (800A)	15	6 (4800A)	0.2 (I [^] 2t Off)	10 (8000A)
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SUB 5 BUS B, 800/800
MCC-52B

Phase	800	100	CUTLER-HAMMER	MDS-C08	800	800	LSI, 800AF, 200-800A Plugs	Magnum DS, RMS 520	1 (800A)	15	6 (4800A)	0.2 (I [^] 2t Off)	10 (8000A)
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SUB 5 BUS B, 800/800
MCC-54B

Phase	800	100	CUTLER-HAMMER	MDS-C08	800	800	LSI, 800AF, 200-800A Plugs	Magnum DS, RMS 520	1 (800A)	15	6 (4800A)	0.2 (I [^] 2t Off)	10 (8000A)
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SUB 5 BUS B, 800/800
MCC-S

Phase	800	100	CUTLER-HAMMER	MDS-C08	800	800	LSI, 800AF, 200-800A Plugs	Magnum DS, RMS 520	1 (800A)	15	6 (4800A)	0.2 (I [^] 2t Off)	10 (8000A)
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SUB 5 BUS B, 800/800
MCC-XB

Phase	800	100	CUTLER-HAMMER	MDS-C08	800	800	LSI, 800AF, 200-800A Plugs	Magnum DS, RMS 520	1 (800A)	12	6 (4800A)	0.2 (I [^] 2t Off)	10 (8000A)
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SUB 5 BUS B, SUB 5
MAIN B

Phase	4,000	100	CUTLER-HAMMER	MDS-C40	4,000	4,000	LSI, 4000AF, 3200-4000A Plugs	Magnum DS, RMS 520	0.8 (3200A)	2	2.5 (8000A)	0.3 (I [^] 2t Off)	
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SUB 6 BUS A, 800/200
MCC-EPB-A

Phase	800	85	SQUARE D	NW08H2	250	0	LSI, 100-250AS, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	0.8	4	10 (2000A)	0.1 (I [^] 2t Off)	15 (3750A)
ARMS	800	85	SQUARE D	NW08H2	250	0	LSI, 100-250AS, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	0.8	4	10 (2000A)	INST (I [^] 2t Off)	15 (3750A)

SUB 6 BUS A, 800/600
MCC-EBB-A

Phase	800	85	SQUARE D	NW08H3	600	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	1	8	3 (1800A)	0.1 (I [^] 2t Off)	15 (9000A)
ARMS	800	85	SQUARE D	NW08H3	600	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	1	8	3 (1800A)	INST (I [^] 2t Off)	15 (9000A)

**SUB 6 BUS A, SUB 6
MAIN A**

Phase	1,600	85	SQUARE D	NW16H3	1,600	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	0.9	2	2.5 (3600A)	0.3 (I^2t Off)	OFF
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SUB 6 BUS A, SUB 6 TIE

Phase	1,600	85	SQUARE D	NW16H3	1,600	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	0.7	2	2.5 (2800A)	0.2 (I^2t Off)	8 (12800A)
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**SUB 6 BUS B, 800/200
MCC-EPB-B**

Phase	800	85	SQUARE D	NW08H2	250	0	LSI, 100-250AS, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	0.8	4	10 (2000A)	0.1 (I^2t Off)	15 (3750A)
ARMS	800	85	SQUARE D	NW08H2	250	0	LSI, 100-250AS, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	0.8	4	10 (2000A)	INST (I^2t Off)	15 (3750A)

**SUB 6 BUS B, 800/600
MCC-EBB-B**

Phase	800	85	SQUARE D	NW08H3	600	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	1	8	3 (1800A)	0.1 (I^2t Off)	15 (9000A)
ARMS	800	85	SQUARE D	NW08H3	600	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	1	8	3 (1800A)	INST (I^2t Off)	15 (9000A)

**SUB 6 BUS B, SUB 6
MAIN B**

Phase	1,600	85	SQUARE D	NW16H3	1,600	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	0.9	2	2.5 (3600A)	0.3 (I^2t Off)	OFF
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**SUB 7 BUS A, 800/200 UV-
1A**

Phase	800	85	SQUARE D	NW08H2	250	0	LSI, 100-250AS, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	0.8	0.5	8 (1600A)	0.2 (I^2t Off)	12 (3000A)
ARMS	800	85	SQUARE D	NW08H2	250	0	LSI, 100-250AS, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	0.8	0.5	8 (1600A)	INST (I^2t Off)	12 (3000A)

**SUB 7 BUS A, 800/600
MCC-CEB-A**

Phase	800	85	SQUARE D	NW08H3	600	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	1	4	6 (3600A)	0.1 (I^2t Off)	15 (9000A)
ARMS	800	100	SQUARE D	NW08H3	600	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	1	4	6 (3600A)	INST (I^2t Off)	15 (9000A)

SUB 7 BUS A, 800/800

ATS-ADM-EMG

Phase	800	85	SQUARE D	NW08H3	800	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	1	12	5 (4000A)	0.2 (I [^] 2t Off)	15 (12000A)
ARMS	800	100	SQUARE D	NW08H3	800	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	1	12	5 (4000A)	INST (I [^] 2t Off)	15 (12000A)

**SUB 7 BUS A, SUB 7
MAIN A**

Phase	3,200	85	SQUARE D	NW32H3	3,200	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	0.7	4	4 (8960A)	0.4 (I [^] 2t Off)	10 (32000A)
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SUB 7 BUS A, SUB 7 TIE

Phase	3,200	85	SQUARE D	NW32H3	3,200	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	0.6	4	4 (7680A)	0.3 (I [^] 2t Off)	10 (32000A)
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**SUB 7 BUS B, 800/200 UV-
1B**

Phase	800	85	SQUARE D	NW08H2	250	0	LSI, 100-250AS, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	0.8	0.5	8 (1600A)	0.2 (I [^] 2t Off)	12 (3000A)
ARMS	800	85	SQUARE D	NW08H2	250	0	LSI, 100-250AS, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	0.8	0.5	8 (1600A)	INST (I [^] 2t Off)	12 (3000A)

**SUB 7 BUS B, 800/250 PP-
MTB**

Phase	800	85	SQUARE D	NW08H2	250	0	LSI, 100-250AS, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	1	24	8 (2000A)	0.1 (I [^] 2t Off)	15 (3750A)
ARMS	800	85	SQUARE D	NW08H2	250	0	LSI, 100-250AS, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	1	24	8 (2000A)	INST (I [^] 2t Off)	15 (3750A)

**SUB 7 BUS B, 800/600
MCC-CEB-B**

Phase	800	85	SQUARE D	NW08H3	600	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	1	4	6 (3600A)	0.1 (I [^] 2t Off)	15 (9000A)
ARMS	800	100	SQUARE D	NW08H3	600	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	1	4	6 (3600A)	INST (I [^] 2t Off)	15 (9000A)

**SUB 7 BUS B, 800/800
ATS-ADM-NRM**

Phase	800	85	SQUARE D	NW08H3	800	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	1	12	5 (4000A)	0.2 (I [^] 2t Off)	15 (12000A)
ARMS	800	100	SQUARE D	NW08H3	800	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	1	12	5 (4000A)	INST (I [^] 2t Off)	15 (12000A)

SUB 7 BUS B, SUB 7 ISO

Phase	3,200	85	SQUARE D	NW32H3	3,200	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	0.6	4	4 (7680A)	0.3 (I^2t Off)	10 (32000A)
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**SUB 7 BUS B, SUB 7
MAIN B**

Phase	3,200	85	SQUARE D	NW32H3	3,200	0	LSI, 400-5000A, ANSI	Masterpact NW, 5.0 & 6.0 A/P/H	0.7	4	4 (8960A)	0.4 (I^2t Off)	10 (32000A)
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**UV-1A PD LINE SIDE, PD
UV-1A**

**UV-1B PD LINE SIDE, PD-
UV-1B SEC**

LOW VOLTAGE THERMAL MAGNETIC MOLDED CASE BREAKERS SETTINGS

DESIGNATION		FRAME		TRIP UNIT			
Location/Name	Amps Frame	MFR	TYPE MODEL	Amps Sensor/Plug	Description	TYPE/MODEL	LT SETTING INST SETTING
LP-E #MB LP-E	150	SQUARE D	QB	150 0	70-250A	QB	Fixed
PP-EBB-A FB AT-E1 FCV	20	SQUARE D	HG	20 0	15-150A	HG	Fixed
PP-EBB-A FB AT-E2 FCV	20	SQUARE D	HG	20 0	15-150A	HG	Fixed
PP-EBB-B FB AT-E3 Z2 FCV	20	SQUARE D	HG	20 0	15-150A	HG	Fixed
PP-EBB-B FB AT-E4 Z2 FCV	20	SQUARE D	HG	20 0	15-150A	HG	Fixed
MCC-CEB-A FB ATS-CEB EMG	90	SQUARE D	HJ	90 0	15-150A	HJ	Fixed
MCC-CEB-B FB ATS-CEB NRM	90	SQUARE D	HJ	90 0	15-150A	HJ	Fixed
MCC-CEB-B FB ATS-PP-UV-EMG	60	SQUARE D	HJ	60 0	15-150A	HJ	Fixed
MCC-RLS-A FB ATS-RLS EMG	60	SQUARE D	HJ	60 0	15-150A	HJ	Fixed
MCC-RLS-B FB ATS-RLS NRM	60	SQUARE D	HJ	60 0	15-150A	HJ	Fixed
MCC-WPB-A FB ATS-WPB-EMG	60	SQUARE D	HJ	60 0	15-150A	HJ	Fixed
MCC-WPB-B FB ATS-WPB-NORM	60	SQUARE D	HJ	60 0	15-150A	HJ	Fixed
PP-LSE FB CN-50-3 FCV	20	SQUARE D	HG	20 0	15-150A	HG	Fixed
PP-MTB FB DRILL PRESS	20	SQUARE D	HG	20 0	15-150A	HG	Fixed

DESIGNATION		FRAME		TRIP UNIT				
Location/Name	Amps Frame	MFR	TYPE MODEL	Amps Sensor/Plug	Description	TYPE/MODEL	LT SETTING	INST SETTING
PP-LSE FB EAST JC GATES	20	SQUARE D	HG	20 0	15-150A	HG	Fixed	
PP-EBB-B FB EBB-EDH-1	30	SQUARE D	HG	30 0	15-150A	HG	Fixed	
PP-EBB-A FB EWH-2	250	SQUARE D	JG	200 0	150-250A, UL	J-Frame, Powerpact	Thermal Curve	INST (5-10 x Trip) Low
MCC-D FB GATE OPERATORS	20	CUTLER-HA MMER	HFD	20 0	15-225A	HFD	Fixed	
PP-MTB FB HORZ BAND SAW	20	SQUARE D	HG	20 0	15-150A	HG	Fixed	
PP-EBB-A FB IPC LP-EFB	60	SQUARE D	HG	60 0	15-150A	HG	Fixed	
PP-MTB FB IRON WORK	20	SQUARE D	HG	20 0	15-150A	HG	Fixed	
PP-MTB FB LP-MTB	90	SQUARE D	HG	90 0	15-150A	HG	Fixed	
PP-LSE FB LSE-ACCU-1	20	SQUARE D	HG	20 0	15-150A	HG	Fixed	
PP-LSE FB LSE-ACU-1	70	SQUARE D	HG	70 0	15-150A	HG	Fixed	
PP-LSE FB LSE-PPU-1	20	SQUARE D	HG	20 0	15-150A	HG	Fixed	
PP-MTB FB MB-EF-1	30	SQUARE D	HG	30 0	15-150A	HG	Fixed	
PP-MTB FB METAL LATHE	30	SQUARE D	HG	30 0	15-150A	HG	Fixed	
PP-MTB FB MILL MACH	30	SQUARE D	HG	30 0	15-150A	HG	Fixed	
PP-EBB-B FB PAB-E1 DV & BOV	20	SQUARE D	HG	20 0	15-150A	HG	Fixed	
PP-EBB-A FB PAB-E1 LCP	30	SQUARE D	HG	30 0	15-150A	HG	Fixed	

DESIGNATION		FRAME		TRIP UNIT				
Location/Name	Amps Frame	MFR	TYPE MODEL	Amps Sensor/Plug	Description	TYPE/MODEL	LT SETTING	INST SETTING
PP-EBB-B FB PAB-E2 DV & BOV1	20	SQUARE D	HG	20 0	15-150A	HG	Fixed	
PP-EBB-A FB PAB-E2 LCP	30	SQUARE D	HG	30 0	15-150A	HG	Fixed	
PP-EBB-A FB PAB-E3 DV & BOV	20	SQUARE D	HG	20 0	15-150A	HG	Fixed	
PP-EBB-A FB PAB-E3 LCP	30	SQUARE D	HG	30 0	15-150A	HG	Fixed	
PP-ADM-1 FB PP-ADM-2	125	SQUARE D	HJ	125 0	15-150A	HJ	Fixed	
MCC-EBB-B. FB PP-EBB-B	60	SQUARE D	HJ	60 0	15-150A	HJ	Fixed	
PP-MTB FB PP-Z	100	SQUARE D	HG	100 0	15-150A	HG	Fixed	
PP-EBB-B FB RECIRCV PAB-E1	20	SQUARE D	HG	20 0	15-150A	HG	Fixed	
PP-EBB-B FB RECIRCV PAB-E2	20	SQUARE D	HG	20 0	15-150A	HG	Fixed	
PP-EBB-B FB RECIRCV PAB-E3	20	SQUARE D	HG	20 0	15-150A	HG	Fixed	
MCC-54 A FB SLC -6	50	CUTLER-HA MMER	HFD	50 0	15-225A	HFD	Fixed	
MCC-54B FB SLC -7	50	CUTLER-HA MMER	HFD	50 0	15-225A	HFD	Fixed	
PP-LSE FB SLDG'S F-50-3,4	20	SQUARE D	HG	20 0	15-150A	HG	Fixed	
PP-LSE FB SLDG'S F-60-1,2,3	20	SQUARE D	HG	20 0	15-150A	HG	Fixed	
PP-LSE FB SLDG'S S-50-1,2,3,4,5	20	SQUARE D	HG	20 0	15-150A	HG	Fixed	
PP-LSE FB SLDG's S-60-1,2	20	SQUARE D	HG	20 0	15-150A	HG	Fixed	

DESIGNATION		FRAME		TRIP UNIT				
Location/Name	Amps Frame	MFR	TYPE MODEL	Amps Sensor/Plug	Description	TYPE/MODEL	LT SETTING	INST SETTING
PP-EBB-A FB WASV E1 P-65-1	20	SQUARE D	HG	20 0	15-150A	HG	Fixed	
PP-EBB-A FB WASV E2 P-65-2	20	SQUARE D	HG	20 0	15-150A	HG	Fixed	
PP-EBB-B FB WASV E3	20	SQUARE D	HG	20 0	15-150A	HG	Fixed	
PP-EBB-B FB WASV E4	20	SQUARE D	HG	20 0	15-150A	HG	Fixed	
PP-EBB-A FB XFMR LP-EBB-A	90	SQUARE D	HG	90 0	15-150A	HG	Fixed	
VFD CFG-1 INPUT MB CFG-1	400	CUTLER-HA MMER	HKD	400 0	100-400A	HKD	Thermal Curve (Fixed)	INST (5-10 x Trip) 7.00
VFD CFG-2 INPUT MB CFG-2	400	CUTLER-HA MMER	HKD	400 0	100-400A	HKD	Thermal Curve (Fixed)	INST (5-10 x Trip) 7.00
VFD CFG-3 INPUT MB CFG-3	400	CUTLER-HA MMER	HKD	400 0	100-400A	HKD	Thermal Curve (Fixed)	INST (5-10 x Trip) 7.00
DP-52 MB DP-52	400	CUTLER-HA MMER	HKD	400 0	100-400A	HKD	Thermal Curve (Fixed)	INST (5-10 x Trip) 5
DP-54 MB DP-54	400	CUTLER-HA MMER	HKD	400 0	100-400A	HKD	Thermal Curve (Fixed)	INST (5-10 x Trip) 5
DP-55 MB DP-55	400	CUTLER-HA MMER	HKD	400 0	100-400A	HKD	Thermal Curve (Fixed)	INST (5-10 x Trip) 5
DP-56 MB DP-56	400	CUTLER-HA MMER	HKD	400 0	100-400A	HKD	Thermal Curve (Fixed)	INST (5-10 x Trip) 5
IPC LP-EFB MB IPC LP-EFB	100	SQUARE D	QO	100 0	15-100A	QO, 3-Pole	Fixed (730-7, 100A)	
IPC LP-WFB MB IPC LP-WFB	100	SQUARE D	QO	100 0	15-100A	QO, 3-Pole	Fixed (730-7, 100A)	
LP-ADM-1 MB LP-ADM-1	400	SQUARE D	LA	250 0	125-400A, Inst 5-10	LA	Thermal Curve (Fixed)	INST (5-10 x Trip) 5.0
LP-ADM-1A MB LP-ADM-1A	400	SQUARE D	LA	250 0	125-400A, Inst 5-10	LA	Thermal Curve (Fixed)	INST (5-10 x Trip) 5.0

DESIGNATION		FRAME		TRIP UNIT				
Location/Name	Amps Frame	MFR	TYPE MODEL	Amps Sensor/Plug	Description	TYPE/MODEL	LT SETTING	INST SETTING
LP-ADM-UPS MB LP-ADM-UPS	60	SQUARE D	QO	60 0	15-100A	QO, 3-Pole	Fixed (730-6, 60A)	
LP-C MB LP-C	70	Unknown	QB	70 0	70-250A	SqD 'QB'	Fixed	
LP-CEB-A MB LP-CEB-A	150	SQUARE D	QB	150 0	70-250A	QB	Fixed	
LP-EBB-A MB LP-EBB-A	150	SQUARE D	QB	150 0	70-250A	QB	Fixed	
LP-N MB LP-N	150	SQUARE D	QB	150 0	70-250A	QB	Fixed	
LP-Q MB LP-Q	150	SQUARE D	QB	150 0	70-250A	QB	Fixed	
LP-WPB-A MB LP-WPB-B	100	SQUARE D	QO	100 0	15-100A	QO, 3-Pole	Fixed (730-7, 100A)	
PP-ADM-1 MB PP-ADM-1	250	SQUARE D	JJ	225 0	150-250A, UL	Powerpact, J-Frame	Thermal Curve (Fixed)	INST (5-10 x Trip) 10
PP-LSE MB PP-LSE	150	SQUARE D	HG	150 0	15-150A	HG	Fixed	
TFB-MPC MB TFB-MPC	50	SQUARE D	QO	50 0	15-100A	QO, 3-Pole	Fixed (730-6, 50A)	
LP-RLS MB-LP-RLS	100	SQUARE D	QO	100 0	15-100A	QO, 3-Pole	Fixed (730-7, 100A)	
PP-Z MB-PP-Z	100	SQUARE D	FD	100 0	15-100A	FD	Fixed	
LP-WBB-A MB-WBB-A	150	SQUARE D	QB	150 0	70-250A	QB	Fixed	
MCC-EBB-B PD WELD RCPT EBB-B	30	SQUARE D	HJ	30 0	15-150A	HJ	Fixed	
MCC-F. PD 0561	30	CUTLER-HA MMER	HFD	30 0	15-225A	HFD	Fixed	
MCC-F.. PD 0581	60	CUTLER-HA MMER	HFD	60 0	15-225A	HFD	Fixed	

DESIGNATION		FRAME		TRIP UNIT				
Location/Name	Amps Frame	MFR	TYPE MODEL	Amps Sensor/Plug	Description	TYPE/MODEL	LT SETTING	INST SETTING
MCC-F., PD 0582	80	CUTLER-HA MMER	HFD	80 0	15-225A	HFD	Fixed	
MCC-F., PD 0583	80	CUTLER-HA MMER	HFD	80 0	15-225A	HFD	Fixed	
MCC-M PD 0650	20	CUTLER-HA MMER	FD	20 0	15-225A	FD	Fixed	
MCC-M. PD 0672	175	CUTLER-HA MMER	FD	175 0	15-225A	FD	Fixed	
MCC-N. PD 0724	100	CUTLER-HA MMER	FD	100 0	15-225A	FD	Fixed	
MCC-RLS-B PD 48IN GATE S-1-1	30	SQUARE D	HJ	30 0	15-150A	HJ	Fixed	
MCC-RLS-A PD 78IN GATE CONTROLLER	20	SQUARE D	HJ	20 0	15-150A	HJ	Fixed	
MCC-ADM-A PD ADM-ACCU-1	15	SQUARE D	HJ	15 0	15-150A	HJ	Fixed	
MCC-ADM-A PD ADM-ACU-1	45	SQUARE D	HJ	45 0	15-150A	HJ	Fixed	
MCC-ADM-A. PD ADM-CH-1	100	SQUARE D	HJ	100 0	15-150A	HJ	Fixed	
MCC-ADM-A. PD ADM-EWH-1	20	SQUARE D	HJ	20 0	15-150A	HJ	Fixed	
MCC-ADM-A. PD ADM-EWH-2	20	SQUARE D	HJ	20 0	15-150A	HJ	Fixed	
MCC-ADM-A PD ADM-HVAC-1	30	SQUARE D	HJ	30 0	15-150A	HJ	Fixed	
MCC-ADM-A PD ADM-HVAC-2	20	SQUARE D	HJ	20 0	15-150A	HJ	Fixed	
PP-WBB-B PD AT-W2 FCV	20	SQUARE D	HJ	20 0	15-150A	HJ	Fixed	
MCC-CEB-A PD CEB-ACCU-1	15	SQUARE D	HJ	15 0	15-150A	HJ	Fixed	

DESIGNATION		FRAME		TRIP UNIT				
Location/Name	Amps Frame	MFR	TYPE MODEL	Amps Sensor/Plug	Description	TYPE/MODEL	LT SETTING	INST SETTING
MCC-CEB-A PD CEB-ACU-1	45	SQUARE D	HJ	45 0	15-150A	HJ	Fixed	
MCC-CEB-B PD CEB-PPU-1	15	SQUARE D	HJ	15 0	15-150A	HJ	Fixed	
MCC-CEB-B PD CEP-FCP-2	20	SQUARE D	HJ	20 0	15-150A	HJ	Fixed	
MCC-EBB-A. PD EBB-A HOIST1	20	SQUARE D	HJ	20 0	15-150A	HJ	Fixed	
MCC-EBB-A. PD EBB-A HOIST2	20	SQUARE D	HJ	20 0	15-150A	HJ	Fixed	
MCC-EBB-A. PD EBB-A WELD RCPT	30	SQUARE D	HJ	30 0	15-150A	HJ	Fixed	
MCC-EBB-B. PD EBB-EUH-1	20	SQUARE D	HJ	20 0	15-150A	HJ	Fixed	
MCC-EBB-A. PD EBB-HV-1	20	SQUARE D	HJ	20 0	15-150A	HJ	Fixed	
MCC-ADM-A PD ELEVATOR CP	30	SQUARE D	HJ	30 0	15-150A	HJ	Fixed	
MCC-EPB-B PD EPB-EUH-1	30	SQUARE D	HJ	30 0	15-150A	HJ	Fixed	
MCC-EPB-B PD EQRCPT-EPB-B	30	SQUARE D	HJ	30 0	15-150A	HJ	Fixed	
MCC-ADM-A. PD EWH-1	50	SQUARE D	HJ	50 0	15-150A	HJ	Fixed	
PP-WBB-A PD EWH-2	250	SQUARE D	JJ	200 0	150-250A, UL	J-Frame, Powerpact	Thermal Curve	INST (5-10 x Trip) Low
MCC-EPB-B. PD F-1-1	30	SQUARE D	HJ	30 0	15-150A	HJ	Fixed	
MCC-EPB-B. PD F-1-5	30	SQUARE D	HJ	30 0	15-150A	HJ	Fixed	
MCC-EPB-A.. PD F-2-13	30	SQUARE D	HJ	30 0	15-150A	HJ	Fixed	

DESIGNATION		FRAME		TRIP UNIT				
Location/Name	Amps Frame	MFR	TYPE MODEL	Amps Sensor/Plug	Description	TYPE/MODEL	LT SETTING	INST SETTING
MCC-EPB-A.. PD F-2-6	30	SQUARE D	HJ	30 0	15-150A	HJ	Fixed	
MCC-WPB-A PD F-54-4	20	SQUARE D	HJ	20 0	15-150A	HJ	Fixed	
MCC-WPB-B PD F-54-5	20	SQUARE D	HJ	20 0	15-150A	HJ	Fixed	
MCC-EPB-B PD HOIST EPB-B	20	SQUARE D	HJ	20 0	15-150A	HJ	Fixed	
MCC-EPB-B PD HV-1	15	SQUARE D	HJ	15 0	15-150A	HJ	Fixed	
MCC-WPB-A. PD IFSAB-1	35	SQUARE D	HJ	35 0	15-150A	HJ	Fixed	
PP-WBB-A PD IPC LP-WFB	60	SQUARE D	HL	60 0	15-150A	HL	Fixed	
PP-WBB-A PD LP-WBB XFMR	90	SQUARE D	HJ	90 0	15-150A	HJ	Fixed	
MCC-WPB-B. PD P-53-06	20	SQUARE D	HJ	20 0	15-150A	HJ	Fixed	
MCC-WPB-A. PD P-53-07	20	SQUARE D	HJ	20 0	15-150A	HJ	Fixed	
PP-WBB-A PD PAB-W1 VALVES	20	SQUARE D	HJ	20 0	15-150A	HJ	Fixed	
PP-WBB-B PD PAB-W2 VALVES	20	SQUARE D	HJ	20 0	15-150A	HJ	Fixed	
PP-WBB-A PD PAB-W3 VALVES	20	SQUARE D	HJ	20 0	15-150A	HJ	Fixed	
MCC-WBB-B. PD PP-WBB-B	90	SQUARE D	HJ	90 0	15-150A	HJ	Fixed	
MCC-EPB-A PD PSLP-E1	30	SQUARE D	HJ	30 0	15-150A	HJ	Fixed	
MCC-EPB-B PD PSLP-E2	30	SQUARE D	HJ	30 0	15-150A	HJ	Fixed	

DESIGNATION		FRAME		TRIP UNIT				
Location/Name	Amps Frame	MFR	TYPE MODEL	Amps Sensor/Plug	Description	TYPE/MODEL	LT SETTING	INST SETTING
MCC-EPB-A PD PSLP-E3	30	SQUARE D	HJ	30 0	15-150A	HJ	Fixed	
MCC-WPB-A PD PSLP-W1	45	SQUARE D	HJ	45 0	15-150A	HJ	Fixed	
MCC-WPB-B PD PSLP-W2	45	SQUARE D	HJ	45 0	15-150A	HJ	Fixed	
MCC-WPB-A PD PSLPG-W1	20	SQUARE D	HJ	20 0	15-150A	HJ	Fixed	
MCC-WPB-B PD PSLPG-W2	20	SQUARE D	HJ	20 0	15-150A	HJ	Fixed	
MCC-EPB-B PD PSLPM-E1	30	SQUARE D	HJ	30 0	15-150A	HJ	Fixed	
MCC-EPB-B PD PSLPM-E2	30	SQUARE D	HJ	30 0	15-150A	HJ	Fixed	
MCC-EPB-A PD PSLPM-E3	30	SQUARE D	HJ	30 0	15-150A	HJ	Fixed	
MCC-EBB-A PD RASP-E1	40	SQUARE D	HJ	40 0	15-150A	HJ	Fixed	
MCC-EBB-B PD RASP-E2	50	SQUARE D	HJ	50 0	15-150A	HJ	Fixed	
MCC-EBB-A PD RASP-E3	40	SQUARE D	HJ	40 0	15-150A	HJ	Fixed	
MCC-EBB-B PD RASP-E4	50	SQUARE D	HJ	50 0	15-150A	HJ	Fixed	
MCC-EBB-A PD RASP-E5	40	SQUARE D	HJ	40 0	15-150A	HJ	Fixed	
MCC-EBB-B PD RASP-E6	50	SQUARE D	HJ	50 0	15-150A	HJ	Fixed	
MCC-EBB-A PD RASP-E7	40	SQUARE D	HJ	40 0	15-150A	HJ	Fixed	
MCC-EBB-B PD RASP-E8	50	SQUARE D	HJ	50 0	15-150A	HJ	Fixed	

DESIGNATION		FRAME		TRIP UNIT				
Location/Name	Amps Frame	MFR	TYPE MODEL	Amps Sensor/Plug	Description	TYPE/MODEL	LT SETTING	INST SETTING
MCC-WBB-A PD RASP-W1	50	SQUARE D	HJ	50 0	15-150A	HJ	Fixed	
MCC-WBB-B PD RASP-W2	40	SQUARE D	HJ	40 0	15-150A	HJ	Fixed	
MCC-WBB-A PD RASP-W3	50	SQUARE D	HJ	50 0	15-150A	HJ	Fixed	
MCC-WBB-B PD RASP-W4	40	SQUARE D	HJ	40 0	15-150A	HJ	Fixed	
MCC-RLS-A PD RLS-ACCU-1	15	SQUARE D	HJ	15 0	15-150A	HJ	Fixed	
MCC-RLS-A PD RLS-ACU-1	25	SQUARE D	HJ	25 0	15-150A	HJ	Fixed	
MCC-RLS-B PD RLS-PPU-1	25	SQUARE D	HJ	25 0	15-150A	HJ	Fixed	
MCC-ADM-A. PD SWPSO-SG	30	SQUARE D	HJ	30 0	15-150A	HJ	Fixed	
UV-1A PD LINE SIDE PD UV-1A	200	CUTLER-HA MMER	FD	200 0	15-225A	FD	Fixed	
PP-WBB-A PD W1 FLOW VALVES	20	SQUARE D	HJ	20 0	15-150A	HJ	Fixed	
PP-WBB-B PD WA MAIN BOV	20	SQUARE D	HJ	20 0	15-150A	HJ	Fixed	
PP-WBB-A PD WAS VALVE W1	20	SQUARE D	HJ	20 0	15-150A	HJ	Fixed	
PP-WBB-B PD WAS VALVE W2	20	SQUARE D	HJ	20 0	15-150A	HJ	Fixed	
LP-ADM-2 PD WASHER	30	SQUARE D	QO	30 0	15-125A	QO, 2-Pole	Fixed (730-5, 30A)	
MCC-EBB-A PD WASP-E1	30	SQUARE D	HJ	30 0	15-150A	HJ	Fixed	
MCC-EBB-B PD WASP-E2	30	SQUARE D	HJ	30 0	15-150A	HJ	Fixed	

DESIGNATION		FRAME		TRIP UNIT				
Location/Name	Amps Frame	MFR	TYPE MODEL	Amps Sensor/Plug	Description	TYPE/MODEL	LT SETTING	INST SETTING
MCC-WBB-A PD WASP-W1	30	SQUARE D	HJ	30 0	15-150A	HJ	Fixed	
MCC-WBB-B PD WASP-W2	30	SQUARE D	HJ	30 0	15-150A	HJ	Fixed	
MCC-WBB-B. PD WBB-H1	30	SQUARE D	HJ	30 0	15-150A	HJ	Fixed	
MCC-WBB-A. PD WBB-H2	30	SQUARE D	HJ	30 0	15-150A	HJ	Fixed	
MCC-WBB-B. PD WBB-HV-2	45	SQUARE D	HJ	45 0	15-150A	HJ	Fixed	
MCC-RLS-B PD WELD OUTLET RLS-B	30	SQUARE D	HJ	30 0	15-150A	HJ	Fixed	
PP-WBB-A PD WEST AESG W1	20	SQUARE D	HJ	20 0	15-150A	HJ	Fixed	
PP-WBB-B PD WEST AESG W2	20	SQUARE D	HJ	20 0	15-150A	HJ	Fixed	
IPC LP-WFB PD WFB-EUH-1	20	SQUARE D	QO	20 0	15-100A	QO, 3-Pole	Fixed (730-4, 20A)	
MCC-WPB-B. PD WPB-H1	30	SQUARE D	HJ	30 0	15-150A	HJ	Fixed	
MCC-WPB-B PD WPB-HV-1	30	SQUARE D	HJ	30 0	15-150A	HJ	Fixed	
MCC-EBB-A PD XFMR LP-O	60	SQUARE D	HJ	60 0	15-150A	HJ	Fixed	
MCC-EBB-B. PD XFMR LP-T	60	SQUARE D	HJ	60 0	15-150A	HJ	Fixed	
MCC-EBB-A PD XFMR LP-U	60	SQUARE D	HJ	60 0	15-150A	HJ	Fixed	
MCC-EPB-A PD XFMR-LP-V	70	SQUARE D	GJL	70 0	15-100A	GJL	Fixed	
MCC-EPB-B PD XFMR-LP-W	70	SQUARE D	GJL	70 0	15-100A	GJL	Fixed	

DESIGNATION		FRAME		TRIP UNIT				
Location/Name	Amps Frame	MFR	TYPE MODEL	Amps Sensor/Plug	Description	TYPE/MODEL	LT SETTING	INST SETTING
MCC-E. PD-0537	30	CUTLER-HA MMER	HFD	30 0	15-225A	HFD	Fixed	
MCC-E.. PD-0538	20	CUTLER-HA MMER	HFD	20 0	15-225A	HFD	Fixed	
MCC-E.. PD-0539	20	CUTLER-HA MMER	HFD	20 0	15-225A	HFD	Fixed	
LP-V PD-0635	150	SQUARE D	QB	150 0	70-250A	QB	Fixed	
LP-W PD-0638	150	SQUARE D	QB	150 0	70-250A	QB	Fixed	
PP-LSE PD-LP-LSE XFMR	60	SQUARE D	HG	60 0	15-150A	HG	Fixed	
LP-ADM-1A PD-UPS-ADM-1	60	SQUARE D	QO	60 0	15-100A	QO, 3-Pole	Fixed (730-6, 60A)	
UV-1B PD LINE SIDE PD-UV-1B	200	CUTLER-HA MMER	FD	200 0	15-225A	FD	Fixed	

Motor Circuit Protectors

Prot Dev	Func Name	Connected Bus	Voltage	Manufacturer	Type	Description	Frame	Segments
MCP ADM-E	Phase	MCC-ADM-A	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP ADM-E	Phase	MCC-ADM-A	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP ADM-P	Phase	MCC-ADM-A.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP ADM-P	Phase	MCC-ADM-A.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP ADM-P	Phase	MCC-ADM-A.	480	SQUARE D	Powerpact H/J,	M71 - M75	M72	Pickup, (8 - 13x) 8x
MCP ADM-P	Phase	MCC-ADM-A.	480	SQUARE D	Powerpact H/J,	M71 - M75	M72	Pickup, (8 - 13x) 8x
MCP ADP-E1	Phase	MCC-EBB-B	480	SQUARE D	Powerpact H/J,	M71 - M75	M73	Pickup, (8 - 13x) 8x
MCP ADP-E2	Phase	MCC-EBB-A	480	SQUARE D	Powerpact H/J,	M71 - M75	M73	Pickup, (8 - 13x) 8x
MCP ADP-W	Phase	MCC-WBB-A	480	SQUARE D	Powerpact H/J,	M71 - M75	M72	Pickup, (8 - 13x) 10x
MCP AHU-1	Phase	MCC-53 A	480	CUTLER-HAMMER	HMCP	50A (150-500A Inst)	HMCP	INST (150-500A) C
MCP AHU-3	Phase	MCC-53 A	480	CUTLER-HAMMER	HMCP	100A (300-1000A Inst)	HMCP	INST (300-1000A) C
MCP ANMX-	Phase	MCC-EPB-A.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP ANMX-	Phase	MCC-EPB-A.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP ANMX-	Phase	MCC-EPB-A.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP ANMX-	Phase	MCC-EPB-A.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP ANMX-	Phase	MCC-EPB-B..	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP ANMX-	Phase	MCC-EPB-B..	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP ANMX-	Phase	MCC-EPB-B..	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP ANMX-	Phase	MCC-EPB-B..	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP ANMX-	Phase	MCC-EPB-A.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP ANMX-	Phase	MCC-EPB-A.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP ANMX-	Phase	MCC-EPB-A.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP ANMX-	Phase	MCC-EPB-A.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP ANMX-	Phase	MCC-EPB-A.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP ANMX-	Phase	MCC-EPB-B..	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP ANMX-	Phase	MCC-EPB-B..	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP ANMX-	Phase	MCC-EPB-B..	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP ANMX-	Phase	MCC-EPB-B..	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP ANMX-	Phase	MCC-EPB-B..	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP ANMX-	Phase	MCC-WPB-A.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP ANMX-	Phase	MCC-WPB-A.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP ANMX-	Phase	MCC-WPB-A.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP ANMX-	Phase	MCC-WPB-A.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP ANMX-	Phase	MCC-WPB-B.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP ANMX-	Phase	MCC-WPB-B.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP ANMX-	Phase	MCC-WPB-B.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP ANMX-	Phase	MCC-WPB-B.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP AXMX-	Phase	MCC-EPB-A.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x

Prot Dev	Func Name	Connected Bus	Voltage	Manufacturer	Type	Description	Frame	Segments
MCP AXMX-	Phase	MCC-EPB-A.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP AXMX-	Phase	MCC-EPB-A.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP AXMX-	Phase	MCC-EPB-B..	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP AXMX-	Phase	MCC-EPB-B..	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP AXMX-	Phase	MCC-EPB-B..	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP AXMX-	Phase	MCC-EPB-A.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP AXMX-	Phase	MCC-EPB-A.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP AXMX-	Phase	MCC-EPB-A.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP AXMX-	Phase	MCC-EPB-B..	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP AXMX-	Phase	MCC-EPB-B..	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP AXMX-	Phase	MCC-EPB-B..	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP AXMX-	Phase	MCC-WPB-A.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP AXMX-	Phase	MCC-WPB-A.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP AXMX-	Phase	MCC-WPB-A.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP AXMX-	Phase	MCC-WPB-B.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP AXMX-	Phase	MCC-WPB-B.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP AXMX-	Phase	MCC-WPB-B.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP BT1-1M	Phase	MCC-56 A	480	CUTLER-HAMMER	HMCP	150A (450-1500A Inst)	HMCP	INST (450-1500A) B
MCP BT2-1M	Phase	MCC-56B	480	CUTLER-HAMMER	HMCP	150A (450-1500A Inst)	HMCP	INST (450-1500A) B
MCP BTAB-1	Phase	MCC-52A	480	CUTLER-HAMMER	HMCP	70A (210-700A Inst)	HMCP	INST (210-700A) B
MCP BTAB-2	Phase	MCC-52B	480	CUTLER-HAMMER	HMCP	70A (210-700A Inst)	HMCP	INST (210-700A) B
MCP BTAB-3	Phase	MCC-52A	480	CUTLER-HAMMER	HMCP	70A (210-700A Inst)	HMCP	INST (210-700A) B
MCP CEB-E	Phase	MCC-CEB-A	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP CEB-E	Phase	MCC-CEB-B	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP CEB-F	Phase	MCC-CEB-A	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP CEB-P	Phase	MCC-CEB-A	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP CEB-P	Phase	MCC-CEB-B	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP CLARI	Phase	MCC-EBB-B	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP CLARI	Phase	MCC-EBB-B	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP EBB S	Phase	MCC-EBB-A.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP EBB S	Phase	MCC-EBB-A.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP EBB-E	Phase	MCC-EBB-A.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP EBB-E	Phase	MCC-EBB-B.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP EBB-E	Phase	MCC-EBB-A.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP EBB-E	Phase	MCC-EBB-B.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP EBB-E	Phase	MCC-EBB-B.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP EPB-SU	Phase	MCC-EPB-A	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP EPB-SU	Phase	MCC-EPB-B	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP EPE-SA	Phase	MCC-EPB-A	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP EPI-SA	Phase	MCC-EPB-A	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP HSP 5	Phase	MCC-53 A	480	CUTLER-HAMMER	HMCP	50A (150-500A Inst)	HMCP	INST (150-500A) D
MCP HSP 6	Phase	MCC-53B	480	CUTLER-HAMMER	HMCP	50A (150-500A Inst)	HMCP	INST (150-500A) D

Prot Dev	Func Name	Connected Bus	Voltage	Manufacturer	Type	Description	Frame	Segments
MCP PC-E1	Phase	MCC-EPB-A	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP PC-E2	Phase	MCC-EPB-B	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP PC-E3	Phase	MCC-EPB-A	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP PC-E4	Phase	MCC-EPB-B	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP PCDR-W	Phase	MCC-WPB-A	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP PCDR-W	Phase	MCC-WPB-B	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 12x
MCP PDP-E1	Phase	MCC-EPB-A	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP PDP-E2	Phase	MCC-EPB-B	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP PDP-W1	Phase	MCC-WPB-A	480	SQUARE D	Powerpact H/J,	M71 - M75	M72	Pickup, (8 - 13x) 10x
MCP PSCP-E	Phase	MCC-EPB-B	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP PSCP-W	Phase	MCC-WPB-A	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 12x
MCP PSCP-W	Phase	MCC-WPB-B	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 10x
MCP PSLMP-	Phase	MCC-EPB-A	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP RF-1	Phase	MCC-EPB-B	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP RLS-E	Phase	MCC-RLS-B	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP RLS-E	Phase	MCC-RLS-B	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP RLS-S	Phase	MCC-RLS-B	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP RS-SAP	Phase	MCC-WPB-A	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 10x
MCP SCDR-W	Phase	MCC-WBB-A.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP SCDR-W	Phase	MCC-WBB-B.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP SCREW	Phase	MCC-RLS-A	480	SQUARE D	Powerpact H/J,	M71 - M75	M74	Pickup, (8 - 13x) 8x
MCP SCREW	Phase	MCC-RLS-B	480	SQUARE D	Powerpact H/J,	M71 - M75	M74	Pickup, (8 - 13x) 8x
MCP SCREW	Phase	MCC-RLS-A	480	SQUARE D	Powerpact H/J,	M71 - M75	M74	Pickup, (8 - 13x) 8x
MCP SCREW	Phase	MCC-RLS-B	480	SQUARE D	Powerpact H/J,	M71 - M75	M74	Pickup, (8 - 13x) 8x
MCP SCREW	Phase	MCC-RLS-A	480	SQUARE D	Powerpact H/J,	M71 - M75	M74	Pickup, (8 - 13x) 8x
MCP SEC S	Phase	MCC-EBB-A	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP SEC-CL	Phase	MCC-EBB-A.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP SEC-CL	Phase	MCC-EBB-A.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP SLC -4	Phase	MCC-54 A	480	CUTLER-HAMMER	HMCP	100A (300-1000A Inst)	HMCP	INST (300-1000A) C
MCP SLC -5	Phase	MCC-54B	480	CUTLER-HAMMER	HMCP	100A (300-1000A Inst)	HMCP	INST (300-1000A) C
MCP SSCP-W	Phase	MCC-WBB-A.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 10x
MCP SSCP-W	Phase	MCC-WBB-B.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 10x
MCP STWP -	Phase	MCC-51A	480	CUTLER-HAMMER	HMCP	100A (300-1000A Inst)	HMCP	INST (300-1000A) C
MCP STWP -	Phase	MCC-51B	480	CUTLER-HAMMER	HMCP	100A (300-1000A Inst)	HMCP	INST (300-1000A) C
MCP SUMP P	Phase	MCC-EBB-B	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP SUMP P	Phase	MCC-EBB-B	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP SWMX-	Phase	MCC-EPB-A.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP SWMX-	Phase	MCC-EPB-B..	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP SWMX-	Phase	MCC-EPB-A.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP SWMX-	Phase	MCC-EPB-B..	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP SWMX-	Phase	MCC-WPB-A.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP SWMX-	Phase	MCC-WPB-B.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x

Prot Dev	Func Name	Connected Bus	Voltage	Manufacturer	Type	Description	Frame	Segments
MCP WATER	Phase	MCC-RLS-A	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP WATER	Phase	MCC-RLS-A	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP WBB-E	Phase	MCC-WBB-A	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP WBB-E	Phase	MCC-WBB-B.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP WBB-E	Phase	MCC-WBB-A	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP WBB-E	Phase	MCC-WBB-B.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP WBB-E	Phase	MCC-WBB-B.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP WBB-E	Phase	MCC-WBB-B.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 11x
MCP WBB-E	Phase	MCC-WBB-A	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP WBB-H	Phase	MCC-WBB-A.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 10x
MCP WBB-P	Phase	MCC-WBB-A.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 10x
MCP WBB-P	Phase	MCC-WBB-B	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 10x
MCP WPB-E	Phase	MCC-WPB-A	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 12x
MCP WPB-E	Phase	MCC-WPB-B	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 10x
MCP WPB-P	Phase	MCC-WPB-A.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 12x
MCP WPB-P	Phase	MCC-WPB-B.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 8x
MCP WPE-S	Phase	MCC-WPB-B	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 10x
MCP WSE-S	Phase	MCC-WBB-A.	480	SQUARE D	Powerpact H/J,	M71 - M75	M71	Pickup, (8 - 13x) 10x

Project: SKMmodel 112015
Scenario: Base Project
ANN ARBOR WASTEWATER TREATMENT PLANT
PLANT FACILITIES RENOVATION
POWER DISTRIBUTION SYSTEM STUDY
AAWWTP

Static Motor Relays

Prot Dev	Func Name	Connected Bus	Manufacturer	Class Desc.	CT Ratio	FLA	Segments						
PD PAB-E1 469	Phase	PAB-E1 STR OUT	GE MULTILIN	469	150 : 5	72	O/L PU 1.15	O/L Curves 4	S/C Trip 4	S/C Delay 200 ms			
PD PAB-E1 469GFP	Ground	PAB-E1 STR OUT	GE MULTILIN	469	50 : 5	72	GF PU 0.5	GF Delay 0.2					
PD PAB-E2 469	Phase	PAB-E2 STR OUT	GE MULTILIN	469	150 : 5	72	O/L PU 1.15	O/L Curves 4	S/C Trip 4	S/C Delay 200 ms			
PD PAB-E2 469GFP	Ground	PAB-E2 STR OUT	GE MULTILIN	469	50 : 5	72	GF PU 0.5	GF Delay 0.2					
PD PAB-E3 469	Phase	PAB-E3 STR OUT	GE MULTILIN	469	150 : 5	72	O/L PU 1.15	O/L Curves 4	S/C Trip 4	S/C Delay 200 ms			
PD PAB-E3 469GFP	Ground	PAB-E3 STR OUT	GE MULTILIN	469	50 : 5	72	GF PU 0.5	GF Delay 0.2					
PD PAB-W1 ML469	Phase	BUS-0003	GE MULTILIN	469	600 : 5	331	O/L PU 1.15	O/L Curves 2	S/C Trip 7.5	S/C Delay 210 ms			
PD PAB-W1 ML469G	Ground	BUS-0003	GE MULTILIN	469	50 : 5	331	GF PU 1	GF Delay 0.2					
PD PAB-W2 ML469	Phase	BUS-0006	GE MULTILIN	469	600 : 5	331	O/L PU 1.15	O/L Curves 2	S/C Trip 7.5	S/C Delay 210 ms			
PD PAB-W2 ML469G	Ground	BUS-0006	GE MULTILIN	469	50 : 5	331	GF PU 1	GF Delay 0.2					
PD PAB-W3 ML469	Phase	BUS-0012	GE MULTILIN	469	600 : 5	331	O/L PU 1.15	O/L Curves 2	S/C Trip 7.5	S/C Delay 210 ms			
PD PAB-W3 ML469G	Ground	BUS-0012	GE MULTILIN	469	50 : 5	331	GF PU 1	GF Delay 0.2					

Project: SKMmodel 112015
Scenario: Base Project
ANN ARBOR WASTEWATER TREATMENT PLANT
PLANT FACILITIES RENOVATION
POWER DISTRIBUTION SYSTEM STUDY
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Motor Overloads

Prot Dev	Func Name	Connected Bus	Voltage	Manufacturer	Type	Class Desc.	Description	OL Factor	FLA	Segments
GEN 1 AMPSENTRY	Phase	BUS G1	13,200	CUMMINS	PowerCommand Control AmpSentry	AmpSentry	Overload	1.00	111	110% Overload
GEN 2 AMPSENTRY	Phase	BUS G2	13,200	CUMMINS	PowerCommand Control AmpSentry	AmpSentry	Overload	1.00	111	110% Overload
O/L 25 HP BTAB 1	Phase	MCC-52A	480	MOL	Class 20	Motor O/L		1.00	35	Class 20
O/L 25 HP BTAB 2	Phase	MCC-52B	480	MOL	Class 20	Motor O/L		1.00	35	Class 20
O/L 25 HP BTAB 3	Phase	MCC-52A	480	MOL	Class 20	Motor O/L		1.00	35	Class 20
O/L AHU 3	Phase	MCC-53 A	480	MOL	Class 20	Motor O/L		1.00	56	Class 20
O/L CF 2 AHU 4	Phase	MCC-53 A	480	MOL	Class 20	Motor O/L		1.00	28	Class 20
O/L CR -1 HSP-6	Phase	MCC-53B	480	MOL	Class 20	Motor O/L		1.00	35	Class 20
O/L HSP 5	Phase	MCC-53 A	480	MOL	Class 20	Motor O/L		1.00	56	Class 20
O/L SLC4	Phase	MCC-54 A	480	MOL	Class 20	Motor O/L		1.00	56	Class 20
O/L SLC5	Phase	MCC-54B	480	MOL	Class 20	Motor O/L		1.00	56	Class 20
O/L SLC6	Phase	MCC-54 A	480	MOL	Class 20	Motor O/L		1.00	28	Class 20
O/L SLC7	Phase	MCC-54B	480	MOL	Class 20	Motor O/L		1.00	28	Class 20
O/L STWP -1	Phase	MCC-51A	480	MOL	Class 20	Motor O/L		1.00	56	Class 20
O/L SWTP 2	Phase	MCC-51B	480	MOL	Class 20	Motor O/L		1.00	56	Class 20

Electronic Relays

Prot Dev	Func Name	Connected Bus	Manufacturer	Class Desc.	CT Ratio	Segments							
52F11G RELAY	Ground	15 KV BUS 1	SEL	SEL-551C		600 : 5	51G1P(0.5-16.0 x CTR)	0.5	U1, Moderately Inverse	0.5	50G1P(0.50-80.0 x CTR)	5.41	
52F11P RELAY	Phase	15 KV BUS 1	SEL	SEL-551C		600 : 5	51P1P(0.5-16.0 x CTR)	0.70	C3, Extremely Inverse	1	50P1P(0.50-80.0 x CTR)	13.00	
52F12G RELAY	Ground	15 KV BUS 1	SEL	SEL-551C		600 : 5	51G1P(0.5-16.0 x CTR)	0.5	U1, Moderately Inverse	0.5	50G1P(0.50-80.0 x CTR)	5.41	
52F12P RELAY	Phase	15 KV BUS 1	SEL	SEL-551C		600 : 5	51P1P(0.5-16.0 x CTR)	0.60	C3, Extremely Inverse	1	50P1P(0.50-80.0 x CTR)	13.00	
52F13G RELAY	Ground	15 KV BUS 1	SEL	SEL-551C		600 : 5	51G1P(0.5-16.0 x CTR)	0.5	U1, Moderately Inverse	0.5	50G1P(0.50-80.0 x CTR)	5.41	
52F13P RELAY	Phase	15 KV BUS 1	SEL	SEL-551C		600 : 5	51P1P(0.5-16.0 x CTR)	1.20	C3, Extremely Inverse	1	50P1P(0.50-80.0 x CTR)	16.50	
52F14G RELAY	Ground	15 KV BUS 1	SEL	SEL-551C		600 : 5	51G1P(0.5-16.0 x CTR)	0.5	U1, Moderately Inverse	0.5	50G1P(0.50-80.0 x CTR)	5.41	
52F14P RELAY	Phase	15 KV BUS 1	SEL	SEL-551C		600 : 5	51P1P(0.5-16.0 x CTR)	0.70	C3, Extremely Inverse	1	50P1P(0.50-80.0 x CTR)	13.00	
52F15G RELAY	Ground	15 KV BUS 1	SEL	SEL-551C		600 : 5	51G1P(0.5-16.0 x CTR)	0.5	U1, Moderately Inverse	0.5	50G1P(0.50-80.0 x CTR)	5.41	
52F15P RELAY	Phase	15 KV BUS 1	SEL	SEL-551C		600 : 5	51P1P(0.5-16.0 x CTR)	1.20	C3, Extremely Inverse	1	50P1P(0.50-80.0 x CTR)	16.50	
52F17G RELAY	Ground	15 KV BUS 1	SEL	SEL-551C		600 : 5	51G1P(0.5-16.0 x CTR)	0.5	U1, Moderately Inverse	0.5	50G1P(0.50-80.0 x CTR)	5.41	
52F17P RELAY	Phase	15 KV BUS 1	SEL	SEL-551C		600 : 5	51P1P(0.5-16.0 x CTR)	1.00	C3, Extremely Inverse	1	50P1P(0.50-80.0 x CTR)	13.00	
52F18G RELAY	Ground	15 KV BUS 1	SEL	SEL-551C		600 : 5	51G1P(0.5-16.0 x CTR)	0.5	U1, Moderately Inverse	0.5	50G1P(0.50-80.0 x CTR)	5.41	
52F18P RELAY	Phase	15 KV BUS 1	SEL	SEL-551C		600 : 5	51P1P(0.5-16.0 x CTR)	1.10	C3, Extremely Inverse	0.37	50P1P(0.50-80.0 x CTR)	12.44	
52F1SPG RELAY	Ground	15 KV BUS 1	SEL	SEL-551C		600 : 5	51G1P(0.5-16.0 x CTR)	0.5	U1, Moderately Inverse	0.5	50G1P(0.50-80.0 x CTR)	5.41	
52F1SPP RELAY	Phase	15 KV BUS 1	SEL	SEL-551C		600 : 5	51P1P(0.5-16.0 x CTR)	2.00	C3, Extremely Inverse	0.33	50P1P(0.50-80.0 x CTR)	45.00	
52F21G RELAY	Ground	15 KV BUS 2	SEL	SEL-551C		600 : 5	51G1P(0.5-16.0 x CTR)	0.5	U1, Moderately Inverse	0.5	50G1P(0.50-80.0 x CTR)	5.41	
52F21P RELAY	Phase	15 KV BUS 2	SEL	SEL-551C		600 : 5	51P1P(0.5-16.0 x CTR)	0.70	C3, Extremely Inverse	1	50P1P(0.50-80.0 x CTR)	13.00	
52F22G RELAY	Ground	15 KV BUS 2	SEL	SEL-551C		600 : 5	51G1P(0.5-16.0 x CTR)	0.5	U1, Moderately Inverse	0.5	50G1P(0.50-80.0 x CTR)	5.41	
52F22P RELAY	Phase	15 KV BUS 2	SEL	SEL-551C		600 : 5	51P1P(0.5-16.0 x CTR)	0.60	C3, Extremely Inverse	1	50P1P(0.50-80.0 x CTR)	13.00	
52F23G RELAY	Ground	15 KV BUS 2	SEL	SEL-551C		600 : 5	51G1P(0.5-16.0 x CTR)	0.5	U1, Moderately Inverse	0.5	50G1P(0.50-80.0 x CTR)	5.41	
52F23P RELAY	Phase	15 KV BUS 2	SEL	SEL-551C		600 : 5	51P1P(0.5-16.0 x CTR)	1.20	C3, Extremely Inverse	1	50P1P(0.50-80.0 x CTR)	16.50	
52F24G RELAY	Ground	15 KV BUS 2	SEL	SEL-551C		600 : 5	51G1P(0.5-16.0 x CTR)	0.5	U1, Moderately Inverse	0.5	50G1P(0.50-80.0 x CTR)	5.41	
52F24P RELAY	Phase	15 KV BUS 2	SEL	SEL-551C		600 : 5	51P1P(0.5-16.0 x CTR)	0.70	C3, Extremely Inverse	1	50P1P(0.50-80.0 x CTR)	13.00	
52F25G RELAY	Ground	15 KV BUS 2	SEL	SEL-551C		600 : 5	51G1P(0.5-16.0 x CTR)	0.5	U1, Moderately Inverse	0.5	50G1P(0.50-80.0 x CTR)	5.41	
52F25P RELAY	Phase	15 KV BUS 2	SEL	SEL-551C		600 : 5	51P1P(0.5-16.0 x CTR)	1.20	C3, Extremely Inverse	1	50P1P(0.50-80.0 x CTR)	16.50	
52F27G RELAY	Ground	15 KV BUS 2	SEL	SEL-551C		600 : 5	51G1P(0.5-16.0 x CTR)	0.5	U1, Moderately Inverse	0.5	50G1P(0.50-80.0 x CTR)	5.41	
52F27P RELAY	Phase	15 KV BUS 2	SEL	SEL-551C		600 : 5	51P1P(0.5-16.0 x CTR)	1.00	C3, Extremely Inverse	1	50P1P(0.50-80.0 x CTR)	13.00	
52F28G RELAY	Ground	15 KV BUS 2	SEL	SEL-551C		600 : 5	51G1P(0.5-16.0 x CTR)	0.5	U1, Moderately Inverse	0.5	50G1P(0.50-80.0 x CTR)	5.41	
52F28P RELAY	Phase	15 KV BUS 2	SEL	SEL-551C		600 : 5	51P1P(0.5-16.0 x CTR)	1.10	C3, Extremely Inverse	0.37	50P1P(0.50-80.0 x CTR)	12.44	
52F2SPG RELAY	Ground	15 KV BUS 2	SEL	SEL-551C		600 : 5	51G1P(0.5-16.0 x CTR)	0.5	U1, Moderately Inverse	0.5	50G1P(0.50-80.0 x CTR)	5.41	
52F2SPP RELAY	Phase	15 KV BUS 2	SEL	SEL-551C		600 : 5	51P1P(0.5-16.0 x CTR)	2.00	C3, Extremely Inverse	0.33	50P1P(0.50-80.0 x CTR)	45.00	
52G1_51V	Phase	15 KV BUS 3	SEL	SEL-300G		200 : 5	51VP(2.0-16.0 x CTR)	3.75	C5, Short-Time Inverse	0.40			
52G1_87H	Phase	15 KV BUS 3	SEL	SEL-300G		200 : 5	50H1P(0.25-100 x CTR)	3.20	50H1D(0-400 sec)	0.35	50H2P(0.25-100 x CTR)	9.20	50H2D(0-400 sec) 0.13
52G1_87R	Phase	15 KV BUS 3	SEL	SEL-300G		200 : 5	50R1P(0.25-100 x CTR)	3.20	50R1D(0-400 sec)	0.35	50R2P(0.25-100 x CTR)	9.20	50R2D(0-400 sec) 0.13
52G1G Relay	Ground	15 KV BUS 3	SEL	SEL-300G		200 : 5	51GP(0.5-16.0 x CTR)	2.10	U1, Moderately Inverse	2.12	50G1P(0.25-100 x CTR)	49.60	50G1D(0-400 sec) 0.20
52G1N RELAY	Phase	15 KV BUS 3	SEL	SEL-300G		200 : 5	50N1P(0.25-100 x CTR)	3.75	50N1D(0-400 sec)	0.35			
52G1P RELAY	Phase	15 KV BUS 3	SEL	SEL-300G		200 : 5	50P1P(0.25-100 x CTR)	3.75	50P1D(0-400 sec)	0.35	50P2P(0.25-100 x CTR)	9.20	50P2D(0-400 sec) 0.13
52G2_51V	Phase	15 KV BUS 3	SEL	SEL-300G		200 : 5	51VP(2.0-16.0 x CTR)	3.50	C5, Short-Time Inverse	0.40			
52G2_87H	Phase	15 KV BUS 3	SEL	SEL-300G		200 : 5	50H1P(0.25-100 x CTR)	3.20	50H1D(0-400 sec)	0.35	50H2P(0.25-100 x CTR)	9.20	50H2D(0-400 sec) 0.13
52G2_87R	Phase	15 KV BUS 3	SEL	SEL-300G		200 : 5	50R1P(0.25-100 x CTR)	3.20	50R1D(0-400 sec)	0.35	50R2P(0.25-100 x CTR)	9.20	50R2D(0-400 sec) 0.13
52G2G Relay	Ground	15 KV BUS 3	SEL	SEL-300G		200 : 5	51GP(0.5-16.0 x CTR)	2.10	U1, Moderately Inverse	2.12	50G1P(0.25-100 x CTR)	49.60	50G1D(0-400 sec) 0.20
52G2N RELAY	Phase	15 KV BUS 3	SEL	SEL-300G		200 : 5	50N1P(0.25-100 x CTR)	3.20	50N1D(0-400 sec)	0.35			
52G2P RELAY	Phase	15 KV BUS 3	SEL	SEL-300G		200 : 5	50P1P(0.25-100 x CTR)	3.20	50P1D(0-400 sec)	0.35	50P2P(0.25-100 x CTR)	9.20	50P2D(0-400 sec) 0.13
52GT1G RELAY	Ground	15 KV BUS 1	SEL	SEL-351A		600 : 5	51GP(0.1-16.0 x CTR)	0.60	U1, Mod Inv	1.09	50G1P(0.05-100 x CTR)	8.62	67G1D (Def. Time) 0.10
52GT1P RELAY	Phase	15 KV BUS 1	SEL	SEL-351A		600 : 5	51PP(0.25-16.0 x CTR)	1.90	C3, Extremely Inverse	0.37	50P1P(0.25-100 x CTR)	28.66	67P1D (Def. Time) 0.0042
52GT2G RELAY	Ground	15 KV BUS 2	SEL	SEL-351A		600 : 5	51GP(0.1-16.0 x CTR)	0.60	U1, Mod Inv	1.09	50G1P(0.05-100 x CTR)	8.62	67G1D (Def. Time) 0.10

52GT2P RELAY	Phase	15 KV BUS 2	SEL	SEL-351A	600 : 5	51PP(0.25-16.0 x CTR) 1.90	C3, Extremely Inverse 0.37	50P1P(0.25-100 x CTR) 28.66	67P1D (Def. Time) 0.0042
52IBG RELAY	Ground	15 KV BUS 2	SEL	SEL-351A	600 : 5	51GP(0.1-16.0 x CTR) 0.60	U1, Mod Inv 0.86	50G1P(0.05-100 x CTR) 8.76	67G1D (Def. Time) 0.10
52IBP RELAY	Phase	15 KV BUS 2	SEL	SEL-351A	600 : 5	51PP(0.25-16.0 x CTR) 2.20	C3, Extremely Inverse 0.40	50P1P(0.25-100 x CTR) 90.00	67P1D (Def. Time) 0.0042
52LBG RELAY	Ground	15 KV BUS 3	SEL	SEL-551C	200 : 5	51G1P(0.5-16.0 x CTR) 1.50	U1, Moderately Inverse 1.49	50G1P(0.50-80.0 x CTR) 12.48	
52LBP RELAY	Phase	15 KV BUS 3	SEL	SEL-551	200 : 5	51P1P(0.5-16.0 x CTR) 2.80	U1, Moderately Inverse 0.5	50P1P(0.50-80.0 x CTR) 5.21	
52M1G RELAY	Ground	15 KV BUS 1	SEL	SEL-351-7	600 : 5	51GP(0.1-16.0 x CTR) 0.70	U1, Moderately Inverse 1.57	50G1P(0.05-100 x CTR) 16.71	67G1D (Def. Time) 0.20
52M1P RELAY	Phase	15 KV BUS 1	SEL	SEL-351-7	600 : 5	51PP(0.25-16.0 x CTR) 2.45	C3, Extremely Inverse 0.52	50P1P(0.25-100 x CTR) 100	67P1D (Def. Time) 0.0042
52M2G RELAY	Ground	15 KV BUS 2	SEL	SEL-351-7	600 : 5	51GP(0.1-16.0 x CTR) 0.70	U1, Moderately Inverse 1.57	50G1P(0.05-100 x CTR) 16.71	67G1D (Def. Time) 0.20
52M2P RELAY	Phase	15 KV BUS 2	SEL	SEL-351-7	600 : 5	51PP(0.25-16.0 x CTR) 2.45	C3, Extremely Inverse 0.52	50P1P(0.25-100 x CTR) 100	67P1D (Def. Time) 0.0042
52TG RELAY	Ground	15 KV BUS 1	SEL	SEL-351A	600 : 5	51GP(0.1-16.0 x CTR) 0.60	U1, Mod Inv 0.86	50G1P(0.05-100 x CTR) 8.76	67G1D (Def. Time) 0.10
52TP RELAY	Phase	15 KV BUS 1	SEL	SEL-351A	600 : 5	51PP(0.25-16.0 x CTR) 2.20	C3, Extremely Inverse 0.40	50P1P(0.25-100 x CTR) 90.00	67P1D (Def. Time) 0.0042
PD PAB-E1 GFP	Ground	SUB 8 BUS A	SQUARE D	Sepam S20	200 : 5	Is0, (Sum of CT's) 0.30	SIT, Sec. 0.1		
PD PAB-E1 RELA	Phase	SUB 8 BUS A	SQUARE D	Sepam S20	200 : 5	Is, DT 0.60	EIT, TMS 2.23	Is, DT 4.17	
PD PAB-E2 GFP	Ground	SUB 8 BUS B	SQUARE D	Sepam S20	200 : 5	Is0, (Sum of CT's) 0.30	SIT, Sec. 0.1		
PD PAB-E2 RELA	Phase	SUB 8 BUS B	SQUARE D	Sepam S20	200 : 5	Is, DT 0.60	EIT, TMS 2.23	Is, DT 4.17	
PD PAB-E3 GFP	Ground	SUB 8 BUS A	SQUARE D	Sepam S20	200 : 5	Is0, (Sum of CT's) 0.30	SIT, Sec. 0.1		
PD PAB-E3 RELA	Phase	SUB 8 BUS A	SQUARE D	Sepam S20	200 : 5	Is, DT 0.60	EIT, TMS 2.23	Is, DT 4.17	
PD SUB 6 XFMR	Ground	SUB 8 BUS A	SQUARE D	Sepam S20	200 : 5	Is0, (Sum of CT's) 0.30	SIT, Sec. 0.1		
PD SUB 6 XFMR	Phase	SUB 8 BUS A	SQUARE D	Sepam S20	200 : 5	Is, DT 1.09	EIT, TMS 0.63	Is, DT 11.16	
PD SUB 6 XFMR	Ground	SUB 8 BUS B	SQUARE D	Sepam S20	200 : 5	Is0, (Sum of CT's) 0.30	SIT, Sec. 0.1		
PD SUB 6 XFMR	Phase	SUB 8 BUS B	SQUARE D	Sepam S20	200 : 5	Is, DT 1.09	EIT, TMS 0.63	Is, DT 11.16	
SUB 8 MAIN A GI	Ground	SUB 8 BUS A	SQUARE D	Sepam S20	1,200 : 5	Is0, (Sum of CT's) 0.1	SIT, Sec. 0.40		
SUB 8 MAIN A RI	Phase	SUB 8 BUS A	SQUARE D	Sepam S20	1,200 : 5	Is, DT 0.32	EIT, TMS 0.30	Is, DT 2.80	
SUB 8 MAIN B GI	Ground	SUB 8 BUS B	SQUARE D	Sepam S20	1,200 : 5	Is0, (Sum of CT's) 0.1	SIT, Sec. 0.40		
SUB 8 MAIN B RI	Phase	SUB 8 BUS B	SQUARE D	Sepam S20	1,200 : 5	Is, DT 0.32	EIT, TMS 0.30	Is, DT 2.80	

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Date Generated May 31 2016 08:19:49 am

Device Information

Part Number 0587Z0X325522XX

FID SEL-587Z-RXXX-V0-Z001001-DXXXXXXXXX

BFID

Config

Special

Displayed Setting Groups

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[SER](#)

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[Rear Port](#)

[Front Port](#)

Settings Legend

Visible Setting

Hidden Setting

Invalid Setting

Relay			
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Setting	Description	Range	Value
RID	Relay Identifier (12 characters)	Range = ASCII string with a maximum length of 12.	BUS 1
TID	Terminal Identifier (12 characters)	Range = ASCII string with a maximum length of 12.	STATION A
DATE_F	Date Format	Select: MDY, YMD	MDY
NFREQ	Nominal Frequency (Hz)	Select: 50, 60	60
PHROT	Phase Rotation	Select: ABC, ACB	ABC
CTR	Phase (IA,IB,IC) Current Transformer Ratio	Range = 1 to 6000	120
TDURD	Minimum Trip Duration Time (cycles in 0.125-cycle steps)	Range = 0.000 to 8000.000	9.000
87A1P	High Impedance Pickup (Volts)	Range = 20 to 800, OFF	65 "200"
87A2P	High Impedance Pickup (Volts)	Range = 20 to 800, OFF	40 "90"
87B1P	High Impedance Pickup (Volts)	Range = 20 to 800, OFF	65 "200"
87B2P	High Impedance Pickup (Volts)	Range = 20 to 800, OFF	40 "90"
87C1P	High Impedance Pickup (Volts)	Range = 20 to 800, OFF	65 "200"
87C2P	High Impedance Pickup (Volts)	Range = 20 to 800, OFF	40 "90"
50P1P	Phase Instantaneous Pickup (Amps)	Range = 0.5 to 80.0, OFF	OFF
50P2P	Phase Instantaneous Pickup (Amps)	Range = 0.5 to 80.0, OFF	OFF
50P3P	Phase Instantaneous Pickup (Amps)	Range = 0.5 to 80.0, OFF	OFF
50A1P	A Phase Instantaneous Pickup (Amps)	Range = 0.5 to 80.0, OFF	2.5 "OFF"
50A2P	A Phase Instantaneous Pickup (Amps)	Range = 0.5 to 80.0, OFF	1.0 "OFF"
50B1P	B Phase Instantaneous Pickup (Amps)	Range = 0.5 to 80.0, OFF	2.5 "OFF"
50B2P	B Phase Instantaneous Pickup (Amps)	Range = 0.5 to 80.0, OFF	1.0 "OFF"
50C1P	C Phase Instantaneous Pickup (Amps)	Range = 0.5 to 80.0, OFF	2.5 "OFF"
50C2P	C Phase Instantaneous Pickup (Amps)	Range = 0.5 to 80.0, OFF	1.0 "OFF"
50G1P	Residual Ground Instantaneous Pickup (Amps)	Range = 0.5 to 80.0, OFF	OFF
50G2P	Residual Ground Instantaneous Pickup (Amps)	Range = 0.5 to 80.0, OFF	OFF
50Q1P	Negative-Sequence Instantaneous Pickup (Amps)	Range = 0.5 to 80.0, OFF	OFF
50Q2P	Negative-Sequence Instantaneous Pickup (Amps)	Range = 0.5 to 80.0, OFF	OFF
51PP	Phase Time-Overcurrent Pickup (Amps)	Range = 0.5 to 16.0, OFF	OFF
51PC	Phase Time-Overcurrent Curve	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51PTD	Phase Time-Overcurrent Time-Dial	Range = 0.50 to 15.00	15.00
51PRS	Phase Time-Overcurrent EM Reset	Select: Y, N	N
51AP	A Phase Time-Overcurrent Pickup (Amps)	Range = 0.5 to 16.0, OFF	OFF
51AC	A Phase Time-Overcurrent Curve	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51ATD	A Phase Time-Overcurrent Time-Dial	Range = 0.50 to 15.00	15.00
51ARS	A Phase Time-Overcurrent EM Reset	Select: Y, N	N
51BP	B Phase Time-Overcurrent Pickup (Amps)	Range = 0.5 to 16.0, OFF	OFF
51BC	B Phase Time-Overcurrent Curve	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51BTD	B Phase Time-Overcurrent Time-Dial	Range = 0.50 to 15.00	15.00
51BRS	B Phase Time-Overcurrent EM Reset	Select: Y, N	N
51CP	C Phase Time-Overcurrent Pickup (Amps)	Range = 0.5 to 16.0, OFF	OFF

51CC	C Phase Time-Overcurrent Curve	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51CTD	C Phase Time-Overcurrent Time-Dial	Range = 0.50 to 15.00	15.00
51CRS	C Phase Time-Overcurrent EM Reset	Select: Y, N	N
51GP	Residual Ground Time-Overcurrent Pickup (Amps)	Range = 0.5 to 16.0, OFF	OFF
51GC	Residual Ground Time-Overcurrent Curve	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51GTD	Residual Ground Time-Overcurrent Time-Dial	Range = 0.50 to 15.00	15.00
51GRS	Residual Ground Time-Overcurrent EM Reset	Select: Y, N	N
51QP	Negative-Sequence Time-Overcurrent Pickup (Amps)	Range = 0.5 to 16.0, OFF	OFF
51QC	Negative-Sequence Time-Overcurrent Curve	Select: U1, U2, U3, U4, U5, C1, C2, C3, C4, C5	U3
51QTD	Negative-Sequence Time-Overcurrent Time-Dial	Range = 0.50 to 15.00	15.00
51QRS	Negative-Sequence Time-Overcurrent EM Reset	Select: Y, N	N
CFD	Close Failure Timer Pickup (cycles in 0.125-cycle steps)	Range = 0.000 to 54000.000	60.000
DMTC	Time Constant (minutes)	Select: 5, 10, 15, 30, 60	5
PDEMP	Demand Phase Pickup (Amps secondary)	Range = 0.50 to 16.00, OFF	5.00
GDEMP	Demand Residual Ground Pickup (Amps secondary)	Range = 0.50 to 16.00, OFF	1.50
QDEMP	Demand Negative-Sequence Pickup (Amps secondary)	Range = 0.50 to 16.00, OFF	1.50
SV5PU	SV5 Timer Pickup (cycles in 0.125-cycle steps)	Range = 0.000 to 54000.000	120.000
SV5DO	SV5 Timer Dropout (cycles in 0.125-cycle steps)	Range = 0.000 to 54000.000	0.000
SV6PU	SV6 Timer Pickup (cycles in 0.125-cycle steps)	Range = 0.000 to 54000.000	15.000
SV6DO	SV6 Timer Dropout (cycles in 0.125-cycle steps)	Range = 0.000 to 54000.000	0.000
SV7PU	SV7 Timer Pickup (cycles in 0.125-cycle steps)	Range = 0.000 to 54000.000	0.000
SV7DO	SV7 Timer Dropout (cycles in 0.125-cycle steps)	Range = 0.000 to 54000.000	0.000
SV8PU	SV8 Timer Pickup (cycles in 0.125-cycle steps)	Range = 0.000 to 54000.000	0.000
SV8DO	SV8 Timer Dropout (cycles in 0.125-cycle steps)	Range = 0.000 to 54000.000	0.000
SV9PU	SV9 Timer Pickup (cycles in 0.125-cycle steps)	Range = 0.000 to 54000.000	0.000
SV9DO	SV9 Timer Dropout (cycles in 0.125-cycle steps)	Range = 0.000 to 54000.000	0.000
SV10PU	SV10 Timer Pickup (cycles in 0.125-cycle steps)	Range = 0.000 to 54000.000	0.000
SV10DO	SV10 Timer Dropout (cycles in 0.125-cycle steps)	Range = 0.000 to 54000.000	0.000
SV11PU	SV11 Timer Pickup (cycles in 0.125-cycle steps)	Range = 0.000 to 54000.000	0.000
SV11DO	SV11 Timer Dropout (cycles in 0.125-cycle steps)	Range = 0.000 to 54000.000	0.000
SV12PU	SV12 Timer Pickup (cycles in 0.125-cycle steps)	Range = 0.000 to 54000.000	0.000
SV12DO	SV12 Timer Dropout (cycles in 0.125-cycle steps)	Range = 0.000 to 54000.000	0.000
SV13PU	SV13 Timer Pickup (cycles in 0.125-cycle steps)	Range = 0.000 to 54000.000	0.000

SV13DO	SV13 Timer Dropout (cycles in 0.125-cycle steps)	Range = 0.000 to 54000.000	0.000
SV14PU	SV14 Timer Pickup (cycles in 0.125-cycle steps)	Range = 0.000 to 54000.000	0.000
SV14DO	SV14 Timer Dropout (cycles in 0.125-cycle steps)	Range = 0.000 to 54000.000	0.000
Relay			
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Logic			
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Setting	Description	Range	Value
TR1	SELogic Control Equation	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	87A1 + 87B1 + 87C1 + 50A1 + 50B1 + 50C1
TR2	SELogic Control Equation	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
TR3	SELogic Control Equation	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
ULTR1	SELogic Control Equation	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	!87A2 * !87B2 * !87C2 * !50A2 * !50B2 * !50C2
ULTR2	SELogic Control Equation	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	1
ULTR3	SELogic Control Equation	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	1
51PTC	Torque Control SELogic Equation	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	1
51ATC	Torque Control SELogic Equation	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	1
51BTC	Torque Control SELogic Equation	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	1
51CTC	Torque Control SELogic Equation	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	1
51GTC	Torque Control SELogic Equation	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	1
51QTC	Torque Control SELogic Equation	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	1
52A	SELogic Control Equation	Valid range = Boolean equation using word bit elements and the legal operators: !/\()* +	0
CL	SELogic Control Equation	Valid range = Boolean equation using word bit elements and the legal	0

		operators: !/\(\) * +	
ULCL	SELogic Control Equation	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	TRIP1
ER1	SELogic Control Equation	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	87A1 + 87B1 + 87C1
ER2	SELogic Control Equation	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	87A2 + 87B2 + 87C2
SV1	SELogic Control Equation	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	0
SV2	SELogic Control Equation	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	0
SV3	SELogic Control Equation	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	0
SV4	SELogic Control Equation	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	0
SV5	SELogic Control Equation	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	0
SV6	SELogic Control Equation	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	0
SV7	SELogic Control Equation	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	0
SV8	SELogic Control Equation	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	0
SV9	SELogic Control Equation	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	0
SV10	SELogic Control Equation	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	0
SV11	SELogic Control Equation	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	0
SV12	SELogic Control Equation	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	0

SV13	SELogic Control Equation	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	0
SV14	SELogic Control Equation	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	0
OUT1	SELogic Control Equation	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	TRIP1
OUT2	SELogic Control Equation	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	TRIP1
OUT3	SELogic Control Equation	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	SV5T + SV6T
OUT4	SELogic Control Equation	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	0
DP1	SELogic Control Equation	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	0
DP2	SELogic Control Equation	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	0
DP3	SELogic Control Equation	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	0
DP4	SELogic Control Equation	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	0
DP5	SELogic Control Equation	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	0
DP6	SELogic Control Equation	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	0
DP7	SELogic Control Equation	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	0
DP8	SELogic Control Equation	Valid range = Boolean equation using word bit elements and the legal operators: !/\(\) * +	0
Logic			

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SER			
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Setting	Description	Range	Value
SER1	Relay Element Event Trigger List 1 (24 elements maximum)	Valid range = 0, NA or a list of relay elements.	87A1, 87A2, 87B1, 87B2, 87C1, 87C2
SER2	Relay Element Event Trigger List 2 (24 elements maximum)	Valid range = 0, NA or a list of relay elements.	50P1, 50A1, 50A2, 50B1, 50B2, 50C1, 50C2
SER3	Relay Element Event Trigger List 3 (24 elements maximum)	Valid range = 0, NA or a list of relay elements.	51PT, 51AT, 51BT, 51CT, 51GT, 51QT
SER			
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Text			
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Setting	Description	Range	Value
NLB1	Local Bit LB1 Name (14 characters)	Range = ASCII string with a maximum length of 14.	NA
CLB1	Clear Local Bit LB1 Label (7 characters)	Range = ASCII string with a maximum length of 7.	NA
SLB1	Set Local Bit LB1 Label (7 characters)	Range = ASCII string with a maximum length of 7.	NA
PLB1	Pulse Local Bit LB1 Label (7 characters)	Range = ASCII string with a maximum length of 7.	NA
NLB2	Local Bit LB2 Name (14 characters)	Range = ASCII string with a maximum length of 14.	NA
CLB2	Clear Local Bit LB2 Label (7 characters)	Range = ASCII string with a maximum length of 7.	NA
SLB2	Set Local Bit LB2 Label (7 characters)	Range = ASCII string with a maximum length of 7.	NA
PLB2	Pulse Local Bit LB2 Label (7 characters)	Range = ASCII string with a maximum length of 7.	NA
NLB3	Local Bit LB3 Name (14 characters)	Range = ASCII string with a maximum length of 14.	NA
CLB3	Clear Local Bit LB3 Label (7 characters)	Range = ASCII string with a maximum length of 7.	NA
SLB3	Set Local Bit LB3 Label (7 characters)	Range = ASCII string with a maximum length of 7.	NA
PLB3	Pulse Local Bit LB3 Label (7 characters)	Range = ASCII string with a maximum length of 7.	NA
NLB4	Local Bit LB4 Name (14 characters)	Range = ASCII string with a maximum length of 14.	NA
CLB4	Clear Local Bit LB4 Label (7 characters)	Range = ASCII string with a maximum length of 7.	NA
SLB4	Set Local Bit LB4 Label (7 characters)	Range = ASCII string with a maximum length of 7.	NA
PLB4	Pulse Local Bit LB4 Label (7 characters)	Range = ASCII string with a maximum length of 7.	NA
NLB5	Local Bit LB5 Name (14 characters)	Range = ASCII string with a maximum length of 14.	NA
CLB5	Clear Local Bit LB5 Label (7 characters)	Range = ASCII string with a maximum length of 7.	NA
SLB5	Set Local Bit LB5 Label (7 characters)	Range = ASCII string with a maximum length of 7.	NA
PLB5	Pulse Local Bit LB5 Label (7 characters)	Range = ASCII string with a maximum length of 7.	NA
NLB6	Local Bit LB6 Name (14 characters)	Range = ASCII string with a maximum length of 14.	NA
CLB6	Clear Local Bit LB6 Label (7 characters)	Range = ASCII string with a maximum length of 7.	NA
SLB6	Set Local Bit LB6 Label (7 characters)	Range = ASCII string with a maximum length of 7.	NA
PLB6	Pulse Local Bit LB6 Label (7 characters)	Range = ASCII string with a maximum length of 7.	NA
NLB7	Local Bit LB7 Name (14 characters)	Range = ASCII string with a maximum length of 14.	NA
		Range = ASCII string with	

CLB7	Clear Local Bit LB7 Label (7 characters)	a maximum length of 7.	NA
SLB7	Set Local Bit LB7 Label (7 characters)	Range = ASCII string with a maximum length of 7.	NA
PLB7	Pulse Local Bit LB7 Label (7 characters)	Range = ASCII string with a maximum length of 7.	NA
NLB8	Local Bit LB8 Name (14 characters)	Range = ASCII string with a maximum length of 14.	NA
CLB8	Clear Local Bit LB8 Label (7 characters)	Range = ASCII string with a maximum length of 7.	NA
SLB8	Set Local Bit LB8 Label (7 characters)	Range = ASCII string with a maximum length of 7.	NA
PLB8	Pulse Local Bit LB8 Label (7 characters)	Range = ASCII string with a maximum length of 7.	NA
DP1_1	Display Point DP1 Label (displays if DP1 = logical 1; 16 characters)	Range = ASCII string with a maximum length of 16.	NA
DP1_0	Display Point DP1 Label (displays if DP1 = logical 0; 16 characters)	Range = ASCII string with a maximum length of 16.	NA
DP2_1	Display Point DP2 Label (displays if DP2 = logical 1; 16 characters)	Range = ASCII string with a maximum length of 16.	NA
DP2_0	Display Point DP2 Label (displays if DP2 = logical 0; 16 characters)	Range = ASCII string with a maximum length of 16.	NA
DP3_1	Display Point DP3 Label (displays if DP3 = logical 1; 16 characters)	Range = ASCII string with a maximum length of 16.	NA
DP3_0	Display Point DP3 Label (displays if DP3 = logical 0; 16 characters)	Range = ASCII string with a maximum length of 16.	NA
DP4_1	Display Point DP4 Label (displays if DP4 = logical 1; 16 characters)	Range = ASCII string with a maximum length of 16.	NA
DP4_0	Display Point DP4 Label (displays if DP4 = logical 0; 16 characters)	Range = ASCII string with a maximum length of 16.	NA
DP5_1	Display Point DP5 Label (displays if DP5 = logical 1; 16 characters)	Range = ASCII string with a maximum length of 16.	NA
DP5_0	Display Point DP5 Label (displays if DP5 = logical 0; 16 characters)	Range = ASCII string with a maximum length of 16.	NA
DP6_1	Display Point DP6 Label (displays if DP6 = logical 1; 16 characters)	Range = ASCII string with a maximum length of 16.	NA
DP6_0	Display Point DP6 Label (displays if DP6 = logical 0; 16 characters)	Range = ASCII string with a maximum length of 16.	NA
DP7_1	Display Point DP7 Label (displays if DP7 = logical 1; 16 characters)	Range = ASCII string with a maximum length of 16.	NA
DP7_0	Display Point DP7 Label (displays if DP7 = logical 0; 16 characters)	Range = ASCII string with a maximum length of 16.	NA
DP8_1	Display Point DP8 Label (displays if DP8 = logical 1; 16 characters)	Range = ASCII string with a maximum length of 16.	NA
DP8_0	Display Point DP8 Label (displays if DP8 = logical 0; 16 characters)	Range = ASCII string with a maximum length of 16.	NA
Text Top			

Rear Port				Top
Setting	Description	Range	Value	
Rear Port				Top

Front Port			
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Setting	Description	Range	Value
PROTO	Port Protocol	Select: SEL, LMD	SEL
SPEED	Baud Rate	Select: 300, 1200, 2400, 4800, 9600, 19200, 38400	19200
BITS	Number Data Bits	Select: 7, 8	8
PARITY	Parity	Select: O, E, N	N
STOP	Stop Bits	Select: 1, 2	1
T_OUT	Timeout (minutes)	Range = 0 to 30	15
AUTO	Send Auto Messages to Port	Select: Y, N	N
RTSCTS	Enable Hardware Handshaking	Select: Y, N	N
FASTOP	Fast Operate Enable	Select: Y, N	N
Front Port			
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CHAPTER 5

DATA PRINTOUTS

5.0 Data Printouts

5.1 Input

Input Data listing includes such information as:

1. Feeder Data

- Feeder data includes the following cable and bus data: length, impedance in Ohms per 1,000 feet, and per-unit impedance on a 100MVA base.

2. Equivalent PI Impedance Data

- The calculation algorithms used by PTW require that impedance components *must* be separated by buses, and buses *must* be separated by an impedance component. PI Equivalent Impedance components are added to the one-line diagram to satisfy this requirement, and are chosen to be a small impedance value which has negligible effect on calculated results. Example uses are insertion in series with bus tie breakers, and as bus links on MCC's having a large number of connected loads.

2. Transformer Data

- Transformer data includes the transformer KVA rating and per-unit impedance on a 100MVA base. Transformer X/R ratios are obtained from ANSI standards, or actual nameplate data when available.

3. VFD Data

- VFD data includes power factor, efficiency, and line reactor impedance.

Generation Contribution Data

- Utility contribution data includes information such as available fault current in MVA and amperes, per unit impedance on a 100MVA base, X/R, and line-to-line voltage.
- Generator contribution data includes information such as generator KVA rating, KW rating, per unit impedance on a 100MVA base, X''_d , X/R, and line-to-line voltage.

4. Motor Data

- Motor Data includes horsepower rating (base KVA rating), voltage, efficiency, and power factor.

5.2 Calculations

- 1) Three Phase Fault Report
- 2) Unbalanced Fault Report
- 3) Fault Study Summary
- 4) Three Phase Momentary Duty Report
- 5) Unbalanced Momentary Duty Report
- 6) Momentary Duty Summary report
- 7) Three Phase Interrupting Duty Report
- 8) Unbalanced Interrupting Duty Report
- 9) Interrupting Duty Summary Report
- 10) Three Phase Fault Report
- 11) Unbalanced Fault Report
- 12) Fault Study Summary

INPUT DATA

Project: AAWWTP 02-28-17
ANN ARBOR WASTEWATER TREATMENT PLANT
PLANT FACILITIES RENOVATION
POWER DISTRIBUTION SYSTEM STUDY
AAWWTP

DAPPER Fault Analysis 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
DC-8266	DTE NORTH	In	13,200	3P:	6,307 Amps	3.48		Pos: 0.191	0.667
				SLG:	5,465 Amps	2.93		Zero: 0.393	0.939
DC-8266 [50% SC]	DTE NORTH	Out	13,200	3P:	3,153 Amps	3.48		Pos: 0.383	1.333
				SLG:	2,732 Amps	2.93		Zero: 0.785	1.879
DC-9798	DTE SOUTH	In	13,200	3P:	6,073 Amps	4.89		Pos: 0.144	0.706
				SLG:	5,091 Amps	4.24		Zero: 0.303	1.097
DC-9798 [50% SC]	DTE SOUTH	Out	13,200	3P:	3,036 Amps	4.89		Pos: 0.289	1.411
				SLG:	2,545 Amps	4.24		Zero: 0.606	2.195

Generators

Contribution From Name	Bus Name	In/Out Service	Nominal Voltage	----- Contribution Data -----			PU (100 MVA Base)	
				Base kVA	X"	X/R	R PU	X PU
GEN 1	BUS G1	In	13,200	2,535.00	0.15	7.45	0.00	0.00
					0.21	10.66	0.00	0.00
					0.03	1.53	0.00	0.00
GEN 2	BUS G2	In	13,200	2,535.00	0.15	7.45	0.00	0.00
					0.21	10.66	0.00	0.00
					0.03	1.53	0.00	0.00
GEN-0004		In		0.00	0.15	20.00	0.00	0.00
					0.15	20.00	0.00	0.00
					0.15	20.00	0.00	0.00

Motors

Contribution From Name	# of Motors	Bus Name	In/Out Service	Nominal Voltage	----- Contribution Data -----			PU (100 MVA Base)	
					Base kVA	Xd"	X/R	R PU	X PU
20 HP CF2 AHU-1	1	CF2 AHU-1 DISC	In	480	20.05	0.1531	10.00	76.333	763.362
20 HP CR-1 HSP 5	1	CR-1 HSP 5 DISC	In	480	20.05	0.1531	10.00	76.333	763.362
20 HP CR-1 HSP 6	1	CR-1 HSP 6 DISC	In	480	20.05	0.1531	10.00	76.333	763.362
20 HP SLC - 6	1	SLC 6 DISC	In	480	20.05	0.1531	10.00	76.333	763.362
20 HP SLC - 7	1	SLC 7 DISC	In	480	20.05	0.1531	10.00	76.333	763.362
25 HP BTAB - 3	1	BTAB-3 DISC	In	480	25.07	0.1531	10.00	61.066	610.689
25 HP BTAB -1	1	BTAB-1 DISC	In	480	25.07	0.1507	4.90	122.747	601.335
25 HP BTAB-2	1	BTAB-2 DISC	In	480	25.07	0.1531	10.00	61.066	610.689
250 HP CFG-1 BOWL DR	1	CFG-1 BOWL DR DISC	In	480	250.67	0.1531	10.00	6.107	61.069
250 HP CFG-2 BOWL DR	1	CFG-2 BOWL DR DISC	In	480	250.67	0.1531	10.00	6.107	61.069
250 HP CFG-3 BOWL DR	1	CFG-3 BOWL DR DISC	In	480	250.67	0.1531	10.00	6.107	61.069
40 HP CF2 AHU-3	1	CF2 AHU-3 DISC	In	480	40.11	0.1531	10.00	38.167	381.681
40 HP SLC - 4	1	SLC 4 DISC	In	480	40.11	0.1531	10.00	38.167	381.681
40 HP SLC - 5	1	SLC 5 DISC	In	480	40.11	0.1531	10.00	38.167	381.681
40 HP STWP - 1	1	STWP 1 DISC	In	480	40.11	0.1507	4.90	76.717	375.834
40 HP STWP - 2	1	STWP 2 DISC	In	480	40.11	0.1531	10.00	38.167	381.681
48IN GATE S-1-1 MTR	1	48IN GATE STR	In	480	1.80	0.1692	10.00	937.193	9,372.308
50 HP CFG-1 BACK DR	1	CFG-1 BACK DR DISC	In	480	50.13	0.1531	10.00	30.533	305.345
50 HP CFG-2 BACK DR	1	CFG-2 BACK DR DISC	In	480	50.13	0.1531	10.00	30.533	305.345
50 HP CFG-3 BACK DR	1	CFG-3 BACK DR DISC	In	480	50.13	0.1507	4.90	61.373	300.668
60 HP BT1-1M	1	BT1-1M DISC	In	480	60.16	0.1531	10.00	25.444	254.454
60 HP BT2-1M	1	BT2-1M DISC	In	480	60.16	0.1531	10.00	25.444	254.454
78IN GATE CONTROLLER	1	78IN GC STR	In	480	2.51	0.1692	10.00	674.779	6,748.062
ADM-ACCU-1 MTR	1	ADM-ACCU-1 MTR TE	In	480	2.01	0.1692	10.00	843.474	8,435.076
ADM-ACU-1 MTR	1	ADM-ACU-1 MTR TER	In	480	25.07	0.1692	10.00	67.478	674.806
ADM-EF-1 MTR	1	ADM-EF-1 MTR TERM	In	480	1.50	0.1692	10.00	1124.632	1,246.770
ADM-EF-2 MTR	1	ADM-EF-2 MTR TERM	In	480	1.00	0.1692	10.00	1686.948	6,870.150
ADM-HVAC-1 MTR	1	ADM-HVAC-1 MTR TE	In	480	10.03	0.1692	10.00	168.695	1,687.015
ADM-HVAC-2 MTR	1	ADM-HVAC-2 MTR TE	In	480	5.01	0.1692	10.00	337.390	3,374.031
ADM-P-1 MTR	1	ADM-P-1 MTR TERM	In	480	3.01	0.1692	10.00	562.316	5,623.385
ADM-P-2 MTR	1	ADM-P-2 MTR TERM	In	480	3.01	0.1692	10.00	562.316	5,623.385
ADM-P-3 MTR	1	ADM-P-3 MTR TERM	In	480	15.04	0.1692	10.00	112.463	1,124.677
ADM-P-4 MTR	1	ADM-P-4 MTR TERM	In	480	15.04	0.1692	10.00	112.463	1,124.677
ADM-SUP-1	1	ADM-SUP LCP	In	480	1.00	0.1692	10.00	1686.948	6,870.150
ADM-SUP-2	1	ADM-SUP LCP	In	480	1.00	0.1692	10.00	1686.948	6,870.150
ADP-E1 MTR	1	ADP-E1 TERM	In	480	50.13	0.1692	10.00	33.739	337.403
ADP-E2	1	ADP-E2 TERM	In	480	50.13	0.1692	10.00	33.739	337.403
ADP-W1 MTR	1	ADP-W1 TERM	In	480	20.05	0.1692	10.00	84.347	843.508
AIR COMP #1P	1	AIR COMP 1P DISC	In	480	20.05	0.1692	10.00	84.347	843.508
AIR COMP #2	1	AC2 DISC	In	480	15.04	0.1692	10.00	112.463	1,124.677
AIR COMP #2F	1	AC2F DISC	In	480	0.50	0.1692	10.00	3373.896	3,740.300
AIR COMP 1	1	AIR COMP 1 DISC	In	480	3.01	0.1692	10.00	562.316	5,623.385
AIR WASH MOD V	1	AIR WASH MV DISC	In	480	1.80	0.1692	10.00	937.193	9,372.308

Contribution From Name	# of Motors	Bus Name	In/Out Service	Nominal Voltage	----- Contribution Data -----			PU (100 MVA Base)	
					Base kVA	Xd"	X/R	R PU	X PU
ANMX-E1A MTR	1	BUS-0104	In	480	1.00	0.1692	10.00	1686.948	6,870.150
ANMX-E1B MTR	1	BUS-0106	In	480	1.00	0.1692	10.00	1686.948	6,870.150
ANMX-E1C MTR	1	BUS-0108	In	480	1.00	0.1692	10.00	1686.948	6,870.150
ANMX-E1D MTR	1	BUS-0110	In	480	1.00	0.1692	10.00	1686.948	6,870.150
ANMX-E2A MTR	1	BUS-0148	In	480	1.00	0.1692	10.00	1686.948	6,870.150
ANMX-E2B MTR	1	BUS-0150	In	480	1.00	0.1692	10.00	1686.948	6,870.150
ANMX-E2C MTR	1	BUS-0152	In	480	1.00	0.1692	10.00	1686.948	6,870.150
ANMX-E2D MTR	1	BUS-0154	In	480	1.00	0.1692	10.00	1686.948	6,870.150
ANMX-E3A MTR	1	BUS-0114	In	480	1.00	0.1692	10.00	1686.948	6,870.150
ANMX-E3B MTR	1	BUS-0116	In	480	1.00	0.1692	10.00	1686.948	6,870.150
ANMX-E3C MTR	1	BUS-0118	In	480	1.00	0.1692	10.00	1686.948	6,870.150
ANMX-E3D MTR	1	BUS-0120	In	480	1.00	0.1692	10.00	1686.948	6,870.150
ANMX-E4A MTR	1	BUS-0158	In	480	1.00	0.1692	10.00	1686.948	6,870.150
ANMX-E4B MTR	1	BUS-0160	In	480	1.00	0.1692	10.00	1686.948	6,870.150
ANMX-E4C MTR	1	BUS-0162	In	480	1.00	0.1692	10.00	1686.948	6,870.150
ANMX-E4D MTR	1	BUS-0164	In	480	1.00	0.1692	10.00	1686.948	6,870.150
ANMX-W1A MTR	1	BUS-0276	In	480	1.00	0.1692	10.00	1686.948	6,870.150
ANMX-W1B MTR	1	BUS-0277	In	480	1.00	0.1692	10.00	1686.948	6,870.150
ANMX-W1C MTR	1	BUS-0278	In	480	1.00	0.1692	10.00	1686.948	6,870.150
ANMX-W1D MTR	1	BUS-0279	In	480	1.00	0.1692	10.00	1686.948	6,870.150
ANMX-W2A MTR	1	BUS-0292	In	480	1.00	0.1692	10.00	1686.948	6,870.150
ANMX-W2B MTR	1	BUS-0293	In	480	1.00	0.1692	10.00	1686.948	6,870.150
ANMX-W2C MTR	1	BUS-0294	In	480	1.00	0.1692	10.00	1686.948	6,870.150
ANMX-W2D MTR	1	BUS-0295	In	480	1.00	0.1692	10.00	1686.948	6,870.150
AXMX-E1A MTR	1	BUS-0098	In	480	1.00	0.1692	10.00	1686.948	6,870.150
AXMX-E1B MTR	1	BUS-0100	In	480	1.00	0.1692	10.00	1686.948	6,870.150
AXMX-E1C MTR	1	BUS-0102	In	480	1.00	0.1692	10.00	1686.948	6,870.150
AXMX-E2A MTR	1	BUS-0142	In	480	1.00	0.1692	10.00	1686.948	6,870.150
AXMX-E2B MTR	1	BUS-0144	In	480	1.00	0.1692	10.00	1686.948	6,870.150
AXMX-E2C MTR	1	BUS-0146	In	480	1.00	0.1692	10.00	1686.948	6,870.150
AXMX-E3A MTR	1	BUS-0122	In	480	1.00	0.1692	10.00	1686.948	6,870.150
AXMX-E3B MTR	1	BUS-0124	In	480	1.00	0.1692	10.00	1686.948	6,870.150
AXMX-E3C MTR	1	BUS-0126	In	480	1.00	0.1692	10.00	1686.948	6,870.150
AXMX-E4A MTR	1	BUS-0166	In	480	1.00	0.1692	10.00	1686.948	6,870.150
AXMX-E4B MTR	1	BUS-0168	In	480	1.00	0.1692	10.00	1686.948	6,870.150
AXMX-E4C MTR	1	BUS-0170	In	480	1.00	0.1692	10.00	1686.948	6,870.150
AXMX-W1A MTR	1	BUS-0273	In	480	1.00	0.1692	10.00	1686.948	6,870.150
AXMX-W1B MTR	1	BUS-0274	In	480	1.00	0.1692	10.00	1686.948	6,870.150
AXMX-W1C MTR	1	BUS-0275	In	480	1.00	0.1692	10.00	1686.948	6,870.150
AXMX-W2A MTR	1	BUS-0289	In	480	1.00	0.1692	10.00	1686.948	6,870.150
AXMX-W2B MTR	1	BUS-0290	In	480	1.00	0.1692	10.00	1686.948	6,870.150
AXMX-W2C MTR	1	BUS-0291	In	480	1.00	0.1692	10.00	1686.948	6,870.150

Contribution From Name	# of Motors	Bus Name	In/Out Service	Nominal Voltage	----- Contribution Data -----			PU (100 MVA Base)	
					Base kVA	Xd"	X/R	R PU	X PU
B-54-1 MTR VALVE	1	B-54-1 MTR VALVE.	In	480	1.00	0.1531	10.00	1526.662	5,267.230
B-54-2 MTR VALVE	1	B-54-2 MTR VALVE.	In	480	1.00	0.1531	10.00	1526.662	5,267.230
B-54-3 MTR VALVE	1	B-54-3 MTR VALVE.	In	480	1.00	0.1531	10.00	1526.662	5,267.230
B-54-4 MTR VALVE	1	BUS-0319	In	480	1.00	0.1531	10.00	1526.662	5,267.230
B-54-5 MTR VALVE	1	BUS-0322	In	480	1.00	0.1531	10.00	1526.662	5,267.230
B-54-6 MTR VALVE	1	BUS-0324	In	480	1.00	0.1531	10.00	1526.662	5,267.230
B-55-1 MTR VALVE	1	BUS-0311	In	480	1.00	0.1531	10.00	1526.662	5,267.230
B-55-2 MTR VALVE	1	BUS-0327	In	480	1.00	0.1531	10.00	1526.662	5,267.230
B-55-3 MTR VALVE	1	BUS-0315	In	480	1.00	0.1531	10.00	1526.662	5,267.230
B-55-4 MTR VALVE	1	BUS-0313	In	480	1.00	0.1531	10.00	1526.662	5,267.230
B-55-5 MTR VALVE	1	BUS-0329	In	480	1.00	0.1531	10.00	1526.662	5,267.230
B-55-6 MTR VALVE	1	BUS-0317	In	480	1.00	0.1531	10.00	1526.662	5,267.230
B-55-8 MTR VALVE	1	WA MAIN BOV	In	480	1.00	0.1531	10.00	1526.662	5,267.230
BACKWASH PUMP #1	1	BWWP1 DISC	In	480	100.27	0.1692	10.00	16.869	168.702
BACKWASH PUMP 2	1	BUS-0133	In	480	100.27	0.1692	10.00	16.869	168.702
BAR SCREEN 1	1	BAR SCREEN 1 TERM	In	480	5.01	0.1692	10.00	337.390	3,374.031
BAR SCREEN 2	1	BAR SCREEN 2 TERM	In	480	5.01	0.1692	10.00	337.390	3,374.031
BAR SCREEN 3	1	BAR SCREEN 3 TERM	In	480	5.01	0.1692	10.00	337.390	3,374.031
BASIN HOIST	1	BSNHST DISC	In	480	7.52	0.1692	10.00	224.926	2,249.354
BASIN INFL GATE 1 S-17-13	1	BSNINFLGT-1 DISC	In	480	1.10	0.1692	10.00	1533.589	5,336.500
BASIN INFL GATE 3 S-17-1	1	BSNINFLGT-3 DISC	In	480	1.10	0.1692	10.00	1533.589	5,336.500
BASIN OUT GATE 1 S-19-3	1	BSN-OUT-GT-1 DISC	In	480	1.10	0.1692	10.00	1533.589	5,336.500
BASIN OUT GATE 3 S-19-1	1	BSN-OUT-GT-3 DISC	In	480	1.10	0.1692	10.00	1533.589	5,336.500
BF-64-07.	1	BF-64-07	In	480	1.00	0.1531	10.00	1526.662	5,267.230
BF-64-08.	1	BF-64-08	In	480	1.00	0.1531	10.00	1526.662	5,267.230
BF-64-15	1	AT-E3 Z1 FCV	In	480	1.00	0.1531	10.00	1526.662	5,267.230
BF-64-16	1	AT-E4 Z1 FCV	In	480	1.00	0.1531	10.00	1526.662	5,267.230
BF-64-25	1	AT-E1 FCV BF-64-25	In	480	1.00	0.1531	10.00	1526.662	5,267.230
BF-64-26	1	AT-E2 FCV BF-64-26	In	480	1.00	0.1531	10.00	1526.662	5,267.230
BF-64-29	1	BF - 64- 29	In	480	1.00	0.1531	10.00	1526.662	5,267.230
BF-64-30	1	BF- 64- 30	In	480	1.00	0.1531	10.00	1526.662	5,267.230
BF-64-45	1	AT-E3 Z3 FCV	In	480	1.00	0.1531	10.00	1526.662	5,267.230
BF-64-46	1	AT-E4 Z3 FCV	In	480	1.00	0.1531	10.00	1526.662	5,267.230
BF-64-47	1	AT-E3 Z2 FCV	In	480	1.00	0.1531	10.00	1526.662	5,267.230
BF-64-48	1	AT-E4 Z2 FCV	In	480	1.00	0.1531	10.00	1526.662	5,267.230
BF-65-01	1	PAB-E1 DV & BOV	In	480	1.00	0.1531	10.00	1526.662	5,267.230
BF-65-02	1	PAB-E2 DV & BOV1	In	480	1.00	0.1531	10.00	1526.662	5,267.230
BF-65-04	1	BUS-0414	In	480	1.00	0.1531	10.00	1526.662	5,267.230
BF-65-05	1	BUS-0406	In	480	1.00	0.1531	10.00	1526.662	5,267.230
BSN INFL GT #2 S-17-2	1	BSNINFLGT2 DISC	In	480	1.10	0.1692	10.00	1533.589	5,336.500
BSN OUT GT #2 S-19-2	1	BSNOUTGT2 DISC	In	480	1.10	0.1692	10.00	1533.589	5,336.500
BYPASS GT #1 S-14-1	1	BYPGT1 DISC	In	480	1.80	0.1692	10.00	937.193	9,372.308

Contribution From Name	# of Motors	Bus Name	In/Out Service	Nominal Voltage	----- Contribution Data -----			PU (100 MVA Base)	
					Base kVA	Xd"	X/R	R PU	X PU
BYPASS GT #2 S-14-2	1	BYPGT2 DISC	In	480	1.80	0.1692	10.00	937.193	9,372.308
C SUMP PUMP	1	C SUMP PUMP TERM	In	480	1.50	0.1692	10.00	1124.632	1,246.770
CE WET WELL GT	1	CE WET WELL GT DISC	In	480	1.80	0.1692	10.00	937.193	9,372.308
CEB-EF-1 MTR	1	CEB-EF-1 TERM	In	480	5.01	0.1692	10.00	337.390	3,374.031
CEB-EF-2 MTR	1	CEB-EF-2 TERM	In	480	0.50	0.1692	10.00	3373.896	3,740.300
CEB-P-1 MTR	1	CEB-P-1 TERM	In	480	0.75	0.1692	10.00	2249.264	2,493.540
CEB-P-2 MTR	1	CEB-P-2 TERM	In	480	0.75	0.1692	10.00	2249.264	2,493.540
CEB-PPU-1 MTR	1	CEB-PPU-1 STR	In	480	3.01	0.1692	10.00	562.316	5,623.385
CHANNEL AIR BLOWER	1	CHABLWR DISC	In	480	7.52	0.1692	10.00	224.926	2,249.354
CLARIFIER SC-E2	1	SC-E2 TERMS	In	480	0.75	0.1692	10.00	2249.264	2,493.540
CLARIFIER SC-E4	1	SC-E4 TERMS	In	480	0.75	0.1692	10.00	2249.264	2,493.540
CONT TK INT GT S-16-1	1	CONT TK INT GT DISC	In	480	1.80	0.1692	10.00	937.193	9,372.308
CROSS COLL #2	1	CC2 DISC	In	480	2.01	0.1692	10.00	843.474	8,435.076
CROSS COLL 1	1	CC-1 DISC	In	480	2.01	0.1692	10.00	843.474	8,435.076
CROSS COLL 3	1	CC-3 DISC	In	480	2.01	0.1692	10.00	843.474	8,435.076
D SUMP PUMP 2	1	D SP-2 DISC	In	480	5.01	0.1692	10.00	337.390	3,374.031
DCH FNL EFF SP	1	DCH FNL EFF SP DISC	In	480	7.52	0.1692	10.00	224.926	2,249.354
DOOR MTR EE1	1	DOOR MTR EE1 TERM	In	480	0.50	0.1692	10.00	3373.896	3,740.300
DOOR MTR EE2	1	DOOR MTR EE2 TERM	In	480	0.50	0.1692	10.00	3373.896	3,740.300
DOOR MTR FF	1	DOOR MTR FF TERM	In	480	0.50	0.1692	10.00	3373.896	3,740.300
DOOR OP (NGW)	1	DOOR OP (NGW) TERM	In	480	0.33	0.1692	10.00	5065.910	0,661.130
DOOR OP (SG)	1	DOOR OP (SG) TERM	In	480	0.33	0.1692	10.00	5065.910	0,661.130
DOOR OPERATOR	1	DOOR OPERATOR STR	In	480	1.00	0.1692	10.00	1686.948	6,870.150
Drag Flt 1	1	MCC-R	In	480	69.94	0.1692	10.00	24.187	241.866
Drag Flt 2	1	MCC-R	In	480	69.94	0.1692	10.00	24.187	241.866
Drag Flt 3	1	MCC-S	In	480	69.94	0.1692	10.00	24.187	241.866
Drag Flt 5	1	MCC-R	In	480	69.94	0.1692	10.00	24.187	241.866
E CONT TK GATE #1	1	E CONT TK G1 DISC	In	480	1.80	0.1692	10.00	937.193	9,372.308
E PLT BLWR BLDG V	1	EPBBV STARTER	In	480	2.01	0.1692	10.00	843.474	8,435.076
E PLT SEC EFF GT E S-6-2	1	EPSEGE DISC	In	480	1.80	0.1692	10.00	937.193	9,372.308
E PLT SEC EFF GT W S-6-1	1	EPSEGW DISC	In	480	1.80	0.1692	10.00	937.193	9,372.308
E SEC EFF SP #6 ESE-SAP-6	1	ESESP6 DISC	In	480	3.01	0.1692	10.00	562.316	5,623.385
E SUMP PUMP 1	1	E SUMP PUMP 1 DISC	In	480	5.01	0.1692	10.00	337.390	3,374.031
E. PLANT THR VALVE	1	EP THRV CONTROLLER	In	480	0.70	0.1692	10.00	2409.926	4,100.220
EBB SUMP PUMP 2	1	EBB SP-2 TERM	In	480	5.01	0.1692	10.00	337.390	3,374.031
EBB SUMP PUMP 4	1	EBB-SP-4 TERM	In	480	5.01	0.1692	10.00	337.390	3,374.031
EBB-EF-10	1	EBB-EF-10 TERM	In	480	1.50	0.1692	10.00	1124.632	1,246.770
EBB-EF-5 MTR	1	EBB-EF-5 TERM	In	480	3.01	0.1692	10.00	562.316	5,623.385
EBB-EF-6	1	EBB-EF-6 TERM	In	480	1.50	0.1692	10.00	1124.632	1,246.770
EBB-EF-7 MTR	1	EBB-EF-7 TERM	In	480	3.01	0.1692	10.00	562.316	5,623.385
EBB-EF-9 MTR	1	EBB-EF-9 TERM	In	480	3.01	0.1692	10.00	562.316	5,623.385
EBB-HV-1	1	EBB-HV-1 STR	In	480	1.00	0.1692	10.00	1686.948	6,870.150

Contribution From Name	# of Motors	Bus Name	In/Out Service	Nominal Voltage	----- Contribution Data -----			PU (100 MVA Base)	
					Base kVA	Xd"	X/R	R PU	X PU
EF-1	1	EF1 DISC	In	480	0.75	0.1692	10.00	2249.264	2,493.540
EF-2	1	EF2 DISC	In	480	0.75	0.1692	10.00	2249.264	2,493.540
EF-3	1	EF3 DISC	In	480	0.75	0.1692	10.00	2249.264	2,493.540
EF-4	1	EF4 DISC	In	480	0.75	0.1692	10.00	2249.264	2,493.540
ENCEXH FAN MTR	1	ENCEXH FAN TERM	In	480	0.75	0.1692	10.00	2249.264	2,493.540
EPB-SUP-1 MTR	1	EPB-SUP-1 TERM	In	480	5.01	0.1692	10.00	337.390	3,374.031
EPB-SUP-2 MTR	1	EPB-SUP-2 TERM	In	480	5.01	0.1692	10.00	337.390	3,374.031
EPE-SAP-5 MTR	1	EPE-SAP-5 TERM	In	480	7.52	0.1692	10.00	224.926	2,249.354
EPI-SAP-4 MTR	1	EPI-SAP-4 TERM	In	480	7.52	0.1692	10.00	224.926	2,249.354
EQ INFL GATE #5 S-13-4	1	EQINGT5 DISC	In	480	1.10	0.1692	10.00	1533.589	5,336.500
EQ INFL GATE #6 S-13-2	1	EQINGT6 DISC	In	480	1.10	0.1692	10.00	1533.589	5,336.500
EQ INFL GATE #7 S-13-11	1	EQINGT7 DISC	In	480	1.10	0.1692	10.00	1533.589	5,336.500
EQ INFL GATE #8 S-13-9	1	EQINGT8 DISC	In	480	1.10	0.1692	10.00	1533.589	5,336.500
EQ INFL GATE 1 S-13-12	1	EQ INFL GATE 1 STR	In	480	1.10	0.1692	10.00	1533.589	5,336.500
EQ INFL GATE 10 S-13-5	1	EQ INFL GATE 10 STR	In	480	1.10	0.1692	10.00	1533.589	5,336.500
EQ INFL GATE 11 S-13-3	1	EQ INFL GATE 11 STR	In	480	1.10	0.1692	10.00	1533.589	5,336.500
EQ INFL GATE 12 S-13-1	1	EQ INFL GATE 12 STR	In	480	1.10	0.1692	10.00	1533.589	5,336.500
EQ INFL GATE 2 S-13-10	1	EQ INFL GATE 2 STR	In	480	1.10	0.1692	10.00	1533.589	5,336.500
EQ INFL GATE 3 S-13-8	1	EQ INFL GATE 3 STR	In	480	1.10	0.1692	10.00	1533.589	5,336.500
EQ INFL GATE 4 S-13-6	1	EQ INFL GATE 4 STR	In	480	1.10	0.1692	10.00	1533.589	5,336.500
EQ INFL GATE 9 S-13-7	1	EQ INFL GATE 9 STR	In	480	1.10	0.1692	10.00	1533.589	5,336.500
EQ RET FCV	1	EQRETF CV DISC	In	480	0.33	0.1692	10.00	5065.910	0,661.130
EQ RET V #3	1	EQRETV3 DISC	In	480	2.61	0.1692	10.00	648.826	6,488.521
EQ RET VALVE 1	1	EQ-RET-V-1 DISC	In	480	2.61	0.1692	10.00	648.826	6,488.521
EQ RET VALVE 2	1	EQ-RET-V-2 DISC	In	480	2.61	0.1692	10.00	648.826	6,488.521
EQPT RM HOIST	1	EQPRM HOIST DISC	In	480	2.01	0.1692	10.00	843.474	8,435.076
F-1-1 MTR	1	F-1-1 STARTER	In	480	1.00	0.1692	10.00	1686.948	6,870.150
F-1-2 MTR	1	F-1-2 STARTER	In	480	1.00	0.1692	10.00	1686.948	6,870.150
F-1-3 MTR	1	F-1-3 STARTER	In	480	1.00	0.1692	10.00	1686.948	6,870.150
F-1-4 MTR	1	F-1-4 STARTER	In	480	1.00	0.1692	10.00	1686.948	6,870.150
F-1-5 MTR	1	F-1-5 STARTER	In	480	1.00	0.1692	10.00	1686.948	6,870.150
F-1-6 MTR	1	F-1-6 STARTER	In	480	1.00	0.1692	10.00	1686.948	6,870.150
F-1-7 MTR	1	F-1-7 STARTER	In	480	1.00	0.1692	10.00	1686.948	6,870.150
F-1-8 MTR	1	F-1-8 STARTER	In	480	1.00	0.1692	10.00	1686.948	6,870.150
F-2-1 MTR	1	F-2-1 STARTER	In	480	1.50	0.1692	10.00	1124.632	1,246.770
F-2-12 MTR	1	F-2-12 STARTER	In	480	1.50	0.1692	10.00	1124.632	1,246.770
F-2-13 MTR	1	F-2-13 STARTER	In	480	1.50	0.1692	10.00	1124.632	1,246.770
F-2-18 MTR	1	F-2-18 STARTER	In	480	1.50	0.1692	10.00	1124.632	1,246.770
F-2-19 MTR	1	F-2-19 STARTER	In	480	1.50	0.1692	10.00	1124.632	1,246.770
F-2-24 MTR	1	F-2-24 STARTER	In	480	1.50	0.1692	10.00	1124.632	1,246.770
F-2-6 MTR	1	F-2-6 STARTER	In	480	1.50	0.1692	10.00	1124.632	1,246.770
F-2-7 MTR	1	F-2-7 STARTER	In	480	1.50	0.1692	10.00	1124.632	1,246.770

Contribution From Name	# of Motors	Bus Name	In/Out Service	Nominal Voltage	----- Contribution Data -----			PU (100 MVA Base)	
					Base kVA	Xd"	X/R	R PU	X PU
F-5-1	1	F-5-1 DISC	In	480	1.80	0.1692	10.00	937.193	9,372.308
F-5-2	1	F-5-2 DISC	In	480	1.80	0.1692	10.00	937.193	9,372.308
F-54-1 MTR	1	F-54-1 STR	In	480	1.00	0.1692	10.00	1686.948	6,870.150
F-54-2 MTR	1	F-54-2 STR	In	480	1.00	0.1692	10.00	1686.948	6,870.150
F-54-4 MTR	1	F-54-4 STR	In	480	1.00	0.1692	10.00	1686.948	6,870.150
F-54-5 MTR	1	F-54-5 STR	In	480	1.00	0.1692	10.00	1686.948	6,870.150
F-6-1	1	F-6-1 CTRLR	In	480	1.80	0.1692	10.00	937.193	9,372.308
F-6-2	1	F-6-2 CTRLR	In	480	1.80	0.1692	10.00	937.193	9,372.308
F-6-4	1	F-6-4 STR	In	480	0.50	0.1692	10.00	3373.896	3,740.300
F-7-1	1	F-7-1 STR	In	480	0.50	0.1692	10.00	3373.896	3,740.300
F-8-6	1	F-8-6 STR	In	480	0.50	0.1692	10.00	3373.896	3,740.300
FASB-1	1	FASB1 TERM	In	480	100.27	0.1692	10.00	16.869	168.702
FCB-1	1	FCB-1 TERM	In	480	40.11	0.1692	10.00	42.174	421.754
FCB-1-EF	1	FCB-1-EF TERM	In	480	1.00	0.1692	10.00	1686.948	6,870.150
Filler Feed	1	MCC-XB	In	480	58.28	0.1692	10.00	29.024	290.239
Filter Feed	1		In	480	58.28	0.1692	10.00	0.000	0.000
Filter Pump	1	MCC-XA	In	480	58.28	0.1692	10.00	29.024	290.239
FLOOR DRN SP #1	1	FDSP1 DISC	In	480	5.01	0.1692	10.00	337.390	3,374.031
FLOOR DRN SP #2	1	FDSP2 DISC	In	480	5.01	0.1692	10.00	337.390	3,374.031
FLOOR DRN SP 4	1	FDSP4 DISC	In	480	5.01	0.1692	10.00	337.390	3,374.031
FLR DRN SP #3	1	FLRDRNSP3 DISC	In	480	5.01	0.1692	10.00	337.390	3,374.031
GP-3	1	GP-3 TERM	In	480	7.52	0.1692	10.00	224.926	2,249.354
GRIT BLOWER 2	1	GRIT BLOWER 2 DISC	In	480	5.01	0.1692	10.00	337.390	3,374.031
GRIT BLOWER 3	1	GRIT BLWR 3 TERM	In	480	5.01	0.1692	10.00	337.390	3,374.031
GRIT DEWATER UNIT 1	1	GDWU-1 DISC	In	480	0.33	0.1692	10.00	5065.910	0,661.130
GRIT DEWATER UNIT 2	1	GDWU-2 DISC	In	480	0.33	0.1692	10.00	5065.910	0,661.130
GRIT SLURRY PUMP 1	1	GSP1 DISC	In	480	7.52	0.1692	10.00	224.926	2,249.354
GRIT SLURRY PUMP 2	1	GSP2 DISC	In	480	7.52	0.1692	10.00	224.926	2,249.354
GRIT SLURRY PUMP 4	1	GSP4 DISC	In	480	7.52	0.1692	10.00	224.926	2,249.354
H2 HOIST MTR	1	WBB-H2	In	480	3.01	0.1692	10.00	562.316	5,623.385
H2 TROLLEY MTR	1	WBB-H2	In	480	3.01	0.1692	10.00	562.316	5,623.385
HOIST D	1	HOIST D DISC	In	480	5.26	0.1692	10.00	321.323	3,213.363
HOIST EPB-B MTR	1	HOIST EPB-B STARTER	In	480	5.01	0.1692	10.00	337.390	3,374.031
HOIST P	1	HOIST P DISC	In	480	7.52	0.1692	10.00	224.926	2,249.354
HOIST Q	1	HOIST Q DISC	In	480	7.52	0.1692	10.00	224.926	2,249.354
HP PEW PUMP #2	1	HPPEW2 DISC	In	480	100.27	0.1692	10.00	16.869	168.702
HP PEW PUMP 1	1	HP-PEW-P-1 DISC	In	480	100.27	0.1692	10.00	16.869	168.702
HT BOOST PUMP	1	HT BOOST PMP DISC	In	480	1.50	0.1692	10.00	1124.632	1,246.770
HV-1 HTG UNIT	1	HV-1 TERM	In	480	5.01	0.1692	10.00	337.390	3,374.031
ID Fan	1		In	480	349.69	0.1692	10.00	0.000	0.000
IFSAB-1 MTR	1	IFSAB-1 TERM	In	480	10.03	0.1692	10.00	168.695	1,687.015
JC-1	1	JC-1 LCP TERM	In	480	1.20	0.1692	10.00	1405.790	4,058.460

Contribution From Name	# of Motors	Bus Name	In/Out Service	Nominal Voltage	----- Contribution Data -----			PU (100 MVA Base)	
					Base kVA	Xd"	X/R	R PU	X PU
JC-2	1	JC-3 LCP TERM	In	480	1.20	0.1692	10.00	1405.790	4,058.460
LUBE PUMP 6	1	LBP-6 STARTER	In	480	0.37	0.1692	10.00	4630.132	6,303.180
LUBE PUMP 7	1	LBP-7 STARTER	In	480	0.37	0.1692	10.00	4630.132	6,303.180
LUBE PUMP 8	1	LBP-8 STARTER	In	480	0.37	0.1692	10.00	4630.132	6,303.180
MAKE-UP HV-2	1	MU HV2 DISC	In	480	10.03	0.1692	10.00	168.695	1,687.015
MB-EF-1 MTR	1	BUS-0346	In	480	1.00	0.1531	10.00	1526.662	5,267.230
MCC GG Misc	1		In	480	38.47	0.1692	10.00	0.000	0.000
MCC HH Misc	1		In	480	51.29	0.1692	10.00	0.000	0.000
MCC R Misc	1	MCC-R	In	480	442.94	0.1692	10.00	3.819	38.189
MCC S Misc	1	MCC-S	In	480	370.67	0.1692	10.00	4.564	45.635
MCC XA Misc	1	MCC-XA	In	480	60.61	0.1692	10.00	27.908	279.076
MCC XB Misc	1	MCC-XB	In	480	95.58	0.1692	10.00	17.698	176.975
MCC XC Misc	1		In	480	118.89	0.1692	10.00	0.000	0.000
MCC Y Misc	1		In	480	118.89	0.1692	10.00	0.000	0.000
MOD VALVE #1	1	MOD VALVE 1 DISC	In	480	1.80	0.1692	10.00	937.193	9,372.308
MOD VALVE #10	1	MV10 DISC	In	480	1.80	0.1692	10.00	937.193	9,372.308
MOD VALVE #11	1	MV11 DISC	In	480	1.80	0.1692	10.00	937.193	9,372.308
MOD VALVE #12	1	MV12 DISC	In	480	1.80	0.1692	10.00	937.193	9,372.308
MOD VALVE #2	1	MV2 DISC	In	480	1.80	0.1692	10.00	937.193	9,372.308
MOD VALVE #3	1	MOD VALVE 3 DISC	In	480	1.80	0.1692	10.00	937.193	9,372.308
MOD VALVE #4	1	MV4 DISC	In	480	1.80	0.1692	10.00	937.193	9,372.308
MOD VALVE #5	1	MOD VALVE 5 DISC	In	480	1.80	0.1692	10.00	937.193	9,372.308
MOD VALVE #6	1	MV6 DISC	In	480	1.80	0.1692	10.00	937.193	9,372.308
MOD VALVE #7	1	MOD VALVE 7 DISC	In	480	1.80	0.1692	10.00	937.193	9,372.308
MOD VALVE #8	1	MV8 DISC	In	480	1.80	0.1692	10.00	937.193	9,372.308
MOD VALVE #9	1	MV9 DISC	In	480	1.80	0.1692	10.00	937.193	9,372.308
MP PEW PUMP #2	1	MPPEWP2 DISC	In	480	60.16	0.1692	10.00	28.116	281.169
MP PEW PUMP 1	1	MPPEWP1 DISC	In	480	60.16	0.1692	10.00	28.116	281.169
MTRI-0098	1	WASV E3	In	480	1.00	0.1531	10.00	1526.662	5,267.230
MTRI-0099	1	WASV E4	In	480	1.00	0.1531	10.00	1526.662	5,267.230
MTRI-0114	1	MCC-XB	In	480	58.28	0.1692	10.00	29.024	290.239
P-53-06 MTR	1	P-53-06 STR	In	480	1.00	0.1692	10.00	1686.948	6,870.150
P-53-07 MTR	1	P-53-07 STR	In	480	1.00	0.1692	10.00	1686.948	6,870.150
P-53-21 MTR	1	P-53-21 STR	In	480	1.00	0.1692	10.00	1686.948	6,870.150
P-53-3 MTR	1	P-53-20 STR	In	480	1.00	0.1692	10.00	1686.948	6,870.150
P-55-1 MTR VALVE	1	WAS VALVE W1	In	480	1.00	0.1531	10.00	1526.662	5,267.230
P-55-2 MTR VALVE	1	WAS VALVE W2	In	480	1.00	0.1531	10.00	1526.662	5,267.230
PAB-E1 MTR	1	PAB-E1 MTR TERM	In	4,160	523.51	0.1378	9.95	2.646	26.324
PAB-E1 MTR [SqD]	1		In	4,160	518.28	0.1588	20.77	0.000	0.000
PAB-E2 MTR	1	PAB-E2 MTR TERM	In	4,160	523.51	0.1378	9.95	2.646	26.324
PAB-E3 MTR	1	PAB-E3 MTR TERM	In	4,160	523.51	0.1378	9.95	2.646	26.324
PAB-W1 MTR	1	PAB-W1 TERM	In	480	263.59	0.1501	16.61	3.149	52.300

Contribution From Name	# of Motors	Bus Name	In/Out Service	Nominal Voltage	----- Contribution Data -----			PU (100 MVA Base)	
					Base kVA	Xd"	X/R	R PU	X PU
PAB-W2 MTR	1	PAB-W2 TERM	In	480	263.59	0.1501	16.61	3.149	52.300
PAB-W3 MTR	1	PAB-W3 TERM	In	480	263.59	0.1501	16.61	3.149	52.300
PCDR-W1 MTR	1	PCDRW1 TERM	In	480	1.50	0.1692	10.00	1124.632	1,246.770
PCDR-W2	1	PCDR-W2 TERM	In	480	1.50	0.1692	10.00	1124.632	1,246.770
PC-E1 MTR	1	PC-E1 TERM	In	480	1.50	0.1692	10.00	1124.632	1,246.770
PC-E2 MTR	1	PC-E2 TERM	In	480	1.50	0.1692	10.00	1124.632	1,246.770
PC-E3 MTR	1	PC-E3 TERM	In	480	1.50	0.1692	10.00	1124.632	1,246.770
PC-E4 MTR	1	PC-E4 TERM	In	480	1.50	0.1692	10.00	1124.632	1,246.770
PDP-E1 MTR	1	PDP-E1 TERM	In	480	15.04	0.1692	10.00	112.463	1,124.677
PDP-E2 MTR	1	PDP-E2 TERM	In	480	10.03	0.1692	10.00	168.695	1,687.015
PDP-W1 MTR	1	PDPW1 TERM	In	480	15.04	0.1692	10.00	112.463	1,124.677
PEW PUMP #1	1	PEWP1 DISC	In	480	200.54	0.1692	10.00	8.435	84.351
PEW PUMP #2	1	PEWP2 MTR	In	480	200.54	0.1692	10.00	8.435	84.351
PEW PUMP 3	1	BUS-0134	In	480	125.34	0.1692	10.00	13.496	134.961
PEW STRAINER	1	PEW STRAINER DISC	In	480	1.00	0.1692	10.00	1686.948	6,870.150
Plate Washer	1	MCC-XB	In	480	69.94	0.1692	10.00	24.187	241.866
PMP RM HOIST	1	PMPRM HOIST DISC	In	480	7.52	0.1692	10.00	224.926	2,249.354
Prefill	1		In	480	58.28	0.1692	10.00	0.000	0.000
Prefill Pump	1	MCC-XA	In	480	58.28	0.1692	10.00	29.024	290.239
PSCP-E1 MTR	1	PSCP-E1 TERM	In	480	7.52	0.1692	10.00	224.926	2,249.354
PSCP-E2 MTR	1	PSCP-E2 TERM	In	480	7.52	0.1692	10.00	224.926	2,249.354
PSCP-W1 MTR	1	PSCP-W1 TERM	In	480	1.50	0.1692	10.00	1124.632	1,246.770
PSCP-W2 MTR	1	PSCP-W2 TERM	In	480	5.01	0.1692	10.00	337.390	3,374.031
PSLP-E1 MTR	1	PSLP-E1 TERM	In	480	15.04	0.1692	10.00	112.463	1,124.677
PSLP-E2 MTR	1	PSLP-E2 TERM	In	480	15.04	0.1692	10.00	112.463	1,124.677
PSLP-E3 MTR	1	PSLP-E3 TERM	In	480	15.04	0.1692	10.00	112.463	1,124.677
PSLPG-W1 MTR	1	PSLPG-W1 TERM	In	480	5.01	0.1692	10.00	337.390	3,374.031
PSLPG-W2 MTR	1	PSLPG-W2 TERM	In	480	5.01	0.1692	10.00	337.390	3,374.031
PSLPM-E1	1	PSLPM-E1 TERM	In	480	5.01	0.1692	10.00	337.390	3,374.031
PSLPM-E2	1	PSLPM-E2 TERM	In	480	5.01	0.1692	10.00	337.390	3,374.031
PSLPM-E3	1	MCC-EPB-B	In	480	5.01	0.1692	10.00	337.390	3,374.031
PSLPM-E3 MTR	1	PSLPM-E3 TERM	In	480	15.04	0.1692	10.00	112.463	1,124.677
PSLP-W1 MTR	1	PSLP-W1 TERM	In	480	15.04	0.1692	10.00	112.463	1,124.677
PSLP-W2 MTR	1	PSLP-W2 TERM	In	480	15.04	0.1692	10.00	112.463	1,124.677
RASP-E1	1	RASP-E1 TERM	In	480	20.05	0.1692	10.00	84.347	843.508
RASP-E2 MTR	1	RASP-E2 TERM	In	480	20.05	0.1692	10.00	84.347	843.508
RASP-E3	1	RASP-E3 TERM	In	480	20.05	0.1692	10.00	84.347	843.508
RASP-E4 MTR	1	RASP-E4 TERM	In	480	20.05	0.1692	10.00	84.347	843.508
RASP-E5	1	RASP-E5 TERM	In	480	20.05	0.1692	10.00	84.347	843.508
RASP-E6 MTR	1	RASP-E6 TERM	In	480	20.05	0.1692	10.00	84.347	843.508
RASP-E7	1	RASP-E7 TERM	In	480	20.05	0.1692	10.00	84.347	843.508
RASP-E8 MTR	1	RASP-E8 TERM	In	480	20.05	0.1692	10.00	84.347	843.508

Contribution From Name	# of Motors	Bus Name	In/Out Service	Nominal Voltage	----- Contribution Data -----			PU (100 MVA Base)	
					Base kVA	Xd"	X/R	R PU	X PU
RASP-W1 MTR	1	RASP-W1 TERM	In	480	20.05	0.1692	10.00	84.347	843.508
RASP-W2 MTR	1	RASP-W2 TERM	In	480	20.05	0.1692	10.00	84.347	843.508
RASP-W3 MTR	1	RASP-W3 TERM	In	480	20.05	0.1692	10.00	84.347	843.508
RASP-W4 MTR	1	RASP-W4 TERM	In	480	20.05	0.1692	10.00	84.347	843.508
RB DRAIN PUMP #1	1	RBDP1 DISC	In	480	40.11	0.1692	10.00	42.174	421.754
RB DRAIN PUMP #3	1	RBDP3 DISC	In	480	40.11	0.1692	10.00	42.174	421.754
RB DRAIN PUMP 2	1	RBDP-2 DISC	In	480	40.11	0.1692	10.00	42.174	421.754
RB DRAIN PUMP 4	1	RBDP-4 DISC	In	480	40.11	0.1692	10.00	42.174	421.754
RET BSN RF CV	1	RETBSNRFCV STARTE	In	480	0.33	0.1692	10.00	5065.910	0,661.130
RF-1 MTR	1	RF-1 TERM	In	480	0.50	0.1692	10.00	3373.896	3,740.300
RIVER VALVE B-3-1	1	RIVER VALVE DISC	In	480	1.00	0.1692	10.00	1686.948	6,870.150
RLS-EF-1	1	RLS-EF-1 TERM	In	480	1.00	0.1692	10.00	1686.948	6,870.150
RLS-EF-2	1	RLS-EF-2 TERM	In	480	0.75	0.1692	10.00	2249.264	2,493.540
RLS-SF-1	1	RLS-SF-1 TERM	In	480	2.01	0.1692	10.00	843.474	8,435.076
ROOF FAN #11 RF-11	1	ROOF FAN 11 DISC	In	480	5.01	0.1692	10.00	337.390	3,374.031
ROOF FAN #13	1	RF13 TERM	In	480	5.01	0.1692	10.00	337.390	3,374.031
ROOF FAN #5	1	RF # 5 DISC	In	480	0.75	0.1692	10.00	2249.264	2,493.540
ROOF FAN #6	1	RF # 6 DISC	In	480	0.50	0.1692	10.00	3373.896	3,740.300
ROOF FAN 10	1	BUS-0137	In	480	5.01	0.1692	10.00	337.390	3,374.031
ROOF FAN 12	1	BUS-0138	In	480	5.01	0.1692	10.00	337.390	3,374.031
RS-SAP-1 MTR	1	RS-SAP-1 TERM	In	480	5.01	0.1692	10.00	337.390	3,374.031
S-21-1 MTR	1	S-21-1 STARTER	In	480	1.00	0.1692	10.00	1686.948	6,870.150
S-21-2 MTR	1	S-21-2 STARTER	In	480	1.00	0.1692	10.00	1686.948	6,870.150
S-21-3 MTR	1	S-21-3 STARTER	In	480	1.00	0.1692	10.00	1686.948	6,870.150
S-21-4 MTR	1	S-21-4 STARTER	In	480	1.00	0.1692	10.00	1686.948	6,870.150
s-54-1 MTR VALVE	1	WEST AESG W1	In	480	1.00	0.1531	10.00	1526.662	5,267.230
S-54-2 MTR	1	S-54-2 STR	In	480	1.00	0.1692	10.00	1686.948	6,870.150
S-54-2 MTR VALVE	1	WEST AESG W2	In	480	1.00	0.1531	10.00	1526.662	5,267.230
SC-1	1	SC-1 TERM	In	480	2.01	0.1692	10.00	843.474	8,435.076
SCDR-W1 MTR	1	SCDR-W1 TERM	In	480	0.75	0.1692	10.00	2249.264	2,493.540
SCDR-W2 MTR	1	SCDR-W2 TERM	In	480	0.75	0.1692	10.00	2249.264	2,493.540
SCREEN COMP SC-2	1	SC-2 DISC	In	480	2.01	0.1692	10.00	843.474	8,435.076
SCREEN COMP SC-3	1	SC-3 DISC	In	480	2.01	0.1692	10.00	843.474	8,435.076
SCREENINGS CONV	1	SCRNCNV DISC	In	480	1.00	0.1692	10.00	1686.948	6,870.150
SCREW CONV 3	1	SCREW CONV 3 STR	In	480	5.01	0.1692	10.00	337.390	3,374.031
SCREW PUMP 1	1	SRP-1 TERM	In	480	100.27	0.1692	10.00	16.869	168.702
SCREW PUMP 2	1	SRP-2 TERM	In	480	100.27	0.1692	10.00	16.869	168.702
SCREW PUMP 3	1	SRP- 3 TERM	In	480	100.27	0.1692	10.00	16.869	168.702
SCREW PUMP 4	1	SRP-4 TERM	In	480	100.27	0.1692	10.00	16.869	168.702
SCREW PUMP 5	1	SRP-5 TERM	In	480	100.27	0.1692	10.00	16.869	168.702
SCREW PUMP 6	1	SCP-6 TERM	In	480	100.27	0.1692	10.00	16.869	168.702
SCREW PUMP 7	1	SCP-7 TERM	In	480	100.27	0.1692	10.00	16.869	168.702

Contribution From Name	# of Motors	Bus Name	In/Out Service	Nominal Voltage	----- Contribution Data -----			PU (100 MVA Base)	
					Base kVA	Xd"	X/R	R PU	X PU
SCREW PUMP 8	1	SCP-8 TERM	In	480	100.27	0.1692	10.00	16.869	168.702
SE ISO VALVE B-2-1	1	SE ISO VALVE DISC	In	480	1.00	0.1692	10.00	1686.948	6,870.150
SEC EFF PMP #1	1	BUS-0173	In	480	150.40	0.1692	10.00	11.246	112.468
SEC EFF PMP #5	1	SEP5 TERM	In	480	150.40	0.1692	10.00	11.246	112.468
SEC EFF PUMP #3	1	BUS-0174	In	480	125.34	0.1692	10.00	13.496	134.961
SEC EFF PUMP #4	1	SEP4 TERM	In	480	150.40	0.1692	10.00	11.246	112.468
SEC EFF PUMP 2	1	BUS-0129	In	480	150.40	0.1692	10.00	11.246	112.468
SEC EFF PUMP 6	1	BUS-0130	In	480	150.40	0.1692	10.00	11.246	112.468
SEC SCUM PMP-E1	1	SSCP-E1 TERM	In	480	15.04	0.1692	10.00	112.463	1,124.677
SEC-CLAR-E1	1	SC-E1 TERM	In	480	0.75	0.1692	10.00	2249.264	2,493.540
SEC-CLAR-E3	1	SC-E3 TERM	In	480	0.75	0.1692	10.00	2249.264	2,493.540
SECURITY GATE	1	SCTY GATE STARTER	In	480	0.50	0.1692	10.00	3373.896	3,740.300
SEPTIC PUMP	1	SEPPMP DISC TERM	In	480	15.04	0.1692	10.00	112.463	1,124.677
SF-1	1	SF1 DISC	In	480	0.75	0.1692	10.00	2249.264	2,493.540
SF-1FF	1	SF-1 FF TERM	In	480	20.05	0.1692	10.00	84.347	843.508
SF-2EE	1	SF-2 EE TERM	In	480	20.05	0.1692	10.00	84.347	843.508
SF-3FF	1	SF-3 FF TERM	In	480	15.04	0.1692	10.00	112.463	1,124.677
SF-4EE	1	SF-4 EE TERM	In	480	15.04	0.1692	10.00	112.463	1,124.677
SLUDGE COLL #2	1	SLC2 DISC	In	480	0.75	0.1692	10.00	2249.264	2,493.540
SLUDGE COLL 1	1	SLC-1 DISC	In	480	0.75	0.1692	10.00	2249.264	2,493.540
SLUDGE COLL 3	1	SLC-3 DISC	In	480	0.75	0.1692	10.00	2249.264	2,493.540
SLUDGE PUMP #3	1	SLP3 DISC	In	480	5.01	0.1692	10.00	337.390	3,374.031
SLUDGE PUMP 1	1	SLP1 DISC	In	480	5.01	0.1692	10.00	337.390	3,374.031
SLUDGE PUMP 2	1	SLP2 DISC	In	480	5.01	0.1692	10.00	337.390	3,374.031
SLUICE GATE 3	1	SLG-3 STR	In	480	1.80	0.1692	10.00	937.193	9,372.308
SLUICE GATE 4	1	SG 4 STR	In	480	1.80	0.1692	10.00	937.193	9,372.308
SLUICE GATE 5	1	SLGT-5 DISC	In	480	1.80	0.1692	10.00	937.193	9,372.308
SLUICE GT #1 S-11-1	1	SLGT1 DISC	In	480	1.80	0.1692	10.00	937.193	9,372.308
SLUICE GT #2 S-11 -2	1	SLGT2 DISC	In	480	1.80	0.1692	10.00	937.193	9,372.308
SSC-1	1	SSC-1 TERM	In	480	5.01	0.1692	10.00	337.390	3,374.031
SSC-2	1	SSC-2 DISC	In	480	5.01	0.1692	10.00	337.390	3,374.031
SSCP-W1 MTR	1	SSCP-W1 TERM	In	480	5.01	0.1692	10.00	337.390	3,374.031
SSCP-W2 MTR	1	SSCP-W2 TERM	In	480	5.01	0.1692	10.00	337.390	3,374.031
Storm 2	1	MCC-S	In	480	58.28	0.1692	10.00	29.024	290.239
Stormwater 1	1	MCC-R	In	480	58.28	0.1692	10.00	29.024	290.239
SUB SUMP PUMP 2	1	SUB SP-2 DISC	In	480	5.01	0.1692	10.00	337.390	3,374.031
SUBM PUMP 1	1	SUBM PUMP1 TERM	In	480	5.01	0.1692	10.00	337.390	3,374.031
SUMP PUMP #2	1	SMP2 DISC	In	480	2.01	0.1692	10.00	843.474	8,435.076
SUMP PUMP 1 MTR	1	SMPPMP1 TERM	In	480	3.01	0.1692	10.00	562.316	5,623.385
SUMP PUMP 3 MTR	1	SMPPMP3 TERM	In	480	3.01	0.1692	10.00	562.316	5,623.385
SUMP PUMP NGB	1	SP NGB TERM	In	480	5.01	0.1692	10.00	337.390	3,374.031
SWMX-E1 MTR	1	BUS-0112	In	480	1.00	0.1692	10.00	1686.948	6,870.150

Contribution From Name	# of Motors	Bus Name	In/Out Service	Nominal Voltage	----- Contribution Data -----			PU (100 MVA Base)	
					Base kVA	Xd"	X/R	R PU	X PU
SWMX-E2 MTR	1	BUS-0156	In	480	1.00	0.1692	10.00	1686.948	6,870.150
SWMX-E3 MTR	1	BUS-0128	In	480	1.00	0.1692	10.00	1686.948	6,870.150
SWMX-E4 MTR	1	BUS-0172	In	480	1.00	0.1692	10.00	1686.948	6,870.150
SWMX-W1 MTR	1	BUS-0281	In	480	1.00	0.1692	10.00	1686.948	6,870.150
SWMX-W2 MTR	1	BUS-0296	In	480	1.00	0.1692	10.00	1686.948	6,870.150
SWP 1 MTR	1	SWP 1 MTR TERM	In	480	40.11	0.1692	10.00	42.174	421.754
SWP 2 MTR	1	SWP 2 MTR TERM	In	480	40.11	0.1692	10.00	42.174	421.754
SWPSO VALVE MTR	1	SWPSO VALVE STR	In	480	1.80	0.1692	10.00	937.193	9,372.308
SWPSO-SG MTR	1	SWPSO-SG STR	In	480	1.80	0.1692	10.00	937.193	9,372.308
TER FIL EFF SP TFE-SAP-6	1	TER FIL EFF SP DISC	In	480	7.52	0.1692	10.00	224.926	2,249.354
Turbo Blr	1		In	480	69.94	0.1692	10.00	0.000	0.000
Turbo Blr 2	1		In	480	116.56	0.1692	10.00	0.000	0.000
UD SP #1	1	UDSP1 DISC	In	480	10.03	0.1692	10.00	168.695	1,687.015
UD SP #2	1	UDSP2 DISC	In	480	7.52	0.1692	10.00	224.926	2,249.354
W CONT GATE #2	1	W CONT GT2 DISC	In	480	1.80	0.1692	10.00	937.193	9,372.308
WASP-E1	1	WASP-E1 TERM	In	480	5.01	0.1692	10.00	337.390	3,374.031
WASP-E2 MTR	1	WASP-E2 TERM	In	480	5.01	0.1692	10.00	337.390	3,374.031
WASP-W1 MTR	1	WASP-W1 TERM	In	480	5.01	0.1692	10.00	337.390	3,374.031
WASP-W2 MTR	1	WASP-W2 TERM	In	480	5.01	0.1692	10.00	337.390	3,374.031
WATER CIRC PUMP 1	1	WTR-CRC-PMP-1 TERM	In	480	0.75	0.1692	10.00	2249.264	2,493.540
WATER CIRC PUMP 2	1	WTR-CRC-PMP-2 TERM	In	480	0.75	0.1692	10.00	2249.264	2,493.540
WBB H1 HOIST MTR	1	WBB-H1	In	480	3.01	0.1692	10.00	562.316	5,623.385
WBB H2 TROLLEY MTR	1	WBB-H1	In	480	3.01	0.1692	10.00	562.316	5,623.385
WBB-EF-1 MTR	1	WBB-EF-1 TERM	In	480	2.01	0.1692	10.00	843.474	8,435.076
WBB-EF-2 MTR	1	WBB-EF-2 TERM	In	480	0.75	0.1692	10.00	2249.264	2,493.540
WBB-EF-3 MTR	1	WBB-EF-3 TERM	In	480	2.01	0.1692	10.00	843.474	8,435.076
WBB-EF-4 MTR	1	WBB-EF-4 TERM	In	480	2.01	0.1692	10.00	843.474	8,435.076
WBB-EF-5 MTR	1	WBB-EF-5 TERM	In	480	2.01	0.1692	10.00	843.474	8,435.076
WBB-EF-6 MTR	1	WBB-EF-6 TERM	In	480	7.52	0.1692	10.00	224.926	2,249.354
WBB-EF-7 MTR	1	WBB-EF-7 TERM	In	480	2.01	0.1692	10.00	843.474	8,435.076
WBB-HV-1 MTR	1	WBB-HV-1 TERM	In	480	5.01	0.1692	10.00	337.390	3,374.031
WBB-P-1 MTR	1	WBB-P-1 TERM	In	480	10.03	0.1692	10.00	168.695	1,687.015
WBB-P-2 MTR	1	WBB-P-2 TERM	In	480	10.03	0.1692	10.00	168.695	1,687.015
WET WELL BYPASS GATE V	1	SEG1 DISC	In	480	1.80	0.1692	10.00	937.193	9,372.308
WPB H1 HOIST MTR	1	WPB-H1 HOIST	In	480	3.01	0.1692	10.00	562.316	5,623.385
WPB H1 TROLLEY MTR	1	WPB-H1 HOIST	In	480	0.25	0.1692	10.00	6747.792	7,480.610
WPB-EF-1 MTR	1	WPB-EF-1 TERM	In	480	3.01	0.1692	10.00	562.316	5,623.385
WPB-EF-2 MTR	1	WPB-EF-2 TERM	In	480	5.01	0.1692	10.00	337.390	3,374.031
WPB-HV-1	1	BUS-0463	In	480	5.01	0.1692	10.00	337.390	3,374.031
WPB-P-1 MTR	1	BUS-0282	In	480	1.50	0.1692	10.00	1124.632	1,246.770
WPB-P-2 MTR	1	WPB-P-2 TERMS	In	480	1.50	0.1692	10.00	1124.632	1,246.770
WPE-SAP-2 MTR	1	WPE-SAP-2 TERM	In	480	5.01	0.1692	10.00	337.390	3,374.031

Contribution From Name	# of Motors	Bus Name	In/Out Service	Nominal Voltage	----- Contribution Data -----			PU (100 MVA Base)	
					Base kVA	Xd"	X/R	R PU	X PU
WPSE GATE E MTR	1	WPSE GATE E DISC	In	480	1.80	0.1692	10.00	937.193	9,372.308
WPSE GATE W MTR	1	BUS-0136	In	480	1.80	0.1692	10.00	937.193	9,372.308
WPSE SAMPLE PUMP	1	BUS-0434	In	480	7.52	0.1692	10.00	224.926	2,249.354
WSE-SAP-3 MTR	1	WSE-SAP-3 TERM	In	480	5.01	0.1692	10.00	337.390	3,374.031
WW BYP GATE E	1	WW BYP GATE E DISC	In	480	1.80	0.1692	10.00	937.193	9,372.308
WW RES DP #1	1	WWWRESDP1 DISC	In	480	30.08	0.1692	10.00	56.232	562.338
WW RES DRN PUMP #3	1	WWRDP3 DISC	In	480	30.08	0.1692	10.00	56.232	562.338
WWRD PUMP 2	1	BUS-0135	In	480	30.08	0.1692	10.00	56.232	562.338

Cables

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	----- Cable Description -----			Per Unit (100 MVA Base)		
					Size	Cond. Type	Duct Type	Insul	R pu	jX pu
#CBL-0250	XFMR-LP-E SEC LP-E	In	1	10	750	Copper	Magnetic	PVC	Pos: 0.4993 Zero: 1.5717	1.0286 2.5310
CBL AT-E1 FCV	PP-EBB-A BUS-0182	In	1	65	12	Copper	Magnetic	PVC	Pos: 52.7561 Zero: 66.2635	2.5673 6.3223
CBL AT-E2 FCV	PP-EBB-A BUS-0188	In	1	53	12	Copper	Magnetic	PVC	Pos: 43.0165 Zero: 35.5687	2.0933 5.1551
CBL AT-E3 Z1 FCV	Wireway BUS-0392	In	1	5	10	Copper	Magnetic	PVC	Pos: 2.5608 Zero: 8.0703	0.1853 0.4564
CBL AT-E3 Z2 FCV	Wireway BUS-0399	In	1	5	10	Copper	Magnetic	PVC	Pos: 2.5608 Zero: 8.0703	0.1853 0.4564
CBL AT-E3 Z3 FCV	Wireway BUS-0400	In	1	5	10	Copper	Magnetic	PVC	Pos: 2.5608 Zero: 8.0703	0.1853 0.4564
CBL AT-E4 Z1 FCV	Wireway. BUS-0401	In	1	5	10	Copper	Magnetic	PVC	Pos: 2.5608 Zero: 8.0703	0.1853 0.4564
CBL AT-E4 Z2 FCV	Wireway. BUS-0402	In	1	5	10	Copper	Magnetic	PVC	Pos: 2.5608 Zero: 8.0703	0.1853 0.4564
CBL AT-E4 Z3 FCV	Wireway. BUS-0403	In	1	5	10	Copper	Magnetic	PVC	Pos: 2.5608 Zero: 8.0703	0.1853 0.4564
CBL AT-E4 Z3 FCV	Junction box. PAB-E2 DV & B	In	1	15	10	Copper	Magnetic	PVC	Pos: 7.6823 Zero: 24.2109	0.5560 1.3691
CBL AT-E4 Z3 FCV	Junction box. BUS-0406	In	1	15	10	Copper	Magnetic	PVC	Pos: 7.6823 Zero: 24.2109	0.5560 1.3691
CBL ATS-51E	MCC-51B ATS-51 EMG	In	2	40	500	Copper	Non-Magnetic	PVC	Pos: 0.2396 Zero: 0.3802	0.3238 0.8672
CBL ATS-51N	MCC-51A ATS-51 NRM	In	2	50	500	Copper	Non-Magnetic	PVC	Pos: 0.2995 Zero: 0.4753	0.4047 1.0840
CBL ATS-52E	MCC-52B ATS-52 EMG	In	2	45	500	Copper	Magnetic	PVC	Pos: 0.2871 Zero: 0.9043	0.4551 1.1201

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	Size	----- Cable Description -----			Per Unit (100 MVA Base)		
						Cond. Type	Duct Type	Insul	R pu	jX pu	
CBL ATS-52N	MCC-52A ATS-52 NRM	In	2	50	500	Copper	Magnetic	PVC	Pos: 0.3190 Zero: 1.0048	0.5056 1.2446	
CBL ATS-54E	MCC-54B ATS-54 EMG	In	1	40	500	Copper	Magnetic	PVC	Pos: 0.5104 Zero: 1.6076	0.8090 1.9913	
CBL ATS-54N	MCC-54 A ATS-54 NRM	In	1	55	500	Copper	Magnetic	PVC	Pos: 0.7018 Zero: 2.2105	1.1124 2.7381	
CBL ATS-55E	MCC-55B ATS-55 EMG	In	1	40	500	Copper	Magnetic	PVC	Pos: 0.5104 Zero: 1.6076	0.8090 1.9913	
CBL ATS-55N	MCC-55 A ATS-55 NRM	In	1	60	500	Copper	Magnetic	PVC	Pos: 0.7656 Zero: 2.4115	1.2135 2.9870	
CBL AT-W2 FCV	PP-WBB-B AT-W2 FCV JB	In	1	90	10	Copper	Magnetic	PVC	Pos: 46.0938 Zero: 45.2656	3.3359 8.2148	
CBL- B-54-3	W1 FLOW VALVE B-54-3 DISC	In	1	1	10	Copper	Magnetic	PVC	Pos: 0.5122 Zero: 1.6141	0.0371 0.0913	
CBL CN-50-3 FCV	PP-LSE BUS-0337	In	1	198	10	Copper	Magnetic	PVC	Pos:101.4063 Zero: 19.5844	7.3391 18.0727	
CBL DP-51	ATS-51 LOAD DP-51	In	2	35	500	Copper	Non-Magnetic	PVC	Pos: 0.2096 Zero: 0.3327	0.2833 0.7588	
CBL DP-52	ATS-52 LOAD DP-52	In	2	40	500	Copper	Magnetic	PVC	Pos: 0.2552 Zero: 0.8038	0.4045 0.9957	
CBL DP-54	ATS-54 LOAD DP-54	In	1	40	500	Copper	Magnetic	PVC	Pos: 0.5104 Zero: 1.6076	0.8090 1.9913	
CBL DP-55	ATS-55 LOAD DP-55	In	1	30	500	Copper	Magnetic	PVC	Pos: 0.3828 Zero: 1.2057	0.6068 1.4935	
CBL DP-56	MCC-56B DP-56	In	1	40	500	Copper	Magnetic	PVC	Pos: 0.5104 Zero: 1.6076	0.8090 1.9913	
CBL DRILL PRESS	PP-MTB DRILL PRESS	In	1	14	10	Copper	Magnetic	PVC	Pos: 7.1701 Zero: 22.5969	0.5189 1.2779	
CBL EAST JC GATE	PP-LSE PP-LSE CKT #26	In	1	230	10	Copper	Magnetic	PVC	Pos:117.7951 Zero: 71.2344	8.5252 20.9935	
CBL EBB-EDH-1'	PP-EBB-B BUS-0412	In	1	25	8	Copper	Magnetic	PVC	Pos: 8.7999 Zero: 27.7333	0.8181 2.0139	
CBL HORZ BAND S	PP-MTB HORZ BAND SA	In	1	70	10	Copper	Magnetic	PVC	Pos: 35.8507 Zero: 12.9844	2.5946 6.3893	
CBL IRON WORK	PP-MTB IRON WORK	In	1	10	10	Copper	Magnetic	PVC	Pos: 5.1215 Zero: 16.1406	0.3707 0.9128	
CBL LSE-ACCU-1	PP-LSE BUS-0332	In	1	12	10	Copper	Magnetic	PVC	Pos: 6.1458 Zero: 19.3688	0.4448 1.0953	
CBL LSE-ACU-1	PP-LSE BUS-0333	In	1	38	10	Copper	Magnetic	PVC	Pos: 19.4618 Zero: 61.3344	1.4085 3.4685	
CBL LSE-PPU-1	PP-LSE BUS-0331	In	1	64	10	Copper	Magnetic	PVC	Pos: 32.7778 Zero: 03.3000	2.3722 5.8417	

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	----- Cable Description -----				Per Unit (100 MVA Base)		
					Size	Cond. Type	Duct Type	Insul	R pu	jX pu	
CBL MCC-56A	SUB 5 BUS A MCC-56 A	In	2	560	500	Copper	Magnetic	PVC	Pos: 3.5729 Zero: 11.2535	5.6632 13.9392	
CBL MCC-56B	SUB 5 BUS B MCC-56B	In	2	570	500	Copper	Magnetic	PVC	Pos: 3.6367 Zero: 11.4544	5.7643 14.1882	
CBL METAL LATH	PP-MTB METAL LATHE	In	1	8	10	Copper	Magnetic	PVC	Pos: 4.0972 Zero: 12.9125	0.2965 0.7302	
CBL MILL MACH	PP-MTB MILL MACH	In	1	22	10	Copper	Magnetic	PVC	Pos: 11.2674 Zero: 35.5094	0.8155 2.0081	
CBL- P-55-1.	WAS VALVE W1 E WAS VALVE W1	In	1	28	10	Copper	Magnetic	PVC	Pos: 14.3403 Zero: 45.1938	1.0378 2.5557	
CBL PAB-E1 DV & EPP-EBB-B	BUS-0413	In	1	70	10	Copper	Magnetic	PVC	Pos: 35.8507 Zero: 12.9844	2.5946 6.3893	
CBL PAB-E1 LCP	PP-EBB-A PAB-E1 LCP	In	1	75	8	Copper	Magnetic	PVC	Pos: 26.3997 Zero: 83.1999	2.4544 6.0417	
CBL PAB-E2 DV & EPP-EBB-B	Junction box.	In	1	90	10	Copper	Magnetic	PVC	Pos: 46.0938 Zero: 45.2656	3.3359 8.2148	
CBL PAB-E2 LCP	PP-EBB-A PAB-E2 LCP	In	1	95	8	Copper	Magnetic	PVC	Pos: 33.4397 Zero: 05.3865	3.1089 7.6528	
CBL PAB-E3 DV & EPP-EBB-A	PAB-E3 DV & B	In	1	135	10	Copper	Magnetic	PVC	Pos: 69.1406 Zero: 17.8984	5.0039 12.3223	
CBL PAB-E3 LCP	PP-EBB-A PAB-E3 LCP	In	1	130	8	Copper	Magnetic	PVC	Pos: 45.7595 Zero: 44.2131	4.2543 10.4722	
CBL PAB-W1 VALVPP-WBB-A	PAB-W1 VALVE	In	1	32	10	Copper	Magnetic	PVC	Pos: 16.3889 Zero: 51.6500	1.1861 2.9208	
CBL PAB-W2 VALVPP-WBB-B	PAB-W2 VALVE	In	1	42	10	Copper	Magnetic	PVC	Pos: 21.5104 Zero: 67.7906	1.5568 3.8336	
CBL PAB-W3 VALVPP-WBB-A	PAB-W3 VALVE	In	1	53	10	Copper	Magnetic	PVC	Pos: 27.1441 Zero: 85.5453	1.9645 4.8376	
CBL PEWP3	PEWP3 DISC BUS-0134	In	1	50	4/0	Copper	Magnetic	PVC	Pos: 1.3889 Zero: 4.3772	1.0786 2.6563	
CBL PEWP3 ATS N	MCC-N PEWP3 ATS NR	In	1	10	4/0	Copper	Magnetic	PVC	Pos: 0.2778 Zero: 0.8754	0.2157 0.5313	
CBL PEWP3 DISC	PEWP3 ATS NRM PEWP3 DISC	In	1	50	4/0	Copper	Magnetic	PVC	Pos: 1.3889 Zero: 4.3772	1.0786 2.6563	
CBL RECIRCV PAB-PP-EBB-B	RECIRCV PAB-	In	1	80	10	Copper	Magnetic	PVC	Pos: 40.9722 Zero: 29.1250	2.9653 7.3021	
CBL RECIRCV PAB-PP-EBB-B	RECIRCV PAB-	In	1	100	10	Copper	Magnetic	PVC	Pos: 51.2153 Zero: 61.4063	3.7066 9.1276	
CBL RECIRCV PAB-PP-EBB-B	RECIRCV PAB-	In	1	135	10	Copper	Magnetic	PVC	Pos: 69.1406 Zero: 17.8984	5.0039 12.3223	
CBL SLDG'S F-50-	PP-LSE	In	1	230	10	Copper	Magnetic	PVC	Pos: 117.7951	8.5252	

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	----- Cable Description -----				Per Unit (100 MVA Base)		
					Size	Cond. Type	Duct Type	Insul	R pu	jX pu	
	PP-LSE CKT #19								Zero: 71.2344	20.9935	
CBL SLDG'S F-60-	PP-LSE	In	1	230	10	Copper	Magnetic	PVC	Pos: 117.7951	8.5252	
	PP-LSE CKT #2								Zero: 71.2344	20.9935	
CBL SLDG'S S-50-	PP-LSE	In	1	230	10	Copper	Magnetic	PVC	Pos: 117.7951	8.5252	
	PP-LSE CKT #14								Zero: 71.2344	20.9935	
CBL SLDG's S-60-1	PP-LSE	In	1	230	10	Copper	Magnetic	PVC	Pos: 117.7951	8.5252	
	PP-LSE CKT #8								Zero: 71.2344	20.9935	
CBL W1 FLOW VAL	PP-WBB-A	In	1	65	10	Copper	Magnetic	PVC	Pos: 33.2899	2.4093	
	W1 FLOW VALV								Zero: 04.9141	5.9329	
CBL WA MAIN BO	PP-WBB-B	In	1	16	10	Copper	Magnetic	PVC	Pos: 8.1944	0.5931	
	BUS-0330								Zero: 25.8250	1.4604	
CBL WAS VALVE W	PP-WBB-A	In	1	43	10	Copper	Magnetic	PVC	Pos: 22.0226	1.5938	
	WAS VALVE W1								Zero: 69.4047	3.9249	
CBL WAS VALVE W	PP-WBB-B	In	1	40	10	Copper	Magnetic	PVC	Pos: 20.4861	1.4826	
	BUS-0320								Zero: 64.5625	3.6510	
CBL WASV E1	PP-EBB-A	In	1	160	10	Copper	Magnetic	PVC	Pos: 81.9444	5.9306	
	BUS-0179								Zero: 58.2500	14.6042	
CBL WASV E2	PP-EBB-A	In	1	160	10	Copper	Magnetic	PVC	Pos: 81.9444	5.9306	
	BUS-0180								Zero: 58.2500	14.6042	
CBL WASV E3	PP-EBB-B	In	1	160	10	Copper	Magnetic	PVC	Pos: 81.9444	5.9306	
	BUS-0409								Zero: 58.2500	14.6042	
CBL WASV E4	PP-EBB-B	In	1	160	10	Copper	Magnetic	PVC	Pos: 81.9444	5.9306	
	BUS-0410								Zero: 58.2500	14.6042	
CBL WELD RCPT E	MCC-EBB-B	In	1	10	10	Copper	Magnetic	PVC	Pos: 5.1215	0.3707	
	EQPT RCPT EBB								Zero: 16.1406	0.9128	
CBL WEST AESG W	PP-WBB-A	In	1	80	10	Copper	Magnetic	PVC	Pos: 40.9722	2.9653	
	WEST AESGW1 I								Zero: 29.1250	7.3021	
CBL WEST AESG W	PP-WBB-B	In	1	100	10	Copper	Magnetic	PVC	Pos: 51.2153	3.7066	
	BUS-0325								Zero: 61.4063	9.1276	
CBL WFB-EUH-1	IPC LP-WFB	In	1	5	10	Copper	Magnetic	PVC	Pos: 13.6372	0.9870	
	WFB-EUH-TER								Zero: 42.9780	2.4304	
CBL-0061	BUS-0075	In	1	10	1	Copper	Magnetic	PVC	Pos: 3.6982	1.3175	
	LP-C								Zero: 11.6540	3.2429	
CBL-0073	BUS-0097	In	1	78	12	Copper	Magnetic	PVC	Pos: 63.3073	3.0807	
	BUS-0098								Zero: 99.5162	7.5867	
CBL-0074	BUS-0099	In	1	42	12	Copper	Magnetic	PVC	Pos: 34.0885	1.6589	
	BUS-0100								Zero: 07.4318	4.0852	
CBL-0075	BUS-0101	In	1	25	12	Copper	Magnetic	PVC	Pos: 20.2908	0.9874	
	BUS-0102								Zero: 63.9475	2.4316	
CBL-0076	BUS-0103	In	1	125	12	Copper	Magnetic	PVC	Pos: 101.4540	4.9371	
	BUS-0104								Zero: 19.7374	12.1582	

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	----- Cable Description -----			Per Unit (100 MVA Base)		
					Size	Cond. Type	Duct Type	Insul	R pu	jX pu
CBL-0077	BUS-0105 BUS-0106	In	1	120	12	Copper	Magnetic	PVC	Pos: 97.3958 Zero: 06.9479	4.7396 11.6719
CBL-0078	BUS-0107 BUS-0108	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266
CBL-0079	BUS-0109 BUS-0110	In	1	72	12	Copper	Magnetic	PVC	Pos: 58.4375 Zero: 84.1688	2.8438 7.0031
CBL-0080	BUS-0111 BUS-0112	In	1	52	12	Copper	Magnetic	PVC	Pos: 42.2049 Zero: 33.0108	2.0538 5.0578
CBL-0081	BUS-0113 BUS-0114	In	1	25	12	Copper	Magnetic	PVC	Pos: 20.2908 Zero: 63.9475	0.9874 2.4316
CBL-0082	BUS-0115 BUS-0116	In	1	52	12	Copper	Magnetic	PVC	Pos: 42.2049 Zero: 33.0108	2.0538 5.0578
CBL-0083	BUS-0117 BUS-0118	In	1	72	12	Copper	Magnetic	PVC	Pos: 58.4375 Zero: 84.1688	2.8438 7.0031
CBL-0084	BUS-0119 BUS-0120	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266
CBL-0085	BUS-0121 BUS-0122	In	1	42	12	Copper	Magnetic	PVC	Pos: 34.0885 Zero: 07.4318	1.6589 4.0852
CBL-0086	BUS-0123 BUS-0124	In	1	78	12	Copper	Magnetic	PVC	Pos: 63.3073 Zero: 99.5162	3.0807 7.5867
CBL-0087	BUS-0125 BUS-0126	In	1	125	12	Copper	Magnetic	PVC	Pos:101.4540 Zero: 19.7374	4.9371 12.1582
CBL-0088	BUS-0127 BUS-0128	In	1	120	12	Copper	Magnetic	PVC	Pos: 97.3958 Zero: 06.9479	4.7396 11.6719
CBL-0090	SEP2 VFD OUT BUS-0129	In	1	100	350	Copper	Magnetic	PVC	Pos: 1.6406 Zero: 5.1693	2.1311 5.2474
CBL-0091	SEP6 VFD OUT BUS-0130	In	1	100	350	Copper	Magnetic	PVC	Pos: 1.6406 Zero: 5.1693	2.1311 5.2474
CBL-0100	BUS-0141 BUS-0142	In	1	42	12	Copper	Magnetic	PVC	Pos: 34.0885 Zero: 07.4318	1.6589 4.0852
CBL-0101	BUS-0143 BUS-0144	In	1	78	12	Copper	Magnetic	PVC	Pos: 63.3073 Zero: 99.5162	3.0807 7.5867
CBL-0102	BUS-0145 BUS-0146	In	1	125	12	Copper	Magnetic	PVC	Pos:101.4540 Zero: 19.7374	4.9371 12.1582
CBL-0103	BUS-0147 BUS-0148	In	1	25	12	Copper	Magnetic	PVC	Pos: 20.2908 Zero: 63.9475	0.9874 2.4316
CBL-0104	BUS-0149 BUS-0150	In	1	52	12	Copper	Magnetic	PVC	Pos: 42.2049 Zero: 33.0108	2.0538 5.0578
CBL-0105	BUS-0151 BUS-0152	In	1	72	12	Copper	Magnetic	PVC	Pos: 58.4375 Zero: 84.1688	2.8438 7.0031
CBL-0106	BUS-0153 BUS-0154	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	----- Cable Description -----				Per Unit (100 MVA Base)		
					Size	Cond. Type	Duct Type	Insul	R pu	jX pu	
CBL-0107	BUS-0155 BUS-0156	In	1	120	12	Copper	Magnetic	PVC	Pos: 97.3958 Zero: 06.9479	4.7396 11.6719	
CBL-0108	BUS-0157 BUS-0158	In	1	125	12	Copper	Magnetic	PVC	Pos:101.4540 Zero: 19.7374	4.9371 12.1582	
CBL-0109	BUS-0159 BUS-0160	In	1	120	12	Copper	Magnetic	PVC	Pos: 97.3958 Zero: 06.9479	4.7396 11.6719	
CBL-0110	BUS-0161 BUS-0162	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266	
CBL-0111	BUS-0163 BUS-0164	In	1	72	12	Copper	Magnetic	PVC	Pos: 58.4375 Zero: 84.1688	2.8438 7.0031	
CBL-0112	BUS-0165 BUS-0166	In	1	78	12	Copper	Magnetic	PVC	Pos: 63.3073 Zero: 99.5162	3.0807 7.5867	
CBL-0113	BUS-0167 BUS-0168	In	1	42	12	Copper	Magnetic	PVC	Pos: 34.0885 Zero: 07.4318	1.6589 4.0852	
CBL-0114	BUS-0169 BUS-0170	In	1	25	12	Copper	Magnetic	PVC	Pos: 20.2908 Zero: 63.9475	0.9874 2.4316	
CBL-0115	BUS-0171 BUS-0172	In	1	52	12	Copper	Magnetic	PVC	Pos: 42.2049 Zero: 33.0108	2.0538 5.0578	
CBL-0117	SEP3 DISC BUS-0174	In	1	100	350	Copper	Magnetic	PVC	Pos: 1.6406 Zero: 5.1693	2.1311 5.2474	
CBL-0118	PP-EBB-A BUS-0178	In	1	220	4/0	Copper	Magnetic	PVC	Pos: 6.1111 Zero: 19.2595	4.7457 11.6875	
CBL-0119	BUS-0179 WASV E1	In	1	20	10	Copper	Magnetic	PVC	Pos: 10.2431 Zero: 32.2813	0.7413 1.8255	
CBL-0120	BUS-0180 WASV E2	In	1	20	10	Copper	Magnetic	PVC	Pos: 10.2431 Zero: 32.2813	0.7413 1.8255	
CBL-0121	BUS-0415 BUS-0181	In	1	6	4/0	Copper	Magnetic	PVC	Pos: 0.1667 Zero: 0.5253	0.1294 0.3188	
CBL-0122	BUS-0182 BUS-0393	In	1	5	10	Copper	Magnetic	PVC	Pos: 2.5608 Zero: 8.0703	0.1853 0.4564	
CBL-0123	BUS-0393 BF-64-07	In	1	114	10	Copper	Magnetic	PVC	Pos: 58.3854 Zero: 84.0031	4.2255 10.4055	
CBL-0124	BUS-0182 BUS-0394	In	1	5	10	Copper	Magnetic	PVC	Pos: 2.5608 Zero: 8.0703	0.1853 0.4564	
CBL-0125	BUS-0394 BF - 64- 29	In	1	73	10	Copper	Magnetic	PVC	Pos: 37.3871 Zero: 17.8266	2.7058 6.6632	
CBL-0126	BUS-0182 BUS-0395	In	1	5	10	Copper	Magnetic	PVC	Pos: 2.5608 Zero: 8.0703	0.1853 0.4564	
CBL-0127	BUS-0395 AT-E1 FCV BF-6	In	1	46	10	Copper	Magnetic	PVC	Pos: 23.5590 Zero: 74.2469	1.7050 4.1987	
CBL-0128	BUS-0188 BUS-0396	In	1	5	10	Copper	Magnetic	PVC	Pos: 2.5608 Zero: 8.0703	0.1853 0.4564	

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	Size	----- Cable Description -----			Per Unit (100 MVA Base)		
						Cond. Type	Duct Type	Insul	R pu	jX pu	
CBL-0129	BUS-0396 BF-64-08	In	1	114	10	Copper	Magnetic	PVC	Pos: 58.3854 Zero: 84.0031	4.2255 10.4055	
CBL-0130	BUS-0188 BUS-0397	In	1	5	10	Copper	Magnetic	PVC	Pos: 2.5608 Zero: 8.0703	0.1853 0.4564	
CBL-0131	BUS-0397 BF- 64- 30	In	1	73	10	Copper	Magnetic	PVC	Pos: 37.3871 Zero: 17.8266	2.7058 6.6632	
CBL-0132	BUS-0188 BUS-0398	In	1	5	10	Copper	Magnetic	PVC	Pos: 2.5608 Zero: 8.0703	0.1853 0.4564	
CBL-0133	BUS-0398 AT-E2 FCV BF-6	In	1	46	10	Copper	Magnetic	PVC	Pos: 23.5590 Zero: 74.2469	1.7050 4.1987	
CBL-0136	PP-EBB-B Wireway	In	1	135	10	Copper	Magnetic	PVC	Pos: 69.1406 Zero: 17.8984	5.0039 12.3223	
CBL-0137	MCC-51A STWP 1 DISC	In	1	90	6	Copper	Magnetic	PVC	Pos: 19.9219 Zero: 62.7813	2.6758 6.5898	
CBL-0138	MCC-52A BTAB-3 DISC	In	1	260	8	Copper	Magnetic	PVC	Pos: 91.5191 Zero: 88.4262	8.5087 20.9444	
CBL-0139	MCC-53 A CR-1 HSP 5 DIS	In	1	100	8	Copper	Magnetic	PVC	Pos: 35.1997 Zero: 10.9332	3.2726 8.0556	
CBL-0140	MCC-53 A CF2 AHU-3 DISC	In	1	270	6	Copper	Magnetic	PVC	Pos: 59.7656 Zero: 88.3438	8.0273 19.7695	
CBL-0141	MCC-53 A CF2 AHU-1 DISC	In	1	290	8	Copper	Magnetic	PVC	Pos:102.0790 Zero: 21.7062	9.4905 23.3611	
CBL-0142	MCC-54 A SLC 4 DISC	In	1	150	6	Copper	Magnetic	PVC	Pos: 33.2031 Zero: 04.6354	4.4596 10.9831	
CBL-0143	MCC-54 A SLC 6 DISC	In	1	140	8	Copper	Magnetic	PVC	Pos: 49.2795 Zero: 55.3064	4.5816 11.2778	
CBL-0144	MCC-56 A BT1-1M DISC	In	1	40	1	Copper	Magnetic	PVC	Pos: 2.7778 Zero: 8.7535	0.9896 2.4358	
CBL-0145	MCC-51B STWP 2 DISC	In	1	100	6	Copper	Magnetic	PVC	Pos: 22.1354 Zero: 69.7569	2.9731 7.3220	
CBL-0146	MCC-52B BTAB-2 DISC	In	1	240	8	Copper	Magnetic	PVC	Pos: 84.4792 Zero: 66.2396	7.8542 19.3333	
CBL-0147	MCC-53B CR-1 HSP 6 DIS	In	1	105	8	Copper	Magnetic	PVC	Pos: 36.9596 Zero: 16.4798	3.4362 8.4583	
CBL-0148	MCC-54B SLC 5 DISC	In	1	160	6	Copper	Magnetic	PVC	Pos: 35.4167 Zero: 11.6111	4.7569 11.7153	
CBL-0149	MCC-54B SLC 7 DISC	In	1	150	8	Copper	Magnetic	PVC	Pos: 52.7995 Zero: 66.3997	4.9089 12.0833	
CBL-0150	MCC-56B BT2-1M DISC	In	1	40	1	Copper	Magnetic	PVC	Pos: 2.7778 Zero: 8.7535	0.9896 2.4358	
CBL-0151	MCC-52A BTAB-1 DISC	In	1	240	8	Copper	Magnetic	PVC	Pos: 84.4792 Zero: 66.2396	7.8542 19.3333	

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	----- Cable Description -----				Per Unit (100 MVA Base)		
					Size	Cond. Type	Duct Type	Insul	R pu	jX pu	
CBL-0152	PP-EBB-B Wireway.	In	1	135	10	Copper	Magnetic	PVC	Pos: 69.1406 Zero: 17.8984	5.0039 12.3223	
CBL-0167	SUB 5 BUS B VFD CFG-2 INPU	In	2	140	500	Copper	Magnetic	PVC	Pos: 0.8932 Zero: 2.8134	1.4158 3.4848	
CBL-0168	CFG-2 PNL CFG-2 BACK DR	In	1	110	4	Copper	Magnetic	PVC	Pos: 15.3255 Zero: 48.2969	3.0174 7.4288	
CBL-0169	CFG-2 PNL CFG-2 BOWL D	In	1	140	500	Copper	Magnetic	PVC	Pos: 1.7865 Zero: 5.6267	2.8316 6.9696	
CBL-0170	SUB 5 BUS B VFD CFG-3 INPU	In	2	100	500	Copper	Magnetic	PVC	Pos: 0.6380 Zero: 2.0095	1.0113 2.4891	
CBL-0171	CFG-3 PNL CFG-3 BACK DR	In	1	140	4	Copper	Magnetic	PVC	Pos: 19.5052 Zero: 61.4688	3.8403 9.4549	
CBL-0172	CFG-3 PNL CFG-3 BOWL D	In	1	140	500	Copper	Magnetic	PVC	Pos: 1.7865 Zero: 5.6267	2.8316 6.9696	
CBL-0173	SUB 5 BUS B MCC-51B	In	2	120	500	Copper	Magnetic	PVC	Pos: 0.7656 Zero: 2.4115	1.2135 2.9870	
CBL-0174	SUB 5 BUS B MCC-52B	In	2	115	500	Copper	Magnetic	PVC	Pos: 0.7337 Zero: 2.3110	1.1630 2.8625	
CBL-0175	SUB 5 BUS B MCC-53B	In	2	120	500	Copper	Magnetic	PVC	Pos: 0.7656 Zero: 2.4115	1.2135 2.9870	
CBL-0176	SUB 5 BUS B MCC-54B	In	2	130	500	Copper	Magnetic	PVC	Pos: 0.8294 Zero: 2.6124	1.3147 3.2359	
CBL-0178	SUB 5 BUS A VFD CFG-1 INPU	In	2	140	500	Copper	Magnetic	PVC	Pos: 0.8932 Zero: 2.8134	1.4158 3.4848	
CBL-0179	CFG-1 PNL CFG-1 BACK DR	In	1	140	4	Copper	Magnetic	PVC	Pos: 19.5052 Zero: 61.4688	3.8403 9.4549	
CBL-0180	CFG-1 PNL CFG-1 BOWL D	In	1	140	500	Copper	Magnetic	PVC	Pos: 1.7865 Zero: 5.6267	2.8316 6.9696	
CBL-0181	SUB 5 BUS A MCC-51A	In	2	120	500	Copper	Magnetic	PVC	Pos: 0.7656 Zero: 2.4115	1.2135 2.9870	
CBL-0182	SUB 5 BUS A MCC-52A	In	2	120	500	Copper	Magnetic	PVC	Pos: 0.7656 Zero: 2.4115	1.2135 2.9870	
CBL-0183	SUB 5 BUS A MCC-53 A	In	2	120	500	Copper	Magnetic	PVC	Pos: 0.7656 Zero: 2.4115	1.2135 2.9870	
CBL-0184	SUB 5 BUS A MCC-54 A	In	2	130	500	Copper	Magnetic	PVC	Pos: 0.8294 Zero: 2.6124	1.3147 3.2359	
CBL-0186	SUB 5 BUS A MCC-55 A	In	2	120	500	Copper	Magnetic	PVC	Pos: 0.7656 Zero: 2.4115	1.2135 2.9870	
CBL-0187	SUB 5 BUS B MCC-55B	In	2	120	500	Copper	Magnetic	PVC	Pos: 0.7656 Zero: 2.4115	1.2135 2.9870	
CBL-0193	Junction Box	In	1	4	10	Copper	Magnetic	PVC	Pos: 2.0486	0.1483	

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	----- Cable Description -----				Per Unit (100 MVA Base)		
					Size	Cond. Type	Duct Type	Insul	R pu	jX pu	
	F-54-4 DISC								Zero:	6.4563	0.3651
CBL-0208	WEST AESGW1 D WEST AESG W1	In	1	5	10	Copper	Magnetic	PVC	Pos: Zero:	2.5608 8.0703	0.1853 0.4564
CBL-0209	BUS-0310 BUS-0311	In	1	1	10	Copper	Magnetic	PVC	Pos: Zero:	0.5122 1.6141	0.0371 0.0913
CBL-0210	PAB-W1 VALVES . BUS-0310	In	1	1	10	Copper	Magnetic	PVC	Pos: Zero:	0.5122 1.6141	0.0371 0.0913
CBL-0211	BUS-0312 BUS-0313	In	1	1	10	Copper	Magnetic	PVC	Pos: Zero:	0.5122 1.6141	0.0371 0.0913
CBL-0212	PAB-W1 VALVES . BUS-0312	In	1	1	10	Copper	Magnetic	PVC	Pos: Zero:	0.5122 1.6141	0.0371 0.0913
CBL-0213	BUS-0314 BUS-0315	In	1	1	10	Copper	Magnetic	PVC	Pos: Zero:	0.5122 1.6141	0.0371 0.0913
CBL-0214	PAB-W3 VALVES . BUS-0314	In	1	1	10	Copper	Magnetic	PVC	Pos: Zero:	0.5122 1.6141	0.0371 0.0913
CBL-0215	BUS-0316 BUS-0317	In	1	1	10	Copper	Magnetic	PVC	Pos: Zero:	0.5122 1.6141	0.0371 0.0913
CBL-0216	PAB-W3 VALVES . BUS-0316	In	1	1	10	Copper	Magnetic	PVC	Pos: Zero:	0.5122 1.6141	0.0371 0.0913
CBL-0217	BUS-0318 BUS-0319	In	1	1	10	Copper	Magnetic	PVC	Pos: Zero:	0.5122 1.6141	0.0371 0.0913
CBL-0218	BUS-0320 WAS VALVE W2	In	1	44	10	Copper	Magnetic	PVC	Pos: Zero:	22.5347 71.0188	1.6309 4.0161
CBL-0219	AT-W2 FCV JB BUS-0318	In	1	1	10	Copper	Magnetic	PVC	Pos: Zero:	0.5122 1.6141	0.0371 0.0913
CBL-0220	BUS-0321 BUS-0322	In	1	1	10	Copper	Magnetic	PVC	Pos: Zero:	0.5122 1.6141	0.0371 0.0913
CBL-0221	AT-W2 FCV JB BUS-0321	In	1	1	10	Copper	Magnetic	PVC	Pos: Zero:	0.5122 1.6141	0.0371 0.0913
CBL-0222	BUS-0323 BUS-0324	In	1	1	10	Copper	Magnetic	PVC	Pos: Zero:	0.5122 1.6141	0.0371 0.0913
CBL-0223	AT-W2 FCV JB BUS-0323	In	1	1	10	Copper	Magnetic	PVC	Pos: Zero:	0.5122 1.6141	0.0371 0.0913
CBL-0224	BUS-0325 WEST AESG W2	In	1	44	10	Copper	Magnetic	PVC	Pos: Zero:	22.5347 71.0188	1.6309 4.0161
CBL-0225	BUS-0326 BUS-0327	In	1	1	10	Copper	Magnetic	PVC	Pos: Zero:	0.5122 1.6141	0.0371 0.0913
CBL-0226	PAB-W2 VALVES . BUS-0326	In	1	1	10	Copper	Magnetic	PVC	Pos: Zero:	0.5122 1.6141	0.0371 0.0913
CBL-0227	BUS-0328 BUS-0329	In	1	1	10	Copper	Magnetic	PVC	Pos: Zero:	0.5122 1.6141	0.0371 0.0913

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	----- Cable Description -----				Per Unit (100 MVA Base)		
					Size	Cond. Type	Duct Type	Insul	R pu	jX pu	
CBL-0228	PAB-W2 VALVES . BUS-0328	In	1	1	10	Copper	Magnetic	PVC	Pos: 0.5122 Zero: 1.6141	0.0371 0.0913	
CBL-0229	BUS-0330 WA MAIN BOV	In	1	44	10	Copper	Magnetic	PVC	Pos: 22.5347 Zero: 71.0188	1.6309 4.0161	
CBL-0230	BUS-0331 LSE-PPU-1	In	1	5	10	Copper	Magnetic	PVC	Pos: 2.5608 Zero: 8.0703	0.1853 0.4564	
CBL-0231	BUS-0332 LSE-ACCU-1	In	1	12	10	Copper	Magnetic	PVC	Pos: 6.1458 Zero: 19.3688	0.4448 1.0953	
CBL-0232	BUS-0333 LSE-ACU-1	In	1	10	10	Copper	Magnetic	PVC	Pos: 5.1215 Zero: 16.1406	0.3707 0.9128	
CBL-0236	BUS-0337 CN-50-3 FCV	In	1	25	10	Copper	Magnetic	PVC	Pos: 12.8038 Zero: 40.3516	0.9266 2.2819	
CBL-0245	PP-LSE CKT #19 BUS-0348	In	1	41	10	Copper	Magnetic	PVC	Pos: 20.9983 Zero: 66.1766	1.5197 3.7423	
CBL-0246	BUS-0348 SLDG F-50-3	In	1	32	10	Copper	Magnetic	PVC	Pos: 16.3889 Zero: 51.6500	1.1861 2.9208	
CBL-0247	PP-LSE CKT #19 BUS-0350	In	1	41	10	Copper	Magnetic	PVC	Pos: 20.9983 Zero: 66.1766	1.5197 3.7423	
CBL-0248	BUS-0350 SLDG F-50-4	In	1	32	10	Copper	Magnetic	PVC	Pos: 16.3889 Zero: 51.6500	1.1861 2.9208	
CBL-0249	MCC-E XFMR-LP-E PRI	In	1	15	4	Copper	Magnetic	PVC	Pos: 2.0898 Zero: 6.5859	0.4115 1.0130	
CBL-0251	SCP-7 SCP-7 TERM	In	1	50	3/0	Copper	Magnetic	PVC	Pos: 1.7470 Zero: 5.5056	1.1263 2.7734	
CBL-0252	SCP-8 SCP-8 TERM	In	1	50	3/0	Copper	Magnetic	PVC	Pos: 1.7470 Zero: 5.5056	1.1263 2.7734	
CBL-0253	MCC-E RBDP-2 DISC	In	1	50	2	Copper	Magnetic	PVC	Pos: 4.3837 Zero: 13.8151	1.2695 3.1250	
CBL-0254	SCP-7 LBP-7 STARTER	In	1	50	10	Copper	Magnetic	PVC	Pos: 25.6076 Zero: 80.7031	1.8533 4.5638	
CBL-0255	SCP-8 LBP-8 STARTER	In	1	50	10	Copper	Magnetic	PVC	Pos: 25.6076 Zero: 80.7031	1.8533 4.5638	
CBL-0256	MCC-E. SECURITY GAT	In	1	200	1	Copper	Magnetic	PVC	Pos: 13.8889 Zero: 43.7674	4.9479 12.1788	
CBL-0257	MCC-E RBDP-4 DISC	In	1	50	2	Copper	Magnetic	PVC	Pos: 4.3837 Zero: 13.8151	1.2695 3.1250	
CBL-0258	MCC-E E SUMP PUMP 1	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633	
CBL-0259	MCC-E SLC-1 DISC	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633	
CBL-0260	MCC-E CC-1 DISC	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633	

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	----- Cable Description -----				Per Unit (100 MVA Base)		
					Size	Cond. Type	Duct Type	Insul	R pu	jX pu	
CBL-0261	MCC-E SLC-3 DISC	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633	
CBL-0262	MCC-E CC-3 DISC	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633	
CBL-0263	MCC-E BSNINFLGT-1 D	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633	
CBL-0264	MCC-E BSNINFLGT-3 D	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633	
CBL-0265	MCC-E. BSN-OUT-GT-1 I	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633	
CBL-0266	MCC-E. BSN-OUT-GT-3 I	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633	
CBL-0267	MCC-F BUS-0283	In	1	15	4	Copper	Magnetic	PVC	Pos: 2.0898 Zero: 6.5859	0.4115 1.0130	
CBL-0268	BUS-0284 LP-F	In	1	10	1	Copper	Magnetic	PVC	Pos: 3.6982 Zero: 11.6540	1.3175 3.2429	
CBL-0269	SCP-6 SCP-6 TERM	In	1	50	3/0	Copper	Magnetic	PVC	Pos: 1.7470 Zero: 5.5056	1.1263 2.7734	
CBL-0270	SCP-6 LBP-6 STARTER	In	1	50	10	Copper	Magnetic	PVC	Pos: 25.6076 Zero: 80.7031	1.8533 4.5638	
CBL-0271	PP-LSE CKT #2 BUS-0349	In	1	3	10	Copper	Magnetic	PVC	Pos: 1.5365 Zero: 4.8422	0.1112 0.2738	
CBL-0272	BUS-0349 SLDG F-60-1	In	1	18	10	Copper	Magnetic	PVC	Pos: 9.2188 Zero: 29.0531	0.6672 1.6430	
CBL-0273	PP-LSE CKT #2 BUS-0351	In	1	3	10	Copper	Magnetic	PVC	Pos: 1.5365 Zero: 4.8422	0.1112 0.2738	
CBL-0274	BUS-0351 SLDG F-60-2	In	1	18	10	Copper	Magnetic	PVC	Pos: 9.2188 Zero: 29.0531	0.6672 1.6430	
CBL-0275	MCC-E. AIR COMP 1 DIS	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633	
CBL-0276	MCC-E. HP-PEW-P-1 DIS	In	1	50	3/0	Copper	Magnetic	PVC	Pos: 1.7470 Zero: 5.5056	1.1263 2.7734	
CBL-0277	MCC-E. MPPEWP1 DISC	In	1	50	1	Copper	Magnetic	PVC	Pos: 3.4722 Zero: 10.9418	1.2370 3.0447	
CBL-0278	MCC-E. SLP2 DISC	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633	
CBL-0279	MCC-E. SLP1 DISC	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633	
CBL-0280	MCC-F BSNHST DISC	In	1	50	10	Copper	Magnetic	PVC	Pos: 25.6076 Zero: 80.7031	1.8533 4.5638	
CBL-0281	MCC-E. RETBSNRFCV S	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633	

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	----- Cable Description -----			Per Unit (100 MVA Base)		
					Size	Cond. Type	Duct Type	Insul	R pu	jX pu
CBL-0282	MCC-E.. EQ INFL GATE 4	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633
CBL-0283	MCC-E.. EQ INFL GATE 9	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633
CBL-0284	MCC-E.. EQ INFL GATE 1	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633
CBL-0285	MCC-E.. EQ-RET-V-1 DIS	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633
CBL-0286	MCC-E.. EQ-RET-V-2 DIS	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633
CBL-0287	MCC-E.. EQPT RCPT E	In	1	1	10	Copper	Magnetic	PVC	Pos: 0.5122 Zero: 1.6141	0.0371 0.0913
CBL-0288	MCC-E.. EQ INFL GATE 1	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633
CBL-0289	MCC-E.. EQ INFL GATE 2	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633
CBL-0290	MCC-E.. EQ INFL GATE 3	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633
CBL-0291	MCC-E.. EQ INFL GATE 1	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633
CBL-0292	MCC-E.. EQ INFL GATE 1	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633
CBL-0293	MCC-F.. RBDPI DISC	In	1	50	4	Copper	Magnetic	PVC	Pos: 6.9661 Zero: 21.9531	1.3715 3.3767
CBL-0294	MCC-E MCC-EE	In	1	15	3/0	Copper	Magnetic	PVC	Pos: 0.5241 Zero: 1.6517	0.3379 0.8320
CBL-0295	MCC-E.. TABLET FDR D	In	1	55	10	Copper	Magnetic	PVC	Pos: 28.1684 Zero: 88.7734	2.0386 5.0202
CBL-0296	MCC-E.. EUH-E1 TERM	In	1	20	12	Copper	Magnetic	PVC	Pos: 16.2326 Zero: 51.1580	0.7899 1.9453
CBL-0297	MCC-E.. EUH-E2 TERM	In	1	35	12	Copper	Magnetic	PVC	Pos: 28.4071 Zero: 89.5265	1.3824 3.4043
CBL-0298	MCC-F SMP2 DISC	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633
CBL-0299	MCC-F SLC2 DISC	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633
CBL-0300	MCC-F CC2 DISC	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633
CBL-0301	MCC-F. RF # 5 DISC	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633
CBL-0302	PP-LSE CKT #2 BUS-0352	In	1	3	10	Copper	Magnetic	PVC	Pos: 1.5365 Zero: 4.8422	0.1112 0.2738

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	----- Cable Description -----				Per Unit (100 MVA Base)		
					Size	Cond. Type	Duct Type	Insul	R pu	jX pu	
CBL-0303	MCC-F. RF # 6 DISC	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633	
CBL-0304	MCC-F BSNINFLGT2 DI	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633	
CBL-0305	MCC-F BSNOUTGT2 DI	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633	
CBL-0306	BUS-0352 SLDG F-60-3	In	1	18	10	Copper	Magnetic	PVC	Pos: 9.2188 Zero: 29.0531	0.6672 1.6430	
CBL-0307	MCC-F., RBDP3 DISC	In	1	50	4	Copper	Magnetic	PVC	Pos: 6.9661 Zero: 21.9531	1.3715 3.3767	
CBL-0308	PP-LSE CKT #14 BUS-0353	In	1	30	10	Copper	Magnetic	PVC	Pos: 15.3646 Zero: 48.4219	1.1120 2.7383	
CBL-0309	MCC-F HPPEW2 DISC	In	1	50	3/0	Copper	Magnetic	PVC	Pos: 1.7470 Zero: 5.5056	1.1263 2.7734	
CBL-0310	MCC-F MPPEWP2 DISC	In	1	50	1	Copper	Magnetic	PVC	Pos: 3.4722 Zero: 10.9418	1.2370 3.0447	
CBL-0311	BUS-0353 SLDG S-50-1	In	1	30	10	Copper	Magnetic	PVC	Pos: 15.3646 Zero: 48.4219	1.1120 2.7383	
CBL-0312	MCC-F., SLP3 DISC	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633	
CBL-0313	MCC-F. EQRETFCV DIS	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633	
CBL-0314	MCC-F BYPGT2 DISC	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633	
CBL-0315	MCC-F. AC2F DISC	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633	
CBL-0316	MCC-F. PMPRM HOIST L	In	1	50	10	Copper	Magnetic	PVC	Pos: 25.6076 Zero: 80.7031	1.8533 4.5638	
CBL-0317	MCC-F., EQRETV3 DISC	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633	
CBL-0318	PP-LSE CKT #14 BUS-0354	In	1	3	10	Copper	Magnetic	PVC	Pos: 1.5365 Zero: 4.8422	0.1112 0.2738	
CBL-0319	MCC-F. EQPT RCPT F	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633	
CBL-0320	MCC-F MCC-FF	In	1	10	1	Copper	Magnetic	PVC	Pos: 0.6944 Zero: 2.1884	0.2474 0.6089	
CBL-0321	MCC-F. ADM-SUP LCP	In	1	100	10	Copper	Magnetic	PVC	Pos: 51.2153 Zero: 61.4063	3.7066 9.1276	
CBL-0322	MCC-F SLGT1 DISC	In	1	15	12	Copper	Magnetic	PVC	Pos: 12.1745 Zero: 38.3685	0.5924 1.4590	
CBL-0323	MCC-F	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816	1.9748	

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	----- Cable Description -----				Per Unit (100 MVA Base)		
					Size	Cond. Type	Duct Type	Insul	R pu	jX pu	
	SLGT2 DISC								Zero: 27.8950	4.8633	
CBL-0324	MCC-F BYPGT1 DISC	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633	
CBL-0325	MCC-F.. EQINGT5 DISC	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633	
CBL-0326	MCC-F.. EQINGT6 DISC	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633	
CBL-0327	BUS-0354 SLDG S-50-2	In	1	30	10	Copper	Magnetic	PVC	Pos: 15.3646 Zero: 48.4219	1.1120 2.7383	
CBL-0328	PP-LSE CKT #14 BUS-0355	In	1	3	10	Copper	Magnetic	PVC	Pos: 1.5365 Zero: 4.8422	0.1112 0.2738	
CBL-0329	MCC-F. ERU DISC	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633	
CBL-0330	MCC-F. EQPRM HOIST D	In	1	30	10	Copper	Magnetic	PVC	Pos: 15.3646 Zero: 48.4219	1.1120 2.7383	
CBL-0331	MCC-F.. EQINGT7 DISC	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633	
CBL-0332	MCC-F.. EQINGT8 DISC	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633	
CBL-0334	BUS-0355 SLDG S-50-3	In	1	30	10	Copper	Magnetic	PVC	Pos: 15.3646 Zero: 48.4219	1.1120 2.7383	
CBL-0335	PP-LSE CKT #14 BUS-0356	In	1	3	10	Copper	Magnetic	PVC	Pos: 1.5365 Zero: 4.8422	0.1112 0.2738	
CBL-0336	BUS-0356 SLDG S-50-4	In	1	30	10	Copper	Magnetic	PVC	Pos: 15.3646 Zero: 48.4219	1.1120 2.7383	
CBL-0337	PP-LSE CKT #14 BUS-0357	In	1	3	10	Copper	Magnetic	PVC	Pos: 1.5365 Zero: 4.8422	0.1112 0.2738	
CBL-0338	BUS-0357 SLDG S-50-5	In	1	30	10	Copper	Magnetic	PVC	Pos: 15.3646 Zero: 48.4219	1.1120 2.7383	
CBL-0339	PP-LSE CKT #14 BUS-0358	In	1	3	10	Copper	Magnetic	PVC	Pos: 1.5365 Zero: 4.8422	0.1112 0.2738	
CBL-0340	BUS-0358 SLDG F-50-1	In	1	30	10	Copper	Magnetic	PVC	Pos: 15.3646 Zero: 48.4219	1.1120 2.7383	
CBL-0341	PP-LSE CKT #14 BUS-0359	In	1	3	10	Copper	Magnetic	PVC	Pos: 1.5365 Zero: 4.8422	0.1112 0.2738	
CBL-0342	BUS-0359 SLDG F-50-2	In	1	30	10	Copper	Magnetic	PVC	Pos: 15.3646 Zero: 48.4219	1.1120 2.7383	
CBL-0343	PP-LSE CKT #8 BUS-0360	In	1	3	10	Copper	Magnetic	PVC	Pos: 1.5365 Zero: 4.8422	0.1112 0.2738	
CBL-0344	BUS-0360 SLDG S-60-1	In	1	37	10	Copper	Magnetic	PVC	Pos: 18.9497 Zero: 59.7203	1.3714 3.3772	

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	----- Cable Description -----				Per Unit (100 MVA Base)		
					Size	Cond. Type	Duct Type	Insul	R pu	jX pu	
CBL-0345	PP-LSE CKT #8 BUS-0361	In	1	3	10	Copper	Magnetic	PVC	Pos: 1.5365 Zero: 4.8422	0.1112 0.2738	
CBL-0346	BUS-0361 SLDG S-60-2	In	1	37	10	Copper	Magnetic	PVC	Pos: 18.9497 Zero: 59.7203	1.3714 3.3772	
CBL-0347	PP-LSE CKT #8 BUS-0362	In	1	41	10	Copper	Magnetic	PVC	Pos: 20.9983 Zero: 66.1766	1.5197 3.7423	
CBL-0348	BUS-0362 SLDG F-60-4	In	1	37	10	Copper	Magnetic	PVC	Pos: 18.9497 Zero: 59.7203	1.3714 3.3772	
CBL-0349	PP-LSE CKT #26 BUS-0363	In	1	3	10	Copper	Magnetic	PVC	Pos: 1.5365 Zero: 4.8422	0.1112 0.2738	
CBL-0350	BUS-0363 F-60-5	In	1	18	10	Copper	Magnetic	PVC	Pos: 9.2188 Zero: 29.0531	0.6672 1.6430	
CBL-0351	PP-LSE CKT #26 BUS-0364	In	1	3	10	Copper	Magnetic	PVC	Pos: 1.5365 Zero: 4.8422	0.1112 0.2738	
CBL-0352	BUS-0364 F-60-6	In	1	18	10	Copper	Magnetic	PVC	Pos: 9.2188 Zero: 29.0531	0.6672 1.6430	
CBL-0358	MCC-M XFMR LP-M PRI	In	1	45	4	Copper	Magnetic	PVC	Pos: 6.2695 Zero: 19.7578	1.2344 3.0391	
CBL-0359	XFMR LP-M SEC LP-M	In	1	10	750	Copper	Magnetic	PVC	Pos: 0.4993 Zero: 1.5717	1.0286 2.5310	
CBL-0360	BUS-0417 EF1 DISC	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266	
CBL-0361	MCC-M SEP1 VFD IN	In	1	50	350	Copper	Magnetic	PVC	Pos: 0.8203 Zero: 2.5846	1.0655 2.6237	
CBL-0362	BUS-0417 EF2 DISC	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266	
CBL-0363	MCC-M SEP5 VFD IN	In	1	50	350	Copper	Magnetic	PVC	Pos: 0.8203 Zero: 2.5846	1.0655 2.6237	
CBL-0364	MCC-M EPBBV DISC	In	1	110	12	Copper	Magnetic	PVC	Pos: 89.2795 Zero: 81.3689	4.3446 10.6992	
CBL-0365	EPBBV DISC EPBBV STARTE	In	1	6	12	Copper	Magnetic	PVC	Pos: 4.8698 Zero: 15.3474	0.2370 0.5836	
CBL-0366	MCC-M WWWRESDP1 D	In	1	100	8	Copper	Magnetic	PVC	Pos: 35.1997 Zero: 10.9332	3.2726 8.0556	
CBL-0367	MCC-M EPSEGE DISC	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266	
CBL-0368	MCC-M EPSEGW DISC	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266	
CBL-0369	MCC-M FLRDRNSP3 DI	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266	
CBL-0370	MCC-M MV9 DISC	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266	

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	----- Cable Description -----				Per Unit (100 MVA Base)		
					Size	Cond. Type	Duct Type	Insul	R pu	jX pu	
CBL-0371	MV9 DISC MV10 DISC	In	1	1	12	Copper	Magnetic	PVC	Pos: 0.8116 Zero: 2.5579	0.0395 0.0973	
CBL-0372	MV10 DISC MV11 DISC	In	1	1	12	Copper	Magnetic	PVC	Pos: 0.8116 Zero: 2.5579	0.0395 0.0973	
CBL-0373	MV11 DISC MV12 DISC	In	1	1	12	Copper	Magnetic	PVC	Pos: 0.8116 Zero: 2.5579	0.0395 0.0973	
CBL-0374	MCC-M. ESESP6 DISC	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266	
CBL-0375	MCC-M. EUH1 DISC	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266	
CBL-0376	MCC-M. EQPT RCPT M	In	1	100	10	Copper	Magnetic	PVC	Pos: 51.2153 Zero: 61.4063	3.7066 9.1276	
CBL-0377	MCC-M. SEG1 DISC	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266	
CBL-0378	MCC-M. WHM DISC	In	1	100	10	Copper	Magnetic	PVC	Pos: 51.2153 Zero: 61.4063	3.7066 9.1276	
CBL-0379	SEP1 VFD OUT BUS-0173	In	1	100	350	Copper	Magnetic	PVC	Pos: 1.6406 Zero: 5.1693	2.1311 5.2474	
CBL-0380	PEWP2 DISC PEWP2 MTR	In	1	10	4/0	Copper	Magnetic	PVC	Pos: 0.2778 Zero: 0.8754	0.2157 0.5313	
CBL-0381	MCC-M. BWWP1 DISC	In	1	50	3/0	Copper	Magnetic	PVC	Pos: 1.7470 Zero: 5.5056	1.1263 2.7734	
CBL-0382	MCC-M. RF13 TERM	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266	
CBL-0383	MCC-M ATS PEWP2 NR	In	1	10	4/0	Copper	Magnetic	PVC	Pos: 0.2778 Zero: 0.8754	0.2157 0.5313	
CBL-0384	PP-MTB BUS-0385	In	1	5	2	Copper	Magnetic	PVC	Pos: 0.4384 Zero: 1.3815	0.1270 0.3125	
CBL-0385	BUS-0386 BUS-0387	In	1	4	1	Copper	Magnetic	PVC	Pos: 1.1111 Zero: 3.5014	0.3958 0.9743	
CBL-0386	BUS-0392 AT-E3 Z1 FCV	In	1	114	10	Copper	Magnetic	PVC	Pos: 58.3854 Zero: 84.0031	4.2255 10.4055	
CBL-0387	MCC-P PEWP1 DISC	In	1	50	350	Copper	Magnetic	PVC	Pos: 0.8203 Zero: 2.5846	1.0655 2.6237	
CBL-0388	MCC-P SEP3 VFD IN	In	1	50	350	Copper	Magnetic	PVC	Pos: 0.8203 Zero: 2.5846	1.0655 2.6237	
CBL-0389	MCC-P WWRDP3 DISC	In	1	100	8	Copper	Magnetic	PVC	Pos: 35.1997 Zero: 10.9332	3.2726 8.0556	
CBL-0390	MCC-P FDSP1 DISC	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266	
CBL-0391	MCC-P UDSP1 DISC	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266	

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	----- Cable Description -----				Per Unit (100 MVA Base)		
					Size	Cond. Type	Duct Type	Insul	R pu	jX pu	
CBL-0392	MCC-P CONT TK INT G	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266	
CBL-0393	BUS-0399 AT-E3 Z2 FCV	In	1	73	10	Copper	Magnetic	PVC	Pos: 37.3871 Zero: 17.8266	2.7058 6.6632	
CBL-0394	MCC-P AIR COMP 1P DI	In	1	100	8	Copper	Magnetic	PVC	Pos: 35.1997 Zero: 10.9332	3.2726 8.0556	
CBL-0395	MCC-P SE ISO VALVE D	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266	
CBL-0396	MCC-P RIVER VALVE D	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266	
CBL-0397	MCC-P TER FIL EFF SP I	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266	
CBL-0398	MCC-P ROOF FAN 11 D	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633	
CBL-0399	MCC-P HOIST P DISC	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266	
CBL-0400	MCC-P PEW STRAINER	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266	
CBL-0401	BUS-0400 AT-E3 Z3 FCV	In	1	46	10	Copper	Magnetic	PVC	Pos: 23.5590 Zero: 74.2469	1.7050 4.1987	
CBL-0402	BUS-0401 AT-E4 Z1 FCV	In	1	114	10	Copper	Magnetic	PVC	Pos: 58.3854 Zero: 84.0031	4.2255 10.4055	
CBL-0403	MCC-N. XF2-0059 PRI	In	1	45	1	Copper	Magnetic	PVC	Pos: 3.1250 Zero: 9.8477	1.1133 2.7402	
CBL-0404	XF2-0059 SEC LP-N	In	1	1	2/0	Copper	Magnetic	PVC	Pos: 0.2358 Zero: 0.7429	0.1232 0.3033	
CBL-0405	BUS-0402 AT-E4 Z2 FCV	In	1	73	10	Copper	Magnetic	PVC	Pos: 37.3871 Zero: 17.8266	2.7058 6.6632	
CBL-0406	MCC-N SEP2 VFD IN	In	1	50	350	Copper	Magnetic	PVC	Pos: 0.8203 Zero: 2.5846	1.0655 2.6237	
CBL-0407	BUS-0403 AT-E4 Z3 FCV	In	1	46	10	Copper	Magnetic	PVC	Pos: 23.5590 Zero: 74.2469	1.7050 4.1987	
CBL-0408	MCC-N SEP6 VFD IN	In	1	50	350	Copper	Magnetic	PVC	Pos: 0.8203 Zero: 2.5846	1.0655 2.6237	
CBL-0409	ATS PEWP2 NRM PEWP2 DISC	In	1	50	4/0	Copper	Magnetic	PVC	Pos: 1.3889 Zero: 4.3772	1.0786 2.6563	
CBL-0410	SEP5 VFD OUT SEP5 TERM	In	1	100	350	Copper	Magnetic	PVC	Pos: 1.6406 Zero: 5.1693	2.1311 5.2474	
CBL-0411	MCC-N WWRDP2 DISC	In	1	100	8	Copper	Magnetic	PVC	Pos: 35.1997 Zero: 10.9332	3.2726 8.0556	
CBL-0412	WWRDP2 DISC BUS-0135	In	1	10	8	Copper	Magnetic	PVC	Pos: 3.5200 Zero: 11.0933	0.3273 0.8056	

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	----- Cable Description -----				Per Unit (100 MVA Base)		
					Size	Cond. Type	Duct Type	Insul	R pu	jX pu	
CBL-0413	MCC-N WPSE GATE E D	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266	
CBL-0414	BUS-0409 WASV E3	In	1	20	10	Copper	Magnetic	PVC	Pos: 10.2431 Zero: 32.2813	0.7413 1.8255	
CBL-0415	MCC-N MV2 DISC	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266	
CBL-0416	MV2 DISC MV4 DISC	In	1	1	12	Copper	Magnetic	PVC	Pos: 0.8116 Zero: 2.5579	0.0395 0.0973	
CBL-0417	MV4 DISC MV6 DISC	In	1	1	12	Copper	Magnetic	PVC	Pos: 0.8116 Zero: 2.5579	0.0395 0.0973	
CBL-0418	MV6 DISC MV8 DISC	In	1	1	12	Copper	Magnetic	PVC	Pos: 0.8116 Zero: 2.5579	0.0395 0.0973	
CBL-0419	MCC-N. WPSE SMPL PM	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266	
CBL-0420	MCC-N. CP-70 EMG	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266	
CBL-0421	MCC-N. N EQPT RCPT	In	1	100	10	Copper	Magnetic	PVC	Pos: 51.2153 Zero: 61.4063	3.7066 9.1276	
CBL-0422	MCC-N. WPSE GATE W C	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266	
CBL-0423	WPSE GATE W D BUS-0136	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	
CBL-0424	ROOF FAN 10 DI BUS-0137	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	
CBL-0425	ROOF FAN 12 DI BUS-0138	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	
CBL-0426	BUS-0410 WASV E4	In	1	20	10	Copper	Magnetic	PVC	Pos: 10.2431 Zero: 32.2813	0.7413 1.8255	
CBL-0427	MCC-N. ROOF FAN 10 D	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633	
CBL-0428	WPSE SMPL PMP 1 BUS-0434	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	
CBL-0429	SEP4 VFD OUT SEP4 TERM	In	1	100	350	Copper	Magnetic	PVC	Pos: 1.6406 Zero: 5.1693	2.1311 5.2474	
CBL-0432	MCC-N BWP2 DISC	In	1	50	4/0	Copper	Magnetic	PVC	Pos: 1.3889 Zero: 4.3772	1.0786 2.6563	
CBL-0433	MCC-N FDSP4 DISC	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266	
CBL-0434	MCC-N EF3 DISC	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266	
CBL-0435	EF3 DISC	In	1	1	12	Copper	Magnetic	PVC	Pos: 0.8116	0.0395	

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	----- Cable Description -----				Per Unit (100 MVA Base)		
					Size	Cond. Type	Duct Type	Insul	R pu	jX pu	
	EF4 DISC								Zero: 2.5579	0.0973	
CBL-0436	EF4 DISC SF1 DISC	In	1	1	12	Copper	Magnetic	PVC	Pos: 0.8116 Zero: 2.5579	0.0395 0.0973	
CBL-0437	MCC-N. XFMR TFB-MPC	In	1	45	750	Copper	Magnetic	PVC	Pos: 0.4219 Zero: 1.3281	0.8691 2.1387	
CBL-0438	BWP2 DISC BUS-0133	In	1	50	4/0	Copper	Magnetic	PVC	Pos: 1.3889 Zero: 4.3772	1.0786 2.6563	
CBL-0439	MCC-N. ROOF FAN 12 D	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633	
CBL-0440	MCC-N. WW BYP GATE I	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266	
CBL-0441	MCC-Q XFMR LP-Q PRI	In	1	45	4	Copper	Magnetic	PVC	Pos: 6.2695 Zero: 19.7578	1.2344 3.0391	
CBL-0442	XFMR LP-Q SEC LP-Q	In	1	10	750	Copper	Magnetic	PVC	Pos: 0.4993 Zero: 1.5717	1.0286 2.5310	
CBL-0443	MCC-Q SEP4 VFD IN	In	1	50	4/0	Copper	Magnetic	PVC	Pos: 1.3889 Zero: 4.3772	1.0786 2.6563	
CBL-0444	MCC-Q FDSP2 DISC	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266	
CBL-0445	MCC-Q UDSP2 DISC	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266	
CBL-0446	MCC-Q AC2 DISC	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266	
CBL-0447	MCC-Q CE WET WELL G	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266	
CBL-0448	MCC-Q MOD VALVE 1 E	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266	
CBL-0449	MOD VALVE 1 D MOD VALVE 3 E	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	
CBL-0450	MOD VALVE 3 D MOD VALVE 5 E	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	
CBL-0451	MOD VALVE 5 D MOD VALVE 7 E	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	
CBL-0452	MCC-Q E CONT TK G1 D	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266	
CBL-0453	MCC-Q W CONT GT2 DI	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266	
CBL-0454	MCC-Q MU HV2 DISC	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266	
CBL-0455	MCC-Q HOIST Q DISC	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266	

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	----- Cable Description -----			Per Unit (100 MVA Base)		
					Size	Cond. Type	Duct Type	Insul	R pu	jX pu
CBL-0456	MCC-Q DCH FNL EFF S	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266
CBL-0457	MCC-Q HT BOOST PMP I	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266
CBL-0458	MCC-Q AIR WASH MV L	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266
CBL-0459	MCC-Q CP-70 NRM	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633
CBL-0460	SECURITY GATE I SCTY GATE ST	In	1	10	10	Copper	Magnetic	PVC	Pos: 5.1215 Zero: 16.1406	0.3707 0.9128
CBL-0461	MCC-D. XFMR LP-D PRI	In	1	20	4	Copper	Magnetic	PVC	Pos: 2.7865 Zero: 8.7813	0.5486 1.3507
CBL-0462	MCC-D EP THRV CONTF	In	1	30	12	Copper	Magnetic	PVC	Pos: 24.3490 Zero: 76.7370	1.1849 2.9180
CBL-0463	MCC-D SCRNCNV DISC	In	1	30	12	Copper	Magnetic	PVC	Pos: 24.3490 Zero: 76.7370	1.1849 2.9180
CBL-0464	MCC-D SSC-2 DISC	In	1	30	12	Copper	Magnetic	PVC	Pos: 24.3490 Zero: 76.7370	1.1849 2.9180
CBL-0465	MCC-D SCREW CONV 3	In	1	30	12	Copper	Magnetic	PVC	Pos: 24.3490 Zero: 76.7370	1.1849 2.9180
CBL-0466	MCC-D D SP-2 DISC	In	1	30	12	Copper	Magnetic	PVC	Pos: 24.3490 Zero: 76.7370	1.1849 2.9180
CBL-0467	MCC-D SUB SP-2 DISC	In	1	30	12	Copper	Magnetic	PVC	Pos: 24.3490 Zero: 76.7370	1.1849 2.9180
CBL-0468	MCC-D F-6-4 DISC	In	1	30	12	Copper	Magnetic	PVC	Pos: 24.3490 Zero: 76.7370	1.1849 2.9180
CBL-0469	F-6-4 DISC F-6-4 STR	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727
CBL-0470	F-7-1 DISC F-7-1 STR	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727
CBL-0471	F-8-6 DISC F-8-6 STR	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727
CBL-0472	F-7-1 DISC F-8-6 DISC	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727
CBL-0473	F-6-4 DISC F-7-1 DISC	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727
CBL-0474	MCC-D DOOR OPERATC	In	1	30	12	Copper	Magnetic	PVC	Pos: 24.3490 Zero: 76.7370	1.1849 2.9180
CBL-0475	MCC-C XFMR LP-C PRI	In	1	20	4	Copper	Magnetic	PVC	Pos: 2.7865 Zero: 8.7813	0.5486 1.3507
CBL-0476	MCC-D SC-2 DISC	In	1	30	12	Copper	Magnetic	PVC	Pos: 24.3490 Zero: 76.7370	1.1849 2.9180

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	----- Cable Description -----				Per Unit (100 MVA Base)		
					Size	Cond. Type	Duct Type	Insul	R pu	jX pu	
CBL-0477	MCC-D SC-3 DISC	In	1	30	12	Copper	Magnetic	PVC	Pos: 24.3490 Zero: 76.7370	1.1849 2.9180	
CBL-0478	MCC-D JC-1 DISC	In	1	30	12	Copper	Magnetic	PVC	Pos: 24.3490 Zero: 76.7370	1.1849 2.9180	
CBL-0479	JC-1 DISC JC-2 DISC	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	
CBL-0480	JC-1 DISC JC-1 LCP TERM	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	
CBL-0481	JC-2 DISC JC-3 LCP TERM	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	
CBL-0482	MCC-D. SEPPMP DISC T	In	1	30	8	Copper	Magnetic	PVC	Pos: 10.5599 Zero: 33.2799	0.9818 2.4167	
CBL-0483	MCC-D. EQPT RCPT D	In	1	30	10	Copper	Magnetic	PVC	Pos: 15.3646 Zero: 48.4219	1.1120 2.7383	
CBL-0484	MCC-D. HOIST D DISC	In	1	30	12	Copper	Magnetic	PVC	Pos: 24.3490 Zero: 76.7370	1.1849 2.9180	
CBL-0485	MCC-D. F-5-1 DISC	In	1	30	12	Copper	Magnetic	PVC	Pos: 24.3490 Zero: 76.7370	1.1849 2.9180	
CBL-0486	MCC-D. F-5-2 DISC	In	1	30	12	Copper	Magnetic	PVC	Pos: 24.3490 Zero: 76.7370	1.1849 2.9180	
CBL-0487	MCC-D. GRIT BLOWER 2	In	1	30	12	Copper	Magnetic	PVC	Pos: 24.3490 Zero: 76.7370	1.1849 2.9180	
CBL-0488	MCC-D. GSP1 DISC	In	1	30	12	Copper	Magnetic	PVC	Pos: 24.3490 Zero: 76.7370	1.1849 2.9180	
CBL-0489	MCC-D. GSP2 DISC	In	1	30	12	Copper	Magnetic	PVC	Pos: 24.3490 Zero: 76.7370	1.1849 2.9180	
CBL-0490	MCC-D. GSP4 DISC	In	1	30	12	Copper	Magnetic	PVC	Pos: 24.3490 Zero: 76.7370	1.1849 2.9180	
CBL-0491	MCC-D. CHABLWR DISC	In	1	30	12	Copper	Magnetic	PVC	Pos: 24.3490 Zero: 76.7370	1.1849 2.9180	
CBL-0492	MCC-D. SLGT-5 DISC	In	1	30	12	Copper	Magnetic	PVC	Pos: 24.3490 Zero: 76.7370	1.1849 2.9180	
CBL-0493	MCC-D. BAR SCREEN 2 T	In	1	30	12	Copper	Magnetic	PVC	Pos: 24.3490 Zero: 76.7370	1.1849 2.9180	
CBL-0494	MCC-D. GDWU-1 DISC	In	1	30	12	Copper	Magnetic	PVC	Pos: 24.3490 Zero: 76.7370	1.1849 2.9180	
CBL-0495	MCC-D. GDWU-2 DISC	In	1	30	12	Copper	Magnetic	PVC	Pos: 24.3490 Zero: 76.7370	1.1849 2.9180	
CBL-0496	MCC-D. HEAT REC UNIT	In	1	30	8	Copper	Magnetic	PVC	Pos: 10.5599 Zero: 33.2799	0.9818 2.4167	
CBL-0498	MCC-C SLG-3 DISC	In	1	30	12	Copper	Magnetic	PVC	Pos: 24.3490 Zero: 76.7370	1.1849 2.9180	

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	----- Cable Description -----				Per Unit (100 MVA Base)		
					Size	Cond. Type	Duct Type	Insul	R pu	jX pu	
CBL-0500	BUS-0412 EBB-EDH-1 LIN	In	1	25	8	Copper	Magnetic	PVC	Pos: 8.7999 Zero: 27.7333	0.8181 2.0139	
CBL-0501	BUS-0413 PAB-E1 DV & B	In	1	15	10	Copper	Magnetic	PVC	Pos: 7.6823 Zero: 24.2109	0.5560 1.3691	
CBL-0502	MCC-RLS-A 78IN GC DISC	In	1	110	12	Copper	Magnetic	PVC	Pos: 89.2795 Zero: 81.3689	4.3446 10.6992	
CBL-0503	78IN GC DISC 78IN GC STR	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	
CBL-0504	MCC-RLS-A WTR-CRC-PMP-	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	
CBL-0505	MCC-RLS-A WTR-CRC-PMP-	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	
CBL-0506	BUS-0413 BUS-0414	In	1	15	10	Copper	Magnetic	PVC	Pos: 7.6823 Zero: 24.2109	0.5560 1.3691	
CBL-0507	BUS-0178 BUS-0415	In	1	6	4/0	Copper	Magnetic	PVC	Pos: 0.1667 Zero: 0.5253	0.1294 0.3188	
CBL-0508	PDP UV 2A UV 2A XFMR P	In	1	30	250	Copper	Magnetic	PVC	Pos: 0.7188 Zero: 2.2643	0.6445 1.5872	
CBL-0509	PDP UV 2B UV 2B XFMR P	In	1	30	250	Copper	Magnetic	PVC	Pos: 0.7188 Zero: 2.2643	0.6445 1.5872	
CBL-0510	MCC-RLS-A RLS-ACCU-1 DI	In	1	40	12	Copper	Magnetic	PVC	Pos: 32.4653 Zero: 02.3160	1.5799 3.8906	
CBL-0511	RLS-ACCU-1 DIS RLS-ACCU-1	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	
CBL-0512	MCC-RLS-A RLS-ACU-1	In	1	25	10	Copper	Magnetic	PVC	Pos: 12.8038 Zero: 40.3516	0.9266 2.2819	
CBL-0513	WTR-CRC-PMP-1 I WTR-CRC-PMP-	In	1	6	12	Copper	Magnetic	PVC	Pos: 4.8698 Zero: 15.3474	0.2370 0.5836	
CBL-0514	WTR-CRC-PMP-2 I WTR-CRC-PMP-	In	1	6	12	Copper	Magnetic	PVC	Pos: 4.8698 Zero: 15.3474	0.2370 0.5836	
CBL-0515	UV 2A XFMR SEC UV 2A	In	1	30	250	Copper	Magnetic	PVC	Pos: 0.7188 Zero: 2.2643	0.6445 1.5872	
CBL-0516	UV 2B XFMR SEC UV 2B	In	1	30	250	Copper	Magnetic	PVC	Pos: 0.7188 Zero: 2.2643	0.6445 1.5872	
CBL-0524	MCC-RLS-B RLS-EF-1 DISC	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633	
CBL-0527	MCC-RLS-B RLS-EF-2 DISC	In	1	25	12	Copper	Magnetic	PVC	Pos: 20.2908 Zero: 63.9475	0.9874 2.4316	
CBL-0528	RLS-EF-1 DISC RLS-EF-1 TERM	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	
CBL-0529	RLS-EF-2 DISC RLS-EF-2 TERM	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	----- Cable Description -----				Per Unit (100 MVA Base)	
					Size	Cond. Type	Duct Type	Insul	R pu	jX pu
CBL-0530	MCC-RLS-B RLS-SF-1 DISC	In	1	80	12	Copper	Magnetic	PVC	Pos: 64.9306 Zero: 04.6320	3.1597 7.7812
CBL-0531	RLS-SF-1 DISC RLS-SF-1 TERM	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727
CBL-0532	SLG-3 DISC SLG-3 STR	In	1	6	12	Copper	Magnetic	PVC	Pos: 4.8698 Zero: 15.3474	0.2370 0.5836
CBL-0533	MCC-C SLG-4 DISC	In	1	30	12	Copper	Magnetic	PVC	Pos: 24.3490 Zero: 76.7370	1.1849 2.9180
CBL-0534	SLG-4 DISC SG 4 STR	In	1	6	12	Copper	Magnetic	PVC	Pos: 4.8698 Zero: 15.3474	0.2370 0.5836
CBL-0535	MCC-C SP NGB DISC	In	1	30	12	Copper	Magnetic	PVC	Pos: 24.3490 Zero: 76.7370	1.1849 2.9180
CBL-0536	SP NGB DISC SP NGB TERM	In	1	6	12	Copper	Magnetic	PVC	Pos: 4.8698 Zero: 15.3474	0.2370 0.5836
CBL-0537	MCC-C C SUMP PUMP D	In	1	30	12	Copper	Magnetic	PVC	Pos: 24.3490 Zero: 76.7370	1.1849 2.9180
CBL-0538	C SUMP PUMP DI C SUMP PUMP T	In	1	6	12	Copper	Magnetic	PVC	Pos: 4.8698 Zero: 15.3474	0.2370 0.5836
CBL-0539	MCC-C SUB SP-1 DISC	In	1	30	12	Copper	Magnetic	PVC	Pos: 24.3490 Zero: 76.7370	1.1849 2.9180
CBL-0540	SUB SP-1 DISC SUBM PUMP1 T	In	1	6	12	Copper	Magnetic	PVC	Pos: 4.8698 Zero: 15.3474	0.2370 0.5836
CBL-0541	MCC-C GP-3 DISC TER	In	1	30	12	Copper	Magnetic	PVC	Pos: 24.3490 Zero: 76.7370	1.1849 2.9180
CBL-0542	GP-3 DISC TERM GP-3 TERM	In	1	6	12	Copper	Magnetic	PVC	Pos: 4.8698 Zero: 15.3474	0.2370 0.5836
CBL-0543	MCC-C BAR SCREEN 1 T	In	1	30	12	Copper	Magnetic	PVC	Pos: 24.3490 Zero: 76.7370	1.1849 2.9180
CBL-0544	MCC-C BSCRN-3 STR	In	1	30	12	Copper	Magnetic	PVC	Pos: 24.3490 Zero: 76.7370	1.1849 2.9180
CBL-0545	BSCRN-3 STR BAR SCREEN 3 T	In	1	6	12	Copper	Magnetic	PVC	Pos: 4.8698 Zero: 15.3474	0.2370 0.5836
CBL-0546	MCC-C DROP (SG) STR	In	1	30	12	Copper	Magnetic	PVC	Pos: 24.3490 Zero: 76.7370	1.1849 2.9180
CBL-0547	DROP (SG) STR DOOR OP (SG) T	In	1	6	12	Copper	Magnetic	PVC	Pos: 4.8698 Zero: 15.3474	0.2370 0.5836
CBL-0548	MCC-C DROP (NGW) S	In	1	30	12	Copper	Magnetic	PVC	Pos: 24.3490 Zero: 76.7370	1.1849 2.9180
CBL-0549	DROP (NGW) STR DOOR OP (NGW	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727
CBL-0550	MCC-C	In	1	30	12	Copper	Magnetic	PVC	Pos: 24.3490	1.1849

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	----- Cable Description -----				Per Unit (100 MVA Base)		
					Size	Cond. Type	Duct Type	Insul	R pu	jX pu	
	SSC-1 DISC								Zero: 76.7370	2.9180	
CBL-0551	SSC-1 DISC SSC-1 TERM	In	1	6	12	Copper	Magnetic	PVC	Pos: 4.8698 Zero: 15.3474	0.2370 0.5836	
CBL-0552	MCC-C SC-1 DISC	In	1	30	12	Copper	Magnetic	PVC	Pos: 24.3490 Zero: 76.7370	1.1849 2.9180	
CBL-0553	SC-1 DISC SC-1 TERM	In	1	6	12	Copper	Magnetic	PVC	Pos: 4.8698 Zero: 15.3474	0.2370 0.5836	
CBL-0554	MCC-C GRTBLWR3 DI	In	1	30	12	Copper	Magnetic	PVC	Pos: 24.3490 Zero: 76.7370	1.1849 2.9180	
CBL-0555	GRTBLWR3 DISC GRIT BLWR 3 T	In	1	6	12	Copper	Magnetic	PVC	Pos: 4.8698 Zero: 15.3474	0.2370 0.5836	
CBL-0556	MCC-C EQPT RCPT C	In	1	30	10	Copper	Magnetic	PVC	Pos: 15.3646 Zero: 48.4219	1.1120 2.7383	
CBL-0557	MCC-C F-6-1 DISC	In	1	30	12	Copper	Magnetic	PVC	Pos: 24.3490 Zero: 76.7370	1.1849 2.9180	
CBL-0558	F-6-1 DISC F-6-1 CTRLR	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	
CBL-0559	MCC-C F-6-2 DISC	In	1	30	12	Copper	Magnetic	PVC	Pos: 24.3490 Zero: 76.7370	1.1849 2.9180	
CBL-0560	F-6-2 DISC F-6-2 CTRLR	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	
CBL-0563	BUS-0436 SWPSO-SG DISC	In	1	6	10	Copper	Magnetic	PVC	Pos: 3.0729 Zero: 9.6844	0.2224 0.5477	
CBL-0564	BUS-0436 SWPSO VALVE I	In	1	6	10	Copper	Magnetic	PVC	Pos: 3.0729 Zero: 9.6844	0.2224 0.5477	
CBL-0600	MCC-RLS-B RLS-PPU-1	In	1	20	10	Copper	Magnetic	PVC	Pos: 10.2431 Zero: 32.2813	0.7413 1.8255	
CBL-0605	MCC-EE BUS-0694	In	1	115	12	Copper	Magnetic	PVC	Pos: 93.3377 Zero: 94.1584	4.5421 11.1855	
CBL-0606	BUS-0695 LP-EE	In	1	10	12	Copper	Magnetic	PVC	Pos: 43.2230 Zero: 36.2195	2.1034 5.1798	
CBL-0607	MCC-EE DOOR OP EE1	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633	
CBL-0608	DOOR OP EE1 DOOR MTR EE1	In	1	6	12	Copper	Magnetic	PVC	Pos: 4.8698 Zero: 15.3474	0.2370 0.5836	
CBL-0609	MCC-EE DOOR OP EE2	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633	
CBL-0610	DOOR OP EE2 DOOR MTR EE2	In	1	6	12	Copper	Magnetic	PVC	Pos: 4.8698 Zero: 15.3474	0.2370 0.5836	
CBL-0611	MCC-EE UH EE DISC	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633	

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	Size	----- Cable Description -----			Per Unit (100 MVA Base)		
						Cond. Type	Duct Type	Insul	R pu	jX pu	
CBL-0612	UH EE DISC UH EE	In	1	6	12	Copper	Magnetic	PVC	Pos: 4.8698 Zero: 15.3474	0.2370 0.5836	
CBL-0613	MCC-EE EQPT RCPT EE	In	1	50	10	Copper	Magnetic	PVC	Pos: 25.6076 Zero: 80.7031	1.8533 4.5638	
CBL-0614	MCC-EE SF2EE DISC	In	1	150	10	Copper	Magnetic	PVC	Pos: 76.8229 Zero: 42.1094	5.5599 13.6914	
CBL-0615	SF2EE DISC SF-2 EE TERM	In	1	6	10	Copper	Magnetic	PVC	Pos: 3.0729 Zero: 9.6844	0.2224 0.5477	
CBL-0616	MCC-EE SF4EE DISC	In	1	50	10	Copper	Magnetic	PVC	Pos: 25.6076 Zero: 80.7031	1.8533 4.5638	
CBL-0617	SF4EE DISC SF-4 EE TERM	In	1	6	12	Copper	Magnetic	PVC	Pos: 4.8698 Zero: 15.3474	0.2370 0.5836	
CBL-0618	MCC-FF XFMR LP-FF PRI	In	1	15	12	Copper	Magnetic	PVC	Pos: 12.1745 Zero: 38.3685	0.5924 1.4590	
CBL-0619	XFMR LP-FF SEC LP-FF	In	1	10	12	Copper	Magnetic	PVC	Pos: 43.2230 Zero: 36.2195	2.1034 5.1798	
CBL-0620	MCC-FF OZNTR DISC	In	1	50	4	Copper	Magnetic	PVC	Pos: 6.9661 Zero: 21.9531	1.3715 3.3767	
CBL-0621	OZNTR DISC OZONATOR IN	In	1	6	4	Copper	Magnetic	PVC	Pos: 0.8359 Zero: 2.6344	0.1646 0.4052	
CBL-0622	MCC-FF UH FF	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633	
CBL-0623	MCC-FF DOOR OP FF	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633	
CBL-0624	DOOR OP FF DOOR MTR FF T	In	1	6	12	Copper	Magnetic	PVC	Pos: 4.8698 Zero: 15.3474	0.2370 0.5836	
CBL-0625	MCC-FF SF1FF DISC	In	1	50	10	Copper	Magnetic	PVC	Pos: 25.6076 Zero: 80.7031	1.8533 4.5638	
CBL-0626	SF1FF DISC SF-1 FF TERM	In	1	6	10	Copper	Magnetic	PVC	Pos: 3.0729 Zero: 9.6844	0.2224 0.5477	
CBL-0627	MCC-FF SF3FF DISC	In	1	50	10	Copper	Magnetic	PVC	Pos: 25.6076 Zero: 80.7031	1.8533 4.5638	
CBL-0628	SF3FF DISC SF-3 FF TERM	In	1	6	10	Copper	Magnetic	PVC	Pos: 3.0729 Zero: 9.6844	0.2224 0.5477	
CBL-0632	MCC-ADM-A. ADMEWH1 DI	In	1	200	12	Copper	Magnetic	PVC	Pos:162.3264 Zero: 11.5799	7.8993 19.4531	
CBL-0633	MCC-ADM-A. ADM-P-1 DISC	In	1	40	12	Copper	Magnetic	PVC	Pos: 32.4653 Zero: 02.3160	1.5799 3.8906	
CBL-0634	ADM-P-1 DISC ADM-P-1 MTR T	In	1	6	12	Copper	Magnetic	PVC	Pos: 4.8698 Zero: 15.3474	0.2370 0.5836	
CBL-0635	MCC-ADM-A. ADM-P-2 DISC	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633	

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	Size	----- Cable Description -----			Per Unit (100 MVA Base)		
						Cond. Type	Duct Type	Insul	R pu	jX pu	
CBL-0636	ADM-P-2 DISC ADM-P-2 MTR T	In	1	6	12	Copper	Magnetic	PVC	Pos: 4.8698 Zero: 15.3474	0.2370 0.5836	
CBL-0637	MCC-ADM-A. ADM-P-3 DISC	In	1	15	10	Copper	Magnetic	PVC	Pos: 7.6823 Zero: 24.2109	0.5560 1.3691	
CBL-0638	ADM-P-3 DISC ADM-P-3 MTR T	In	1	7	12	Copper	Magnetic	PVC	Pos: 5.6814 Zero: 17.9053	0.2765 0.6809	
CBL-0639	MCC-ADM-A. ADM-P-4 DISC	In	1	18	10	Copper	Magnetic	PVC	Pos: 9.2188 Zero: 29.0531	0.6672 1.6430	
CBL-0640	ADM-P-4 DISC ADM-P-4 MTR T	In	1	7	10	Copper	Magnetic	PVC	Pos: 3.5851 Zero: 11.2984	0.2595 0.6389	
CBL-0641	MCC-ADM-A ADM-EF-1 DISC	In	1	60	12	Copper	Magnetic	PVC	Pos: 48.6979 Zero: 53.4740	2.3698 5.8359	
CBL-0642	ADM-EF-1 DISC ADM-EF-1 MTR T	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	
CBL-0643	MCC-ADM-A ADM-EF-2 DISC	In	1	60	12	Copper	Magnetic	PVC	Pos: 48.6979 Zero: 53.4740	2.3698 5.8359	
CBL-0644	ADM-EF-2 DISC ADM-EF-2 MTR T	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	
CBL-0645	MCC-ADM-A. ADMEWH2 DI	In	1	75	12	Copper	Magnetic	PVC	Pos: 60.8724 Zero: 91.8425	2.9622 7.2949	
CBL-0646	MCC-ADM-A ADM-HVAC-1 D	In	1	30	10	Copper	Magnetic	PVC	Pos: 15.3646 Zero: 48.4219	1.1120 2.7383	
CBL-0647	ADM-HVAC-1 DI ADM-HVAC-1 M	In	1	10	10	Copper	Magnetic	PVC	Pos: 5.1215 Zero: 16.1406	0.3707 0.9128	
CBL-0648	MCC-ADM-A ADM-HVAC-2 D	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633	
CBL-0649	ADM-HVAC-2 DI ADM-HVAC-2 M	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	
CBL-0652	MCC-ADM-A. BUS-0436	In	1	75	10	Copper	Magnetic	PVC	Pos: 38.4115 Zero: 21.0547	2.7799 6.8457	
CBL-0653	SWPSO-SG DISC S SWPSO-SG STR	In	1	6	10	Copper	Magnetic	PVC	Pos: 3.0729 Zero: 9.6844	0.2224 0.5477	
CBL-0654	SWPSO VALVE D SWPSO VALVE S	In	1	32	10	Copper	Magnetic	PVC	Pos: 16.3889 Zero: 51.6500	1.1861 2.9208	
CBL-0720	F-2-6 DISC F-2-1 DISC	In	1	1	10	Copper	Magnetic	PVC	Pos: 0.5122 Zero: 1.6141	0.0371 0.0913	
CBL-0721	F-2-1 DISC F-2-12 DISC	In	1	1	10	Copper	Magnetic	PVC	Pos: 0.5122 Zero: 1.6141	0.0371 0.0913	
CBL-0722	F-2-12 DISC F-2-7 DISC	In	1	1	10	Copper	Magnetic	PVC	Pos: 0.5122 Zero: 1.6141	0.0371 0.0913	
CBL-0723	F-2-13 DISC F-2-18 DISC	In	1	1	10	Copper	Magnetic	PVC	Pos: 0.5122 Zero: 1.6141	0.0371 0.0913	

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	Size	----- Cable Description -----			Per Unit (100 MVA Base)		
						Cond. Type	Duct Type	Insul	R pu	jX pu	
CBL-0724	F-2-18 DISC F-2-19 DISC	In	1	1	10	Copper	Magnetic	PVC	Pos: 0.5122	0.0371	
									Zero: 1.6141	0.0913	
CBL-0725	F-2-19 DISC F-2-24 DISC	In	1	1	10	Copper	Magnetic	PVC	Pos: 0.5122	0.0371	
									Zero: 1.6141	0.0913	
CBL-0737	F-54-1 DISC Junction Box	In	1	87	10	Copper	Magnetic	PVC	Pos: 44.5573	3.2247	
									Zero: 40.4234	7.9410	
CBL-ANMX-E1A	MCC-EPB-A. BUS-0103	In	1	125	12	Copper	Magnetic	PVC	Pos:101.4540	4.9371	
									Zero: 19.7374	12.1582	
CBL-ANMX-E1B	MCC-EPB-A. BUS-0105	In	1	125	12	Copper	Magnetic	PVC	Pos:101.4540	4.9371	
									Zero: 19.7374	12.1582	
CBL-ANMX-E1C	MCC-EPB-A. BUS-0107	In	1	125	12	Copper	Magnetic	PVC	Pos:101.4540	4.9371	
									Zero: 19.7374	12.1582	
CBL-ANMX-E1D	MCC-EPB-A. BUS-0109	In	1	125	12	Copper	Magnetic	PVC	Pos:101.4540	4.9371	
									Zero: 19.7374	12.1582	
CBL-ANMX-E2A	MCC-EPB-B.. BUS-0147	In	1	165	12	Copper	Magnetic	PVC	Pos:133.9193	6.5169	
									Zero: 22.0534	16.0488	
CBL-ANMX-E2B	MCC-EPB-B.. BUS-0149	In	1	165	12	Copper	Magnetic	PVC	Pos:133.9193	6.5169	
									Zero: 22.0534	16.0488	
CBL-ANMX-E2C	MCC-EPB-B.. BUS-0151	In	1	165	12	Copper	Magnetic	PVC	Pos:133.9193	6.5169	
									Zero: 22.0534	16.0488	
CBL-ANMX-E2D	MCC-EPB-B.. BUS-0153	In	1	165	12	Copper	Magnetic	PVC	Pos:133.9193	6.5169	
									Zero: 22.0534	16.0488	
CBL-ANMX-E3A	MCC-EPB-A. BUS-0113	In	1	125	12	Copper	Magnetic	PVC	Pos:101.4540	4.9371	
									Zero: 19.7374	12.1582	
CBL-ANMX-E3B	MCC-EPB-A. BUS-0115	In	1	125	12	Copper	Magnetic	PVC	Pos:101.4540	4.9371	
									Zero: 19.7374	12.1582	
CBL-ANMX-E3C	MCC-EPB-A. BUS-0117	In	1	125	12	Copper	Magnetic	PVC	Pos:101.4540	4.9371	
									Zero: 19.7374	12.1582	
CBL-ANMX-E3D	MCC-EPB-A. BUS-0119	In	1	125	12	Copper	Magnetic	PVC	Pos:101.4540	4.9371	
									Zero: 19.7374	12.1582	
CBL-ANMX-E4A	MCC-EPB-B.. BUS-0157	In	1	165	12	Copper	Magnetic	PVC	Pos:133.9193	6.5169	
									Zero: 22.0534	16.0488	
CBL-ANMX-E4B	MCC-EPB-B.. BUS-0159	In	1	165	12	Copper	Magnetic	PVC	Pos:133.9193	6.5169	
									Zero: 22.0534	16.0488	
CBL-ANMX-E4C	MCC-EPB-B.. BUS-0161	In	1	165	12	Copper	Magnetic	PVC	Pos:133.9193	6.5169	
									Zero: 22.0534	16.0488	
CBL-ANMX-E4D	MCC-EPB-B.. BUS-0163	In	1	165	12	Copper	Magnetic	PVC	Pos:133.9193	6.5169	
									Zero: 22.0534	16.0488	
CBL-ANMX-W1A	MCC-WPB-A. BUS-0276	In	1	138	10	Copper	Magnetic	PVC	Pos: 70.6771	5.1151	
									Zero: 22.7406	12.5961	
CBL-ANMX-W1B	MCC-WPB-A. BUS-0277	In	1	95	10	Copper	Magnetic	PVC	Pos: 48.6545	3.5213	
									Zero: 53.3359	8.6712	

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	----- Cable Description -----				Per Unit (100 MVA Base)		
					Size	Cond. Type	Duct Type	Insul	R pu	jX pu	
CBL-ANMX-W1C	MCC-WPB-A. BUS-0278	In	1	107	10	Copper	Magnetic	PVC	Pos: 54.8003 Zero: 72.7047	3.9661 9.7665	
CBL-ANMX-W1D	MCC-WPB-A. BUS-0279	In	1	110	10	Copper	Magnetic	PVC	Pos: 56.3368 Zero: 77.5469	4.0773 10.0404	
CBL-ANMX-W2A	MCC-WPB-B. BUS-0292	In	1	131	10	Copper	Magnetic	PVC	Pos: 67.0920 Zero: 11.4422	4.8556 11.9572	
CBL-ANMX-W2B	MCC-WPB-B. BUS-0293	In	1	106	10	Copper	Magnetic	PVC	Pos: 54.2882 Zero: 71.0906	3.9290 9.6753	
CBL-ANMX-W2C	MCC-WPB-B. BUS-0294	In	1	111	10	Copper	Magnetic	PVC	Pos: 56.8490 Zero: 79.1609	4.1143 10.1316	
CBL-ANMX-W2D	MCC-WPB-B. BUS-0295	In	1	144	10	Copper	Magnetic	PVC	Pos: 73.7500 Zero: 32.4250	5.3375 13.1438	
CBL-AXMX-E1A	MCC-EPB-A. BUS-0097	In	1	125	12	Copper	Magnetic	PVC	Pos:101.4540 Zero: 19.7374	4.9371 12.1582	
CBL-AXMX-E1B	MCC-EPB-A. BUS-0099	In	1	125	12	Copper	Magnetic	PVC	Pos:101.4540 Zero: 19.7374	4.9371 12.1582	
CBL-AXMX-E1C	MCC-EPB-A. BUS-0101	In	1	125	12	Copper	Magnetic	PVC	Pos:101.4540 Zero: 19.7374	4.9371 12.1582	
CBL-AXMX-E2A	MCC-EPB-B.. BUS-0141	In	1	165	12	Copper	Magnetic	PVC	Pos:133.9193 Zero: 22.0534	6.5169 16.0488	
CBL-AXMX-E2B	MCC-EPB-B.. BUS-0143	In	1	165	12	Copper	Magnetic	PVC	Pos:133.9193 Zero: 22.0534	6.5169 16.0488	
CBL-AXMX-E2C	MCC-EPB-B.. BUS-0145	In	1	165	12	Copper	Magnetic	PVC	Pos:133.9193 Zero: 22.0534	6.5169 16.0488	
CBL-AXMX-E3A	MCC-EPB-A. BUS-0121	In	1	125	12	Copper	Magnetic	PVC	Pos:101.4540 Zero: 19.7374	4.9371 12.1582	
CBL-AXMX-E3B	MCC-EPB-A. BUS-0123	In	1	125	12	Copper	Magnetic	PVC	Pos:101.4540 Zero: 19.7374	4.9371 12.1582	
CBL-AXMX-E3C	MCC-EPB-A. BUS-0125	In	1	125	12	Copper	Magnetic	PVC	Pos:101.4540 Zero: 19.7374	4.9371 12.1582	
CBL-AXMX-E4A	MCC-EPB-B.. BUS-0165	In	1	165	12	Copper	Magnetic	PVC	Pos:133.9193 Zero: 22.0534	6.5169 16.0488	
CBL-AXMX-E4B	MCC-EPB-B.. BUS-0167	In	1	165	12	Copper	Magnetic	PVC	Pos:133.9193 Zero: 22.0534	6.5169 16.0488	
CBL-AXMX-E4C	MCC-EPB-B.. BUS-0169	In	1	165	12	Copper	Magnetic	PVC	Pos:133.9193 Zero: 22.0534	6.5169 16.0488	
CBL-AXMX-W1A	MCC-WPB-A. BUS-0273	In	1	115	10	Copper	Magnetic	PVC	Pos: 58.8976 Zero: 85.6172	4.2626 10.4967	
CBL-AXMX-W1B	MCC-WPB-A. BUS-0274	In	1	150	10	Copper	Magnetic	PVC	Pos: 76.8229 Zero: 42.1094	5.5599 13.6914	
CBL-AXMX-W1C	MCC-WPB-A.	In	1	117	10	Copper	Magnetic	PVC	Pos: 59.9219	4.3367	

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	----- Cable Description -----				Per Unit (100 MVA Base)		
					Size	Cond. Type	Duct Type	Insul	R pu	jX pu	
	BUS-0275								Zero: 88.8453	10.6793	
CBL-AXMX-W2A	MCC-WPB-B. BUS-0289	In	1	57	10	Copper	Magnetic	PVC	Pos: 29.1927 Zero: 92.0016	2.1128 5.2027	
CBL-AXMX-W2B	MCC-WPB-B. BUS-0290	In	1	85	10	Copper	Magnetic	PVC	Pos: 43.5330 Zero: 37.1953	3.1506 7.7585	
CBL-AXMX-W2C	MCC-WPB-B. BUS-0291	In	1	108	10	Copper	Magnetic	PVC	Pos: 55.3125 Zero: 74.3188	4.0031 9.8578	
CBL-B-54-1	W1 FLOW VALVE B-54-1 DISC	In	1	1	10	Copper	Magnetic	PVC	Pos: 0.5122 Zero: 1.6141	0.0371 0.0913	
CBL-B-54-1.	B-54-1 DISC B-54-1 MTR VAL	In	1	1	10	Copper	Magnetic	PVC	Pos: 0.5122 Zero: 1.6141	0.0371 0.0913	
CBL-B-54-2	W1 FLOW VALVE B-54-2 DISC	In	1	1	10	Copper	Magnetic	PVC	Pos: 0.5122 Zero: 1.6141	0.0371 0.0913	
CBL-B-54-2.	B-54-2 DISC B-54-2 MTR VAL	In	1	1	10	Copper	Magnetic	PVC	Pos: 0.5122 Zero: 1.6141	0.0371 0.0913	
CBL-B-54-3.	B-54-3 DISC B-54-3 MTR VAL	In	1	1	10	Copper	Magnetic	PVC	Pos: 0.5122 Zero: 1.6141	0.0371 0.0913	
CBL-EBB-A HOIST 1	MCC-EBB-A. EBB-A HOIST 1 I	In	1	142	12	Copper	Magnetic	PVC	Pos: 115.2517 Zero: 63.2217	5.6085 13.8117	
CBL-EBB-A HOIST 2	MCC-EBB-A. EBB-A HOIST 2 I	In	1	142	12	Copper	Magnetic	PVC	Pos: 115.2517 Zero: 63.2217	5.6085 13.8117	
CBL-EBB-A WELD 1	MCC-EBB-A. EQPT RCPT EBB	In	1	10	10	Copper	Magnetic	PVC	Pos: 5.1215 Zero: 16.1406	0.3707 0.9128	
CBL-EBB-EF-10	EBB-EF-10 DISC EBB-EF-10 TER	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	
CBL-EBB-EF-10 DI	MCC-EBB-A. EBB-EF-10 DISC	In	1	50	12	Copper	Magnetic	PVC	Pos: 40.5816 Zero: 27.8950	1.9748 4.8633	
CBL-EBB-EF-5	EBB-EF-5 DISC EBB-EF-5 TERM	In	1	5	12	Copper	Magnetic	PVC	Pos: 4.0582 Zero: 12.7895	0.1975 0.4863	
CBL-EBB-EF-5D	MCC-EBB-B. EBB-EF-5 DISC	In	1	30	12	Copper	Magnetic	PVC	Pos: 24.3490 Zero: 76.7370	1.1849 2.9180	
CBL-EBB-EF-6	EBB-EF-6 DISC EBB-EF-6 TERM	In	1	5	12	Copper	Magnetic	PVC	Pos: 4.0582 Zero: 12.7895	0.1975 0.4863	
CBL-EBB-EF-6 DIS	MCC-EBB-A. EBB-EF-6 DISC	In	1	65	12	Copper	Magnetic	PVC	Pos: 52.7561 Zero: 66.2635	2.5673 6.3223	
CBL-EBB-EF-7	EBB-EF-7 DISC EBB-EF-7 TERM	In	1	5	12	Copper	Magnetic	PVC	Pos: 4.0582 Zero: 12.7895	0.1975 0.4863	
CBL-EBB-EF-7D	MCC-EBB-B. EBB-EF-7 DISC	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266	
CBL-EBB-EF-9	EBB-EF-9 DISC EBB-EF-9 TERM	In	1	5	12	Copper	Magnetic	PVC	Pos: 4.0582 Zero: 12.7895	0.1975 0.4863	

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	----- Cable Description -----				Per Unit (100 MVA Base)		
					Size	Cond. Type	Duct Type	Insul	R pu	jX pu	
CBL-EBB-EF-9D	MCC-EBB-B. EBB-EF-9 DISC	In	1	150	12	Copper	Magnetic	PVC	Pos:121.7448 Zero: 83.6849	5.9245 14.5898	
CBL-EBB-EUH-1	MCC-EBB-B. EBB-EUH-1 TER	In	1	15	12	Copper	Magnetic	PVC	Pos: 12.1745 Zero: 38.3685	0.5924 1.4590	
CBL-EBB-HV-1	EBB-HV-1 DISC EBB-HV-1 STR	In	1	15	12	Copper	Magnetic	PVC	Pos: 12.1745 Zero: 38.3685	0.5924 1.4590	
CBL-EBB-HV-1 DI	MCC-EBB-A. EBB-HV-1 DISC	In	1	40	12	Copper	Magnetic	PVC	Pos: 32.4653 Zero: 02.3160	1.5799 3.8906	
CBL-EBB-SP-2 DIS	MCC-EBB-A. EBB SUMP PUM	In	1	60	10	Copper	Magnetic	PVC	Pos: 30.7292 Zero: 96.8438	2.2240 5.4766	
CBL-EBB-SP-2A	EBB SUMP PUMP EBB SP-2 TERM	In	1	5	10	Copper	Magnetic	PVC	Pos: 2.5608 Zero: 8.0703	0.1853 0.4564	
CBL-EBB-SP-4 DIS	MCC-EBB-A. EBB SUMP PUM	In	1	150	12	Copper	Magnetic	PVC	Pos:121.7448 Zero: 83.6849	5.9245 14.5898	
CBL-EBB-SP-4A	EBB SUMP PUMP EBB-SP-4 TERM	In	1	5	10	Copper	Magnetic	PVC	Pos: 2.5608 Zero: 8.0703	0.1853 0.4564	
CBL-EEB A HOIST 1	EBB-A HOIST 1 D EBB-A HOIST 1	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	
CBL-EEB A HOIST 2	EBB-A HOIST 2 D EBB-A HOIST 2	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	
CBL-EPB-EUH	EPB-EUH-1 DISC EPB-EUH-1 TER	In	1	5	10	Copper	Magnetic	PVC	Pos: 2.5608 Zero: 8.0703	0.1853 0.4564	
CBL-EPB-EUH-1 DI	MCC-EPB-B EPB-EUH-1 DIS	In	1	25	10	Copper	Magnetic	PVC	Pos: 12.8038 Zero: 40.3516	0.9266 2.2819	
CBL-EPB-SUP-1	MCC-EPB-A EPB-SUP-1 TER	In	1	20	12	Copper	Magnetic	PVC	Pos: 16.2326 Zero: 51.1580	0.7899 1.9453	
CBL-EPB-SUP-2	MCC-EPB-B EPB-SUP-2 TER	In	1	20	12	Copper	Magnetic	PVC	Pos: 16.2326 Zero: 51.1580	0.7899 1.9453	
CBL-EPE-SAP-5	MCC-EPB-A EPE-SAP-5 TER	In	1	45	12	Copper	Magnetic	PVC	Pos: 36.5234 Zero: 15.1055	1.7773 4.3770	
CBL-EPI-SAP-4	MCC-EPB-A EPI-SAP-4 TERM	In	1	20	10	Copper	Magnetic	PVC	Pos: 10.2431 Zero: 32.2813	0.7413 1.8255	
CBL-EQRCPT-EPB-	MCC-EPB-B EQPT RCPT EPB	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	
CBL-F-1-1	F-1-1 DISC F-1-1 STARTER	In	1	20	10	Copper	Magnetic	PVC	Pos: 10.2431 Zero: 32.2813	0.7413 1.8255	
CBL-F-1-2	F-1-2 DISC F-1-2 STARTER	In	1	26	10	Copper	Magnetic	PVC	Pos: 13.3160 Zero: 41.9656	0.9637 2.3732	
CBL-F-1-3	F-1-3 DISC F-1-3 STARTER	In	1	50	10	Copper	Magnetic	PVC	Pos: 25.6076 Zero: 80.7031	1.8533 4.5638	
CBL-F-1-4	F-1-4 DISC F-1-4 STARTER	In	1	56	10	Copper	Magnetic	PVC	Pos: 28.6806 Zero: 90.3875	2.0757 5.1115	

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	Size	----- Cable Description -----			Per Unit (100 MVA Base)		
						Cond. Type	Duct Type	Insul	R pu	jX pu	
CBL-F-1-5	F-1-5 DISC F-1-5 STARTER	In	1	56	10	Copper	Magnetic	PVC	Pos: 28.6806 Zero: 90.3875	2.0757 5.1115	
CBL-F-1-6	F-1-6 DISC F-1-6 STARTER	In	1	50	10	Copper	Magnetic	PVC	Pos: 25.6076 Zero: 80.7031	1.8533 4.5638	
CBL-F-1-7	F-1-7 DISC F-1-7 STARTER	In	1	26	10	Copper	Magnetic	PVC	Pos: 13.3160 Zero: 41.9656	0.9637 2.3732	
CBL-F-1-8	F-1-8 DISC F-1-8 STARTER	In	1	20	10	Copper	Magnetic	PVC	Pos: 10.2431 Zero: 32.2813	0.7413 1.8255	
CBL-F-2-1	F-2-1 DISC F-2-1 STARTER	In	1	20	10	Copper	Magnetic	PVC	Pos: 10.2431 Zero: 32.2813	0.7413 1.8255	
CBL-F-2-12	F-2-12 DISC F-2-12 STARTER	In	1	20	10	Copper	Magnetic	PVC	Pos: 10.2431 Zero: 32.2813	0.7413 1.8255	
CBL-F-2-13	F-2-13 DISC F-2-13 STARTER	In	1	80	10	Copper	Magnetic	PVC	Pos: 40.9722 Zero: 29.1250	2.9653 7.3021	
CBL-F-2-13 DISC	MCC-EPB-A.. F-2-13 DISC	In	1	125	10	Copper	Magnetic	PVC	Pos: 64.0191 Zero: 01.7578	4.6332 11.4095	
CBL-F-2-18	F-2-18 DISC F-2-18 STARTER	In	1	20	10	Copper	Magnetic	PVC	Pos: 10.2431 Zero: 32.2813	0.7413 1.8255	
CBL-F-2-19	F-2-19 DISC F-2-19 STARTER	In	1	20	10	Copper	Magnetic	PVC	Pos: 10.2431 Zero: 32.2813	0.7413 1.8255	
CBL-F-2-24	F-2-24 DISC F-2-24 STARTER	In	1	85	10	Copper	Magnetic	PVC	Pos: 43.5330 Zero: 37.1953	3.1506 7.7585	
CBL-F-2-6	F-2-6 DISC F-2-6 STARTER	In	1	85	10	Copper	Magnetic	PVC	Pos: 43.5330 Zero: 37.1953	3.1506 7.7585	
CBL-F-2-6 DISC	MCC-EPB-A.. F-2-6 DISC	In	1	1	10	Copper	Magnetic	PVC	Pos: 0.5122 Zero: 1.6141	0.0371 0.0913	
CBL-F-2-7	F-2-7 DISC F-2-7 STARTER	In	1	80	10	Copper	Magnetic	PVC	Pos: 40.9722 Zero: 29.1250	2.9653 7.3021	
CBL-F-54-1	F-54-1 DISC F-54-1 STR	In	1	4	10	Copper	Magnetic	PVC	Pos: 2.0486 Zero: 6.4563	0.1483 0.3651	
CBL-F-54-2	F-54-2 DISC F-54-2 STR	In	1	4	10	Copper	Magnetic	PVC	Pos: 2.0486 Zero: 6.4563	0.1483 0.3651	
CBL-F-54-2D	F-54-2 DISC BUS-0287	In	1	87	10	Copper	Magnetic	PVC	Pos: 44.5573 Zero: 40.4234	3.2247 7.9410	
CBL-F-54-4	F-54-4 DISC F-54-4 STR	In	1	6	10	Copper	Magnetic	PVC	Pos: 3.0729 Zero: 9.6844	0.2224 0.5477	
CBL-F-54-4D	MCC-WPB-A Junction Box	In	1	37	10	Copper	Magnetic	PVC	Pos: 18.9497 Zero: 59.7203	1.3714 3.3772	
CBL-F-54-5	F-54-5 DISC F-54-5 STR	In	1	6	10	Copper	Magnetic	PVC	Pos: 3.0729 Zero: 9.6844	0.2224 0.5477	
CBL-F-54-5D	MCC-WPB-B BUS-0287	In	1	1	10	Copper	Magnetic	PVC	Pos: 0.5122 Zero: 1.6141	0.0371 0.0913	

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	Size	----- Cable Description -----			Per Unit (100 MVA Base)		
						Cond. Type	Duct Type	Insul	R pu	jX pu	
CBL-F-54-5D.	F-54-5 DISC BUS-0287	In	1	4	10	Copper	Magnetic	PVC	Pos: 2.0486 Zero: 6.4563	0.1483 0.3651	
CBL-HOIST EPB-B	HOIST EPB-B DIS HOIST EPB-B S	In	1	10	10	Copper	Magnetic	PVC	Pos: 5.1215 Zero: 16.1406	0.3707 0.9128	
CBL-HOIST EPB-B	IMCC-EPB-B HOIST EPB-B D	In	1	20	10	Copper	Magnetic	PVC	Pos: 10.2431 Zero: 32.2813	0.7413 1.8255	
CBL-HV-1	HV-1 DISC HV-1 TERM	In	1	75	12	Copper	Magnetic	PVC	Pos: 60.8724 Zero: 91.8425	2.9622 7.2949	
CBL-HV-1 DISC	MCC-EPB-B HV-1 DISC	In	1	25	12	Copper	Magnetic	PVC	Pos: 20.2908 Zero: 63.9475	0.9874 2.4316	
CBL-LP-V SEC	XFMR LP-V SEC LP-V	In	1	6	1/0	Copper	Magnetic	PVC	Pos: 1.7751 Zero: 5.5945	0.7489 1.8431	
CBL-LP-W	XFMR-LP-W SEC LP-W	In	1	6	1/0	Copper	Magnetic	PVC	Pos: 1.7751 Zero: 5.5945	0.7489 1.8431	
CBL-MB-EF-1	PP-MTB MB-EF-1 DISC	In	1	39	10	Copper	Magnetic	PVC	Pos: 19.9740 Zero: 62.9484	1.4456 3.5598	
CBL-MB-EF-1.	MB-EF-1 DISC BUS-0346	In	1	4	10	Copper	Magnetic	PVC	Pos: 2.0486 Zero: 6.4563	0.1483 0.3651	
CBL-P11.210	MCC-CEB-B CEB-EF-2 DISC	In	1	78	12	Copper	Magnetic	PVC	Pos: 63.3073 Zero: 99.5162	3.0807 7.5867	
CBL-P11.210A	CEB-EF-2 DISC CEB-EF-2 TERM	In	1	15	12	Copper	Magnetic	PVC	Pos: 12.1745 Zero: 38.3685	0.5924 1.4590	
CBL-P11.211	MCC-CEB-B CEB-PPU-1 STR	In	1	45	12	Copper	Magnetic	PVC	Pos: 36.5234 Zero: 15.1055	1.7773 4.3770	
CBL-P11.213	MCC-CEB-B CEB-FCP-2 TER	In	1	45	12	Copper	Magnetic	PVC	Pos: 36.5234 Zero: 15.1055	1.7773 4.3770	
CBL-P11.214	MCC-CEB-B CEB-P-2 DISC	In	1	45	12	Copper	Magnetic	PVC	Pos: 36.5234 Zero: 15.1055	1.7773 4.3770	
CBL-P11.214A	CEB-P-2 DISC CEB-P-2 TERM	In	1	6	12	Copper	Magnetic	PVC	Pos: 4.8698 Zero: 15.3474	0.2370 0.5836	
CBL-P-53-06	P-53-06 DISC BUS-0288	In	1	27	10	Copper	Magnetic	PVC	Pos: 13.8281 Zero: 43.5797	1.0008 2.4645	
CBL-P-53-06.	P-53-06 DISC P-53-06 STR	In	1	8	10	Copper	Magnetic	PVC	Pos: 4.0972 Zero: 12.9125	0.2965 0.7302	
CBL-P-53-06..	MCC-WPB-B. BUS-0288	In	1	1	10	Copper	Magnetic	PVC	Pos: 0.5122 Zero: 1.6141	0.0371 0.0913	
CBL-P-53-07	MCC-WPB-A. BUS-0272	In	1	5	10	Copper	Magnetic	PVC	Pos: 2.5608 Zero: 8.0703	0.1853 0.4564	
CBL-P-53-07.	BUS-0272 P-53-07 DISC.	In	1	53	10	Copper	Magnetic	PVC	Pos: 27.1441 Zero: 85.5453	1.9645 4.8376	
CBL-P-53-07..	P-53-07 DISC. P-53-07 STR	In	1	8	10	Copper	Magnetic	PVC	Pos: 4.0972 Zero: 12.9125	0.2965 0.7302	

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	Size	----- Cable Description -----			Per Unit (100 MVA Base)		
						Cond. Type	Duct Type	Insul	R pu	jX pu	
CBL-P-53-20	BUS-0272 P-53-20 DISC	In	1	23	10	Copper	Magnetic	PVC	Pos: 11.7795 Zero: 37.1234	0.8525 2.0993	
CBL-P-53-20.	P-53-20 DISC P-53-20 STR	In	1	8	10	Copper	Magnetic	PVC	Pos: 4.0972 Zero: 12.9125	0.2965 0.7302	
CBL-P-53-21	P-53-21 DISC P-53-21 STR	In	1	8	10	Copper	Magnetic	PVC	Pos: 4.0972 Zero: 12.9125	0.2965 0.7302	
CBL-P-53-21.	P-53-21 DISC BUS-0288	In	1	31	10	Copper	Magnetic	PVC	Pos: 15.8767 Zero: 50.0359	1.1490 2.8296	
CBL-PC-E1	PC-E1 DISC PC-E1 TERM	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	
CBL-PC-E1 DISC	MCC-EPB-A PC-E1 DISC	In	1	240	12	Copper	Magnetic	PVC	Pos:194.7917 Zero: 13.8959	9.4792 23.3437	
CBL-PC-E2	PC-E2 DISC PC-E2 TERM	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	
CBL-PC-E2 DISK	MCC-EPB-B PC-E2 DISC	In	1	185	12	Copper	Magnetic	PVC	Pos:150.1519 Zero: 73.2114	7.3069 17.9941	
CBL-PC-E3	PC-E3 DISC PC-E3 TERM	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	
CBL-PC-E3 DISC	MCC-EPB-A PC-E3 DISC	In	1	180	12	Copper	Magnetic	PVC	Pos:146.0938 Zero: 60.4219	7.1094 17.5078	
CBL-PC-E4	PC-E4 DISC PC-E4 TERM	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	
CBL-PC-E4 DISK	MCC-EPB-B PC-E4 DISC	In	1	265	12	Copper	Magnetic	PVC	Pos:215.0825 Zero: 77.8433	10.4666 25.7754	
CBL-PDP-E1	PDP-E1 DISC PDP-E1 TERM	In	1	10	10	Copper	Magnetic	PVC	Pos: 5.1215 Zero: 16.1406	0.3707 0.9128	
CBL-PDP-E1 DISC	MCC-EPB-A PDP-E1 DISC	In	1	20	10	Copper	Magnetic	PVC	Pos: 10.2431 Zero: 32.2813	0.7413 1.8255	
CBL-PDP-E2	MCC-EPB-B PDP-E2 TERM	In	1	40	12	Copper	Magnetic	PVC	Pos: 32.4653 Zero: 02.3160	1.5799 3.8906	
CBL-PDP-W1	PDP-W1 DISC PDPW1 TERM	In	1	26	10	Copper	Magnetic	PVC	Pos: 13.3160 Zero: 41.9656	0.9637 2.3732	
CBL-PDP-W1D	MCC-WPB-A PDP-W1 DISC	In	1	60	10	Copper	Magnetic	PVC	Pos: 30.7292 Zero: 96.8438	2.2240 5.4766	
CBL-PSCP-E1	PSCP-E1 DISC PSCP-E1 TERM	In	1	40	10	Copper	Magnetic	PVC	Pos: 20.4861 Zero: 64.5625	1.4826 3.6510	
CBL-PSCP-E1 DISC	MCC-EPB-A PSCP-E1 DISC	In	1	30	10	Copper	Magnetic	PVC	Pos: 15.3646 Zero: 48.4219	1.1120 2.7383	
CBL-PSCP-E2	PSCP-E2 DISC PSCP-E2 TERM	In	1	40	10	Copper	Magnetic	PVC	Pos: 20.4861 Zero: 64.5625	1.4826 3.6510	
CBL-PSCP-E2 DISC	MCC-EPB-B	In	1	30	10	Copper	Magnetic	PVC	Pos: 15.3646	1.1120	

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	----- Cable Description -----				Per Unit (100 MVA Base)		
					Size	Cond. Type	Duct Type	Insul	R pu	jX pu	
	PSCP-E2 DISC								Zero: 48.4219	2.7383	
CBL-PSCP-W1	PSCP-W1 DISC PSCP-W1 TERM	In	1	14	10	Copper	Magnetic	PVC	Pos: 7.1701 Zero: 22.5969	0.5189 1.2779	
CBL-PSCP-W1D	MCC-WPB-A PSCP-W1 DISC	In	1	22	10	Copper	Magnetic	PVC	Pos: 11.2674 Zero: 35.5094	0.8155 2.0081	
CBL-PSCP-W2	PSCP-W2 DISC PSCP-W2 TERM	In	1	8	10	Copper	Magnetic	PVC	Pos: 4.0972 Zero: 12.9125	0.2965 0.7302	
CBL-PSCP-W2D	MCC-WPB-B PSCP-W2 DISC	In	1	42	10	Copper	Magnetic	PVC	Pos: 21.5104 Zero: 67.7906	1.5568 3.8336	
CBL-PSLP-E1	PSLP-E1 VFD OUT PSLP-E1 TERM	In	1	5	10	Copper	Magnetic	PVC	Pos: 2.5608 Zero: 8.0703	0.1853 0.4564	
CBL-PSLP-E1 VFD	MCC-EPB-A PSLP-E1 VFD IN	In	1	30	10	Copper	Magnetic	PVC	Pos: 15.3646 Zero: 48.4219	1.1120 2.7383	
CBL-PSLP-E2	PSLP-E2 VFD OUT PSLP-E2 TERM	In	1	5	10	Copper	Magnetic	PVC	Pos: 2.5608 Zero: 8.0703	0.1853 0.4564	
CBL-PSLP-E2 VFD	MCC-EPB-B PSLP-E2 VFD IN	In	1	35	10	Copper	Magnetic	PVC	Pos: 17.9253 Zero: 56.4922	1.2973 3.1947	
CBL-PSLP-E3	PSLP-E3 VFD OUT PSLP-E3 TERM	In	1	5	10	Copper	Magnetic	PVC	Pos: 2.5608 Zero: 8.0703	0.1853 0.4564	
CBL-PSLP-E3 VFD	MCC-EPB-A PSLP-E3 VFD IN	In	1	40	10	Copper	Magnetic	PVC	Pos: 20.4861 Zero: 64.5625	1.4826 3.6510	
CBL-PSLPG-W1	PSLPG-W1 VFD O PSLPG-W1 TER	In	1	25	12	Copper	Magnetic	PVC	Pos: 20.2908 Zero: 63.9475	0.9874 2.4316	
CBL-PSLPG-W1V	MCC-WPB-A PSLPG-W1 VFD I	In	1	52	12	Copper	Magnetic	PVC	Pos: 42.2049 Zero: 33.0108	2.0538 5.0578	
CBL-PSLPG-W2	BUS-0794 PSLPG-W2 TER	In	1	25	12	Copper	Magnetic	PVC	Pos: 20.2908 Zero: 63.9475	0.9874 2.4316	
CBL-PSLPG-W2V	MCC-WPB-B PSLPG-W2 INPU	In	1	25	12	Copper	Magnetic	PVC	Pos: 20.2908 Zero: 63.9475	0.9874 2.4316	
CBL-PSLPM-E1	PSLPM-E1 LCP PSLPM-E1 TER	In	1	5	10	Copper	Magnetic	PVC	Pos: 2.5608 Zero: 8.0703	0.1853 0.4564	
CBL-PSLPM-E1 LCP	MCC-EPB-B PSLPM-E1 LCP	In	1	30	10	Copper	Magnetic	PVC	Pos: 15.3646 Zero: 48.4219	1.1120 2.7383	
CBL-PSLPM-E2	PSLPM-E2 LCP PSLPM-E2 TER	In	1	5	10	Copper	Magnetic	PVC	Pos: 2.5608 Zero: 8.0703	0.1853 0.4564	
CBL-PSLPM-E2 LCP	MCC-EPB-B PSLPM-E2 LCP	In	1	35	10	Copper	Magnetic	PVC	Pos: 17.9253 Zero: 56.4922	1.2973 3.1947	
CBL-PSLPM-E3	SLUDGE CND LC PSLPM-E3 TER	In	1	5	10	Copper	Magnetic	PVC	Pos: 2.5608 Zero: 8.0703	0.1853 0.4564	
CBL-PSLPM-E3 LCP	MCC-EPB-A SLUDGE CND L	In	1	40	10	Copper	Magnetic	PVC	Pos: 20.4861 Zero: 64.5625	1.4826 3.6510	

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	----- Cable Description -----				Per Unit (100 MVA Base)		
					Size	Cond. Type	Duct Type	Insul	R pu	jX pu	
CBL-PSLP-W2	BUS-0298 PSLP-W2 TERM	In	1	30	10	Copper	Magnetic	PVC	Pos: 15.3646 Zero: 48.4219	1.1120 2.7383	
CBL-RASP-E1	VFD3MCC-EBB-A WASP-E1 VFD I	In	1	155	10	Copper	Magnetic	PVC	Pos: 79.3837 Zero: 50.1797	5.7452 14.1478	
CBL-RF-1	RF-1 DISC RF-1 TERM	In	1	25	12	Copper	Magnetic	PVC	Pos: 20.2908 Zero: 63.9475	0.9874 2.4316	
CBL-RF-1 DISK	MCC-EPB-B RF-1 DISC	In	1	25	12	Copper	Magnetic	PVC	Pos: 20.2908 Zero: 63.9475	0.9874 2.4316	
CBL-RS-SAP-1	RS-SAP-1 DISC RS-SAP-1 TERM	In	1	17	12	Copper	Magnetic	PVC	Pos: 13.7977 Zero: 43.4843	0.6714 1.6535	
CBL-RS-SAP-1D	MCC-WPB-A RS-SAP-1 DISC	In	1	68	12	Copper	Magnetic	PVC	Pos: 55.1910 Zero: 73.9372	2.6858 6.6141	
CBL-S-21-1	S-21-1 DISC S-21-1 STARTER	In	1	15	10	Copper	Magnetic	PVC	Pos: 7.6823 Zero: 24.2109	0.5560 1.3691	
CBL-S-21-2	S-21-2 DISC S-21-2 STARTER	In	1	30	10	Copper	Magnetic	PVC	Pos: 15.3646 Zero: 48.4219	1.1120 2.7383	
CBL-S-21-3	S-21-3 DISC S-21-3 STARTER	In	1	30	10	Copper	Magnetic	PVC	Pos: 15.3646 Zero: 48.4219	1.1120 2.7383	
CBL-S-21-4	S-21-4 DISC S-21-4 STARTER	In	1	15	10	Copper	Magnetic	PVC	Pos: 7.6823 Zero: 24.2109	0.5560 1.3691	
CBL-S-54-2	S-54-2 DISC S-54-2 STR	In	1	4	10	Copper	Magnetic	PVC	Pos: 2.0486 Zero: 6.4563	0.1483 0.3651	
CBL-S-54-2D	S-54-2 DISC BUS-0287	In	1	87	10	Copper	Magnetic	PVC	Pos: 44.5573 Zero: 40.4234	3.2247 7.9410	
CBL-SCDR-W1	SCDR-W1 DISC SCDR-W1 TERM	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	
CBL-SCDR-W1D	MCC-WBB-A. SCDR-W1 DISC	In	1	242	12	Copper	Magnetic	PVC	Pos:196.4149 Zero: 19.0117	9.5582 23.5383	
CBL-SCDR-W2	SCDR-W2 DISC SCDR-W2 TERM	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	
CBL-SCDR-W2D	MCC-WBB-B. SCDR-W2 DISC	In	1	242	12	Copper	Magnetic	PVC	Pos:196.4149 Zero: 19.0117	9.5582 23.5383	
CBL-SC-E1	MCC-EBB-A. SC-E1 DISC	In	1	260	12	Copper	Magnetic	PVC	Pos:211.0243 Zero: 65.0538	10.2691 25.2891	
CBL-SC-E1A	SC-E1 DISC SC-E1 TERM	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	
CBL-SC-E2	SC-E2 DISC SC-E2 TERMS	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	
CBL-SC-E2D	MCC-EBB-B SC-E2 DISC	In	1	260	12	Copper	Magnetic	PVC	Pos:211.0243 Zero: 65.0538	10.2691 25.2891	
CBL-SC-E3	MCC-EBB-A. SC-E3 DISC	In	1	455	12	Copper	Magnetic	PVC	Pos:369.2925 Zero: 63.8442	17.9709 44.2559	

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	----- Cable Description -----				Per Unit (100 MVA Base)		
					Size	Cond. Type	Duct Type	Insul	R pu	jX pu	
CBL-SC-E3A	SC-E3 DISC SC-E3 TERM	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	
CBL-SC-E4	SC-E4 DISC SC-E4 TERMS	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	
CBL-SC-E4D	MCC-EBB-B SC-E4 DISC	In	1	455	12	Copper	Magnetic	PVC	Pos: 369.2925 Zero: 63.8442	17.9709 44.2559	
CBL-SSCP-E1	MCC-EBB-A SSCP-E1 DISC	In	1	170	10	Copper	Magnetic	PVC	Pos: 87.0660 Zero: 74.3906	6.3012 15.5169	
CBL-SSCP-E1A	SSCP-E1 DISC SSCP-E1 TERM	In	1	10	10	Copper	Magnetic	PVC	Pos: 5.1215 Zero: 16.1406	0.3707 0.9128	
CBL-SSCP-W1	SSCP-W1 DISC SSCP-W1 TERM	In	1	30	12	Copper	Magnetic	PVC	Pos: 24.3490 Zero: 76.7370	1.1849 2.9180	
CBL-SSCP-W1D	MCC-WBB-A. SSCP-W1 DISC	In	1	20	12	Copper	Magnetic	PVC	Pos: 16.2326 Zero: 51.1580	0.7899 1.9453	
CBL-SSCP-W2	SSCP-W2 DISC SSCP-W2 TERM	In	1	25	12	Copper	Magnetic	PVC	Pos: 20.2908 Zero: 63.9475	0.9874 2.4316	
CBL-SSCP-W2D	MCC-WBB-B. SSCP-W2 DISC	In	1	20	12	Copper	Magnetic	PVC	Pos: 16.2326 Zero: 51.1580	0.7899 1.9453	
CBL-SUMP PUMP 1	SUMP PUMP 1 DI SMPPMP1 TER	In	1	5	12	Copper	Magnetic	PVC	Pos: 4.0582 Zero: 12.7895	0.1975 0.4863	
CBL-SUMP PUMP 1	MCC-EBB-B SUMP PUMP 1 D	In	1	60	12	Copper	Magnetic	PVC	Pos: 48.6979 Zero: 53.4740	2.3698 5.8359	
CBL-SUMP PUMP 3	SUMP PUMP 3 DI SMPPMP3 TER	In	1	5	12	Copper	Magnetic	PVC	Pos: 4.0582 Zero: 12.7895	0.1975 0.4863	
CBL-SUMP PUMP 3	MCC-EBB-B SUMP PUMP 3 D	In	1	160	12	Copper	Magnetic	PVC	Pos: 129.8611 Zero: 09.2639	6.3194 15.5625	
CBL-SWMX-E1	MCC-EPB-A. BUS-0111	In	1	125	12	Copper	Magnetic	PVC	Pos: 101.4540 Zero: 19.7374	4.9371 12.1582	
CBL-SWMX-E2	MCC-EPB-B.. BUS-0155	In	1	165	12	Copper	Magnetic	PVC	Pos: 133.9193 Zero: 22.0534	6.5169 16.0488	
CBL-SWMX-E3	MCC-EPB-A. BUS-0127	In	1	125	12	Copper	Magnetic	PVC	Pos: 101.4540 Zero: 19.7374	4.9371 12.1582	
CBL-SWMX-E4	MCC-EPB-B.. BUS-0171	In	1	165	12	Copper	Magnetic	PVC	Pos: 133.9193 Zero: 22.0534	6.5169 16.0488	
CBL-SWMX-W1	MCC-WPB-A. BUS-0281	In	1	69	10	Copper	Magnetic	PVC	Pos: 35.3385 Zero: 11.3703	2.5576 6.2980	
CBL-SWMX-W2	MCC-WPB-B. BUS-0296	In	1	65	10	Copper	Magnetic	PVC	Pos: 33.2899 Zero: 04.9141	2.4093 5.9329	
CBL-TEMP PUMPS	MCC-P TEMP PUMPS	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266	
CBL-WASP-E1	WASP-E1 VFD O WASP-E1 TERM	In	1	40	10	Copper	Magnetic	PVC	Pos: 20.4861 Zero: 64.5625	1.4826 3.6510	

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	Size	----- Cable Description -----			Per Unit (100 MVA Base)		
						Cond. Type	Duct Type	Insul	R pu	jX pu	
CBL-WASP-E2	WASP-E2 VFD O WASP-E2 TERM	In	1	35	10	Copper	Magnetic	PVC	Pos: 17.9253 Zero: 56.4922	1.2973 3.1947	
CBL-WASP-E2 VFD	MCC-EBB-B WASP-E2 VFD I	In	1	155	10	Copper	Magnetic	PVC	Pos: 79.3837 Zero: 50.1797	5.7452 14.1478	
CBL-WASP-W1	WASP-W1 VFD O WASP-W1 TER	In	1	55	12	Copper	Magnetic	PVC	Pos: 44.6398 Zero: 40.6845	2.1723 5.3496	
CBL-WASP-W1 VF	MCC-WBB-A WASP-W1 VFD I	In	1	20	12	Copper	Magnetic	PVC	Pos: 16.2326 Zero: 51.1580	0.7899 1.9453	
CBL-WASP-W2	WASP-W2 VFD O WASP-W2 TER	In	1	56	12	Copper	Magnetic	PVC	Pos: 45.4514 Zero: 43.2424	2.2118 5.4469	
CBL-WASP-W2 VF	MCC-WBB-B WASP-W2 VFD I	In	1	20	12	Copper	Magnetic	PVC	Pos: 16.2326 Zero: 51.1580	0.7899 1.9453	
CBL-WBB-EF-1	WBB-EF-1 DISC WBB-EF-1 TER	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	
CBL-WBB-EF-1D	MCC-WBB-A WBB-EF-1 DISC	In	1	20	12	Copper	Magnetic	PVC	Pos: 16.2326 Zero: 51.1580	0.7899 1.9453	
CBL-WBB-EF-2	WBB-EF-2 DISC WBB-EF-2 TER	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	
CBL-WBB-EF-2D	MCC-WBB-B. WBB-EF-2 DISC	In	1	18	12	Copper	Magnetic	PVC	Pos: 14.6094 Zero: 46.0422	0.7109 1.7508	
CBL-WBB-EF-3	WBB-EF-3 DISC WBB-EF-3 TER	In	1	5	12	Copper	Magnetic	PVC	Pos: 4.0582 Zero: 12.7895	0.1975 0.4863	
CBL-WBB-EF-3D	MCC-WBB-A WBB-EF-3 DISC	In	1	40	12	Copper	Magnetic	PVC	Pos: 32.4653 Zero: 02.3160	1.5799 3.8906	
CBL-WBB-EF-4	WBB-EF-4 DISC WBB-EF-4 TER	In	1	5	12	Copper	Magnetic	PVC	Pos: 4.0582 Zero: 12.7895	0.1975 0.4863	
CBL-WBB-EF-4D	MCC-WBB-B. WBB-EF-4 DISC	In	1	52	12	Copper	Magnetic	PVC	Pos: 42.2049 Zero: 33.0108	2.0538 5.0578	
CBL-WBB-EF-5	WBB-EF-5 DISC WBB-EF-5 TER	In	1	5	12	Copper	Magnetic	PVC	Pos: 4.0582 Zero: 12.7895	0.1975 0.4863	
CBL-WBB-EF-5D	MCC-WBB-B. WBB-EF-5 DISC	In	1	75	12	Copper	Magnetic	PVC	Pos: 60.8724 Zero: 91.8425	2.9622 7.2949	
CBL-WBB-EF-6	WBB-EF-6 DISC WBB-EF-6 TER	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	
CBL-WBB-EF-6D	MCC-WBB-B. WBB-EF-6 DISC	In	1	100	12	Copper	Magnetic	PVC	Pos: 81.1632 Zero: 55.7899	3.9497 9.7266	
CBL-WBB-EF-7	WBB-EF-7 DISC WBB-EF-7 TER	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	
CBL-WBB-EF-7D	MCC-WBB-A WBB-EF-7 DISC	In	1	60	12	Copper	Magnetic	PVC	Pos: 48.6979 Zero: 53.4740	2.3698 5.8359	
CBL-WBB-H1	WBB-H1 DISC WBB-H1	In	1	10	10	Copper	Magnetic	PVC	Pos: 5.1215 Zero: 16.1406	0.3707 0.9128	

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	----- Cable Description -----				Per Unit (100 MVA Base)		
					Size	Cond. Type	Duct Type	Insul	R pu	jX pu	
CBL-WBB-H1D	MCC-WBB-B. WBB-H1 DISC	In	1	22	10	Copper	Magnetic	PVC	Pos: 11.2674 Zero: 35.5094	0.8155 2.0081	
CBL-WBB-H2	WBB-H2 DISC WBB-H2	In	1	10	10	Copper	Magnetic	PVC	Pos: 5.1215 Zero: 16.1406	0.3707 0.9128	
CBL-WBB-H2D	MCC-WBB-A. WBB-H2 DISC	In	1	35	10	Copper	Magnetic	PVC	Pos: 17.9253 Zero: 56.4922	1.2973 3.1947	
CBL-WBB-HV-1	WBB-HV-1 DISC WBB-HV-1 TER	In	1	16	10	Copper	Magnetic	PVC	Pos: 8.1944 Zero: 25.8250	0.5931 1.4604	
CBL-WBB-HV-1D	MCC-WBB-A. WBB-HV-1 DISC	In	1	53	10	Copper	Magnetic	PVC	Pos: 27.1441 Zero: 85.5453	1.9645 4.8376	
CBL-WBB-P-1	WBB-P-1 DISC WBB-P-1 TERM	In	1	6	12	Copper	Magnetic	PVC	Pos: 4.8698 Zero: 15.3474	0.2370 0.5836	
CBL-WBB-P-1D	MCC-WBB-A. WBB-P-1 DISC	In	1	70	12	Copper	Magnetic	PVC	Pos: 56.8142 Zero: 79.0530	2.7648 6.8086	
CBL-WBB-P-2	WBB-P-2 DISC WBB-P-2 TERM	In	1	6	12	Copper	Magnetic	PVC	Pos: 4.8698 Zero: 15.3474	0.2370 0.5836	
CBL-WBB-P-2D	MCC-WBB-B WBB-P-2 DISC	In	1	70	12	Copper	Magnetic	PVC	Pos: 56.8142 Zero: 79.0530	2.7648 6.8086	
CBL-WPB-EF-1	WPB-EF-1 DISC WPB-EF-1 TER	In	1	7	12	Copper	Magnetic	PVC	Pos: 5.6814 Zero: 17.9053	0.2765 0.6809	
CBL-WPB-EF-1D	MCC-WPB-A WPB-EF-1 DISC	In	1	61	12	Copper	Magnetic	PVC	Pos: 49.5095 Zero: 56.0319	2.4093 5.9332	
CBL-WPB-EF-2	PC-WPB-EF-2 DIS WPB-EF-2 TER	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	
CBL-WPB-EF-2D	MCC-WPB-B PC-WPB-EF-2 D	In	1	41	12	Copper	Magnetic	PVC	Pos: 33.2769 Zero: 04.8739	1.6194 3.9879	
CBL-WPB-H1	WPB-H1 DISC WPB-H1 HOIST	In	1	10	10	Copper	Magnetic	PVC	Pos: 5.1215 Zero: 16.1406	0.3707 0.9128	
CBL-WPB-H1D	MCC-WPB-B. WPB-H1 DISC	In	1	30	10	Copper	Magnetic	PVC	Pos: 15.3646 Zero: 48.4219	1.1120 2.7383	
CBL-WPB-HV-1	WPB-HV-1 DISC BUS-0463	In	1	8	12	Copper	Magnetic	PVC	Pos: 6.4931 Zero: 20.4632	0.3160 0.7781	
CBL-WPB-HV-1D	MCC-WPB-B WPB-HV-1 DISC	In	1	49	12	Copper	Magnetic	PVC	Pos: 39.7700 Zero: 25.3371	1.9353 4.7660	
CBL-WPB-P-1	WPB-P-1 DISC BUS-0282	In	1	1	12	Copper	Magnetic	PVC	Pos: 0.8116 Zero: 2.5579	0.0395 0.0973	
CBL-WPB-P-1D	MCC-WPB-A. WPB-P-1 DISC	In	1	79	12	Copper	Magnetic	PVC	Pos: 64.1189 Zero: 02.0741	3.1202 7.6840	
CBL-WPB-P-2	PC-WPB-P-2 DISC WPB-P-2 TERMS	In	1	12	12	Copper	Magnetic	PVC	Pos: 9.7396 Zero: 30.6948	0.4740 1.1672	
CBL-WPB-P-2D	MCC-WPB-B.	In	1	69	12	Copper	Magnetic	PVC	Pos: 56.0026	2.7253	

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	----- Cable Description -----				Per Unit (100 MVA Base)		
					Size	Cond. Type	Duct Type	Insul	R pu	jX pu	
	PC-WPB-P-2 DIS								Zero: 76.4951	6.7113	
CBL-WPE-SAP-2	WPE-SAP-2 DISC WPE-SAP-2 TER	In	1	12	12	Copper	Magnetic	PVC	Pos: 9.7396 Zero: 30.6948	0.4740 1.1672	
CBL-WPE-SAP-2D	MCC-WPB-B WPE-SAP-2 DIS	In	1	68	12	Copper	Magnetic	PVC	Pos: 55.1910 Zero: 73.9372	2.6858 6.6141	
CBL-WSE-SAP-3	WSE-SAP-3 DISC WSE-SAP-3 TER	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	
CBL-WSE-SAP-3D	MCC-WBB-A. WSE-SAP-3 DI	In	1	40	12	Copper	Magnetic	PVC	Pos: 32.4653 Zero: 02.3160	1.5799 3.8906	
CBL-XFMR-LP-V	MCC-EPB-A XFMR LP-V PRI	In	1	25	4	Copper	Magnetic	PVC	Pos: 3.4831 Zero: 10.9766	0.6858 1.6884	
CBL-XFMR-LP-W	MCC-EPB-B XFMR-LP-W PRI	In	1	25	4	Copper	Magnetic	PVC	Pos: 3.4831 Zero: 10.9766	0.6858 1.6884	
L03.101	XFMR LP-RLS SE LP-RLS	In	1	10	1	Copper	Magnetic	PVC	Pos: 3.6982 Zero: 11.6540	1.3175 3.2429	
L03.102	XFMR LP-LSE SE LP-LSE	In	1	5	1	Copper	Magnetic	PVC	Pos: 1.8491 Zero: 5.8270	0.6587 1.6214	
L05.101	XFMR LP U SEC LP-U	In	1	10	4	Copper	Magnetic	PVC	Pos: 7.4196 Zero: 23.3820	1.4608 3.5965	
L05.102	XFMR LP O SEC LP-O	In	1	10	4	Copper	Magnetic	PVC	Pos: 7.4196 Zero: 23.3820	1.4608 3.5965	
L05.116	XFMR LP-EBB-A S LP-EBB-A	In	1	10	1/0	Copper	Magnetic	PVC	Pos: 2.9586 Zero: 9.3241	1.2482 3.0718	
L05.214	XFMR LP-T SEC LP-T	In	1	5	2/0	Copper	Magnetic	PVC	Pos: 1.1788 Zero: 3.7144	0.6160 1.5163	
L06.100	XFMR LP-WPB-A S LP-WPB-A	In	1	6	1	Copper	Magnetic	PVC	Pos: 2.2189 Zero: 6.9924	0.7905 1.9457	
L06.200	LP-WPB-A LP-WPB-B	In	1	4	1	Copper	Magnetic	PVC	Pos: 1.4793 Zero: 4.6616	0.5270 1.2972	
L07.119	XFMR LP-WBB-A S LP-WBB-A	In	1	5	1/0	Copper	Magnetic	PVC	Pos: 1.4793 Zero: 4.6621	0.6241 1.5359	
L07.218	LP-WBB-A LP-WBB-B	In	1	5	1/0	Copper	Magnetic	PVC	Pos: 1.4793 Zero: 4.6621	0.6241 1.5359	
L09.020	XFMR LP-ADM-1 S LP-ADM-1	In	1	5	250	Copper	Magnetic	PVC	Pos: 0.6379 Zero: 2.0098	0.5721 1.4088	
L09.030A [FIRE RATLP-ADM-2 DISC T	LP-ADM-2	In	2	175	250	Copper	Magnetic	PVC	Pos: 8.3854 Zero: 26.4171	7.5195 18.5178	
L09.030x	LP-ADM-2 DISC T BUS-0015	In	2	10	250	Copper	Magnetic	PVC	Pos: 0.4792 Zero: 1.5095	0.4297 1.0582	
L09.035	LP-ADM-1 LP-ADM-1A	In	1	5	250	Copper	Magnetic	PVC	Pos: 0.6379 Zero: 2.0098	0.5721 1.4088	

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	----- Cable Description -----				Per Unit (100 MVA Base)		
					Size	Cond. Type	Duct Type	Insul	R pu	jX pu	
L09.040	UPS-ADM-1 INPU LP-ADM-1A	In	1	8	4	Copper	Magnetic	PVC	Pos: 5.9357 Zero: 18.7056	1.1686 2.8772	
L09.045	LP-ADM-UPS UPS-ADM-1 OUT	In	1	5	4	Copper	Magnetic	PVC	Pos: 3.7098 Zero: 11.6910	0.7304 1.7983	
L11.116	XFMR LP-CEB-A S LP-CEB-A	In	1	10	1/0	Copper	Magnetic	PVC	Pos: 2.9586 Zero: 9.3241	1.2482 3.0718	
L11.216	LP-CEB-A LP-CEB-B	In	1	6	1/0	Copper	Magnetic	PVC	Pos: 1.7751 Zero: 5.5945	0.7489 1.8431	
M05.001	SUB 8 BUS A PAB-E1 STR IN	In	1	80	2	Copper	Non-Magnetic	EPR	Pos: 0.0934 Zero: 0.1484	0.0216 0.0549	
M05.002	PAB-E1 STR OUT PAB-E1 MTR TE	In	1	175	2	Copper	Non-Magnetic	EPR	Pos: 0.2043 Zero: 0.3247	0.0472 0.1201	
M05.003	SUB 8 BUS A SUB 6 XFMR A P	In	1	50	500	Copper	Non-Magnetic	EPR	Pos: 0.0080 Zero: 0.0127	0.0108 0.0289	
M05.004	SUB 8 BUS A PAB-E3 STR IN	In	1	80	2	Copper	Non-Magnetic	EPR	Pos: 0.0934 Zero: 0.1484	0.0216 0.0549	
M05.005	PAB-E3 STR OUT PAB-E3 MTR TE	In	1	175	2	Copper	Non-Magnetic	EPR	Pos: 0.2043 Zero: 0.3247	0.0472 0.1201	
M05.006	SUB 8 BUS B PAB-E2 STR IN	In	1	80	2	Copper	Non-Magnetic	EPR	Pos: 0.0934 Zero: 0.1484	0.0216 0.0549	
M05.007	PAB-E2 STR OUT PAB-E2 MTR TE	In	1	175	2	Copper	Non-Magnetic	EPR	Pos: 0.2043 Zero: 0.3247	0.0472 0.1201	
M05.008	SUB 8 BUS B SUB 6 XFMR B P	In	1	50	500	Copper	Non-Magnetic	EPR	Pos: 0.0080 Zero: 0.0127	0.0108 0.0289	
M11.100	DTE NORTH 15 KV BUS 1 Lin	In	1	550	4/0	Copper	Non-Magnetic	EPR	Pos: 0.0202 Zero: 0.0321	0.0147 0.0374	
M11.101	15 KV BUS 1 SUB 1 PRIMAR	In	1	2,620	2	Copper	Non-Magnetic	EPR	Pos: 0.3037 Zero: 0.4828	0.0823 0.2093	
M11.102	15 KV BUS 1 SUB 2 PRIMAR	In	1	2,180	2	Copper	Non-Magnetic	EPR	Pos: 0.2527 Zero: 0.4017	0.0684 0.1742	
M11.103	15 KV BUS 1 SUB 3 PRIMAR	In	1	340	3/0	Copper	Non-Magnetic	EPR	Pos: 0.0157 Zero: 0.0250	0.0094 0.0240	
M11.104	15 KV BUS 1 SUB 4 PRIMAR	In	1	1,500	2	Copper	Non-Magnetic	EPR	Pos: 0.1739 Zero: 0.2764	0.0471 0.1198	
M11.105	15 KV BUS 1 SUB 5 PRIMAR	In	1	160	250	Copper	Non-Magnetic	EPR	Pos: 0.0050 Zero: 0.0080	0.0042 0.0107	
M11.107	15 KV BUS 1 SUB 7 XFMR A P	In	1	60	2	Copper	Non-Magnetic	EPR	Pos: 0.0070 Zero: 0.0111	0.0019 0.0048	
M11.108	15 KV BUS 1 SUB 8 PRIMAR	In	1	300	250	Copper	Non-Magnetic	EPR	Pos: 0.0094 Zero: 0.0150	0.0079 0.0200	
M11.109	15 KV BUS 1 15 KV BUS 3	In	1	5	1200	Copper	Busway	Epoxy	Pos: 0.0000 Zero: 0.0002	0.0002 0.0010	

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	----- Cable Description -----				Per Unit (100 MVA Base)		
					Size	Cond. Type	Duct Type	Insul	R pu	jX pu	
M11.110	15 KV BUS 1	In	1	300	250	Copper	Non-Magnetic	EPR	Pos: 0.0094 Zero: 0.0150	0.0079 0.0200	
M11.117	15 KV BUS 3 BUS G1	In	1	65	250	Copper	Non-Magnetic	EPR	Pos: 0.0020 Zero: 0.0032	0.0017 0.0043	
M11.118	15 KV BUS 3 BUS-0280	In	1	100	250	Copper	Non-Magnetic	EPR	Pos: 0.0031 Zero: 0.0050	0.0026 0.0067	
M11.200	DTE SOUTH 15 KV BUS 2 Lin	In	1	400	4/0	Copper	Non-Magnetic	EPR	Pos: 0.0147 Zero: 0.0233	0.0107 0.0272	
M11.201	15 KV BUS 2 SUB 1 PRIMAR	In	1	1,000	2	Copper	Non-Magnetic	EPR	Pos: 0.1159 Zero: 0.1843	0.0314 0.0799	
M11.202	15 KV BUS 2 SUB 2 PRIMAR	In	1	480	2	Copper	Non-Magnetic	EPR	Pos: 0.0556 Zero: 0.0885	0.0151 0.0383	
M11.203	15 KV BUS 2 SUB 3 PRIMAR	In	1	340	3/0	Copper	Non-Magnetic	EPR	Pos: 0.0157 Zero: 0.0250	0.0094 0.0240	
M11.204	15 KV BUS 2 SUB 4 PRIMAR	In	1	170	2	Copper	Non-Magnetic	EPR	Pos: 0.0197 Zero: 0.0313	0.0053 0.0136	
M11.205	15 KV BUS 2 SUB 5 PRIMAR	In	1	160	250	Copper	Non-Magnetic	EPR	Pos: 0.0050 Zero: 0.0080	0.0042 0.0107	
M11.207	15 KV BUS 2 SUB 7 XFMR B P	In	1	60	2	Copper	Non-Magnetic	EPR	Pos: 0.0070 Zero: 0.0111	0.0019 0.0048	
M11.208	15 KV BUS 2 SUB 8 PRIMAR	In	1	300	250	Copper	Non-Magnetic	EPR	Pos: 0.0094 Zero: 0.0150	0.0079 0.0200	
M11.209	15 KV BUS 2 15 KV BUS 3	In	1	5	1200	Copper	Busway	Epoxy	Pos: 0.0000 Zero: 0.0002	0.0002 0.0010	
M11.210	15 KV BUS 2	In	1	300	250	Copper	Non-Magnetic	EPR	Pos: 0.0094 Zero: 0.0150	0.0079 0.0200	
M11.217	15 KV BUS 3 BUS G2	In	1	50	250	Copper	Non-Magnetic	EPR	Pos: 0.0016 Zero: 0.0025	0.0013 0.0033	
P03.001	SUB 1 BUS A MCC-RLS-A	In	2	100	500	Copper	Magnetic	PVC	Pos: 0.6380 Zero: 2.0095	1.0113 2.4891	
P03.002	SUB 1 BUS A MCC-C	In	1	35	4/0	Copper	Magnetic	PVC	Pos: 0.9722 Zero: 3.0640	0.7550 1.8594	
P03.003	SUB 1 BUS B MCC-RLS-B	In	1	125	500	Copper	Magnetic	PVC	Pos: 1.5951 Zero: 5.0239	2.5282 6.2229	
P03.004	SUB 1 BUS B MCC-D	In	1	20	4/0	Copper	Magnetic	PVC	Pos: 0.5556 Zero: 1.7509	0.4314 1.0625	
P03.103	SRP-1 RVSS OUT SRP-1 JBOX	In	1	20	2/0	Copper	Magnetic	PVC	Pos: 0.8854 Zero: 2.7899	0.4627 1.1389	
P03.103A	SRP-1 JBOX SRP-1 TERM	In	1	5	2/0	Copper	Magnetic	PVC	Pos: 0.2214 Zero: 0.6975	0.1157 0.2847	
P03.104	SRP-3 RVSS OUT SRP-3 JBOX	In	1	20	2/0	Copper	Magnetic	PVC	Pos: 0.8854 Zero: 2.7899	0.4627 1.1389	

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	----- Cable Description -----			Per Unit (100 MVA Base)			
					Size	Cond. Type	Duct Type	Insul	R pu	jX pu	
P03.104A	SRP-3 JBOX SRP- 3 TERM	In	1	5	2/0	Copper	Magnetic	PVC	Pos: 0.2214 Zero: 0.6975	0.1157 0.2847	
P03.105	SRP-5 RVSS OUT SRP-5 JBOX	In	1	40	2/0	Copper	Magnetic	PVC	Pos: 1.7708 Zero: 5.5799	0.9253 2.2778	
P03.106	MCC-RLS-A ATS-RLS EMG	In	1	10	4	Copper	Magnetic	PVC	Pos: 1.3932 Zero: 4.3906	0.2743 0.6753	
P03.106A	ATS-RLS LOAD XFMR LP-RLS P	In	1	10	4	Copper	Magnetic	PVC	Pos: 1.3932 Zero: 4.3906	0.2743 0.6753	
P03.107,A TIE	MCC-RLS-B MCC-RLS-A	In	2	20	350	Copper	Magnetic	PVC	Pos: 0.1641 Zero: 0.5169	0.2131 0.5247	
P03.202	RVSS SRP2 OUT SRP-2 JBOX	In	1	20	2/0	Copper	Magnetic	PVC	Pos: 0.8854 Zero: 2.7899	0.4627 1.1389	
P03.202A	SRP-2 JBOX SRP-2 TERM	In	1	5	2/0	Copper	Magnetic	PVC	Pos: 0.2214 Zero: 0.6975	0.1157 0.2847	
P03.204	RVSS SRP4 OUT SRP-4 JBOX	In	1	25	2/0	Copper	Magnetic	PVC	Pos: 1.1068 Zero: 3.4874	0.5783 1.4236	
P03.204A	SRP-4 JBOX SRP-4 TERM	In	1	5	2/0	Copper	Magnetic	PVC	Pos: 0.2214 Zero: 0.6975	0.1157 0.2847	
P03.205	MCC-RLS-B ATS-RLS NRM	In	1	10	4	Copper	Magnetic	PVC	Pos: 1.3932 Zero: 4.3906	0.2743 0.6753	
P03.207	MCC-RLS-B EQPT RCPT RLS	In	1	45	10	Copper	Magnetic	PVC	Pos: 23.0469 Zero: 72.6328	1.6680 4.1074	
P03.208	MCC-C ATS-LSE EMG	In	1	40	2/0	Copper	Magnetic	PVC	Pos: 1.7708 Zero: 5.5799	0.9253 2.2778	
P03.208A	ATS-LSE LOAD PP-LSE	In	1	10	2/0	Copper	Magnetic	PVC	Pos: 0.4427 Zero: 1.3950	0.2313 0.5694	
P03.209	PP-LSE XFMR LP-LSE P	In	1	4	4	Copper	Magnetic	PVC	Pos: 0.5573 Zero: 1.7563	0.1097 0.2701	
P03.215	MCC-D ATS-LSE NRM	In	1	45	2/0	Copper	Magnetic	PVC	Pos: 1.9922 Zero: 6.2773	1.0410 2.5625	
P04.210	MCC-EPB-B. F-1-1 DISC	In	1	75	10	Copper	Magnetic	PVC	Pos: 38.4115 Zero: 21.0547	2.7799 6.8457	
P04.210A	F-1-1 DISC F-1-2 DISC	In	1	1	10	Copper	Magnetic	PVC	Pos: 0.5122 Zero: 1.6141	0.0371 0.0913	
P04.210B	F-1-2 DISC F-1-3 DISC	In	1	1	10	Copper	Magnetic	PVC	Pos: 0.5122 Zero: 1.6141	0.0371 0.0913	
P04.210C	F-1-3 DISC F-1-4 DISC	In	1	1	10	Copper	Magnetic	PVC	Pos: 0.5122 Zero: 1.6141	0.0371 0.0913	
P04.210D	F-1-4 DISC S-21-1 DISC	In	1	1	10	Copper	Magnetic	PVC	Pos: 0.5122 Zero: 1.6141	0.0371 0.0913	
P04.210E	S-21-1 DISC S-21-2 DISC	In	1	1	10	Copper	Magnetic	PVC	Pos: 0.5122 Zero: 1.6141	0.0371 0.0913	

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	----- Cable Description -----				Per Unit (100 MVA Base)		
					Size	Cond. Type	Duct Type	Insul	R pu	jX pu	
P04.215	MCC-EPB-B. F-1-5 DISC	In	1	100	10	Copper	Magnetic	PVC	Pos: 51.2153 Zero: 61.4063	3.7066 9.1276	
P04.215A	F-1-5 DISC F-1-6 DISC	In	1	1	10	Copper	Magnetic	PVC	Pos: 0.5122 Zero: 1.6141	0.0371 0.0913	
P04.215B	F-1-6 DISC F-1-7 DISC	In	1	1	10	Copper	Magnetic	PVC	Pos: 0.5122 Zero: 1.6141	0.0371 0.0913	
P04.215C	F-1-7 DISC F-1-8 DISC	In	1	1	10	Copper	Magnetic	PVC	Pos: 0.5122 Zero: 1.6141	0.0371 0.0913	
P04.215D	F-1-8 DISC S-21-3 DISC	In	1	1	10	Copper	Magnetic	PVC	Pos: 0.5122 Zero: 1.6141	0.0371 0.0913	
P04.215E	S-21-3 DISC S-21-4 DISC	In	1	1	10	Copper	Magnetic	PVC	Pos: 0.5122 Zero: 1.6141	0.0371 0.0913	
P04.220	MCC-EPB-A MCC-EPB-B	In	1	10	4/0	Copper	Magnetic	PVC	Pos: 0.2778 Zero: 0.8754	0.2157 0.5313	
P04.MCC-M	SUB 4 BUS A MCC-M	In	3	50	250	Copper	Magnetic	PVC	Pos: 0.3993 Zero: 1.2580	0.2742 0.6749	
P04.MCC-N	SUB 4 BUS B MCC-N	In	3	15	250	Copper	Magnetic	PVC	Pos: 0.1198 Zero: 0.3774	0.0822 0.2025	
P04.MCC-P	SUB 4 BUS B MCC-P	In	2	40	3/0	Copper	Magnetic	PVC	Pos: 0.6988 Zero: 2.2023	0.3446 0.8490	
P04.MCC-Q	SUB 4 BUS A MCC-Q	In	3	50	2/0	Copper	Magnetic	PVC	Pos: 0.7378 Zero: 2.3249	0.2944 0.7248	
P04.UV 2A	SUB 4 BUS B PDP UV 2A	In	1	100	3/0	Copper	Magnetic	PVC	Pos: 3.4939 Zero: 11.0113	1.7231 4.2448	
P04.UV 2B	SUB 4 BUS B PDP UV 2B	In	1	100	3/0	Copper	Magnetic	PVC	Pos: 3.4939 Zero: 11.0113	1.7231 4.2448	
P05.009,009A	SUB 6 BUS A MCC-EBB-A	In	2	65	350	Copper	Magnetic	PVC	Pos: 0.5332 Zero: 1.6800	0.5262 1.2949	
P05.010	SUB 6 BUS A MCC-EPB-A	In	1	350	4/0	Copper	Magnetic	PVC	Pos: 9.7222 Zero: 30.6402	5.7878 14.2491	
P05.011,A	SUB 6 BUS B MCC-EBB-B	In	2	65	350	Copper	Magnetic	PVC	Pos: 0.5332 Zero: 1.6800	0.5262 1.2949	
P05.012	SUB 6 BUS B MCC-EPB-B	In	1	350	4/0	Copper	Magnetic	PVC	Pos: 9.7222 Zero: 30.6402	5.7878 14.2491	
P05.1	SUB 5 BUS A MCC-R	In	3	25	300	Copper	Magnetic	PVC	Pos: 0.1678 Zero: 0.5288	0.1364 0.3356	
P05.101	MCC-EBB-A XFMR LP U PRI	In	1	15	6	Copper	Magnetic	PVC	Pos: 3.3203 Zero: 10.4635	0.4460 1.0983	
P05.102	MCC-EBB-A XFMR LP O PRI	In	1	15	6	Copper	Magnetic	PVC	Pos: 3.3203 Zero: 10.4635	0.4460 1.0983	
P05.105	MCC-EBB-A	In	1	160	8	Copper	Magnetic	PVC	Pos: 56.3194	5.2361	

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	----- Cable Description -----				Per Unit (100 MVA Base)	
					Size	Cond. Type	Duct Type	Insul	R pu	jX pu
	RASP-E1 VFD IN								Zero: 77.4931	12.8889
P05.106	RASP-E1 VFD OU RASP-E1 TERM	In	1	55	8	Copper	Magnetic	PVC	Pos: 19.3598 Zero: 61.0132	1.7999 4.4306
P05.107	MCC-EBB-A RASP-E3 VFD IN	In	1	160	8	Copper	Magnetic	PVC	Pos: 56.3194 Zero: 77.4931	5.2361 12.8889
P05.108	RASP-E3 VFD OU RASP-E3 TERM	In	1	45	8	Copper	Magnetic	PVC	Pos: 15.8398 Zero: 49.9199	1.4727 3.6250
P05.109	MCC-EBB-A RASP-E5 VFD IN	In	1	160	8	Copper	Magnetic	PVC	Pos: 56.3194 Zero: 77.4931	5.2361 12.8889
P05.110	RASP-E5 VFD OU RASP-E5 TERM	In	1	25	8	Copper	Magnetic	PVC	Pos: 8.7999 Zero: 27.7333	0.8181 2.0139
P05.111	MCC-EBB-A RASP-E7 VFD IN	In	1	160	8	Copper	Magnetic	PVC	Pos: 56.3194 Zero: 77.4931	5.2361 12.8889
P05.112	RASP-E7 VFD OU RASP-E7 TERM	In	1	30	8	Copper	Magnetic	PVC	Pos: 10.5599 Zero: 33.2799	0.9818 2.4167
P05.114	MCC-EBB-A ADP-E2 DISC	In	1	145	2	Copper	Magnetic	PVC	Pos: 12.7127 Zero: 40.0638	3.6816 9.0625
P05.114A	ADP-E2 DISC ADP-E2 TERM	In	1	6	2	Copper	Magnetic	PVC	Pos: 0.5260 Zero: 1.6578	0.1523 0.3750
P05.115	MCC-EBB-A ATS-EBB-EMG	In	1	15	350	Copper	Magnetic	PVC	Pos: 0.2461 Zero: 0.7754	0.3197 0.7871
P05.115A	ATS-EBB-LOAD PP-EBB-A	In	1	15	350	Copper	Magnetic	PVC	Pos: 0.2461 Zero: 0.7754	0.3197 0.7871
P05.116	PP-EBB-A XFMR LP-EBB-	In	1	10	350	Copper	Magnetic	PVC	Pos: 0.1641 Zero: 0.5169	0.2131 0.5247
P05.201	PP-EBB-A LINESIDE IPC LP	In	1	250	4	Copper	Magnetic	PVC	Pos: 34.8307 Zero: 09.7656	6.8576 16.8837
P05.2010	RASP-E6 VFD OU RASP-E6 TERM	In	1	25	8	Copper	Magnetic	PVC	Pos: 8.7999 Zero: 27.7333	0.8181 2.0139
P05.205	MCC-EBB-B RASP-E2 VFD IN	In	1	160	8	Copper	Magnetic	PVC	Pos: 56.3194 Zero: 77.4931	5.2361 12.8889
P05.206	RASP-E2 VFD OU RASP-E2 TERM	In	1	50	8	Copper	Magnetic	PVC	Pos: 17.5998 Zero: 55.4666	1.6363 4.0278
P05.207	MCC-EBB-B RASP-E4 VFD IN	In	1	160	8	Copper	Magnetic	PVC	Pos: 56.3194 Zero: 77.4931	5.2361 12.8889
P05.208	RASP-E4 VFD OU RASP-E4 TERM	In	1	40	8	Copper	Magnetic	PVC	Pos: 14.0799 Zero: 44.3733	1.3090 3.2222
P05.209	MCC-EBB-B RASP-E6 VFD IN	In	1	160	8	Copper	Magnetic	PVC	Pos: 56.3194 Zero: 77.4931	5.2361 12.8889
P05.211	MCC-EBB-B ADP-E1 DISC	In	1	95	12	Copper	Magnetic	PVC	Pos: 77.1050 Zero: 43.0004	3.7522 9.2402

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	----- Cable Description -----				Per Unit (100 MVA Base)		
					Size	Cond. Type	Duct Type	Insul	R pu	jX pu	
P05.211A	ADP-E1 DISC ADP-E1 TERM	In	1	6	4	Copper	Magnetic	PVC	Pos: 0.8359 Zero: 2.6344	0.1646 0.4052	
P05.212	MCC-EBB-B RASP-E8 VFD IN	In	1	160	8	Copper	Magnetic	PVC	Pos: 56.3194 Zero: 77.4931	5.2361 12.8889	
P05.213	RASP-E8 VFD OU RASP-E8 TERM	In	1	35	8	Copper	Magnetic	PVC	Pos: 12.3199 Zero: 38.8266	1.1454 2.8194	
P05.214	MCC-EBB-B. XFMR LP-T PRI	In	1	15	4	Copper	Magnetic	PVC	Pos: 2.0898 Zero: 6.5859	0.4115 1.0130	
P05.215	MCC-EBB-B. PP-EBB-B	In	1	30	6	Copper	Magnetic	PVC	Pos: 6.6406 Zero: 20.9271	0.8919 2.1966	
P05.216	MCC-EBB-B ATS-EBB NORM	In	1	15	350	Copper	Magnetic	PVC	Pos: 0.2461 Zero: 0.7754	0.3197 0.7871	
P05.217-217A	MCC-EBB-B MCC-EBB-A	In	2	10	350	Copper	Magnetic	PVC	Pos: 0.0820 Zero: 0.2585	0.1066 0.2624	
P05.4	SUB 5 BUS A MCC-XA	In	2	425	500	Copper	Magnetic	PVC	Pos: 2.7116 Zero: 8.5406	4.2980 10.5789	
P05.5	SUB 5 BUS B MCC-XB	In	2	30	250	Copper	Magnetic	PVC	Pos: 0.3594 Zero: 1.1322	0.2467 0.6074	
P05.8	SUB 5 BUS B MCC-S	In	3	25	300	Copper	Magnetic	PVC	Pos: 0.1678 Zero: 0.5288	0.1364 0.3356	
P06.100	MCC-WPB-A ATS-WPB-EMG	In	1	25	4	Copper	Magnetic	PVC	Pos: 3.4831 Zero: 10.9766	0.6858 1.6884	
P06.100A	ATS-WPB-LOAD XFMR LP-WPB-	In	1	10	4	Copper	Magnetic	PVC	Pos: 1.3932 Zero: 4.3906	0.2743 0.6753	
P06.105	MCC-WPB-A PCDR W1 DISC	In	1	170	10	Copper	Magnetic	PVC	Pos: 87.0660 Zero: 74.3906	6.3012 15.5169	
P06.105A	PCDR W1 DISC PCDRW1 TERM	In	1	10	10	Copper	Magnetic	PVC	Pos: 5.1215 Zero: 16.1406	0.3707 0.9128	
P06.110	MCC-WPB-A PSLP-W1 VFD I	In	1	47	6	Copper	Magnetic	PVC	Pos: 10.4036 Zero: 32.7858	1.3974 3.4414	
P06.110A	PSLP-W1 OUT PSLP-W1 TERM	In	1	15	10	Copper	Magnetic	PVC	Pos: 7.6823 Zero: 24.2109	0.5560 1.3691	
P06.115	MCC-WPB-A. IFSAB-1 LCP	In	1	25	8	Copper	Magnetic	PVC	Pos: 8.7999 Zero: 27.7333	0.8181 2.0139	
P06.115B	IFSAB-1 LCP IFSAB-1 TERM	In	1	4	10	Copper	Magnetic	PVC	Pos: 2.0486 Zero: 6.4563	0.1483 0.3651	
P06.115C	IFSAB-1 LCP ENCXEH FAN T	In	1	4	12	Copper	Magnetic	PVC	Pos: 3.2465 Zero: 10.2316	0.1580 0.3891	
P06.120	MCC-WPB-B MCC-WPB-A	In	1	10	500	Copper	Magnetic	PVC	Pos: 0.1276 Zero: 0.4019	0.2023 0.4978	
P06.200	MCC-WPB-B ATS-WPB-NOR	In	1	38	4	Copper	Magnetic	PVC	Pos: 5.2943 Zero: 16.6844	1.0424 2.5663	

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	----- Cable Description -----				Per Unit (100 MVA Base)		
					Size	Cond. Type	Duct Type	Insul	R pu	jX pu	
P06.205	MCC-WPB-B PCDR-W2 DISC	In	1	100	10	Copper	Magnetic	PVC	Pos: 51.2153 Zero: 61.4063	3.7066 9.1276	
P06.205A	PCDR-W2 DISC PCDR-W2 TERM	In	1	10	10	Copper	Magnetic	PVC	Pos: 5.1215 Zero: 16.1406	0.3707 0.9128	
P06.210	MCC-WPB-B PSLP-W2 INPUT	In	1	32	6	Copper	Magnetic	PVC	Pos: 7.0833 Zero: 22.3222	0.9514 2.3431	
P07.001	SUB 3 BUS A MCC-WPB-A	In	1	280	500	Copper	Magnetic	PVC	Pos: 3.5729 Zero: 11.2535	5.6632 13.9392	
P07.002,ABC	SUB 3 BUS A MCC-WBB-A	In	4	57	500	Copper	Magnetic	PVC	Pos: 0.1818 Zero: 0.5727	0.2882 0.7094	
P07.003	SUB 3 BUS B MCC-WPB-B	In	1	280	500	Copper	Magnetic	PVC	Pos: 3.5729 Zero: 11.2535	5.6632 13.9392	
P07.004,ABC	SUB 3 BUS B MCC-WBB-B	In	4	65	500	Copper	Magnetic	PVC	Pos: 0.2074 Zero: 0.6531	0.3287 0.8090	
P07.101,101A	BUS-0003 PAB-W1 TERM	In	2	35	4/0	Copper	Magnetic	PVC	Pos: 0.4861 Zero: 1.5320	0.3775 0.9297	
P07.102,102A	BUS-0012 PAB-W3 TERM	In	2	55	4/0	Copper	Magnetic	PVC	Pos: 0.7639 Zero: 2.4074	0.5932 1.4609	
P07.103,A,B,C	MCC-WBB-A MCC-WBB-B	In	4	10	500	Copper	Magnetic	PVC	Pos: 0.0319 Zero: 0.1005	0.0506 0.1245	
P07.107	MCC-WBB-A RASP-W1 VFD I	In	1	20	8	Copper	Magnetic	PVC	Pos: 7.0399 Zero: 22.1866	0.6545 1.6111	
P07.108	RASP-W1 VFD OU RASP-W1 TERM	In	1	29	8	Copper	Magnetic	PVC	Pos: 10.2079 Zero: 32.1706	0.9490 2.3361	
P07.109	MCC-WBB-A RASP-W3 VFD I	In	1	20	8	Copper	Magnetic	PVC	Pos: 7.0399 Zero: 22.1866	0.6545 1.6111	
P07.110	RASP-W3 VFD OU RASP-W3 TERM	In	1	29	8	Copper	Magnetic	PVC	Pos: 10.2079 Zero: 32.1706	0.9490 2.3361	
P07.119	PP-WBB-A XFMR LP-WBB-	In	1	10	2	Copper	Magnetic	PVC	Pos: 0.8767 Zero: 2.7630	0.2539 0.6250	
P07.120	MCC-WBB-A ATS-WBB-EMG	In	1	15	500	Copper	Magnetic	PVC	Pos: 0.1914 Zero: 0.6029	0.3034 0.7467	
P07.120A	ATS-WBB-LOAD PP-WBB-A	In	1	12	500	Copper	Magnetic	PVC	Pos: 0.1531 Zero: 0.4823	0.1818 0.4474	
P07.121	PP-WBB-A EWH-2 DISC	In	1	80	4/0	Copper	Magnetic	PVC	Pos: 2.2222 Zero: 7.0035	1.7257 4.2500	
P07.121A	EWH-2 DISC EWH-2 TERMS	In	1	12	4/0	Copper	Magnetic	PVC	Pos: 0.3333 Zero: 1.0505	0.2589 0.6375	
P07.122	MCC-WBB-A ADP-W1 DISC	In	1	58	8	Copper	Magnetic	PVC	Pos: 20.4158 Zero: 64.3412	1.8981 4.6722	
P07.122A	ADP-W1 DISC ADP-W1 TERM	In	1	6	8	Copper	Magnetic	PVC	Pos: 2.1120 Zero: 6.6560	0.1964 0.4833	

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	----- Cable Description -----				Per Unit (100 MVA Base)		
					Size	Cond. Type	Duct Type	Insul	R pu	jX pu	
P07.201,201A	BUS-0006 PAB-W2 TERM	In	2	50	4/0	Copper	Magnetic	PVC	Pos: 0.6944 Zero: 2.1886	0.5393 1.3281	
P07.208	MCC-WBB-B RASP-W2 VFD I	In	1	20	8	Copper	Magnetic	PVC	Pos: 7.0399 Zero: 22.1866	0.6545 1.6111	
P07.209	RASP-W2 VFD OU RASP-W2 TERM	In	1	29	8	Copper	Magnetic	PVC	Pos: 10.2079 Zero: 32.1706	0.9490 2.3361	
P07.210	MCC-WBB-B RASP-W4 VFD I	In	1	20	8	Copper	Magnetic	PVC	Pos: 7.0399 Zero: 22.1866	0.6545 1.6111	
P07.211	RASP-W4 VFD OU RASP-W4 TERM	In	1	29	8	Copper	Magnetic	PVC	Pos: 10.2079 Zero: 32.1706	0.9490 2.3361	
P07.219	MCC-WBB-B. PP-WBB-B	In	1	14	1	Copper	Magnetic	PVC	Pos: 0.9722 Zero: 3.0637	0.3464 0.8525	
P07.220	PP-WBB-A XFMR IPC LP-	In	1	110	4	Copper	Magnetic	PVC	Pos: 15.3255 Zero: 48.2969	3.0174 7.4288	
P07.221	MCC-WBB-B ATS-WBB NOR	In	1	12	500	Copper	Magnetic	PVC	Pos: 0.1531 Zero: 0.4823	0.2427 0.5974	
P07.222	MCC-WBB-B. WBB-HV-2 DISC	In	1	35	6	Copper	Magnetic	PVC	Pos: 7.7474 Zero: 24.4149	1.0406 2.5627	
P07.222A	WBB-HV-2 DISC WBB-HV-2	In	1	10	6	Copper	Magnetic	PVC	Pos: 2.2135 Zero: 6.9757	0.2973 0.7322	
P08.001A,B	SUB 2 BUS A MCC-E	In	2	25	4/0	Copper	Magnetic	PVC	Pos: 0.3472 Zero: 1.0943	0.2067 0.5089	
P08.002A,B	SUB 2 BUS B MCC-F	In	2	35	4/0	Copper	Magnetic	PVC	Pos: 0.4861 Zero: 1.5320	0.2894 0.7125	
P08.003	MCC-F.. TEMP ADM1 DI	In	1	200	1	Copper	Magnetic	PVC	Pos: 13.8889 Zero: 43.7674	4.9479 12.1788	
P08.004	MCC-F.. TEMP ADM2 DI	In	1	200	1	Copper	Magnetic	PVC	Pos: 13.8889 Zero: 43.7674	4.9479 12.1788	
P08.005	MCC-F.. TGS DISC	In	1	200	4	Copper	Magnetic	PVC	Pos: 27.8646 Zero: 87.8125	5.4861 13.5069	
P09.010,A	ATS-ADM LOAD MCC-ADM-A	In	2	10	750	Copper	Magnetic	PVC	Pos: 0.0469 Zero: 0.1476	0.0966 0.2376	
P09.015	MCC-ADM-A XFMR PP-ADM-	In	1	15	350	Copper	Magnetic	PVC	Pos: 0.2461 Zero: 0.7754	0.3197 0.7871	
P09.016	XFMR PP-ADM-1 S PP-ADM-1	In	1	6	4/0	Copper	Magnetic	PVC	Pos: 0.1667 Zero: 0.5253	0.1294 0.3188	
P09.020	MCC-ADM-A XFMR LP-ADM-	In	1	10	1/0	Copper	Magnetic	PVC	Pos: 0.5556 Zero: 1.7509	0.2344 0.5768	
P09.025 [FIRE RATE	PP-ADM-1 PP-ADM-2	In	1	185	2	Copper	Magnetic	PVC	Pos: 16.2196 Zero: 51.1159	4.6973 11.5625	
P09.030	MCC-ADM-A BUS-0014	In	1	10	250	Copper	Magnetic	PVC	Pos: 0.2396 Zero: 0.7548	0.2148 0.5291	

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	----- Cable Description -----				Per Unit (100 MVA Base)		
					Size	Cond. Type	Duct Type	Insul	R pu	jX pu	
P09.070	MCC-ADM-A. ADM-CH-1 DISC	In	1	45	2	Copper	Magnetic	PVC	Pos: 3.9453 Zero: 12.4336	1.1426 2.8125	
P09.070A	ADM-CH-1 DISC ADM-CH-1 TER	In	1	10	2	Copper	Magnetic	PVC	Pos: 0.8767 Zero: 2.7630	0.2539 0.6250	
P09.070A1	ADM ACCU1 DI ADM-ACCU-1 M	In	1	8	12	Copper	Magnetic	PVC	Pos: 6.4931 Zero: 20.4632	0.3160 0.7781	
P09.070A2	ELEVATOR CP DI ELEVATOR CP I	In	1	10	10	Copper	Magnetic	PVC	Pos: 5.1215 Zero: 16.1406	0.3707 0.9128	
P09.072	MCC-ADM-A ADM ACCU1 D	In	1	25	12	Copper	Magnetic	PVC	Pos: 20.2908 Zero: 63.9475	0.9874 2.4316	
P09.073	MCC-ADM-A ELEVATOR CP L	In	1	145	10	Copper	Magnetic	PVC	Pos: 74.2622 Zero: 34.0391	5.3746 13.2350	
P09.085	MCC-ADM-A ADM ACU1 DI	In	1	20	8	Copper	Magnetic	PVC	Pos: 7.0399 Zero: 22.1866	0.6545 1.6111	
P09.085A	ADM ACU1 DISC ADM-ACU-1 MT	In	1	10	8	Copper	Magnetic	PVC	Pos: 3.5200 Zero: 11.0933	0.3273 0.8056	
P09.090	MCC-ADM-A SWP LCP	In	1	85	1/0	Copper	Magnetic	PVC	Pos: 4.7222 Zero: 14.8824	1.9922 4.9030	
P09.095	SWP LCP SWP 1 MTR TE	In	1	16	4	Copper	Magnetic	PVC	Pos: 2.2292 Zero: 7.0250	0.4389 1.0806	
P09.100	SWP LCP SWP 2 MTR TE	In	1	28	4	Copper	Magnetic	PVC	Pos: 3.9010 Zero: 12.2938	0.7681 1.8910	
P09.101	MCC-ADM-A. EWH-1 DISC	In	1	18	2	Copper	Magnetic	PVC	Pos: 1.5781 Zero: 4.9734	0.4570 1.1250	
P09.102	EWH-1 DISC EWH-1 TERM	In	1	6	2	Copper	Magnetic	PVC	Pos: 0.5260 Zero: 1.6578	0.1523 0.3750	
P10.001	PP-MTB DISC SW PP-MTB	In	1	30	4/0	Copper	Magnetic	PVC	Pos: 0.8333 Zero: 2.6263	0.6471 1.5938	
P10.002	PP-MTB XFMR LP-MTB P	In	1	20	2	Copper	Magnetic	PVC	Pos: 1.7535 Zero: 5.5260	0.5078 1.2500	
P10.003	PP-MTB PP-Z	In	1	40	2	Copper	Magnetic	PVC	Pos: 3.5069 Zero: 11.0521	1.0156 2.5000	
P11.101AB	SUB 7 BUS A MCC-CEB-A	In	2	65	350	Copper	Magnetic	PVC	Pos: 0.5332 Zero: 1.6800	0.6926 1.7054	
P11.102AB	SUB 7 BUS A ATS-ADM EMG	In	2	630	750	Copper	Magnetic	PVC	Pos: 2.9531 Zero: 9.2969	6.0840 14.9707	
P11.110	MCC-CEB-A CEB-EF-1 DISC	In	1	85	12	Copper	Magnetic	PVC	Pos: 68.9887 Zero: 17.4214	3.3572 8.2676	
P11.110A	CEB-EF-1 DISC CEB-EF-1 TERM	In	1	15	12	Copper	Magnetic	PVC	Pos: 12.1745 Zero: 38.3685	0.5924 1.4590	
P11.111	MCC-CEB-A	In	1	20	8	Copper	Magnetic	PVC	Pos: 7.0399	0.6545	

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	----- Cable Description -----				Per Unit (100 MVA Base)		
					Size	Cond. Type	Duct Type	Insul	R pu	jX pu	
	CEB-ACU-1 TER								Zero: 22.1866	1.6111	
P11.112	MCC-CEB-A CEB-ACCU-1 DI	In	1	28	12	Copper	Magnetic	PVC	Pos: 22.7257 Zero: 71.6212	1.1059 2.7234	
P11.112A	CEB-ACCU-1 DIS CEB-ACCU-1 TE	In	1	6	12	Copper	Magnetic	PVC	Pos: 4.8698 Zero: 15.3474	0.2370 0.5836	
P11.113	MCC-CEB-A CEB-FCP-1 DISC	In	1	35	12	Copper	Magnetic	PVC	Pos: 28.4071 Zero: 89.5265	1.3824 3.4043	
P11.114	MCC-CEB-A CEB-P-1 DISC	In	1	45	12	Copper	Magnetic	PVC	Pos: 36.5234 Zero: 15.1055	1.7773 4.3770	
P11.114A	CEB-P-1 DISC CEB-P-1 TERM	In	1	6	12	Copper	Magnetic	PVC	Pos: 4.8698 Zero: 15.3474	0.2370 0.5836	
P11.115	MCC-CEB-A ATS-CEB-EMG	In	1	15	2	Copper	Magnetic	PVC	Pos: 1.3151 Zero: 4.1445	0.3809 0.9375	
P11.115A	ATS-CEB LOAD XFMR LP-CEB-	In	1	35	2	Copper	Magnetic	PVC	Pos: 3.0686 Zero: 9.6706	0.8887 2.1875	
P11.151	SUB 7 BUS A XFMR UV-1A I	In	1	180	250	Copper	Magnetic	PVC	Pos: 4.3125 Zero: 13.5859	3.8672 9.5234	
P11.151A	XFMR UV-1A ISO UV-1A PD LINE S	In	1	10	250	Copper	Magnetic	PVC	Pos: 0.2396 Zero: 0.7548	0.2148 0.5291	
P11.151B	UV-1A PD LINE S UV-1A	In	1	10	250	Copper	Magnetic	PVC	Pos: 0.2396 Zero: 0.7548	0.2148 0.5291	
P11.201AB	SUB 7 BUS B MCC-CEB-B	In	2	55	350	Copper	Magnetic	PVC	Pos: 0.4512 Zero: 1.4215	0.5860 1.4430	
P11.202AB	SUB 7 BUS B ATS-ADM NRM	In	2	630	750	Copper	Magnetic	PVC	Pos: 2.9531 Zero: 9.2969	6.0840 14.9707	
P11.204	SUB 7 BUS B PP-MTB DISC S	In	1	730	500	Copper	Magnetic	PVC	Pos: 9.3151 Zero: 29.3394	14.7648 36.3416	
P11.212	MCC-CEB-B ATS PP-UV-EM	In	1	230	4	Copper	Magnetic	PVC	Pos: 32.0443 Zero: 00.9844	6.3090 15.5330	
P11.213	ATS PP-UV-LOAD PP-UV	In	1	10	4	Copper	Magnetic	PVC	Pos: 1.3932 Zero: 4.3906	0.2743 0.6753	
P11.215	MCC-CEB-B ATS-CEB-NRM	In	1	10	2	Copper	Magnetic	PVC	Pos: 0.8767 Zero: 2.7630	0.2539 0.6250	
P11.251	SUB 7 BUS B XFMR UV-1B I	In	1	180	250	Copper	Magnetic	PVC	Pos: 4.3125 Zero: 13.5859	3.8672 9.5234	
P11.251A	XFMR UV-1B ISO UV-1B PD LINE S	In	1	10	250	Copper	Magnetic	PVC	Pos: 0.2396 Zero: 0.7548	0.2148 0.5291	
P11.251B	UV-1B PD LINE S UV-1B	In	1	10	250	Copper	Magnetic	PVC	Pos: 0.2396 Zero: 0.7548	0.2148 0.5291	
P13.001	MCC-M. FASB-1 LCP	In	1	40	2/0	Copper	Magnetic	PVC	Pos: 1.7708 Zero: 5.5799	0.9253 2.2778	

Cable Name	From Bus To Bus	In/Out Service	Qty /Ph	Length Feet	Size	----- Cable Description -----			Per Unit (100 MVA Base)		
						Cond. Type	Duct Type	Insul	R pu	jX pu	
P13.002	FASB-1 LCP FASB1 DISC	In	2	70	2/0	Copper	Magnetic	PVC	Pos: 1.5495 Zero: 4.8824	0.8097 1.9931	
P13.002A	FASB1 DISC FASB1 TERM	In	2	10	1/0	Copper	Magnetic	PVC	Pos: 0.2778 Zero: 0.8754	0.1172 0.2884	
P13.003	MCC-N. FCBV-1 VFD	In	1	45	1	Copper	Magnetic	PVC	Pos: 3.1250 Zero: 9.8477	1.1133 2.7402	
P13.004	VFD FCB-1 OUT FCB-1 DISC	In	1	55	4	Copper	Magnetic	PVC	Pos: 7.6628 Zero: 24.1484	1.5087 3.7144	
P13.004A	FCB-1 DISC FCB-1 TERM	In	1	10	4	Copper	Magnetic	PVC	Pos: 1.3932 Zero: 4.3906	0.2743 0.6753	
P13.004B	FCBV-1 VFD FCB-1-EF DISC	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	
P13.004C	FCB-1-EF DISC FCB-1-EF TERM	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	
P13.212	MCC-P ATS PP-UV-NR	In	1	200	8	Copper	Magnetic	PVC	Pos: 70.3993 Zero: 21.8663	6.5451 16.1111	
P3.105A	SRP-5 JBOX SRP-5 TERM	In	1	5	2/0	Copper	Magnetic	PVC	Pos: 0.2214 Zero: 0.6975	0.1157 0.2847	
PC03.206	MCC-RLS-B S-1-1 JBOX	In	1	120	10	Copper	Magnetic	PVC	Pos: 61.4583 Zero: 93.6875	4.4479 10.9531	
PC03.206A	S-1-1 JBOX S-1-1 DISC	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	
PC03.206B	S-1-1 DISC 48IN GATE STR	In	1	10	12	Copper	Magnetic	PVC	Pos: 8.1163 Zero: 25.5790	0.3950 0.9727	
SUB 1TIE BUS	SUB 1 BUS B SUB 1 BUS A	In	10	1	2000	Copper	Busway	Epoxy	Pos: 0.0003 Zero: 0.0017	0.0002 0.0008	
SUB 2 TIE BUS	SUB 2 BUS B SUB 2 BUS A	In	1	5	800	Copper	Busway	Epoxy	Pos: 0.0362 Zero: 0.2153	0.0276 0.1474	
SUB 3 TIE BUS	SUB 3 BUS B SUB 3 BUS A	In	10	1	2000	Copper	Busway	Epoxy	Pos: 0.0003 Zero: 0.0017	0.0002 0.0008	
SUB 5 TIE BUS	SUB 5 BUS B SUB 5 BUS A	In	10	1	2000	Copper	Busway	Epoxy	Pos: 0.0003 Zero: 0.0017	0.0002 0.0008	
SUB 6 TIE BUS	SUB 6 BUS B SUB 6 BUS A	In	10	1	2000	Copper	Busway	Epoxy	Pos: 0.0003 Zero: 0.0017	0.0002 0.0008	
SUB 7 TIE BUS	SUB 7 BUS B SUB 7 BUS A	In	10	1	2000	Copper	Busway	Epoxy	Pos: 0.0003 Zero: 0.0017	0.0002 0.0008	
SUB 8 TIE BUS	SUB 8 BUS B SUB 8 BUS A	In	10	1	2000	Copper	Busway	Epoxy	Pos: 0.0000 Zero: 0.0000	0.0000 0.0002	

2-Winding Transformers

Xformer Name	In/Out Service	-----Primary & Secondary-----				Nominal kVA	Z PU (100 MVA Base)		
		Bus	Conn.	Volts	FLA		R pu	jX pu	
SUB 1 XFMR A	In	SUB 1 PRIMARY SWI	D	13,200	33	750.0	Pos:	1.4571	7.6356
		SUB 1 BUS A	WG	480	902		Zero:	1.4571	7.6356
SUB 1 XFMR B	In	SUB 1 PRIMARY SWI	D	13,200	33	750.0	Pos:	1.4496	7.5963
		SUB 1 BUS B	WG	480	902		Zero:	1.4496	7.5963
SUB 2 XFMR A	In	SUB 2 PRIMARY SWI	D	13,200	22	500.0	Pos:	2.3334	10.9542
		SUB 2 BUS A	WG	480	601		Zero:	2.3334	10.9542
SUB 2 XFMR B	In	SUB 2 PRIMARY SWI	D	13,200	22	500.0	Pos:	2.3292	10.9346
		SUB 2 BUS B	WG	480	601		Zero:	2.3292	10.9346
SUB 3 XFMR B	In	SUB 3 PRIMARY SWI	D	13,200	87	2,000.0	Pos:	0.4002	2.9177
		SUB 3 BUS B	WG	480	2,406		Zero:	0.4002	2.9177
SUB 3 XFMR A	In	SUB 3 PRIMARY SWI	D	13,200	87	2,000.0	Pos:	0.3988	2.9078
		SUB 3 BUS A	WG	480	2,406		Zero:	0.3988	2.9078
SUB 4 XFMR A	In	SUB 4 PRIMARY SWI	D	13,200	33	750.0	Pos:	1.4371	7.5308
		SUB 4 BUS A	WG	480	902		Zero:	1.4371	7.5308
SUB 4 XFMR B	In	SUB 4 PRIMARY SWI	D	13,200	33	750.0	Pos:	1.4371	7.5308
		SUB 4 BUS B	WG	480	902		Zero:	1.4371	7.5308
SUB 5 XFMR A	In	SUB 5 PRIMARY SWI	D	13,200	128	2,000.0	Pos:	0.4036	2.9425
		SUB 5 BUS A	WG	480	3,528		Zero:	0.4036	2.9425
SUB 5 XFMR B	In	SUB 5 PRIMARY SWI	D	13,200	128	2,000.0	Pos:	0.4036	2.9425
		SUB 5 BUS B	WG	480	3,528		Zero:	0.4036	2.9425
SUB 6 XFMR A	In	SUB 6 XFMR A PRI	D	4,160	104	750.0	Pos:	1.4371	7.5308
		SUB 6 BUS A	WG	480	902		Zero:	1.4371	7.5308
SUB 6 XFMR B	In	SUB 6 XFMR B PRI	D	4,160	104	750.0	Pos:	1.4371	7.5308
		SUB 6 BUS B	WG	480	902		Zero:	1.4371	7.5308
SUB 7 XFMR A	In	SUB 7 XFMR A PRI	D	13,200	66	1,500.0	Pos:	0.5774	3.7761
		SUB 7 BUS A	WG	480	1,804		Zero:	0.5774	3.7761
SUB 7 XFMR B	In	SUB 7 XFMR B PRI	D	13,200	66	1,500.0	Pos:	0.5804	3.7959
		SUB 7 BUS B	WG	480	1,804		Zero:	0.5804	3.7959
SUB 8 XFMR A	In	SUB 8 PRIMARY SWI	D	13,200	33	750.0	Pos:	1.4371	7.5308
		SUB 8 BUS A	WG	4,160	104		Zero:	1.4371	7.5308
SUB 8 XFMR B	In	SUB 8 PRIMARY SWI	D	13,200	33	750.0	Pos:	1.4371	7.5308
		SUB 8 BUS B	WG	4,160	104		Zero:	1.4371	7.5308
UV 2A XFMR	In	UV 2A XFMR PRI	D	480	180	150.0	Pos:	12.9333	27.1333
		UV 2A XFMR SEC	WG	480	180		Zero:	12.9333	27.1333
UV 2B XFMR	In	UV 2B XFMR PRI	D	480	180	150.0	Pos:	12.9333	27.1333
		UV 2B XFMR SEC	WG	480	180		Zero:	12.9333	27.1333
XF2 LP- F	In	BUS-0283	D	480	36	30.0	Pos:	19.9800	54.4500
		BUS-0284	WG	208	83		Zero:	19.9800	54.4500
XF2-0052	In	MCC-F.	D	480	1	1.0	Pos:	853.3333	,230.0000
		ALTERNATOR F	D	120	5		Zero:	853.3333	,230.0000

Xformer Name	In/Out Service	-----Primary & Secondary-----				Nominal kVA	Z PU (100 MVA Base)		
		Bus	Conn.	Volts	FLA		R pu	jX pu	
XF2-0059	In	XF2-0059 PRI	D	480	54	45.0	Pos: 60.6667	43.7778	
		XF2-0059 SEC	WG	208	125		Zero: 60.6667	43.7778	
XF2-0068	In	BUS-0694	D	480	7	6.0	Pos: 227.8000	500.6000	
		BUS-0695	WG	208	17		Zero: 227.8000	500.6000	
XFMR ALTERNATOR P	In	MCC-P	D	480	36	1.0	Pos: 968.0000	750.1000	
		ALTERNATOR P	WG	208	83		Zero: 968.0000	750.1000	
XFMR IPC LP-EFB	In	LINESIDE IPC LP-EF	D	480	36	30.0	Pos: 14.9300	40.6800	
		IPC LP-EFB	WG	208	83		Zero: 14.9300	40.6800	
XFMR LP-ADM-1	In	XFMR LP-ADM-1 PRI	D	480	90	75.0	Pos: 12.3640	39.0213	
		XFMR LP-ADM-1 SE	WG	208	208		Zero: 12.3640	39.0213	
XFMR LP-ADM-2x	In	BUS-0014	D	480	60	50.0	Pos: 8.3480	24.6233	
		BUS-0015	D	240	120		Zero: 8.3480	24.6233	
XFMR LP-C	In	XFMR LP-C PRI	D	480	36	30.0	Pos: 125.0000	68.0000	
		BUS-0075	WG	208	83		Zero: 125.0000	68.0000	
XFMR LP-CEB-A	In	XFMR LP-CEB-A PRI	D	480	54	45.0	Pos: 60.6667	43.7778	
		XFMR LP-CEB-A SEC	WG	208	125		Zero: 60.6667	43.7778	
XFMR LP-D	In	XFMR LP-D PRI	D	480	36	30.0	Pos: 51.1033	139.2533	
		LP-D	WG	208	83		Zero: 51.1033	139.2533	
XFMR LP-EBB-A	In	XFMR LP-EBB-A PRI	D	480	54	45.0	Pos: 60.6667	43.7778	
		XFMR LP-EBB-A SEC	WG	208	125		Zero: 60.6667	43.7778	
XFMR LP-LSE	In	XFMR LP-LSE PRI	D	480	36	30.0	Pos: 125.0000	68.0000	
		XFMR LP-LSE SEC	WG	208	83		Zero: 125.0000	68.0000	
XFMR LP-M	In	XFMR LP-M PRI	D	480	54	45.0	Pos: 60.6667	43.7778	
		XFMR LP-M SEC	WG	208	125		Zero: 60.6667	43.7778	
XFMR LP-MTB	In	XFMR LP-MTB PRI	D	480	36	25.0	Pos: 50.0000	27.2000	
		LP-MTB	D	240	72		Zero: 50.0000	27.2000	
XFMR LP-O	In	XFMR LP O PRI	D	480	36	30.0	Pos: 32.9567	89.8100	
		XFMR LP O SEC	WG	208	83		Zero: 32.9567	89.8100	
XFMR LP-Q	In	XFMR LP-Q PRI	D	480	54	45.0	Pos: 60.6667	43.7778	
		XFMR LP-Q SEC	WG	208	125		Zero: 60.6667	43.7778	
XFMR LP-RLS	In	XFMR LP-RLS PRI	D	480	36	30.0	Pos: 51.1033	139.2533	
		XFMR LP-RLS SEC	WG	208	83		Zero: 51.1033	139.2533	
XFMR LP-T	In	XFMR LP-T PRI	D	480	36	30.0	Pos: 32.9567	89.8100	
		XFMR LP-T SEC	WG	208	83		Zero: 32.9567	89.8100	
XFMR LP-U	In	XFMR LP U PRI	D	480	36	30.0	Pos: 32.6133	88.8700	
		XFMR LP U SEC	WG	208	83		Zero: 32.6133	88.8700	
XFMR LP-V	In	XFMR LP-V PRI	D	480	54	45.0	Pos: 48.8933	141.8067	
		XFMR LP-V SEC	WG	208	125		Zero: 48.8933	141.8067	
XFMR LP-WBB-A	In	XFMR LP-WBB-A PRI	D	480	54	45.0	Pos: 60.6667	43.7778	
		XFMR LP-WBB-A SE	WG	208	125		Zero: 60.6667	43.7778	

Xformer Name	In/Out Service	-----Primary & Secondary-----				Nominal kVA	Z PU (100 MVA Base)	
		Bus	Conn.	Volts	FLA		R pu	jX pu
XFMR LP-WFB	In	XFMR IPC LP-WFB P	D	480	36	30.0	Pos: 125.0000	68.0000
		IPC LP-WFB	WG	208	83		Zero: 125.0000	68.0000
XFMR LP-WPB-A	In	XFMR LP-WPB-A PRI	D	480	36	30.0	Pos: 125.0000	68.0000
		XFMR LP-WPB-A SE	WG	208	83		Zero: 125.0000	68.0000
XFMR PP-ADM-1	In	XFMR PP-ADM-1 PRI	D	480	180	150.0	Pos: 9.4027	33.7133
		XFMR PP-ADM-1 SE	WG	480	180		Zero: 9.4027	33.7133
XFMR TFB-MPC	In	XFMR TFB-MPC PRI	D	480	18	15.0	Pos: 140.0000	121.3333
		TFB-MPC	WG	208	42		Zero: 140.0000	121.3333
XFMR UV-1A ISO	In	XFMR UV-1A ISO PRI	D	480	180	150.0	Pos: 9.1340	32.7500
		XFMR UV-1A ISO SE	WG	480	180		Zero: 9.1340	32.7500
XFMR UV-1B ISO	In	XFMR UV-1B ISO PRI	D	480	180	150.0	Pos: 7.3433	26.3287
		XFMR UV-1B ISO SE	WG	480	180		Zero: 7.3433	26.3287
XFMR-LP-E	In	XFMR-LP-E PRI	D	480	36	30.0	Pos: 19.9800	54.4500
		XFMR-LP-E SEC	WG	208	83		Zero: 19.9800	54.4500
XFMR-LP-FF	In	XFMR LP-FF PRI	D	480	7	6.0	Pos: 227.8000	500.6000
		XFMR LP-FF SEC	WG	208	17		Zero: 227.8000	500.6000
XFMR-LP-MTB	In	BUS-0385	D	480	30	25.0	Pos: 13.3333	65.3187
		BUS-0386	D	240	60		Zero: 13.3333	65.3187
XFMR-LP-W	In	XFMR-LP-W PRI	D	480	54	45.0	Pos: 48.8933	141.8067
		XFMR-LP-W SEC	WG	208	125		Zero: 48.8933	141.8067

Pi Impedances

Pi Name	In/Out Service	From Bus	To Bus	Per Unit (100 MVA Base)			Per Unit (100 MVA Base)		
					G/2 pu	B/2 pu		R pu	jX pu
15 KV BUS 1 LINK	In	15 KV BUS 1 LineSi	15 KV BUS 1	Pos	0.0000	0.000000	Pos	0.0000	0.0000
				Zero	0.0000	0.000000	Zero	0.0000	0.0000
15 KV BUS 2 LINK	In	15 KV BUS 2 LineSi	15 KV BUS 2	Pos	0.0000	0.000000	Pos	0.0000	0.0000
				Zero	0.0000	0.000000	Zero	0.0000	0.0000
BUS 1-2 TIE BUS	In	15 KV BUS 1	15 KV BUS 2	Pos	0.0000	0.000000	Pos	0.0000	0.0000
				Zero	0.0000	0.000000	Zero	0.0000	0.0000
BUS LINK A-A.	In	MCC-ADM-A	MCC-ADM-A.	Pos	0.0000	0.000000	Pos	0.0000	0.0000
				Zero	0.0000	0.000000	Zero	0.0000	0.0000
BUS LINK D-D.	In	MCC-D	MCC-D.	Pos	0.0000	0.000000	Pos	0.0000	0.0000
				Zero	0.0000	0.000000	Zero	0.0000	0.0000
BUS LINK E.-E..	In	MCC-E.	MCC-E..	Pos	0.0000	0.000000	Pos	0.0000	0.0000
				Zero	0.0000	0.000000	Zero	0.0000	0.0000
BUS LINK EBB A	In	MCC-EBB-A	MCC-EBB-A.	Pos	0.0000	0.000000	Pos	0.0000	0.0000
				Zero	0.0000	0.000000	Zero	0.0000	0.0000

Pi Name	In/Out Service	From Bus	To Bus	Per Unit (100 MVA Base)			Per Unit (100 MVA Base)		
					G/2 pu	B/2 pu	R pu	jX pu	
BUS LINK EBB B	In	MCC-EBB-B	MCC-EBB-B.	Pos	0.0000	0.000000	Pos	0.0000	0.0000
				Zero	0.0000	0.000000	Zero	0.0000	0.0000
BUS LINK E-E.	In	MCC-E	MCC-E.	Pos	0.0000	0.000000	Pos	0.0000	0.0000
				Zero	0.0000	0.000000	Zero	0.0000	0.0000
BUS LINK EF1-2	In	MCC-M.	BUS-0417	Pos	0.0000	0.000000	Pos	0.0000	0.0000
				Zero	0.0000	0.000000	Zero	0.0000	0.0000
BUS LINK EPB A	In	MCC-EPB-A.	MCC-EPB-A..	Pos	0.0000	0.000000	Pos	0.0000	0.0000
				Zero	0.0000	0.000000	Zero	0.0000	0.0000
BUS LINK EPB A	In	MCC-EPB-A	MCC-EPB-A.	Pos	0.0000	0.000000	Pos	0.0000	0.0000
				Zero	0.0000	0.000000	Zero	0.0000	0.0000
BUS LINK EPB B	In	MCC-EPB-B.	MCC-EPB-B..	Pos	0.0000	0.000000	Pos	0.0000	0.0000
				Zero	0.0000	0.000000	Zero	0.0000	0.0000
BUS LINK EPB B	In	MCC-EPB-B	MCC-EPB-B.	Pos	0.0000	0.000000	Pos	0.0000	0.0000
				Zero	0.0000	0.000000	Zero	0.0000	0.0000
BUS LINK F-F..	In	MCC-F.	MCC-F..	Pos	0.0000	0.000000	Pos	0.0000	0.0000
				Zero	0.0000	0.000000	Zero	0.0000	0.0000
BUS LINK F-F.	In	MCC-F	MCC-F.	Pos	0.0000	0.000000	Pos	0.0000	0.0000
				Zero	0.0000	0.000000	Zero	0.0000	0.0000
BUS LINK M-M.	In	MCC-M	MCC-M.	Pos	0.0000	0.000000	Pos	0.0001	0.0000
				Zero	0.0000	0.000000	Zero	0.0000	0.0000
BUS LINK N-N.	In	MCC-N	MCC-N.	Pos	0.0000	0.000000	Pos	0.0001	0.0000
				Zero	0.0000	0.000000	Zero	0.0000	0.0000
BUS LINK WBB-A-	In	MCC-WBB-A	MCC-WBB-A.	Pos	0.0000	0.000000	Pos	0.0000	0.0000
				Zero	0.0000	0.000000	Zero	0.0000	0.0000
BUS LINK WBB-B-	In	MCC-WBB-B	MCC-WBB-B.	Pos	0.0000	0.000000	Pos	0.0000	0.0000
				Zero	0.0000	0.000000	Zero	0.0000	0.0000
BUS LINK WPB-A-	In	MCC-WPB-A	MCC-WPB-A.	Pos	0.0000	0.000000	Pos	0.0000	0.0000
				Zero	0.0000	0.000000	Zero	0.0000	0.0000
BUS LINK WPB-B-	In	MCC-WPB-B	MCC-WPB-B.	Pos	0.0000	0.000000	Pos	0.0000	0.0000
				Zero	0.0000	0.000000	Zero	0.0000	0.0000
MCC-51A/B BUS L	In	MCC-51A	MCC-51B	Pos	0.0000	0.000000	Pos	0.0000	0.0000
				Zero	0.0000	0.000000	Zero	0.0000	0.0000
MCC-52A/B BUS L	In	MCC-52A	MCC-52B	Pos	0.0000	0.000000	Pos	0.0000	0.0000
				Zero	0.0000	0.000000	Zero	0.0000	0.0000
MCC-53A/B BUS L	In	MCC-53 A	MCC-53B	Pos	0.0000	0.000000	Pos	0.0000	0.0000
				Zero	0.0000	0.000000	Zero	0.0000	0.0000
MCC-54A/B BUS L	In	MCC-54 A	MCC-54B	Pos	0.0000	0.000000	Pos	0.0000	0.0000
				Zero	0.0000	0.000000	Zero	0.0000	0.0000
MCC-55A/B BUS L	In	MCC-55 A	MCC-55B	Pos	0.0000	0.000000	Pos	0.0000	0.0000
				Zero	0.0000	0.000000	Zero	0.0000	0.0000

Pi Name	In/Out Service	From Bus	To Bus	Per Unit (100 MVA Base)			Per Unit (100 MVA Base)		
					G/2 pu	B/2 pu	R pu	jX pu	
MCC-56A/B BUS L	In	MCC-56 A	MCC-56B	Pos	0.0000	0.000000	Pos	0.0000	0.0000
				Zero	0.0000	0.000000	Zero	0.0000	0.0000
MCC-CEB-A/B T	In	MCC-CEB-B	MCC-CEB-A	Pos	0.0000	0.000000	Pos	0.0000	0.0000
				Zero	0.0000	0.000000	Zero	0.0000	0.0000
PI-0001	In	MCC-E	SCP-7	Pos	0.0000	0.000000	Pos	0.0000	0.0000
				Zero	0.0000	0.000000	Zero	0.0000	0.0000
PI-0002	In	MCC-E	SCP-8	Pos	0.0000	0.000000	Pos	0.0000	0.0000
				Zero	0.0000	0.000000	Zero	0.0000	0.0000
PI-0005	In	MCC-F	SCP-6	Pos	0.0000	0.000000	Pos	0.0000	0.0000
				Zero	0.0000	0.000000	Zero	0.0000	0.0000
SUB 4 TIE BUS	In	SUB 4 BUS B	SUB 4 BUS A	Pos	0.0000	0.000000	Pos	0.0000	0.0000
				Zero	0.0000	0.000000	Zero	0.0000	0.0000

SHORT CIRCUIT CALCULATIONS

Ann Arbor Wastewater Treatment Plant

May 06, 2016 13:00:59

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A_FAULT SHORT CIRCUIT ANALYSIS REPORT
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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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15 KV BUS 1	3P Duty:	7.210 KA AT -74.17 DEG (164.84 MVA)	X/R:	3.88	
	VOLTAGE:	13200. EQUIV. IMPEDANCE=	0.2883 + J 1.0169	OHMS	
M11.102	SUB 2 PRIMARY	0.099 KA	ANG:	98.60	
M11.103	SUB 3 PRIMARY	0.169 KA	ANG:	95.22	
M11.104	SUB 4 PRIMARY	0.170 KA	ANG:	99.04	
M11.107	SUB 7 XFMR A P	0.040 KA	ANG:	97.99	
M11.108	SUB 8 PRIMARY	0.232 KA	ANG:	98.52	
15 KV BUS 1 LI	15 KV BUS 1 Li	6.131 KA	ANG:	-252.75	
M11.101	SUB 1 PRIMARY	0.077 KA	ANG:	97.49	
M11.105	SUB 5 PRIMARY	0.305 KA	ANG:	97.81	
15 KV BUS 1 Li	3P Duty:	7.210 KA AT -74.17 DEG (164.84 MVA)	X/R:	3.88	
	VOLTAGE:	13200. EQUIV. IMPEDANCE=	0.2883 + J 1.0169	OHMS	
M11.100	DTE NORTH	6.131 KA	ANG:	-72.75	
15 KV BUS 1 LI	15 KV BUS 1	1.091 KA	ANG:	-82.19	
15 KV BUS 2	3P Duty:	6.874 KA AT -78.13 DEG (157.15 MVA)	X/R:	4.94	
	VOLTAGE:	13200. EQUIV. IMPEDANCE=	0.2281 + J 1.0850	OHMS	
M11.202	SUB 2 PRIMARY	0.085 KA	ANG:	98.19	
M11.203	SUB 3 PRIMARY	0.097 KA	ANG:	95.09	
M11.204	SUB 4 PRIMARY	0.180 KA	ANG:	98.48	
M11.207	SUB 7 XFMR B P	0.001 KA	ANG:	95.97	
M11.208	SUB 8 PRIMARY	0.161 KA	ANG:	98.49	
15 KV BUS 2 LI	15 KV BUS 2 Li	5.961 KA	ANG:	-257.48	
M11.201	SUB 1 PRIMARY	0.067 KA	ANG:	97.34	
M11.205	SUB 5 PRIMARY	0.325 KA	ANG:	97.50	
15 KV BUS 2 Li	3P Duty:	6.874 KA AT -78.13 DEG (157.16 MVA)	X/R:	4.94	
	VOLTAGE:	13200. EQUIV. IMPEDANCE=	0.2281 + J 1.0850	OHMS	
M11.200	DTE SOUTH	5.961 KA	ANG:	-77.48	
15 KV BUS 2 LI	15 KV BUS 2	0.916 KA	ANG:	-82.34	
15 KV BUS 3	3P Duty:	1.505 KA AT -82.34 DEG (34.41 MVA)	X/R:	7.43	
	VOLTAGE:	13200. EQUIV. IMPEDANCE=	0.6752 + J 5.0189	OHMS	
M11.217	BUS G2	0.752 KA	ANG:	97.66	
M11.117	BUS G1	0.752 KA	ANG:	-262.34	
78IN GC DISC	3P Duty:	1.311 KA AT -8.38 DEG (1.09 MVA)	X/R:	0.15	
	VOLTAGE:	480. EQUIV. IMPEDANCE=	0.2092 + J 0.0308	OHMS	
	LOW VOLTAGE POWER CIRCUIT BREAKER	1.311 KA			
	MOLDED CASE CIRCUIT BREAKER < 10KA	1.311 KA			
	MOLDED CASE CIRCUIT BREAKER < 20KA	1.311 KA			
	MOLDED CASE CIRCUIT BREAKER > 20KA	1.311 KA			

THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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CONTRIBUTIONS TO 78IN GC DISC (CONTINUED)
CBL-0503      78IN GC STR      0.018 KA      ANG:   95.78
CBL-0502      MCC-RLS-A        1.307 KA      ANG:  -7.63

AC2 DISC      3P Duty:  1.468 KA AT  -10.84 DEG (  1.22 MVA) X/R:   0.20
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.1854 + J  0.0355 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  1.468 KA
MOLDED CASE CIRCUIT BREAKER < 10KA  1.468 KA
MOLDED CASE CIRCUIT BREAKER < 20KA  1.468 KA
MOLDED CASE CIRCUIT BREAKER > 20KA  1.468 KA
CONTRIBUTIONS: AIR COMP #2          0.106 KA      ANG:  -84.29
CBL-0446      MCC-Q          1.441 KA      ANG:  -6.78

AC2F DISC     3P Duty:  2.733 KA AT  -14.75 DEG (  2.27 MVA) X/R:   0.27
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.0981 + J  0.0258 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  2.733 KA
MOLDED CASE CIRCUIT BREAKER < 10KA  2.733 KA
MOLDED CASE CIRCUIT BREAKER < 20KA  2.733 KA
MOLDED CASE CIRCUIT BREAKER > 20KA  2.733 KA
CONTRIBUTIONS: AIR COMP #2F         0.004 KA      ANG:  -84.29
CBL-0315      MCC-F          2.731 KA      ANG:  -14.68

ADM ACCU1 DISC 3P Duty:  4.675 KA AT  -24.45 DEG (  3.89 MVA) X/R:   0.47
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.0540 + J  0.0245 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  4.675 KA
MOLDED CASE CIRCUIT BREAKER < 10KA  4.675 KA
MOLDED CASE CIRCUIT BREAKER < 20KA  4.675 KA
MOLDED CASE CIRCUIT BREAKER > 20KA  4.675 KA
P09.070A1     ADM-ACCU-1 MTR  0.014 KA      ANG:   95.75
P09.072       MCC-ADM-A      4.668 KA      ANG:  -24.30

ADM ACU1 DISC  3P Duty:  8.357 KA AT  -46.01 DEG (  6.95 MVA) X/R:   1.16
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.0230 + J  0.0239 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  8.357 KA
MOLDED CASE CIRCUIT BREAKER < 10KA  8.357 KA
MOLDED CASE CIRCUIT BREAKER < 20KA  8.357 KA
MOLDED CASE CIRCUIT BREAKER > 20KA  8.357 KA
P09.085A     ADM-ACU-1 MTR  0.177 KA      ANG:   96.00
P09.085       MCC-ADM-A      8.218 KA      ANG:  -45.25

ADM-CH-1 DISC  3P Duty:  9.323 KA AT  -56.43 DEG (  7.75 MVA) X/R:   1.57
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.0164 + J  0.0248 OHMS

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER      9.323 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     9.323 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     9.323 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     9.323 KA
P09.070      MCC-ADM-A.      9.323 KA      ANG:  -236.43

ADM-EF-1 DISC  3P Duty:  2.262 KA AT  -13.26 DEG (  1.88 MVA) X/R:    0.24
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.1192 + J  0.0281  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      2.262 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     2.262 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     2.262 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     2.262 KA
CBL-0642      ADM-EF-1 MTR T      0.011 KA      ANG:    95.75
CBL-0641      MCC-ADM-A      2.259 KA      ANG:   -13.01

ADM-EF-2 DISC  3P Duty:  2.261 KA AT  -13.17 DEG (  1.88 MVA) X/R:    0.24
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.1193 + J  0.0279  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      2.261 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     2.261 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     2.261 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     2.261 KA
CBL-0644      ADM-EF-2 MTR T      0.007 KA      ANG:    95.74
CBL-0643      MCC-ADM-A      2.259 KA      ANG:   -13.00

ADM-HVAC-1 DIS 3P Duty:  5.642 KA AT  -30.68 DEG (  4.69 MVA) X/R:    0.64
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.0422 + J  0.0251  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      5.642 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     5.642 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     5.642 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     5.642 KA
CBL-0647      ADM-HVAC-1 MTR      0.071 KA      ANG:    95.88
CBL-0646      MCC-ADM-A      5.600 KA      ANG:   -30.10

ADM-HVAC-2 DIS 3P Duty:  2.668 KA AT  -15.56 DEG (  2.22 MVA) X/R:    0.30
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.1001 + J  0.0279  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      2.668 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     2.668 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     2.668 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     2.668 KA
CBL-0649      ADM-HVAC-2 MTR      0.035 KA      ANG:    95.85
CBL-0648      MCC-ADM-A      2.655 KA      ANG:   -14.85

ADM-P-1 DISC   3P Duty:  3.226 KA AT  -17.79 DEG (  2.68 MVA) X/R:    0.33
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.0818 + J  0.0262  OHMS

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER      3.226 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     3.226 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     3.226 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     3.226 KA
CBL-0634      ADM-P-1 MTR TE           0.021 KA      ANG:    95.76
CBL-0633      MCC-ADM-A.                3.218 KA      ANG:   -197.44

ADM-P-2 DISC  3P Duty:  2.663 KA AT  -15.27 DEG (  2.21 MVA) X/R:    0.29
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.1004 + J  0.0274 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      2.663 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     2.663 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     2.663 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     2.663 KA
CBL-0636      ADM-P-2 MTR TE           0.021 KA      ANG:    95.76
CBL-0635      MCC-ADM-A.                2.656 KA      ANG:   -194.84

ADM-P-3 DISC  3P Duty:  8.116 KA AT  -43.67 DEG (  6.75 MVA) X/R:    1.04
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.0247 + J  0.0236 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      8.116 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     8.116 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     8.116 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     8.116 KA
CBL-0638      ADM-P-3 MTR TE           0.106 KA      ANG:    96.00
CBL-0637      MCC-ADM-A.                8.035 KA      ANG:   -223.18

ADM-P-4 DISC  3P Duty:  7.503 KA AT  -40.31 DEG (  6.24 MVA) X/R:    0.93
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.0282 + J  0.0239 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      7.503 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     7.503 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     7.503 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     7.503 KA
CBL-0640      ADM-P-4 MTR TE           0.106 KA      ANG:    95.89
CBL-0639      MCC-ADM-A.                7.427 KA      ANG:   -219.74

ADM-SUP LCP   3P Duty:  2.201 KA AT  -13.97 DEG (  1.83 MVA) X/R:    0.26
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.1222 + J  0.0304 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      2.201 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     2.201 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     2.201 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     2.201 KA
CONTRIBUTIONS:  ADM-SUP-2              0.007 KA      ANG:   -84.29
                  ADM-SUP-1              0.007 KA      ANG:   -84.29
CBL-0321      MCC-F.                    2.196 KA      ANG:   -193.62

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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ADP-E1 DISC  3P Duty:  1.621 KA AT  -23.38 DEG (   1.35 MVA) X/R:    0.63
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.1569 + J  0.0679 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  1.621 KA
MOLDED CASE CIRCUIT BREAKER < 10KA  1.621 KA
MOLDED CASE CIRCUIT BREAKER < 20KA  1.621 KA
MOLDED CASE CIRCUIT BREAKER > 20KA  1.621 KA
P05.211A      ADP-E1 TERM      0.354 KA      ANG:    95.85
P05.211      MCC-EBB-B      1.480 KA      ANG:   -11.32

ADP-E2 DISC  3P Duty:  5.950 KA AT  -46.77 DEG (   4.95 MVA) X/R:    1.36
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.0319 + J  0.0339 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  5.950 KA
MOLDED CASE CIRCUIT BREAKER < 10KA  5.950 KA
MOLDED CASE CIRCUIT BREAKER < 20KA  5.950 KA
MOLDED CASE CIRCUIT BREAKER > 20KA  5.950 KA
P05.114A      ADP-E2 TERM      0.355 KA      ANG:    95.80
P05.114      MCC-EBB-A      5.672 KA      ANG:   -44.59

ADP-W1 DISC  3P Duty:  5.605 KA AT  -15.20 DEG (   4.66 MVA) X/R:    0.30
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.0477 + J  0.0130 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  5.605 KA
MOLDED CASE CIRCUIT BREAKER < 10KA  5.605 KA
MOLDED CASE CIRCUIT BREAKER < 20KA  5.605 KA
MOLDED CASE CIRCUIT BREAKER > 20KA  5.605 KA
P07.122A      ADP-W1 TERM      0.142 KA      ANG:    95.85
P07.122      MCC-WBB-A      5.556 KA      ANG:   -13.83

AIR COMP 1 DIS 3P Duty:  2.751 KA AT  -14.55 DEG (   2.29 MVA) X/R:    0.27
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.0975 + J  0.0253 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  2.751 KA
MOLDED CASE CIRCUIT BREAKER < 10KA  2.751 KA
MOLDED CASE CIRCUIT BREAKER < 20KA  2.751 KA
MOLDED CASE CIRCUIT BREAKER > 20KA  2.751 KA
CONTRIBUTIONS: AIR COMP 1      0.021 KA      ANG:   -84.29
CBL-0275      MCC-E.      2.744 KA      ANG:  -194.13

AIR COMP 1P DI 3P Duty:  3.236 KA AT  -16.23 DEG (   2.69 MVA) X/R:    0.35
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.0822 + J  0.0239 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  3.236 KA
MOLDED CASE CIRCUIT BREAKER < 10KA  3.236 KA
MOLDED CASE CIRCUIT BREAKER < 20KA  3.236 KA
MOLDED CASE CIRCUIT BREAKER > 20KA  3.236 KA

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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CONTRIBUTIONS TO AIR COMP 1P DI (CONTINUED)

CONTRIBUTIONS:	AIR COMP #1P	0.142 KA	ANG:	-84.29
CBL-0394	MCC-P	3.186 KA	ANG:	-13.86

AIR WASH MV DI 3P Duty: 1.444 KA AT -7.25 DEG (1.20 MVA) X/R: 0.13
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1903 + J 0.0242 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.444 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.444 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.444 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.444 KA
CONTRIBUTIONS: AIR WASH MOD V 0.013 KA ANG: -84.29
CBL-0458 MCC-Q 1.441 KA ANG: -6.76

ALTERNATOR P 3P Duty: 0.138 KA AT -61.10 DEG (0.05 MVA) X/R: 1.81
VOLTAGE: 208. EQUIV. IMPEDANCE= 0.4194 + J 0.7596 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 0.138 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.140 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.138 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.138 KA
XFMR ALTERNATO MCC-P 0.138 KA ANG: 118.90

AT-E1 FCV BF-6 3P Duty: 1.444 KA AT -12.23 DEG (1.20 MVA) X/R: 0.23
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1876 + J 0.0407 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.444 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.444 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.444 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.444 KA
CONTRIBUTIONS: BF-64-25 0.008 KA ANG: -84.29
CBL-0127 BUS-0395 1.442 KA ANG: -191.93

AT-E2 FCV BF-6 3P Duty: 1.631 KA AT -13.30 DEG (1.36 MVA) X/R: 0.25
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1653 + J 0.0391 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.631 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.631 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.631 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.631 KA
CONTRIBUTIONS: BF-64-26 0.008 KA ANG: -84.29
CBL-0133 BUS-0398 1.629 KA ANG: -193.04

AT-E3 Z1 FCV 3P Duty: 0.858 KA AT -9.86 DEG (0.71 MVA) X/R: 0.18
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.3183 + J 0.0553 OHMS

THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER    0.858 KA
MOLDED CASE CIRCUIT BREAKER < 10KA   0.858 KA
MOLDED CASE CIRCUIT BREAKER < 20KA   0.858 KA
MOLDED CASE CIRCUIT BREAKER > 20KA   0.858 KA
CONTRIBUTIONS: BF-64-15              0.008 KA      ANG: -84.29
CBL-0386        BUS-0392              0.856 KA      ANG: -189.35

AT-E3 Z2 FCV  3P Duty: 1.008 KA AT -10.70 DEG ( 0.84 MVA) X/R: 0.20
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.2702 + J 0.0511 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER    1.008 KA
MOLDED CASE CIRCUIT BREAKER < 10KA   1.008 KA
MOLDED CASE CIRCUIT BREAKER < 20KA   1.008 KA
MOLDED CASE CIRCUIT BREAKER > 20KA   1.008 KA
CONTRIBUTIONS: BF-64-47              0.008 KA      ANG: -84.29
CBL-0393        BUS-0399              1.005 KA      ANG: -190.27

AT-E3 Z3 FCV  3P Duty: 1.139 KA AT -11.45 DEG ( 0.95 MVA) X/R: 0.21
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.2385 + J 0.0483 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER    1.139 KA
MOLDED CASE CIRCUIT BREAKER < 10KA   1.139 KA
MOLDED CASE CIRCUIT BREAKER < 20KA   1.139 KA
MOLDED CASE CIRCUIT BREAKER > 20KA   1.139 KA
CONTRIBUTIONS: BF-64-45              0.008 KA      ANG: -84.29
CBL-0401        BUS-0400              1.136 KA      ANG: -191.07

AT-E4 Z1 FCV  3P Duty: 0.858 KA AT -9.86 DEG ( 0.71 MVA) X/R: 0.18
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.3183 + J 0.0553 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER    0.858 KA
MOLDED CASE CIRCUIT BREAKER < 10KA   0.858 KA
MOLDED CASE CIRCUIT BREAKER < 20KA   0.858 KA
MOLDED CASE CIRCUIT BREAKER > 20KA   0.858 KA
CONTRIBUTIONS: BF-64-16              0.008 KA      ANG: -84.29
CBL-0402        BUS-0401              0.856 KA      ANG: -189.35

AT-E4 Z2 FCV  3P Duty: 1.008 KA AT -10.70 DEG ( 0.84 MVA) X/R: 0.20
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.2702 + J 0.0511 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER    1.008 KA
MOLDED CASE CIRCUIT BREAKER < 10KA   1.008 KA
MOLDED CASE CIRCUIT BREAKER < 20KA   1.008 KA
MOLDED CASE CIRCUIT BREAKER > 20KA   1.008 KA
CONTRIBUTIONS: BF-64-48              0.008 KA      ANG: -84.29
CBL-0405        BUS-0402              1.005 KA      ANG: -190.27

AT-E4 Z3 FCV  3P Duty: 1.139 KA AT -11.45 DEG ( 0.95 MVA) X/R: 0.21

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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VOLTAGE: 480. EQUIV. IMPEDANCE= 0.2385 + J 0.0483 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.139 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.139 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.139 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.139 KA
CONTRIBUTIONS: BF-64-46 0.008 KA ANG: -84.29
CBL-0407 BUS-0403 1.136 KA ANG: -191.07

AT-W2 FCV JB 3P Duty: 2.498 KA AT -9.16 DEG ( 2.08 MVA) X/R: 0.17
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1095 + J 0.0177 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.498 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.498 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.498 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.498 KA
CBL-0221 BUS-0321 0.008 KA ANG: 95.71
CBL-0223 BUS-0323 0.008 KA ANG: 95.71
CBL-0219 BUS-0318 0.008 KA ANG: 95.71
CBL AT-W2 FCV PP-WBB-B 2.492 KA ANG: -8.63

ATS PEWP2 NRM 3P Duty: 19.609 KA AT -75.86 DEG ( 16.30 MVA) X/R: 4.44
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0035 + J 0.0137 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 19.609 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 19.609 KA
CBL-0409 PEWP2 DISC 1.395 KA ANG: -83.27
CBL-0383 MCC-M 18.227 KA ANG: -75.29

ATS PP-UV-EMG 3P Duty: 3.428 KA AT -18.80 DEG ( 2.85 MVA) X/R: 0.34
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0765 + J 0.0261 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 3.428 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 3.428 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 3.428 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 3.428 KA
P11.212 MCC-CEB-B 3.428 KA ANG: -18.80

ATS PP-UV-LOAD 3P Duty: 1.650 KA AT -9.70 DEG ( 1.37 MVA) X/R: 0.17
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1655 + J 0.0283 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.650 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.650 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.650 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.650 KA
ATS UV ATS PP-UV-NRM 1.650 KA ANG: 170.30

ATS PP-UV-NRM 3P Duty: 1.650 KA AT -9.70 DEG ( 1.37 MVA) X/R: 0.17
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1655 + J 0.0283 OHMS

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER 1.650 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.650 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.650 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.650 KA
P13.212 MCC-P 1.650 KA ANG: -9.70

ATS-51 EMG 3P Duty: 27.246 KA AT -71.75 DEG ( 22.65 MVA) X/R: 3.06
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0032 + J 0.0097 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 27.246 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 27.246 KA
CBL ATS-51E MCC-51B 27.246 KA ANG: -71.75

ATS-51 LOAD 3P Duty: 26.452 KA AT -71.02 DEG ( 21.99 MVA) X/R: 2.94
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0034 + J 0.0099 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 26.452 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 26.452 KA
ATS-51 ATS-51 NRM 26.452 KA ANG: -71.02

ATS-51 NRM 3P Duty: 26.452 KA AT -71.02 DEG ( 21.99 MVA) X/R: 2.94
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0034 + J 0.0099 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 26.452 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 26.452 KA
CBL ATS-51N MCC-51A 26.452 KA ANG: -71.02

ATS-52 EMG 3P Duty: 26.696 KA AT -71.83 DEG ( 22.19 MVA) X/R: 3.07
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0032 + J 0.0099 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 26.696 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 26.696 KA
CBL ATS-52E MCC-52B 26.696 KA ANG: -71.83

ATS-52 LOAD 3P Duty: 25.903 KA AT -71.20 DEG ( 21.54 MVA) X/R: 2.97
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0034 + J 0.0101 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 25.903 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 25.903 KA
ATS-52 ATS-52 NRM 25.903 KA ANG: -71.20

ATS-52 NRM 3P Duty: 25.904 KA AT -71.20 DEG ( 21.54 MVA) X/R: 2.97
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0034 + J 0.0101 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 25.904 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 25.904 KA
CBL ATS-52N MCC-52A 25.904 KA ANG: -71.20

ATS-54 EMG 3P Duty: 23.758 KA AT -70.28 DEG ( 19.75 MVA) X/R: 2.81
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0039 + J 0.0110 OHMS
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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER 23.758 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 23.758 KA
CBL ATS-54E MCC-54B 23.758 KA ANG: -70.28

ATS-54 LOAD 3P Duty: 22.064 KA AT -69.22 DEG ( 18.34 MVA) X/R: 2.67
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0045 + J 0.0117 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 22.064 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 22.064 KA
ATS-54 ATS-54 NRM 22.064 KA ANG: -69.22

ATS-54 NRM 3P Duty: 22.064 KA AT -69.22 DEG ( 18.34 MVA) X/R: 2.67
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0045 + J 0.0117 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 22.064 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 22.064 KA
CBL ATS-54N MCC-54 A 22.064 KA ANG: -69.22

ATS-55 EMG 3P Duty: 24.129 KA AT -70.45 DEG ( 20.06 MVA) X/R: 2.83
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0038 + J 0.0108 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 24.129 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 24.129 KA
CBL ATS-55E MCC-55B 24.129 KA ANG: -70.45

ATS-55 LOAD 3P Duty: 21.905 KA AT -69.11 DEG ( 18.21 MVA) X/R: 2.64
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0045 + J 0.0118 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 21.905 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 21.905 KA
ATS-55 ATS-55 NRM 21.905 KA ANG: 110.89

ATS-55 NRM 3P Duty: 21.905 KA AT -69.11 DEG ( 18.21 MVA) X/R: 2.64
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0045 + J 0.0118 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 21.905 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 21.905 KA
CBL ATS-55N MCC-55 A 21.905 KA ANG: -69.11

ATS-ADM EMG 3P Duty: 11.985 KA AT -71.68 DEG ( 9.96 MVA) X/R: 3.34
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0073 + J 0.0220 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 11.985 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 12.140 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 11.985 KA
P11.102AB SUB 7 BUS A 10.856 KA ANG: -70.48
ATS-ADM-A ATS-ADM LOAD 1.154 KA ANG: -83.14

ATS-ADM LOAD 3P Duty: 11.985 KA AT -71.68 DEG ( 9.96 MVA) X/R: 3.34
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0073 + J 0.0220 OHMS

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER 11.985 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 12.140 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 11.985 KA
ATS-ADM-A ATS-ADM EMG 10.856 KA ANG: -250.48
P09.010,A MCC-ADM-A 1.154 KA ANG: -83.14

ATS-ADM NRM 3P Duty: 10.815 KA AT -70.73 DEG ( 8.99 MVA) X/R: 2.86
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0085 + J 0.0242 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 10.815 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 10.815 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 10.815 KA
P11.202AB SUB 7 BUS B 10.815 KA ANG: -70.73

ATS-CEB LOAD 3P Duty: 21.339 KA AT -68.74 DEG ( 17.74 MVA) X/R: 2.58
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0047 + J 0.0121 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 21.339 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 21.339 KA
ATS-CEB ATS-CEB-NRM 21.339 KA ANG: -68.74

ATS-CEB-EMG 3P Duty: 20.548 KA AT -64.04 DEG ( 17.08 MVA) X/R: 2.07
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0059 + J 0.0121 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 20.548 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 20.548 KA
P11.115 MCC-CEB-A 20.548 KA ANG: -64.04

ATS-CEB-NRM 3P Duty: 21.339 KA AT -68.74 DEG ( 17.74 MVA) X/R: 2.58
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0047 + J 0.0121 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 21.339 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 21.339 KA
P11.215 MCC-CEB-B 21.339 KA ANG: -68.74

ATS-EBB NORM 3P Duty: 9.691 KA AT -77.15 DEG ( 8.06 MVA) X/R: 4.52
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0064 + J 0.0279 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 9.691 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 10.585 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 9.691 KA
ATS-EBB ATS-EBB-LOAD 0.047 KA ANG: -83.60
P05.216 MCC-EBB-B 9.644 KA ANG: -77.12

ATS-EBB-EMG 3P Duty: 10.502 KA AT -77.23 DEG ( 8.73 MVA) X/R: 4.53
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0058 + J 0.0257 OHMS

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER 10.502 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 11.478 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 10.502 KA
P05.115 MCC-EBB-A 10.502 KA ANG: -77.23

ATS-EBB-LOAD 3P Duty: 9.691 KA AT -77.15 DEG ( 8.06 MVA) X/R: 4.52
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0064 + J 0.0279 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 9.691 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 10.585 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 9.691 KA
P05.115A PP-EBB-A 0.047 KA ANG: 96.40
ATS-EBB ATS-EBB NORM 9.644 KA ANG: -257.12

ATS-LSE EMG 3P Duty: 12.365 KA AT -64.28 DEG ( 10.28 MVA) X/R: 2.14
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0097 + J 0.0202 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 12.365 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 12.365 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 12.365 KA
P03.208 MCC-C 12.365 KA ANG: -64.28

ATS-LSE LOAD 3P Duty: 12.664 KA AT -65.76 DEG ( 10.53 MVA) X/R: 2.27
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0090 + J 0.0200 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 12.664 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 12.664 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 12.664 KA
ATS-LSE ATS-LSE NRM 12.664 KA ANG: -65.76

ATS-LSE NRM 3P Duty: 12.664 KA AT -65.76 DEG ( 10.53 MVA) X/R: 2.27
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0090 + J 0.0200 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 12.664 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 12.664 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 12.664 KA
P03.215 MCC-D 12.664 KA ANG: -65.76

ATS-RLS EMG 3P Duty: 13.659 KA AT -67.62 DEG ( 11.36 MVA) X/R: 2.58
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0077 + J 0.0188 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 13.659 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 13.659 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 13.659 KA
P03.106 MCC-RLS-A 13.659 KA ANG: -67.62

ATS-RLS LOAD 3P Duty: 11.608 KA AT -67.25 DEG ( 9.65 MVA) X/R: 2.56
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0092 + J 0.0220 OHMS

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER 11.608 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 11.608 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 11.608 KA
ATS-RLS          ATS-RLS NRM          11.608 KA          ANG: 112.75

ATS-RLS NRM      3P Duty: 11.608 KA AT -67.25 DEG ( 9.65 MVA) X/R: 2.56
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0092 + J 0.0220 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 11.608 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 11.608 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 11.608 KA
P03.205          MCC-RLS-B          11.608 KA          ANG: -67.25

ATS-WBB NORM      3P Duty: 30.921 KA AT -77.94 DEG ( 25.71 MVA) X/R: 4.95
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0019 + J 0.0088 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 30.921 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 30.991 KA
ATS-WBB          ATS-WBB-LOAD          0.070 KA          ANG: -84.06
P07.221          MCC-WBB-B          30.851 KA          ANG: -77.92

ATS-WBB-EMG      3P Duty: 32.899 KA AT -77.46 DEG ( 27.35 MVA) X/R: 4.95
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0018 + J 0.0082 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 32.899 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 32.977 KA
P07.120          MCC-WBB-A          32.899 KA          ANG: -77.46

ATS-WBB-LOAD      3P Duty: 30.921 KA AT -77.94 DEG ( 25.71 MVA) X/R: 4.95
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0019 + J 0.0088 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 30.921 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 30.991 KA
ATS-WBB          ATS-WBB NORM          30.851 KA          ANG: -257.92
P07.120A          PP-WBB-A          0.070 KA          ANG: 95.94

ATS-WPB-EMG      3P Duty: 10.193 KA AT -51.44 DEG ( 8.47 MVA) X/R: 1.29
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0169 + J 0.0213 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 10.193 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 10.193 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 10.193 KA
P06.100          MCC-WPB-A          10.193 KA          ANG: -51.44

ATS-WPB-LOAD      3P Duty: 8.902 KA AT -46.91 DEG ( 7.40 MVA) X/R: 1.09
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0213 + J 0.0227 OHMS

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER      8.902 KA
MOLDED CASE CIRCUIT BREAKER < 10KA    8.902 KA
MOLDED CASE CIRCUIT BREAKER < 20KA    8.902 KA
MOLDED CASE CIRCUIT BREAKER > 20KA    8.902 KA
ATS-WPB          ATS-WPB-NORM          8.902 KA      ANG:   -46.91

ATS-WPB-NORM  3P Duty:  8.902 KA AT  -46.91 DEG (   7.40 MVA) X/R:    1.09
VOLTAGE:      480.    EQUIV. IMPEDANCE=  0.0213 + J  0.0227 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      8.902 KA
MOLDED CASE CIRCUIT BREAKER < 10KA    8.902 KA
MOLDED CASE CIRCUIT BREAKER < 20KA    8.902 KA
MOLDED CASE CIRCUIT BREAKER > 20KA    8.902 KA
P06.200      MCC-WPB-B          8.902 KA      ANG:   -46.91

B-54-1 DISC  3P Duty:  3.408 KA AT  -10.86 DEG (   2.83 MVA) X/R:    0.20
VOLTAGE:      480.    EQUIV. IMPEDANCE=  0.0799 + J  0.0153 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      3.408 KA
MOLDED CASE CIRCUIT BREAKER < 10KA    3.408 KA
MOLDED CASE CIRCUIT BREAKER < 20KA    3.408 KA
MOLDED CASE CIRCUIT BREAKER > 20KA    3.408 KA
CBL-B-54-1.   B-54-1 MTR VAL      0.008 KA      ANG:    95.71
CBL-B-54-1    W1 FLOW VALVES      3.406 KA      ANG:   -10.73

B-54-1 MTR VAL 3P Duty:  3.360 KA AT  -10.76 DEG (   2.79 MVA) X/R:    0.20
VOLTAGE:      480.    EQUIV. IMPEDANCE=  0.0810 + J  0.0154 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      3.360 KA
MOLDED CASE CIRCUIT BREAKER < 10KA    3.360 KA
MOLDED CASE CIRCUIT BREAKER < 20KA    3.360 KA
MOLDED CASE CIRCUIT BREAKER > 20KA    3.360 KA
CONTRIBUTIONS: B-54-1 MTR VAL      0.008 KA      ANG:   -84.29
CBL-B-54-1.   B-54-1 DISC        3.358 KA      ANG:   -10.64

B-54-2 DISC  3P Duty:  3.408 KA AT  -10.86 DEG (   2.83 MVA) X/R:    0.20
VOLTAGE:      480.    EQUIV. IMPEDANCE=  0.0799 + J  0.0153 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      3.408 KA
MOLDED CASE CIRCUIT BREAKER < 10KA    3.408 KA
MOLDED CASE CIRCUIT BREAKER < 20KA    3.408 KA
MOLDED CASE CIRCUIT BREAKER > 20KA    3.408 KA
CBL-B-54-2.   B-54-2 MTR VAL      0.008 KA      ANG:    95.71
CBL-B-54-2    W1 FLOW VALVES      3.406 KA      ANG:   -10.73

B-54-2 MTR VAL 3P Duty:  3.360 KA AT  -10.76 DEG (   2.79 MVA) X/R:    0.20
VOLTAGE:      480.    EQUIV. IMPEDANCE=  0.0810 + J  0.0154 OHMS

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER      3.360 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     3.360 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     3.360 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     3.360 KA
CONTRIBUTIONS:  B-54-2 MTR VAL         0.008 KA      ANG:   -84.29
CBL-B-54-2.      B-54-2 DISC            3.358 KA      ANG:   -10.64

B-54-3 DISC    3P Duty:  3.408 KA AT  -10.86 DEG (   2.83 MVA) X/R:    0.20
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.0799 + J  0.0153 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      3.408 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     3.408 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     3.408 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     3.408 KA
CBL-B-54-3.    B-54-3 MTR VAL         0.008 KA      ANG:    95.71
CBL- B-54-3    W1 FLOW VALVES          3.406 KA      ANG:   -10.73

B-54-3 MTR VAL 3P Duty:  3.360 KA AT  -10.76 DEG (   2.79 MVA) X/R:    0.20
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.0810 + J  0.0154 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      3.360 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     3.360 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     3.360 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     3.360 KA
CONTRIBUTIONS:  B-54-3 MTR VAL         0.008 KA      ANG:   -84.29
CBL-B-54-3.    B-54-3 DISC            3.358 KA      ANG:   -10.64

BAR SCREEN 2 T 3P Duty:  4.356 KA AT  -18.99 DEG (   3.62 MVA) X/R:    0.36
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.0602 + J  0.0207 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      4.356 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     4.356 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     4.356 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     4.356 KA
CONTRIBUTIONS:  BAR SCREEN 2           0.035 KA      ANG:   -84.29
CBL-0493        MCC-D.                 4.342 KA      ANG:   -18.57

BF - 64- 29    3P Duty:  1.240 KA AT  -11.17 DEG (   1.03 MVA) X/R:    0.21
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.2193 + J  0.0433 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      1.240 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     1.240 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     1.240 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     1.240 KA
CONTRIBUTIONS:  BF-64-29               0.008 KA      ANG:   -84.29
CBL-0125        BUS-0394               1.238 KA      ANG:  -190.83

BF- 64- 30     3P Duty:  1.376 KA AT  -11.94 DEG (   1.14 MVA) X/R:    0.22

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1971 + J 0.0417 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.376 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.376 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.376 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.376 KA
CONTRIBUTIONS: BF-64-30 0.008 KA ANG: -84.29
CBL-0131 BUS-0397 1.373 KA ANG: -191.63

BF-64-07 3P Duty: 1.020 KA AT -10.06 DEG ( 0.85 MVA) X/R: 0.18
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.2674 + J 0.0475 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.020 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.020 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.020 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.020 KA
CONTRIBUTIONS: BF-64-07. 0.008 KA ANG: -84.29
CBL-0123 BUS-0393 1.018 KA ANG: -189.64

BF-64-08 3P Duty: 1.111 KA AT -10.57 DEG ( 0.92 MVA) X/R: 0.19
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.2452 + J 0.0458 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.111 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.111 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.111 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.111 KA
CONTRIBUTIONS: BF-64-08. 0.008 KA ANG: -84.29
CBL-0129 BUS-0396 1.109 KA ANG: -190.18

BSCRN-3 STR 3P Duty: 4.266 KA AT -19.07 DEG ( 3.55 MVA) X/R: 0.36
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0614 + J 0.0212 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 4.266 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.266 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.266 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.266 KA
CBL-0545 BAR SCREEN 3 T 0.035 KA ANG: 95.79
CBL-0544 MCC-C 4.251 KA ANG: -18.63

BSN-OUT-GT-1 D 3P Duty: 2.747 KA AT -14.28 DEG ( 2.28 MVA) X/R: 0.26
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0978 + J 0.0249 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.747 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.747 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.747 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.747 KA
CONTRIBUTIONS: BASIN OUT GATE 0.008 KA ANG: -84.29
CBL-0265 MCC-E. 2.744 KA ANG: -194.12

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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BSN-OUT-GT-3 D 3P Duty: 2.747 KA AT -14.28 DEG ( 2.28 MVA) X/R: 0.26
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0978 + J 0.0249 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.747 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.747 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.747 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.747 KA
CONTRIBUTIONS: BASIN OUT GATE 0.008 KA ANG: -84.29
CBL-0266 MCC-E 2.744 KA ANG: -194.12

BSNHST DISC 3P Duty: 4.065 KA AT -22.50 DEG ( 3.38 MVA) X/R: 0.45
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0630 + J 0.0261 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 4.065 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.065 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.065 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.065 KA
CONTRIBUTIONS: BASIN HOIST 0.053 KA ANG: -84.29
CBL-0280 MCC-F 4.040 KA ANG: -21.83

BSNINFLGT-1 DI 3P Duty: 2.747 KA AT -14.28 DEG ( 2.28 MVA) X/R: 0.26
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0978 + J 0.0249 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.747 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.747 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.747 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.747 KA
CONTRIBUTIONS: BASIN INFL GAT 0.008 KA ANG: -84.29
CBL-0263 MCC-E 2.744 KA ANG: -14.12

BSNINFLGT-3 DI 3P Duty: 2.747 KA AT -14.28 DEG ( 2.28 MVA) X/R: 0.26
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0978 + J 0.0249 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.747 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.747 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.747 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.747 KA
CONTRIBUTIONS: BASIN INFL GAT 0.008 KA ANG: -84.29
CBL-0264 MCC-E 2.744 KA ANG: -14.12

BSNINFLGT2 DIS 3P Duty: 2.734 KA AT -14.84 DEG ( 2.27 MVA) X/R: 0.27
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0980 + J 0.0260 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.734 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.734 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.734 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.734 KA
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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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CONTRIBUTIONS TO BSNINFLT2 DIS (CONTINUED)
CONTRIBUTIONS: BSN INFL GT #2      0.008 KA      ANG: -84.29
CBL-0304      MCC-F      2.731 KA      ANG: -14.68

BSNOUTGT2 DISC 3P Duty: 2.734 KA AT -14.84 DEG ( 2.27 MVA) X/R: 0.27
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0980 + J 0.0260 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.734 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.734 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.734 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.734 KA
CONTRIBUTIONS: BSN OUT GT #2      0.008 KA      ANG: -84.29
CBL-0305      MCC-F      2.731 KA      ANG: -14.68

BT1-1M DISC 3P Duty: 10.797 KA AT -55.39 DEG ( 8.98 MVA) X/R: 1.69
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0146 + J 0.0211 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 10.797 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 10.797 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 10.797 KA
CONTRIBUTIONS: 60 HP BT1-1M      0.470 KA      ANG: -84.29
CBL-0144      MCC-56 A      10.388 KA      ANG: -54.14

BT2-1M DISC 3P Duty: 10.731 KA AT -55.49 DEG ( 8.92 MVA) X/R: 1.70
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0146 + J 0.0213 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 10.731 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 10.731 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 10.731 KA
CONTRIBUTIONS: 60 HP BT2-1M      0.470 KA      ANG: -84.29
CBL-0150      MCC-56B      10.321 KA      ANG: -54.24

BTAB-1 DISC 3P Duty: 1.468 KA AT -15.06 DEG ( 1.22 MVA) X/R: 0.23
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1823 + J 0.0491 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.468 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.468 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.468 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.468 KA
CONTRIBUTIONS: 25 HP BTAB -1      0.196 KA      ANG: -78.46
CBL-0151      MCC-52A      1.391 KA      ANG: -7.82

BTAB-2 DISC 3P Duty: 1.450 KA AT -15.33 DEG ( 1.21 MVA) X/R: 0.32
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1843 + J 0.0505 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.450 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.450 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.450 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.450 KA

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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	CONTRIBUTIONS TO BTAB-2 DISC (CONTINUED)				
	CONTRIBUTIONS: 25 HP BTAB-2	0.196 KA	ANG:	-84.29	
	CBL-0146 MCC-52B	1.392 KA	ANG:	-7.79	
BTAB-3 DISC	3P Duty: 1.345 KA AT -15.78 DEG (1.12 MVA) X/R: 0.33				
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1983 + J 0.0561 OHMS				
	LOW VOLTAGE POWER CIRCUIT BREAKER 1.345 KA				
	MOLDED CASE CIRCUIT BREAKER < 10KA 1.345 KA				
	MOLDED CASE CIRCUIT BREAKER < 20KA 1.345 KA				
	MOLDED CASE CIRCUIT BREAKER > 20KA 1.345 KA				
	CONTRIBUTIONS: 25 HP BTAB - 3	0.196 KA	ANG:	-84.29	
	CBL-0138 MCC-52A	1.286 KA	ANG:	-7.63	
BUS-0097	3P Duty: 1.068 KA AT -10.89 DEG (0.89 MVA) X/R: 0.20				
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.2548 + J 0.0490 OHMS				
	LOW VOLTAGE POWER CIRCUIT BREAKER 1.068 KA				
	MOLDED CASE CIRCUIT BREAKER < 10KA 1.068 KA				
	MOLDED CASE CIRCUIT BREAKER < 20KA 1.068 KA				
	MOLDED CASE CIRCUIT BREAKER > 20KA 1.068 KA				
	CBL-0073 BUS-0098	0.007 KA	ANG:	95.92	
	CBL-AXMX-E1A MCC-EPB-A.	1.066 KA	ANG:	-10.52	
BUS-0099	3P Duty: 1.068 KA AT -10.89 DEG (0.89 MVA) X/R: 0.20				
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.2548 + J 0.0490 OHMS				
	LOW VOLTAGE POWER CIRCUIT BREAKER 1.068 KA				
	MOLDED CASE CIRCUIT BREAKER < 10KA 1.068 KA				
	MOLDED CASE CIRCUIT BREAKER < 20KA 1.068 KA				
	MOLDED CASE CIRCUIT BREAKER > 20KA 1.068 KA				
	CBL-0074 BUS-0100	0.007 KA	ANG:	95.82	
	CBL-AXMX-E1B MCC-EPB-A.	1.066 KA	ANG:	-10.52	
BUS-0101	3P Duty: 1.068 KA AT -10.89 DEG (0.89 MVA) X/R: 0.20				
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.2548 + J 0.0490 OHMS				
	LOW VOLTAGE POWER CIRCUIT BREAKER 1.068 KA				
	MOLDED CASE CIRCUIT BREAKER < 10KA 1.068 KA				
	MOLDED CASE CIRCUIT BREAKER < 20KA 1.068 KA				
	MOLDED CASE CIRCUIT BREAKER > 20KA 1.068 KA				
	CBL-0075 BUS-0102	0.007 KA	ANG:	95.78	
	CBL-AXMX-E1C MCC-EPB-A.	1.066 KA	ANG:	-10.52	
BUS-0103	3P Duty: 1.068 KA AT -10.89 DEG (0.89 MVA) X/R: 0.20				
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.2548 + J 0.0490 OHMS				

THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER      1.068 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     1.068 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     1.068 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     1.068 KA
CBL-0076      BUS-0104      0.007 KA      ANG:    96.05
CBL-ANMX-E1A   MCC-EPB-A.    1.066 KA      ANG:   -10.52

BUS-0105      3P Duty:  1.068 KA AT  -10.89 DEG (  0.89 MVA) X/R:    0.20
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.2548 + J  0.0490 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      1.068 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     1.068 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     1.068 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     1.068 KA
CBL-0077      BUS-0106      0.007 KA      ANG:    96.04
CBL-ANMX-E1B   MCC-EPB-A.    1.066 KA      ANG:   -10.52

BUS-0107      3P Duty:  1.068 KA AT  -10.89 DEG (  0.89 MVA) X/R:    0.20
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.2548 + J  0.0490 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      1.068 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     1.068 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     1.068 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     1.068 KA
CBL-0078      BUS-0108      0.007 KA      ANG:    95.98
CBL-ANMX-E1C   MCC-EPB-A.    1.066 KA      ANG:   -10.52

BUS-0109      3P Duty:  1.068 KA AT  -10.89 DEG (  0.89 MVA) X/R:    0.20
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.2548 + J  0.0490 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      1.068 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     1.068 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     1.068 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     1.068 KA
CBL-0079      BUS-0110      0.007 KA      ANG:    95.91
CBL-ANMX-E1D   MCC-EPB-A.    1.066 KA      ANG:   -10.52

BUS-0111      3P Duty:  1.068 KA AT  -10.89 DEG (  0.89 MVA) X/R:    0.20
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.2548 + J  0.0490 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      1.068 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     1.068 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     1.068 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     1.068 KA
CBL-0080      BUS-0112      0.007 KA      ANG:    95.85
CBL-SWMX-E1    MCC-EPB-A.    1.066 KA      ANG:   -10.52

BUS-0113      3P Duty:  1.068 KA AT  -10.89 DEG (  0.89 MVA) X/R:    0.20

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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VOLTAGE: 480. EQUIV. IMPEDANCE= 0.2548 + J 0.0490 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.068 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.068 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.068 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.068 KA
CBL-0081 BUS-0114 0.007 KA ANG: 95.78
CBL-ANMX-E3A MCC-EPB-A. 1.066 KA ANG: -10.52

BUS-0115 3P Duty: 1.068 KA AT -10.89 DEG ( 0.89 MVA) X/R: 0.20
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.2548 + J 0.0490 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.068 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.068 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.068 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.068 KA
CBL-0082 BUS-0116 0.007 KA ANG: 95.85
CBL-ANMX-E3B MCC-EPB-A. 1.066 KA ANG: -10.52

BUS-0117 3P Duty: 1.068 KA AT -10.89 DEG ( 0.89 MVA) X/R: 0.20
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.2548 + J 0.0490 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.068 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.068 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.068 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.068 KA
CBL-0083 BUS-0118 0.007 KA ANG: 95.91
CBL-ANMX-E3C MCC-EPB-A. 1.066 KA ANG: -10.52

BUS-0119 3P Duty: 1.068 KA AT -10.89 DEG ( 0.89 MVA) X/R: 0.20
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.2548 + J 0.0490 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.068 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.068 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.068 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.068 KA
CBL-0084 BUS-0120 0.007 KA ANG: 95.98
CBL-ANMX-E3D MCC-EPB-A. 1.066 KA ANG: -10.52

BUS-0121 3P Duty: 1.068 KA AT -10.89 DEG ( 0.89 MVA) X/R: 0.20
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.2548 + J 0.0490 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.068 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.068 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.068 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.068 KA
CBL-0085 BUS-0122 0.007 KA ANG: 95.82
CBL-AXMX-E3A MCC-EPB-A. 1.066 KA ANG: -10.52

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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BUS-0123    3P Duty:  1.068 KA AT  -10.89 DEG (   0.89 MVA) X/R:    0.20
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.2548 + J  0.0490 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  1.068 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.068 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.068 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.068 KA
CBL-0086      BUS-0124      0.007 KA      ANG:    95.92
CBL-AXMX-E3B  MCC-EPB-A.    1.066 KA      ANG:   -10.52

BUS-0125    3P Duty:  1.068 KA AT  -10.89 DEG (   0.89 MVA) X/R:    0.20
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.2548 + J  0.0490 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  1.068 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.068 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.068 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.068 KA
CBL-0087      BUS-0126      0.007 KA      ANG:    96.05
CBL-AXMX-E3C  MCC-EPB-A.    1.066 KA      ANG:   -10.52

BUS-0127    3P Duty:  1.068 KA AT  -10.89 DEG (   0.89 MVA) X/R:    0.20
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.2548 + J  0.0490 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  1.068 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.068 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.068 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.068 KA
CBL-0088      BUS-0128      0.007 KA      ANG:    96.04
CBL-SWMX-E3   MCC-EPB-A.    1.066 KA      ANG:   -10.52

BUS-0141    3P Duty:  0.827 KA AT  -9.64 DEG (   0.69 MVA) X/R:    0.17
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.3305 + J  0.0561 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  0.827 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.827 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.827 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.827 KA
CBL-0100      BUS-0142      0.007 KA      ANG:    95.82
CBL-AXMX-E2A  MCC-EPB-B..    0.825 KA      ANG:    -9.16

BUS-0143    3P Duty:  0.827 KA AT  -9.64 DEG (   0.69 MVA) X/R:    0.17
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.3305 + J  0.0561 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  0.827 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.827 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.827 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.827 KA
CBL-0101      BUS-0144      0.007 KA      ANG:    95.92

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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	CONTRIBUTIONS TO	BUS-0143	(CONTINUED)		
	CBL-AXMX-E2B	MCC-EPB-B..	0.825 KA	ANG:	-9.16
BUS-0145	3P Duty:	0.827 KA AT -9.64 DEG (	0.69 MVA)	X/R:	0.17
	VOLTAGE:	480. EQUIV. IMPEDANCE=	0.3304 + J	0.0561	OHMS
	LOW VOLTAGE POWER CIRCUIT BREAKER	0.827 KA			
	MOLDED CASE CIRCUIT BREAKER < 10KA	0.827 KA			
	MOLDED CASE CIRCUIT BREAKER < 20KA	0.827 KA			
	MOLDED CASE CIRCUIT BREAKER > 20KA	0.827 KA			
	CBL-0102	BUS-0146	0.007 KA	ANG:	96.05
	CBL-AXMX-E2C	MCC-EPB-B..	0.825 KA	ANG:	-9.16
BUS-0147	3P Duty:	0.827 KA AT -9.64 DEG (	0.69 MVA)	X/R:	0.17
	VOLTAGE:	480. EQUIV. IMPEDANCE=	0.3305 + J	0.0561	OHMS
	LOW VOLTAGE POWER CIRCUIT BREAKER	0.827 KA			
	MOLDED CASE CIRCUIT BREAKER < 10KA	0.827 KA			
	MOLDED CASE CIRCUIT BREAKER < 20KA	0.827 KA			
	MOLDED CASE CIRCUIT BREAKER > 20KA	0.827 KA			
	CBL-0103	BUS-0148	0.007 KA	ANG:	95.78
	CBL-ANMX-E2A	MCC-EPB-B..	0.825 KA	ANG:	-9.16
BUS-0149	3P Duty:	0.827 KA AT -9.64 DEG (	0.69 MVA)	X/R:	0.17
	VOLTAGE:	480. EQUIV. IMPEDANCE=	0.3305 + J	0.0561	OHMS
	LOW VOLTAGE POWER CIRCUIT BREAKER	0.827 KA			
	MOLDED CASE CIRCUIT BREAKER < 10KA	0.827 KA			
	MOLDED CASE CIRCUIT BREAKER < 20KA	0.827 KA			
	MOLDED CASE CIRCUIT BREAKER > 20KA	0.827 KA			
	CBL-0104	BUS-0150	0.007 KA	ANG:	95.85
	CBL-ANMX-E2B	MCC-EPB-B..	0.825 KA	ANG:	-9.16
BUS-0151	3P Duty:	0.827 KA AT -9.64 DEG (	0.69 MVA)	X/R:	0.17
	VOLTAGE:	480. EQUIV. IMPEDANCE=	0.3305 + J	0.0561	OHMS
	LOW VOLTAGE POWER CIRCUIT BREAKER	0.827 KA			
	MOLDED CASE CIRCUIT BREAKER < 10KA	0.827 KA			
	MOLDED CASE CIRCUIT BREAKER < 20KA	0.827 KA			
	MOLDED CASE CIRCUIT BREAKER > 20KA	0.827 KA			
	CBL-0105	BUS-0152	0.007 KA	ANG:	95.91
	CBL-ANMX-E2C	MCC-EPB-B..	0.825 KA	ANG:	-9.16
BUS-0153	3P Duty:	0.827 KA AT -9.64 DEG (	0.69 MVA)	X/R:	0.17
	VOLTAGE:	480. EQUIV. IMPEDANCE=	0.3304 + J	0.0561	OHMS

THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER      0.827 KA
MOLDED CASE CIRCUIT BREAKER < 10KA    0.827 KA
MOLDED CASE CIRCUIT BREAKER < 20KA    0.827 KA
MOLDED CASE CIRCUIT BREAKER > 20KA    0.827 KA
CBL-0106      BUS-0154      0.007 KA      ANG:      95.98
CBL-ANMX-E2D   MCC-EPB-B..   0.825 KA      ANG:      -9.16

BUS-0155      3P Duty:  0.827 KA AT  -9.64 DEG (  0.69 MVA) X/R:      0.17
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.3304 + J  0.0561  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      0.827 KA
MOLDED CASE CIRCUIT BREAKER < 10KA    0.827 KA
MOLDED CASE CIRCUIT BREAKER < 20KA    0.827 KA
MOLDED CASE CIRCUIT BREAKER > 20KA    0.827 KA
CBL-0107      BUS-0156      0.007 KA      ANG:      96.04
CBL-SWMX-E2    MCC-EPB-B..   0.825 KA      ANG:      -9.16

BUS-0157      3P Duty:  0.827 KA AT  -9.64 DEG (  0.69 MVA) X/R:      0.17
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.3304 + J  0.0561  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      0.827 KA
MOLDED CASE CIRCUIT BREAKER < 10KA    0.827 KA
MOLDED CASE CIRCUIT BREAKER < 20KA    0.827 KA
MOLDED CASE CIRCUIT BREAKER > 20KA    0.827 KA
CBL-0108      BUS-0158      0.007 KA      ANG:      96.05
CBL-ANMX-E4A   MCC-EPB-B..   0.825 KA      ANG:      -9.16

BUS-0159      3P Duty:  0.827 KA AT  -9.64 DEG (  0.69 MVA) X/R:      0.17
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.3304 + J  0.0561  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      0.827 KA
MOLDED CASE CIRCUIT BREAKER < 10KA    0.827 KA
MOLDED CASE CIRCUIT BREAKER < 20KA    0.827 KA
MOLDED CASE CIRCUIT BREAKER > 20KA    0.827 KA
CBL-0109      BUS-0160      0.007 KA      ANG:      96.04
CBL-ANMX-E4B   MCC-EPB-B..   0.825 KA      ANG:      -9.16

BUS-0161      3P Duty:  0.827 KA AT  -9.64 DEG (  0.69 MVA) X/R:      0.17
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.3304 + J  0.0561  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      0.827 KA
MOLDED CASE CIRCUIT BREAKER < 10KA    0.827 KA
MOLDED CASE CIRCUIT BREAKER < 20KA    0.827 KA
MOLDED CASE CIRCUIT BREAKER > 20KA    0.827 KA
CBL-0110      BUS-0162      0.007 KA      ANG:      95.98
CBL-ANMX-E4C   MCC-EPB-B..   0.825 KA      ANG:      -9.16

BUS-0163      3P Duty:  0.827 KA AT  -9.64 DEG (  0.69 MVA) X/R:      0.17

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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VOLTAGE: 480. EQUIV. IMPEDANCE= 0.3305 + J 0.0561 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 0.827 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.827 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.827 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.827 KA
CBL-0111 BUS-0164 0.007 KA ANG: 95.91
CBL-ANMX-E4D MCC-EPB-B.. 0.825 KA ANG: -9.16

BUS-0165 3P Duty: 0.827 KA AT -9.64 DEG ( 0.69 MVA) X/R: 0.17
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.3305 + J 0.0561 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 0.827 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.827 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.827 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.827 KA
CBL-0112 BUS-0166 0.007 KA ANG: 95.92
CBL-AXMX-E4A MCC-EPB-B.. 0.825 KA ANG: -9.16

BUS-0167 3P Duty: 0.827 KA AT -9.64 DEG ( 0.69 MVA) X/R: 0.17
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.3305 + J 0.0561 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 0.827 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.827 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.827 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.827 KA
CBL-0113 BUS-0168 0.007 KA ANG: 95.82
CBL-AXMX-E4B MCC-EPB-B.. 0.825 KA ANG: -9.16

BUS-0169 3P Duty: 0.827 KA AT -9.64 DEG ( 0.69 MVA) X/R: 0.17
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.3305 + J 0.0561 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 0.827 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.827 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.827 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.827 KA
CBL-0114 BUS-0170 0.007 KA ANG: 95.78
CBL-AXMX-E4C MCC-EPB-B.. 0.825 KA ANG: -9.16

BUS-0171 3P Duty: 0.827 KA AT -9.64 DEG ( 0.69 MVA) X/R: 0.17
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.3305 + J 0.0561 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 0.827 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.827 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.827 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.827 KA
CBL-0115 BUS-0172 0.007 KA ANG: 95.85
CBL-SWMX-E4 MCC-EPB-B.. 0.825 KA ANG: -9.16

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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BUS-0178      3P Duty:  6.189 KA AT  -62.03 DEG (   5.15 MVA) X/R:    1.90
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.0210 + J  0.0395 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      6.189 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     6.340 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     6.189 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     6.189 KA
CBL-0118      PP-EBB-A                  6.189 KA      ANG:   -62.03

BUS-0179      3P Duty:  1.384 KA AT  -12.19 DEG (   1.15 MVA) X/R:    0.22
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.1957 + J  0.0423 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      1.384 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     1.384 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     1.384 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     1.384 KA
CBL WASV E1   PP-EBB-A                  1.384 KA      ANG:   -12.19

BUS-0180      3P Duty:  1.384 KA AT  -12.19 DEG (   1.15 MVA) X/R:    0.22
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.1957 + J  0.0423 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      1.384 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     1.384 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     1.384 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     1.384 KA
CBL WASV E2   PP-EBB-A                  1.384 KA      ANG:   -12.19

BUS-0181      3P Duty:  6.069 KA AT  -61.53 DEG (   5.05 MVA) X/R:    1.86
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.0218 + J  0.0401 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      6.069 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     6.182 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     6.069 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     6.069 KA
CBL-0121      BUS-0415                  6.069 KA      ANG:   118.47

BUS-0182      3P Duty:  2.091 KA AT  -15.67 DEG (   1.74 MVA) X/R:    0.30
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.1276 + J  0.0358 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      2.091 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     2.091 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     2.091 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     2.091 KA
CBL-0124      BUS-0394                  0.008 KA      ANG:    95.86
CBL-0126      BUS-0395                  0.008 KA      ANG:    95.81
CBL-0122      BUS-0393                  0.008 KA      ANG:    95.94
CBL AT-E1 FCV PP-EBB-A                  2.083 KA      ANG:   -15.07

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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BUS-0188    3P Duty:  2.501 KA AT  -18.03 DEG (   2.08 MVA) X/R:    0.34
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.1054 + J  0.0343  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER    2.501 KA
MOLDED CASE CIRCUIT BREAKER < 10KA   2.501 KA
MOLDED CASE CIRCUIT BREAKER < 20KA   2.501 KA
MOLDED CASE CIRCUIT BREAKER > 20KA   2.501 KA
CBL-0130      BUS-0397          0.008 KA      ANG:    95.86
CBL-0132      BUS-0398          0.008 KA      ANG:    95.81
CBL-0128      BUS-0396          0.008 KA      ANG:    95.94
CBL AT-E2 FCV PP-EBB-A          2.492 KA      ANG:   -17.53

BUS-0272    3P Duty: 11.095 KA AT  -53.64 DEG (   9.22 MVA) X/R:    1.41
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.0148 + J  0.0201  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER    11.095 KA
MOLDED CASE CIRCUIT BREAKER < 20KA   11.095 KA
MOLDED CASE CIRCUIT BREAKER > 20KA   11.095 KA
CBL-P-53-07.   P-53-07 DISC.      0.007 KA      ANG:   -84.19
CBL-P-53-20    P-53-20 DISC       0.007 KA      ANG:   -84.24
CBL-P-53-07    MCC-WPB-A.        11.083 KA      ANG:   -53.60

BUS-0273    3P Duty:  1.880 KA AT  -11.74 DEG (   1.56 MVA) X/R:    0.21
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.1444 + J  0.0300  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER    1.880 KA
MOLDED CASE CIRCUIT BREAKER < 10KA   1.880 KA
MOLDED CASE CIRCUIT BREAKER < 20KA   1.880 KA
MOLDED CASE CIRCUIT BREAKER > 20KA   1.880 KA
CONTRIBUTIONS: AXMX-W1A MTR      0.007 KA      ANG:   -84.29
CBL-AXMX-W1A   MCC-WPB-A.        1.877 KA      ANG:   -11.53

BUS-0274    3P Duty:  1.470 KA AT  -10.18 DEG (   1.22 MVA) X/R:    0.18
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.1855 + J  0.0333  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER    1.470 KA
MOLDED CASE CIRCUIT BREAKER < 10KA   1.470 KA
MOLDED CASE CIRCUIT BREAKER < 20KA   1.470 KA
MOLDED CASE CIRCUIT BREAKER > 20KA   1.470 KA
CONTRIBUTIONS: AXMX-W1B MTR      0.007 KA      ANG:   -84.29
CBL-AXMX-W1B   MCC-WPB-A.        1.468 KA      ANG:    -9.92

BUS-0275    3P Duty:  1.850 KA AT  -11.63 DEG (   1.54 MVA) X/R:    0.21
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.1467 + J  0.0302  OHMS

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER      1.850 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     1.850 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     1.850 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     1.850 KA
CONTRIBUTIONS:  AXMX-W1C MTR           0.007 KA      ANG:  -84.29
CBL-AXMX-W1C     MCC-WPB-A.             1.848 KA      ANG:  -11.42

BUS-0276  3P Duty:  1.589 KA AT  -10.63 DEG (  1.32 MVA) X/R:    0.19
VOLTAGE:   480.   EQUIV. IMPEDANCE=  0.1714 + J  0.0322 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      1.589 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     1.589 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     1.589 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     1.589 KA
CONTRIBUTIONS:  ANMX-W1A MTR           0.007 KA      ANG:  -84.29
CBL-ANMX-W1A     MCC-WPB-A.             1.587 KA      ANG:  -10.38

BUS-0277  3P Duty:  2.234 KA AT  -13.11 DEG (  1.86 MVA) X/R:    0.24
VOLTAGE:   480.   EQUIV. IMPEDANCE=  0.1208 + J  0.0281 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      2.234 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     2.234 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     2.234 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     2.234 KA
CONTRIBUTIONS:  ANMX-W1B MTR           0.007 KA      ANG:  -84.29
CBL-ANMX-W1B     MCC-WPB-A.             2.232 KA      ANG:  -12.94

BUS-0278  3P Duty:  2.007 KA AT  -12.23 DEG (  1.67 MVA) X/R:    0.22
VOLTAGE:   480.   EQUIV. IMPEDANCE=  0.1349 + J  0.0293 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      2.007 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     2.007 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     2.007 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     2.007 KA
CONTRIBUTIONS:  ANMX-W1C MTR           0.007 KA      ANG:  -84.29
CBL-ANMX-W1C     MCC-WPB-A.             2.005 KA      ANG:  -12.04

BUS-0279  3P Duty:  1.957 KA AT  -12.04 DEG (  1.63 MVA) X/R:    0.22
VOLTAGE:   480.   EQUIV. IMPEDANCE=  0.1385 + J  0.0295 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      1.957 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     1.957 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     1.957 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     1.957 KA
CONTRIBUTIONS:  ANMX-W1D MTR           0.007 KA      ANG:  -84.29
CBL-ANMX-W1D     MCC-WPB-A.             1.955 KA      ANG:  -11.84

BUS-0281  3P Duty:  2.954 KA AT  -15.94 DEG (  2.46 MVA) X/R:    0.29

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0902 + J 0.0258 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.954 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.954 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.954 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.954 KA
CONTRIBUTIONS: SWMX-W1 MTR 0.007 KA ANG: -84.29
CBL-SWMX-W1 MCC-WPB-A. 2.951 KA ANG: -15.81

BUS-0287 3P Duty: 12.132 KA AT -63.35 DEG ( 10.09 MVA) X/R: 2.07
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0102 + J 0.0204 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 12.132 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 12.132 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 12.132 KA
CBL-S-54-2D S-54-2 DISC 0.007 KA ANG: 95.87
CBL-F-54-5D. F-54-5 DISC 0.007 KA ANG: -84.27
CBL-F-54-2D F-54-2 DISC 0.007 KA ANG: -84.13
CBL-F-54-5D MCC-WPB-B 12.112 KA ANG: -63.31

BUS-0288 3P Duty: 12.132 KA AT -63.35 DEG ( 10.09 MVA) X/R: 2.07
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0102 + J 0.0204 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 12.132 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 12.132 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 12.132 KA
CBL-P-53-21. P-53-21 DISC 0.007 KA ANG: -84.22
CBL-P-53-06 P-53-06 DISC 0.007 KA ANG: -84.23
CBL-P-53-06. MCC-WPB-B. 12.118 KA ANG: -63.32

BUS-0289 3P Duty: 3.450 KA AT -18.38 DEG ( 2.87 MVA) X/R: 0.34
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0762 + J 0.0253 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 3.450 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 3.450 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 3.450 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 3.450 KA
CONTRIBUTIONS: AXMX-W2A MTR 0.007 KA ANG: -84.29
CBL-AXMX-W2A MCC-WPB-B. 3.447 KA ANG: -18.27

BUS-0290 3P Duty: 2.459 KA AT -14.32 DEG ( 2.04 MVA) X/R: 0.26
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1092 + J 0.0279 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.459 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.459 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.459 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.459 KA
CONTRIBUTIONS: AXMX-W2B MTR 0.007 KA ANG: -84.29
CBL-AXMX-W2B MCC-WPB-B. 2.457 KA ANG: -14.16

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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BUS-0291    3P Duty:  1.986 KA AT  -12.41 DEG (   1.65 MVA) X/R:    0.22
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.1363 + J  0.0300  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER    1.986 KA
MOLDED CASE CIRCUIT BREAKER < 10KA   1.986 KA
MOLDED CASE CIRCUIT BREAKER < 20KA   1.986 KA
MOLDED CASE CIRCUIT BREAKER > 20KA   1.986 KA
CONTRIBUTIONS:  AXMX-W2C MTR          0.007 KA      ANG:   -84.29
CBL-AXMX-W2C    MCC-WPB-B.           1.984 KA      ANG:   -12.22

BUS-0292    3P Duty:  1.665 KA AT  -11.14 DEG (   1.38 MVA) X/R:    0.20
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.1633 + J  0.0322  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER    1.665 KA
MOLDED CASE CIRCUIT BREAKER < 10KA   1.665 KA
MOLDED CASE CIRCUIT BREAKER < 20KA   1.665 KA
MOLDED CASE CIRCUIT BREAKER > 20KA   1.665 KA
CONTRIBUTIONS:  ANMX-W2A MTR          0.007 KA      ANG:   -84.29
CBL-ANMX-W2A    MCC-WPB-B.           1.663 KA      ANG:   -10.90

BUS-0293    3P Duty:  2.020 KA AT  -12.55 DEG (   1.68 MVA) X/R:    0.23
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.1339 + J  0.0298  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER    2.020 KA
MOLDED CASE CIRCUIT BREAKER < 10KA   2.020 KA
MOLDED CASE CIRCUIT BREAKER < 20KA   2.020 KA
MOLDED CASE CIRCUIT BREAKER > 20KA   2.020 KA
CONTRIBUTIONS:  ANMX-W2B MTR          0.007 KA      ANG:   -84.29
CBL-ANMX-W2B    MCC-WPB-B.           2.018 KA      ANG:   -12.36

BUS-0294    3P Duty:  1.937 KA AT  -12.22 DEG (   1.61 MVA) X/R:    0.22
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.1398 + J  0.0303  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER    1.937 KA
MOLDED CASE CIRCUIT BREAKER < 10KA   1.937 KA
MOLDED CASE CIRCUIT BREAKER < 20KA   1.937 KA
MOLDED CASE CIRCUIT BREAKER > 20KA   1.937 KA
CONTRIBUTIONS:  ANMX-W2C MTR          0.007 KA      ANG:   -84.29
CBL-ANMX-W2C    MCC-WPB-B.           1.935 KA      ANG:   -12.02

BUS-0295    3P Duty:  1.525 KA AT  -10.59 DEG (   1.27 MVA) X/R:    0.19
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.1786 + J  0.0334  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER    1.525 KA
MOLDED CASE CIRCUIT BREAKER < 10KA   1.525 KA
MOLDED CASE CIRCUIT BREAKER < 20KA   1.525 KA
MOLDED CASE CIRCUIT BREAKER > 20KA   1.525 KA

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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CONTRIBUTIONS TO BUS-0295 (CONTINUED)
CONTRIBUTIONS: ANMX-W2D MTR 0.007 KA ANG: -84.29
CBL-ANMX-W2D MCC-WPB-B. 1.523 KA ANG: -10.33

BUS-0296 3P Duty: 3.096 KA AT -16.92 DEG ( 2.57 MVA) X/R: 0.31
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0856 + J 0.0260 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 3.096 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 3.096 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 3.096 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 3.096 KA
CONTRIBUTIONS: SWMX-W2 MTR 0.007 KA ANG: -84.29
CBL-SWMX-W2 MCC-WPB-B. 3.093 KA ANG: -16.80

BUS-0310 3P Duty: 6.469 KA AT -16.38 DEG ( 5.38 MVA) X/R: 0.30
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0411 + J 0.0121 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 6.469 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 6.469 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 6.469 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 6.469 KA
CBL-0209 BUS-0311 0.008 KA ANG: 95.71
CBL-0210 PAB-W1 VALVES 6.466 KA ANG: -16.32

BUS-0311 3P Duty: 6.299 KA AT -16.06 DEG ( 5.24 MVA) X/R: 0.29
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0423 + J 0.0122 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 6.299 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 6.299 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 6.299 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 6.299 KA
CONTRIBUTIONS: B-55-1 MTR VAL 0.008 KA ANG: -84.29
CBL-0209 BUS-0310 6.296 KA ANG: -15.99

BUS-0312 3P Duty: 6.469 KA AT -16.38 DEG ( 5.38 MVA) X/R: 0.30
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0411 + J 0.0121 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 6.469 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 6.469 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 6.469 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 6.469 KA
CBL-0211 BUS-0313 0.008 KA ANG: 95.71
CBL-0212 PAB-W1 VALVES 6.466 KA ANG: -16.32

BUS-0313 3P Duty: 6.299 KA AT -16.06 DEG ( 5.24 MVA) X/R: 0.29
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0423 + J 0.0122 OHMS

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER      6.299 KA
MOLDED CASE CIRCUIT BREAKER < 10KA    6.299 KA
MOLDED CASE CIRCUIT BREAKER < 20KA    6.299 KA
MOLDED CASE CIRCUIT BREAKER > 20KA    6.299 KA
CONTRIBUTIONS:  B-55-4 MTR VAL      0.008 KA      ANG:  -84.29
CBL-0211          BUS-0312          6.296 KA      ANG:  -15.99

BUS-0314  3P Duty:  4.118 KA AT  -12.02 DEG (  3.42 MVA) X/R:    0.22
VOLTAGE:   480.   EQUIV. IMPEDANCE=  0.0658 + J  0.0140 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      4.118 KA
MOLDED CASE CIRCUIT BREAKER < 10KA    4.118 KA
MOLDED CASE CIRCUIT BREAKER < 20KA    4.118 KA
MOLDED CASE CIRCUIT BREAKER > 20KA    4.118 KA
CBL-0213          BUS-0315          0.008 KA      ANG:   95.71
CBL-0214          PAB-W3 VALVES        4.116 KA      ANG:  -11.92

BUS-0315  3P Duty:  4.048 KA AT  -11.89 DEG (  3.37 MVA) X/R:    0.21
VOLTAGE:   480.   EQUIV. IMPEDANCE=  0.0670 + J  0.0141 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      4.048 KA
MOLDED CASE CIRCUIT BREAKER < 10KA    4.048 KA
MOLDED CASE CIRCUIT BREAKER < 20KA    4.048 KA
MOLDED CASE CIRCUIT BREAKER > 20KA    4.048 KA
CONTRIBUTIONS:  B-55-3 MTR VAL      0.008 KA      ANG:  -84.29
CBL-0213          BUS-0314          4.045 KA      ANG:  -11.78

BUS-0316  3P Duty:  4.118 KA AT  -12.02 DEG (  3.42 MVA) X/R:    0.22
VOLTAGE:   480.   EQUIV. IMPEDANCE=  0.0658 + J  0.0140 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      4.118 KA
MOLDED CASE CIRCUIT BREAKER < 10KA    4.118 KA
MOLDED CASE CIRCUIT BREAKER < 20KA    4.118 KA
MOLDED CASE CIRCUIT BREAKER > 20KA    4.118 KA
CBL-0215          BUS-0317          0.008 KA      ANG:   95.71
CBL-0216          PAB-W3 VALVES        4.116 KA      ANG:  -11.92

BUS-0317  3P Duty:  4.048 KA AT  -11.89 DEG (  3.37 MVA) X/R:    0.21
VOLTAGE:   480.   EQUIV. IMPEDANCE=  0.0670 + J  0.0141 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      4.048 KA
MOLDED CASE CIRCUIT BREAKER < 10KA    4.048 KA
MOLDED CASE CIRCUIT BREAKER < 20KA    4.048 KA
MOLDED CASE CIRCUIT BREAKER > 20KA    4.048 KA
CONTRIBUTIONS:  B-55-6 MTR VAL      0.008 KA      ANG:  -84.29
CBL-0215          BUS-0316          4.045 KA      ANG:  -11.78

BUS-0318  3P Duty:  2.471 KA AT   -9.11 DEG (  2.05 MVA) X/R:    0.16

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1107 + J 0.0177 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.471 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.471 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.471 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.471 KA
CBL-0217 BUS-0319 0.008 KA ANG: 95.71
CBL-0219 AT-W2 FCV JB 2.469 KA ANG: -8.93

BUS-0319 3P Duty: 2.446 KA AT -9.06 DEG ( 2.03 MVA) X/R: 0.16
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1119 + J 0.0178 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.446 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.446 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.446 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.446 KA
CONTRIBUTIONS: B-54-4 MTR VAL 0.008 KA ANG: -84.29
CBL-0217 BUS-0318 2.444 KA ANG: -8.88

BUS-0320 3P Duty: 5.287 KA AT -13.78 DEG ( 4.40 MVA) X/R: 0.25
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0509 + J 0.0125 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 5.287 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 5.287 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 5.287 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 5.287 KA
CBL-0218 WAS VALVE W2 0.008 KA ANG: -84.21
CBL WAS VALVE PP-WBB-B 5.284 KA ANG: -13.70

BUS-0321 3P Duty: 2.471 KA AT -9.11 DEG ( 2.05 MVA) X/R: 0.16
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1107 + J 0.0177 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.471 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.471 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.471 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.471 KA
CBL-0220 BUS-0322 0.008 KA ANG: 95.71
CBL-0221 AT-W2 FCV JB 2.469 KA ANG: -8.93

BUS-0322 3P Duty: 2.446 KA AT -9.06 DEG ( 2.03 MVA) X/R: 0.16
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1119 + J 0.0178 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.446 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.446 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.446 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.446 KA
CONTRIBUTIONS: B-54-5 MTR VAL 0.008 KA ANG: -84.29
CBL-0220 BUS-0321 2.444 KA ANG: -8.88

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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BUS-0323    3P Duty:  2.471 KA AT  -9.11 DEG (  2.05 MVA) X/R:    0.16
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.1107 + J  0.0177 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  2.471 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.471 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.471 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.471 KA
CBL-0222     BUS-0324      0.008 KA      ANG:    95.71
CBL-0223     AT-W2 FCV JB   2.469 KA      ANG:   -8.93

BUS-0324    3P Duty:  2.446 KA AT  -9.06 DEG (  2.03 MVA) X/R:    0.16
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.1119 + J  0.0178 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  2.446 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.446 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.446 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.446 KA
CONTRIBUTIONS: B-54-6 MTR VAL  0.008 KA      ANG:   -84.29
CBL-0222     BUS-0323      2.444 KA      ANG:   -8.88

BUS-0325    3P Duty:  2.255 KA AT  -8.39 DEG (  1.87 MVA) X/R:    0.15
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.1216 + J  0.0179 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  2.255 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.255 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.255 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.255 KA
CBL-0224     WEST AESG W2    0.008 KA      ANG:   -84.21
CBL WEST AESG PP-WBB-B      2.253 KA      ANG:   -8.20

BUS-0326    3P Duty:  4.958 KA AT -13.27 DEG (  4.12 MVA) X/R:    0.24
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.0544 + J  0.0128 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  4.958 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.958 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.958 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.958 KA
CBL-0225     BUS-0327      0.008 KA      ANG:    95.71
CBL-0226     PAB-W2 VALVES   4.955 KA      ANG:  -13.18

BUS-0327    3P Duty:  4.857 KA AT -13.08 DEG (  4.04 MVA) X/R:    0.24
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.0556 + J  0.0129 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  4.857 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.857 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.857 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.857 KA

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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	CONTRIBUTIONS TO BUS-0327	(CONTINUED)		
	CONTRIBUTIONS: B-55-2 MTR VAL	0.008 KA	ANG:	-84.29
	CBL-0225 BUS-0326	4.854 KA	ANG:	-12.99
BUS-0328	3P Duty: 4.958 KA AT -13.27 DEG (4.12 MVA)	X/R:	0.24	
	VOLTAGE: 480. EQUIV. IMPEDANCE=	0.0544 + J 0.0128	OHMS	
	LOW VOLTAGE POWER CIRCUIT BREAKER	4.958 KA		
	MOLDED CASE CIRCUIT BREAKER < 10KA	4.958 KA		
	MOLDED CASE CIRCUIT BREAKER < 20KA	4.958 KA		
	MOLDED CASE CIRCUIT BREAKER > 20KA	4.958 KA		
	CBL-0227 BUS-0329	0.008 KA	ANG:	95.71
	CBL-0228 PAB-W2 VALVES	4.955 KA	ANG:	-13.18
BUS-0329	3P Duty: 4.857 KA AT -13.08 DEG (4.04 MVA)	X/R:	0.24	
	VOLTAGE: 480. EQUIV. IMPEDANCE=	0.0556 + J 0.0129	OHMS	
	LOW VOLTAGE POWER CIRCUIT BREAKER	4.857 KA		
	MOLDED CASE CIRCUIT BREAKER < 10KA	4.857 KA		
	MOLDED CASE CIRCUIT BREAKER < 20KA	4.857 KA		
	MOLDED CASE CIRCUIT BREAKER > 20KA	4.857 KA		
	CONTRIBUTIONS: B-55-5 MTR VAL	0.008 KA	ANG:	-84.29
	CBL-0227 BUS-0328	4.854 KA	ANG:	-12.99
BUS-0330	3P Duty: 11.135 KA AT -24.66 DEG (9.26 MVA)	X/R:	0.46	
	VOLTAGE: 480. EQUIV. IMPEDANCE=	0.0226 + J 0.0104	OHMS	
	LOW VOLTAGE POWER CIRCUIT BREAKER	11.135 KA		
	MOLDED CASE CIRCUIT BREAKER < 20KA	11.135 KA		
	MOLDED CASE CIRCUIT BREAKER > 20KA	11.135 KA		
	CBL-0229 WA MAIN BOV	0.008 KA	ANG:	-84.21
	CBL WA MAIN BO PP-WBB-B	11.131 KA	ANG:	-24.62
BUS-0331	3P Duty: 3.101 KA AT -16.88 DEG (2.58 MVA)	X/R:	0.30	
	VOLTAGE: 480. EQUIV. IMPEDANCE=	0.0855 + J 0.0260	OHMS	
	LOW VOLTAGE POWER CIRCUIT BREAKER	3.101 KA		
	MOLDED CASE CIRCUIT BREAKER < 10KA	3.101 KA		
	MOLDED CASE CIRCUIT BREAKER < 20KA	3.101 KA		
	MOLDED CASE CIRCUIT BREAKER > 20KA	3.101 KA		
	CBL LSE-PPU-1 PP-LSE	3.101 KA	ANG:	-16.88
BUS-0332	3P Duty: 8.566 KA AT -41.68 DEG (7.12 MVA)	X/R:	0.90	
	VOLTAGE: 480. EQUIV. IMPEDANCE=	0.0242 + J 0.0215	OHMS	
	LOW VOLTAGE POWER CIRCUIT BREAKER	8.566 KA		
	MOLDED CASE CIRCUIT BREAKER < 10KA	8.566 KA		
	MOLDED CASE CIRCUIT BREAKER < 20KA	8.566 KA		
	MOLDED CASE CIRCUIT BREAKER > 20KA	8.566 KA		

THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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CONTRIBUTIONS TO BUS-0332      (CONTINUED)
CBL LSE-ACCU-1 PP-LSE          8.566 KA      ANG:   -41.68

BUS-0333    3P Duty:  4.637 KA AT  -23.40 DEG (   3.86 MVA) X/R:    0.43
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.0548 + J  0.0237 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  4.637 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.637 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.637 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.637 KA
CBL LSE-ACU-1 PP-LSE          4.637 KA      ANG:   -23.40

BUS-0337    3P Duty:  1.124 KA AT  -8.73 DEG (   0.93 MVA) X/R:    0.15
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.2436 + J  0.0374 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  1.124 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.124 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.124 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.124 KA
CBL CN-50-3 FC PP-LSE          1.124 KA      ANG:   -8.73

BUS-0348    3P Duty:  0.833 KA AT  -7.54 DEG (   0.69 MVA) X/R:    0.13
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.3298 + J  0.0436 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  0.833 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.833 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.833 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.833 KA
CBL-0245      PP-LSE CKT #19    0.833 KA      ANG:   -7.54

BUS-0349    3P Duty:  0.963 KA AT  -8.07 DEG (   0.80 MVA) X/R:    0.14
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.2849 + J  0.0404 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  0.963 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.963 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.963 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.963 KA
CBL-0271      PP-LSE CKT #2    0.963 KA      ANG:   -8.07

BUS-0350    3P Duty:  0.833 KA AT  -7.54 DEG (   0.69 MVA) X/R:    0.13
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.3298 + J  0.0436 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  0.833 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.833 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.833 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.833 KA
CBL-0247      PP-LSE CKT #19    0.833 KA      ANG:   -7.54

BUS-0351    3P Duty:  0.963 KA AT  -8.07 DEG (   0.80 MVA) X/R:    0.14

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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VOLTAGE: 480. EQUIV. IMPEDANCE= 0.2849 + J 0.0404 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 0.963 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.963 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.963 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.963 KA
CBL-0273 PP-LSE CKT #2 0.963 KA ANG: -8.07

BUS-0352 3P Duty: 0.963 KA AT -8.07 DEG ( 0.80 MVA) X/R: 0.14
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.2849 + J 0.0404 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 0.963 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.963 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.963 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.963 KA
CBL-0302 PP-LSE CKT #2 0.963 KA ANG: -8.07

BUS-0353 3P Duty: 0.867 KA AT -7.67 DEG ( 0.72 MVA) X/R: 0.13
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.3168 + J 0.0427 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 0.867 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.867 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.867 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.867 KA
CBL-0308 PP-LSE CKT #14 0.867 KA ANG: -7.67

BUS-0354 3P Duty: 0.963 KA AT -8.07 DEG ( 0.80 MVA) X/R: 0.14
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.2849 + J 0.0404 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 0.963 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.963 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.963 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.963 KA
CBL-0318 PP-LSE CKT #14 0.963 KA ANG: -8.07

BUS-0355 3P Duty: 0.963 KA AT -8.07 DEG ( 0.80 MVA) X/R: 0.14
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.2849 + J 0.0404 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 0.963 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.963 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.963 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.963 KA
CBL-0328 PP-LSE CKT #14 0.963 KA ANG: -8.07

BUS-0356 3P Duty: 0.963 KA AT -8.07 DEG ( 0.80 MVA) X/R: 0.14
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.2849 + J 0.0404 OHMS
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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER 0.963 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.963 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.963 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.963 KA
CBL-0335 PP-LSE CKT #14 0.963 KA ANG: -8.07

BUS-0357 3P Duty: 0.963 KA AT -8.07 DEG ( 0.80 MVA) X/R: 0.14
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.2849 + J 0.0404 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 0.963 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.963 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.963 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.963 KA
CBL-0337 PP-LSE CKT #14 0.963 KA ANG: -8.07

BUS-0358 3P Duty: 0.963 KA AT -8.07 DEG ( 0.80 MVA) X/R: 0.14
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.2849 + J 0.0404 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 0.963 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.963 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.963 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.963 KA
CBL-0339 PP-LSE CKT #14 0.963 KA ANG: -8.07

BUS-0359 3P Duty: 0.963 KA AT -8.07 DEG ( 0.80 MVA) X/R: 0.14
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.2849 + J 0.0404 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 0.963 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.963 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.963 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.963 KA
CBL-0341 PP-LSE CKT #14 0.963 KA ANG: -8.07

BUS-0360 3P Duty: 0.963 KA AT -8.07 DEG ( 0.80 MVA) X/R: 0.14
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.2849 + J 0.0404 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 0.963 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.963 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.963 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.963 KA
CBL-0343 PP-LSE CKT #8 0.963 KA ANG: -8.07

BUS-0361 3P Duty: 0.963 KA AT -8.07 DEG ( 0.80 MVA) X/R: 0.14
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.2849 + J 0.0404 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 0.963 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.963 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.963 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.963 KA

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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CONTRIBUTIONS TO BUS-0361 (CONTINUED)
CBL-0345 PP-LSE CKT #8 0.963 KA ANG: -8.07

BUS-0362 3P Duty: 0.833 KA AT -7.54 DEG ( 0.69 MVA) X/R: 0.13
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.3298 + J 0.0436 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 0.833 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.833 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.833 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.833 KA
CBL-0347 PP-LSE CKT #8 0.833 KA ANG: -7.54

BUS-0363 3P Duty: 0.963 KA AT -8.07 DEG ( 0.80 MVA) X/R: 0.14
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.2849 + J 0.0404 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 0.963 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.963 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.963 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.963 KA
CBL-0349 PP-LSE CKT #26 0.963 KA ANG: -8.07

BUS-0364 3P Duty: 0.963 KA AT -8.07 DEG ( 0.80 MVA) X/R: 0.14
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.2849 + J 0.0404 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 0.963 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.963 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.963 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.963 KA
CBL-0351 PP-LSE CKT #26 0.963 KA ANG: -8.07

BUS-0392 3P Duty: 1.461 KA AT -13.34 DEG ( 1.21 MVA) X/R: 0.25
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1845 + J 0.0438 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.461 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.461 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.461 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.461 KA
CBL-0386 AT-E3 Z1 FCV 0.008 KA ANG: -84.07
CBL AT-E3 Z1 F Wireway 1.459 KA ANG: -13.05

BUS-0393 3P Duty: 2.003 KA AT -15.20 DEG ( 1.67 MVA) X/R: 0.29
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1335 + J 0.0363 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.003 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.003 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.003 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.003 KA
CBL-0123 BF-64-07 0.008 KA ANG: -84.07
CBL-0122 BUS-0182 2.001 KA ANG: -14.99

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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BUS-0394    3P Duty:  2.003 KA AT  -15.20 DEG (   1.67 MVA) X/R:    0.29
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.1335 + J  0.0363  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER    2.003 KA
MOLDED CASE CIRCUIT BREAKER < 10KA   2.003 KA
MOLDED CASE CIRCUIT BREAKER < 20KA   2.003 KA
MOLDED CASE CIRCUIT BREAKER > 20KA   2.003 KA
CBL-0125     BF - 64- 29             0.008 KA      ANG:   -84.15
CBL-0124     BUS-0182                 2.001 KA      ANG:   -14.99

BUS-0395    3P Duty:  2.003 KA AT  -15.20 DEG (   1.67 MVA) X/R:    0.29
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.1335 + J  0.0363  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER    2.003 KA
MOLDED CASE CIRCUIT BREAKER < 10KA   2.003 KA
MOLDED CASE CIRCUIT BREAKER < 20KA   2.003 KA
MOLDED CASE CIRCUIT BREAKER > 20KA   2.003 KA
CBL-0127     AT-E1 FCV BF-6          0.008 KA      ANG:   -84.20
CBL-0126     BUS-0182                 2.001 KA      ANG:   -14.99

BUS-0396    3P Duty:  2.378 KA AT  -17.35 DEG (   1.98 MVA) X/R:    0.33
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.1112 + J  0.0347  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER    2.378 KA
MOLDED CASE CIRCUIT BREAKER < 10KA   2.378 KA
MOLDED CASE CIRCUIT BREAKER < 20KA   2.378 KA
MOLDED CASE CIRCUIT BREAKER > 20KA   2.378 KA
CBL-0129     BF-64-08                0.008 KA      ANG:   -84.07
CBL-0128     BUS-0188                2.375 KA      ANG:   -17.17

BUS-0397    3P Duty:  2.378 KA AT  -17.35 DEG (   1.98 MVA) X/R:    0.33
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.1112 + J  0.0347  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER    2.378 KA
MOLDED CASE CIRCUIT BREAKER < 10KA   2.378 KA
MOLDED CASE CIRCUIT BREAKER < 20KA   2.378 KA
MOLDED CASE CIRCUIT BREAKER > 20KA   2.378 KA
CBL-0131     BF- 64- 30              0.008 KA      ANG:   -84.15
CBL-0130     BUS-0188                2.375 KA      ANG:   -17.17

BUS-0398    3P Duty:  2.378 KA AT  -17.35 DEG (   1.98 MVA) X/R:    0.33
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.1112 + J  0.0347  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER    2.378 KA
MOLDED CASE CIRCUIT BREAKER < 10KA   2.378 KA
MOLDED CASE CIRCUIT BREAKER < 20KA   2.378 KA
MOLDED CASE CIRCUIT BREAKER > 20KA   2.378 KA
CBL-0133     AT-E2 FCV BF-6          0.008 KA      ANG:   -84.20

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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	CONTRIBUTIONS TO BUS-0398	(CONTINUED)		
	CBL-0132 BUS-0188	2.375 KA	ANG:	-17.17
BUS-0399	3P Duty: 1.461 KA AT -13.34 DEG (1.21 MVA)	X/R:	0.25	
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1845 + J 0.0438 OHMS			
	LOW VOLTAGE POWER CIRCUIT BREAKER	1.461 KA		
	MOLDED CASE CIRCUIT BREAKER < 10KA	1.461 KA		
	MOLDED CASE CIRCUIT BREAKER < 20KA	1.461 KA		
	MOLDED CASE CIRCUIT BREAKER > 20KA	1.461 KA		
	CBL-0393 AT-E3 Z2 FCV	0.008 KA	ANG:	-84.15
	CBL AT-E3 Z2 F Wireway	1.459 KA	ANG:	-13.05
BUS-0400	3P Duty: 1.461 KA AT -13.34 DEG (1.21 MVA)	X/R:	0.25	
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1845 + J 0.0438 OHMS			
	LOW VOLTAGE POWER CIRCUIT BREAKER	1.461 KA		
	MOLDED CASE CIRCUIT BREAKER < 10KA	1.461 KA		
	MOLDED CASE CIRCUIT BREAKER < 20KA	1.461 KA		
	MOLDED CASE CIRCUIT BREAKER > 20KA	1.461 KA		
	CBL-0401 AT-E3 Z3 FCV	0.008 KA	ANG:	-84.20
	CBL AT-E3 Z3 F Wireway	1.459 KA	ANG:	-13.05
BUS-0401	3P Duty: 1.461 KA AT -13.34 DEG (1.21 MVA)	X/R:	0.25	
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1845 + J 0.0438 OHMS			
	LOW VOLTAGE POWER CIRCUIT BREAKER	1.461 KA		
	MOLDED CASE CIRCUIT BREAKER < 10KA	1.461 KA		
	MOLDED CASE CIRCUIT BREAKER < 20KA	1.461 KA		
	MOLDED CASE CIRCUIT BREAKER > 20KA	1.461 KA		
	CBL-0402 AT-E4 Z1 FCV	0.008 KA	ANG:	-84.07
	CBL AT-E4 Z1 F Wireway.	1.459 KA	ANG:	-193.05
BUS-0402	3P Duty: 1.461 KA AT -13.34 DEG (1.21 MVA)	X/R:	0.25	
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1845 + J 0.0438 OHMS			
	LOW VOLTAGE POWER CIRCUIT BREAKER	1.461 KA		
	MOLDED CASE CIRCUIT BREAKER < 10KA	1.461 KA		
	MOLDED CASE CIRCUIT BREAKER < 20KA	1.461 KA		
	MOLDED CASE CIRCUIT BREAKER > 20KA	1.461 KA		
	CBL-0405 AT-E4 Z2 FCV	0.008 KA	ANG:	-84.15
	CBL AT-E4 Z2 F Wireway.	1.459 KA	ANG:	-193.05
BUS-0403	3P Duty: 1.461 KA AT -13.34 DEG (1.21 MVA)	X/R:	0.25	
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1845 + J 0.0438 OHMS			

THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER      1.461 KA
MOLDED CASE CIRCUIT BREAKER < 10KA    1.461 KA
MOLDED CASE CIRCUIT BREAKER < 20KA    1.461 KA
MOLDED CASE CIRCUIT BREAKER > 20KA    1.461 KA
CBL-0407      AT-E4 Z3 FCV              0.008 KA      ANG:  -84.20
CBL AT-E4 Z3 F Wireway.                 1.459 KA      ANG:  -193.05

BUS-0406      3P Duty:  1.856 KA AT  -15.21 DEG (  1.54 MVA) X/R:    0.28
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.1441 + J  0.0392 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      1.856 KA
MOLDED CASE CIRCUIT BREAKER < 10KA    1.856 KA
MOLDED CASE CIRCUIT BREAKER < 20KA    1.856 KA
MOLDED CASE CIRCUIT BREAKER > 20KA    1.856 KA
CONTRIBUTIONS: BF-65-05                0.008 KA      ANG:  -84.29
CBL AT-E4 Z3 F Junction box.           1.853 KA      ANG:  -14.98

BUS-0409      3P Duty:  1.298 KA AT  -11.91 DEG (  1.08 MVA) X/R:    0.22
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.2090 + J  0.0441 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      1.298 KA
MOLDED CASE CIRCUIT BREAKER < 10KA    1.298 KA
MOLDED CASE CIRCUIT BREAKER < 20KA    1.298 KA
MOLDED CASE CIRCUIT BREAKER > 20KA    1.298 KA
CBL-0414      WASV E3                   0.008 KA      ANG:  -84.25
CBL WASV E3    PP-EBB-B                 1.295 KA      ANG:  -11.58

BUS-0410      3P Duty:  1.298 KA AT  -11.91 DEG (  1.08 MVA) X/R:    0.22
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.2090 + J  0.0441 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      1.298 KA
MOLDED CASE CIRCUIT BREAKER < 10KA    1.298 KA
MOLDED CASE CIRCUIT BREAKER < 20KA    1.298 KA
MOLDED CASE CIRCUIT BREAKER > 20KA    1.298 KA
CBL-0426      WASV E4                   0.008 KA      ANG:  -84.25
CBL WASV E4    PP-EBB-B                 1.295 KA      ANG:  -11.58

BUS-0412      3P Duty:  5.377 KA AT  -37.19 DEG (  4.47 MVA) X/R:    0.78
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.0411 + J  0.0312 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      5.377 KA
MOLDED CASE CIRCUIT BREAKER < 10KA    5.377 KA
MOLDED CASE CIRCUIT BREAKER < 20KA    5.377 KA
MOLDED CASE CIRCUIT BREAKER > 20KA    5.377 KA
CBL EBB-EDH-1' PP-EBB-B                5.377 KA      ANG:  -37.19

BUS-0413      3P Duty:  2.542 KA AT  -19.15 DEG (  2.11 MVA) X/R:    0.36
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.1030 + J  0.0358 OHMS

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER      2.542 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     2.542 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     2.542 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     2.542 KA
CBL-0506      BUS-0414      0.008 KA      ANG:    95.74
CBL-0501      PAB-E1 DV & BO 0.008 KA      ANG:   -84.26
CBL PAB-E1 DV PP-EBB-B      2.536 KA      ANG:   -18.83

BUS-0414      3P Duty: 2.196 KA AT -17.12 DEG ( 1.83 MVA) X/R:    0.32
VOLTAGE:      480. EQUIV. IMPEDANCE= 0.1206 + J 0.0372 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      2.196 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     2.196 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     2.196 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     2.196 KA
CONTRIBUTIONS: BF-65-04      0.008 KA      ANG:   -84.29
CBL-0506      BUS-0413      2.193 KA      ANG:   -16.93

BUS-0415      3P Duty: 6.128 KA AT -61.78 DEG ( 5.10 MVA) X/R:    1.88
VOLTAGE:      480. EQUIV. IMPEDANCE= 0.0214 + J 0.0398 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      6.128 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     6.260 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     6.128 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     6.128 KA
CBL-0507      BUS-0178      6.128 KA      ANG:   -61.78

BUS-0436      3P Duty: 2.780 KA AT -17.09 DEG ( 2.31 MVA) X/R:    0.32
VOLTAGE:      480. EQUIV. IMPEDANCE= 0.0953 + J 0.0293 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      2.780 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     2.780 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     2.780 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     2.780 KA
CBL-0564      SWPSO VALVE DI 0.013 KA      ANG:   -84.17
CBL-0563      SWPSO-SG DISC 0.013 KA      ANG:   -84.25
CBL-0652      MCC-ADM-A.     2.770 KA      ANG:   -16.60

BWP2 DISC     3P Duty: 17.368 KA AT -70.69 DEG ( 14.44 MVA) X/R:    3.08
VOLTAGE:      480. EQUIV. IMPEDANCE= 0.0053 + J 0.0151 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      17.368 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     17.368 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     17.368 KA
CBL-0438      BUS-0133      0.704 KA      ANG:    96.14
CBL-0432      MCC-N         16.683 KA      ANG:   -70.14

BWWP1 DISC    3P Duty: 16.251 KA AT -67.28 DEG ( 13.51 MVA) X/R:    2.71

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0066 + J 0.0157 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 16.251 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 16.251 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 16.251 KA
CONTRIBUTIONS: BACKWASH PUMP 0.709 KA ANG: -84.29
CBL-0381 MCC-M. 15.574 KA ANG: -66.52

BYPGT1 DISC 3P Duty: 2.736 KA AT -14.94 DEG ( 2.27 MVA) X/R: 0.27
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0979 + J 0.0261 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.736 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.736 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.736 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.736 KA
CONTRIBUTIONS: BYPASS GT #1 S 0.013 KA ANG: -84.29
CBL-0324 MCC-F 2.731 KA ANG: -14.69

BYPGT2 DISC 3P Duty: 2.736 KA AT -14.94 DEG ( 2.27 MVA) X/R: 0.27
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0979 + J 0.0261 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.736 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.736 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.736 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.736 KA
CONTRIBUTIONS: BYPASS GT #2 S 0.013 KA ANG: -84.29
CBL-0314 MCC-F 2.731 KA ANG: -14.69

C SUMP PUMP DI 3P Duty: 4.257 KA AT -18.75 DEG ( 3.54 MVA) X/R: 0.35
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0616 + J 0.0209 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 4.257 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.257 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.257 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.257 KA
CBL-0538 C SUMP PUMP TE 0.011 KA ANG: 95.73
CBL-0537 MCC-C 4.253 KA ANG: -18.62

CC-1 DISC 3P Duty: 2.749 KA AT -14.40 DEG ( 2.29 MVA) X/R: 0.26
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0977 + J 0.0251 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.749 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.749 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.749 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.749 KA
CONTRIBUTIONS: CROSS COLL 1 0.014 KA ANG: -84.29
CBL-0260 MCC-E 2.744 KA ANG: -14.13

CC-3 DISC 3P Duty: 2.749 KA AT -14.40 DEG ( 2.29 MVA) X/R: 0.26

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0977 + J 0.0251 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.749 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.749 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.749 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.749 KA
CONTRIBUTIONS: CROSS COLL 3 0.014 KA ANG: -84.29
CBL-0262 MCC-E 2.744 KA ANG: -14.13

CC2 DISC 3P Duty: 2.736 KA AT -14.97 DEG ( 2.27 MVA) X/R: 0.28
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0979 + J 0.0262 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.736 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.736 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.736 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.736 KA
CONTRIBUTIONS: CROSS COLL #2 0.014 KA ANG: -84.29
CBL-0300 MCC-F 2.731 KA ANG: -14.69

CE WET WELL GT 3P Duty: 1.444 KA AT -7.25 DEG ( 1.20 MVA) X/R: 0.13
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1903 + J 0.0242 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.444 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.444 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.444 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.444 KA
CONTRIBUTIONS: CE WET WELL GT 0.013 KA ANG: -84.29
CBL-0447 MCC-Q 1.441 KA ANG: -6.76

CEB-ACCU-1 DIS 3P Duty: 4.868 KA AT -14.02 DEG ( 4.05 MVA) X/R: 0.25
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0552 + J 0.0138 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 4.868 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.868 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.868 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.868 KA
P11.112 MCC-CEB-A 4.868 KA ANG: -14.02

CEB-ACCU-1 TER 3P Duty: 4.076 KA AT -12.18 DEG ( 3.39 MVA) X/R: 0.22
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0665 + J 0.0143 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 4.076 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.076 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.076 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.076 KA
P11.112A CEB-ACCU-1 DIS 4.076 KA ANG: -192.18

CEB-ACU-1 TERM 3P Duty: 12.068 KA AT -33.75 DEG ( 10.03 MVA) X/R: 0.67
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0191 + J 0.0128 OHMS

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER 12.068 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 12.068 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 12.068 KA
P11.111 MCC-CEB-A 12.068 KA ANG: -33.75

CEB-EF-1 DISC 3P Duty: 1.709 KA AT -7.86 DEG ( 1.42 MVA) X/R: 0.14
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1606 + J 0.0222 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.709 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.709 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.709 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.709 KA
P11.110A CEB-EF-1 TERM 0.035 KA ANG: -84.09
P11.110 MCC-CEB-A 1.701 KA ANG: -6.70

CEB-EF-2 DISC 3P Duty: 1.852 KA AT -7.25 DEG ( 1.54 MVA) X/R: 0.13
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1485 + J 0.0189 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.852 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.852 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.852 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.852 KA
CBL-P11.210A CEB-EF-2 TERM 0.004 KA ANG: 95.73
CBL-P11.210 MCC-CEB-B 1.851 KA ANG: -7.14

CEB-FCP-1 DISC 3P Duty: 3.969 KA AT -11.93 DEG ( 3.30 MVA) X/R: 0.21
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0683 + J 0.0144 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 3.969 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 3.969 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 3.969 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 3.969 KA
P11.113 MCC-CEB-A 3.969 KA ANG: -11.93

CEB-FCP-2 TERM 3P Duty: 3.141 KA AT -10.19 DEG ( 2.61 MVA) X/R: 0.18
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0868 + J 0.0156 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 3.141 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 3.141 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 3.141 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 3.141 KA
CBL-P11.213 MCC-CEB-B 3.141 KA ANG: -10.19

CEB-P-1 DISC 3P Duty: 3.138 KA AT -10.09 DEG ( 2.61 MVA) X/R: 0.18
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0870 + J 0.0155 OHMS

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER      3.138 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     3.138 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     3.138 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     3.138 KA
P11.114A      CEB-P-1 TERM              0.005 KA      ANG:   95.72
P11.114      MCC-CEB-A                  3.136 KA      ANG:  -10.00

CEB-P-2 DISC  3P Duty:  3.142 KA AT  -10.29 DEG (   2.61 MVA) X/R:    0.18
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.0868 + J  0.0157 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      3.142 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     3.142 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     3.142 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     3.142 KA
CBL-P11.214A  CEB-P-2 TERM              0.005 KA      ANG:   95.72
CBL-P11.214  MCC-CEB-B                  3.141 KA      ANG:  -10.19

CF2 AHU-1 DISC 3P Duty:  1.201 KA AT  -14.69 DEG (   1.00 MVA) X/R:    0.30
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.2233 + J  0.0586 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      1.201 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     1.201 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     1.201 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     1.201 KA
CONTRIBUTIONS: 20 HP CF2 AHU-          0.157 KA      ANG:  -84.29
CBL-0141      MCC-53 A                  1.155 KA      ANG:  -7.39

CF2 AHU-3 DISC 3P Duty:  2.050 KA AT  -19.51 DEG (   1.70 MVA) X/R:    0.49
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.1275 + J  0.0452 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      2.050 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     2.050 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     2.050 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     2.050 KA
CONTRIBUTIONS: 40 HP CF2 AHU-          0.314 KA      ANG:  -84.29
CBL-0140      MCC-53 A                  1.937 KA      ANG:  -11.09

CHABLWR DISC  3P Duty:  4.363 KA AT  -19.22 DEG (   3.63 MVA) X/R:    0.37
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.0600 + J  0.0209 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      4.363 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     4.363 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     4.363 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     4.363 KA
CONTRIBUTIONS: CHANNEL AIR BL          0.053 KA      ANG:  -84.29
CBL-0491      MCC-D.                   4.341 KA      ANG:  -18.58

CN-50-3 FCV   3P Duty:  1.004 KA AT   -8.23 DEG (   0.83 MVA) X/R:    0.14

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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VOLTAGE: 480. EQUIV. IMPEDANCE= 0.2731 + J 0.0395 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.004 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.004 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.004 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.004 KA
CBL-0236 BUS-0337 1.004 KA ANG: -188.23

CONT TK INT GT 3P Duty: 1.449 KA AT -7.18 DEG ( 1.20 MVA) X/R: 0.13
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1898 + J 0.0239 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.449 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.449 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.449 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.449 KA
CONTRIBUTIONS: CONT TK INT GT 0.013 KA ANG: -84.29
CBL-0392 MCC-P 1.446 KA ANG: -6.69

CP-70 EMG 3P Duty: 1.454 KA AT -6.57 DEG ( 1.21 MVA) X/R: 0.12
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1893 + J 0.0218 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.454 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.454 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.454 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.454 KA
CBL-0420 MCC-N. 1.454 KA ANG: -6.57

CP-70 NRM 3P Duty: 2.797 KA AT -10.51 DEG ( 2.33 MVA) X/R: 0.19
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0974 + J 0.0181 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.797 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.797 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.797 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.797 KA
CBL-0459 MCC-Q 2.797 KA ANG: -10.51

CR-1 HSP 5 DIS 3P Duty: 3.293 KA AT -13.76 DEG ( 2.74 MVA) X/R: 0.29
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0817 + J 0.0200 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 3.293 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 3.293 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 3.293 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 3.293 KA
CONTRIBUTIONS: 20 HP CR-1 HSP 0.157 KA ANG: -84.29
CBL-0139 MCC-53 A 3.244 KA ANG: -11.15

CR-1 HSP 6 DIS 3P Duty: 3.147 KA AT -13.63 DEG ( 2.62 MVA) X/R: 0.29
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0856 + J 0.0207 OHMS

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER      3.147 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     3.147 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     3.147 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     3.147 KA
CONTRIBUTIONS:  20 HP CR-1 HSP         0.157 KA      ANG:  -84.29
CBL-0147          MCC-53B                3.099 KA      ANG:  -10.89

D SP-2 DISC  3P Duty:  4.356 KA AT  -18.99 DEG (  3.62 MVA) X/R:    0.36
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.0602 + J  0.0207 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      4.356 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     4.356 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     4.356 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     4.356 KA
CONTRIBUTIONS:  D SUMP PUMP 2           0.035 KA      ANG:  -84.29
CBL-0466          MCC-D                  4.342 KA      ANG:  -18.57

DCH FNL EFF SP 3P Duty:  1.454 KA AT  -8.82 DEG (  1.21 MVA) X/R:    0.16
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.1884 + J  0.0292 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      1.454 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     1.454 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     1.454 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     1.454 KA
CONTRIBUTIONS:  DCH FNL EFF SP          0.053 KA      ANG:  -84.29
CBL-0456          MCC-Q                  1.441 KA      ANG:  -6.77

DOOR OP EE1  3P Duty:  2.710 KA AT  -14.44 DEG (  2.25 MVA) X/R:    0.26
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.0990 + J  0.0255 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      2.710 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     2.710 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     2.710 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     2.710 KA
CBL-0608          DOOR MTR EE1 T         0.004 KA      ANG:   95.72
CBL-0607          MCC-EE                  2.709 KA      ANG:  -14.37

DOOR OP EE2  3P Duty:  2.710 KA AT  -14.44 DEG (  2.25 MVA) X/R:    0.26
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.0990 + J  0.0255 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      2.710 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     2.710 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     2.710 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     2.710 KA
CBL-0610          DOOR MTR EE2 T         0.004 KA      ANG:   95.72
CBL-0609          MCC-EE                  2.709 KA      ANG:  -14.37

DOOR OP FF   3P Duty:  2.690 KA AT  -14.83 DEG (  2.24 MVA) X/R:    0.27

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0996 + J 0.0264 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.690 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.690 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.690 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.690 KA
CBL-0624 DOOR MTR FF TE 0.004 KA ANG: 95.72
CBL-0623 MCC-FF 2.688 KA ANG: -14.76

DOOR OPERATOR 3P Duty: 4.346 KA AT -18.63 DEG ( 3.61 MVA) X/R: 0.34
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0604 + J 0.0204 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 4.346 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.346 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.346 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.346 KA
CONTRIBUTIONS: DOOR OPERATOR 0.007 KA ANG: -84.29
CBL-0474 MCC-D 4.343 KA ANG: -18.54

DP-51 3P Duty: 24.626 KA AT -69.78 DEG ( 20.47 MVA) X/R: 2.74
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0039 + J 0.0106 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 24.626 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 24.626 KA
CBL DP-51 ATS-51 LOAD 24.626 KA ANG: 110.22

DP-52 3P Duty: 23.539 KA AT -69.95 DEG ( 19.57 MVA) X/R: 2.77
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0040 + J 0.0111 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 23.539 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 23.539 KA
CBL DP-52 ATS-52 LOAD 23.539 KA ANG: 110.05

DP-54 3P Duty: 18.818 KA AT -67.52 DEG ( 15.65 MVA) X/R: 2.44
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0056 + J 0.0136 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 18.818 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 18.818 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 18.818 KA
CBL DP-54 ATS-54 LOAD 18.818 KA ANG: 112.48

DP-56 3P Duty: 12.010 KA AT -64.48 DEG ( 9.99 MVA) X/R: 2.23
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0099 + J 0.0208 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 12.010 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 12.010 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 12.010 KA
CBL DP-56 MCC-56B 12.010 KA ANG: -64.48

DRILL PRESS 3P Duty: 4.429 KA AT -48.46 DEG ( 3.68 MVA) X/R: 1.13

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0415 + J 0.0468 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 4.429 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.429 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.429 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.429 KA
CBL DRILL PRES PP-MTB 4.429 KA ANG: -48.46

DROP (NGW) STR 3P Duty: 4.254 KA AT -18.64 DEG ( 3.54 MVA) X/R: 0.34
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0617 + J 0.0208 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 4.254 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.254 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.254 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.254 KA
CBL-0549 DOOR OP (NGW) 0.002 KA ANG: 95.72
CBL-0548 MCC-C 4.253 KA ANG: -18.61

DROP (SG) STR 3P Duty: 4.254 KA AT -18.64 DEG ( 3.54 MVA) X/R: 0.34
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0617 + J 0.0208 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 4.254 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.254 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.254 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.254 KA
CBL-0547 DOOR OP (SG) T 0.002 KA ANG: 95.72
CBL-0546 MCC-C 4.253 KA ANG: -18.61

DTE NORTH 3P Duty: 7.385 KA AT -75.15 DEG ( 168.84 MVA) X/R: 4.05
VOLTAGE: 13200. EQUIV. IMPEDANCE= 0.2645 + J 0.9975 OHMS
CONTRIBUTIONS: DC-8266 6.307 KA ANG: -73.98
M11.100 15 KV BUS 1 Li 1.087 KA ANG: 98.07

DTE SOUTH 3P Duty: 6.985 KA AT -78.93 DEG ( 159.69 MVA) X/R: 5.24
VOLTAGE: 13200. EQUIV. IMPEDANCE= 0.2096 + J 1.0708 OHMS
CONTRIBUTIONS: DC-9798 6.073 KA ANG: -78.44
M11.200 15 KV BUS 2 Li 0.913 KA ANG: 97.82

E CONT TK G1 D 3P Duty: 1.444 KA AT -7.25 DEG ( 1.20 MVA) X/R: 0.13
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1903 + J 0.0242 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.444 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.444 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.444 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.444 KA
CONTRIBUTIONS: E CONT TK GATE 0.013 KA ANG: -84.29
CBL-0452 MCC-Q 1.441 KA ANG: -6.76
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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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E SUMP PUMP 1 3P Duty: 2.756 KA AT -14.84 DEG ( 2.29 MVA) X/R: 0.28
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0972 + J 0.0258 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.756 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.756 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.756 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.756 KA
CONTRIBUTIONS: E SUMP PUMP 1 0.035 KA ANG: -84.29
CBL-0258 MCC-E 2.743 KA ANG: -14.14

EBB SUMP PUMP 3P Duty: 3.402 KA AT -22.18 DEG ( 2.83 MVA) X/R: 0.43
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0754 + J 0.0308 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 3.402 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 3.402 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 3.402 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 3.402 KA
CBL-EBB-SP-2A EBB SP-2 TERM 0.035 KA ANG: 95.75
CBL-EBB-SP-2 D MCC-EBB-A. 3.385 KA ANG: -21.65

EBB SUMP PUMP 3P Duty: 0.970 KA AT -9.76 DEG ( 0.81 MVA) X/R: 0.18
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.2816 + J 0.0484 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 0.970 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.970 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.970 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.970 KA
CBL-EBB-SP-4A EBB-SP-4 TERM 0.035 KA ANG: 95.75
CBL-EBB-SP-4 D MCC-EBB-A. 0.961 KA ANG: -7.72

EBB-A HOIST 1 3P Duty: 0.949 KA AT -7.64 DEG ( 0.79 MVA) X/R: 0.13
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.2895 + J 0.0388 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 0.949 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.949 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.949 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.949 KA
CBL-EBB A HOIS EBB-A HOIST 1 0.949 KA ANG: -7.64

EBB-A HOIST 1 3P Duty: 1.013 KA AT -7.97 DEG ( 0.84 MVA) X/R: 0.14
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.2708 + J 0.0379 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.013 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.013 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.013 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.013 KA
CBL-EBB-A HOIS MCC-EBB-A. 1.013 KA ANG: -7.97

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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EBB-A HOIST 2 3P Duty: 0.949 KA AT -7.64 DEG ( 0.79 MVA) X/R: 0.13
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.2895 + J 0.0388 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 0.949 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.949 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.949 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.949 KA
CBL-EEB A HOIS EBB-A HOIST 2 0.949 KA ANG: -7.64

EBB-A HOIST 2 3P Duty: 1.013 KA AT -7.97 DEG ( 0.84 MVA) X/R: 0.14
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.2708 + J 0.0379 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.013 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.013 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.013 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.013 KA
CBL-EBB-A HOIS MCC-EBB-A. 1.013 KA ANG: -7.97

EBB-EDH-1 LINE 3P Duty: 3.978 KA AT -28.31 DEG ( 3.31 MVA) X/R: 0.55
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0613 + J 0.0330 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 3.978 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 3.978 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 3.978 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 3.978 KA
CBL-0500 BUS-0412 3.978 KA ANG: 151.69

EBB-EF-10 DISC 3P Duty: 2.692 KA AT -16.88 DEG ( 2.24 MVA) X/R: 0.31
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0985 + J 0.0299 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.692 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.692 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.692 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.692 KA
CBL-EBB-EF-10 EBB-EF-10 TERM 0.011 KA ANG: 95.75
CBL-EBB-EF-10 MCC-EBB-A. 2.688 KA ANG: -16.67

EBB-EF-5 DISC 3P Duty: 4.041 KA AT -26.06 DEG ( 3.36 MVA) X/R: 0.51
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0616 + J 0.0301 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 4.041 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.041 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.041 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.041 KA
CBL-EBB-EF-5 EBB-EF-5 TERM 0.021 KA ANG: 95.75
CBL-EBB-EF-5D MCC-EBB-B. 4.029 KA ANG: -205.80

EBB-EF-6 DISC 3P Duty: 2.126 KA AT -13.98 DEG ( 1.77 MVA) X/R: 0.26
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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1265 + J 0.0315 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.126 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.126 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.126 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.126 KA
CBL-EBB-EF-6 EBB-EF-6 TERM 0.011 KA ANG: 95.73
CBL-EBB-EF-6 D MCC-EBB-A. 2.123 KA ANG: -13.71

EBB-EF-7 DISC 3P Duty: 1.419 KA AT -11.49 DEG ( 1.18 MVA) X/R: 0.22
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1914 + J 0.0389 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.419 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.419 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.419 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.419 KA
CBL-EBB-EF-7 EBB-EF-7 TERM 0.021 KA ANG: 95.75
CBL-EBB-EF-7D MCC-EBB-B. 1.412 KA ANG: -190.66

EBB-EF-9 DISC 3P Duty: 0.964 KA AT -9.35 DEG ( 0.80 MVA) X/R: 0.17
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.2838 + J 0.0467 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 0.964 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.964 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.964 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.964 KA
CBL-EBB-EF-9 EBB-EF-9 TERM 0.021 KA ANG: 95.75
CBL-EBB-EF-9D MCC-EBB-B. 0.958 KA ANG: -188.12

EBB-EUH-1 TERM 3P Duty: 6.261 KA AT -40.11 DEG ( 5.21 MVA) X/R: 0.85
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0338 + J 0.0285 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 6.261 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 6.261 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 6.261 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 6.261 KA
CBL-EBB-EUH-1 MCC-EBB-B. 6.261 KA ANG: -220.11

EBB-HV-1 DISC 3P Duty: 3.262 KA AT -19.80 DEG ( 2.71 MVA) X/R: 0.37
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0799 + J 0.0288 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 3.262 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 3.262 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 3.262 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 3.262 KA
CBL-EBB-HV-1 EBB-HV-1 STR 0.007 KA ANG: 95.75
CBL-EBB-HV-1 D MCC-EBB-A. 3.259 KA ANG: -19.69

EF1 DISC 3P Duty: 1.450 KA AT -6.92 DEG ( 1.21 MVA) X/R: 0.12

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1897 + J 0.0230 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.450 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.450 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.450 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.450 KA
CONTRIBUTIONS: EF-1 0.005 KA ANG: -84.29
CBL-0360 BUS-0417 1.449 KA ANG: -186.72

EF2 DISC 3P Duty: 1.450 KA AT -6.92 DEG ( 1.21 MVA) X/R: 0.12
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1897 + J 0.0230 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.450 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.450 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.450 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.450 KA
CONTRIBUTIONS: EF-2 0.005 KA ANG: -84.29
CBL-0362 BUS-0417 1.449 KA ANG: -6.72

EF3 DISC 3P Duty: 1.458 KA AT -7.19 DEG ( 1.21 MVA) X/R: 0.13
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1886 + J 0.0238 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.458 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.458 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.458 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.458 KA
CONTRIBUTIONS: EF-3 0.005 KA ANG: -84.29
CBL-0435 EF4 DISC 0.011 KA ANG: 95.72
CBL-0434 MCC-N 1.454 KA ANG: -6.58

EF4 DISC 3P Duty: 1.443 KA AT -7.15 DEG ( 1.20 MVA) X/R: 0.13
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1905 + J 0.0239 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.443 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.443 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.443 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.443 KA
CONTRIBUTIONS: EF-4 0.005 KA ANG: -84.29
CBL-0436 SF1 DISC 0.005 KA ANG: 95.71
CBL-0435 EF3 DISC 1.441 KA ANG: -6.74

ELEVATOR CP DI 3P Duty: 1.525 KA AT -10.95 DEG ( 1.27 MVA) X/R: 0.19
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1784 + J 0.0345 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.525 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.525 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.525 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.525 KA
P09.073 MCC-ADM-A 1.525 KA ANG: -10.95

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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ELEVATOR CP IN 3P Duty: 1.432 KA AT -10.53 DEG ( 1.19 MVA) X/R: 0.19
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1902 + J 0.0354 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.432 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.432 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.432 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.432 KA
P09.070A2 ELEVATOR CP DI 1.432 KA ANG: -10.53

EP THRV CONTRO 3P Duty: 4.345 KA AT -18.60 DEG ( 3.61 MVA) X/R: 0.34
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0604 + J 0.0203 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 4.345 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.345 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.345 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.345 KA
CONTRIBUTIONS: E. PLANT THR V 0.005 KA ANG: -84.29
CBL-0462 MCC-D 4.343 KA ANG: -18.54

EPB-EUH-1 DISC 3P Duty: 4.173 KA AT -37.68 DEG ( 3.47 MVA) X/R: 0.85
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0526 + J 0.0406 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 4.173 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.173 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.173 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.173 KA
CBL-EPB-EUH-1 MCC-EPB-B 4.173 KA ANG: -37.68

EPB-EUH-1 TERM 3P Duty: 3.880 KA AT -35.06 DEG ( 3.23 MVA) X/R: 0.76
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0585 + J 0.0410 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 3.880 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 3.880 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 3.880 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 3.880 KA
CBL-EPB-EUH EPB-EUH-1 DISC 3.880 KA ANG: -35.06

EPBBV DISC 3P Duty: 1.323 KA AT -6.97 DEG ( 1.10 MVA) X/R: 0.12
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.2079 + J 0.0254 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.323 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.323 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.323 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.323 KA
CBL-0365 EPBBV STARTER 0.014 KA ANG: 95.74
CBL-0364 MCC-M 1.320 KA ANG: -6.37

EPBBV STARTER 3P Duty: 1.256 KA AT -6.82 DEG ( 1.04 MVA) X/R: 0.12

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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VOLTAGE: 480. EQUIV. IMPEDANCE= 0.2190 + J 0.0262 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.256 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.256 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.256 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.256 KA
CONTRIBUTIONS: E PLT BLWR BLD 0.014 KA ANG: -84.29
CBL-0365 EPBBV DISC 1.253 KA ANG: -6.19

EPSEGE DISC 3P Duty: 1.452 KA AT -7.21 DEG ( 1.21 MVA) X/R: 0.13
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1893 + J 0.0240 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.452 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.452 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.452 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.452 KA
CONTRIBUTIONS: E PLT SEC EFF 0.013 KA ANG: -84.29
CBL-0367 MCC-M 1.449 KA ANG: -6.72

EPSEGW DISC 3P Duty: 1.452 KA AT -7.21 DEG ( 1.21 MVA) X/R: 0.13
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1893 + J 0.0240 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.452 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.452 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.452 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.452 KA
CONTRIBUTIONS: E PLT SEC EFF 0.013 KA ANG: -84.29
CBL-0368 MCC-M 1.449 KA ANG: -6.72

EQ INFL GATE 1 3P Duty: 2.747 KA AT -14.28 DEG ( 2.28 MVA) X/R: 0.26
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0978 + J 0.0249 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.747 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.747 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.747 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.747 KA
CONTRIBUTIONS: EQ INFL GATE 1 0.008 KA ANG: -84.29
CBL-0288 MCC-E.. 2.744 KA ANG: -14.12

EQ INFL GATE 1 3P Duty: 2.747 KA AT -14.28 DEG ( 2.28 MVA) X/R: 0.26
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0978 + J 0.0249 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.747 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.747 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.747 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.747 KA
CONTRIBUTIONS: EQ INFL GATE 1 0.008 KA ANG: -84.29
CBL-0284 MCC-E.. 2.744 KA ANG: -14.12

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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EQ INFL GATE 1 3P Duty: 2.747 KA AT -14.28 DEG ( 2.28 MVA) X/R: 0.26
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0978 + J 0.0249 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.747 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.747 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.747 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.747 KA
CONTRIBUTIONS: EQ INFL GATE 1 0.008 KA ANG: -84.29
CBL-0291 MCC-E.. 2.744 KA ANG: -14.12

EQ INFL GATE 1 3P Duty: 2.747 KA AT -14.28 DEG ( 2.28 MVA) X/R: 0.26
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0978 + J 0.0249 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.747 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.747 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.747 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.747 KA
CONTRIBUTIONS: EQ INFL GATE 1 0.008 KA ANG: -84.29
CBL-0292 MCC-E.. 2.744 KA ANG: -14.12

EQ INFL GATE 2 3P Duty: 2.747 KA AT -14.28 DEG ( 2.28 MVA) X/R: 0.26
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0978 + J 0.0249 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.747 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.747 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.747 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.747 KA
CONTRIBUTIONS: EQ INFL GATE 2 0.008 KA ANG: -84.29
CBL-0289 MCC-E.. 2.744 KA ANG: -14.12

EQ INFL GATE 3 3P Duty: 2.747 KA AT -14.28 DEG ( 2.28 MVA) X/R: 0.26
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0978 + J 0.0249 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.747 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.747 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.747 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.747 KA
CONTRIBUTIONS: EQ INFL GATE 3 0.008 KA ANG: -84.29
CBL-0290 MCC-E.. 2.744 KA ANG: -14.12

EQ INFL GATE 4 3P Duty: 2.747 KA AT -14.28 DEG ( 2.28 MVA) X/R: 0.26
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0978 + J 0.0249 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.747 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.747 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.747 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.747 KA
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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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CONTRIBUTIONS TO EQ INFL GATE 4 (CONTINUED)
CONTRIBUTIONS: EQ INFL GATE 4      0.008 KA      ANG:  -84.29
CBL-0282      MCC-E..      2.744 KA      ANG:  -14.12

EQ INFL GATE 9 3P Duty: 2.747 KA AT -14.28 DEG ( 2.28 MVA) X/R: 0.26
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0978 + J 0.0249 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.747 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.747 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.747 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.747 KA
CONTRIBUTIONS: EQ INFL GATE 9      0.008 KA      ANG:  -84.29
CBL-0283      MCC-E..      2.744 KA      ANG:  -14.12

EQ-RET-V-1 DIS 3P Duty: 2.750 KA AT -14.49 DEG ( 2.29 MVA) X/R: 0.27
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0976 + J 0.0252 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.750 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.750 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.750 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.750 KA
CONTRIBUTIONS: EQ RET VALVE 1      0.018 KA      ANG:  -84.29
CBL-0285      MCC-E..      2.744 KA      ANG: -194.13

EQ-RET-V-2 DIS 3P Duty: 2.750 KA AT -14.49 DEG ( 2.29 MVA) X/R: 0.27
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0976 + J 0.0252 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.750 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.750 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.750 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.750 KA
CONTRIBUTIONS: EQ RET VALVE 2      0.018 KA      ANG:  -84.29
CBL-0286      MCC-E..      2.744 KA      ANG: -194.13

EQINGT5 DISC 3P Duty: 2.734 KA AT -14.84 DEG ( 2.27 MVA) X/R: 0.27
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0980 + J 0.0260 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.734 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.734 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.734 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.734 KA
CONTRIBUTIONS: EQ INFL GATE #      0.008 KA      ANG:  -84.29
CBL-0325      MCC-F..      2.731 KA      ANG: -194.68

EQINGT6 DISC 3P Duty: 2.734 KA AT -14.84 DEG ( 2.27 MVA) X/R: 0.27
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0980 + J 0.0260 OHMS
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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER      2.734 KA
MOLDED CASE CIRCUIT BREAKER < 10KA    2.734 KA
MOLDED CASE CIRCUIT BREAKER < 20KA    2.734 KA
MOLDED CASE CIRCUIT BREAKER > 20KA    2.734 KA
CONTRIBUTIONS:  EQ INFL GATE #      0.008 KA      ANG:   -84.29
CBL-0326          MCC-F..            2.731 KA      ANG:  -194.68

EQINGT7 DISC  3P Duty:  2.734 KA AT  -14.84 DEG (  2.27 MVA) X/R:    0.27
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.0980 + J  0.0260 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      2.734 KA
MOLDED CASE CIRCUIT BREAKER < 10KA    2.734 KA
MOLDED CASE CIRCUIT BREAKER < 20KA    2.734 KA
MOLDED CASE CIRCUIT BREAKER > 20KA    2.734 KA
CONTRIBUTIONS:  EQ INFL GATE #      0.008 KA      ANG:   -84.29
CBL-0331          MCC-F..            2.731 KA      ANG:  -14.68

EQINGT8 DISC  3P Duty:  2.734 KA AT  -14.84 DEG (  2.27 MVA) X/R:    0.27
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.0980 + J  0.0260 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      2.734 KA
MOLDED CASE CIRCUIT BREAKER < 10KA    2.734 KA
MOLDED CASE CIRCUIT BREAKER < 20KA    2.734 KA
MOLDED CASE CIRCUIT BREAKER > 20KA    2.734 KA
CONTRIBUTIONS:  EQ INFL GATE #      0.008 KA      ANG:   -84.29
CBL-0332          MCC-F..            2.731 KA      ANG:  -14.68

EQPRM HOIST DI 3P Duty:  5.960 KA AT  -30.77 DEG (  4.96 MVA) X/R:    0.61
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.0400 + J  0.0238 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      5.960 KA
MOLDED CASE CIRCUIT BREAKER < 10KA    5.960 KA
MOLDED CASE CIRCUIT BREAKER < 20KA    5.960 KA
MOLDED CASE CIRCUIT BREAKER > 20KA    5.960 KA
CONTRIBUTIONS:  EQPT RM HOIST       0.014 KA      ANG:   -84.29
CBL-0330          MCC-F..            5.952 KA      ANG:  -30.66

EQPT RCPT C    3P Duty:  6.033 KA AT  -26.67 DEG (  5.02 MVA) X/R:    0.51
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.0410 + J  0.0206 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      6.033 KA
MOLDED CASE CIRCUIT BREAKER < 10KA    6.033 KA
MOLDED CASE CIRCUIT BREAKER < 20KA    6.033 KA
MOLDED CASE CIRCUIT BREAKER > 20KA    6.033 KA
CBL-0556          MCC-C              6.033 KA      ANG:   -26.67

EQPT RCPT D    3P Duty:  6.215 KA AT  -26.82 DEG (  5.17 MVA) X/R:    0.51
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.0398 + J  0.0201 OHMS

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER 6.215 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 6.215 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 6.215 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 6.215 KA
CBL-0483 MCC-D. 6.215 KA ANG: -26.82

EQPT RCPT E 3P Duty: 13.237 KA AT -74.42 DEG ( 11.01 MVA) X/R: 3.99
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0056 + J 0.0202 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 13.237 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 14.032 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 13.237 KA
CBL-0287 MCC-E. 13.237 KA ANG: 105.58

EQPT RCPT EBB- 3P Duty: 8.946 KA AT -56.57 DEG ( 7.44 MVA) X/R: 1.53
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0171 + J 0.0259 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 8.946 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 8.946 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 8.946 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 8.946 KA
CBL-EBB-A WELD MCC-EBB-A. 8.946 KA ANG: -56.57

EQPT RCPT EBB- 3P Duty: 8.379 KA AT -57.85 DEG ( 6.97 MVA) X/R: 1.61
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0176 + J 0.0280 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 8.379 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 8.379 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 8.379 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 8.379 KA
CBL WELD RCPT MCC-EBB-B 8.379 KA ANG: -57.85

EQPT RCPT EE 3P Duty: 3.999 KA AT -21.24 DEG ( 3.32 MVA) X/R: 0.39
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0646 + J 0.0251 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 3.999 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 3.999 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 3.999 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 3.999 KA
CBL-0613 MCC-EE 3.999 KA ANG: -21.24

EQPT RCPT EPB- 3P Duty: 4.828 KA AT -43.31 DEG ( 4.01 MVA) X/R: 1.07
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0418 + J 0.0394 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 4.828 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.828 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.828 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.828 KA
CBL-EQRCPT-EPB MCC-EPB-B 4.828 KA ANG: -43.31

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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EQPT RCPT F    3P Duty:  2.731 KA AT  -14.68 DEG (   2.27 MVA) X/R:    0.26
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.0981 + J  0.0257 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      2.731 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     2.731 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     2.731 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     2.731 KA
CBL-0319      MCC-F.                  2.731 KA      ANG:  -194.68

EQPT RCPT M    3P Duty:  2.256 KA AT  -10.22 DEG (   1.88 MVA) X/R:    0.18
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.1209 + J  0.0218 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      2.256 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     2.256 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     2.256 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     2.256 KA
CBL-0376      MCC-M.                  2.256 KA      ANG:  -10.22

EQPT RCPT RLS- 3P Duty:  4.311 KA AT  -23.11 DEG (   3.58 MVA) X/R:    0.43
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.0591 + J  0.0252 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      4.311 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     4.311 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     4.311 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     4.311 KA
P03.207      MCC-RLS-B                4.311 KA      ANG:  -23.11

EQRETFCV DISC  3P Duty:  2.732 KA AT  -14.73 DEG (   2.27 MVA) X/R:    0.26
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.0981 + J  0.0258 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      2.732 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     2.732 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     2.732 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     2.732 KA
CONTRIBUTIONS: EQ RET FCV              0.002 KA      ANG:  -84.29
CBL-0313      MCC-F.                  2.731 KA      ANG:  -194.68

EQRETV3 DISC   3P Duty:  2.737 KA AT  -15.05 DEG (   2.28 MVA) X/R:    0.28
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.0978 + J  0.0263 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      2.737 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     2.737 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     2.737 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     2.737 KA
CONTRIBUTIONS: EQ RET V #3              0.018 KA      ANG:  -84.29
CBL-0317      MCC-F..                 2.731 KA      ANG:  -194.69

ERU DISC       3P Duty:  2.731 KA AT  -14.68 DEG (   2.27 MVA) X/R:    0.26

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0981 + J 0.0257 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.731 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.731 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.731 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.731 KA
CBL-0329 MCC-F. 2.731 KA ANG: -14.68

EESP6 DISC 3P Duty: 1.454 KA AT -7.54 DEG ( 1.21 MVA) X/R: 0.13
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1890 + J 0.0250 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.454 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.454 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.454 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.454 KA
CONTRIBUTIONS: E SEC EFF SP # 0.021 KA ANG: -84.29
CBL-0374 MCC-M. 1.449 KA ANG: -6.72

EUH-E1 TERM 3P Duty: 5.868 KA AT -27.63 DEG ( 4.88 MVA) X/R: 0.53
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0418 + J 0.0219 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 5.868 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 5.868 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 5.868 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 5.868 KA
CBL-0296 MCC-E. 5.868 KA ANG: -27.63

EUH-E2 TERM 3P Duty: 3.762 KA AT -18.41 DEG ( 3.13 MVA) X/R: 0.33
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0699 + J 0.0233 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 3.762 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 3.762 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 3.762 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 3.762 KA
CBL-0297 MCC-E. 3.762 KA ANG: -18.41

EUH1 DISC 3P Duty: 1.449 KA AT -6.72 DEG ( 1.20 MVA) X/R: 0.12
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1899 + J 0.0224 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.449 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.449 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.449 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.449 KA
CBL-0375 MCC-M. 1.449 KA ANG: -6.72

EWH-1 DISC 3P Duty: 10.801 KA AT -64.66 DEG ( 8.98 MVA) X/R: 2.25
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0110 + J 0.0232 OHMS

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER 10.801 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 10.801 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 10.801 KA
P09.101 MCC-ADM-A. 10.801 KA ANG: -64.66

EWH-2 DISC 3P Duty: 18.391 KA AT -60.83 DEG ( 15.29 MVA) X/R: 1.82
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0073 + J 0.0132 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 18.391 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 18.391 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 18.391 KA
P07.121 PP-WBB-A 18.391 KA ANG: 119.17

EWH-2 TERMS 3P Duty: 17.355 KA AT -59.47 DEG ( 14.43 MVA) X/R: 1.72
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0081 + J 0.0138 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 17.355 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 17.355 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 17.355 KA
P07.121A EWH-2 DISC 17.355 KA ANG: -59.47

F-1-1 DISC 3P Duty: 2.319 KA AT -22.87 DEG ( 1.93 MVA) X/R: 0.48
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1101 + J 0.0464 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.319 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.319 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.319 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.319 KA
CBL-F-1-1 F-1-1 STARTER 0.007 KA ANG: 95.74
P04.210A F-1-2 DISC 0.035 KA ANG: 95.79
P04.210 MCC-EPB-B. 2.299 KA ANG: -201.94

F-1-1 STARTER 3P Duty: 1.950 KA AT -19.87 DEG ( 1.62 MVA) X/R: 0.40
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1336 + J 0.0483 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.950 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.950 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.950 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.950 KA
CONTRIBUTIONS: F-1-1 MTR 0.007 KA ANG: -84.29
CBL-F-1-1 F-1-1 DISC 1.947 KA ANG: -19.68

F-1-2 DISC 3P Duty: 2.298 KA AT -22.71 DEG ( 1.91 MVA) X/R: 0.48
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1113 + J 0.0466 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.298 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.298 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.298 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.298 KA

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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CONTRIBUTIONS TO F-1-2 DISC (CONTINUED)					
CBL-F-1-2	F-1-2 STARTER	0.007 KA	ANG:	95.75	
P04.210B	F-1-3 DISC	0.028 KA	ANG:	95.79	
P04.210A	F-1-1 DISC	2.281 KA	ANG:	-21.92	
F-1-2 STARTER 3P Duty: 1.847 KA AT -19.04 DEG (1.54 MVA) X/R: 0.38					
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1418 + J 0.0490 OHMS					
LOW VOLTAGE POWER CIRCUIT BREAKER 1.847 KA					
MOLDED CASE CIRCUIT BREAKER < 10KA 1.847 KA					
MOLDED CASE CIRCUIT BREAKER < 20KA 1.847 KA					
MOLDED CASE CIRCUIT BREAKER > 20KA 1.847 KA					
CONTRIBUTIONS: F-1-2 MTR 0.007 KA ANG: -84.29					
CBL-F-1-2	F-1-2 DISC	1.844 KA	ANG:	-18.84	
F-1-3 DISC 3P Duty: 2.276 KA AT -22.54 DEG (1.89 MVA) X/R: 0.47					
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1124 + J 0.0467 OHMS					
LOW VOLTAGE POWER CIRCUIT BREAKER 2.276 KA					
MOLDED CASE CIRCUIT BREAKER < 10KA 2.276 KA					
MOLDED CASE CIRCUIT BREAKER < 20KA 2.276 KA					
MOLDED CASE CIRCUIT BREAKER > 20KA 2.276 KA					
CBL-F-1-3	F-1-3 STARTER	0.007 KA	ANG:	95.80	
P04.210C	F-1-4 DISC	0.021 KA	ANG:	95.78	
P04.210B	F-1-2 DISC	2.263 KA	ANG:	-21.91	
F-1-3 STARTER 3P Duty: 1.550 KA AT -16.69 DEG (1.29 MVA) X/R: 0.32					
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1712 + J 0.0513 OHMS					
LOW VOLTAGE POWER CIRCUIT BREAKER 1.550 KA					
MOLDED CASE CIRCUIT BREAKER < 10KA 1.550 KA					
MOLDED CASE CIRCUIT BREAKER < 20KA 1.550 KA					
MOLDED CASE CIRCUIT BREAKER > 20KA 1.550 KA					
CONTRIBUTIONS: F-1-3 MTR 0.007 KA ANG: -84.29					
CBL-F-1-3	F-1-3 DISC	1.548 KA	ANG:	-16.45	
F-1-4 DISC 3P Duty: 2.256 KA AT -22.38 DEG (1.88 MVA) X/R: 0.47					
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1136 + J 0.0468 OHMS					
LOW VOLTAGE POWER CIRCUIT BREAKER 2.256 KA					
MOLDED CASE CIRCUIT BREAKER < 10KA 2.256 KA					
MOLDED CASE CIRCUIT BREAKER < 20KA 2.256 KA					
MOLDED CASE CIRCUIT BREAKER > 20KA 2.256 KA					
CBL-F-1-4	F-1-4 STARTER	0.007 KA	ANG:	95.81	
P04.210D	S-21-1 DISC	0.014 KA	ANG:	95.75	
P04.210C	F-1-3 DISC	2.246 KA	ANG:	-21.90	
F-1-4 STARTER 3P Duty: 1.483 KA AT -16.17 DEG (1.23 MVA) X/R: 0.31					

THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1794 + J 0.0520 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.483 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.483 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.483 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.483 KA
CONTRIBUTIONS: F-1-4 MTR 0.007 KA ANG: -84.29
CBL-F-1-4 F-1-4 DISC 1.481 KA ANG: -15.91

F-1-5 DISC 3P Duty: 1.878 KA AT -19.64 DEG ( 1.56 MVA) X/R: 0.41
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1390 + J 0.0496 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.878 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.878 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.878 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.878 KA
CBL-F-1-5 F-1-5 STARTER 0.007 KA ANG: 95.81
P04.215A F-1-6 DISC 0.035 KA ANG: 95.78
P04.215 MCC-EPB-B. 1.860 KA ANG: -198.46

F-1-5 STARTER 3P Duty: 1.307 KA AT -15.02 DEG ( 1.09 MVA) X/R: 0.29
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.2048 + J 0.0549 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.307 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.307 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.307 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.307 KA
CONTRIBUTIONS: F-1-5 MTR 0.007 KA ANG: -84.29
CBL-F-1-5 F-1-5 DISC 1.305 KA ANG: -14.73

F-1-6 DISC 3P Duty: 1.864 KA AT -19.54 DEG ( 1.55 MVA) X/R: 0.41
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1401 + J 0.0497 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.864 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.864 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.864 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.864 KA
CBL-F-1-6 F-1-6 STARTER 0.007 KA ANG: 95.80
P04.215B F-1-7 DISC 0.028 KA ANG: 95.76
P04.215A F-1-5 DISC 1.849 KA ANG: -18.55

F-1-6 STARTER 3P Duty: 1.344 KA AT -15.32 DEG ( 1.12 MVA) X/R: 0.30
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1989 + J 0.0545 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.344 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.344 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.344 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.344 KA

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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	CONTRIBUTIONS TO F-1-6 STARTER (CONTINUED)			
	CONTRIBUTIONS: F-1-6 MTR	0.007 KA	ANG:	-84.29
	CBL-F-1-6 F-1-6 DISC	1.341 KA	ANG:	-15.04
F-1-7 DISC	3P Duty: 1.850 KA AT -19.43 DEG (1.54 MVA) X/R: 0.40			
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1413 + J 0.0499 OHMS			
	LOW VOLTAGE POWER CIRCUIT BREAKER 1.850 KA			
	MOLDED CASE CIRCUIT BREAKER < 10KA 1.850 KA			
	MOLDED CASE CIRCUIT BREAKER < 20KA 1.850 KA			
	MOLDED CASE CIRCUIT BREAKER > 20KA 1.850 KA			
	CBL-F-1-7 F-1-7 STARTER	0.007 KA	ANG:	95.75
	P04.215C F-1-8 DISC	0.021 KA	ANG:	95.76
	P04.215B F-1-6 DISC	1.838 KA	ANG:	-18.63
F-1-7 STARTER	3P Duty: 1.543 KA AT -16.93 DEG (1.28 MVA) X/R: 0.34			
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1719 + J 0.0523 OHMS			
	LOW VOLTAGE POWER CIRCUIT BREAKER 1.543 KA			
	MOLDED CASE CIRCUIT BREAKER < 10KA 1.543 KA			
	MOLDED CASE CIRCUIT BREAKER < 20KA 1.543 KA			
	MOLDED CASE CIRCUIT BREAKER > 20KA 1.543 KA			
	CONTRIBUTIONS: F-1-7 MTR	0.007 KA	ANG:	-84.29
	CBL-F-1-7 F-1-7 DISC	1.540 KA	ANG:	-16.68
F-1-8 DISC	3P Duty: 1.836 KA AT -19.32 DEG (1.53 MVA) X/R: 0.40			
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1425 + J 0.0500 OHMS			
	LOW VOLTAGE POWER CIRCUIT BREAKER 1.836 KA			
	MOLDED CASE CIRCUIT BREAKER < 10KA 1.836 KA			
	MOLDED CASE CIRCUIT BREAKER < 20KA 1.836 KA			
	MOLDED CASE CIRCUIT BREAKER > 20KA 1.836 KA			
	CBL-F-1-8 F-1-8 STARTER	0.007 KA	ANG:	95.74
	P04.215D S-21-3 DISC	0.014 KA	ANG:	95.75
	P04.215C F-1-7 DISC	1.827 KA	ANG:	-18.72
F-1-8 STARTER	3P Duty: 1.594 KA AT -17.35 DEG (1.33 MVA) X/R: 0.35			
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1660 + J 0.0518 OHMS			
	LOW VOLTAGE POWER CIRCUIT BREAKER 1.594 KA			
	MOLDED CASE CIRCUIT BREAKER < 10KA 1.594 KA			
	MOLDED CASE CIRCUIT BREAKER < 20KA 1.594 KA			
	MOLDED CASE CIRCUIT BREAKER > 20KA 1.594 KA			
	CONTRIBUTIONS: F-1-8 MTR	0.007 KA	ANG:	-84.29
	CBL-F-1-8 F-1-8 DISC	1.591 KA	ANG:	-17.11
F-2-1 DISC	3P Duty: 6.361 KA AT -56.34 DEG (5.29 MVA) X/R: 1.96			
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0241 + J 0.0363 OHMS			

THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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	LOW VOLTAGE POWER CIRCUIT BREAKER	6.361 KA			
	MOLDED CASE CIRCUIT BREAKER < 10KA	6.573 KA			
	MOLDED CASE CIRCUIT BREAKER < 20KA	6.361 KA			
	MOLDED CASE CIRCUIT BREAKER > 20KA	6.361 KA			
CBL-F-2-1	F-2-1 STARTER	0.011 KA	ANG:	95.76	
CBL-0721	F-2-12 DISC	0.021 KA	ANG:	95.84	
CBL-0720	F-2-6 DISC	6.333 KA	ANG:	-56.20	
F-2-1 STARTER 3P Duty: 4.545 KA AT -38.57 DEG (3.78 MVA) X/R: 0.90					
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0477 + J 0.0380 OHMS					
	LOW VOLTAGE POWER CIRCUIT BREAKER	4.545 KA			
	MOLDED CASE CIRCUIT BREAKER < 10KA	4.545 KA			
	MOLDED CASE CIRCUIT BREAKER < 20KA	4.545 KA			
	MOLDED CASE CIRCUIT BREAKER > 20KA	4.545 KA			
	CONTRIBUTIONS: F-2-1 MTR	0.011 KA	ANG:	-84.29	
CBL-F-2-1	F-2-1 DISC	4.537 KA	ANG:	-38.48	
F-2-12 DISC 3P Duty: 6.256 KA AT -55.14 DEG (5.20 MVA) X/R: 1.85					
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0253 + J 0.0363 OHMS					
	LOW VOLTAGE POWER CIRCUIT BREAKER	6.256 KA			
	MOLDED CASE CIRCUIT BREAKER < 10KA	6.363 KA			
	MOLDED CASE CIRCUIT BREAKER < 20KA	6.256 KA			
	MOLDED CASE CIRCUIT BREAKER > 20KA	6.256 KA			
CBL-F-2-12	F-2-12 STARTER	0.011 KA	ANG:	95.76	
CBL-0722	F-2-7 DISC	0.011 KA	ANG:	95.92	
CBL-0721	F-2-1 DISC	6.237 KA	ANG:	-55.04	
F-2-12 STARTER 3P Duty: 4.473 KA AT -37.96 DEG (3.72 MVA) X/R: 0.88					
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0488 + J 0.0381 OHMS					
	LOW VOLTAGE POWER CIRCUIT BREAKER	4.473 KA			
	MOLDED CASE CIRCUIT BREAKER < 10KA	4.473 KA			
	MOLDED CASE CIRCUIT BREAKER < 20KA	4.473 KA			
	MOLDED CASE CIRCUIT BREAKER > 20KA	4.473 KA			
	CONTRIBUTIONS: F-2-12 MTR	0.011 KA	ANG:	-84.29	
CBL-F-2-12	F-2-12 DISC	4.466 KA	ANG:	-37.86	
F-2-13 DISC 3P Duty: 1.591 KA AT -16.89 DEG (1.32 MVA) X/R: 0.35					
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1666 + J 0.0506 OHMS					
	LOW VOLTAGE POWER CIRCUIT BREAKER	1.591 KA			
	MOLDED CASE CIRCUIT BREAKER < 10KA	1.591 KA			
	MOLDED CASE CIRCUIT BREAKER < 20KA	1.591 KA			
	MOLDED CASE CIRCUIT BREAKER > 20KA	1.591 KA			
CBL-F-2-13	F-2-13 STARTER	0.011 KA	ANG:	95.92	
CBL-0723	F-2-18 DISC	0.032 KA	ANG:	95.83	

THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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CONTRIBUTIONS TO F-2-13 DISC (CONTINUED)
CBL-F-2-13 DIS MCC-EPB-A.. 1.575 KA ANG: -15.47

F-2-13 STARTER 3P Duty: 1.038 KA AT -12.75 DEG ( 0.86 MVA) X/R: 0.25
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.2604 + J 0.0589 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.038 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.038 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.038 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.038 KA
CONTRIBUTIONS: F-2-13 MTR 0.011 KA ANG: -84.29
CBL-F-2-13 F-2-13 DISC 1.035 KA ANG: -12.19

F-2-18 DISC 3P Duty: 1.581 KA AT -16.82 DEG ( 1.31 MVA) X/R: 0.35
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1678 + J 0.0507 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.581 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.581 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.581 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.581 KA
CBL-F-2-18 F-2-18 STARTER 0.011 KA ANG: 95.76
CBL-0724 F-2-19 DISC 0.021 KA ANG: 95.85
CBL-0723 F-2-13 DISC 1.569 KA ANG: -15.75

F-2-18 STARTER 3P Duty: 1.397 KA AT -15.42 DEG ( 1.16 MVA) X/R: 0.31
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1912 + J 0.0527 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.397 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.397 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.397 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.397 KA
CONTRIBUTIONS: F-2-18 MTR 0.011 KA ANG: -84.29
CBL-F-2-18 F-2-18 DISC 1.393 KA ANG: -15.01

F-2-19 DISC 3P Duty: 1.571 KA AT -16.75 DEG ( 1.31 MVA) X/R: 0.34
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1690 + J 0.0508 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.571 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.571 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.571 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.571 KA
CBL-F-2-19 F-2-19 STARTER 0.011 KA ANG: 95.76
CBL-0725 F-2-24 DISC 0.011 KA ANG: 95.93
CBL-0724 F-2-18 DISC 1.563 KA ANG: -16.03

F-2-19 STARTER 3P Duty: 1.389 KA AT -15.36 DEG ( 1.15 MVA) X/R: 0.31
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1924 + J 0.0529 OHMS

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER      1.389 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     1.389 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     1.389 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     1.389 KA
CONTRIBUTIONS: F-2-19 MTR              0.011 KA      ANG:  -84.29
CBL-F-2-19      F-2-19 DISC             1.385 KA      ANG:  -14.95

F-2-24 DISC  3P Duty:  1.560 KA AT  -16.67 DEG (  1.30 MVA) X/R:    0.34
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.1701 + J  0.0509 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      1.560 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     1.560 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     1.560 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     1.560 KA
CBL-F-2-24    F-2-24 STARTER           0.011 KA      ANG:   95.93
CBL-0725      F-2-19 DISC              1.556 KA      ANG:  -16.31

F-2-24 STARTER 3P Duty:  1.003 KA AT  -12.50 DEG (  0.83 MVA) X/R:    0.24
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.2697 + J  0.0598 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      1.003 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     1.003 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     1.003 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     1.003 KA
CONTRIBUTIONS: F-2-24 MTR              0.011 KA      ANG:  -84.29
CBL-F-2-24    F-2-24 DISC             1.000 KA      ANG:  -11.92

F-2-6 DISC  3P Duty:  6.467 KA AT  -57.57 DEG (  5.38 MVA) X/R:    2.09
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.0230 + J  0.0362 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      6.467 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     6.798 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     6.467 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     6.467 KA
CBL-F-2-6     F-2-6 STARTER            0.011 KA      ANG:   95.93
CBL-0720      F-2-1 DISC                0.032 KA      ANG:   95.82
CBL-F-2-6 DISC MCC-EPB-A..             6.429 KA      ANG:  -57.40

F-2-6 STARTER 3P Duty:  2.124 KA AT  -19.67 DEG (  1.77 MVA) X/R:    0.38
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.1229 + J  0.0439 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      2.124 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     2.124 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     2.124 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     2.124 KA
CONTRIBUTIONS: F-2-6 MTR              0.011 KA      ANG:  -84.29
CBL-F-2-6     F-2-6 DISC              2.119 KA      ANG:  -19.41

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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F-2-7 DISC      3P Duty:  6.151 KA AT  -53.97 DEG (   5.11 MVA) X/R:    1.75
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.0265 + J  0.0364  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      6.151 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     6.165 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     6.151 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     6.151 KA
CBL-F-2-7      F-2-7 STARTER      0.011 KA      ANG:    95.92
CBL-0722       F-2-12 DISC        6.142 KA      ANG:   -53.92

F-2-7 STARTER  3P Duty:  2.161 KA AT  -19.95 DEG (   1.80 MVA) X/R:    0.38
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.1205 + J  0.0437  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      2.161 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     2.161 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     2.161 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     2.161 KA
CONTRIBUTIONS: F-2-7 MTR          0.011 KA      ANG:   -84.29
CBL-F-2-7      F-2-7 DISC        2.157 KA      ANG:   -19.69

F-5-1 DISC     3P Duty:  4.348 KA AT  -18.70 DEG (   3.61 MVA) X/R:    0.35
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.0604 + J  0.0204  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      4.348 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     4.348 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     4.348 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     4.348 KA
CONTRIBUTIONS: F-5-1             0.013 KA      ANG:   -84.29
CBL-0485       MCC-D.            4.343 KA      ANG:   -18.55

F-5-2 DISC     3P Duty:  4.348 KA AT  -18.70 DEG (   3.61 MVA) X/R:    0.35
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.0604 + J  0.0204  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      4.348 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     4.348 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     4.348 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     4.348 KA
CONTRIBUTIONS: F-5-2             0.013 KA      ANG:   -84.29
CBL-0486       MCC-D.            4.343 KA      ANG:   -18.55

F-54-1 DISC    3P Duty:  1.755 KA AT  -11.28 DEG (   1.46 MVA) X/R:    0.20
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.1549 + J  0.0309  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      1.755 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     1.755 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     1.755 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     1.755 KA
CBL-F-54-1     F-54-1 STR        0.007 KA      ANG:    95.72
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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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	CONTRIBUTIONS TO F-54-1 DISC	(CONTINUED)		
	CBL-0737 Junction Box	1.753 KA	ANG:	-191.06
F-54-1 STR	3P Duty: 1.704 KA AT -11.09 DEG (1.42 MVA)	X/R: 0.20		
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1596 + J 0.0313 OHMS			
	LOW VOLTAGE POWER CIRCUIT BREAKER	1.704 KA		
	MOLDED CASE CIRCUIT BREAKER < 10KA	1.704 KA		
	MOLDED CASE CIRCUIT BREAKER < 20KA	1.704 KA		
	MOLDED CASE CIRCUIT BREAKER > 20KA	1.704 KA		
	CONTRIBUTIONS: F-54-1 MTR	0.007 KA	ANG:	-84.29
	CBL-F-54-1 F-54-1 DISC	1.702 KA	ANG:	-10.86
F-54-2 DISC	3P Duty: 2.385 KA AT -14.02 DEG (1.98 MVA)	X/R: 0.25		
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1127 + J 0.0281 OHMS			
	LOW VOLTAGE POWER CIRCUIT BREAKER	2.385 KA		
	MOLDED CASE CIRCUIT BREAKER < 10KA	2.385 KA		
	MOLDED CASE CIRCUIT BREAKER < 20KA	2.385 KA		
	MOLDED CASE CIRCUIT BREAKER > 20KA	2.385 KA		
	CBL-F-54-2 F-54-2 STR	0.007 KA	ANG:	95.72
	CBL-F-54-2D BUS-0287	2.383 KA	ANG:	-193.86
F-54-2 STR	3P Duty: 2.293 KA AT -13.65 DEG (1.91 MVA)	X/R: 0.25		
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1174 + J 0.0285 OHMS			
	LOW VOLTAGE POWER CIRCUIT BREAKER	2.293 KA		
	MOLDED CASE CIRCUIT BREAKER < 10KA	2.293 KA		
	MOLDED CASE CIRCUIT BREAKER < 20KA	2.293 KA		
	MOLDED CASE CIRCUIT BREAKER > 20KA	2.293 KA		
	CONTRIBUTIONS: F-54-2 MTR	0.007 KA	ANG:	-84.29
	CBL-F-54-2 F-54-2 DISC	2.291 KA	ANG:	-13.48
F-54-4 DISC	3P Duty: 4.488 KA AT -22.18 DEG (3.73 MVA)	X/R: 0.42		
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0572 + J 0.0233 OHMS			
	LOW VOLTAGE POWER CIRCUIT BREAKER	4.488 KA		
	MOLDED CASE CIRCUIT BREAKER < 10KA	4.488 KA		
	MOLDED CASE CIRCUIT BREAKER < 20KA	4.488 KA		
	MOLDED CASE CIRCUIT BREAKER > 20KA	4.488 KA		
	CBL-F-54-4 F-54-4 STR	0.007 KA	ANG:	95.72
	CBL-0193 Junction Box	4.485 KA	ANG:	-202.10
F-54-4 STR	3P Duty: 4.044 KA AT -20.36 DEG (3.36 MVA)	X/R: 0.38		
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0642 + J 0.0238 OHMS			

THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER      4.044 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     4.044 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     4.044 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     4.044 KA
CONTRIBUTIONS:  F-54-4 MTR              0.007 KA      ANG:   -84.29
CBL-F-54-4      F-54-4 DISC              4.041 KA      ANG:   -20.27

F-54-5 DISC  3P Duty: 10.830 KA AT  -54.22 DEG (  9.00 MVA) X/R:    1.43
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.0150 + J  0.0208 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      10.830 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     10.830 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     10.830 KA
CBL-F-54-5    F-54-5 STR                 0.007 KA      ANG:    95.72
CBL-F-54-5D.  BUS-0287                  10.824 KA      ANG:  -234.20

F-54-5 STR   3P Duty:  9.048 KA AT  -44.00 DEG (  7.52 MVA) X/R:    0.99
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.0220 + J  0.0213 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER       9.048 KA
MOLDED CASE CIRCUIT BREAKER < 10KA      9.048 KA
MOLDED CASE CIRCUIT BREAKER < 20KA      9.048 KA
MOLDED CASE CIRCUIT BREAKER > 20KA      9.048 KA
CONTRIBUTIONS:  F-54-5 MTR              0.007 KA      ANG:   -84.29
CBL-F-54-5     F-54-5 DISC              9.042 KA      ANG:  -43.97

F-6-1 DISC   3P Duty:  4.258 KA AT  -18.77 DEG (  3.54 MVA) X/R:    0.35
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.0616 + J  0.0209 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER       4.258 KA
MOLDED CASE CIRCUIT BREAKER < 10KA      4.258 KA
MOLDED CASE CIRCUIT BREAKER < 20KA      4.258 KA
MOLDED CASE CIRCUIT BREAKER > 20KA      4.258 KA
CBL-0558      F-6-1 CTRLR               0.013 KA      ANG:    95.76
CBL-0557      MCC-C                     4.253 KA      ANG:   -18.62

F-6-2 DISC   3P Duty:  4.258 KA AT  -18.77 DEG (  3.54 MVA) X/R:    0.35
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.0616 + J  0.0209 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER       4.258 KA
MOLDED CASE CIRCUIT BREAKER < 10KA      4.258 KA
MOLDED CASE CIRCUIT BREAKER < 20KA      4.258 KA
MOLDED CASE CIRCUIT BREAKER > 20KA      4.258 KA
CBL-0560      F-6-2 CTRLR               0.013 KA      ANG:    95.76
CBL-0559      MCC-C                     4.253 KA      ANG:   -18.62

F-6-4 DISC   3P Duty:  4.347 KA AT  -18.67 DEG (  3.61 MVA) X/R:    0.34
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.0604 + J  0.0204 OHMS

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER      4.347 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     4.347 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     4.347 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     4.347 KA
CBL-0469      F-6-4 STR                  0.004 KA      ANG:    95.72
CBL-0473      F-7-1 DISC                 0.007 KA      ANG:    95.76
CBL-0468      MCC-D                      4.343 KA      ANG:   -18.55

F-60-5      3P Duty: 0.897 KA AT  -7.80 DEG ( 0.75 MVA) X/R:    0.14
VOLTAGE:    480.  EQUIV. IMPEDANCE= 0.3062 + J 0.0419 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      0.897 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     0.897 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     0.897 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     0.897 KA
CBL-0350      BUS-0363                  0.897 KA      ANG:   -7.80

F-60-6      3P Duty: 0.897 KA AT  -7.80 DEG ( 0.75 MVA) X/R:    0.14
VOLTAGE:    480.  EQUIV. IMPEDANCE= 0.3062 + J 0.0419 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      0.897 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     0.897 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     0.897 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     0.897 KA
CBL-0352      BUS-0364                  0.897 KA      ANG:   -7.80

F-7-1 DISC  3P Duty: 3.384 KA AT -15.13 DEG ( 2.81 MVA) X/R:    0.27
VOLTAGE:    480.  EQUIV. IMPEDANCE= 0.0791 + J 0.0214 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      3.384 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     3.384 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     3.384 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     3.384 KA
CBL-0470      F-7-1 STR                  0.004 KA      ANG:    95.72
CBL-0472      F-8-6 DISC                 0.004 KA      ANG:    95.74
CBL-0473      F-6-4 DISC                 3.381 KA      ANG:   -15.02

F-8-6 DISC  3P Duty: 2.764 KA AT -12.87 DEG ( 2.30 MVA) X/R:    0.23
VOLTAGE:    480.  EQUIV. IMPEDANCE= 0.0977 + J 0.0223 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      2.764 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     2.764 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     2.764 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     2.764 KA
CBL-0471      F-8-6 STR                  0.004 KA      ANG:    95.72
CBL-0472      F-7-1 DISC                 2.763 KA      ANG:   -12.80

FASB-1 LCP   3P Duty: 16.608 KA AT -66.51 DEG ( 13.81 MVA) X/R:    2.58

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0067 + J 0.0153 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 16.608 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 16.608 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 16.608 KA
P13.002 FASB1 DISC 0.705 KA ANG: 96.29
P13.001 MCC-M. 15.936 KA ANG: -65.76

FASB1 DISC 3P Duty: 14.027 KA AT -60.10 DEG ( 11.66 MVA) X/R: 2.06
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0098 + J 0.0171 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 14.027 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 14.027 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 14.027 KA
P13.002A FASB1 TERM 0.709 KA ANG: 95.80
P13.002 FASB-1 LCP 13.383 KA ANG: -58.86

FCB-1-EF DISC 3P Duty: 8.574 KA AT -30.06 DEG ( 7.13 MVA) X/R: 0.59
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0280 + J 0.0162 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 8.574 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 8.574 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 8.574 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 8.574 KA
P13.004C FCB-1-EF TERM 0.007 KA ANG: 95.74
P13.004B FCBV-1 VFD 8.570 KA ANG: -30.02

FCBV-1 VFD 3P Duty: 15.507 KA AT -58.66 DEG ( 12.89 MVA) X/R: 1.74
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0093 + J 0.0153 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 15.507 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 15.507 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 15.507 KA
P13.004B FCB-1-EF DISC 0.007 KA ANG: 95.76
VFD FCB-1 VFD FCB-1 OUT 0.282 KA ANG: 96.90
P13.003 MCC-N. 15.245 KA ANG: -58.21

FDSP1 DISC 3P Duty: 1.454 KA AT -8.06 DEG ( 1.21 MVA) X/R: 0.15
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1887 + J 0.0267 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.454 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.454 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.454 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.454 KA
CONTRIBUTIONS: FLOOR DRN SP # 0.035 KA ANG: -84.29
CBL-0390 MCC-P 1.446 KA ANG: -6.69

FDSP2 DISC 3P Duty: 1.449 KA AT -8.13 DEG ( 1.21 MVA) X/R: 0.15
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1893 + J 0.0270 OHMS

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER      1.449 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     1.449 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     1.449 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     1.449 KA
CONTRIBUTIONS: FLOOR DRN SP #         0.035 KA      ANG:  -84.29
CBL-0444      MCC-Q                     1.441 KA      ANG:  -6.76

FDSP4 DISC  3P Duty:  1.462 KA AT  -7.94 DEG (  1.22 MVA) X/R:    0.14
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.1877 + J  0.0262 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      1.462 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     1.462 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     1.462 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     1.462 KA
CONTRIBUTIONS: FLOOR DRN SP 4         0.035 KA      ANG:  -84.29
CBL-0433      MCC-N                     1.454 KA      ANG:  -6.58

FLRDRNSP3 DISC 3P Duty:  1.457 KA AT  -8.09 DEG (  1.21 MVA) X/R:    0.15
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.1883 + J  0.0267 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      1.457 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     1.457 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     1.457 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     1.457 KA
CONTRIBUTIONS: FLR DRN SP #3         0.035 KA      ANG:  -84.29
CBL-0369      MCC-M                     1.449 KA      ANG:  -6.72

GDWU-1 DISC  3P Duty:  4.344 KA AT -18.57 DEG (  3.61 MVA) X/R:    0.34
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.0605 + J  0.0203 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      4.344 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     4.344 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     4.344 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     4.344 KA
CONTRIBUTIONS: GRIT DEWATER U         0.002 KA      ANG:  -84.29
CBL-0494      MCC-D.                   4.343 KA      ANG:  -18.54

GDWU-2 DISC  3P Duty:  4.344 KA AT -18.57 DEG (  3.61 MVA) X/R:    0.34
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.0605 + J  0.0203 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      4.344 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     4.344 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     4.344 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     4.344 KA
CONTRIBUTIONS: GRIT DEWATER U         0.002 KA      ANG:  -84.29
CBL-0495      MCC-D.                   4.343 KA      ANG:  -18.54

GP-3 DISC TERM 3P Duty:  4.273 KA AT -19.30 DEG (  3.55 MVA) X/R:    0.38

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0612 + J 0.0214 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 4.273 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.273 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.273 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.273 KA
CBL-0542 GP-3 TERM 0.053 KA ANG: 95.83
CBL-0541 MCC-C 4.250 KA ANG: -18.65

GRIT BLOWER 2 3P Duty: 4.356 KA AT -18.99 DEG ( 3.62 MVA) X/R: 0.36
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0602 + J 0.0207 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 4.356 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.356 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.356 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.356 KA
CONTRIBUTIONS: GRIT BLOWER 2 0.035 KA ANG: -84.29
CBL-0487 MCC-D. 4.342 KA ANG: -18.57

GRTBLWR3 DISC 3P Duty: 4.266 KA AT -19.07 DEG ( 3.55 MVA) X/R: 0.36
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0614 + J 0.0212 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 4.266 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.266 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.266 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.266 KA
CBL-0555 GRIT BLWR 3 TE 0.035 KA ANG: 95.79
CBL-0554 MCC-C 4.251 KA ANG: -18.63

GSP1 DISC 3P Duty: 4.363 KA AT -19.22 DEG ( 3.63 MVA) X/R: 0.37
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0600 + J 0.0209 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 4.363 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.363 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.363 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.363 KA
CONTRIBUTIONS: GRIT SLURRY PU 0.053 KA ANG: -84.29
CBL-0488 MCC-D. 4.341 KA ANG: -18.58

GSP2 DISC 3P Duty: 4.363 KA AT -19.22 DEG ( 3.63 MVA) X/R: 0.37
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0600 + J 0.0209 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 4.363 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.363 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.363 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.363 KA
CONTRIBUTIONS: GRIT SLURRY PU 0.053 KA ANG: -84.29
CBL-0489 MCC-D. 4.341 KA ANG: -18.58

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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GSP4 DISC      3P Duty:  4.363 KA AT  -19.22 DEG (   3.63 MVA) X/R:    0.37
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.0600 + J  0.0209 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  4.363 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.363 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.363 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.363 KA
CONTRIBUTIONS: GRIT SLURRY PU      0.053 KA      ANG:   -84.29
CBL-0490        MCC-D.              4.341 KA      ANG:   -18.58

HEAT REC UNIT  3P Duty:  7.941 KA AT  -34.60 DEG (   6.60 MVA) X/R:    0.69
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.0287 + J  0.0198 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  7.941 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 7.941 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 7.941 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 7.941 KA
CBL-0496        MCC-D.              7.941 KA      ANG:   -34.60

HOIST D DISC   3P Duty:  4.357 KA AT  -19.01 DEG (   3.62 MVA) X/R:    0.36
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.0601 + J  0.0207 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  4.357 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.357 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.357 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.357 KA
CONTRIBUTIONS: HOIST D              0.037 KA      ANG:   -84.29
CBL-0484        MCC-D.              4.341 KA      ANG:   -18.57

HOIST EPB-B DI 3P Duty:  4.508 KA AT  -41.00 DEG (   3.75 MVA) X/R:    1.00
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.0464 + J  0.0403 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  4.508 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.508 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.508 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.508 KA
CBL-HOIST EPB- HOIST EPB-B ST      0.035 KA      ANG:    95.80
CBL-HOIST EPB- MCC-EPB-B           4.482 KA      ANG:   -40.69

HOIST EPB-B ST 3P Duty:  3.890 KA AT  -35.45 DEG (   3.23 MVA) X/R:    0.81
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.0580 + J  0.0413 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  3.890 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 3.890 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 3.890 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 3.890 KA
CONTRIBUTIONS: HOIST EPB-B MT      0.035 KA      ANG:   -84.29
CBL-HOIST EPB- HOIST EPB-B DI      3.866 KA      ANG:   -35.05

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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HOIST P DISC  3P Duty:  1.458 KA AT  -8.74 DEG (   1.21 MVA) X/R:    0.16
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.1878 + J  0.0289  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  1.458 KA
MOLDED CASE CIRCUIT BREAKER < 10KA  1.458 KA
MOLDED CASE CIRCUIT BREAKER < 20KA  1.458 KA
MOLDED CASE CIRCUIT BREAKER > 20KA  1.458 KA
CONTRIBUTIONS:  HOIST P              0.053 KA      ANG:   -84.29
CBL-0399         MCC-P              1.446 KA      ANG:   -6.70

HOIST Q DISC  3P Duty:  1.454 KA AT  -8.82 DEG (   1.21 MVA) X/R:    0.16
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.1884 + J  0.0292  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  1.454 KA
MOLDED CASE CIRCUIT BREAKER < 10KA  1.454 KA
MOLDED CASE CIRCUIT BREAKER < 20KA  1.454 KA
MOLDED CASE CIRCUIT BREAKER > 20KA  1.454 KA
CONTRIBUTIONS:  HOIST Q              0.053 KA      ANG:   -84.29
CBL-0455         MCC-Q              1.441 KA      ANG:   -6.77

HORZ BAND SAW 3P Duty:  2.323 KA AT -25.63 DEG (   1.93 MVA) X/R:    0.48
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.1076 + J  0.0516  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  2.323 KA
MOLDED CASE CIRCUIT BREAKER < 10KA  2.323 KA
MOLDED CASE CIRCUIT BREAKER < 20KA  2.323 KA
MOLDED CASE CIRCUIT BREAKER > 20KA  2.323 KA
CBL HORZ BAND   PP-MTB              2.323 KA      ANG:   -25.63

HP-PEW-P-1 DIS 3P Duty: 11.625 KA AT -70.48 DEG (   9.66 MVA) X/R:    3.27
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.0080 + J  0.0225  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 11.625 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 11.715 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 11.625 KA
CONTRIBUTIONS:  HP PEW PUMP 1       0.709 KA      ANG:   -84.29
CBL-0276         MCC-E              10.937 KA     ANG:  -249.59

HPPEW2 DISC    3P Duty: 11.128 KA AT -70.90 DEG (   9.25 MVA) X/R:    3.32
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.0081 + J  0.0235  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 11.128 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 11.254 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 11.128 KA
CONTRIBUTIONS:  HP PEW PUMP #2      0.709 KA      ANG:   -84.29
CBL-0309         MCC-F              10.439 KA     ANG:   -70.00

HT BOOST PMP D 3P Duty:  1.444 KA AT  -7.17 DEG (   1.20 MVA) X/R:    0.13

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1904 + J 0.0240 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.444 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.444 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.444 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.444 KA
CONTRIBUTIONS: HT BOOST PUMP 0.011 KA ANG: -84.29
CBL-0457 MCC-Q 1.441 KA ANG: -6.76

HV-1 DISC 3P Duty: 3.439 KA AT -30.75 DEG ( 2.86 MVA) X/R: 0.66
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0693 + J 0.0412 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 3.439 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 3.439 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 3.439 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 3.439 KA
CBL-HV-1 HV-1 TERM 0.035 KA ANG: 96.73
CBL-HV-1 DISC MCC-EPB-B 3.418 KA ANG: -30.28

IFSAB-1 LCP 3P Duty: 7.660 KA AT -36.91 DEG ( 6.37 MVA) X/R: 0.80
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0289 + J 0.0217 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 7.660 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 7.660 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 7.660 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 7.660 KA
P06.115B IFSAB-1 TERM 0.071 KA ANG: 95.78
P06.115C ENCEXH FAN TER 0.005 KA ANG: 95.72
P06.115 MCC-WPB-A. 7.608 KA ANG: -36.49

IPC LP-EFB 3P Duty: 3.475 KA AT -48.65 DEG ( 1.25 MVA) X/R: 1.14
VOLTAGE: 208. EQUIV. IMPEDANCE= 0.0228 + J 0.0259 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 3.475 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 3.475 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 3.475 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 3.475 KA
XFMR IPC LP-EF LINESIDE IPC L 3.475 KA ANG: -228.65

IPC LP-WFB 3P Duty: 1.735 KA AT -27.96 DEG ( 0.63 MVA) X/R: 0.53
VOLTAGE: 208. EQUIV. IMPEDANCE= 0.0611 + J 0.0324 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.735 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.735 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.735 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.735 KA
XFMR LP-WFB XFMR IPC LP-WF 1.735 KA ANG: -207.96

IRON WORK 3P Duty: 4.675 KA AT -51.65 DEG ( 3.89 MVA) X/R: 1.27

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0368 + J 0.0465 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 4.675 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.675 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.675 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.675 KA
CBL IRON WORK PP-MTB 4.675 KA ANG: -51.65

JC-1 DISC 3P Duty: 4.350 KA AT -18.76 DEG ( 3.62 MVA) X/R: 0.35
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0603 + J 0.0205 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 4.350 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.350 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.350 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.350 KA
CBL-0480 JC-1 LCP TERM 0.009 KA ANG: 95.74
CBL-0479 JC-2 DISC 0.009 KA ANG: 95.78
CBL-0478 MCC-D 4.342 KA ANG: -18.55

JC-2 DISC 3P Duty: 3.385 KA AT -15.21 DEG ( 2.81 MVA) X/R: 0.28
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0790 + J 0.0215 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 3.385 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 3.385 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 3.385 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 3.385 KA
CBL-0481 JC-3 LCP TERM 0.009 KA ANG: 95.74
CBL-0479 JC-1 DISC 3.382 KA ANG: -15.07

Junction Box 3P Duty: 4.839 KA AT -23.64 DEG ( 4.02 MVA) X/R: 0.45
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0525 + J 0.0230 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 4.839 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.839 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.839 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.839 KA
CBL-0737 F-54-1 DISC 0.007 KA ANG: -84.13
CBL-0193 F-54-4 DISC 0.007 KA ANG: -84.27
CBL-F-54-4D MCC-WPB-A 4.832 KA ANG: -23.49

Junction box. 3P Duty: 2.100 KA AT -16.63 DEG ( 1.75 MVA) X/R: 0.31
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1264 + J 0.0378 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.100 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.100 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.100 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.100 KA
CBL AT-E4 Z3 F BUS-0406 0.008 KA ANG: 95.74
CBL AT-E4 Z3 F PAB-E2 DV & BO 0.008 KA ANG: -84.26

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO
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CONTRIBUTIONS TO Junction box. (CONTINUED)

CBL PAB-E2 DV PP-EBB-B 2.094 KA ANG: -16.23

LBP-6 STARTER 3P Duty: 4.044 KA AT -21.81 DEG (3.36 MVA) X/R: 0.40
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0636 + J 0.0255 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 4.044 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.044 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.044 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.044 KA
CONTRIBUTIONS: LUBE PUMP 6 0.003 KA ANG: -84.29
CBL-0270 SCP-6 4.043 KA ANG: -21.78

LBP-7 STARTER 3P Duty: 4.079 KA AT -21.03 DEG (3.39 MVA) X/R: 0.39
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0634 + J 0.0244 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 4.079 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.079 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.079 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.079 KA
CONTRIBUTIONS: LUBE PUMP 7 0.003 KA ANG: -84.29
CBL-0254 SCP-7 4.078 KA ANG: -21.00

LBP-8 STARTER 3P Duty: 4.079 KA AT -21.03 DEG (3.39 MVA) X/R: 0.39
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0634 + J 0.0244 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 4.079 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.079 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.079 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.079 KA
CONTRIBUTIONS: LUBE PUMP 8 0.003 KA ANG: -84.29
CBL-0255 SCP-8 4.078 KA ANG: -21.00

LP-ADM-1 3P Duty: 5.318 KA AT -71.29 DEG (1.92 MVA) X/R: 3.01
VOLTAGE: 208. EQUIV. IMPEDANCE= 0.0072 + J 0.0214 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 5.318 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 6.181 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 5.318 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 5.318 KA
L09.020 XFMR LP-ADM-1 5.318 KA ANG: -71.29

LP-ADM-1A 3P Duty: 5.243 KA AT -70.83 DEG (1.89 MVA) X/R: 2.93
VOLTAGE: 208. EQUIV. IMPEDANCE= 0.0075 + J 0.0216 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 5.243 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 6.050 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 5.243 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 5.243 KA

THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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CONTRIBUTIONS TO LP-ADM-1A (CONTINUED)
L09.035 LP-ADM-1 5.243 KA ANG: -70.83

LP-ADM-UPS 3P Duty: 0.042 KA AT -82.84 DEG ( 0.01 MVA) X/R: 7.97
VOLTAGE: 208. EQUIV. IMPEDANCE= 0.3594 + J 2.8623 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 0.043 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.060 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.051 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.046 KA
L09.045 UPS-ADM-1 OUTP 0.042 KA ANG: -262.84

LP-C 3P Duty: 1.793 KA AT -30.12 DEG ( 0.65 MVA) X/R: 0.58
VOLTAGE: 208. EQUIV. IMPEDANCE= 0.0579 + J 0.0336 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.793 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.793 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.793 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.793 KA
CBL-0061 BUS-0075 1.793 KA ANG: -210.12

LP-CEB-A 3P Duty: 3.239 KA AT -36.66 DEG ( 1.17 MVA) X/R: 0.74
VOLTAGE: 208. EQUIV. IMPEDANCE= 0.0297 + J 0.0221 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 3.239 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 3.239 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 3.239 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 3.239 KA
L11.116 XFMR LP-CEB-A 3.239 KA ANG: -36.66

LP-CEB-B 3P Duty: 3.170 KA AT -36.36 DEG ( 1.14 MVA) X/R: 0.74
VOLTAGE: 208. EQUIV. IMPEDANCE= 0.0305 + J 0.0225 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 3.170 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 3.170 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 3.170 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 3.170 KA
L11.216 LP-CEB-A 3.170 KA ANG: -36.36

LP-D 3P Duty: 1.761 KA AT -69.27 DEG ( 0.63 MVA) X/R: 2.65
VOLTAGE: 208. EQUIV. IMPEDANCE= 0.0241 + J 0.0638 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.761 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.976 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.761 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.761 KA
XFMR LP-D XFMR LP-D PRI 1.761 KA ANG: 110.73

LP-E 3P Duty: 4.017 KA AT -69.23 DEG ( 1.45 MVA) X/R: 2.66

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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VOLTAGE: 208. EQUIV. IMPEDANCE= 0.0106 + J 0.0280 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 4.017 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.516 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.017 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.017 KA
CBL-0250 XFMR-LP-E SEC 4.017 KA ANG: -69.23

LP-EBB-A 3P Duty: 3.146 KA AT -40.80 DEG ( 1.13 MVA) X/R: 0.86
VOLTAGE: 208. EQUIV. IMPEDANCE= 0.0289 + J 0.0249 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 3.146 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 3.146 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 3.146 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 3.146 KA
L05.116 XFMR LP-EBB-A 3.146 KA ANG: -40.80

LP-EE 3P Duty: 0.438 KA AT -54.61 DEG ( 0.16 MVA) X/R: 1.41
VOLTAGE: 208. EQUIV. IMPEDANCE= 0.1587 + J 0.2234 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 0.438 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.438 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.438 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.438 KA
CBL-0606 BUS-0695 0.438 KA ANG: -54.61

LP-F 3P Duty: 3.908 KA AT -66.97 DEG ( 1.41 MVA) X/R: 2.37
VOLTAGE: 208. EQUIV. IMPEDANCE= 0.0120 + J 0.0283 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 3.908 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.253 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 3.908 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 3.908 KA
CBL-0268 BUS-0284 3.908 KA ANG: -66.97

LP-FF 3P Duty: 0.473 KA AT -60.86 DEG ( 0.17 MVA) X/R: 1.79
VOLTAGE: 208. EQUIV. IMPEDANCE= 0.1237 + J 0.2218 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 0.473 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.477 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.473 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.473 KA
CBL-0619 XFMR LP-FF SEC 0.473 KA ANG: -60.86

LP-LSE 3P Duty: 1.815 KA AT -30.52 DEG ( 0.65 MVA) X/R: 0.59
VOLTAGE: 208. EQUIV. IMPEDANCE= 0.0570 + J 0.0336 OHMS
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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER 1.815 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.815 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.815 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.815 KA
L03.102 XFMR LP-LSE SE 1.815 KA ANG: -30.52

LP-M 3P Duty: 3.226 KA AT -37.02 DEG ( 1.16 MVA) X/R: 0.76
VOLTAGE: 208. EQUIV. IMPEDANCE= 0.0297 + J 0.0224 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 3.226 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 3.226 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 3.226 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 3.226 KA
CBL-0359 XFMR LP-M SEC 3.226 KA ANG: -37.02

LP-N 3P Duty: 3.370 KA AT -37.85 DEG ( 1.21 MVA) X/R: 0.78
VOLTAGE: 208. EQUIV. IMPEDANCE= 0.0281 + J 0.0219 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 3.370 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 3.370 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 3.370 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 3.370 KA
CBL-0404 XF2-0059 SEC 3.370 KA ANG: -37.85

LP-O 3P Duty: 2.469 KA AT -65.85 DEG ( 0.89 MVA) X/R: 2.23
VOLTAGE: 208. EQUIV. IMPEDANCE= 0.0199 + J 0.0444 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.469 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.644 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.469 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.469 KA
L05.102 XFMR LP O SEC 2.469 KA ANG: -65.85

LP-Q 3P Duty: 3.211 KA AT -36.90 DEG ( 1.16 MVA) X/R: 0.75
VOLTAGE: 208. EQUIV. IMPEDANCE= 0.0299 + J 0.0225 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 3.211 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 3.211 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 3.211 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 3.211 KA
CBL-0442 XFMR LP-Q SEC 3.211 KA ANG: -36.90

LP-RLS 3P Duty: 1.713 KA AT -68.18 DEG ( 0.62 MVA) X/R: 2.51
VOLTAGE: 208. EQUIV. IMPEDANCE= 0.0260 + J 0.0651 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.713 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.895 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.713 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.713 KA

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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CONTRIBUTIONS TO LP-RLS          (CONTINUED)
L03.101      XFMR LP-RLS SE      1.713 KA      ANG:   -68.18

LP-T      3P Duty:  2.530 KA AT  -69.32 DEG (   0.91 MVA) X/R:    2.65
VOLTAGE:    208.   EQUIV. IMPEDANCE=  0.0168 + J  0.0444 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  2.530 KA
MOLDED CASE CIRCUIT BREAKER < 10KA  2.842 KA
MOLDED CASE CIRCUIT BREAKER < 20KA  2.530 KA
MOLDED CASE CIRCUIT BREAKER > 20KA  2.530 KA
L05.214      XFMR LP-T SEC      2.530 KA      ANG:   -69.32

LP-U      3P Duty:  2.492 KA AT  -65.82 DEG (   0.90 MVA) X/R:    2.23
VOLTAGE:    208.   EQUIV. IMPEDANCE=  0.0197 + J  0.0440 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  2.492 KA
MOLDED CASE CIRCUIT BREAKER < 10KA  2.666 KA
MOLDED CASE CIRCUIT BREAKER < 20KA  2.492 KA
MOLDED CASE CIRCUIT BREAKER > 20KA  2.492 KA
L05.101      XFMR LP U SEC      2.492 KA      ANG:   -65.82

LP-V      3P Duty:  1.488 KA AT  -59.28 DEG (   0.54 MVA) X/R:    1.73
VOLTAGE:    208.   EQUIV. IMPEDANCE=  0.0412 + J  0.0694 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  1.488 KA
MOLDED CASE CIRCUIT BREAKER < 10KA  1.488 KA
MOLDED CASE CIRCUIT BREAKER < 20KA  1.488 KA
MOLDED CASE CIRCUIT BREAKER > 20KA  1.488 KA
CBL-LP-V SEC  XFMR LP-V SEC      1.488 KA      ANG:   -59.28

LP-W      3P Duty:  1.479 KA AT  -59.30 DEG (   0.53 MVA) X/R:    1.72
VOLTAGE:    208.   EQUIV. IMPEDANCE=  0.0415 + J  0.0698 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  1.479 KA
MOLDED CASE CIRCUIT BREAKER < 10KA  1.479 KA
MOLDED CASE CIRCUIT BREAKER < 20KA  1.479 KA
MOLDED CASE CIRCUIT BREAKER > 20KA  1.479 KA
CBL-LP-W      XFMR-LP-W SEC      1.479 KA      ANG:   -59.30

LP-WBB-A   3P Duty:  3.453 KA AT  -37.24 DEG (   1.24 MVA) X/R:    0.76
VOLTAGE:    208.   EQUIV. IMPEDANCE=  0.0277 + J  0.0210 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  3.453 KA
MOLDED CASE CIRCUIT BREAKER < 10KA  3.453 KA
MOLDED CASE CIRCUIT BREAKER < 20KA  3.453 KA
MOLDED CASE CIRCUIT BREAKER > 20KA  3.453 KA
L07.119      XFMR LP-WBB-A      3.453 KA      ANG:  -217.24

LP-WBB-B   3P Duty:  3.388 KA AT  -36.96 DEG (   1.22 MVA) X/R:    0.75

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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VOLTAGE: 208. EQUIV. IMPEDANCE= 0.0283 + J 0.0213 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 3.388 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 3.388 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 3.388 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 3.388 KA
L07.218 LP-WBB-A 3.388 KA ANG: -36.96

LP-WPB-A 3P Duty: 1.747 KA AT -29.80 DEG ( 0.63 MVA) X/R: 0.57
VOLTAGE: 208. EQUIV. IMPEDANCE= 0.0596 + J 0.0341 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.747 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.747 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.747 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.747 KA
L06.100 XFMR LP-WPB-A 1.747 KA ANG: -29.80

LP-WPB-B 3P Duty: 1.731 KA AT -29.70 DEG ( 0.62 MVA) X/R: 0.57
VOLTAGE: 208. EQUIV. IMPEDANCE= 0.0603 + J 0.0344 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.731 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.731 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.731 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.731 KA
L06.200 LP-WPB-A 1.731 KA ANG: -29.70

LSE-ACCU-1 3P Duty: 6.233 KA AT -30.46 DEG ( 5.18 MVA) X/R: 0.59
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0383 + J 0.0225 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 6.233 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 6.233 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 6.233 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 6.233 KA
CBL-0231 BUS-0332 6.233 KA ANG: 149.54

LSE-ACU-1 3P Duty: 3.901 KA AT -20.25 DEG ( 3.24 MVA) X/R: 0.37
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0666 + J 0.0246 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 3.901 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 3.901 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 3.901 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 3.901 KA
CBL-0232 BUS-0333 3.901 KA ANG: -200.25

LSE-PPU-1 3P Duty: 2.912 KA AT -16.09 DEG ( 2.42 MVA) X/R: 0.29
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0914 + J 0.0264 OHMS

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER 2.912 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.912 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.912 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.912 KA
CBL-0230 BUS-0331 2.912 KA ANG: 163.91

MB-EF-1 DISC 3P Duty: 3.216 KA AT -34.70 DEG ( 2.67 MVA) X/R: 0.70
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0709 + J 0.0491 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 3.216 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 3.216 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 3.216 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 3.216 KA
CBL-MB-EF-1. BUS-0346 0.008 KA ANG: 95.72
CBL-MB-EF-1 PP-MTB 3.210 KA ANG: -34.60

MCC-51A 3P Duty: 29.554 KA AT -73.16 DEG ( 24.57 MVA) X/R: 3.35
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0027 + J 0.0090 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 29.554 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 29.554 KA
CBL-0137 STWP 1 DISC 0.308 KA ANG: 104.32
CBL-0181 SUB 5 BUS A 29.247 KA ANG: -73.13

MCC-51B 3P Duty: 29.816 KA AT -73.54 DEG ( 24.79 MVA) X/R: 3.43
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0026 + J 0.0089 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 29.816 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 29.816 KA
CBL-0145 STWP 2 DISC 0.309 KA ANG: 98.91
CBL-0173 SUB 5 BUS B 29.510 KA ANG: -73.46

MCC-52A 3P Duty: 29.594 KA AT -73.16 DEG ( 24.60 MVA) X/R: 3.35
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0027 + J 0.0090 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 29.594 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 29.594 KA
CBL-0151 BTAB-1 DISC 0.187 KA ANG: -251.21
CBL-0138 BTAB-3 DISC 0.189 KA ANG: 103.84
CBL-0182 SUB 5 BUS A 29.219 KA ANG: -73.15

MCC-52B 3P Duty: 30.177 KA AT -73.71 DEG ( 25.09 MVA) X/R: 3.45
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0026 + J 0.0088 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 30.177 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 30.177 KA
CBL-0146 BTAB-2 DISC 0.189 KA ANG: 103.24
CBL-0174 SUB 5 BUS B 29.988 KA ANG: -73.69

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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MCC-53 A      3P Duty: 29.720 KA AT -73.26 DEG ( 24.71 MVA) X/R: 3.38
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0027 + J 0.0089 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 29.720 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 29.720 KA
CBL-0140      CF2 AHU-3 DISC 0.299 KA ANG: 104.11
CBL-0141      CF2 AHU-1 DISC 0.152 KA ANG: 103.00
CBL-0139      CR-1 HSP 5 DIS 0.155 KA ANG: 98.28
CBL-0183      SUB 5 BUS A 29.116 KA ANG: -73.17

MCC-53B      3P Duty: 29.731 KA AT -73.49 DEG ( 24.72 MVA) X/R: 3.41
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0026 + J 0.0089 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 29.731 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 29.731 KA
CBL-0147      CR-1 HSP 6 DIS 0.155 KA ANG: 98.40
CBL-0175      SUB 5 BUS B 29.578 KA ANG: -73.44

MCC-54 A      3P Duty: 28.840 KA AT -72.82 DEG ( 23.98 MVA) X/R: 3.30
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0028 + J 0.0092 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 28.840 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 28.840 KA
CBL-0143      SLC 6 DISC 0.155 KA ANG: 99.29
CBL-0142      SLC 4 DISC 0.306 KA ANG: 100.47
CBL-0184      SUB 5 BUS A 28.383 KA ANG: -72.70

MCC-54B      3P Duty: 29.095 KA AT -73.16 DEG ( 24.19 MVA) X/R: 3.34
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0028 + J 0.0091 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 29.095 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 29.095 KA
CBL-0149      SLC 7 DISC 0.154 KA ANG: 99.54
CBL-0148      SLC 5 DISC 0.306 KA ANG: 100.78
CBL-0176      SUB 5 BUS B 28.637 KA ANG: -73.05

MCC-55 A      3P Duty: 29.381 KA AT -73.07 DEG ( 24.43 MVA) X/R: 3.33
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0027 + J 0.0090 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 29.381 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 29.381 KA
CBL-0186      SUB 5 BUS A 29.381 KA ANG: -73.07

MCC-55B      3P Duty: 29.646 KA AT -73.42 DEG ( 24.65 MVA) X/R: 3.39
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0027 + J 0.0090 OHMS

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER 29.646 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 29.646 KA
CBL-0187 SUB 5 BUS B 29.646 KA ANG: -73.42

MCC-56 A 3P Duty: 13.375 KA AT -65.15 DEG ( 11.12 MVA) X/R: 2.33
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0087 + J 0.0188 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 13.375 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 13.375 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 13.375 KA
CBL-0144 BT1-1M DISC 0.468 KA ANG: 96.30
CBL MCC-56A SUB 5 BUS A 12.932 KA ANG: -64.49

MCC-56B 3P Duty: 13.268 KA AT -65.19 DEG ( 11.03 MVA) X/R: 2.33
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0088 + J 0.0190 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 13.268 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 13.268 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 13.268 KA
CBL-0150 BT2-1M DISC 0.468 KA ANG: 96.30
CBL MCC-56B SUB 5 BUS B 12.825 KA ANG: -64.53

MCC-ADM-A 3P Duty: 11.882 KA AT -71.64 DEG ( 9.88 MVA) X/R: 3.34
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0073 + J 0.0221 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 11.882 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 12.034 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 11.882 KA
CBL-0643 ADM-EF-2 DISC 0.007 KA ANG: 95.90
CBL-0646 ADM-HVAC-1 DIS 0.071 KA ANG: 96.39
CBL-0648 ADM-HVAC-2 DIS 0.035 KA ANG: 96.52
P09.010,A ATS-ADM LOAD 10.753 KA ANG: -250.41
P09.072 ADM ACCU1 DISC 0.014 KA ANG: 95.89
P09.085 ADM ACU1 DISC 0.177 KA ANG: 96.59
CBL-0641 ADM-EF-1 DISC 0.011 KA ANG: 96.00
P09.090 SWP LCP 0.560 KA ANG: 97.31
BUS LINK A-A. MCC-ADM-A. 0.280 KA ANG: 96.32

MCC-ADM-A. 3P Duty: 11.882 KA AT -71.64 DEG ( 9.88 MVA) X/R: 3.34
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0073 + J 0.0221 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 11.882 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 12.034 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 11.882 KA
CBL-0637 ADM-P-3 DISC 0.106 KA ANG: -83.62
CBL-0639 ADM-P-4 DISC 0.106 KA ANG: -83.65
CBL-0635 ADM-P-2 DISC 0.021 KA ANG: -83.83
CBL-0633 ADM-P-1 DISC 0.021 KA ANG: -83.92

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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	CONTRIBUTIONS TO MCC-ADM-A.	(CONTINUED)		
	CBL-0652 BUS-0436	0.025 KA	ANG:	96.25
	BUS LINK A-A. MCC-ADM-A	11.608 KA	ANG:	-71.35
MCC-C	3P Duty: 14.647 KA AT -72.63 DEG (12.18 MVA) X/R: 3.39			
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0056 + J 0.0181 OHMS			
	LOW VOLTAGE POWER CIRCUIT BREAKER 14.647 KA			
	MOLDED CASE CIRCUIT BREAKER < 20KA 14.899 KA			
	MOLDED CASE CIRCUIT BREAKER > 20KA 14.647 KA			
	CBL-0543 BAR SCREEN 1 T	0.035 KA	ANG:	96.12
	CBL-0537 C SUMP PUMP DI	0.011 KA	ANG:	95.86
	CBL-0539 SUB SP-1 DISC	0.035 KA	ANG:	96.20
	CBL-0541 GP-3 DISC TERM	0.053 KA	ANG:	96.44
	CBL-0535 SP NGB DISC	0.035 KA	ANG:	96.20
	CBL-0544 BSCRN-3 STR	0.035 KA	ANG:	96.20
	CBL-0546 DROP (SG) STR	0.002 KA	ANG:	95.74
	CBL-0548 DROP (NGW) STR	0.002 KA	ANG:	95.75
	CBL-0550 SSC-1 DISC	0.035 KA	ANG:	96.20
	CBL-0552 SC-1 DISC	0.014 KA	ANG:	95.91
	CBL-0554 GRTBLWR3 DISC	0.035 KA	ANG:	96.20
	CBL-0533 SLG-4 DISC	0.013 KA	ANG:	95.89
	CBL-0557 F-6-1 DISC	0.013 KA	ANG:	95.91
	CBL-0559 F-6-2 DISC	0.013 KA	ANG:	95.91
	CBL-0498 SLG-3 DISC	0.013 KA	ANG:	95.89
	P03.002 SUB 1 BUS A	14.307 KA	ANG:	-72.36
MCC-CEB-A	3P Duty: 23.870 KA AT -75.67 DEG (19.84 MVA) X/R: 3.96			
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0029 + J 0.0112 OHMS			
	LOW VOLTAGE POWER CIRCUIT BREAKER 23.870 KA			
	MOLDED CASE CIRCUIT BREAKER > 20KA 23.870 KA			
	P11.114 CEB-P-1 DISC	0.005 KA	ANG:	95.81
	P11.110 CEB-EF-1 DISC	0.035 KA	ANG:	97.06
	P11.101AB SUB 7 BUS A	23.829 KA	ANG:	-75.66
MCC-CEB-B	3P Duty: 23.431 KA AT -76.86 DEG (19.48 MVA) X/R: 4.31			
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0027 + J 0.0115 OHMS			
	LOW VOLTAGE POWER CIRCUIT BREAKER 23.431 KA			
	MOLDED CASE CIRCUIT BREAKER > 20KA 23.431 KA			
	CBL-P11.211 CEB-PPU-1 STR	0.021 KA	ANG:	96.08
	CBL-P11.214 CEB-P-2 DISC	0.005 KA	ANG:	95.81
	CBL-P11.210 CEB-EF-2 DISC	0.004 KA	ANG:	95.84
	P11.201AB SUB 7 BUS B	23.401 KA	ANG:	-76.85
MCC-D	3P Duty: 15.314 KA AT -75.95 DEG (12.73 MVA) X/R: 4.19			

THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0044 + J 0.0176 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 15.314 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 16.429 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 15.314 KA
CBL-0463 SCRNCNV DISC 0.007 KA ANG: 95.79
CBL-0464 SSC-2 DISC 0.035 KA ANG: 96.12
CBL-0465 SCREW CONV 3 S 0.035 KA ANG: 96.12
CBL-0466 D SP-2 DISC 0.035 KA ANG: 96.12
CBL-0467 SUB SP-2 DISC 0.035 KA ANG: 96.12
CBL-0477 SC-3 DISC 0.014 KA ANG: 95.87
CBL-0474 DOOR OPERATOR 0.007 KA ANG: 95.79
CBL-0476 SC-2 DISC 0.014 KA ANG: 95.87
CBL-0462 EP THRV CONTRO 0.005 KA ANG: 95.77
P03.004 SUB 1 BUS B 14.634 KA ANG: -75.58
CBL-0478 JC-1 DISC 0.017 KA ANG: 95.95
CBL-0468 F-6-4 DISC 0.011 KA ANG: 95.87
BUS LINK D-D. MCC-D. 0.470 KA ANG: 96.21

MCC-D. 3P Duty: 15.314 KA AT -75.95 DEG ( 12.73 MVA) X/R: 4.19
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0044 + J 0.0176 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 15.314 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 16.429 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 15.314 KA
CBL-0482 SEPPMP DISC TE 0.106 KA ANG: 96.24
CBL-0484 HOIST D DISC 0.037 KA ANG: 96.14
CBL-0485 F-5-1 DISC 0.013 KA ANG: 95.86
CBL-0486 F-5-2 DISC 0.013 KA ANG: 95.86
CBL-0487 GRIT BLOWER 2 0.035 KA ANG: 96.12
CBL-0488 GSP1 DISC 0.053 KA ANG: 96.32
CBL-0489 GSP2 DISC 0.053 KA ANG: 96.32
CBL-0490 GSP4 DISC 0.053 KA ANG: 96.32
CBL-0491 CHABLWR DISC 0.053 KA ANG: 96.32
CBL-0492 SLGT-5 DISC 0.013 KA ANG: 95.86
CBL-0493 BAR SCREEN 2 T 0.035 KA ANG: 96.12
CBL-0494 GDWU-1 DISC 0.002 KA ANG: 95.74
CBL-0495 GDWU-2 DISC 0.002 KA ANG: 95.74
BUS LINK D-D. MCC-D 14.849 KA ANG: -75.70

MCC-E 3P Duty: 13.475 KA AT -77.53 DEG ( 11.20 MVA) X/R: 5.18
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0044 + J 0.0201 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 13.475 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 15.176 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 13.642 KA
CBL-0253 RBDP-2 DISC 0.283 KA ANG: 96.28

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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CONTRIBUTIONS TO MCC-E		(CONTINUED)	
CBL-0257	RBDP-4 DISC	0.283 KA	ANG: 96.28
CBL-0258	E SUMP PUMP 1	0.035 KA	ANG: 96.39
CBL-0259	SLC-1 DISC	0.005 KA	ANG: 95.81
CBL-0260	CC-1 DISC	0.014 KA	ANG: 95.98
CBL-0261	SLC-3 DISC	0.005 KA	ANG: 95.81
CBL-0262	CC-3 DISC	0.014 KA	ANG: 95.98
CBL-0263	BSNINFLGT-1 DI	0.008 KA	ANG: 95.86
CBL-0264	BSNINFLGT-3 DI	0.008 KA	ANG: 95.86
P08.001A,B	SUB 2 BUS A	9.842 KA	ANG: -75.30
PI-0002	SCP-8	0.707 KA	ANG: 96.25
PI-0001	SCP-7	0.707 KA	ANG: 96.25
CBL-0294	MCC-EE	0.252 KA	ANG: 99.29
BUS LINK E-E.	MCC-E.	1.340 KA	ANG: 96.27

MCC-E. 3P Duty: 13.475 KA AT -77.53 DEG (11.20 MVA) X/R: 5.18
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0044 + J 0.0201 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 13.475 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 15.175 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 13.642 KA

CBL-0265	BSN-OUT-GT-1 D	0.008 KA	ANG: -84.14
CBL-0266	BSN-OUT-GT-3 D	0.008 KA	ANG: -84.14
CBL-0275	AIR COMP 1 DIS	0.021 KA	ANG: -83.88
CBL-0276	HP-PEW-P-1 DIS	0.704 KA	ANG: -83.74
CBL-0277	MPPEWP1 DISC	0.423 KA	ANG: -83.62
CBL-0278	SLP2 DISC	0.035 KA	ANG: -83.61
CBL-0279	SLP1 DISC	0.035 KA	ANG: -83.61
CBL-0281	RETBSNRFCV STA	0.002 KA	ANG: -84.24
CBL-0285	EQ-RET-V-1 DIS	0.018 KA	ANG: -83.94
CBL-0286	EQ-RET-V-2 DIS	0.018 KA	ANG: -83.94
CBL-0256	SECURITY GATE	0.004 KA	ANG: 95.74
BUS LINK E.-E.	MCC-E..	0.062 KA	ANG: -84.14
BUS LINK E-E.	MCC-E	12.143 KA	ANG: -76.84

MCC-E.. 3P Duty: 13.475 KA AT -77.53 DEG (11.20 MVA) X/R: 5.18
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0044 + J 0.0201 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 13.475 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 15.175 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 13.642 KA

CBL-0283	EQ INFL GATE 9	0.008 KA	ANG: 95.86
CBL-0284	EQ INFL GATE 1	0.008 KA	ANG: 95.86
CBL-0288	EQ INFL GATE 1	0.008 KA	ANG: 95.86
CBL-0289	EQ INFL GATE 2	0.008 KA	ANG: 95.86
CBL-0290	EQ INFL GATE 3	0.008 KA	ANG: 95.86

THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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	CONTRIBUTIONS TO MCC-E..	(CONTINUED)		
	CBL-0291 EQ INFL GATE 1	0.008 KA	ANG:	95.86
	CBL-0292 EQ INFL GATE 1	0.008 KA	ANG:	95.86
	CBL-0282 EQ INFL GATE 4	0.008 KA	ANG:	95.86
	BUS LINK E.-E. MCC-E.	13.413 KA	ANG:	-257.49
MCC-EBB-A	3P Duty: 10.847 KA AT -78.11 DEG (9.02 MVA)	X/R:	4.89	
	VOLTAGE: 480. EQUIV. IMPEDANCE=	0.0053 + J 0.0250	OHMS	
	LOW VOLTAGE POWER CIRCUIT BREAKER	10.847 KA		
	MOLDED CASE CIRCUIT BREAKER < 20KA	12.062 KA		
	MOLDED CASE CIRCUIT BREAKER > 20KA	10.847 KA		
	CBL-SSCP-E1 SSCP-E1 DISC	0.105 KA	ANG:	100.25
	P05.105 RASP-E1 VFD IN	0.139 KA	ANG:	100.66
	P05.107 RASP-E3 VFD IN	0.139 KA	ANG:	100.43
	P05.109 RASP-E5 VFD IN	0.139 KA	ANG:	99.98
	P05.111 RASP-E7 VFD IN	0.139 KA	ANG:	100.09
	P05.114 ADP-E2 DISC	0.349 KA	ANG:	97.84
	CBL-RASP-E1 VF WASP-E1 VFD IN	0.035 KA	ANG:	97.37
	BUS LINK EBB A MCC-EBB-A.	0.110 KA	ANG:	96.69
	P05.009,009A SUB 6 BUS A	9.694 KA	ANG:	-77.77
MCC-EBB-A.	3P Duty: 10.847 KA AT -78.11 DEG (9.02 MVA)	X/R:	4.89	
	VOLTAGE: 480. EQUIV. IMPEDANCE=	0.0053 + J 0.0250	OHMS	
	LOW VOLTAGE POWER CIRCUIT BREAKER	10.847 KA		
	MOLDED CASE CIRCUIT BREAKER < 20KA	12.062 KA		
	MOLDED CASE CIRCUIT BREAKER > 20KA	10.847 KA		
	CBL-EBB-EF-10 EBB-EF-10 DISC	0.011 KA	ANG:	95.95
	CBL-EBB-EF-6 D EBB-EF-6 DISC	0.011 KA	ANG:	96.00
	CBL-EBB-HV-1 D EBB-HV-1 DISC	0.007 KA	ANG:	95.86
	CBL-EBB-SP-2 D EBB SUMP PUMP	0.035 KA	ANG:	96.27
	CBL-EBB-SP-4 D EBB SUMP PUMP	0.035 KA	ANG:	97.78
	CBL-SC-E1 SC-E1 DISC	0.005 KA	ANG:	-83.74
	CBL-SC-E3 SC-E3 DISC	0.005 KA	ANG:	-83.34
	BUS LINK EBB A MCC-EBB-A	10.738 KA	ANG:	-78.05
MCC-EBB-B	3P Duty: 9.982 KA AT -77.94 DEG (8.30 MVA)	X/R:	4.84	
	VOLTAGE: 480. EQUIV. IMPEDANCE=	0.0058 + J 0.0272	OHMS	
	LOW VOLTAGE POWER CIRCUIT BREAKER	9.982 KA		
	MOLDED CASE CIRCUIT BREAKER < 20KA	11.073 KA		
	MOLDED CASE CIRCUIT BREAKER > 20KA	9.982 KA		
	CBL-SUMP PUMP SUMP PUMP 1 DI	0.021 KA	ANG:	96.24
	CBL-SUMP PUMP SUMP PUMP 3 DI	0.021 KA	ANG:	97.05
	CBL-WASP-E2 VF WASP-E2 VFD IN	0.035 KA	ANG:	97.33
	CBL-SC-E4D SC-E4 DISC	0.005 KA	ANG:	96.66

THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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CONTRIBUTIONS TO MCC-EBB-B (CONTINUED)				
P05.216	ATS-EBB NORM	0.047 KA	ANG:	96.41
P05.205	RASP-E2 VFD IN	0.139 KA	ANG:	100.54
P05.207	RASP-E4 VFD IN	0.139 KA	ANG:	100.32
P05.209	RASP-E6 VFD IN	0.139 KA	ANG:	99.98
P05.211	ADP-E1 DISC	0.335 KA	ANG:	-251.88
P05.212	RASP-E8 VFD IN	0.139 KA	ANG:	100.20
CBL-SC-E2D	SC-E2 DISC	0.005 KA	ANG:	96.26
BUS LINK EBB B	MCC-EBB-B.	0.157 KA	ANG:	96.58
P05.011,A	SUB 6 BUS B	8.800 KA	ANG:	-77.88
MCC-EBB-B.				
3P Duty: 9.982 KA AT -77.94 DEG (8.30 MVA) X/R: 4.84				
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0058 + J 0.0272 OHMS				
LOW VOLTAGE POWER CIRCUIT BREAKER 9.982 KA				
MOLDED CASE CIRCUIT BREAKER < 20KA 11.073 KA				
MOLDED CASE CIRCUIT BREAKER > 20KA 9.982 KA				
CBL-EBB-EF-9D	EBB-EF-9 DISC	0.021 KA	ANG:	-83.03
CBL-EBB-EF-7D	EBB-EF-7 DISC	0.021 KA	ANG:	-83.44
CBL-EBB-EF-5D	EBB-EF-5 DISC	0.021 KA	ANG:	-84.00
P05.215	PP-EBB-B	0.094 KA	ANG:	-83.37
BUS LINK EBB B	MCC-EBB-B	9.825 KA	ANG:	-77.86
MCC-EE				
3P Duty: 12.846 KA AT -74.95 DEG (10.68 MVA) X/R: 4.15				
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0056 + J 0.0208 OHMS				
LOW VOLTAGE POWER CIRCUIT BREAKER 12.846 KA				
MOLDED CASE CIRCUIT BREAKER < 20KA 13.750 KA				
MOLDED CASE CIRCUIT BREAKER > 20KA 12.846 KA				
CBL-0607	DOOR OP EE1	0.004 KA	ANG:	95.79
CBL-0609	DOOR OP EE2	0.004 KA	ANG:	95.79
CBL-0614	SF2EE DISC	0.139 KA	ANG:	100.95
CBL-0616	SF4EE DISC	0.106 KA	ANG:	97.23
CBL-0294	MCC-E	12.595 KA	ANG:	-74.83
MCC-EPB-A				
3P Duty: 6.573 KA AT -58.84 DEG (5.46 MVA) X/R: 2.23				
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0218 + J 0.0361 OHMS				
LOW VOLTAGE POWER CIRCUIT BREAKER 6.573 KA				
MOLDED CASE CIRCUIT BREAKER < 10KA 7.037 KA				
MOLDED CASE CIRCUIT BREAKER < 20KA 6.573 KA				
MOLDED CASE CIRCUIT BREAKER > 20KA 6.573 KA				
CBL-EPE-SAP-5	EPE-SAP-5 TERM	0.053 KA	ANG:	96.62
CBL-EPI-SAP-4	EPI-SAP-4 TERM	0.053 KA	ANG:	95.97
CBL-EPB-SUP-1	EPB-SUP-1 TERM	0.035 KA	ANG:	95.98
CBL-PC-E3 DISC	PC-E3 DISC	0.011 KA	ANG:	96.48
CBL-PDP-E1 DIS	PDP-E1 DISC	0.106 KA	ANG:	96.48

THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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CONTRIBUTIONS TO MCC-EPB-A (CONTINUED)

CBL-PSCP-E1 DI	PSCP-E1 DISC	0.053 KA	ANG:	96.61
CBL-PSLP-E1 VF	PSLP-E1 VFD IN	0.106 KA	ANG:	96.61
CBL-PSLP-E3 VF	PSLP-E3 VFD IN	0.106 KA	ANG:	96.86
CBL-PSLPM-E3 L	SLUDGE CND LCP	0.106 KA	ANG:	96.86
CBL-PC-E1 DISC	PC-E1 DISC	0.011 KA	ANG:	96.73
P05.010	SUB 6 BUS A	5.822 KA	ANG:	-55.40
BUS LINK EPB A	MCC-EPB-A.	0.198 KA	ANG:	96.36

MCC-EPB-A. 3P Duty: 6.573 KA AT -58.84 DEG (5.46 MVA) X/R: 2.23
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0218 + J 0.0361 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 6.573 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 7.037 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 6.573 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 6.573 KA

CBL-ANMX-E1B	BUS-0105	0.007 KA	ANG:	96.37
CBL-ANMX-E1C	BUS-0107	0.007 KA	ANG:	96.32
CBL-ANMX-E1D	BUS-0109	0.007 KA	ANG:	96.24
CBL-ANMX-E3A	BUS-0113	0.007 KA	ANG:	96.12
CBL-ANMX-E3B	BUS-0115	0.007 KA	ANG:	96.19
CBL-ANMX-E3C	BUS-0117	0.007 KA	ANG:	96.24
CBL-ANMX-E3D	BUS-0119	0.007 KA	ANG:	96.32
CBL-AXMX-E1A	BUS-0097	0.007 KA	ANG:	96.26
CBL-AXMX-E1B	BUS-0099	0.007 KA	ANG:	96.16
CBL-AXMX-E1C	BUS-0101	0.007 KA	ANG:	96.12
CBL-AXMX-E3A	BUS-0121	0.007 KA	ANG:	96.16
CBL-AXMX-E3B	BUS-0123	0.007 KA	ANG:	96.26
CBL-AXMX-E3C	BUS-0125	0.007 KA	ANG:	96.39
CBL-SWMX-E1	BUS-0111	0.007 KA	ANG:	96.19
CBL-SWMX-E3	BUS-0127	0.007 KA	ANG:	96.37
CBL-ANMX-E1A	BUS-0103	0.007 KA	ANG:	96.39
BUS LINK EPB A	MCC-EPB-A.	0.085 KA	ANG:	96.49
BUS LINK EPB A	MCC-EPB-A	6.394 KA	ANG:	-58.10

MCC-EPB-A.. 3P Duty: 6.573 KA AT -58.84 DEG (5.46 MVA) X/R: 2.23
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0218 + J 0.0361 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 6.573 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 7.037 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 6.573 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 6.573 KA

CBL-F-2-6 DISC	F-2-6 DISC	0.043 KA	ANG:	95.86
CBL-F-2-13 DIS	F-2-13 DISC	0.042 KA	ANG:	97.13
BUS LINK EPB A	MCC-EPB-A.	6.496 KA	ANG:	-58.53

THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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MCC-EPB-B      3P Duty:  6.180 KA AT  -59.05 DEG (   5.14 MVA) X/R:      2.17
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.0231 + J  0.0385 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      6.180 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     6.563 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     6.180 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     6.180 KA
CONTRIBUTIONS: PSLPM-E3                0.035 KA      ANG:   -84.29
CBL-EPB-SUP-2  EPB-SUP-2 TERM           0.035 KA      ANG:   95.98
CBL-PDP-E2     PDP-E2 TERM               0.071 KA      ANG:   96.79
CBL-HV-1 DISC  HV-1 DISC                 0.035 KA      ANG:   97.06
CBL-PC-E2 DISK PC-E2 DISC                0.011 KA      ANG:   96.50
CBL-PC-E4 DISK PC-E4 DISC                0.011 KA      ANG:   96.83
CBL-HOIST EPB- HOIST EPB-B DI            0.035 KA      ANG:   95.97
CBL-PSCP-E2 DI PSCP-E2 DISC              0.053 KA      ANG:   96.61
CBL-PSLP-E2 VF PSLP-E2 VFD IN            0.106 KA      ANG:   96.73
CBL-PSLPM-E1 L PSLPM-E1 LCP              0.035 KA      ANG:   96.01
CBL-PSLPM-E2 L PSLPM-E2 LCP              0.035 KA      ANG:   96.05
CBL-RF-1 DISK  RF-1 DISC                 0.004 KA      ANG:   95.78
P05.012        SUB 6 BUS B                5.581 KA      ANG:  -56.22
BUS LINK EPB B MCC-EPB-B.                0.198 KA      ANG:   96.50

MCC-EPB-B.     3P Duty:  6.180 KA AT  -59.05 DEG (   5.14 MVA) X/R:      2.17
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.0231 + J  0.0385 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      6.180 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     6.563 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     6.180 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     6.180 KA
P04.215        F-1-5 DISC                0.042 KA      ANG:  -83.20
P04.210        F-1-1 DISC                0.042 KA      ANG:  -83.45
BUS LINK EPB B MCC-EPB-B                6.000 KA      ANG:  -58.26
BUS LINK EPB B MCC-EPB-B.                0.113 KA      ANG:   96.37

MCC-EPB-B..    3P Duty:  6.180 KA AT  -59.05 DEG (   5.14 MVA) X/R:      2.17
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.0231 + J  0.0385 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      6.180 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     6.563 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     6.180 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     6.180 KA
CBL-ANMX-E2B   BUS-0149                  0.007 KA      ANG:   96.30
CBL-ANMX-E2C   BUS-0151                  0.007 KA      ANG:   96.35
CBL-ANMX-E2D   BUS-0153                  0.007 KA      ANG:   96.43
CBL-ANMX-E4A   BUS-0157                  0.007 KA      ANG:   96.50
CBL-ANMX-E4B   BUS-0159                  0.007 KA      ANG:   96.48

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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CONTRIBUTIONS TO MCC-EPB-B.. (CONTINUED)

CBL-ANMX-E4C	BUS-0161	0.007 KA	ANG:	96.43
CBL-ANMX-E4D	BUS-0163	0.007 KA	ANG:	96.35
CBL-AXMX-E2A	BUS-0141	0.007 KA	ANG:	96.27
CBL-AXMX-E2B	BUS-0143	0.007 KA	ANG:	96.37
CBL-AXMX-E2C	BUS-0145	0.007 KA	ANG:	96.50
CBL-AXMX-E4A	BUS-0165	0.007 KA	ANG:	96.37
CBL-AXMX-E4B	BUS-0167	0.007 KA	ANG:	96.27
CBL-AXMX-E4C	BUS-0169	0.007 KA	ANG:	96.23
CBL-SWMX-E2	BUS-0155	0.007 KA	ANG:	96.48
CBL-SWMX-E4	BUS-0171	0.007 KA	ANG:	96.30
CBL-ANMX-E2A	BUS-0147	0.007 KA	ANG:	96.23
BUS LINK EPB B	MCC-EPB-B.	6.077 KA	ANG:	-58.60

MCC-F 3P Duty: 12.794 KA AT -77.61 DEG (10.64 MVA) X/R: 5.09
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0046 + J 0.0212 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 12.794 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 14.352 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 12.901 KA

CBL-0280	BSNHST DISC	0.053 KA	ANG:	96.35
CBL-0298	SMP2 DISC	0.014 KA	ANG:	95.98
CBL-0299	SLC2 DISC	0.005 KA	ANG:	95.81
CBL-0300	CC2 DISC	0.014 KA	ANG:	95.98
CBL-0304	BSNINFLGT2 DIS	0.008 KA	ANG:	95.86
CBL-0305	BSNOUTGT2 DISC	0.008 KA	ANG:	95.86
CBL-0309	HPPEW2 DISC	0.704 KA	ANG:	96.26
CBL-0310	MPPEWP2 DISC	0.423 KA	ANG:	96.38
CBL-0314	BYPGT2 DISC	0.013 KA	ANG:	95.95
CBL-0323	SLGT2 DISC	0.013 KA	ANG:	95.95
CBL-0322	SLGT1 DISC	0.013 KA	ANG:	95.78
CBL-0324	BYPGT1 DISC	0.013 KA	ANG:	95.95
P08.002A,B	SUB 2 BUS B	9.824 KA	ANG:	-75.80
PI-0005	SCP-6	0.707 KA	ANG:	96.25
CBL-0320	MCC-FF	0.250 KA	ANG:	97.47
BUS LINK F-F.	MCC-F.	0.753 KA	ANG:	96.50

MCC-F. 3P Duty: 12.794 KA AT -77.61 DEG (10.64 MVA) X/R: 5.09
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0046 + J 0.0212 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 12.794 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 14.352 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 12.901 KA

CBL-0303	RF # 6 DISC	0.004 KA	ANG:	95.78
CBL-0313	EQRETFCV DISC	0.002 KA	ANG:	-84.24
CBL-0315	AC2F DISC	0.004 KA	ANG:	95.78

THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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CONTRIBUTIONS TO MCC-F.		(CONTINUED)		
CBL-0316	PMPRM HOIST DI	0.053 KA	ANG:	96.35
CBL-0321	ADM-SUP LCP	0.014 KA	ANG:	-83.95
CBL-0330	EQPRM HOIST DI	0.014 KA	ANG:	95.81
CBL-0301	RF # 5 DISC	0.005 KA	ANG:	95.81
BUS LINK F.-F.	MCC-F..	0.657 KA	ANG:	96.56
BUS LINK F-F.	MCC-F	12.045 KA	ANG:	-77.24
MCC-F..	3P Duty: 12.794 KA AT -77.61 DEG (10.64 MVA) X/R: 5.09			
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0046 + J 0.0212 OHMS			
	LOW VOLTAGE POWER CIRCUIT BREAKER 12.794 KA			
	MOLDED CASE CIRCUIT BREAKER < 20KA 14.352 KA			
	MOLDED CASE CIRCUIT BREAKER > 20KA 12.901 KA			
CBL-0307	RBDP3 DISC	0.282 KA	ANG:	-83.38
CBL-0312	SLP3 DISC	0.035 KA	ANG:	-83.61
CBL-0317	EQRETV3 DISC	0.018 KA	ANG:	-83.94
CBL-0325	EQINGT5 DISC	0.008 KA	ANG:	-84.14
CBL-0326	EQINGT6 DISC	0.008 KA	ANG:	-84.14
CBL-0331	EQINGT7 DISC	0.008 KA	ANG:	95.86
CBL-0332	EQINGT8 DISC	0.008 KA	ANG:	95.86
CBL-0333	EQREF1 TERM	0.007 KA	ANG:	96.25
CBL-0293	RBDP1 DISC	0.282 KA	ANG:	-83.38
BUS LINK F.-F.	MCC-F.	12.140 KA	ANG:	-77.29
MCC-FF	3P Duty: 12.276 KA AT -74.11 DEG (10.21 MVA) X/R: 3.84			
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0062 + J 0.0217 OHMS			
	LOW VOLTAGE POWER CIRCUIT BREAKER 12.276 KA			
	MOLDED CASE CIRCUIT BREAKER < 20KA 12.893 KA			
	MOLDED CASE CIRCUIT BREAKER > 20KA 12.276 KA			
CBL-0623	DOOR OP FF	0.004 KA	ANG:	95.79
CBL-0625	SF1FF DISC	0.141 KA	ANG:	97.61
CBL-0627	SF3FF DISC	0.106 KA	ANG:	97.14
CBL-0320	MCC-F	12.028 KA	ANG:	-73.93
MCC-M	3P Duty: 20.405 KA AT -77.63 DEG (16.96 MVA) X/R: 5.11			
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0029 + J 0.0133 OHMS			
	LOW VOLTAGE POWER CIRCUIT BREAKER 20.405 KA			
	MOLDED CASE CIRCUIT BREAKER > 20KA 20.597 KA			
CBL-0368	EPSEGW DISC	0.013 KA	ANG:	96.20
CBL-0367	EPSEGE DISC	0.013 KA	ANG:	96.20
CBL-0366	WWWRESDP1 DISC	0.210 KA	ANG:	99.18
CBL-0369	FLRDRNSP3 DISC	0.035 KA	ANG:	97.06
CBL-0364	EPBBV DISC	0.014 KA	ANG:	96.34
CBL-0363	SEP5 VFD IN	1.033 KA	ANG:	96.76

THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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CONTRIBUTIONS TO MCC-M			(CONTINUED)		
CBL-0361	SEP1 VFD IN	1.033 KA	ANG:	96.76	
CBL-0370	MV9 DISC	0.051 KA	ANG:	97.67	
CBL-0383	ATS PEWP2 NRM	1.391 KA	ANG:	96.89	
BUS LINK M-M.	MCC-M.	1.484 KA	ANG:	96.55	
P04.MCC-M	SUB 4 BUS A	15.162 KA	ANG:	-75.71	
MCC-M.	3P Duty: 20.405 KA AT -77.63 DEG (16.96 MVA) X/R: 5.11				
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0029 + J 0.0133 OHMS				
	LOW VOLTAGE POWER CIRCUIT BREAKER 20.405 KA				
	MOLDED CASE CIRCUIT BREAKER > 20KA 20.596 KA				
CBL-0377	SEG1 DISC	0.013 KA	ANG:	96.20	
CBL-0381	BWWP1 DISC	0.704 KA	ANG:	96.26	
CBL-0382	RF13 TERM	0.035 KA	ANG:	97.06	
CBL-0374	ESESP6 DISC	0.021 KA	ANG:	96.52	
P13.001	FASB-1 LCP	0.700 KA	ANG:	96.84	
BUS LINK EF1-2	BUS-0417	0.011 KA	ANG:	95.91	
BUS LINK M-M.	MCC-M	18.929 KA	ANG:	-77.17	
MCC-N	3P Duty: 21.435 KA AT -79.60 DEG (17.82 MVA) X/R: 5.76				
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0023 + J 0.0127 OHMS				
	LOW VOLTAGE POWER CIRCUIT BREAKER 21.435 KA				
	MOLDED CASE CIRCUIT BREAKER > 20KA 22.177 KA				
CBL-0413	WPSE GATE E DI	0.013 KA	ANG:	96.20	
CBL-0433	FDSP4 DISC	0.035 KA	ANG:	97.06	
CBL-0411	WWRDP2 DISC	0.210 KA	ANG:	99.52	
CBL-0415	MV2 DISC	0.051 KA	ANG:	97.67	
CBL-0432	BWP2 DISC	0.699 KA	ANG:	96.56	
CBL-0408	SEP6 VFD IN	1.033 KA	ANG:	96.76	
CBL-0434	EF3 DISC	0.016 KA	ANG:	96.32	
CBL PEWP3 ATS	PEWP3 ATS NRM	0.870 KA	ANG:	96.87	
CBL-0406	SEP2 VFD IN	1.033 KA	ANG:	96.76	
BUS LINK N-N.	MCC-N.	0.437 KA	ANG:	97.17	
P04.MCC-N	SUB 4 BUS B	17.050 KA	ANG:	-78.71	
MCC-N.	3P Duty: 21.435 KA AT -79.60 DEG (17.82 MVA) X/R: 5.76				
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0023 + J 0.0127 OHMS				
	LOW VOLTAGE POWER CIRCUIT BREAKER 21.435 KA				
	MOLDED CASE CIRCUIT BREAKER > 20KA 22.176 KA				
CBL-0440	WW BYP GATE E	0.013 KA	ANG:	96.20	
CBL-0422	WPSE GATE W DI	0.013 KA	ANG:	96.25	
CBL-0427	ROOF FAN 10 DI	0.035 KA	ANG:	96.52	
CBL-0439	ROOF FAN 12 DI	0.035 KA	ANG:	96.52	
CBL-0419	WPSE SMPL PMP	0.053 KA	ANG:	97.94	

THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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CONTRIBUTIONS TO MCC-N.			(CONTINUED)		
P13.003	FCBV-1 VFD	0.288 KA	ANG:	97.28	
BUS LINK N-N.	MCC-N	20.999 KA	ANG:	-79.53	
MCC-P	3P Duty: 20.341 KA AT -75.87 DEG (16.91 MVA) X/R: 4.40				
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0033 + J 0.0132 OHMS				
	LOW VOLTAGE POWER CIRCUIT BREAKER 20.341 KA				
	MOLDED CASE CIRCUIT BREAKER > 20KA 20.341 KA				
CBL-0389	WWRDP3 DISC	0.210 KA	ANG:	99.18	
CBL-0390	FDSP1 DISC	0.035 KA	ANG:	97.06	
CBL-0391	UDSP1 DISC	0.070 KA	ANG:	98.41	
CBL-0392	CONT TK INT GT	0.013 KA	ANG:	96.20	
CBL-0394	AIR COMP 1P DI	0.141 KA	ANG:	98.04	
CBL-0395	SE ISO VALVE D	0.007 KA	ANG:	95.98	
CBL-0396	RIVER VALVE DI	0.007 KA	ANG:	95.98	
CBL-0397	TER FIL EFF SP	0.053 KA	ANG:	97.74	
CBL-0398	ROOF FAN 11 DI	0.035 KA	ANG:	96.39	
CBL-0399	HOIST P DISC	0.053 KA	ANG:	97.74	
CBL-0400	PEW STRAINER D	0.007 KA	ANG:	95.98	
CBL-0387	PEWP1 DISC	1.400 KA	ANG:	96.18	
CBL-0388	SEP3 VFD IN	0.865 KA	ANG:	96.59	
P04.MCC-P	SUB 4 BUS B	17.473 KA	ANG:	-74.65	
MCC-Q	3P Duty: 19.685 KA AT -73.85 DEG (16.37 MVA) X/R: 3.72				
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0039 + J 0.0135 OHMS				
	LOW VOLTAGE POWER CIRCUIT BREAKER 19.685 KA				
	MOLDED CASE CIRCUIT BREAKER > 20KA 19.685 KA				
CBL-0458	AIR WASH MV DI	0.013 KA	ANG:	96.20	
CBL-0444	FDSP2 DISC	0.035 KA	ANG:	97.06	
CBL-0445	UDSP2 DISC	0.053 KA	ANG:	97.74	
CBL-0446	AC2 DISC	0.105 KA	ANG:	99.73	
CBL-0447	CE WET WELL GT	0.013 KA	ANG:	96.20	
CBL-0457	HT BOOST PMP D	0.011 KA	ANG:	96.12	
CBL-0452	E CONT TK G1 D	0.013 KA	ANG:	96.20	
CBL-0453	W CONT GT2 DIS	0.013 KA	ANG:	96.20	
CBL-0454	MU HV2 DISC	0.070 KA	ANG:	98.41	
CBL-0455	HOIST Q DISC	0.053 KA	ANG:	97.74	
CBL-0456	DCH FNL EFF SP	0.053 KA	ANG:	97.74	
CBL-0448	MOD VALVE 1 DI	0.051 KA	ANG:	97.82	
CBL-0443	SEP4 VFD IN	1.032 KA	ANG:	97.04	
P04.MCC-Q	SUB 4 BUS A	18.191 KA	ANG:	-73.12	
MCC-R	3P Duty: 41.994 KA AT -78.86 DEG (34.91 MVA) X/R: 5.47				
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0013 + J 0.0065 OHMS				

THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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	LOW VOLTAGE POWER CIRCUIT BREAKER	41.994 KA			
	MOLDED CASE CIRCUIT BREAKER > 20KA	42.998 KA			
	CONTRIBUTIONS: Drag Flt 1	0.495 KA	ANG:	-84.29	
	Drag Flt 5	0.495 KA	ANG:	-84.29	
	Drag Flt 2	0.495 KA	ANG:	-84.29	
	Stormwater 1	0.412 KA	ANG:	-84.29	
	MCC R Misc	3.134 KA	ANG:	-84.29	
P05.1	SUB 5 BUS A	36.988 KA	ANG:	-78.13	
MCC-RLS-A	3P Duty: 14.834 KA AT -76.01 DEG (12.33 MVA)	X/R:	4.49		
	VOLTAGE: 480. EQUIV. IMPEDANCE=	0.0045 + J 0.0181	OHMS		
	LOW VOLTAGE POWER CIRCUIT BREAKER	14.834 KA			
	MOLDED CASE CIRCUIT BREAKER < 20KA	16.179 KA			
	MOLDED CASE CIRCUIT BREAKER > 20KA	14.834 KA			
	CBL-0505 WTR-CRC-PMP-2	0.005 KA	ANG:	95.74	
	RVSS SCREW PUM SRP-5 RVSS OUT	0.704 KA	ANG:	96.34	
	CBL-0504 WTR-CRC-PMP-1	0.005 KA	ANG:	95.74	
	RVSS SCREW PUM SRP-1 RVSS OUT	0.707 KA	ANG:	96.06	
	RVSS SCREW PUM SRP-3 RVSS OUT	0.707 KA	ANG:	96.06	
	CBL-0502 78IN GC DISC	0.018 KA	ANG:	96.52	
P03.001	SUB 1 BUS A	12.711 KA	ANG:	-74.69	
MCC-RLS-B	3P Duty: 12.474 KA AT -74.27 DEG (10.37 MVA)	X/R:	3.98		
	VOLTAGE: 480. EQUIV. IMPEDANCE=	0.0060 + J 0.0214	OHMS		
	LOW VOLTAGE POWER CIRCUIT BREAKER	12.474 KA			
	MOLDED CASE CIRCUIT BREAKER < 20KA	13.220 KA			
	MOLDED CASE CIRCUIT BREAKER > 20KA	12.474 KA			
	CBL-0530 RLS-SF-1 DISC	0.014 KA	ANG:	96.20	
	RVSS SCREW PUM RVSS SRP4 OUT	0.706 KA	ANG:	96.13	
	CBL-0527 RLS-EF-2 DISC	0.005 KA	ANG:	95.78	
	PC03.206 S-1-1 JBOX	0.013 KA	ANG:	96.18	
	RVSS SCREW PUM RVSS SRP2 OUT	0.707 KA	ANG:	96.06	
	CBL-0524 RLS-EF-1 DISC	0.007 KA	ANG:	95.87	
P03.003	SUB 1 BUS B	11.045 KA	ANG:	-73.01	
MCC-S	3P Duty: 42.334 KA AT -79.23 DEG (35.20 MVA)	X/R:	5.50		
	VOLTAGE: 480. EQUIV. IMPEDANCE=	0.0012 + J 0.0064	OHMS		
	LOW VOLTAGE POWER CIRCUIT BREAKER	42.334 KA			
	MOLDED CASE CIRCUIT BREAKER > 20KA	43.396 KA			
	CONTRIBUTIONS: Storm 2	0.412 KA	ANG:	-84.29	
	MCC S Misc	2.623 KA	ANG:	-84.29	
	Drag Flt 3	0.495 KA	ANG:	-84.29	
P05.8	SUB 5 BUS B	38.819 KA	ANG:	-78.77	

THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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MCC-WBB-A      3P Duty: 36.223 KA AT -79.55 DEG ( 30.12 MVA) X/R:      6.17
VOLTAGE:      480. EQUIV. IMPEDANCE= 0.0014 + J 0.0075 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 36.223 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 37.991 KA
CBL-WBB-EF-3D  WBB-EF-3 DISC      0.014 KA      ANG:      95.95
CBL-WBB-EF-7D  WBB-EF-7 DISC      0.014 KA      ANG:      96.09
PAB-W1 SSTR    BUS-0003            2.278 KA      ANG:      93.95
CBL-WBB-EF-1D  WBB-EF-1 DISC      0.014 KA      ANG:      95.87
P07.122        ADP-W1 DISC        0.141 KA      ANG:      97.20
PAB-W3 SSTR    BUS-0012            2.268 KA      ANG:      94.23
P07.002,ABC    SUB 3 BUS A        31.303 KA     ANG:     -78.58
BUS LINK WBB-A MCC-WBB-A.         0.225 KA      ANG:      96.76

MCC-WBB-A.     3P Duty: 36.223 KA AT -79.55 DEG ( 30.12 MVA) X/R:      6.17
VOLTAGE:      480. EQUIV. IMPEDANCE= 0.0014 + J 0.0075 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 36.223 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 37.990 KA
CBL-SSCP-W1D   SSCP-W1 DISC      0.035 KA      ANG:      96.39
CBL-WBB-H2D    WBB-H2 DISC      0.043 KA      ANG:      96.17
CBL-WBB-HV-1D  WBB-HV-1 DISC     0.035 KA      ANG:      96.30
CBL-WBB-P-1D   WBB-P-1 DISC      0.071 KA      ANG:      97.76
CBL-WSE-SAP-3D WSE-SAP-3 DIS     0.035 KA      ANG:      96.39
CBL-SCDR-W1D   SCDR-W1 DISC      0.005 KA      ANG:      96.22
BUS LINK WBB-A MCC-WBB-A         35.999 KA     ANG:     -79.52

MCC-WBB-B      3P Duty: 33.198 KA AT -79.50 DEG ( 27.60 MVA) X/R:      5.78
VOLTAGE:      480. EQUIV. IMPEDANCE= 0.0015 + J 0.0082 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 33.198 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 34.372 KA
CBL-WBB-P-2D   WBB-P-2 DISC      0.071 KA      ANG:      97.76
PAB-W2 RVSS    BUS-0006            2.270 KA      ANG:      94.16
P07.221        ATS-WBB NORM       0.070 KA      ANG:      95.95
BUS LINK WBB-B MCC-WBB-B.         0.232 KA      ANG:      96.52
P07.004,ABC    SUB 3 BUS B        30.571 KA     ANG:     -78.98

MCC-WBB-B.     3P Duty: 33.198 KA AT -79.50 DEG ( 27.60 MVA) X/R:      5.78
VOLTAGE:      480. EQUIV. IMPEDANCE= 0.0015 + J 0.0082 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 33.198 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 34.372 KA
CBL-SSCP-W2D   SSCP-W2 DISC      0.035 KA      ANG:      96.32
CBL-WBB-EF-2D  WBB-EF-2 DISC      0.005 KA      ANG:      95.77
CBL-WBB-EF-4D  WBB-EF-4 DISC      0.014 KA      ANG:      96.02
CBL-WBB-EF-5D  WBB-EF-5 DISC      0.014 KA      ANG:      96.14

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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CONTRIBUTIONS TO MCC-WBB-B. (CONTINUED)				
CBL-WBB-EF-6D	WBB-EF-6 DISC	0.053 KA	ANG:	97.94
CBL-WBB-H1D	WBB-H1 DISC	0.043 KA	ANG:	96.04
CBL-SCDR-W2D	SCDR-W2 DISC	0.005 KA	ANG:	96.22
P07.219	PP-WBB-B	0.063 KA	ANG:	96.04
BUS LINK WBB-B	MCC-WBB-B	32.966 KA	ANG:	-79.47
MCC-WPB-A	3P Duty: 12.825 KA AT -65.61 DEG (10.66 MVA) X/R: 2.34			
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0089 + J 0.0197 OHMS			
	LOW VOLTAGE POWER CIRCUIT BREAKER 12.825 KA			
	MOLDED CASE CIRCUIT BREAKER < 20KA 12.825 KA			
	MOLDED CASE CIRCUIT BREAKER > 20KA 12.825 KA			
CBL-PSCP-W1D	PSCP-W1 DISC	0.011 KA	ANG:	95.80
CBL-RS-SAP-1D	RS-SAP-1 DISC	0.035 KA	ANG:	96.86
CBL-WPB-EF-1D	WPB-EF-1 DISC	0.021 KA	ANG:	96.26
CBL-PDP-W1D	PDP-W1 DISC	0.106 KA	ANG:	97.90
P06.105	PCDR W1 DISC	0.011 KA	ANG:	96.17
CBL-F-54-4D	Junction Box	0.014 KA	ANG:	95.92
BUS LINK WPB-A	MCC-WPB-A.	0.158 KA	ANG:	95.99
P07.001	SUB 3 BUS A	12.487 KA	ANG:	-65.12
MCC-WPB-A.	3P Duty: 12.825 KA AT -65.61 DEG (10.66 MVA) X/R: 2.34			
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0089 + J 0.0197 OHMS			
	LOW VOLTAGE POWER CIRCUIT BREAKER 12.825 KA			
	MOLDED CASE CIRCUIT BREAKER < 20KA 12.825 KA			
	MOLDED CASE CIRCUIT BREAKER > 20KA 12.825 KA			
CBL-ANMX-W1B	BUS-0277	0.007 KA	ANG:	95.87
CBL-ANMX-W1C	BUS-0278	0.007 KA	ANG:	95.89
CBL-ANMX-W1D	BUS-0279	0.007 KA	ANG:	95.90
CBL-AXMX-W1A	BUS-0273	0.007 KA	ANG:	95.91
CBL-AXMX-W1B	BUS-0274	0.007 KA	ANG:	95.97
CBL-AXMX-W1C	BUS-0275	0.007 KA	ANG:	95.91
CBL-SWMX-W1	BUS-0281	0.007 KA	ANG:	95.83
CBL-ANMX-W1A	BUS-0276	0.007 KA	ANG:	95.95
CBL-WPB-P-1D	WPB-P-1 DISC	0.011 KA	ANG:	96.04
P06.115	IFSAB-1 LCP	0.076 KA	ANG:	96.09
CBL-P-53-07	BUS-0272	0.014 KA	ANG:	95.81
BUS LINK WPB-A	MCC-WPB-A	12.675 KA	ANG:	-65.39
MCC-WPB-B	3P Duty: 12.449 KA AT -65.96 DEG (10.35 MVA) X/R: 2.34			
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0091 + J 0.0203 OHMS			

THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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	LOW VOLTAGE POWER CIRCUIT BREAKER	12.449 KA			
	MOLDED CASE CIRCUIT BREAKER < 20KA	12.449 KA			
	MOLDED CASE CIRCUIT BREAKER > 20KA	12.449 KA			
	CBL-PSCP-W2D PSCP-W2 DISC	0.035 KA	ANG:	96.14	
	CBL-WPB-EF-2D PC-WPB-EF-2 DI	0.035 KA	ANG:	96.40	
	CBL-WPE-SAP-2D WPE-SAP-2 DISC	0.035 KA	ANG:	96.79	
	P06.205 PCDR-W2 DISC	0.011 KA	ANG:	95.99	
	P07.003 SUB 3 BUS B	12.218 KA	ANG:	-65.61	
	CBL-F-54-5D BUS-0287	0.021 KA	ANG:	95.82	
	BUS LINK WPB-B MCC-WPB-B.	0.105 KA	ANG:	95.90	
MCC-WPB-B.	3P Duty: 12.449 KA AT -65.96 DEG (10.35 MVA) X/R: 2.34				
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0091 + J 0.0203 OHMS				
	LOW VOLTAGE POWER CIRCUIT BREAKER	12.449 KA			
	MOLDED CASE CIRCUIT BREAKER < 20KA	12.449 KA			
	MOLDED CASE CIRCUIT BREAKER > 20KA	12.449 KA			
	CBL-ANMX-W2B BUS-0293	0.007 KA	ANG:	95.89	
	CBL-ANMX-W2C BUS-0294	0.007 KA	ANG:	95.90	
	CBL-ANMX-W2D BUS-0295	0.007 KA	ANG:	95.96	
	CBL-AXMX-W2A BUS-0289	0.007 KA	ANG:	95.81	
	CBL-AXMX-W2B BUS-0290	0.007 KA	ANG:	95.86	
	CBL-AXMX-W2C BUS-0291	0.007 KA	ANG:	95.89	
	CBL-SWMX-W2 BUS-0296	0.007 KA	ANG:	95.82	
	CBL-ANMX-W2A BUS-0292	0.007 KA	ANG:	95.93	
	CBL-WPB-H1D WPB-H1 DISC	0.023 KA	ANG:	95.93	
	CBL-WPB-P-2D PC-WPB-P-2 DIS	0.011 KA	ANG:	96.04	
	CBL-P-53-06. BUS-0288	0.014 KA	ANG:	95.78	
	BUS LINK WPB-B MCC-WPB-B	12.349 KA	ANG:	-65.81	
MCC-XA	3P Duty: 16.722 KA AT -67.33 DEG (13.90 MVA) X/R: 2.79				
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0064 + J 0.0153 OHMS				
	LOW VOLTAGE POWER CIRCUIT BREAKER	16.722 KA			
	MOLDED CASE CIRCUIT BREAKER < 20KA	16.722 KA			
	MOLDED CASE CIRCUIT BREAKER > 20KA	16.722 KA			
	CONTRIBUTIONS: Filter Pump	0.412 KA	ANG:	-84.29	
	Prefill Pump	0.412 KA	ANG:	-84.29	
	MCC XA Misc	0.429 KA	ANG:	-84.29	
	P05.4 SUB 5 BUS A	15.527 KA	ANG:	-65.98	
MCC-XB	3P Duty: 40.244 KA AT -76.15 DEG (33.46 MVA) X/R: 4.27				
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0016 + J 0.0067 OHMS				

THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER 40.244 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 40.244 KA
CONTRIBUTIONS: Plate Washer 0.495 KA ANG: -84.29
                MTRI-0114 0.412 KA ANG: -84.29
                Filler Feed 0.412 KA ANG: -84.29
                MCC XB Misc 0.676 KA ANG: -84.29
P05.5 SUB 5 BUS B 38.269 KA ANG: -75.73

METAL LATHE 3P Duty: 4.803 KA AT -53.39 DEG ( 3.99 MVA) X/R: 1.35
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0344 + J 0.0463 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 4.803 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.803 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.803 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.803 KA
CBL METAL LATH PP-MTB 4.803 KA ANG: -53.39

MILL MACH 3P Duty: 3.979 KA AT -43.01 DEG ( 3.31 MVA) X/R: 0.93
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0509 + J 0.0475 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 3.979 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 3.979 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 3.979 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 3.979 KA
CBL MILL MACH PP-MTB 3.979 KA ANG: -43.01

MOD VALVE 1 DI 3P Duty: 1.453 KA AT -8.73 DEG ( 1.21 MVA) X/R: 0.16
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1885 + J 0.0289 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.453 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.453 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.453 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.453 KA
CONTRIBUTIONS: MOD VALVE #1 0.013 KA ANG: -84.29
CBL-0449 MOD VALVE 3 DI 0.038 KA ANG: 95.94
CBL-0448 MCC-Q 1.441 KA ANG: -6.77

MOD VALVE 3 DI 3P Duty: 1.325 KA AT -8.48 DEG ( 1.10 MVA) X/R: 0.15
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.2069 + J 0.0308 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.325 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.325 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.325 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.325 KA
CONTRIBUTIONS: MOD VALVE #3 0.013 KA ANG: -84.29
CBL-0450 MOD VALVE 5 DI 0.026 KA ANG: 95.83
CBL-0449 MOD VALVE 1 DI 1.316 KA ANG: -6.86

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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MOD VALVE 5 DI 3P Duty: 1.217 KA AT -8.20 DEG ( 1.01 MVA) X/R: 0.15
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.2253 + J 0.0325 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.217 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.217 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.217 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.217 KA
CONTRIBUTIONS: MOD VALVE #5 0.013 KA ANG: -84.29
CBL-0451 MOD VALVE 7 DI 0.013 KA ANG: 95.76
CBL-0450 MOD VALVE 3 DI 1.211 KA ANG: -7.03

MOD VALVE 7 DI 3P Duty: 1.125 KA AT -7.88 DEG ( 0.94 MVA) X/R: 0.14
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.2439 + J 0.0338 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.125 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.125 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.125 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.125 KA
CONTRIBUTIONS: MOD VALVE #7 0.013 KA ANG: -84.29
CBL-0451 MOD VALVE 5 DI 1.122 KA ANG: -7.25

MPPEWP1 DISC 3P Duty: 10.756 KA AT -62.63 DEG ( 8.94 MVA) X/R: 2.23
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0118 + J 0.0229 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 10.756 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 10.756 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 10.756 KA
CONTRIBUTIONS: MP PEW PUMP 1 0.426 KA ANG: -84.29
CBL-0277 MCC-E. 10.361 KA ANG: -241.76

MPPEWP2 DISC 3P Duty: 10.341 KA AT -63.34 DEG ( 8.60 MVA) X/R: 2.28
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0120 + J 0.0239 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 10.341 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 10.341 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 10.341 KA
CONTRIBUTIONS: MP PEW PUMP #2 0.426 KA ANG: -84.29
CBL-0310 MCC-F 9.945 KA ANG: -62.46

MU HV2 DISC 3P Duty: 1.458 KA AT -9.49 DEG ( 1.21 MVA) X/R: 0.18
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1874 + J 0.0313 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.458 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.458 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.458 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.458 KA
CONTRIBUTIONS: MAKE-UP HV-2 0.071 KA ANG: -84.29
CBL-0454 MCC-Q 1.441 KA ANG: -6.77
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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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MV10 DISC    3P Duty:  1.447 KA AT  -8.65 DEG (  1.20 MVA) X/R:    0.16
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.1893 + J  0.0288 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  1.447 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.447 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.447 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.447 KA
CONTRIBUTIONS: MOD VALVE #10      0.013 KA      ANG:   -84.29
CBL-0372      MV11 DISC            0.026 KA      ANG:   95.72
CBL-0371      MV9 DISC             1.438 KA      ANG:   -7.18

MV11 DISC    3P Duty:  1.433 KA AT  -8.62 DEG (  1.19 MVA) X/R:    0.16
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.1912 + J  0.0290 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  1.433 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.433 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.433 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.433 KA
CONTRIBUTIONS: MOD VALVE #11      0.013 KA      ANG:   -84.29
CBL-0373      MV12 DISC            0.013 KA      ANG:   95.72
CBL-0372      MV10 DISC            1.427 KA      ANG:   -7.62

MV12 DISC    3P Duty:  1.419 KA AT  -8.57 DEG (  1.18 MVA) X/R:    0.16
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.1931 + J  0.0291 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  1.419 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.419 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.419 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.419 KA
CONTRIBUTIONS: MOD VALVE #12      0.013 KA      ANG:   -84.29
CBL-0373      MV11 DISC            1.416 KA      ANG:   -8.07

MV2 DISC     3P Duty:  1.466 KA AT  -8.53 DEG (  1.22 MVA) X/R:    0.16
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.1870 + J  0.0281 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  1.466 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.466 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.466 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.466 KA
CONTRIBUTIONS: MOD VALVE #2       0.013 KA      ANG:   -84.29
CBL-0416      MV4 DISC             0.038 KA      ANG:   95.73
CBL-0415      MCC-N                1.454 KA      ANG:   -6.58

MV4 DISC     3P Duty:  1.452 KA AT  -8.51 DEG (  1.21 MVA) X/R:    0.15
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.1888 + J  0.0282 OHMS

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER      1.452 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     1.452 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     1.452 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     1.452 KA
CONTRIBUTIONS:  MOD VALVE #4           0.013 KA      ANG:  -84.29
CBL-0417         MV6 DISC                0.026 KA      ANG:   95.72
CBL-0416         MV2 DISC                1.443 KA      ANG:   -7.03

MV6 DISC      3P Duty:  1.438 KA AT  -8.47 DEG (  1.20 MVA) X/R:    0.15
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.1907 + J  0.0284 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      1.438 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     1.438 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     1.438 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     1.438 KA
CONTRIBUTIONS:  MOD VALVE #6           0.013 KA      ANG:  -84.29
CBL-0418         MV8 DISC                0.013 KA      ANG:   95.72
CBL-0417         MV4 DISC                1.432 KA      ANG:   -7.48

MV8 DISC      3P Duty:  1.424 KA AT  -8.42 DEG (  1.18 MVA) X/R:    0.15
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.1925 + J  0.0285 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      1.424 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     1.424 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     1.424 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     1.424 KA
CONTRIBUTIONS:  MOD VALVE #8           0.013 KA      ANG:  -84.29
CBL-0418         MV6 DISC                1.421 KA      ANG:   -7.93

MV9 DISC      3P Duty:  1.461 KA AT  -8.68 DEG (  1.21 MVA) X/R:    0.16
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.1875 + J  0.0286 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      1.461 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     1.461 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     1.461 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     1.461 KA
CONTRIBUTIONS:  MOD VALVE #9           0.013 KA      ANG:  -84.29
CBL-0371         MV10 DISC               0.038 KA      ANG:   95.73
CBL-0370         MCC-M                   1.449 KA      ANG:   -6.73

N EQPT RCPT   3P Duty:  2.268 KA AT -10.02 DEG (  1.89 MVA) X/R:    0.18
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.1203 + J  0.0213 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      2.268 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     2.268 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     2.268 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     2.268 KA
CBL-0421         MCC-N                   2.268 KA      ANG:  -10.02

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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OZNTR DISC      3P Duty:  8.307 KA AT  -48.21 DEG (   6.91 MVA) X/R:    1.14
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.0222 + J  0.0249 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      8.307 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     8.307 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     8.307 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     8.307 KA
CBL-0620        MCC-FF                   8.307 KA      ANG:   -48.21

P-53-06 DISC    3P Duty:  5.794 KA AT  -28.41 DEG (   4.82 MVA) X/R:    0.55
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.0421 + J  0.0228 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      5.794 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     5.794 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     5.794 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     5.794 KA
CBL-P-53-06.    P-53-06 STR              0.007 KA      ANG:    95.72
CBL-P-53-06     BUS-0288                 5.790 KA      ANG:   -208.36

P-53-06 STR     3P Duty:  4.898 KA AT  -24.50 DEG (   4.07 MVA) X/R:    0.46
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.0515 + J  0.0235 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      4.898 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     4.898 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     4.898 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     4.898 KA
CONTRIBUTIONS: P-53-06 MTR              0.007 KA      ANG:   -84.29
CBL-P-53-06.    P-53-06 DISC            4.894 KA      ANG:   -24.42

P-53-07 DISC.   3P Duty:  3.416 KA AT  -17.78 DEG (   2.84 MVA) X/R:    0.33
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.0773 + J  0.0248 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      3.416 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     3.416 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     3.416 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     3.416 KA
CBL-P-53-07..   P-53-07 STR              0.007 KA      ANG:    95.72
CBL-P-53-07.    BUS-0272                 3.413 KA      ANG:   -197.67

P-53-07 STR     3P Duty:  3.067 KA AT  -16.39 DEG (   2.55 MVA) X/R:    0.30
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.0867 + J  0.0255 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      3.067 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     3.067 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     3.067 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     3.067 KA
CONTRIBUTIONS: P-53-07 MTR              0.007 KA      ANG:   -84.29
CBL-P-53-07..   P-53-07 DISC.           3.065 KA      ANG:   -16.27

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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P-53-20 DISC  3P Duty:  5.848 KA AT  -27.81 DEG (   4.86 MVA) X/R:    0.54
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.0419 + J  0.0221  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  5.848 KA
MOLDED CASE CIRCUIT BREAKER < 10KA  5.848 KA
MOLDED CASE CIRCUIT BREAKER < 20KA  5.848 KA
MOLDED CASE CIRCUIT BREAKER > 20KA  5.848 KA
CBL-P-53-20.   P-53-20 STR          0.007 KA      ANG:    95.72
CBL-P-53-20    BUS-0272             5.844 KA      ANG:   -207.76

P-53-20 STR   3P Duty:  4.933 KA AT  -23.96 DEG (   4.10 MVA) X/R:    0.45
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.0513 + J  0.0228  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  4.933 KA
MOLDED CASE CIRCUIT BREAKER < 10KA  4.933 KA
MOLDED CASE CIRCUIT BREAKER < 20KA  4.933 KA
MOLDED CASE CIRCUIT BREAKER > 20KA  4.933 KA
CONTRIBUTIONS: P-53-3 MTR          0.007 KA      ANG:   -84.29
CBL-P-53-20.   P-53-20 DISC        4.929 KA      ANG:   -23.89

P-53-21 DISC  3P Duty:  5.312 KA AT  -26.29 DEG (   4.42 MVA) X/R:    0.50
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.0468 + J  0.0231  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  5.312 KA
MOLDED CASE CIRCUIT BREAKER < 10KA  5.312 KA
MOLDED CASE CIRCUIT BREAKER < 20KA  5.312 KA
MOLDED CASE CIRCUIT BREAKER > 20KA  5.312 KA
CBL-P-53-21.   P-53-21 STR          0.007 KA      ANG:    95.72
CBL-P-53-21.   BUS-0288             5.308 KA      ANG:   -206.23

P-53-21 STR   3P Duty:  4.540 KA AT  -22.96 DEG (   3.77 MVA) X/R:    0.43
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.0562 + J  0.0238  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  4.540 KA
MOLDED CASE CIRCUIT BREAKER < 10KA  4.540 KA
MOLDED CASE CIRCUIT BREAKER < 20KA  4.540 KA
MOLDED CASE CIRCUIT BREAKER > 20KA  4.540 KA
CONTRIBUTIONS: P-53-21 MTR          0.007 KA      ANG:   -84.29
CBL-P-53-21    P-53-21 DISC        4.537 KA      ANG:   -22.89

PAB-E1 DV & BO 3P Duty:  2.196 KA AT  -17.12 DEG (   1.83 MVA) X/R:    0.32
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.1206 + J  0.0372  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  2.196 KA
MOLDED CASE CIRCUIT BREAKER < 10KA  2.196 KA
MOLDED CASE CIRCUIT BREAKER < 20KA  2.196 KA
MOLDED CASE CIRCUIT BREAKER > 20KA  2.196 KA

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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CONTRIBUTIONS TO PAB-E1 DV & BO (CONTINUED)
CONTRIBUTIONS: BF-65-01          0.008 KA      ANG:  -84.29
CBL-0501      BUS-0413          2.193 KA      ANG:  -196.93

PAB-E1 LCP    3P Duty:  3.650 KA AT  -26.83 DEG (  3.03 MVA) X/R:    0.51
VOLTAGE:      480.    EQUIV. IMPEDANCE=  0.0677 + J  0.0343 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  3.650 KA
MOLDED CASE CIRCUIT BREAKER < 10KA  3.650 KA
MOLDED CASE CIRCUIT BREAKER < 20KA  3.650 KA
MOLDED CASE CIRCUIT BREAKER > 20KA  3.650 KA
CBL PAB-E1 LCP PP-EBB-A            3.650 KA      ANG:   -26.83

PAB-E1 STR IN 3P Duty:  2.899 KA AT  -79.93 DEG ( 20.89 MVA) X/R:    6.14
VOLTAGE:      4160.   EQUIV. IMPEDANCE=  0.1448 + J  0.8157 OHMS
PAB-E1 STARTER PAB-E1 STR OUT      0.523 KA      ANG:   96.17
M05.001      SUB 8 BUS A            2.377 KA      ANG:   -79.07

PAB-E2 DV & BO 3P Duty:  1.856 KA AT  -15.21 DEG (  1.54 MVA) X/R:    0.28
VOLTAGE:      480.    EQUIV. IMPEDANCE=  0.1441 + J  0.0392 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  1.856 KA
MOLDED CASE CIRCUIT BREAKER < 10KA  1.856 KA
MOLDED CASE CIRCUIT BREAKER < 20KA  1.856 KA
MOLDED CASE CIRCUIT BREAKER > 20KA  1.856 KA
CONTRIBUTIONS: BF-65-02          0.008 KA      ANG:   -84.29
CBL AT-E4 Z3 F Junction box.      1.853 KA      ANG:  -194.98

PAB-E2 LCP    3P Duty:  3.036 KA AT  -23.08 DEG (  2.52 MVA) X/R:    0.43
VOLTAGE:      480.    EQUIV. IMPEDANCE=  0.0840 + J  0.0358 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  3.036 KA
MOLDED CASE CIRCUIT BREAKER < 10KA  3.036 KA
MOLDED CASE CIRCUIT BREAKER < 20KA  3.036 KA
MOLDED CASE CIRCUIT BREAKER > 20KA  3.036 KA
CBL PAB-E2 LCP PP-EBB-A            3.036 KA      ANG:   -23.08

PAB-E2 STR IN 3P Duty:  2.366 KA AT  -79.59 DEG ( 17.05 MVA) X/R:    5.87
VOLTAGE:      4160.   EQUIV. IMPEDANCE=  0.1834 + J  0.9985 OHMS
PAB-E2 STARTER PAB-E2 STR OUT      0.523 KA      ANG:  -83.83
M05.006      SUB 8 BUS B            1.844 KA      ANG:  -78.39

PAB-E3 DV & BO 3P Duty:  1.621 KA AT  -13.58 DEG (  1.35 MVA) X/R:    0.24
VOLTAGE:      480.    EQUIV. IMPEDANCE=  0.1662 + J  0.0401 OHMS

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER      1.621 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     1.621 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     1.621 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     1.621 KA
CBL PAB-E3 DV  PP-EBB-A                 1.621 KA      ANG:  -13.58

PAB-E3 LCP  3P Duty:  2.334 KA AT  -18.88 DEG (  1.94 MVA) X/R:    0.34
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.1124 + J  0.0384 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      2.334 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     2.334 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     2.334 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     2.334 KA
CBL PAB-E3 LCP  PP-EBB-A                 2.334 KA      ANG:  -18.88

PAB-E3 STR IN  3P Duty:  2.899 KA AT  -79.93 DEG ( 20.89 MVA) X/R:    6.14
VOLTAGE:    4160. EQUIV. IMPEDANCE=  0.1448 + J  0.8157 OHMS
PAB-E3 STARTER  PAB-E3 STR OUT          0.523 KA      ANG:  -83.83
M05.004          SUB 8 BUS A             2.377 KA      ANG:  -79.07

PAB-W1 VALVES  3P Duty:  6.648 KA AT  -16.72 DEG (  5.53 MVA) X/R:    0.31
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.0399 + J  0.0120 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      6.648 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     6.648 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     6.648 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     6.648 KA
CBL-0212          BUS-0312              0.008 KA      ANG:   95.71
CBL-0210          BUS-0310              0.008 KA      ANG:   95.71
CBL PAB-W1 VAL  PP-WBB-A                6.642 KA      ANG:  -16.60

PAB-W2 VALVES  3P Duty:  5.064 KA AT  -13.46 DEG (  4.21 MVA) X/R:    0.24
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.0532 + J  0.0127 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      5.064 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     5.064 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     5.064 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     5.064 KA
CBL-0228          BUS-0328              0.008 KA      ANG:   95.71
CBL-0226          BUS-0326              0.008 KA      ANG:   95.71
CBL PAB-W2 VAL  PP-WBB-B                5.059 KA      ANG:  -13.29

PAB-W3 VALVES  3P Duty:  4.191 KA AT  -12.16 DEG (  3.48 MVA) X/R:    0.22
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.0646 + J  0.0139 OHMS

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER      4.191 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     4.191 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     4.191 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     4.191 KA
CBL-0216      BUS-0316      0.008 KA      ANG:      95.71
CBL-0214      BUS-0314      0.008 KA      ANG:      95.71
CBL PAB-W3 VAL PP-WBB-A      4.186 KA      ANG:     -11.95

PC-E1 DISC    3P Duty:  0.587 KA AT  -8.03 DEG (  0.49 MVA) X/R:      0.14
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.4676 + J  0.0660 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      0.587 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     0.587 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     0.587 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     0.587 KA
CBL-PC-E1      PC-E1 TERM      0.011 KA      ANG:      95.75
CBL-PC-E1 DISC MCC-EPB-A      0.584 KA      ANG:     -7.02

PC-E2 DISC    3P Duty:  0.745 KA AT  -9.32 DEG (  0.62 MVA) X/R:      0.17
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.3669 + J  0.0602 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      0.745 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     0.745 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     0.745 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     0.745 KA
CBL-PC-E2      PC-E2 TERM      0.011 KA      ANG:      95.75
CBL-PC-E2 DISK MCC-EPB-B      0.743 KA      ANG:     -8.53

PC-E3 DISC    3P Duty:  0.768 KA AT  -9.10 DEG (  0.64 MVA) X/R:      0.17
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.3565 + J  0.0571 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      0.768 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     0.768 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     0.768 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     0.768 KA
CBL-PC-E3      PC-E3 TERM      0.011 KA      ANG:      95.75
CBL-PC-E3 DISC MCC-EPB-A      0.765 KA      ANG:     -8.33

PC-E4 DISC    3P Duty:  0.533 KA AT  -8.00 DEG (  0.44 MVA) X/R:      0.14
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.5150 + J  0.0724 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      0.533 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     0.533 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     0.533 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     0.533 KA
CBL-PC-E4      PC-E4 TERM      0.011 KA      ANG:      95.75
CBL-PC-E4 DISK MCC-EPB-B      0.530 KA      ANG:     -6.88

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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PC-WPB-EF-2 DI 3P Duty: 3.123 KA AT -16.30 DEG ( 2.60 MVA) X/R: 0.31
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0852 + J 0.0249 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 3.123 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 3.123 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 3.123 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 3.123 KA
CBL-WPB-EF-2 WPB-EF-2 TERM 0.035 KA ANG: 95.85
CBL-WPB-EF-2D MCC-WPB-B 3.110 KA ANG: -15.70

PC-WPB-P-2 DIS 3P Duty: 1.973 KA AT -11.21 DEG ( 1.64 MVA) X/R: 0.20
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1378 + J 0.0273 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.973 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.973 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.973 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.973 KA
CBL-WPB-P-2 WPB-P-2 TERMS 0.011 KA ANG: 95.76
CBL-WPB-P-2D MCC-WPB-B 1.970 KA ANG: -10.91

PCDR W1 DISC 3P Duty: 1.308 KA AT -9.72 DEG ( 1.09 MVA) X/R: 0.18
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.2088 + J 0.0358 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.308 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.308 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.308 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.308 KA
P06.105A PCDRW1 TERM 0.011 KA ANG: 95.74
P06.105 MCC-WPB-A 1.305 KA ANG: -9.27

PCDR-W2 DISC 3P Duty: 2.130 KA AT -13.08 DEG ( 1.77 MVA) X/R: 0.24
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1267 + J 0.0294 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.130 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.130 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.130 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.130 KA
P06.205A PCDR-W2 TERM 0.011 KA ANG: 95.74
P06.205 MCC-WPB-B 2.126 KA ANG: -12.80

PDP UV 2A 3P Duty: 14.235 KA AT -58.32 DEG ( 11.83 MVA) X/R: 1.63
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0102 + J 0.0166 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 14.235 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 14.235 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 14.235 KA
P04.UV 2A SUB 4 BUS B 14.235 KA ANG: -58.32

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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PDP UV 2B      3P Duty: 14.235 KA AT -58.32 DEG ( 11.83 MVA) X/R: 1.63
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0102 + J 0.0166 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 14.235 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 14.235 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 14.235 KA
P04.UV 2B      SUB 4 BUS B      14.235 KA      ANG: -58.32

PDP-E1 DISC    3P Duty: 4.714 KA AT -40.60 DEG ( 3.92 MVA) X/R: 1.05
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0446 + J 0.0383 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 4.714 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.714 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.714 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.714 KA
CBL-PDP-E1      PDP-E1 TERM      0.106 KA      ANG: 95.97
CBL-PDP-E1 DIS  MCC-EPB-A      4.637 KA      ANG: -39.69

PDP-W1 DISC    3P Duty: 3.357 KA AT -19.01 DEG ( 2.79 MVA) X/R: 0.40
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0780 + J 0.0269 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 3.357 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 3.357 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 3.357 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 3.357 KA
CBL-PDP-W1      PDPW1 TERM      0.106 KA      ANG: 96.38
CBL-PDP-W1D     MCC-WPB-A      3.313 KA      ANG: -17.35

PEW STRAINER D 3P Duty: 1.448 KA AT -6.96 DEG ( 1.20 MVA) X/R: 0.12
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1900 + J 0.0232 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.448 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.448 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.448 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.448 KA
CONTRIBUTIONS: PEW STRAINER      0.007 KA      ANG: -84.29
CBL-0400        MCC-P          1.446 KA      ANG: -6.69

PEWP1 DISC     3P Duty: 17.207 KA AT -72.40 DEG ( 14.31 MVA) X/R: 3.63
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0049 + J 0.0154 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 17.207 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 17.811 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 17.207 KA
CONTRIBUTIONS: PEW PUMP #1      1.419 KA      ANG: -84.29
CBL-0387        MCC-P          15.821 KA      ANG: -71.34

PEWP2 DISC     3P Duty: 16.274 KA AT -69.08 DEG ( 13.53 MVA) X/R: 3.12

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0061 + J 0.0159 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 16.274 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 16.274 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 16.274 KA
CBL-0380 PEWP2 MTR 1.415 KA ANG: -84.12
CBL-0409 ATS PEWP2 NRM 14.912 KA ANG: -247.67

PEWP3 ATS NRM 3P Duty: 20.535 KA AT -77.51 DEG ( 17.07 MVA) X/R: 4.76
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0029 + J 0.0132 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 20.535 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 20.535 KA
CBL PEWP3 DISC PEWP3 DISC 0.871 KA ANG: -83.23
CBL PEWP3 ATS MCC-N 19.668 KA ANG: -77.26

PEWP3 DISC 3P Duty: 16.768 KA AT -69.54 DEG ( 13.94 MVA) X/R: 2.94
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0058 + J 0.0155 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 16.768 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 16.768 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 16.768 KA
CBL PEWP3 BUS-0134 0.879 KA ANG: 96.24
CBL PEWP3 DISC PEWP3 ATS NRM 15.917 KA ANG: -248.76

PMPRM HOIST DI 3P Duty: 4.065 KA AT -22.50 DEG ( 3.38 MVA) X/R: 0.45
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0630 + J 0.0261 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 4.065 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.065 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.065 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.065 KA
CONTRIBUTIONS: PMP RM HOIST 0.053 KA ANG: -84.29
CBL-0316 MCC-F. 4.040 KA ANG: -21.83

PP-ADM-1 3P Duty: 2.634 KA AT -73.45 DEG ( 2.19 MVA) X/R: 3.45
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0300 + J 0.1008 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.634 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 3.176 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.691 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.634 KA
P09.016 XFMR PP-ADM-1 2.634 KA ANG: -73.45

PP-ADM-2 3P Duty: 2.125 KA AT -58.91 DEG ( 1.77 MVA) X/R: 1.68
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0673 + J 0.1117 OHMS

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER      2.125 KA
MOLDED CASE CIRCUIT BREAKER < 10KA    2.125 KA
MOLDED CASE CIRCUIT BREAKER < 20KA    2.125 KA
MOLDED CASE CIRCUIT BREAKER > 20KA    2.125 KA
P09.025 [FIRE PP-ADM-1                2.125 KA      ANG:  -58.91

PP-EBB-A  3P Duty:  9.414 KA AT  -76.40 DEG (  7.83 MVA) X/R:    4.25
VOLTAGE:   480.   EQUIV. IMPEDANCE=  0.0069 + J  0.0286 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      9.414 KA
MOLDED CASE CIRCUIT BREAKER < 20KA    10.138 KA
MOLDED CASE CIRCUIT BREAKER > 20KA    9.414 KA
P05.115A   ATS-EBB-LOAD                9.368 KA      ANG:  -76.37
CBL AT-E2 FCV  BUS-0188                0.023 KA      ANG:   96.34
CBL AT-E1 FCV  BUS-0182                0.023 KA      ANG:   96.45

PP-EBB-B  3P Duty:  7.720 KA AT  -54.63 DEG (  6.42 MVA) X/R:    1.48
VOLTAGE:   480.   EQUIV. IMPEDANCE=  0.0208 + J  0.0293 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      7.720 KA
MOLDED CASE CIRCUIT BREAKER < 10KA    7.720 KA
MOLDED CASE CIRCUIT BREAKER < 20KA    7.720 KA
MOLDED CASE CIRCUIT BREAKER > 20KA    7.720 KA
CBL WASV E3   BUS-0409                0.008 KA      ANG:   96.05
CBL WASV E4   BUS-0410                0.008 KA      ANG:   96.05
CBL PAB-E2 DV  Junction box.          0.016 KA      ANG:   96.08
CBL PAB-E1 DV  BUS-0413                0.016 KA      ANG:   96.00
CBL-0152      Wireway.                0.023 KA      ANG:   96.63
CBL-0136      Wireway                0.023 KA      ANG:   96.63
P05.215      MCC-EBB-B.                7.639 KA      ANG: -234.29

PP-LSE    3P Duty: 12.156 KA AT  -63.97 DEG ( 10.11 MVA) X/R:    2.09
VOLTAGE:   480.   EQUIV. IMPEDANCE=  0.0100 + J  0.0205 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER     12.156 KA
MOLDED CASE CIRCUIT BREAKER < 20KA    12.156 KA
MOLDED CASE CIRCUIT BREAKER > 20KA    12.156 KA
P03.208A     ATS-LSE LOAD              12.156 KA      ANG:  -63.97

PP-LSE CKT #14 3P Duty:  0.975 KA AT  -8.12 DEG (  0.81 MVA) X/R:    0.14
VOLTAGE:   480.   EQUIV. IMPEDANCE=  0.2814 + J  0.0401 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      0.975 KA
MOLDED CASE CIRCUIT BREAKER < 10KA    0.975 KA
MOLDED CASE CIRCUIT BREAKER < 20KA    0.975 KA
MOLDED CASE CIRCUIT BREAKER > 20KA    0.975 KA
CBL SLDG'S S-5 PP-LSE                0.975 KA      ANG:   -8.12

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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PP-LSE CKT #2  3P Duty:  0.975 KA AT  -8.12 DEG (  0.81 MVA) X/R:    0.14
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.2814 + J  0.0401  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  0.975 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.975 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.975 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.975 KA
CBL SLDG'S F-6 PP-LSE              0.975 KA      ANG:   -8.12

PP-LSE CKT #26 3P Duty:  0.975 KA AT  -8.12 DEG (  0.81 MVA) X/R:    0.14
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.2814 + J  0.0401  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  0.975 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.975 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.975 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.975 KA
CBL EAST JC GA PP-LSE              0.975 KA      ANG:   -8.12

PP-LSE CKT #8  3P Duty:  0.975 KA AT  -8.12 DEG (  0.81 MVA) X/R:    0.14
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.2814 + J  0.0401  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  0.975 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.975 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.975 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.975 KA
CBL SLDG's S-6 PP-LSE              0.975 KA      ANG:   -8.12

PP-MTB          3P Duty:  5.327 KA AT -61.31 DEG (  4.43 MVA) X/R:    1.84
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.0250 + J  0.0456  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  5.327 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 5.408 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 5.327 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 5.327 KA
P10.001        PP-MTB DISC SW      5.320 KA      ANG:  -241.28
CBL-MB-EF-1    MB-EF-1 DISC        0.008 KA      ANG:    95.79

PP-MTB DISC SW 3P Duty:  5.564 KA AT -62.42 DEG (  4.63 MVA) X/R:    1.92
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.0231 + J  0.0441  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  5.564 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 5.718 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 5.564 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 5.564 KA
P11.204        SUB 7 BUS B          5.557 KA      ANG:   -62.39
P10.001        PP-MTB              0.008 KA      ANG:   -84.21

PP-UV           3P Duty:  1.619 KA AT  -9.73 DEG (  1.35 MVA) X/R:    0.17

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1687 + J 0.0289 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.619 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.619 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.619 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.619 KA
P11.213 ATS PP-UV-LOAD 1.619 KA ANG: -189.73

PP-WBB-A 3P Duty: 29.334 KA AT -76.39 DEG ( 24.39 MVA) X/R: 4.33
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0022 + J 0.0092 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 29.334 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 29.334 KA
P07.120A ATS-WBB-LOAD 29.265 KA ANG: -76.37
CBL WAS VALVE WAS VALVE W1 D 0.008 KA ANG: 95.84
CBL WEST AESG WEST AESGW1 DI 0.008 KA ANG: 95.87
CBL PAB-W3 VAL PAB-W3 VALVES 0.016 KA ANG: 95.91
CBL PAB-W1 VAL PAB-W1 VALVES 0.016 KA ANG: 95.83
CBL W1 FLOW VA W1 FLOW VALVES 0.023 KA ANG: 96.08

PP-WBB-B 3P Duty: 28.409 KA AT -67.38 DEG ( 23.62 MVA) X/R: 2.47
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0038 + J 0.0090 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 28.409 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 28.409 KA
CBL WAS VALVE BUS-0320 0.008 KA ANG: 95.87
CBL WA MAIN BO BUS-0330 0.008 KA ANG: 95.82
CBL WEST AESG BUS-0325 0.008 KA ANG: 95.98
CBL PAB-W2 VAL PAB-W2 VALVES 0.016 KA ANG: 95.87
CBL AT-W2 FCV AT-W2 FCV JB 0.023 KA ANG: 96.22
P07.219 MCC-WBB-B. 28.349 KA ANG: -67.34

PP-Z 3P Duty: 4.757 KA AT -55.43 DEG ( 3.95 MVA) X/R: 1.46
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0331 + J 0.0480 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 4.757 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.757 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.757 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.757 KA
P10.003 PP-MTB 4.757 KA ANG: -55.43

PSCP-E1 DISC 3P Duty: 4.029 KA AT -34.61 DEG ( 3.35 MVA) X/R: 0.80
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0566 + J 0.0391 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 4.029 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.029 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.029 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.029 KA
CBL-PSCP-E1 PSCP-E1 TERM 0.053 KA ANG: 96.22

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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CONTRIBUTIONS TO PSCP-E1 DISC (CONTINUED)
CBL-PSCP-E1 DI MCC-EPB-A 3.994 KA ANG: -34.03

PSCP-E2 DISC 3P Duty: 3.895 KA AT -35.64 DEG ( 3.24 MVA) X/R: 0.82
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0578 + J 0.0415 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 3.895 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 3.895 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 3.895 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 3.895 KA
CBL-PSCP-E2 PSCP-E2 TERM 0.053 KA ANG: 96.22
CBL-PSCP-E2 DI MCC-EPB-B 3.859 KA ANG: -35.05

PSCP-W1 DISC 3P Duty: 6.762 KA AT -31.80 DEG ( 5.62 MVA) X/R: 0.63
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0348 + J 0.0216 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 6.762 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 6.762 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 6.762 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 6.762 KA
CBL-PSCP-W1 PSCP-W1 TERM 0.011 KA ANG: 95.75
CBL-PSCP-W1D MCC-WPB-A 6.755 KA ANG: -31.73

PSCP-W2 DISC 3P Duty: 4.389 KA AT -22.63 DEG ( 3.65 MVA) X/R: 0.44
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0583 + J 0.0243 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 4.389 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.389 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.389 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.389 KA
CBL-PSCP-W2 PSCP-W2 TERM 0.035 KA ANG: 95.78
CBL-PSCP-W2D MCC-WPB-B 4.373 KA ANG: -22.22

PSLP-E1 VFD IN 3P Duty: 4.043 KA AT -35.19 DEG ( 3.36 MVA) X/R: 0.86
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0560 + J 0.0395 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 4.043 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.043 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.043 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.043 KA
PSLP-E1 VFD PSLP-E1 VFD OU 0.106 KA ANG: 95.84
CBL-PSLP-E1 VF MCC-EPB-A 3.974 KA ANG: -34.03

PSLP-E2 VFD IN 3P Duty: 3.651 KA AT -34.10 DEG ( 3.04 MVA) X/R: 0.83
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0629 + J 0.0426 OHMS

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER      3.651 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     3.651 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     3.651 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     3.651 KA
PSLP-E2 VFD      PSLP-E2 VFD OU      0.106 KA      ANG:    95.84
CBL-PSLP-E2 VF   MCC-EPB-B           3.583 KA      ANG:   -32.80

PSLP-E3 VFD IN 3P Duty:  3.518 KA AT  -31.23 DEG (  2.93 MVA) X/R:    0.75
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.0674 + J  0.0408  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      3.518 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     3.518 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     3.518 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     3.518 KA
PSLP-E3 VFD      PSLP-E3 VFD OU      0.106 KA      ANG:    95.84
CBL-PSLP-E3 VF   MCC-EPB-A           3.455 KA      ANG:   -29.82

PSLP-W1 VFD IN 3P Duty:  6.915 KA AT  -34.85 DEG (  5.75 MVA) X/R:    0.71
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.0329 + J  0.0229  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      6.915 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     6.915 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     6.915 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     6.915 KA
P06.110          MCC-WPB-A           6.915 KA      ANG:   -34.85

PSLP-W2 INPUT 3P Duty:  8.165 KA AT  -41.57 DEG (  6.79 MVA) X/R:    0.90
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.0254 + J  0.0225  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      8.165 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     8.165 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     8.165 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     8.165 KA
P06.210          MCC-WPB-B           8.165 KA      ANG:   -41.57

PSLPG-W1 VFD I 3P Duty:  2.544 KA AT  -12.95 DEG (  2.12 MVA) X/R:    0.23
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.1062 + J  0.0244  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      2.544 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     2.544 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     2.544 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     2.544 KA
CBL-PSLPG-W1V    MCC-WPB-A           2.544 KA      ANG:   -12.95

PSLPG-W2 INPUT 3P Duty:  4.602 KA AT  -22.05 DEG (  3.83 MVA) X/R:    0.41
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.0558 + J  0.0226  OHMS

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER      4.602 KA
MOLDED CASE CIRCUIT BREAKER < 10KA    4.602 KA
MOLDED CASE CIRCUIT BREAKER < 20KA    4.602 KA
MOLDED CASE CIRCUIT BREAKER > 20KA    4.602 KA
CBL-PSLPG-W2V  MCC-WPB-B                4.602 KA      ANG:  -22.05

PSLPM-E1 LCP  3P Duty:  3.890 KA AT  -35.45 DEG (  3.23 MVA) X/R:    0.81
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.0580 + J  0.0413 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      3.890 KA
MOLDED CASE CIRCUIT BREAKER < 10KA    3.890 KA
MOLDED CASE CIRCUIT BREAKER < 20KA    3.890 KA
MOLDED CASE CIRCUIT BREAKER > 20KA    3.890 KA
CBL-PSLPM-E1  PSLPM-E1 TERM            0.035 KA      ANG:    95.75
CBL-PSLPM-E1 L MCC-EPB-B                3.866 KA      ANG:   -35.05

PSLPM-E2 LCP  3P Duty:  3.630 KA AT  -33.22 DEG (  3.02 MVA) X/R:    0.74
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.0639 + J  0.0418 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      3.630 KA
MOLDED CASE CIRCUIT BREAKER < 10KA    3.630 KA
MOLDED CASE CIRCUIT BREAKER < 20KA    3.630 KA
MOLDED CASE CIRCUIT BREAKER > 20KA    3.630 KA
CBL-PSLPM-E2  PSLPM-E2 TERM            0.035 KA      ANG:    95.75
CBL-PSLPM-E2 L MCC-EPB-B                3.608 KA      ANG:   -32.78

RASP-E1 VFD IN 3P Duty:  2.035 KA AT  -19.15 DEG (  1.69 MVA) X/R:    0.43
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.1286 + J  0.0447 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      2.035 KA
MOLDED CASE CIRCUIT BREAKER < 10KA    2.035 KA
MOLDED CASE CIRCUIT BREAKER < 20KA    2.035 KA
MOLDED CASE CIRCUIT BREAKER > 20KA    2.035 KA
RASP-E1 VFD    RASP-E1 VFD OU          0.141 KA      ANG:    96.99
P05.105        MCC-EBB-A                1.977 KA      ANG:   -15.47

RASP-E2 VFD IN 3P Duty:  2.021 KA AT  -19.96 DEG (  1.68 MVA) X/R:    0.45
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.1289 + J  0.0468 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      2.021 KA
MOLDED CASE CIRCUIT BREAKER < 10KA    2.021 KA
MOLDED CASE CIRCUIT BREAKER < 20KA    2.021 KA
MOLDED CASE CIRCUIT BREAKER > 20KA    2.021 KA
RASP-E2 VFD    RASP-E2 VFD OU          0.141 KA      ANG:    96.88
P05.205        MCC-EBB-B                1.961 KA      ANG:   -16.27

RASP-E3 VFD IN 3P Duty:  2.035 KA AT  -19.16 DEG (  1.69 MVA) X/R:    0.43
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.1287 + J  0.0447 OHMS

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER      2.035 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     2.035 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     2.035 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     2.035 KA
RASP-E3 VFD      RASP-E3 VFD OU      0.141 KA      ANG:    96.76
P05.107          MCC-EBB-A            1.977 KA      ANG:   -15.47

RASP-E4 VFD IN 3P Duty: 2.020 KA AT -19.97 DEG ( 1.68 MVA) X/R:    0.46
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1289 + J 0.0468 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      2.020 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     2.020 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     2.020 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     2.020 KA
RASP-E4 VFD      RASP-E4 VFD OU      0.141 KA      ANG:    96.65
P05.207          MCC-EBB-B            1.961 KA      ANG:   -16.27

RASP-E5 VFD IN 3P Duty: 2.034 KA AT -19.18 DEG ( 1.69 MVA) X/R:    0.44
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1287 + J 0.0448 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      2.034 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     2.034 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     2.034 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     2.034 KA
RASP-E5 VFD      RASP-E5 VFD OU      0.142 KA      ANG:    96.30
P05.109          MCC-EBB-A            1.977 KA      ANG:   -15.47

RASP-E6 VFD IN 3P Duty: 2.020 KA AT -19.98 DEG ( 1.68 MVA) X/R:    0.47
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1290 + J 0.0469 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      2.020 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     2.020 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     2.020 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     2.020 KA
RASP-E6 VFD      RASP-E6 VFD OU      0.142 KA      ANG:    96.30
P05.209          MCC-EBB-B            1.961 KA      ANG:   -16.27

RASP-E7 VFD IN 3P Duty: 2.034 KA AT -19.17 DEG ( 1.69 MVA) X/R:    0.44
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1287 + J 0.0447 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      2.034 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     2.034 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     2.034 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     2.034 KA
RASP-E7 VFD      RASP-E7 VFD OU      0.142 KA      ANG:    96.41
P05.111          MCC-EBB-A            1.977 KA      ANG:   -15.47

RASP-E8 VFD IN 3P Duty: 2.020 KA AT -19.97 DEG ( 1.68 MVA) X/R:    0.46

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1289 + J 0.0469 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.020 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.020 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.020 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.020 KA
RASP-E8 VFD RASP-E8 VFD OU 0.141 KA ANG: 96.53
P05.212 MCC-EBB-B 1.961 KA ANG: -16.27

RASP-W1 VFD IN 3P Duty: 14.004 KA AT -27.15 DEG ( 11.64 MVA) X/R: 0.52
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0176 + J 0.0090 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 14.004 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 14.004 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 14.004 KA
P07.107 MCC-WBB-A 14.004 KA ANG: -27.15

RASP-W2 VFD IN 3P Duty: 13.700 KA AT -28.71 DEG ( 11.39 MVA) X/R: 0.55
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0177 + J 0.0097 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 13.700 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 13.700 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 13.700 KA
P07.208 MCC-WBB-B 13.700 KA ANG: -28.71

RASP-W3 VFD IN 3P Duty: 14.004 KA AT -27.15 DEG ( 11.64 MVA) X/R: 0.52
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0176 + J 0.0090 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 14.004 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 14.004 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 14.004 KA
P07.109 MCC-WBB-A 14.004 KA ANG: -27.15

RASP-W4 VFD IN 3P Duty: 13.700 KA AT -28.71 DEG ( 11.39 MVA) X/R: 0.55
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0177 + J 0.0097 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 13.700 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 13.700 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 13.700 KA
P07.210 MCC-WBB-B 13.700 KA ANG: -28.71

RBDP-2 DISC 3P Duty: 10.279 KA AT -58.62 DEG ( 8.55 MVA) X/R: 1.85
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0140 + J 0.0230 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 10.279 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 10.279 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 10.279 KA
CONTRIBUTIONS: RB DRAIN PUMP 0.284 KA ANG: -84.29
CBL-0253 MCC-E 10.024 KA ANG: -57.92
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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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RBDP-4 DISC  3P Duty: 10.279 KA AT -58.62 DEG ( 8.55 MVA) X/R: 1.85
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0140 + J 0.0230 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 10.279 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 10.279 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 10.279 KA
CONTRIBUTIONS: RB DRAIN PUMP 0.284 KA ANG: -84.29
CBL-0257 MCC-E 10.024 KA ANG: -57.92

RBDP1 DISC  3P Duty: 8.793 KA AT -50.97 DEG ( 7.31 MVA) X/R: 1.43
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0198 + J 0.0245 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 8.793 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 8.793 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 8.793 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 8.793 KA
CONTRIBUTIONS: RB DRAIN PUMP 0.284 KA ANG: -84.29
CBL-0293 MCC-F.. 8.557 KA ANG: -229.92

RBDP3 DISC  3P Duty: 8.793 KA AT -50.97 DEG ( 7.31 MVA) X/R: 1.43
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0198 + J 0.0245 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 8.793 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 8.793 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 8.793 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 8.793 KA
CONTRIBUTIONS: RB DRAIN PUMP 0.284 KA ANG: -84.29
CBL-0307 MCC-F.. 8.557 KA ANG: -229.92

RECIRCV PAB-E1 3P Duty: 2.296 KA AT -17.40 DEG ( 1.91 MVA) X/R: 0.32
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1152 + J 0.0361 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.296 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.296 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.296 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.296 KA
CBL RECIRCV PA PP-EBB-B 2.296 KA ANG: -17.40

RECIRCV PAB-E2 3P Duty: 1.927 KA AT -15.24 DEG ( 1.60 MVA) X/R: 0.27
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1388 + J 0.0378 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.927 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.927 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.927 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.927 KA
CBL RECIRCV PA PP-EBB-B 1.927 KA ANG: -15.24

RECIRCV PAB-E3 3P Duty: 1.501 KA AT -12.77 DEG ( 1.25 MVA) X/R: 0.23

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1801 + J 0.0408 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.501 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.501 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.501 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.501 KA
CBL RECIRCV PA PP-EBB-B 1.501 KA ANG: -12.77

RETBSNRFCV STA 3P Duty: 2.745 KA AT -14.16 DEG ( 2.28 MVA) X/R: 0.25
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0979 + J 0.0247 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.745 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.745 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.745 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.745 KA
CONTRIBUTIONS: RET BSN RF CV 0.002 KA ANG: -84.29
CBL-0281 MCC-E. 2.744 KA ANG: -194.12

RF # 5 DISC 3P Duty: 2.733 KA AT -14.79 DEG ( 2.27 MVA) X/R: 0.27
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0980 + J 0.0259 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.733 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.733 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.733 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.733 KA
CONTRIBUTIONS: ROOF FAN #5 0.005 KA ANG: -84.29
CBL-0301 MCC-F. 2.731 KA ANG: -14.68

RF # 6 DISC 3P Duty: 2.733 KA AT -14.75 DEG ( 2.27 MVA) X/R: 0.27
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0981 + J 0.0258 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.733 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.733 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.733 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.733 KA
CONTRIBUTIONS: ROOF FAN #6 0.004 KA ANG: -84.29
CBL-0303 MCC-F. 2.731 KA ANG: -14.68

RF-1 DISC 3P Duty: 3.430 KA AT -30.31 DEG ( 2.85 MVA) X/R: 0.63
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0698 + J 0.0408 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 3.430 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 3.430 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 3.430 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 3.430 KA
CBL-RF-1 RF-1 TERM 0.004 KA ANG: 95.74
CBL-RF-1 DISK MCC-EPB-B 3.427 KA ANG: -30.26

RIVER VALVE DI 3P Duty: 1.448 KA AT -6.96 DEG ( 1.20 MVA) X/R: 0.12
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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1900 + J 0.0232 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.448 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.448 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.448 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.448 KA
CONTRIBUTIONS: RIVER VALVE B- 0.007 KA ANG: -84.29
CBL-0396 MCC-P 1.446 KA ANG: -6.69

RLS-ACCU-1 3P Duty: 2.755 KA AT -13.03 DEG ( 2.29 MVA) X/R: 0.23
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0980 + J 0.0227 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.755 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.755 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.755 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.755 KA
CBL-0511 RLS-ACCU-1 DIS 2.755 KA ANG: -13.03

RLS-ACCU-1 DIS 3P Duty: 3.369 KA AT -15.35 DEG ( 2.80 MVA) X/R: 0.28
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0793 + J 0.0218 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 3.369 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 3.369 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 3.369 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 3.369 KA
CBL-0510 MCC-RLS-A 3.369 KA ANG: -15.35

RLS-ACU-1 3P Duty: 6.999 KA AT -30.78 DEG ( 5.82 MVA) X/R: 0.60
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0340 + J 0.0203 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 6.999 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 6.999 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 6.999 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 6.999 KA
CBL-0512 MCC-RLS-A 6.999 KA ANG: -30.78

RLS-EF-1 DISC 3P Duty: 2.697 KA AT -14.75 DEG ( 2.24 MVA) X/R: 0.27
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0994 + J 0.0262 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.697 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.697 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.697 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.697 KA
CBL-0528 RLS-EF-1 TERM 0.007 KA ANG: -84.26
CBL-0524 MCC-RLS-B 2.694 KA ANG: -14.61

RLS-EF-2 DISC 3P Duty: 4.794 KA AT -24.21 DEG ( 3.99 MVA) X/R: 0.46
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0527 + J 0.0237 OHMS

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER      4.794 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     4.794 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     4.794 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     4.794 KA
CBL-0529      RLS-EF-2 TERM             0.005 KA      ANG:   -84.27
CBL-0527      MCC-RLS-B                  4.791 KA      ANG:   -24.15

RLS-PPU-1    3P Duty:  7.378 KA AT  -37.94 DEG (   6.13 MVA) X/R:    0.79
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.0296 + J  0.0231 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      7.378 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     7.378 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     7.378 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     7.378 KA
CBL-0600      MCC-RLS-B                  7.378 KA      ANG:   -37.94

RLS-SF-1 DISC 3P Duty:  1.755 KA AT  -10.89 DEG (   1.46 MVA) X/R:    0.20
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.1551 + J  0.0298 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      1.755 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     1.755 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     1.755 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     1.755 KA
CBL-0531      RLS-SF-1 TERM             0.014 KA      ANG:   -84.24
CBL-0530      MCC-RLS-B                  1.751 KA      ANG:   -10.44

ROOF FAN 10 DI 3P Duty:  2.856 KA AT  -10.91 DEG (   2.37 MVA) X/R:    0.20
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.0953 + J  0.0184 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      2.856 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     2.856 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     2.856 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     2.856 KA
CBL-0424      BUS-0137                   0.035 KA      ANG:    95.85
CBL-0427      MCC-N.                    2.846 KA      ANG:   -10.22

ROOF FAN 11 DI 3P Duty:  2.825 KA AT  -11.10 DEG (   2.35 MVA) X/R:    0.21
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.0963 + J  0.0189 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      2.825 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     2.825 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     2.825 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     2.825 KA
CONTRIBUTIONS: ROOF FAN #11 R          0.035 KA      ANG:   -84.29
CBL-0398      MCC-P                    2.815 KA      ANG:   -10.41

ROOF FAN 12 DI 3P Duty:  2.856 KA AT  -10.91 DEG (   2.37 MVA) X/R:    0.20
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.0953 + J  0.0184 OHMS

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER      2.856 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     2.856 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     2.856 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     2.856 KA
CBL-0425      BUS-0138      0.035 KA      ANG:    95.85
CBL-0439      MCC-N.        2.846 KA      ANG:   -10.22

RS-SAP-1 DISC  3P Duty:  2.010 KA AT  -11.75 DEG (  1.67 MVA) X/R:    0.22
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.1350 + J  0.0281 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      2.010 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     2.010 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     2.010 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     2.010 KA
CBL-RS-SAP-1   RS-SAP-1 TERM      0.035 KA      ANG:    95.94
CBL-RS-SAP-1D  MCC-WPB-A          2.000 KA      ANG:   -10.78

S-1-1 DISC     3P Duty:  1.639 KA AT  -11.50 DEG (  1.36 MVA) X/R:    0.21
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.1657 + J  0.0337 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      1.639 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     1.639 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     1.639 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     1.639 KA
PC03.206B      48IN GATE STR      0.013 KA      ANG:    95.76
PC03.206A      S-1-1 JBOX         1.635 KA      ANG:  -191.08

S-21-1 DISC    3P Duty:  2.235 KA AT  -22.21 DEG (  1.86 MVA) X/R:    0.46
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.1148 + J  0.0469 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      2.235 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     2.235 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     2.235 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     2.235 KA
CBL-S-21-1     S-21-1 STARTER      0.007 KA      ANG:    95.74
P04.210E       S-21-2 DISC          0.007 KA      ANG:    95.76
P04.210D       F-1-4 DISC          2.229 KA      ANG:  -21.89

S-21-1 STARTER 3P Duty:  1.966 KA AT  -20.02 DEG (  1.63 MVA) X/R:    0.41
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.1324 + J  0.0483 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      1.966 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     1.966 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     1.966 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     1.966 KA
CONTRIBUTIONS: S-21-1 MTR          0.007 KA      ANG:   -84.29
CBL-S-21-1     S-21-1 DISC          1.963 KA      ANG:   -19.84

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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S-21-2 DISC  3P Duty:  2.215 KA AT  -22.05 DEG (   1.84 MVA) X/R:    0.46
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.1160 + J  0.0470 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  2.215 KA
MOLDED CASE CIRCUIT BREAKER < 10KA  2.215 KA
MOLDED CASE CIRCUIT BREAKER < 20KA  2.215 KA
MOLDED CASE CIRCUIT BREAKER > 20KA  2.215 KA
CBL-S-21-2    S-21-2 STARTER    0.007 KA      ANG:    95.76
P04.210E      S-21-1 DISC       2.212 KA      ANG:   -21.89

S-21-2 STARTER 3P Duty:  1.741 KA AT  -18.21 DEG (   1.45 MVA) X/R:    0.36
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.1512 + J  0.0498 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  1.741 KA
MOLDED CASE CIRCUIT BREAKER < 10KA  1.741 KA
MOLDED CASE CIRCUIT BREAKER < 20KA  1.741 KA
MOLDED CASE CIRCUIT BREAKER > 20KA  1.741 KA
CONTRIBUTIONS: S-21-2 MTR        0.007 KA      ANG:   -84.29
CBL-S-21-2    S-21-2 DISC       1.738 KA      ANG:   -18.00

S-21-3 DISC  3P Duty:  1.822 KA AT  -19.21 DEG (   1.51 MVA) X/R:    0.40
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.1436 + J  0.0501 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  1.822 KA
MOLDED CASE CIRCUIT BREAKER < 10KA  1.822 KA
MOLDED CASE CIRCUIT BREAKER < 20KA  1.822 KA
MOLDED CASE CIRCUIT BREAKER > 20KA  1.822 KA
CBL-S-21-3    S-21-3 STARTER    0.007 KA      ANG:    95.76
P04.215E      S-21-4 DISC       0.007 KA      ANG:    95.74
P04.215D      F-1-8 DISC       1.816 KA      ANG:   -18.81

S-21-3 STARTER 3P Duty:  1.486 KA AT  -16.47 DEG (   1.24 MVA) X/R:    0.33
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.1789 + J  0.0529 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  1.486 KA
MOLDED CASE CIRCUIT BREAKER < 10KA  1.486 KA
MOLDED CASE CIRCUIT BREAKER < 20KA  1.486 KA
MOLDED CASE CIRCUIT BREAKER > 20KA  1.486 KA
CONTRIBUTIONS: S-21-3 MTR        0.007 KA      ANG:   -84.29
CBL-S-21-3    S-21-3 DISC       1.483 KA      ANG:   -16.22

S-21-4 DISC  3P Duty:  1.808 KA AT  -19.10 DEG (   1.50 MVA) X/R:    0.40
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.1448 + J  0.0502 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  1.808 KA
MOLDED CASE CIRCUIT BREAKER < 10KA  1.808 KA
MOLDED CASE CIRCUIT BREAKER < 20KA  1.808 KA
MOLDED CASE CIRCUIT BREAKER > 20KA  1.808 KA
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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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CONTRIBUTIONS TO S-21-4 DISC (CONTINUED)					
CBL-S-21-4	S-21-4 STARTER	0.007 KA	ANG:	95.74	
P04.215E	S-21-3 DISC	1.805 KA	ANG:	-18.90	
S-21-4 STARTER	3P Duty: 1.626 KA AT -17.61 DEG (1.35 MVA) X/R: 0.36				
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1624 + J 0.0516 OHMS				
	LOW VOLTAGE POWER CIRCUIT BREAKER 1.626 KA				
	MOLDED CASE CIRCUIT BREAKER < 10KA 1.626 KA				
	MOLDED CASE CIRCUIT BREAKER < 20KA 1.626 KA				
	MOLDED CASE CIRCUIT BREAKER > 20KA 1.626 KA				
	CONTRIBUTIONS: S-21-4 MTR	0.007 KA	ANG:	-84.29	
CBL-S-21-4	S-21-4 DISC	1.623 KA	ANG:	-17.38	
S-54-2 DISC	3P Duty: 2.385 KA AT -14.02 DEG (1.98 MVA) X/R: 0.25				
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1127 + J 0.0281 OHMS				
	LOW VOLTAGE POWER CIRCUIT BREAKER 2.385 KA				
	MOLDED CASE CIRCUIT BREAKER < 10KA 2.385 KA				
	MOLDED CASE CIRCUIT BREAKER < 20KA 2.385 KA				
	MOLDED CASE CIRCUIT BREAKER > 20KA 2.385 KA				
CBL-S-54-2	S-54-2 STR	0.007 KA	ANG:	95.72	
CBL-S-54-2D	BUS-0287	2.383 KA	ANG:	-13.86	
S-54-2 STR	3P Duty: 2.293 KA AT -13.65 DEG (1.91 MVA) X/R: 0.25				
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1174 + J 0.0285 OHMS				
	LOW VOLTAGE POWER CIRCUIT BREAKER 2.293 KA				
	MOLDED CASE CIRCUIT BREAKER < 10KA 2.293 KA				
	MOLDED CASE CIRCUIT BREAKER < 20KA 2.293 KA				
	MOLDED CASE CIRCUIT BREAKER > 20KA 2.293 KA				
	CONTRIBUTIONS: S-54-2 MTR	0.007 KA	ANG:	-84.29	
CBL-S-54-2	S-54-2 DISC	2.291 KA	ANG:	-13.48	
SC-1 DISC	3P Duty: 4.258 KA AT -18.79 DEG (3.54 MVA) X/R: 0.35				
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0616 + J 0.0210 OHMS				
	LOW VOLTAGE POWER CIRCUIT BREAKER 4.258 KA				
	MOLDED CASE CIRCUIT BREAKER < 10KA 4.258 KA				
	MOLDED CASE CIRCUIT BREAKER < 20KA 4.258 KA				
	MOLDED CASE CIRCUIT BREAKER > 20KA 4.258 KA				
CBL-0553	SC-1 TERM	0.014 KA	ANG:	95.74	
CBL-0552	MCC-C	4.253 KA	ANG:	-18.62	
SC-2 DISC	3P Duty: 4.348 KA AT -18.72 DEG (3.62 MVA) X/R: 0.35				
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0604 + J 0.0205 OHMS				

THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER      4.348 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     4.348 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     4.348 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     4.348 KA
CONTRIBUTIONS:  SCREEN COMP SC        0.014 KA      ANG:  -84.29
CBL-0476         MCC-D                  4.343 KA      ANG:  -18.55

SC-3 DISC    3P Duty:  4.348 KA AT  -18.72 DEG (   3.62 MVA) X/R:    0.35
VOLTAGE:     480.   EQUIV. IMPEDANCE=  0.0604 + J  0.0205 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      4.348 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     4.348 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     4.348 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     4.348 KA
CONTRIBUTIONS:  SCREEN COMP SC        0.014 KA      ANG:  -84.29
CBL-0477         MCC-D                  4.343 KA      ANG:  -18.55

SC-E1 DISC   3P Duty:  0.562 KA AT  -6.19 DEG (   0.47 MVA) X/R:    0.11
VOLTAGE:     480.   EQUIV. IMPEDANCE=  0.4901 + J  0.0531 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      0.562 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     0.562 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     0.562 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     0.562 KA
CBL-SC-E1A      SC-E1 TERM              0.005 KA      ANG:   95.73
CBL-SC-E1       MCC-EBB-A.              0.561 KA      ANG: -185.66

SC-E2 DISC   3P Duty:  0.561 KA AT  -6.43 DEG (   0.47 MVA) X/R:    0.11
VOLTAGE:     480.   EQUIV. IMPEDANCE=  0.4906 + J  0.0553 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      0.561 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     0.561 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     0.561 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     0.561 KA
CBL-SC-E2       SC-E2 TERMS              0.005 KA      ANG:   95.73
CBL-SC-E2D      MCC-EBB-B              0.560 KA      ANG:   -5.90

SC-E3 DISC   3P Duty:  0.324 KA AT  -5.36 DEG (   0.27 MVA) X/R:    0.09
VOLTAGE:     480.   EQUIV. IMPEDANCE=  0.8523 + J  0.0800 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      0.324 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     0.324 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     0.324 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     0.324 KA
CBL-SC-E3A      SC-E3 TERM              0.005 KA      ANG:   95.73
CBL-SC-E3       MCC-EBB-A.              0.323 KA      ANG: -184.44

SC-E4 DISC   3P Duty:  0.323 KA AT  -5.50 DEG (   0.27 MVA) X/R:    0.09

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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VOLTAGE: 480. EQUIV. IMPEDANCE= 0.8528 + J 0.0822 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 0.323 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.323 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.323 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.323 KA
CBL-SC-E4 SC-E4 TERMS 0.005 KA ANG: 95.73
CBL-SC-E4D MCC-EBB-B 0.322 KA ANG: -4.58

SCDR-W1 DISC 3P Duty: 0.610 KA AT -4.22 DEG ( 0.51 MVA) X/R: 0.07
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.4530 + J 0.0334 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 0.610 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.610 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.610 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.610 KA
CBL-SCDR-W1 SCDR-W1 TERM 0.005 KA ANG: 95.73
CBL-SCDR-W1D MCC-WBB-A. 0.609 KA ANG: -3.72

SCDR-W2 DISC 3P Duty: 0.610 KA AT -4.30 DEG ( 0.51 MVA) X/R: 0.07
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.4531 + J 0.0341 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 0.610 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.610 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.610 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.610 KA
CBL-SCDR-W2 SCDR-W2 TERM 0.005 KA ANG: 95.73
CBL-SCDR-W2D MCC-WBB-B. 0.609 KA ANG: -3.81

SCP-6 3P Duty: 12.794 KA AT -77.61 DEG ( 10.64 MVA) X/R: 5.09
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0046 + J 0.0212 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 12.794 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 14.352 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 12.901 KA
CBL-0270 LBP-6 STARTER 0.003 KA ANG: 95.74
CBL-0269 SCP-6 TERM 0.704 KA ANG: -83.74
PI-0005 MCC-F 12.091 KA ANG: -77.25

SCP-8 3P Duty: 13.475 KA AT -77.53 DEG ( 11.20 MVA) X/R: 5.18
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0044 + J 0.0201 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 13.475 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 15.175 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 13.642 KA
CBL-0255 LBP-8 STARTER 0.003 KA ANG: 95.74
CBL-0252 SCP-8 TERM 0.704 KA ANG: -83.74
PI-0002 MCC-E 12.772 KA ANG: -77.18

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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SCREW CONV 3 S 3P Duty: 4.356 KA AT -18.99 DEG (3.62 MVA) X/R: 0.36
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0602 + J 0.0207 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 4.356 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.356 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.356 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.356 KA
CONTRIBUTIONS: SCREW CONV 3 0.035 KA ANG: -84.29
CBL-0465 MCC-D 4.342 KA ANG: -18.57

SCRNCNV DISC 3P Duty: 4.346 KA AT -18.63 DEG (3.61 MVA) X/R: 0.34
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0604 + J 0.0204 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 4.346 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.346 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.346 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.346 KA
CONTRIBUTIONS: SCREENINGS CON 0.007 KA ANG: -84.29
CBL-0463 MCC-D 4.343 KA ANG: -18.54

SCTY GATE STAR 3P Duty: 4.774 KA AT -33.87 DEG (3.97 MVA) X/R: 0.68
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0482 + J 0.0324 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 4.774 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.774 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.774 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.774 KA
CONTRIBUTIONS: SECURITY GATE 0.004 KA ANG: -84.29
CBL-0460 SECURITY GATE 4.771 KA ANG: -213.84

SE ISO VALVE D 3P Duty: 1.448 KA AT -6.96 DEG (1.20 MVA) X/R: 0.12
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1900 + J 0.0232 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.448 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.448 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.448 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.448 KA
CONTRIBUTIONS: SE ISO VALVE B 0.007 KA ANG: -84.29
CBL-0395 MCC-P 1.446 KA ANG: -6.69

SECURITY GATE 3P Duty: 5.757 KA AT -40.85 DEG (4.79 MVA) X/R: 0.88
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0364 + J 0.0315 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 5.757 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 5.757 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 5.757 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 5.757 KA
CBL-0460 SCTY GATE STAR 0.004 KA ANG: -84.28

THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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	CONTRIBUTIONS TO SECURITY GATE (CONTINUED)			
	CBL-0256	MCC-E.	5.754 KA	ANG: -40.83
SEP1 DISC	3P Duty: 1.452 KA AT -7.21 DEG (1.21 MVA) X/R: 0.13			
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1893 + J 0.0240 OHMS			
	LOW VOLTAGE POWER CIRCUIT BREAKER 1.452 KA			
	MOLDED CASE CIRCUIT BREAKER < 10KA 1.452 KA			
	MOLDED CASE CIRCUIT BREAKER < 20KA 1.452 KA			
	MOLDED CASE CIRCUIT BREAKER > 20KA 1.452 KA			
	CONTRIBUTIONS: WET WELL BYPAS 0.013 KA ANG: -84.29			
	CBL-0377	MCC-M.	1.449 KA	ANG: -6.72
SEP1 VFD IN	3P Duty: 17.175 KA AT -73.61 DEG (14.28 MVA) X/R: 3.79			
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0046 + J 0.0155 OHMS			
	LOW VOLTAGE POWER CIRCUIT BREAKER 17.175 KA			
	MOLDED CASE CIRCUIT BREAKER < 20KA 17.982 KA			
	MOLDED CASE CIRCUIT BREAKER > 20KA 17.175 KA			
	SEP1 VFD	SEP1 VFD OUT	1.043 KA	ANG: 96.42
	CBL-0361	MCC-M	16.149 KA	ANG: -72.97
SEP2 VFD IN	3P Duty: 17.926 KA AT -75.02 DEG (14.90 MVA) X/R: 4.00			
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0040 + J 0.0149 OHMS			
	LOW VOLTAGE POWER CIRCUIT BREAKER 17.926 KA			
	MOLDED CASE CIRCUIT BREAKER < 20KA 19.016 KA			
	MOLDED CASE CIRCUIT BREAKER > 20KA 17.926 KA			
	SEP2 VFD	SEP2 VFD OUT	1.043 KA	ANG: 96.42
	CBL-0406	MCC-N	16.896 KA	ANG: -74.49
SEP3 VFD IN	3P Duty: 17.044 KA AT -72.08 DEG (14.17 MVA) X/R: 3.43			
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0050 + J 0.0155 OHMS			
	LOW VOLTAGE POWER CIRCUIT BREAKER 17.044 KA			
	MOLDED CASE CIRCUIT BREAKER < 20KA 17.393 KA			
	MOLDED CASE CIRCUIT BREAKER > 20KA 17.044 KA			
	SEP3 VFD	SEP3 DISC	0.872 KA	ANG: 96.30
	CBL-0388	MCC-P	16.191 KA	ANG: -71.46
SEP4 VFD IN	3P Duty: 16.144 KA AT -67.08 DEG (13.42 MVA) X/R: 2.69			
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0067 + J 0.0158 OHMS			
	LOW VOLTAGE POWER CIRCUIT BREAKER 16.144 KA			
	MOLDED CASE CIRCUIT BREAKER < 20KA 16.144 KA			
	MOLDED CASE CIRCUIT BREAKER > 20KA 16.144 KA			
	SEP4 VFD	SEP4 VFD OUT	1.043 KA	ANG: 96.42
	CBL-0443	MCC-Q	15.147 KA	ANG: -65.96

THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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SEP5 VFD IN      3P Duty: 17.175 KA AT -73.61 DEG ( 14.28 MVA) X/R: 3.79
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0046 + J 0.0155 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 17.175 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 17.982 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 17.175 KA
SEP5 VFD          SEP5 VFD OUT      1.043 KA      ANG: 96.42
CBL-0363          MCC-M              16.149 KA     ANG: -72.97

SEP6 VFD IN      3P Duty: 17.926 KA AT -75.02 DEG ( 14.90 MVA) X/R: 4.00
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0040 + J 0.0149 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 17.926 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 19.016 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 17.926 KA
SEP6 VFD          SEP6 VFD OUT      1.043 KA      ANG: 96.42
CBL-0408          MCC-N              16.896 KA     ANG: -74.49

SEPPMP DISC TE  3P Duty: 7.987 KA AT -35.30 DEG ( 6.64 MVA) X/R: 0.77
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0283 + J 0.0200 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 7.987 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 7.987 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 7.987 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 7.987 KA
CONTRIBUTIONS: SEPTIC PUMP          0.106 KA      ANG: -84.29
CBL-0482          MCC-D              7.917 KA      ANG: -34.72

SF1 DISC         3P Duty: 1.430 KA AT -7.12 DEG ( 1.19 MVA) X/R: 0.13
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1924 + J 0.0240 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.430 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.430 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.430 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.430 KA
CONTRIBUTIONS: SF-1                  0.005 KA      ANG: -84.29
CBL-0436          EF4 DISC           1.428 KA      ANG: -6.91

SF1FF DISC       3P Duty: 4.007 KA AT -23.67 DEG ( 3.33 MVA) X/R: 0.53
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0633 + J 0.0278 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 4.007 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.007 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.007 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.007 KA
CBL-0626          SF-1 FF TERM       0.142 KA      ANG: 95.92
CBL-0625          MCC-FF              3.939 KA      ANG: -21.88

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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SF2EE DISC    3P Duty:  1.538 KA AT  -15.58 DEG (   1.28 MVA) X/R:    0.35
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.1736 + J  0.0484 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER    1.538 KA
MOLDED CASE CIRCUIT BREAKER < 10KA   1.538 KA
MOLDED CASE CIRCUIT BREAKER < 20KA   1.538 KA
MOLDED CASE CIRCUIT BREAKER > 20KA   1.538 KA
CBL-0615      SF-2 EE TERM            0.142 KA      ANG:    95.92
CBL-0614      MCC-EE                  1.492 KA      ANG:   -10.50

SF3FF DISC    3P Duty:  3.992 KA AT  -23.19 DEG (   3.32 MVA) X/R:    0.50
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.0638 + J  0.0273 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER    3.992 KA
MOLDED CASE CIRCUIT BREAKER < 10KA   3.992 KA
MOLDED CASE CIRCUIT BREAKER < 20KA   3.992 KA
MOLDED CASE CIRCUIT BREAKER > 20KA   3.992 KA
CBL-0628      SF-3 FF TERM            0.106 KA      ANG:    95.86
CBL-0627      MCC-FF                  3.941 KA      ANG:   -21.84

SF4EE DISC    3P Duty:  4.041 KA AT  -22.68 DEG (   3.36 MVA) X/R:    0.48
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.0633 + J  0.0264 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER    4.041 KA
MOLDED CASE CIRCUIT BREAKER < 10KA   4.041 KA
MOLDED CASE CIRCUIT BREAKER < 20KA   4.041 KA
MOLDED CASE CIRCUIT BREAKER > 20KA   4.041 KA
CBL-0617      SF-4 EE TERM            0.106 KA      ANG:    95.95
CBL-0616      MCC-EE                  3.991 KA      ANG:   -21.34

SLC 4 DISC    3P Duty:  3.507 KA AT  -18.67 DEG (   2.92 MVA) X/R:    0.46
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.0749 + J  0.0253 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER    3.507 KA
MOLDED CASE CIRCUIT BREAKER < 10KA   3.507 KA
MOLDED CASE CIRCUIT BREAKER < 20KA   3.507 KA
MOLDED CASE CIRCUIT BREAKER > 20KA   3.507 KA
CONTRIBUTIONS: 40 HP SLC - 4         0.314 KA      ANG:   -84.29
CBL-0142      MCC-54 A                3.390 KA      ANG:   -13.84

SLC 5 DISC    3P Duty:  3.310 KA AT  -18.58 DEG (   2.75 MVA) X/R:    0.46
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.0794 + J  0.0267 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER    3.310 KA
MOLDED CASE CIRCUIT BREAKER < 10KA   3.310 KA
MOLDED CASE CIRCUIT BREAKER < 20KA   3.310 KA
MOLDED CASE CIRCUIT BREAKER > 20KA   3.310 KA
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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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CONTRIBUTIONS TO SLC 5 DISC (CONTINUED)
CONTRIBUTIONS: 40 HP SLC - 5 0.314 KA ANG: -84.29
CBL-0148 MCC-54B 3.194 KA ANG: -13.44

SLC 6 DISC 3P Duty: 2.393 KA AT -13.27 DEG ( 1.99 MVA) X/R: 0.28
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1127 + J 0.0266 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.393 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.393 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.393 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.393 KA
CONTRIBUTIONS: 20 HP SLC - 6 0.157 KA ANG: -84.29
CBL-0143 MCC-54 A 2.347 KA ANG: -9.65

SLC 7 DISC 3P Duty: 2.243 KA AT -13.21 DEG ( 1.87 MVA) X/R: 0.28
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1203 + J 0.0282 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.243 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.243 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.243 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.243 KA
CONTRIBUTIONS: 20 HP SLC - 7 0.157 KA ANG: -84.29
CBL-0149 MCC-54B 2.198 KA ANG: -9.34

SLC-1 DISC 3P Duty: 2.746 KA AT -14.22 DEG ( 2.28 MVA) X/R: 0.26
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0978 + J 0.0248 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.746 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.746 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.746 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.746 KA
CONTRIBUTIONS: SLUDGE COLL 1 0.005 KA ANG: -84.29
CBL-0259 MCC-E 2.744 KA ANG: -14.12

SLC-3 DISC 3P Duty: 2.746 KA AT -14.22 DEG ( 2.28 MVA) X/R: 0.26
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0978 + J 0.0248 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.746 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.746 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.746 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.746 KA
CONTRIBUTIONS: SLUDGE COLL 3 0.005 KA ANG: -84.29
CBL-0261 MCC-E 2.744 KA ANG: -14.12

SLC2 DISC 3P Duty: 2.733 KA AT -14.79 DEG ( 2.27 MVA) X/R: 0.27
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0980 + J 0.0259 OHMS

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER      2.733 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     2.733 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     2.733 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     2.733 KA
CONTRIBUTIONS:  SLUDGE COLL #2        0.005 KA      ANG:  -84.29
CBL-0299          MCC-F                  2.731 KA      ANG:  -14.68

SLDG F-50-1  3P Duty:  0.857 KA AT  -7.64 DEG (  0.71 MVA) X/R:    0.13
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.3203 + J  0.0429  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      0.857 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     0.857 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     0.857 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     0.857 KA
CBL-0340      BUS-0358                  0.857 KA      ANG:   -7.64

SLDG F-50-2  3P Duty:  0.857 KA AT  -7.64 DEG (  0.71 MVA) X/R:    0.13
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.3203 + J  0.0429  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      0.857 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     0.857 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     0.857 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     0.857 KA
CBL-0342      BUS-0359                  0.857 KA      ANG:   -7.64

SLDG F-50-3  3P Duty:  0.748 KA AT  -7.19 DEG (  0.62 MVA) X/R:    0.13
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.3675 + J  0.0464  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      0.748 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     0.748 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     0.748 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     0.748 KA
CBL-0246      BUS-0348                  0.748 KA      ANG:   -7.19

SLDG F-50-4  3P Duty:  0.748 KA AT  -7.19 DEG (  0.62 MVA) X/R:    0.13
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.3675 + J  0.0464  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      0.748 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     0.748 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     0.748 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     0.748 KA
CBL-0248      BUS-0350                  0.748 KA      ANG:   -7.19

SLDG F-60-1  3P Duty:  0.897 KA AT  -7.80 DEG (  0.75 MVA) X/R:    0.14
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.3062 + J  0.0419  OHMS

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER    0.897 KA
MOLDED CASE CIRCUIT BREAKER < 10KA   0.897 KA
MOLDED CASE CIRCUIT BREAKER < 20KA   0.897 KA
MOLDED CASE CIRCUIT BREAKER > 20KA   0.897 KA
CBL-0272      BUS-0349      0.897 KA      ANG:    -7.80

SLDG F-60-2  3P Duty:  0.897 KA AT  -7.80 DEG (  0.75 MVA) X/R:    0.14
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.3062 + J  0.0419 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER    0.897 KA
MOLDED CASE CIRCUIT BREAKER < 10KA   0.897 KA
MOLDED CASE CIRCUIT BREAKER < 20KA   0.897 KA
MOLDED CASE CIRCUIT BREAKER > 20KA   0.897 KA
CBL-0274      BUS-0351      0.897 KA      ANG:    -7.80

SLDG F-60-3  3P Duty:  0.897 KA AT  -7.80 DEG (  0.75 MVA) X/R:    0.14
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.3062 + J  0.0419 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER    0.897 KA
MOLDED CASE CIRCUIT BREAKER < 10KA   0.897 KA
MOLDED CASE CIRCUIT BREAKER < 20KA   0.897 KA
MOLDED CASE CIRCUIT BREAKER > 20KA   0.897 KA
CBL-0306      BUS-0352      0.897 KA      ANG:    -7.80

SLDG F-60-4  3P Duty:  0.736 KA AT  -7.14 DEG (  0.61 MVA) X/R:    0.13
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.3734 + J  0.0468 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER    0.736 KA
MOLDED CASE CIRCUIT BREAKER < 10KA   0.736 KA
MOLDED CASE CIRCUIT BREAKER < 20KA   0.736 KA
MOLDED CASE CIRCUIT BREAKER > 20KA   0.736 KA
CBL-0348      BUS-0362      0.736 KA      ANG:    -7.14

SLDG S-50-1  3P Duty:  0.780 KA AT  -7.32 DEG (  0.65 MVA) X/R:    0.13
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.3522 + J  0.0453 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER    0.780 KA
MOLDED CASE CIRCUIT BREAKER < 10KA   0.780 KA
MOLDED CASE CIRCUIT BREAKER < 20KA   0.780 KA
MOLDED CASE CIRCUIT BREAKER > 20KA   0.780 KA
CBL-0311      BUS-0353      0.780 KA      ANG:    -7.32

SLDG S-50-2  3P Duty:  0.857 KA AT  -7.64 DEG (  0.71 MVA) X/R:    0.13
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.3203 + J  0.0429 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER    0.857 KA
MOLDED CASE CIRCUIT BREAKER < 10KA   0.857 KA
MOLDED CASE CIRCUIT BREAKER < 20KA   0.857 KA
MOLDED CASE CIRCUIT BREAKER > 20KA   0.857 KA

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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CONTRIBUTIONS TO SLDG S-50-2 (CONTINUED)
CBL-0327 BUS-0354 0.857 KA ANG: -7.64

SLDG S-50-3 3P Duty: 0.857 KA AT -7.64 DEG ( 0.71 MVA) X/R: 0.13
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.3203 + J 0.0429 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 0.857 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.857 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.857 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.857 KA
CBL-0334 BUS-0355 0.857 KA ANG: -7.64

SLDG S-50-4 3P Duty: 0.857 KA AT -7.64 DEG ( 0.71 MVA) X/R: 0.13
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.3203 + J 0.0429 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 0.857 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.857 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.857 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.857 KA
CBL-0336 BUS-0356 0.857 KA ANG: -7.64

SLDG S-50-5 3P Duty: 0.857 KA AT -7.64 DEG ( 0.71 MVA) X/R: 0.13
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.3203 + J 0.0429 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 0.857 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.857 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.857 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.857 KA
CBL-0338 BUS-0357 0.857 KA ANG: -7.64

SLDG S-60-1 3P Duty: 0.836 KA AT -7.55 DEG ( 0.70 MVA) X/R: 0.13
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.3286 + J 0.0435 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 0.836 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.836 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.836 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.836 KA
CBL-0344 BUS-0360 0.836 KA ANG: -7.55

SLDG S-60-2 3P Duty: 0.836 KA AT -7.55 DEG ( 0.70 MVA) X/R: 0.13
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.3286 + J 0.0435 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 0.836 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.836 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.836 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.836 KA
CBL-0346 BUS-0361 0.836 KA ANG: -7.55

SLG-3 DISC 3P Duty: 4.258 KA AT -18.77 DEG ( 3.54 MVA) X/R: 0.35

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0616 + J 0.0209 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 4.258 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.258 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.258 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.258 KA
CBL-0532 SLG-3 STR 0.013 KA ANG: 95.74
CBL-0498 MCC-C 4.253 KA ANG: -18.62

SLG-4 DISC 3P Duty: 4.258 KA AT -18.77 DEG ( 3.54 MVA) X/R: 0.35
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0616 + J 0.0209 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 4.258 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.258 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.258 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.258 KA
CBL-0534 SG 4 STR 0.013 KA ANG: 95.74
CBL-0533 MCC-C 4.253 KA ANG: -18.62

SLGT-5 DISC 3P Duty: 4.348 KA AT -18.70 DEG ( 3.61 MVA) X/R: 0.35
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0604 + J 0.0204 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 4.348 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.348 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.348 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.348 KA
CONTRIBUTIONS: SLUICE GATE 5 0.013 KA ANG: -84.29
CBL-0492 MCC-D. 4.343 KA ANG: -18.55

SLGT1 DISC 3P Duty: 6.985 KA AT -34.66 DEG ( 5.81 MVA) X/R: 0.71
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0326 + J 0.0226 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 6.985 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 6.985 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 6.985 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 6.985 KA
CONTRIBUTIONS: SLUICE GT #1 S 0.013 KA ANG: -84.29
CBL-0322 MCC-F 6.977 KA ANG: -34.58

SLGT2 DISC 3P Duty: 2.736 KA AT -14.94 DEG ( 2.27 MVA) X/R: 0.27
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0979 + J 0.0261 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.736 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.736 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.736 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.736 KA
CONTRIBUTIONS: SLUICE GT #2 S 0.013 KA ANG: -84.29
CBL-0323 MCC-F 2.731 KA ANG: -14.69

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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SLP1 DISC      3P Duty:  2.756 KA AT  -14.84 DEG (  2.29 MVA) X/R:    0.28
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.0972 + J  0.0258  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  2.756 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.756 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.756 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.756 KA
CONTRIBUTIONS:  SLUDGE PUMP 1      0.035 KA      ANG:   -84.29
CBL-0279         MCC-E.             2.743 KA      ANG:  -194.14

SLP2 DISC      3P Duty:  2.756 KA AT  -14.84 DEG (  2.29 MVA) X/R:    0.28
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.0972 + J  0.0258  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  2.756 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.756 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.756 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.756 KA
CONTRIBUTIONS:  SLUDGE PUMP 2      0.035 KA      ANG:   -84.29
CBL-0278         MCC-E.             2.743 KA      ANG:  -194.14

SLP3 DISC      3P Duty:  2.743 KA AT  -15.40 DEG (  2.28 MVA) X/R:    0.30
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.0974 + J  0.0268  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  2.743 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.743 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.743 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.743 KA
CONTRIBUTIONS:  SLUDGE PUMP #3     0.035 KA      ANG:   -84.29
CBL-0312         MCC-F..            2.731 KA      ANG:  -194.71

SLUDGE CND LCP 3P Duty:  3.518 KA AT  -31.23 DEG (  2.93 MVA) X/R:    0.75
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.0674 + J  0.0408  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  3.518 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 3.518 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 3.518 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 3.518 KA
CBL-PSLPM-E3    PSLPM-E3 TERM      0.106 KA      ANG:    95.84
CBL-PSLPM-E3 L  MCC-EPB-A          3.455 KA      ANG:   -29.82

SMP2 DISC      3P Duty:  2.736 KA AT  -14.97 DEG (  2.27 MVA) X/R:    0.28
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.0979 + J  0.0262  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  2.736 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.736 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.736 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.736 KA
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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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	CONTRIBUTIONS TO SMP2 DISC	(CONTINUED)			
	CONTRIBUTIONS: SUMP PUMP #2	0.014 KA	ANG:	-84.29	
	CBL-0298 MCC-F	2.731 KA	ANG:	-14.69	
SP NGB DISC	3P Duty: 4.266 KA AT -19.07 DEG (3.55 MVA)	X/R:	0.36		
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0614 + J 0.0212 OHMS				
	LOW VOLTAGE POWER CIRCUIT BREAKER	4.266 KA			
	MOLDED CASE CIRCUIT BREAKER < 10KA	4.266 KA			
	MOLDED CASE CIRCUIT BREAKER < 20KA	4.266 KA			
	MOLDED CASE CIRCUIT BREAKER > 20KA	4.266 KA			
	CBL-0536 SP NGB TERM	0.035 KA	ANG:	95.79	
	CBL-0535 MCC-C	4.251 KA	ANG:	-18.63	
SSC-1 DISC	3P Duty: 4.266 KA AT -19.07 DEG (3.55 MVA)	X/R:	0.36		
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0614 + J 0.0212 OHMS				
	LOW VOLTAGE POWER CIRCUIT BREAKER	4.266 KA			
	MOLDED CASE CIRCUIT BREAKER < 10KA	4.266 KA			
	MOLDED CASE CIRCUIT BREAKER < 20KA	4.266 KA			
	MOLDED CASE CIRCUIT BREAKER > 20KA	4.266 KA			
	CBL-0551 SSC-1 TERM	0.035 KA	ANG:	95.79	
	CBL-0550 MCC-C	4.251 KA	ANG:	-18.63	
SSC-2 DISC	3P Duty: 4.356 KA AT -18.99 DEG (3.62 MVA)	X/R:	0.36		
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0602 + J 0.0207 OHMS				
	LOW VOLTAGE POWER CIRCUIT BREAKER	4.356 KA			
	MOLDED CASE CIRCUIT BREAKER < 10KA	4.356 KA			
	MOLDED CASE CIRCUIT BREAKER < 20KA	4.356 KA			
	MOLDED CASE CIRCUIT BREAKER > 20KA	4.356 KA			
	CONTRIBUTIONS: SSC-2	0.035 KA	ANG:	-84.29	
	CBL-0464 MCC-D	4.342 KA	ANG:	-18.57	
SSCP-E1 DISC	3P Duty: 1.356 KA AT -15.23 DEG (1.13 MVA)	X/R:	0.33		
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1972 + J 0.0537 OHMS				
	LOW VOLTAGE POWER CIRCUIT BREAKER	1.356 KA			
	MOLDED CASE CIRCUIT BREAKER < 10KA	1.356 KA			
	MOLDED CASE CIRCUIT BREAKER < 20KA	1.356 KA			
	MOLDED CASE CIRCUIT BREAKER > 20KA	1.356 KA			
	CBL-SSCP-E1A SSCP-E1TERM	0.106 KA	ANG:	95.97	
	CBL-SSCP-E1 MCC-EBB-A	1.321 KA	ANG:	-10.93	
SSCP-W1 DISC	3P Duty: 6.957 KA AT -13.83 DEG (5.78 MVA)	X/R:	0.25		
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0387 + J 0.0095 OHMS				

THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER      6.957 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     6.957 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     6.957 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     6.957 KA
CBL-SSCP-W1      SSCP-W1 TERM          0.035 KA      ANG:   96.12
CBL-SSCP-W1D     MCC-WBB-A.            6.945 KA      ANG:  -13.55

SSCP-W2 DISC    3P Duty: 6.907 KA AT -14.73 DEG ( 5.74 MVA) X/R:   0.27
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0388 + J 0.0102 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      6.907 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     6.907 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     6.907 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     6.907 KA
CBL-SSCP-W2      SSCP-W2 TERM          0.035 KA      ANG:   96.05
CBL-SSCP-W2D     MCC-WBB-B.            6.894 KA      ANG:  -14.46

STWP 1 DISC     3P Duty: 5.595 KA AT -20.20 DEG ( 4.65 MVA) X/R:   0.39
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0465 + J 0.0171 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      5.595 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     5.595 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     5.595 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     5.595 KA
CONTRIBUTIONS: 40 HP STWP - 1          0.314 KA      ANG:  -78.46
CBL-0137         MCC-51A                5.436 KA      ANG:  -17.39

STWP 2 DISC     3P Duty: 5.078 KA AT -19.73 DEG ( 4.22 MVA) X/R:   0.47
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0514 + J 0.0184 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      5.078 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     5.078 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     5.078 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     5.078 KA
CONTRIBUTIONS: 40 HP STWP - 2          0.314 KA      ANG:  -84.29
CBL-0145         MCC-51B                4.952 KA      ANG:  -16.45

SUB 1 BUS A     3P Duty: 16.541 KA AT -77.88 DEG ( 13.75 MVA) X/R:   4.96
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0035 + J 0.0164 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER     16.541 KA
MOLDED CASE CIRCUIT BREAKER < 20KA    18.452 KA
MOLDED CASE CIRCUIT BREAKER > 20KA    16.587 KA
SUB 1 XFMR A     SUB 1 PRIMARY        14.104 KA      ANG: -256.93
P03.001          MCC-RLS-A            2.105 KA      ANG:   96.68
P03.002          MCC-C                0.345 KA      ANG:   96.30

SUB 1 BUS B     3P Duty: 16.354 KA AT -79.00 DEG ( 13.60 MVA) X/R:   5.33

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0032 + J 0.0166 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 16.354 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 18.524 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 16.652 KA
SUB 1 XFMR B SUB 1 PRIMARY 14.270 KA ANG: -258.38
P03.003 MCC-RLS-B 1.406 KA ANG: 96.98
P03.004 MCC-D 0.685 KA ANG: 96.32

SUB 1 PRIMARY 3P Duty: 5.395 KA AT -55.30 DEG ( 123.36 MVA) X/R: 1.54
VOLTAGE: 13200. EQUIV. IMPEDANCE= 0.8041 + J 1.1612 OHMS
M11.101 15 KV BUS 1 5.327 KA ANG: -54.92
SUB 1 XFMR A SUB 1 BUS A 0.077 KA ANG: 97.20

SUB 1 PRIMARY 3P Duty: 6.266 KA AT -69.50 DEG ( 143.26 MVA) X/R: 2.76
VOLTAGE: 13200. EQUIV. IMPEDANCE= 0.4259 + J 1.1392 OHMS
M11.201 15 KV BUS 2 6.201 KA ANG: -69.36
SUB 1 XFMR B SUB 1 BUS B 0.067 KA ANG: 97.24

SUB 2 BUS A 3P Duty: 13.694 KA AT -78.33 DEG ( 11.38 MVA) X/R: 5.27
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0041 + J 0.0198 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 13.694 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 15.479 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 13.914 KA
SUB 2 XFMR A SUB 2 PRIMARY 10.077 KA ANG: -256.66
P08.001A,B MCC-E 3.633 KA ANG: 97.03

SUB 2 BUS B 3P Duty: 13.106 KA AT -78.91 DEG ( 10.90 MVA) X/R: 5.39
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0041 + J 0.0208 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 13.106 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 14.879 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 13.376 KA
SUB 2 XFMR B SUB 2 PRIMARY 10.150 KA ANG: -257.73
P08.002A,B MCC-F 2.965 KA ANG: 97.06

SUB 2 PRIMARY 3P Duty: 5.676 KA AT -57.84 DEG ( 129.78 MVA) X/R: 1.70
VOLTAGE: 13200. EQUIV. IMPEDANCE= 0.7147 + J 1.1365 OHMS
M11.102 15 KV BUS 1 5.586 KA ANG: -57.43
SUB 2 XFMR A SUB 2 BUS A 0.099 KA ANG: 98.29

SUB 2 PRIMARY 3P Duty: 6.588 KA AT -73.81 DEG ( 150.63 MVA) X/R: 3.55
VOLTAGE: 13200. EQUIV. IMPEDANCE= 0.3226 + J 1.1108 OHMS
M11.202 15 KV BUS 2 6.505 KA ANG: -73.70
SUB 2 XFMR B SUB 2 BUS B 0.085 KA ANG: 98.13

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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SUB 3 BUS A  3P Duty: 38.990 KA AT -81.14 DEG ( 32.42 MVA) X/R: 6.91
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0011 + J 0.0070 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 39.325 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 41.753 KA
SUB 3 XFMR A  SUB 3 PRIMARY 33.763 KA ANG: -260.52
P07.001 MCC-WPB-A 0.349 KA ANG: 97.14
P07.002,ABC MCC-WBB-A 4.893 KA ANG: 94.69

SUB 3 BUS B  3P Duty: 36.262 KA AT -81.53 DEG ( 30.15 MVA) X/R: 6.95
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0011 + J 0.0076 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 36.610 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 38.870 KA
SUB 3 XFMR B  SUB 3 PRIMARY 33.405 KA ANG: -261.22
P07.004,ABC MCC-WBB-B 2.624 KA ANG: 94.74
P07.003 MCC-WPB-B 0.240 KA ANG: 96.47

SUB 3 PRIMARY 3P Duty: 7.059 KA AT -73.08 DEG ( 161.39 MVA) X/R: 3.61
VOLTAGE: 13200. EQUIV. IMPEDANCE= 0.3143 + J 1.0329 OHMS
M11.103 15 KV BUS 1 6.893 KA ANG: -72.79
SUB 3 XFMR A  SUB 3 BUS A 0.169 KA ANG: 95.19

SUB 3 PRIMARY 3P Duty: 6.743 KA AT -76.98 DEG ( 154.17 MVA) X/R: 4.49
VOLTAGE: 13200. EQUIV. IMPEDANCE= 0.2547 + J 1.1011 OHMS
M11.203 15 KV BUS 2 6.647 KA ANG: -76.86
SUB 3 XFMR B  SUB 3 BUS B 0.097 KA ANG: 95.07

SUB 4 BUS A  3P Duty: 21.070 KA AT -79.14 DEG ( 17.52 MVA) X/R: 5.49
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0025 + J 0.0129 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 21.070 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 21.590 KA
SUB 4 XFMR A  SUB 4 PRIMARY 14.376 KA ANG: -257.70
P04.MCC-M MCC-M 5.202 KA ANG: 97.74
P04.MCC-Q MCC-Q 1.506 KA ANG: 97.85

SUB 4 BUS B  3P Duty: 21.678 KA AT -80.21 DEG ( 18.02 MVA) X/R: 6.04
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0022 + J 0.0126 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 21.678 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 22.641 KA
SUB 4 XFMR B  SUB 4 PRIMARY 14.441 KA ANG: -258.98
P04.MCC-N MCC-N 4.380 KA ANG: 97.16
P04.MCC-P MCC-P 2.866 KA ANG: 97.63

SUB 4 PRIMARY 3P Duty: 6.146 KA AT -62.36 DEG ( 140.51 MVA) X/R: 2.06

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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VOLTAGE: 13200. EQUIV. IMPEDANCE= 0.5753 + J 1.0985 OHMS
M11.104      15 KV BUS 1      5.985 KA      ANG: -61.83
SUB 4 XFMR A  SUB 4 BUS A      0.171 KA      ANG: 98.68

SUB 4 PRIMARY 3P Duty: 6.777 KA AT -76.60 DEG ( 154.94 MVA) X/R: 4.35
VOLTAGE: 13200. EQUIV. IMPEDANCE= 0.2606 + J 1.0939 OHMS
M11.204      15 KV BUS 2      6.597 KA      ANG: -76.46
SUB 4 XFMR B  SUB 4 BUS B      0.180 KA      ANG: 98.44

SUB 5 BUS A 3P Duty: 43.957 KA AT -81.03 DEG ( 36.54 MVA) X/R: 6.62
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0010 + J 0.0062 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 43.990 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 46.706 KA
P05.4      MCC-XA      1.197 KA      ANG: 97.00
P05.1      MCC-R      4.999 KA      ANG: 96.08
SUB 5 XFMR A  SUB 5 PRIMARY 33.388 KA      ANG: -260.65
CBL MCC-56A  MCC-56 A      0.457 KA      ANG: 96.94
CBL-0178    VFD CFG-1 INPU 2.189 KA      ANG: 98.14
CBL-0181    MCC-51A      0.307 KA      ANG: -255.61
CBL-0184    MCC-54 A      0.458 KA      ANG: -259.80
CBL-0183    MCC-53 A      0.602 KA      ANG: -257.52
CBL-0182    MCC-52A      0.374 KA      ANG: -253.63

SUB 5 BUS B 3P Duty: 44.488 KA AT -81.67 DEG ( 36.99 MVA) X/R: 7.00
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0009 + J 0.0062 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 44.966 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 47.742 KA
P05.8      MCC-S      3.514 KA      ANG: 95.97
P05.5      MCC-XB      1.987 KA      ANG: 96.03
CBL-0170    VFD CFG-3 INPU 2.202 KA      ANG: -261.12
CBL-0175    MCC-53B      0.155 KA      ANG: -261.55
SUB 5 XFMR B  SUB 5 PRIMARY 33.034 KA      ANG: -261.34
CBL-0167    VFD CFG-2 INPU 2.191 KA      ANG: 98.02
CBL MCC-56B  MCC-56B      0.457 KA      ANG: 96.95
CBL-0174    MCC-52B      0.189 KA      ANG: -256.72
CBL-0173    MCC-51B      0.308 KA      ANG: -261.01
CBL-0176    MCC-54B      0.458 KA      ANG: -259.51

SUB 5 PRIMARY 3P Duty: 7.151 KA AT -73.86 DEG ( 163.49 MVA) X/R: 3.80
VOLTAGE: 13200. EQUIV. IMPEDANCE= 0.2963 + J 1.0237 OHMS
M11.105      15 KV BUS 1      6.849 KA      ANG: -73.49
SUB 5 XFMR A  SUB 5 BUS A      0.305 KA      ANG: 97.80

SUB 5 PRIMARY 3P Duty: 6.823 KA AT -77.80 DEG ( 156.00 MVA) X/R: 4.81

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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VOLTAGE: 13200. EQUIV. IMPEDANCE= 0.2360 + J 1.0917 OHMS
M11.205 15 KV BUS 2 6.500 KA ANG: -77.56
SUB 5 XFMR B SUB 5 BUS B 0.325 KA ANG: 97.48

SUB 6 BUS A 3P Duty: 11.352 KA AT -79.85 DEG ( 9.44 MVA) X/R: 5.74
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0043 + J 0.0240 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 11.352 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 13.057 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 11.738 KA
SUB 6 XFMR A SUB 6 XFMR A P 9.404 KA ANG: -259.74
P05.009,009A MCC-EBB-A 1.149 KA ANG: 99.36
P05.010 MCC-EPB-A 0.799 KA ANG: 99.96

SUB 6 BUS B 3P Duty: 10.392 KA AT -79.52 DEG ( 8.64 MVA) X/R: 5.60
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0049 + J 0.0262 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 10.392 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 11.892 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 10.691 KA
SUB 6 XFMR B SUB 6 XFMR B P 8.578 KA ANG: 100.40
P05.011,A MCC-EBB-B 1.174 KA ANG: -258.18
P05.012 MCC-EPB-B 0.640 KA ANG: 99.21

SUB 7 BUS A 3P Duty: 28.285 KA AT -80.31 DEG ( 23.52 MVA) X/R: 5.98
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0016 + J 0.0097 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 28.285 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 29.484 KA
P11.102AB ATS-ADM EMG 1.087 KA ANG: 98.00
P11.101AB MCC-CEB-A 0.041 KA ANG: 96.91
SUB 7 XFMR A SUB 7 XFMR A P 27.158 KA ANG: -260.23

SUB 7 BUS B 3P Duty: 26.895 KA AT -80.77 DEG ( 22.36 MVA) X/R: 6.20
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0017 + J 0.0102 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 26.895 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 28.232 KA
P11.201AB MCC-CEB-B 0.030 KA ANG: 96.01
SUB 7 XFMR B SUB 7 XFMR B P 26.857 KA ANG: -260.77
P11.204 PP-MTB DISC SW 0.008 KA ANG: 95.82

SUB 7 XFMR A P 3P Duty: 7.166 KA AT -73.60 DEG ( 163.84 MVA) X/R: 3.72
VOLTAGE: 13200. EQUIV. IMPEDANCE= 0.3003 + J 1.0202 OHMS
SUB 7 XFMR A SUB 7 BUS A 0.040 KA ANG: 97.99
M11.107 15 KV BUS 1 7.127 KA ANG: -73.55

SUB 7 XFMR B P 3P Duty: 6.838 KA AT -77.55 DEG ( 156.34 MVA) X/R: 4.69

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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VOLTAGE: 13200. EQUIV. IMPEDANCE= 0.2403 + J 1.0883 OHMS
SUB 7 XFMR B SUB 7 BUS B 0.001 KA ANG: 95.97
M11.207 15 KV BUS 2 6.837 KA ANG: -77.55

SUB 8 BUS A 3P Duty: 2.915 KA AT -80.60 DEG ( 21.00 MVA) X/R: 6.51
VOLTAGE: 4160. EQUIV. IMPEDANCE= 0.1346 + J 0.8129 OHMS
M05.003 SUB 6 XFMR A P 0.200 KA ANG: -260.26
M05.004 PAB-E3 STR IN 0.523 KA ANG: 96.36
M05.001 PAB-E1 STR IN 0.523 KA ANG: 96.36
SUB 8 XFMR A SUB 8 PRIMARY 1.672 KA ANG: -258.75

SUB 8 BUS B 3P Duty: 2.375 KA AT -80.06 DEG ( 17.12 MVA) X/R: 6.04
VOLTAGE: 4160. EQUIV. IMPEDANCE= 0.1744 + J 0.9959 OHMS
M05.006 PAB-E2 STR IN 0.523 KA ANG: 96.36
M05.008 SUB 6 XFMR B P 0.188 KA ANG: -259.11
SUB 8 XFMR B SUB 8 PRIMARY 1.667 KA ANG: -259.05

SUB 8 PRIMARY 3P Duty: 7.098 KA AT -73.58 DEG ( 162.28 MVA) X/R: 3.72
VOLTAGE: 13200. EQUIV. IMPEDANCE= 0.3036 + J 1.0299 OHMS
SUB 8 XFMR A SUB 8 BUS A 0.233 KA ANG: 98.49
M11.108 15 KV BUS 1 6.868 KA ANG: -73.31

SUB 8 PRIMARY 3P Duty: 6.775 KA AT -77.48 DEG ( 154.91 MVA) X/R: 4.67
VOLTAGE: 13200. EQUIV. IMPEDANCE= 0.2437 + J 1.0981 OHMS
SUB 8 XFMR B SUB 8 BUS B 0.161 KA ANG: 98.47
M11.208 15 KV BUS 2 6.615 KA ANG: -77.39

SUB SP-1 DISC 3P Duty: 4.266 KA AT -19.07 DEG ( 3.55 MVA) X/R: 0.36
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0614 + J 0.0212 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 4.266 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.266 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.266 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.266 KA
CBL-0540 SUBM PUMP1 TER 0.035 KA ANG: 95.79
CBL-0539 MCC-C 4.251 KA ANG: -18.63

SUB SP-2 DISC 3P Duty: 4.356 KA AT -18.99 DEG ( 3.62 MVA) X/R: 0.36
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0602 + J 0.0207 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 4.356 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 4.356 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.356 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.356 KA
CONTRIBUTIONS: SUB SUMP PUMP 0.035 KA ANG: -84.29
CBL-0467 MCC-D 4.342 KA ANG: -18.57

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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SUMP PUMP 1 DI 3P Duty: 2.271 KA AT -15.97 DEG ( 1.89 MVA) X/R: 0.30
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1173 + J 0.0336 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.271 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.271 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.271 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.271 KA
CBL-SUMP PUMP SMPPMP1 TERM 0.021 KA ANG: 95.75
CBL-SUMP PUMP MCC-EBB-B 2.263 KA ANG: -15.47

SUMP PUMP 3 DI 3P Duty: 0.905 KA AT -9.11 DEG ( 0.75 MVA) X/R: 0.17
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.3022 + J 0.0484 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 0.905 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.905 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.905 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.905 KA
CBL-SUMP PUMP SMPPMP3 TERM 0.021 KA ANG: 95.75
CBL-SUMP PUMP MCC-EBB-B 0.900 KA ANG: -7.80

SWP LCP 3P Duty: 8.777 KA AT -57.60 DEG ( 7.30 MVA) X/R: 1.94
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0169 + J 0.0267 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 8.777 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 9.035 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 8.777 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 8.777 KA
P09.095 SWP 1 MTR TERM 0.283 KA ANG: 96.00
P09.100 SWP 2 MTR TERM 0.283 KA ANG: 96.22
P09.090 MCC-ADM-A 8.273 KA ANG: -55.86

SWPSO VALVE DI 3P Duty: 2.600 KA AT -16.27 DEG ( 2.16 MVA) X/R: 0.31
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1023 + J 0.0299 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.600 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.600 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.600 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.600 KA
CBL-0654 SWPSO VALVE ST 0.013 KA ANG: 95.81
CBL-0564 BUS-0436 2.595 KA ANG: -196.01

SWPSO-SG DISC 3P Duty: 2.600 KA AT -16.27 DEG ( 2.16 MVA) X/R: 0.31
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1023 + J 0.0299 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.600 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.600 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.600 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.600 KA
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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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CONTRIBUTIONS TO SWPSO-SG DISC (CONTINUED)
CBL-0653      SWPSO-SG STR      0.013 KA      ANG:   95.73
CBL-0563      BUS-0436         2.595 KA      ANG: -196.01

TABLET FDR DIS 3P Duty:  3.763 KA AT  -19.66 DEG (  3.13 MVA) X/R:   0.36
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.0693 + J  0.0248 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  3.763 KA
MOLDED CASE CIRCUIT BREAKER < 10KA  3.763 KA
MOLDED CASE CIRCUIT BREAKER < 20KA  3.763 KA
MOLDED CASE CIRCUIT BREAKER > 20KA  3.763 KA
CBL-0295      MCC-E.          3.763 KA      ANG:   160.34

TEMP ADM1 DISC 3P Duty:  5.653 KA AT  -41.62 DEG (  4.70 MVA) X/R:   0.90
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.0366 + J  0.0326 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  5.653 KA
MOLDED CASE CIRCUIT BREAKER < 10KA  5.653 KA
MOLDED CASE CIRCUIT BREAKER < 20KA  5.653 KA
MOLDED CASE CIRCUIT BREAKER > 20KA  5.653 KA
P08.003      MCC-F..         5.653 KA      ANG:  -41.62

TEMP ADM2 DISC 3P Duty:  5.653 KA AT  -41.62 DEG (  4.70 MVA) X/R:   0.90
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.0366 + J  0.0326 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  5.653 KA
MOLDED CASE CIRCUIT BREAKER < 10KA  5.653 KA
MOLDED CASE CIRCUIT BREAKER < 20KA  5.653 KA
MOLDED CASE CIRCUIT BREAKER > 20KA  5.653 KA
P08.004      MCC-F..         5.653 KA      ANG:  -41.62

TEMP PUMPS     3P Duty:  1.446 KA AT  -6.69 DEG (  1.20 MVA) X/R:   0.12
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.1903 + J  0.0223 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  1.446 KA
MOLDED CASE CIRCUIT BREAKER < 10KA  1.446 KA
MOLDED CASE CIRCUIT BREAKER < 20KA  1.446 KA
MOLDED CASE CIRCUIT BREAKER > 20KA  1.446 KA
CBL-TEMP PUMPS MCC-P         1.446 KA      ANG:   -6.69

TER FIL EFF SP 3P Duty:  1.458 KA AT  -8.74 DEG (  1.21 MVA) X/R:   0.16
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.1878 + J  0.0289 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  1.458 KA
MOLDED CASE CIRCUIT BREAKER < 10KA  1.458 KA
MOLDED CASE CIRCUIT BREAKER < 20KA  1.458 KA
MOLDED CASE CIRCUIT BREAKER > 20KA  1.458 KA
CONTRIBUTIONS: TER FIL EFF SP      0.053 KA      ANG:  -84.29
CBL-0397      MCC-P         1.446 KA      ANG:   -6.70

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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TFB-MPC      3P Duty:  1.457 KA AT  -42.08 DEG (   0.52 MVA) X/R:    0.90
VOLTAGE:    208.   EQUIV. IMPEDANCE=  0.0612 + J  0.0553 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  1.457 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.457 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.457 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.457 KA
XFMR TFB-MPC  XFMR TFB-MPC P  1.457 KA      ANG:   137.92

TGS DISC     3P Duty:  3.613 KA AT  -26.15 DEG (   3.00 MVA) X/R:    0.49
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.0688 + J  0.0338 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  3.613 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 3.613 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 3.613 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 3.613 KA
P08.005      MCC-F..      3.613 KA      ANG:   -26.15

UDSP1 DISC   3P Duty:  1.463 KA AT  -9.41 DEG (   1.22 MVA) X/R:    0.17
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.1869 + J  0.0310 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  1.463 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.463 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.463 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.463 KA
CONTRIBUTIONS: UD SP #1      0.071 KA      ANG:   -84.29
CBL-0391      MCC-P      1.446 KA      ANG:   -6.70

UDSP2 DISC   3P Duty:  1.454 KA AT  -8.82 DEG (   1.21 MVA) X/R:    0.16
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.1884 + J  0.0292 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  1.454 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.454 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.454 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.454 KA
CONTRIBUTIONS: UD SP #2      0.053 KA      ANG:   -84.29
CBL-0445      MCC-Q      1.441 KA      ANG:   -6.77

UH EE        3P Duty:  2.445 KA AT  -13.23 DEG (   2.03 MVA) X/R:    0.24
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.1103 + J  0.0259 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  2.445 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.445 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.445 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.445 KA
CBL-0612      UH EE DISC  2.445 KA      ANG:   -13.23

UH EE DISC   3P Duty:  2.709 KA AT  -14.37 DEG (   2.25 MVA) X/R:    0.26

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0991 + J 0.0254 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.709 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.709 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.709 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.709 KA
CBL-0611 MCC-EE 2.709 KA ANG: -14.37

UH FF 3P Duty: 2.688 KA AT -14.76 DEG ( 2.24 MVA) X/R: 0.26
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0997 + J 0.0263 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.688 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.688 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.688 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.688 KA
CBL-0622 MCC-FF 2.688 KA ANG: -14.76

UPS-ADM-1 INPU 3P Duty: 4.936 KA AT -65.50 DEG ( 1.78 MVA) X/R: 2.22
VOLTAGE: 208. EQUIV. IMPEDANCE= 0.0101 + J 0.0221 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 4.936 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 5.277 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 4.936 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 4.936 KA
L09.040 LP-ADM-1A 4.936 KA ANG: -65.50

UPS-ADM-1 OUTP 3P Duty: 0.042 KA AT -82.87 DEG ( 0.02 MVA) X/R: 8.00
VOLTAGE: 208. EQUIV. IMPEDANCE= 0.3577 + J 2.8620 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 0.043 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 0.060 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 0.051 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 0.046 KA
CONTRIBUTIONS: UPS-ADM-1 0.042 KA ANG: -82.87

UV 2A 3P Duty: 2.987 KA AT -62.16 DEG ( 2.48 MVA) X/R: 1.90
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0433 + J 0.0821 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.987 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 3.058 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.987 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.987 KA
CBL-0515 UV 2A XFMR SEC 2.987 KA ANG: -62.16

UV 2B 3P Duty: 2.987 KA AT -62.16 DEG ( 2.48 MVA) X/R: 1.90
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0433 + J 0.0821 OHMS

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER      2.987 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     3.058 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     2.987 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     2.987 KA
CBL-0516      UV 2B XFMR SEC      2.987 KA      ANG:  -62.16

UV-1A      3P Duty:  2.749 KA AT  -70.45 DEG (  2.29 MVA) X/R:    2.82
VOLTAGE:    480.    EQUIV. IMPEDANCE=  0.0337 + J  0.0950 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      2.749 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     3.139 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     2.749 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     2.749 KA
P11.151B      UV-1A PD LINE      2.749 KA      ANG:  -70.45

UV-1A PD LINE 3P Duty:  2.766 KA AT  -70.66 DEG (  2.30 MVA) X/R:    2.85
VOLTAGE:    480.    EQUIV. IMPEDANCE=  0.0332 + J  0.0945 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      2.766 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     3.169 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     2.766 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     2.766 KA
P11.151A      XFMR UV-1A ISO      2.766 KA      ANG:   109.34

UV-1B      3P Duty:  3.223 KA AT  -69.86 DEG (  2.68 MVA) X/R:    2.73
VOLTAGE:    480.    EQUIV. IMPEDANCE=  0.0296 + J  0.0807 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      3.223 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     3.647 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     3.223 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     3.223 KA
P11.251B      UV-1B PD LINE      3.223 KA      ANG:   110.14

UV-1B PD LINE 3P Duty:  3.247 KA AT  -70.09 DEG (  2.70 MVA) X/R:    2.76
VOLTAGE:    480.    EQUIV. IMPEDANCE=  0.0291 + J  0.0802 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      3.247 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     3.688 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     3.247 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     3.247 KA
P11.251A      XFMR UV-1B ISO      3.247 KA      ANG:   109.91

VFD CFG-1 INPU 3P Duty: 29.145 KA AT  -73.26 DEG ( 24.23 MVA) X/R:    3.55
VOLTAGE:    480.    EQUIV. IMPEDANCE=  0.0027 + J  0.0091 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      29.145 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     29.145 KA
VFD CFG-1      CFG-1 PNL          2.252 KA      ANG:  -82.59
CBL-0178      SUB 5 BUS A          26.926 KA      ANG:  -72.48

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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VFD CFG-2 INPU 3P Duty: 29.396 KA AT -73.59 DEG ( 24.44 MVA) X/R: 3.60
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0027 + J 0.0090 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 29.396 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 29.396 KA
VFD CFG-2 CFG-2 PNL 2.254 KA ANG: -82.72
CBL-0167 SUB 5 BUS B 27.173 KA ANG: -72.84

VFD CFG-3 INPU 3P Duty: 32.551 KA AT -75.15 DEG ( 27.06 MVA) X/R: 3.93
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0022 + J 0.0082 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 32.551 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 32.551 KA
VFD CFG-3 CFG-3 PNL 2.247 KA ANG: -81.63
CBL-0170 SUB 5 BUS B 30.320 KA ANG: -74.67

W CONT GT2 DIS 3P Duty: 1.444 KA AT -7.25 DEG ( 1.20 MVA) X/R: 0.13
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1903 + J 0.0242 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.444 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.444 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.444 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.444 KA
CONTRIBUTIONS: W CONT GATE #2 0.013 KA ANG: -84.29
CBL-0453 MCC-Q 1.441 KA ANG: -6.76

W1 FLOW VALVES 3P Duty: 3.458 KA AT -10.95 DEG ( 2.88 MVA) X/R: 0.20
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0787 + J 0.0152 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 3.458 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 3.458 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 3.458 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 3.458 KA
CBL-B-54-2 B-54-2 DISC 0.008 KA ANG: 95.71
CBL- B-54-3 B-54-3 DISC 0.008 KA ANG: 95.71
CBL-B-54-1 B-54-1 DISC 0.008 KA ANG: 95.71
CBL W1 FLOW VA PP-WBB-A 3.452 KA ANG: -10.58

WA MAIN BOV 3P Duty: 3.654 KA AT -10.85 DEG ( 3.04 MVA) X/R: 0.19
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0745 + J 0.0143 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 3.654 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 3.654 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 3.654 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 3.654 KA
CONTRIBUTIONS: B-55-8 MTR VAL 0.008 KA ANG: -84.29
CBL-0229 BUS-0330 3.652 KA ANG: -190.73

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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WAS VALVE W1  3P Duty:  3.175 KA AT  -10.19 DEG (  2.64 MVA) X/R:    0.18
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.0859 + J  0.0154 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  3.175 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 3.175 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 3.175 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 3.175 KA
CONTRIBUTIONS: P-55-1 MTR VAL      0.008 KA      ANG:   -84.29
CBL- P-55-1.   WAS VALVE W1 D      3.173 KA      ANG:  -190.05

WAS VALVE W1 D 3P Duty:  5.087 KA AT  -13.73 DEG (  4.23 MVA) X/R:    0.25
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.0529 + J  0.0129 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  5.087 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 5.087 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 5.087 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 5.087 KA
CBL- P-55-1.   WAS VALVE W1      0.008 KA      ANG:   -84.24
CBL WAS VALVE  PP-WBB-A          5.085 KA      ANG:   -13.64

WAS VALVE W2  3P Duty:  2.663 KA AT  -9.10 DEG (  2.21 MVA) X/R:    0.16
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.1028 + J  0.0165 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  2.663 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.663 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.663 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.663 KA
CONTRIBUTIONS: P-55-2 MTR VAL      0.008 KA      ANG:   -84.29
CBL-0218      BUS-0320          2.661 KA      ANG:  -188.94

WASP-E1 VFD IN 3P Duty:  1.454 KA AT  -12.84 DEG (  1.21 MVA) X/R:    0.25
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.1858 + J  0.0424 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  1.454 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.454 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.454 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.454 KA
WASP-E1 VFD    WASP-E1 VFD OU     0.035 KA      ANG:    96.05
CBL-RASP-E1 VF MCC-EBB-A          1.443 KA      ANG:   -11.51

WASP-E2 VFD IN 3P Duty:  1.447 KA AT  -13.44 DEG (  1.20 MVA) X/R:    0.26
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.1863 + J  0.0445 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  1.447 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.447 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.447 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.447 KA
WASP-E2 VFD    WASP-E2 VFD OU     0.035 KA      ANG:    96.01
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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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CONTRIBUTIONS TO WASP-E2 VFD IN (CONTINUED)
CBL-WASP-E2 VF MCC-EBB-B          1.436 KA      ANG:  -12.11

WASP-W1 VFD IN 3P Duty:  6.946 KA AT  -13.54 DEG (  5.77 MVA) X/R:    0.24
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.0388 + J  0.0093 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  6.946 KA
MOLDED CASE CIRCUIT BREAKER < 10KA  6.946 KA
MOLDED CASE CIRCUIT BREAKER < 20KA  6.946 KA
MOLDED CASE CIRCUIT BREAKER > 20KA  6.946 KA
CBL-WASP-W1 VF MCC-WBB-A          6.946 KA      ANG:  -13.54

WASP-W2 VFD IN 3P Duty:  6.895 KA AT  -14.45 DEG (  5.73 MVA) X/R:    0.26
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.0389 + J  0.0100 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  6.895 KA
MOLDED CASE CIRCUIT BREAKER < 10KA  6.895 KA
MOLDED CASE CIRCUIT BREAKER < 20KA  6.895 KA
MOLDED CASE CIRCUIT BREAKER > 20KA  6.895 KA
CBL-WASP-W2 VF MCC-WBB-B          6.895 KA      ANG:  -14.45

WASV E1        3P Duty:  1.239 KA AT  -11.34 DEG (  1.03 MVA) X/R:    0.20
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.2193 + J  0.0440 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  1.239 KA
MOLDED CASE CIRCUIT BREAKER < 10KA  1.239 KA
MOLDED CASE CIRCUIT BREAKER < 20KA  1.239 KA
MOLDED CASE CIRCUIT BREAKER > 20KA  1.239 KA
CBL-0119      BUS-0179          1.239 KA      ANG:  -191.34

WASV E2        3P Duty:  1.239 KA AT  -11.34 DEG (  1.03 MVA) X/R:    0.20
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.2193 + J  0.0440 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  1.239 KA
MOLDED CASE CIRCUIT BREAKER < 10KA  1.239 KA
MOLDED CASE CIRCUIT BREAKER < 20KA  1.239 KA
MOLDED CASE CIRCUIT BREAKER > 20KA  1.239 KA
CBL-0120      BUS-0180          1.239 KA      ANG:  -191.34

WASV E3        3P Duty:  1.169 KA AT  -11.21 DEG (  0.97 MVA) X/R:    0.20
VOLTAGE:    480.  EQUIV. IMPEDANCE=  0.2325 + J  0.0461 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  1.169 KA
MOLDED CASE CIRCUIT BREAKER < 10KA  1.169 KA
MOLDED CASE CIRCUIT BREAKER < 20KA  1.169 KA
MOLDED CASE CIRCUIT BREAKER > 20KA  1.169 KA
CONTRIBUTIONS: MTRI-0098          0.008 KA      ANG:  -84.29
CBL-0414      BUS-0409          1.167 KA      ANG:  -190.84
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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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WASV E4      3P Duty:  1.169 KA AT  -11.21 DEG (   0.97 MVA) X/R:    0.20
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.2325 + J  0.0461 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  1.169 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.169 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.169 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.169 KA
CONTRIBUTIONS: MTRI-0099          0.008 KA      ANG:   -84.29
CBL-0426        BUS-0410          1.167 KA      ANG:  -190.84

WBB-EF-1 DISC 3P Duty:  6.950 KA AT  -13.66 DEG (   5.78 MVA) X/R:    0.25
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.0387 + J  0.0094 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  6.950 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 6.950 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 6.950 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 6.950 KA
CBL-WBB-EF-1   WBB-EF-1 TERM      0.014 KA      ANG:    95.76
CBL-WBB-EF-1D  MCC-WBB-A          6.946 KA      ANG:   -13.55

WBB-EF-2 DISC 3P Duty:  7.587 KA AT  -15.67 DEG (   6.31 MVA) X/R:    0.28
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.0352 + J  0.0099 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  7.587 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 7.587 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 7.587 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 7.587 KA
CBL-WBB-EF-2   WBB-EF-2 TERM      0.005 KA      ANG:    95.73
CBL-WBB-EF-2D  MCC-WBB-B.         7.585 KA      ANG:   -15.64

WBB-EF-3 DISC 3P Duty:  3.602 KA AT   -8.56 DEG (   2.99 MVA) X/R:    0.15
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.0761 + J  0.0114 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  3.602 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 3.602 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 3.602 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 3.602 KA
CBL-WBB-EF-3   WBB-EF-3 TERM      0.014 KA      ANG:    95.74
CBL-WBB-EF-3D  MCC-WBB-A          3.599 KA      ANG:    -8.34

WBB-EF-4 DISC 3P Duty:  2.785 KA AT   -7.75 DEG (   2.32 MVA) X/R:    0.14
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.0986 + J  0.0134 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  2.785 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.785 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.785 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.785 KA
CBL-WBB-EF-4   WBB-EF-4 TERM      0.014 KA      ANG:    95.74
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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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CONTRIBUTIONS TO WBB-EF-4 DISC (CONTINUED)					
CBL-WBB-EF-4D	MCC-WBB-B.	2.782 KA	ANG:	-7.47	
WBB-EF-5 DISC	3P Duty: 1.947 KA AT -6.46 DEG (1.62 MVA) X/R: 0.11				
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1414 + J 0.0160 OHMS				
	LOW VOLTAGE POWER CIRCUIT BREAKER 1.947 KA				
	MOLDED CASE CIRCUIT BREAKER < 10KA 1.947 KA				
	MOLDED CASE CIRCUIT BREAKER < 20KA 1.947 KA				
	MOLDED CASE CIRCUIT BREAKER > 20KA 1.947 KA				
CBL-WBB-EF-5	WBB-EF-5 TERM	0.014 KA	ANG:	95.74	
CBL-WBB-EF-5D	MCC-WBB-B.	1.944 KA	ANG:	-6.05	
WBB-EF-6 DISC	3P Duty: 1.475 KA AT -7.28 DEG (1.23 MVA) X/R: 0.12				
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1864 + J 0.0238 OHMS				
	LOW VOLTAGE POWER CIRCUIT BREAKER 1.475 KA				
	MOLDED CASE CIRCUIT BREAKER < 10KA 1.475 KA				
	MOLDED CASE CIRCUIT BREAKER < 20KA 1.475 KA				
	MOLDED CASE CIRCUIT BREAKER > 20KA 1.475 KA				
CBL-WBB-EF-6	WBB-EF-6 TERM	0.053 KA	ANG:	95.91	
CBL-WBB-EF-6D	MCC-WBB-B.	1.464 KA	ANG:	-5.25	
WBB-EF-7 DISC	3P Duty: 2.427 KA AT -6.85 DEG (2.02 MVA) X/R: 0.12				
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1134 + J 0.0136 OHMS				
	LOW VOLTAGE POWER CIRCUIT BREAKER 2.427 KA				
	MOLDED CASE CIRCUIT BREAKER < 10KA 2.427 KA				
	MOLDED CASE CIRCUIT BREAKER < 20KA 2.427 KA				
	MOLDED CASE CIRCUIT BREAKER > 20KA 2.427 KA				
CBL-WBB-EF-7	WBB-EF-7 TERM	0.014 KA	ANG:	95.76	
CBL-WBB-EF-7D	MCC-WBB-A	2.424 KA	ANG:	-6.52	
WBB-H1	3P Duty: 6.811 KA AT -15.91 DEG (5.66 MVA) X/R: 0.30				
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0391 + J 0.0112 OHMS				
	LOW VOLTAGE POWER CIRCUIT BREAKER 6.811 KA				
	MOLDED CASE CIRCUIT BREAKER < 10KA 6.811 KA				
	MOLDED CASE CIRCUIT BREAKER < 20KA 6.811 KA				
	MOLDED CASE CIRCUIT BREAKER > 20KA 6.811 KA				
	CONTRIBUTIONS: WBB H2 TROLLEY	0.021 KA	ANG:	-84.29	
		WBB H1 HOIST M	0.021 KA	ANG:	-84.29
CBL-WBB-H1	WBB-H1 DISC	6.795 KA	ANG:	-15.58	
WBB-H1 DISC	3P Duty: 9.483 KA AT -20.40 DEG (7.88 MVA) X/R: 0.38				
	VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0274 + J 0.0102 OHMS				

THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER      9.483 KA
MOLDED CASE CIRCUIT BREAKER < 10KA    9.483 KA
MOLDED CASE CIRCUIT BREAKER < 20KA    9.483 KA
MOLDED CASE CIRCUIT BREAKER > 20KA    9.483 KA
CBL-WBB-H1      WBB-H1      0.043 KA      ANG:   95.81
CBL-WBB-H1D     MCC-WBB-B.   9.465 KA      ANG:  -20.17

WBB-H2      3P Duty:  4.991 KA AT  -12.26 DEG (  4.15 MVA) X/R:   0.23
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.0543 + J  0.0118 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      4.991 KA
MOLDED CASE CIRCUIT BREAKER < 10KA    4.991 KA
MOLDED CASE CIRCUIT BREAKER < 20KA    4.991 KA
MOLDED CASE CIRCUIT BREAKER > 20KA    4.991 KA
CONTRIBUTIONS:  H2 HOIST MTR      0.021 KA      ANG:  -84.29
                  H2 TROLLEY MTR   0.021 KA      ANG:  -84.29
CBL-WBB-H2      WBB-H2 DISC   4.979 KA      ANG:  -11.79

WBB-H2 DISC  3P Duty:  6.317 KA AT  -14.21 DEG (  5.25 MVA) X/R:   0.26
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.0425 + J  0.0108 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      6.317 KA
MOLDED CASE CIRCUIT BREAKER < 10KA    6.317 KA
MOLDED CASE CIRCUIT BREAKER < 20KA    6.317 KA
MOLDED CASE CIRCUIT BREAKER > 20KA    6.317 KA
CBL-WBB-H2      WBB-H2      0.043 KA      ANG:   95.81
CBL-WBB-H2D     MCC-WBB-A.   6.303 KA      ANG:  -13.84

WBB-HV-1 DISC 3P Duty:  4.270 KA AT  -11.14 DEG (  3.55 MVA) X/R:   0.20
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.0637 + J  0.0125 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      4.270 KA
MOLDED CASE CIRCUIT BREAKER < 10KA    4.270 KA
MOLDED CASE CIRCUIT BREAKER < 20KA    4.270 KA
MOLDED CASE CIRCUIT BREAKER > 20KA    4.270 KA
CBL-WBB-HV-1    WBB-HV-1 TERM  0.035 KA      ANG:   95.85
CBL-WBB-HV-1D   MCC-WBB-A.     4.260 KA      ANG:  -10.68

WBB-HV-2      3P Duty: 10.283 KA AT  -24.77 DEG (  8.55 MVA) X/R:   0.46
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.0245 + J  0.0113 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER     10.283 KA
MOLDED CASE CIRCUIT BREAKER < 20KA    10.283 KA
MOLDED CASE CIRCUIT BREAKER > 20KA    10.283 KA
P07.222A      WBB-HV-2 DISC   10.283 KA      ANG:  -24.77

WBB-HV-2 DISC 3P Duty: 12.548 KA AT  -28.70 DEG ( 10.43 MVA) X/R:   0.55
VOLTAGE:    480.   EQUIV. IMPEDANCE=  0.0194 + J  0.0106 OHMS

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER 12.548 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 12.548 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 12.548 KA
P07.222 MCC-WBB-B. 12.548 KA ANG: -28.70

WBB-P-1 DISC 3P Duty: 2.099 KA AT -7.90 DEG ( 1.75 MVA) X/R: 0.14
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1308 + J 0.0181 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.099 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.099 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.099 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.099 KA
CBL-WBB-P-1 WBB-P-1 TERM 0.071 KA ANG: 95.87
CBL-WBB-P-1D MCC-WBB-A. 2.083 KA ANG: -6.00

WBB-P-2 DISC 3P Duty: 2.096 KA AT -8.18 DEG ( 1.74 MVA) X/R: 0.15
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1309 + J 0.0188 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.096 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.096 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.096 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.096 KA
CBL-WBB-P-2 WBB-P-2 TERM 0.071 KA ANG: 95.87
CBL-WBB-P-2D MCC-WBB-B 2.080 KA ANG: -6.29

WEST AESG W1 3P Duty: 2.671 KA AT -9.27 DEG ( 2.22 MVA) X/R: 0.17
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1024 + J 0.0167 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 2.671 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 2.671 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 2.671 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 2.671 KA
CONTRIBUTIONS: s-54-1 MTR VAL 0.008 KA ANG: -84.29
CBL-0208 WEST AESGW1 DI 2.669 KA ANG: -189.11

WEST AESG W2 3P Duty: 1.586 KA AT -7.27 DEG ( 1.32 MVA) X/R: 0.13
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1734 + J 0.0221 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.586 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.586 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.586 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.586 KA
CONTRIBUTIONS: S-54-2 MTR VAL 0.008 KA ANG: -84.29
CBL-0224 BUS-0325 1.584 KA ANG: -186.99

WEST AESGW1 DI 3P Duty: 2.832 KA AT -9.56 DEG ( 2.35 MVA) X/R: 0.17
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0965 + J 0.0163 OHMS

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER      2.832 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     2.832 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     2.832 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     2.832 KA
CBL-0208      WEST AESG W1              0.008 KA      ANG:   -84.28
CBL WEST AESG  PP-WBB-A                 2.829 KA      ANG:   -9.41

WFB-EUH-TERM's 3P Duty: 1.609 KA AT -26.13 DEG ( 0.58 MVA) X/R:    0.49
VOLTAGE:      208.  EQUIV. IMPEDANCE= 0.0670 + J 0.0329 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      1.609 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     1.609 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     1.609 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     1.609 KA
CBL WFB-EUH-1  IPC LP-WFB              1.609 KA      ANG:   -26.13

WHM DISC       3P Duty: 2.256 KA AT -10.22 DEG ( 1.88 MVA) X/R:    0.18
VOLTAGE:      480.  EQUIV. IMPEDANCE= 0.1209 + J 0.0218 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      2.256 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     2.256 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     2.256 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     2.256 KA
CBL-0378      MCC-M.                   2.256 KA      ANG:   -10.22

WPB-EF-1 DISC  3P Duty: 2.213 KA AT -12.13 DEG ( 1.84 MVA) X/R:    0.22
VOLTAGE:      480.  EQUIV. IMPEDANCE= 0.1224 + J 0.0263 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      2.213 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     2.213 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     2.213 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     2.213 KA
CBL-WPB-EF-1   WPB-EF-1 TERM           0.021 KA      ANG:   95.77
CBL-WPB-EF-1D  MCC-WPB-A               2.207 KA      ANG:   -11.60

WPB-H1 DISC    3P Duty: 5.549 KA AT -27.45 DEG ( 4.61 MVA) X/R:    0.54
VOLTAGE:      480.  EQUIV. IMPEDANCE= 0.0443 + J 0.0230 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      5.549 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     5.549 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     5.549 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     5.549 KA
CBL-WPB-H1     WPB-H1 HOIST             0.023 KA      ANG:   95.77
CBL-WPB-H1D    MCC-WPB-B.               5.536 KA      ANG:   -27.25

WPB-H1 HOIST   3P Duty: 4.546 KA AT -23.15 DEG ( 3.78 MVA) X/R:    0.44
VOLTAGE:      480.  EQUIV. IMPEDANCE= 0.0561 + J 0.0240 OHMS

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER      4.546 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     4.546 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     4.546 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     4.546 KA
CONTRIBUTIONS: WPB H1 HOIST M          0.021 KA      ANG:  -84.29
                  WPB H1 TROLLEY        0.002 KA      ANG:  -84.29
CBL-WPB-H1      WPB-H1 DISC             4.535 KA      ANG:  -22.90

WPB-HV-1      3P Duty:  2.340 KA AT  -12.44 DEG (  1.95 MVA) X/R:    0.22
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.1157 + J  0.0255 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      2.340 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     2.340 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     2.340 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     2.340 KA
CBL-WPB-HV-1   WPB-HV-1 DISC           2.340 KA      ANG:  -12.44

WPB-HV-1 DISC 3P Duty:  2.672 KA AT  -13.83 DEG (  2.22 MVA) X/R:    0.25
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.1007 + J  0.0248 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      2.672 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     2.672 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     2.672 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     2.672 KA
CBL-WPB-HV-1D  MCC-WPB-B               2.672 KA      ANG:  -13.83

WPB-P-1 DISC  3P Duty:  1.746 KA AT  -10.07 DEG (  1.45 MVA) X/R:    0.18
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.1562 + J  0.0278 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      1.746 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     1.746 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     1.746 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     1.746 KA
CBL-WPB-P-1    BUS-0282                 0.011 KA      ANG:   95.71
CBL-WPB-P-1D   MCC-WPB-A.               1.743 KA      ANG:   -9.74

WPE-SAP-2 DISC 3P Duty:  2.007 KA AT  -12.00 DEG (  1.67 MVA) X/R:    0.23
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.1351 + J  0.0287 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      2.007 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     2.007 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     2.007 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     2.007 KA
CBL-WPE-SAP-2  WPE-SAP-2 TERM           0.035 KA      ANG:   95.87
CBL-WPE-SAP-2D MCC-WPB-B               1.996 KA      ANG:  -11.03

WPSE GATE E DI 3P Duty:  1.457 KA AT  -7.07 DEG (  1.21 MVA) X/R:    0.13
VOLTAGE:      480.   EQUIV. IMPEDANCE=  0.1888 + J  0.0234 OHMS

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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LOW VOLTAGE POWER CIRCUIT BREAKER      1.457 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     1.457 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     1.457 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     1.457 KA
CONTRIBUTIONS: WPSE GATE E MT          0.013 KA      ANG:  -84.29
CBL-0413        MCC-N                    1.454 KA      ANG:  -6.58

WPSE GATE W DI 3P Duty: 1.457 KA AT  -7.07 DEG ( 1.21 MVA) X/R: 0.13
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1888 + J 0.0234 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      1.457 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     1.457 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     1.457 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     1.457 KA
CBL-0423        BUS-0136                0.013 KA      ANG:  95.76
CBL-0422        MCC-N                    1.454 KA      ANG:  -6.58

WPSE SMPL PMP 3P Duty: 1.466 KA AT  -8.61 DEG ( 1.22 MVA) X/R: 0.16
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1869 + J 0.0283 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      1.466 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     1.466 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     1.466 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     1.466 KA
CBL-0428        BUS-0434                0.053 KA      ANG:  95.91
CBL-0419        MCC-N                    1.454 KA      ANG:  -6.58

WSE-SAP-3 DIS 3P Duty: 3.608 KA AT  -8.89 DEG ( 3.00 MVA) X/R: 0.16
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0759 + J 0.0119 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      3.608 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     3.608 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     3.608 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     3.608 KA
CBL-WSE-SAP-3   WSE-SAP-3 TERM          0.035 KA      ANG:  95.85
CBL-WSE-SAP-3D  MCC-WBB-A               3.599 KA      ANG:  -8.34

WTR-CRC-PMP-1 3P Duty: 9.232 KA AT  -39.38 DEG ( 7.68 MVA) X/R: 0.84
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0232 + J 0.0190 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER      9.232 KA
MOLDED CASE CIRCUIT BREAKER < 10KA     9.232 KA
MOLDED CASE CIRCUIT BREAKER < 20KA     9.232 KA
MOLDED CASE CIRCUIT BREAKER > 20KA     9.232 KA
CBL-0513        WTR-CRC-PMP-1           0.005 KA      ANG:  -84.28
CBL-0504        MCC-RLS-A               9.228 KA      ANG:  -39.36

WTR-CRC-PMP-2 3P Duty: 9.232 KA AT  -39.38 DEG ( 7.68 MVA) X/R: 0.84

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0232 + J 0.0190 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 9.232 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 9.232 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 9.232 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 9.232 KA
CBL-0514 WTR-CRC-PMP-2 0.005 KA ANG: -84.28
CBL-0505 MCC-RLS-A 9.228 KA ANG: -39.36

WW BYP GATE E 3P Duty: 1.457 KA AT -7.07 DEG ( 1.21 MVA) X/R: 0.13
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.1888 + J 0.0234 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 1.457 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 1.457 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 1.457 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 1.457 KA
CONTRIBUTIONS: WW BYP GATE E 0.013 KA ANG: -84.29
CBL-0440 MCC-N. 1.454 KA ANG: -6.58

WWRDP2 DISC 3P Duty: 3.304 KA AT -17.19 DEG ( 2.75 MVA) X/R: 0.39
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0801 + J 0.0248 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 3.304 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 3.304 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 3.304 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 3.304 KA
CBL-0412 BUS-0135 0.213 KA ANG: 96.06
CBL-0411 MCC-N 3.226 KA ANG: -13.72

WWRDP3 DISC 3P Duty: 3.262 KA AT -17.41 DEG ( 2.71 MVA) X/R: 0.40
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0811 + J 0.0254 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 3.262 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 3.262 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 3.262 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 3.262 KA
CONTRIBUTIONS: WW RES DRN PUM 0.213 KA ANG: -84.29
CBL-0389 MCC-P 3.185 KA ANG: -13.89

WWWRESDP1 DISC 3P Duty: 3.277 KA AT -17.50 DEG ( 2.72 MVA) X/R: 0.40
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0806 + J 0.0254 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 3.277 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 3.277 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 3.277 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 3.277 KA
CONTRIBUTIONS: WW RES DP #1 0.213 KA ANG: -84.29
CBL-0366 MCC-M 3.199 KA ANG: -13.99

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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Wireway      3P Duty:  1.508 KA AT  -13.62 DEG (   1.25 MVA) X/R:    0.26
              VOLTAGE:   480.   EQUIV. IMPEDANCE=  0.1786 + J  0.0433 OHMS
              LOW VOLTAGE POWER CIRCUIT BREAKER    1.508 KA
              MOLDED CASE CIRCUIT BREAKER < 10KA   1.508 KA
              MOLDED CASE CIRCUIT BREAKER < 20KA   1.508 KA
              MOLDED CASE CIRCUIT BREAKER > 20KA   1.508 KA
              CBL AT-E3 Z1 F  BUS-0392             0.008 KA      ANG:    95.94
              CBL AT-E3 Z2 F  BUS-0399             0.008 KA      ANG:    95.86
              CBL AT-E3 Z3 F  BUS-0400             0.008 KA      ANG:    95.81
              CBL-0136        PP-EBB-B             1.500 KA      ANG:   -12.77

Wireway.     3P Duty:  1.508 KA AT  -13.62 DEG (   1.25 MVA) X/R:    0.26
              VOLTAGE:   480.   EQUIV. IMPEDANCE=  0.1786 + J  0.0433 OHMS
              LOW VOLTAGE POWER CIRCUIT BREAKER    1.508 KA
              MOLDED CASE CIRCUIT BREAKER < 10KA   1.508 KA
              MOLDED CASE CIRCUIT BREAKER < 20KA   1.508 KA
              MOLDED CASE CIRCUIT BREAKER > 20KA   1.508 KA
              CBL AT-E4 Z1 F  BUS-0401             0.008 KA      ANG:   -84.06
              CBL AT-E4 Z2 F  BUS-0402             0.008 KA      ANG:   -84.14
              CBL AT-E4 Z3 F  BUS-0403             0.008 KA      ANG:   -84.19
              CBL-0152        PP-EBB-B             1.500 KA      ANG:   -12.77
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UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
15 KV BUS 1	3P Duty:	7.210	3.88	Z1= 0.6067	8.518	7.878
	SLG DUTY:	5.772	2.95	Z2= 0.6067	6.423	
13200. VOLTS	LN/LN:	6.244		Z0= 1.0650		
	LN/LN/GND:	6.919	(4.802	GND RETURN KA)		
15 KV BUS 1 Li	3P Duty:	7.210	3.88	Z1= 0.6066	8.518	7.878
	SLG DUTY:	5.772	2.95	Z2= 0.6066	6.423	
13200. VOLTS	LN/LN:	6.244		Z0= 1.0650		
	LN/LN/GND:	6.919	(4.802	GND RETURN KA)		
15 KV BUS 2	3P Duty:	6.874	4.94	Z1= 0.6363	8.586	7.755
	SLG DUTY:	5.374	4.10	Z2= 0.6363	6.429	
13200. VOLTS	LN/LN:	5.953		Z0= 1.1710		
	LN/LN/GND:	6.469	(4.408	GND RETURN KA)		
15 KV BUS 2 Li	3P Duty:	6.874	4.94	Z1= 0.6363	8.586	7.755
	SLG DUTY:	5.374	4.10	Z2= 0.6363	6.429	
13200. VOLTS	LN/LN:	5.953		Z0= 1.1710		
	LN/LN/GND:	6.469	(4.408	GND RETURN KA)		
15 KV BUS 3	3P Duty:	1.505	7.43	Z1= 2.9064	2.052	1.790
	SLG DUTY:	0.076	0.04	Z2= 4.1412	0.076	
13200. VOLTS	LN/LN:	1.075		Z0= 172.5654		
	LN/LN/GND:	1.097	(0.045	GND RETURN KA)		
78IN GC DISC	3P Duty:	1.311	0.15	Z1= 91.7615	1.311	1.311
	SLG DUTY:	0.770	0.10	Z2= 91.7615	0.770	
480. VOLTS	LN/LN:	1.135		Z0= 285.5957		
	LN/LN/GND:	1.184	(0.544	GND RETURN KA)		
AC2 DISC	3P Duty:	1.468	0.20	Z1= 81.9411	1.468	1.468
	SLG DUTY:	0.852	0.11	Z2= 81.9411	0.852	
480. VOLTS	LN/LN:	1.271		Z0= 260.1740		
	LN/LN/GND:	1.336	(0.600	GND RETURN KA)		
AC2F DISC	3P Duty:	2.733	0.27	Z1= 44.0174	2.733	2.733
	SLG DUTY:	1.638	0.18	Z2= 44.0174	1.638	
480. VOLTS	LN/LN:	2.366		Z0= 132.7866		
	LN/LN/GND:	2.501	(1.167	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
ADM ACCU1 DISC	3P Duty:	4.675	0.47	Z1= 25.7295	4.675	4.675
	SLG DUTY:	2.816	0.36	Z2= 25.7295	2.816	
480. VOLTS	LN/LN:	4.049		Z0= 77.0072		
	LN/LN/GND:	4.291	(2.010	GND RETURN KA)		
ADM ACU1 DISC	3P Duty:	8.357	1.16	Z1= 14.3935	8.394	8.375
	SLG DUTY:	5.421	0.82	Z2= 14.3935	5.423	
480. VOLTS	LN/LN:	7.237		Z0= 38.2304		
	LN/LN/GND:	7.874	(3.986	GND RETURN KA)		
ADM-CH-1 DISC	3P Duty:	9.323	1.57	Z1= 12.9018	9.492	9.408
	SLG DUTY:	6.356	1.20	Z2= 12.9018	6.389	
480. VOLTS	LN/LN:	8.074		Z0= 31.2947		
	LN/LN/GND:	8.820	(4.796	GND RETURN KA)		
ADM-EF-1 DISC	3P Duty:	2.262	0.24	Z1= 53.1757	2.262	2.262
	SLG DUTY:	1.329	0.19	Z2= 53.1757	1.329	
480. VOLTS	LN/LN:	1.959		Z0= 165.3691		
	LN/LN/GND:	2.046	(0.940	GND RETURN KA)		
ADM-EF-2 DISC	3P Duty:	2.261	0.24	Z1= 53.2008	2.261	2.261
	SLG DUTY:	1.329	0.18	Z2= 53.2008	1.329	
480. VOLTS	LN/LN:	1.958		Z0= 165.3691		
	LN/LN/GND:	2.045	(0.940	GND RETURN KA)		
ADM-HVAC-1 DIS	3P Duty:	5.642	0.64	Z1= 21.3200	5.642	5.642
	SLG DUTY:	3.450	0.47	Z2= 21.3200	3.450	
480. VOLTS	LN/LN:	4.886		Z0= 62.3502		
	LN/LN/GND:	5.221	(2.476	GND RETURN KA)		
ADM-HVAC-2 DIS	3P Duty:	2.668	0.30	Z1= 45.0814	2.668	2.668
	SLG DUTY:	1.570	0.22	Z2= 45.0814	1.570	
480. VOLTS	LN/LN:	2.311		Z0= 139.9634		
	LN/LN/GND:	2.423	(1.111	GND RETURN KA)		
ADM-P-1 DISC	3P Duty:	3.226	0.33	Z1= 37.2831	3.226	3.226
	SLG DUTY:	1.910	0.25	Z2= 37.2831	1.910	
480. VOLTS	LN/LN:	2.794		Z0= 114.6432		
	LN/LN/GND:	2.936	(1.355	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
ADM-P-2 DISC	3P Duty:	2.663	0.29	Z1= 45.1606	2.663	2.663
	SLG DUTY:	1.569	0.21	Z2= 45.1606	1.569	
480. VOLTS	LN/LN:	2.307		Z0= 139.9634		
	LN/LN/GND:	2.416	(1.111	GND RETURN KA)		
ADM-P-3 DISC	3P Duty:	8.116	1.04	Z1= 14.8204	8.135	8.125
	SLG DUTY:	5.227	0.76	Z2= 14.8204	5.228	
480. VOLTS	LN/LN:	7.029		Z0= 39.8266		
	LN/LN/GND:	7.627	(3.832	GND RETURN KA)		
ADM-P-4 DISC	3P Duty:	7.503	0.93	Z1= 16.0302	7.512	7.508
	SLG DUTY:	4.760	0.67	Z2= 16.0302	4.761	
480. VOLTS	LN/LN:	6.498		Z0= 44.1854		
	LN/LN/GND:	7.026	(3.467	GND RETURN KA)		
ADM-SUP LCP	3P Duty:	2.201	0.26	Z1= 54.6585	2.201	2.201
	SLG DUTY:	1.310	0.18	Z2= 54.6585	1.310	
480. VOLTS	LN/LN:	1.906		Z0= 166.5680		
	LN/LN/GND:	2.007	(0.931	GND RETURN KA)		
ADP-E1 DISC	3P Duty:	1.621	0.63	Z1= 74.2070	1.621	1.621
	SLG DUTY:	0.925	0.16	Z2= 74.2070	0.925	
480. VOLTS	LN/LN:	1.404		Z0= 246.7796		
	LN/LN/GND:	1.527	(0.640	GND RETURN KA)		
ADP-E2 DISC	3P Duty:	5.950	1.36	Z1= 20.2159	6.009	5.979
	SLG DUTY:	4.234	0.72	Z2= 20.2159	4.234	
480. VOLTS	LN/LN:	5.153		Z0= 46.7395		
	LN/LN/GND:	5.900	(3.216	GND RETURN KA)		
ADP-W1 DISC	3P Duty:	5.605	0.30	Z1= 21.4586	5.605	5.605
	SLG DUTY:	3.326	0.19	Z2= 21.4586	3.326	
480. VOLTS	LN/LN:	4.854		Z0= 65.8367		
	LN/LN/GND:	5.130	(2.359	GND RETURN KA)		
AIR COMP 1 DIS	3P Duty:	2.751	0.27	Z1= 43.7249	2.751	2.751
	SLG DUTY:	1.645	0.18	Z2= 43.7249	1.645	
480. VOLTS	LN/LN:	2.382		Z0= 132.3336		
	LN/LN/GND:	2.516	(1.171	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
=====						
AIR COMP 1P DI 3P Duty:		3.236	0.35	Z1= 37.1701	3.236	3.236
SLG DUTY:		1.903	0.21	Z2= 37.1701	1.903	
480. VOLTS LN/LN:		2.802		Z0= 115.7453		
LN/LN/GND:		2.960	(	1.345 GND RETURN KA)		
AIR WASH MV DI 3P Duty:		1.444	0.13	Z1= 83.2824	1.444	1.444
SLG DUTY:		0.846	0.09	Z2= 83.2824	0.846	
480. VOLTS LN/LN:		1.251		Z0= 260.1740		
LN/LN/GND:		1.300	(	0.598 GND RETURN KA)		
ALTERNATOR P 3P Duty:		0.138	1.81	Z1=2005.6858	0.138	0.141
SLG DUTY:		0.139	1.81	Z2=2005.6858	0.139	
208. VOLTS LN/LN:		0.120		Z0=1999.9684		
LN/LN/GND:		0.138	(	0.139 GND RETURN KA)		
AT-E1 FCV BF-6 3P Duty:		1.444	0.23	Z1= 83.2986	1.444	1.444
SLG DUTY:		0.859	0.14	Z2= 83.2986	0.859	
480. VOLTS LN/LN:		1.251		Z0= 254.1490		
LN/LN/GND:		1.320	(	0.611 GND RETURN KA)		
AT-E2 FCV BF-6 3P Duty:		1.631	0.25	Z1= 73.7401	1.631	1.631
SLG DUTY:		0.975	0.15	Z2= 73.7401	0.975	
480. VOLTS LN/LN:		1.413		Z0= 223.4694		
LN/LN/GND:		1.495	(	0.694 GND RETURN KA)		
AT-E3 Z1 FCV 3P Duty:		0.858	0.18	Z1= 140.2363	0.858	0.858
SLG DUTY:		0.505	0.12	Z2= 140.2363	0.505	
480. VOLTS LN/LN:		0.743		Z0= 435.3616		
LN/LN/GND:		0.778	(	0.357 GND RETURN KA)		
AT-E3 Z2 FCV 3P Duty:		1.008	0.20	Z1= 119.3649	1.008	1.008
SLG DUTY:		0.594	0.12	Z2= 119.3649	0.594	
480. VOLTS LN/LN:		0.873		Z0= 369.0986		
LN/LN/GND:		0.916	(	0.421 GND RETURN KA)		
AT-E3 Z3 FCV 3P Duty:		1.139	0.21	Z1= 105.6368	1.139	1.139
SLG DUTY:		0.673	0.13	Z2= 105.6368	0.673	
480. VOLTS LN/LN:		0.986		Z0= 325.4662		
LN/LN/GND:		1.037	(	0.477 GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
AT-E4 Z1 FCV	3P Duty:	0.858	0.18	Z1= 140.2363	0.858	0.858
	SLG DUTY:	0.505	0.12	Z2= 140.2363	0.505	
480. VOLTS	LN/LN:	0.743		Z0= 435.3616		
	LN/LN/GND:	0.778 (	0.357	GND RETURN KA)		
AT-E4 Z2 FCV	3P Duty:	1.008	0.20	Z1= 119.3649	1.008	1.008
	SLG DUTY:	0.594	0.12	Z2= 119.3649	0.594	
480. VOLTS	LN/LN:	0.873		Z0= 369.0986		
	LN/LN/GND:	0.916 (	0.421	GND RETURN KA)		
AT-E4 Z3 FCV	3P Duty:	1.139	0.21	Z1= 105.6368	1.139	1.139
	SLG DUTY:	0.673	0.13	Z2= 105.6368	0.673	
480. VOLTS	LN/LN:	0.986		Z0= 325.4662		
	LN/LN/GND:	1.037 (	0.477	GND RETURN KA)		
AT-W2 FCV JB	3P Duty:	2.498	0.17	Z1= 48.1570	2.498	2.498
	SLG DUTY:	1.466	0.12	Z2= 48.1570	1.466	
480. VOLTS	LN/LN:	2.163		Z0= 149.9295		
	LN/LN/GND:	2.256 (	1.037	GND RETURN KA)		
ATS PEWP2 NRM	3P Duty:	19.609	4.44	Z1= 6.1340	23.906	21.813
	SLG DUTY:	16.665	3.30	Z2= 6.1340	18.986	
480. VOLTS	LN/LN:	16.982		Z0= 9.4384		
	LN/LN/GND:	19.150 (	14.454	GND RETURN KA)		
ATS PP-UV-EMG	3P Duty:	3.428	0.34	Z1= 35.0836	3.428	3.428
	SLG DUTY:	2.063	0.26	Z2= 35.0836	2.063	
480. VOLTS	LN/LN:	2.969		Z0= 105.0602		
	LN/LN/GND:	3.137 (	1.473	GND RETURN KA)		
ATS PP-UV-LOAD	3P Duty:	1.650	0.17	Z1= 72.8847	1.650	1.650
	SLG DUTY:	0.969	0.13	Z2= 72.8847	0.969	
480. VOLTS	LN/LN:	1.429		Z0= 226.8317		
	LN/LN/GND:	1.487 (	0.685	GND RETURN KA)		
ATS PP-UV-NRM	3P Duty:	1.650	0.17	Z1= 72.8847	1.650	1.650
	SLG DUTY:	0.969	0.13	Z2= 72.8847	0.969	
480. VOLTS	LN/LN:	1.429		Z0= 226.8316		
	LN/LN/GND:	1.487 (	0.685	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
ATS-51 EMG	3P Duty:	27.246	3.06	Z1= 4.4146	30.548	28.922
	SLG DUTY:	22.124	2.56	Z2= 4.4146	23.948	
480. VOLTS	LN/LN:	23.596		Z0= 7.5102		
	LN/LN/GND:	26.156	(18.590	GND RETURN KA)		
ATS-51 LOAD	3P Duty:	26.452	2.94	Z1= 4.5471	29.412	27.952
	SLG DUTY:	21.457	2.51	Z2= 4.5471	23.150	
480. VOLTS	LN/LN:	22.908		Z0= 7.7469		
	LN/LN/GND:	25.303	(18.024	GND RETURN KA)		
ATS-51 NRM	3P Duty:	26.452	2.94	Z1= 4.5471	29.412	27.952
	SLG DUTY:	21.457	2.51	Z2= 4.5471	23.151	
480. VOLTS	LN/LN:	22.908		Z0= 7.7469		
	LN/LN/GND:	25.303	(18.024	GND RETURN KA)		
ATS-52 EMG	3P Duty:	26.696	3.07	Z1= 4.5057	29.940	28.342
	SLG DUTY:	21.519	2.42	Z2= 4.5057	23.061	
480. VOLTS	LN/LN:	23.119		Z0= 7.8136		
	LN/LN/GND:	25.847	(17.965	GND RETURN KA)		
ATS-52 LOAD	3P Duty:	25.903	2.97	Z1= 4.6435	28.859	27.402
	SLG DUTY:	20.788	2.35	Z2= 4.6435	22.183	
480. VOLTS	LN/LN:	22.433		Z0= 8.1276		
	LN/LN/GND:	25.033	(17.305	GND RETURN KA)		
ATS-52 NRM	3P Duty:	25.904	2.97	Z1= 4.6434	28.859	27.402
	SLG DUTY:	20.788	2.35	Z2= 4.6434	22.183	
480. VOLTS	LN/LN:	22.433		Z0= 8.1276		
	LN/LN/GND:	25.033	(17.305	GND RETURN KA)		
ATS-54 EMG	3P Duty:	23.758	2.81	Z1= 5.0628	26.177	24.983
	SLG DUTY:	18.560	2.21	Z2= 5.0628	19.610	
480. VOLTS	LN/LN:	20.575		Z0= 9.3873		
	LN/LN/GND:	22.865	(15.175	GND RETURN KA)		
ATS-54 LOAD	3P Duty:	22.064	2.67	Z1= 5.4514	24.065	23.075
	SLG DUTY:	17.050	2.11	Z2= 5.4514	17.899	
480. VOLTS	LN/LN:	19.108		Z0= 10.3353		
	LN/LN/GND:	21.167	(13.846	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
ATS-54 NRM	3P Duty:	22.064	2.67	Z1= 5.4514	24.065	23.076
	SLG DUTY:	17.050	2.11	Z2= 5.4514	17.899	
480. VOLTS	LN/LN:	19.108		Z0= 10.3353		
	LN/LN/GND:	21.167	(13.846	GND RETURN KA)		
ATS-55 EMG	3P Duty:	24.129	2.83	Z1= 4.9850	26.624	25.392
	SLG DUTY:	19.017	2.24	Z2= 4.9850	20.131	
480. VOLTS	LN/LN:	20.896		Z0= 9.0719		
	LN/LN/GND:	23.254	(15.639	GND RETURN KA)		
ATS-55 LOAD	3P Duty:	21.905	2.64	Z1= 5.4909	23.853	22.890
	SLG DUTY:	16.985	2.11	Z2= 5.4909	17.824	
480. VOLTS	LN/LN:	18.971		Z0= 10.3353		
	LN/LN/GND:	21.021	(13.824	GND RETURN KA)		
ATS-55 NRM	3P Duty:	21.905	2.64	Z1= 5.4909	23.853	22.890
	SLG DUTY:	16.985	2.11	Z2= 5.4909	17.824	
480. VOLTS	LN/LN:	18.971		Z0= 10.3353		
	LN/LN/GND:	21.021	(13.824	GND RETURN KA)		
ATS-ADM EMG	3P Duty:	11.985	3.34	Z1= 10.0362	13.688	12.851
	SLG DUTY:	8.775	2.42	Z2= 10.0362	9.410	
480. VOLTS	LN/LN:	10.379		Z0= 21.1883		
	LN/LN/GND:	11.365	(6.899	GND RETURN KA)		
ATS-ADM LOAD	3P Duty:	11.985	3.34	Z1= 10.0362	13.688	12.851
	SLG DUTY:	8.775	2.42	Z2= 10.0362	9.410	
480. VOLTS	LN/LN:	10.379		Z0= 21.1883		
	LN/LN/GND:	11.365	(6.899	GND RETURN KA)		
ATS-ADM NRM	3P Duty:	10.815	2.86	Z1= 11.1214	11.961	11.395
	SLG DUTY:	8.328	2.31	Z2= 11.1214	8.860	
480. VOLTS	LN/LN:	9.366		Z0= 21.2072		
	LN/LN/GND:	10.322	(6.752	GND RETURN KA)		
ATS-CEB LOAD	3P Duty:	21.339	2.58	Z1= 5.6366	23.129	22.243
	SLG DUTY:	19.390	1.85	Z2= 5.6366	20.030	
480. VOLTS	LN/LN:	18.480		Z0= 7.5558		
	LN/LN/GND:	22.175	(17.559	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
ATS-CEB-EMG	3P Duty:	20.548	2.07	Z1= 5.8538	21.507	21.030
	SLG DUTY:	17.607	1.47	Z2= 5.8538	17.853	
480. VOLTS	LN/LN:	17.795		Z0= 9.0658		
	LN/LN/GND:	21.012	(15.197	GND RETURN KA)		
ATS-CEB-NRM	3P Duty:	21.339	2.58	Z1= 5.6366	23.129	22.243
	SLG DUTY:	19.390	1.85	Z2= 5.6366	20.030	
480. VOLTS	LN/LN:	18.480		Z0= 7.5558		
	LN/LN/GND:	22.175	(17.559	GND RETURN KA)		
ATS-EBB NORM	3P Duty:	9.691	4.52	Z1= 12.4122	11.861	10.804
	SLG DUTY:	10.280	3.66	Z2= 12.4122	11.983	
480. VOLTS	LN/LN:	8.392		Z0= 10.3710		
	LN/LN/GND:	10.460	(10.917	GND RETURN KA)		
ATS-EBB-EMG	3P Duty:	10.502	4.53	Z1= 11.4535	12.861	11.713
	SLG DUTY:	10.874	3.62	Z2= 11.4535	12.647	
480. VOLTS	LN/LN:	9.095		Z0= 10.3710		
	LN/LN/GND:	11.178	(11.242	GND RETURN KA)		
ATS-EBB-LOAD	3P Duty:	9.691	4.52	Z1= 12.4122	11.861	10.804
	SLG DUTY:	10.280	3.66	Z2= 12.4122	11.983	
480. VOLTS	LN/LN:	8.392		Z0= 10.3710		
	LN/LN/GND:	10.460	(10.917	GND RETURN KA)		
ATS-LSE EMG	3P Duty:	12.365	2.14	Z1= 9.7273	13.009	12.689
	SLG DUTY:	10.406	1.60	Z2= 9.7273	10.611	
480. VOLTS	LN/LN:	10.709		Z0= 15.5122		
	LN/LN/GND:	12.382	(8.909	GND RETURN KA)		
ATS-LSE LOAD	3P Duty:	12.664	2.27	Z1= 9.4977	13.437	13.053
	SLG DUTY:	10.816	1.67	Z2= 9.4977	11.063	
480. VOLTS	LN/LN:	10.968		Z0= 14.6883		
	LN/LN/GND:	12.790	(9.349	GND RETURN KA)		
ATS-LSE NRM	3P Duty:	12.664	2.27	Z1= 9.4977	13.437	13.053
	SLG DUTY:	10.816	1.67	Z2= 9.4977	11.063	
480. VOLTS	LN/LN:	10.968		Z0= 14.6883		
	LN/LN/GND:	12.790	(9.349	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
ATS-RLS EMG	3P Duty:	13.659	2.58	Z1= 8.8060	14.812	14.241
	SLG DUTY:	11.734	1.91	Z2= 8.8060	12.165	
480. VOLTS	LN/LN:	11.829		Z0= 13.3558		
	LN/LN/GND:	13.695	(10.214	GND RETURN KA)		
ATS-RLS LOAD	3P Duty:	11.608	2.56	Z1= 10.3623	12.568	12.093
	SLG DUTY:	9.361	1.83	Z2= 10.3623	9.660	
480. VOLTS	LN/LN:	10.052		Z0= 18.1140		
	LN/LN/GND:	11.450	(7.786	GND RETURN KA)		
ATS-RLS NRM	3P Duty:	11.608	2.56	Z1= 10.3623	12.568	12.093
	SLG DUTY:	9.361	1.83	Z2= 10.3623	9.660	
480. VOLTS	LN/LN:	10.053		Z0= 18.1140		
	LN/LN/GND:	11.450	(7.786	GND RETURN KA)		
ATS-WBB NORM	3P Duty:	30.921	4.95	Z1= 3.8900	38.645	34.896
	SLG DUTY:	29.232	3.88	Z2= 3.8900	34.545	
480. VOLTS	LN/LN:	26.778		Z0= 4.5886		
	LN/LN/GND:	31.246	(27.664	GND RETURN KA)		
ATS-WBB-EMG	3P Duty:	32.899	4.95	Z1= 3.6560	41.121	37.131
	SLG DUTY:	30.251	3.81	Z2= 3.6560	35.599	
480. VOLTS	LN/LN:	28.492		Z0= 4.6393		
	LN/LN/GND:	32.858	(27.943	GND RETURN KA)		
ATS-WBB-LOAD	3P Duty:	30.921	4.95	Z1= 3.8900	38.645	34.896
	SLG DUTY:	29.232	3.88	Z2= 3.8900	34.545	
480. VOLTS	LN/LN:	26.778		Z0= 4.5887		
	LN/LN/GND:	31.246	(27.664	GND RETURN KA)		
ATS-WPB-EMG	3P Duty:	10.193	1.29	Z1= 11.8008	10.271	10.232
	SLG DUTY:	6.865	1.00	Z2= 11.8008	6.878	
480. VOLTS	LN/LN:	8.827		Z0= 29.2511		
	LN/LN/GND:	9.618	(5.149	GND RETURN KA)		
ATS-WPB-LOAD	3P Duty:	8.902	1.09	Z1= 13.5111	8.930	8.916
	SLG DUTY:	5.914	0.84	Z2= 13.5111	5.917	
480. VOLTS	LN/LN:	7.710		Z0= 34.3556		
	LN/LN/GND:	8.393	(4.403	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
ATS-WPB-NORM	3P Duty:	8.902	1.09	Z1= 13.5111	8.930	8.916
	SLG DUTY:	5.914	0.84	Z2= 13.5111	5.917	
480. VOLTS	LN/LN:	7.710		Z0= 34.3556		
	LN/LN/GND:	8.393	(4.403	GND RETURN KA)		
B-54-1 DISC	3P Duty:	3.408	0.20	Z1= 35.2909	3.408	3.408
	SLG DUTY:	2.010	0.14	Z2= 35.2909	2.010	
480. VOLTS	LN/LN:	2.952		Z0= 109.0815		
	LN/LN/GND:	3.090	(1.424	GND RETURN KA)		
B-54-1 MTR VAL	3P Duty:	3.360	0.20	Z1= 35.8005	3.360	3.360
	SLG DUTY:	1.981	0.14	Z2= 35.8005	1.981	
480. VOLTS	LN/LN:	2.910		Z0= 110.6967		
	LN/LN/GND:	3.045	(1.404	GND RETURN KA)		
B-54-2 DISC	3P Duty:	3.408	0.20	Z1= 35.2909	3.408	3.408
	SLG DUTY:	2.010	0.14	Z2= 35.2909	2.010	
480. VOLTS	LN/LN:	2.952		Z0= 109.0815		
	LN/LN/GND:	3.090	(1.424	GND RETURN KA)		
B-54-2 MTR VAL	3P Duty:	3.360	0.20	Z1= 35.8005	3.360	3.360
	SLG DUTY:	1.981	0.14	Z2= 35.8005	1.981	
480. VOLTS	LN/LN:	2.910		Z0= 110.6967		
	LN/LN/GND:	3.045	(1.404	GND RETURN KA)		
B-54-3 DISC	3P Duty:	3.408	0.20	Z1= 35.2909	3.408	3.408
	SLG DUTY:	2.010	0.14	Z2= 35.2909	2.010	
480. VOLTS	LN/LN:	2.952		Z0= 109.0815		
	LN/LN/GND:	3.090	(1.424	GND RETURN KA)		
B-54-3 MTR VAL	3P Duty:	3.360	0.20	Z1= 35.8005	3.360	3.360
	SLG DUTY:	1.981	0.14	Z2= 35.8005	1.981	
480. VOLTS	LN/LN:	2.910		Z0= 110.6967		
	LN/LN/GND:	3.045	(1.404	GND RETURN KA)		
BAR SCREEN 2 T	3P Duty:	4.356	0.36	Z1= 27.6113	4.356	4.356
	SLG DUTY:	2.665	0.23	Z2= 27.6113	2.665	
480. VOLTS	LN/LN:	3.773		Z0= 80.7714		
	LN/LN/GND:	4.037	(1.912	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
BF - 64- 29	3P Duty:	1.240	0.21	Z1= 97.0149	1.240	1.240
	SLG DUTY:	0.735	0.13	Z2= 97.0149	0.735	
480. VOLTS	LN/LN:	1.074		Z0= 297.7840		
	LN/LN/GND:	1.130	(0.521	GND RETURN KA)		
BF- 64- 30	3P Duty:	1.376	0.22	Z1= 87.4288	1.376	1.376
	SLG DUTY:	0.818	0.14	Z2= 87.4288	0.818	
480. VOLTS	LN/LN:	1.191		Z0= 267.0975		
	LN/LN/GND:	1.256	(0.581	GND RETURN KA)		
BF-64-07	3P Duty:	1.020	0.18	Z1= 117.8838	1.020	1.020
	SLG DUTY:	0.602	0.12	Z2= 117.8838	0.602	
480. VOLTS	LN/LN:	0.884		Z0= 364.0511		
	LN/LN/GND:	0.927	(0.427	GND RETURN KA)		
BF-64-08	3P Duty:	1.111	0.19	Z1= 108.2749	1.111	1.111
	SLG DUTY:	0.657	0.12	Z2= 108.2749	0.657	
480. VOLTS	LN/LN:	0.962		Z0= 333.3582		
	LN/LN/GND:	1.010	(0.466	GND RETURN KA)		
BSCRN-3 STR	3P Duty:	4.266	0.36	Z1= 28.1947	4.266	4.266
	SLG DUTY:	2.614	0.23	Z2= 28.1947	2.614	
480. VOLTS	LN/LN:	3.695		Z0= 82.2007		
	LN/LN/GND:	3.950	(1.877	GND RETURN KA)		
BSN-OUT-GT-1 D	3P Duty:	2.747	0.26	Z1= 43.7939	2.747	2.747
	SLG DUTY:	1.644	0.18	Z2= 43.7939	1.644	
480. VOLTS	LN/LN:	2.379		Z0= 132.3336		
	LN/LN/GND:	2.510	(1.171	GND RETURN KA)		
BSN-OUT-GT-3 D	3P Duty:	2.747	0.26	Z1= 43.7939	2.747	2.747
	SLG DUTY:	1.644	0.18	Z2= 43.7939	1.644	
480. VOLTS	LN/LN:	2.379		Z0= 132.3336		
	LN/LN/GND:	2.510	(1.171	GND RETURN KA)		
BSNHST DISC	3P Duty:	4.065	0.45	Z1= 29.5909	4.065	4.065
	SLG DUTY:	2.496	0.29	Z2= 29.5909	2.496	
480. VOLTS	LN/LN:	3.520		Z0= 86.1041		
	LN/LN/GND:	3.780	(1.793	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
BSNINFLGT-1 DI 3P Duty:		2.747	0.26	Z1= 43.7939	2.747	2.747
	SLG DUTY:	1.644	0.18	Z2= 43.7939	1.644	
480. VOLTS	LN/LN:	2.379		Z0= 132.3336		
	LN/LN/GND:	2.510	(1.171	GND RETURN KA)		
BSNINFLGT-3 DI 3P Duty:		2.747	0.26	Z1= 43.7939	2.747	2.747
	SLG DUTY:	1.644	0.18	Z2= 43.7939	1.644	
480. VOLTS	LN/LN:	2.379		Z0= 132.3336		
	LN/LN/GND:	2.510	(1.171	GND RETURN KA)		
BSNINFLGT2 DIS 3P Duty:		2.734	0.27	Z1= 43.9951	2.734	2.734
	SLG DUTY:	1.638	0.18	Z2= 43.9951	1.638	
480. VOLTS	LN/LN:	2.368		Z0= 132.7866		
	LN/LN/GND:	2.503	(1.167	GND RETURN KA)		
BSNOUTGT2 DISC 3P Duty:		2.734	0.27	Z1= 43.9951	2.734	2.734
	SLG DUTY:	1.638	0.18	Z2= 43.9951	1.638	
480. VOLTS	LN/LN:	2.368		Z0= 132.7866		
	LN/LN/GND:	2.503	(1.167	GND RETURN KA)		
BT1-1M DISC 3P Duty:		10.797	1.69	Z1= 11.1398	11.058	10.928
	SLG DUTY:	7.201	1.20	Z2= 11.1398	7.240	
480. VOLTS	LN/LN:	9.351		Z0= 28.1026		
	LN/LN/GND:	10.168	(5.374	GND RETURN KA)		
BT2-1M DISC 3P Duty:		10.731	1.70	Z1= 11.2092	10.993	10.862
	SLG DUTY:	7.136	1.21	Z2= 11.2092	7.175	
480. VOLTS	LN/LN:	9.293		Z0= 28.4196		
	LN/LN/GND:	10.101	(5.319	GND RETURN KA)		
BTAB-1 DISC 3P Duty:		1.468	0.23	Z1= 81.9516	1.468	1.468
	SLG DUTY:	0.834	0.13	Z2= 81.9516	0.834	
480. VOLTS	LN/LN:	1.271		Z0= 270.2380		
	LN/LN/GND:	1.345	(0.581	GND RETURN KA)		
BTAB-2 DISC 3P Duty:		1.450	0.32	Z1= 82.9283	1.450	1.450
	SLG DUTY:	0.831	0.14	Z2= 82.9283	0.831	
480. VOLTS	LN/LN:	1.256		Z0= 270.1263		
	LN/LN/GND:	1.331	(0.580	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
BTAB-3 DISC	3P Duty:	1.345	0.33	Z1= 89.4431	1.345	1.345
	SLG DUTY:	0.769	0.14	Z2= 89.4431	0.769	
480. VOLTS	LN/LN:	1.165		Z0= 292.4784		
	LN/LN/GND:	1.236	(0.536	GND RETURN KA)		
BUS-0097	3P Duty:	1.068	0.20	Z1= 112.6217	1.068	1.068
	SLG DUTY:	0.624	0.13	Z2= 112.6217	0.624	
480. VOLTS	LN/LN:	0.925		Z0= 353.4476		
	LN/LN/GND:	0.968	(0.441	GND RETURN KA)		
BUS-0099	3P Duty:	1.068	0.20	Z1= 112.6228	1.068	1.068
	SLG DUTY:	0.624	0.13	Z2= 112.6228	0.624	
480. VOLTS	LN/LN:	0.925		Z0= 353.4476		
	LN/LN/GND:	0.968	(0.441	GND RETURN KA)		
BUS-0101	3P Duty:	1.068	0.20	Z1= 112.6234	1.068	1.068
	SLG DUTY:	0.624	0.13	Z2= 112.6234	0.624	
480. VOLTS	LN/LN:	0.925		Z0= 353.4476		
	LN/LN/GND:	0.968	(0.441	GND RETURN KA)		
BUS-0103	3P Duty:	1.068	0.20	Z1= 112.6201	1.068	1.068
	SLG DUTY:	0.624	0.13	Z2= 112.6201	0.624	
480. VOLTS	LN/LN:	0.925		Z0= 353.4476		
	LN/LN/GND:	0.968	(0.441	GND RETURN KA)		
BUS-0105	3P Duty:	1.068	0.20	Z1= 112.6203	1.068	1.068
	SLG DUTY:	0.624	0.13	Z2= 112.6203	0.624	
480. VOLTS	LN/LN:	0.925		Z0= 353.4476		
	LN/LN/GND:	0.968	(0.441	GND RETURN KA)		
BUS-0107	3P Duty:	1.068	0.20	Z1= 112.6209	1.068	1.068
	SLG DUTY:	0.624	0.13	Z2= 112.6209	0.624	
480. VOLTS	LN/LN:	0.925		Z0= 353.4476		
	LN/LN/GND:	0.968	(0.441	GND RETURN KA)		
BUS-0109	3P Duty:	1.068	0.20	Z1= 112.6218	1.068	1.068
	SLG DUTY:	0.624	0.13	Z2= 112.6218	0.624	
480. VOLTS	LN/LN:	0.925		Z0= 353.4476		
	LN/LN/GND:	0.968	(0.441	GND RETURN KA)		

UNBALANCED FAULT REPORT

(FOR APPLICATION OF LOW VOLTAGE BREAKERS)

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
BUS-0111	3P Duty:	1.068	0.20	Z1= 112.6225	1.068	1.068
	SLG DUTY:	0.624	0.13	Z2= 112.6225	0.624	
480. VOLTS	LN/LN:	0.925		Z0= 353.4476		
	LN/LN/GND:	0.968 (	0.441	GND RETURN KA)		
BUS-0113	3P Duty:	1.068	0.20	Z1= 112.6234	1.068	1.068
	SLG DUTY:	0.624	0.13	Z2= 112.6234	0.624	
480. VOLTS	LN/LN:	0.925		Z0= 353.4476		
	LN/LN/GND:	0.968 (	0.441	GND RETURN KA)		
BUS-0115	3P Duty:	1.068	0.20	Z1= 112.6225	1.068	1.068
	SLG DUTY:	0.624	0.13	Z2= 112.6225	0.624	
480. VOLTS	LN/LN:	0.925		Z0= 353.4476		
	LN/LN/GND:	0.968 (	0.441	GND RETURN KA)		
BUS-0117	3P Duty:	1.068	0.20	Z1= 112.6218	1.068	1.068
	SLG DUTY:	0.624	0.13	Z2= 112.6218	0.624	
480. VOLTS	LN/LN:	0.925		Z0= 353.4476		
	LN/LN/GND:	0.968 (	0.441	GND RETURN KA)		
BUS-0119	3P Duty:	1.068	0.20	Z1= 112.6209	1.068	1.068
	SLG DUTY:	0.624	0.13	Z2= 112.6209	0.624	
480. VOLTS	LN/LN:	0.925		Z0= 353.4476		
	LN/LN/GND:	0.968 (	0.441	GND RETURN KA)		
BUS-0121	3P Duty:	1.068	0.20	Z1= 112.6228	1.068	1.068
	SLG DUTY:	0.624	0.13	Z2= 112.6228	0.624	
480. VOLTS	LN/LN:	0.925		Z0= 353.4476		
	LN/LN/GND:	0.968 (	0.441	GND RETURN KA)		
BUS-0123	3P Duty:	1.068	0.20	Z1= 112.6217	1.068	1.068
	SLG DUTY:	0.624	0.13	Z2= 112.6217	0.624	
480. VOLTS	LN/LN:	0.925		Z0= 353.4476		
	LN/LN/GND:	0.968 (	0.441	GND RETURN KA)		
BUS-0125	3P Duty:	1.068	0.20	Z1= 112.6201	1.068	1.068
	SLG DUTY:	0.624	0.13	Z2= 112.6201	0.624	
480. VOLTS	LN/LN:	0.925		Z0= 353.4476		
	LN/LN/GND:	0.968 (	0.441	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
BUS-0127	3P Duty:	1.068	0.20	Z1= 112.6203	1.068	1.068
	SLG DUTY:	0.624	0.13	Z2= 112.6203	0.624	
480. VOLTS	LN/LN:	0.925		Z0= 353.4476		
	LN/LN/GND:	0.968	(0.441	GND RETURN KA)		
BUS-0141	3P Duty:	0.827	0.17	Z1= 145.4809	0.827	0.827
	SLG DUTY:	0.484	0.12	Z2= 145.4809	0.484	
480. VOLTS	LN/LN:	0.716		Z0= 455.7032		
	LN/LN/GND:	0.748	(0.342	GND RETURN KA)		
BUS-0143	3P Duty:	0.827	0.17	Z1= 145.4789	0.827	0.827
	SLG DUTY:	0.484	0.12	Z2= 145.4789	0.484	
480. VOLTS	LN/LN:	0.716		Z0= 455.7032		
	LN/LN/GND:	0.748	(0.342	GND RETURN KA)		
BUS-0145	3P Duty:	0.827	0.17	Z1= 145.4763	0.827	0.827
	SLG DUTY:	0.484	0.12	Z2= 145.4763	0.484	
480. VOLTS	LN/LN:	0.716		Z0= 455.7032		
	LN/LN/GND:	0.748	(0.342	GND RETURN KA)		
BUS-0147	3P Duty:	0.827	0.17	Z1= 145.4818	0.827	0.827
	SLG DUTY:	0.484	0.12	Z2= 145.4818	0.484	
480. VOLTS	LN/LN:	0.716		Z0= 455.7032		
	LN/LN/GND:	0.748	(0.342	GND RETURN KA)		
BUS-0149	3P Duty:	0.827	0.17	Z1= 145.4804	0.827	0.827
	SLG DUTY:	0.484	0.12	Z2= 145.4804	0.484	
480. VOLTS	LN/LN:	0.716		Z0= 455.7032		
	LN/LN/GND:	0.748	(0.342	GND RETURN KA)		
BUS-0151	3P Duty:	0.827	0.17	Z1= 145.4792	0.827	0.827
	SLG DUTY:	0.484	0.12	Z2= 145.4792	0.484	
480. VOLTS	LN/LN:	0.716		Z0= 455.7032		
	LN/LN/GND:	0.748	(0.342	GND RETURN KA)		
BUS-0153	3P Duty:	0.827	0.17	Z1= 145.4777	0.827	0.827
	SLG DUTY:	0.484	0.12	Z2= 145.4777	0.484	
480. VOLTS	LN/LN:	0.716		Z0= 455.7032		
	LN/LN/GND:	0.748	(0.342	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
BUS-0155	3P Duty:	0.827	0.17	Z1= 145.4766	0.827	0.827
	SLG DUTY:	0.484	0.12	Z2= 145.4766	0.484	
480. VOLTS	LN/LN:	0.716		Z0= 455.7032		
	LN/LN/GND:	0.748	(	0.342 GND RETURN KA)		
BUS-0157	3P Duty:	0.827	0.17	Z1= 145.4763	0.827	0.827
	SLG DUTY:	0.484	0.12	Z2= 145.4763	0.484	
480. VOLTS	LN/LN:	0.716		Z0= 455.7032		
	LN/LN/GND:	0.748	(	0.342 GND RETURN KA)		
BUS-0159	3P Duty:	0.827	0.17	Z1= 145.4766	0.827	0.827
	SLG DUTY:	0.484	0.12	Z2= 145.4766	0.484	
480. VOLTS	LN/LN:	0.716		Z0= 455.7032		
	LN/LN/GND:	0.748	(	0.342 GND RETURN KA)		
BUS-0161	3P Duty:	0.827	0.17	Z1= 145.4777	0.827	0.827
	SLG DUTY:	0.484	0.12	Z2= 145.4777	0.484	
480. VOLTS	LN/LN:	0.716		Z0= 455.7032		
	LN/LN/GND:	0.748	(	0.342 GND RETURN KA)		
BUS-0163	3P Duty:	0.827	0.17	Z1= 145.4792	0.827	0.827
	SLG DUTY:	0.484	0.12	Z2= 145.4792	0.484	
480. VOLTS	LN/LN:	0.716		Z0= 455.7032		
	LN/LN/GND:	0.748	(	0.342 GND RETURN KA)		
BUS-0165	3P Duty:	0.827	0.17	Z1= 145.4789	0.827	0.827
	SLG DUTY:	0.484	0.12	Z2= 145.4789	0.484	
480. VOLTS	LN/LN:	0.716		Z0= 455.7032		
	LN/LN/GND:	0.748	(	0.342 GND RETURN KA)		
BUS-0167	3P Duty:	0.827	0.17	Z1= 145.4809	0.827	0.827
	SLG DUTY:	0.484	0.12	Z2= 145.4809	0.484	
480. VOLTS	LN/LN:	0.716		Z0= 455.7032		
	LN/LN/GND:	0.748	(	0.342 GND RETURN KA)		
BUS-0169	3P Duty:	0.827	0.17	Z1= 145.4818	0.827	0.827
	SLG DUTY:	0.484	0.12	Z2= 145.4818	0.484	
480. VOLTS	LN/LN:	0.716		Z0= 455.7032		
	LN/LN/GND:	0.748	(	0.342 GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
BUS-0171	3P Duty:	0.827	0.17	Z1= 145.4804	0.827	0.827
	SLG DUTY:	0.484	0.12	Z2= 145.4804	0.484	
480. VOLTS	LN/LN:	0.716		Z0= 455.7032		
	LN/LN/GND:	0.748	(	0.342 GND RETURN KA)		
BUS-0178	3P Duty:	6.189	1.90	Z1= 19.4339	6.412	6.301
	SLG DUTY:	5.124	1.34	Z2= 19.4339	5.171	
480. VOLTS	LN/LN:	5.360		Z0= 32.5634		
	LN/LN/GND:	6.271	(	4.310 GND RETURN KA)		
BUS-0179	3P Duty:	1.384	0.22	Z1= 86.9072	1.384	1.384
	SLG DUTY:	0.825	0.14	Z2= 86.9072	0.825	
480. VOLTS	LN/LN:	1.199		Z0= 264.1042		
	LN/LN/GND:	1.263	(	0.587 GND RETURN KA)		
BUS-0180	3P Duty:	1.384	0.22	Z1= 86.9072	1.384	1.384
	SLG DUTY:	0.825	0.14	Z2= 86.9072	0.825	
480. VOLTS	LN/LN:	1.199		Z0= 264.1042		
	LN/LN/GND:	1.263	(	0.587 GND RETURN KA)		
BUS-0181	3P Duty:	6.069	1.86	Z1= 19.8196	6.272	6.171
	SLG DUTY:	4.985	1.32	Z2= 19.8196	5.027	
480. VOLTS	LN/LN:	5.256		Z0= 33.7686		
	LN/LN/GND:	6.133	(	4.172 GND RETURN KA)		
BUS-0182	3P Duty:	2.091	0.30	Z1= 57.5219	2.091	2.091
	SLG DUTY:	1.263	0.17	Z2= 57.5219	1.263	
480. VOLTS	LN/LN:	1.811		Z0= 171.7473		
	LN/LN/GND:	1.931	(	0.902 GND RETURN KA)		
BUS-0188	3P Duty:	2.501	0.34	Z1= 48.0918	2.501	2.501
	SLG DUTY:	1.528	0.20	Z2= 48.0918	1.528	
480. VOLTS	LN/LN:	2.166		Z0= 141.0965		
	LN/LN/GND:	2.325	(	1.095 GND RETURN KA)		
BUS-0272	3P Duty:	11.095	1.41	Z1= 10.8407	11.223	11.159
	SLG DUTY:	7.574	1.08	Z2= 10.8407	7.597	
480. VOLTS	LN/LN:	9.609		Z0= 26.2372		
	LN/LN/GND:	10.502	(	5.718 GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
BUS-0273	3P Duty:	1.880	0.21	Z1= 63.9947	1.880	1.880
	SLG DUTY:	1.104	0.17	Z2= 63.9947	1.104	
480. VOLTS	LN/LN:	1.628		Z0= 199.1555		
	LN/LN/GND:	1.696	(0.781	GND RETURN KA)		
BUS-0274	3P Duty:	1.470	0.18	Z1= 81.8149	1.470	1.470
	SLG DUTY:	0.861	0.14	Z2= 81.8149	0.861	
480. VOLTS	LN/LN:	1.273		Z0= 255.5926		
	LN/LN/GND:	1.324	(0.609	GND RETURN KA)		
BUS-0275	3P Duty:	1.850	0.21	Z1= 65.0115	1.850	1.850
	SLG DUTY:	1.086	0.16	Z2= 65.0115	1.086	
480. VOLTS	LN/LN:	1.602		Z0= 202.3783		
	LN/LN/GND:	1.669	(0.768	GND RETURN KA)		
BUS-0276	3P Duty:	1.589	0.19	Z1= 75.6997	1.589	1.589
	SLG DUTY:	0.931	0.15	Z2= 75.6997	0.931	
480. VOLTS	LN/LN:	1.376		Z0= 236.2349		
	LN/LN/GND:	1.431	(0.658	GND RETURN KA)		
BUS-0277	3P Duty:	2.234	0.24	Z1= 53.8436	2.234	2.234
	SLG DUTY:	1.315	0.19	Z2= 53.8436	1.315	
480. VOLTS	LN/LN:	1.935		Z0= 166.9500		
	LN/LN/GND:	2.019	(0.931	GND RETURN KA)		
BUS-0278	3P Duty:	2.007	0.22	Z1= 59.9304	2.007	2.007
	SLG DUTY:	1.179	0.17	Z2= 59.9304	1.179	
480. VOLTS	LN/LN:	1.738		Z0= 186.2680		
	LN/LN/GND:	1.812	(0.835	GND RETURN KA)		
BUS-0279	3P Duty:	1.957	0.22	Z1= 61.4540	1.957	1.957
	SLG DUTY:	1.150	0.17	Z2= 61.4540	1.150	
480. VOLTS	LN/LN:	1.695		Z0= 191.1001		
	LN/LN/GND:	1.766	(0.814	GND RETURN KA)		
BUS-0281	3P Duty:	2.954	0.29	Z1= 40.7201	2.954	2.954
	SLG DUTY:	1.748	0.23	Z2= 40.7201	1.748	
480. VOLTS	LN/LN:	2.558		Z0= 125.1809		
	LN/LN/GND:	2.680	(1.240	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
BUS-0287	3P Duty:	12.132	2.07	Z1= 9.9146	12.704	12.419
	SLG DUTY:	8.769	1.59	Z2= 9.9146	8.936	
480. VOLTS	LN/LN:	10.506		Z0= 21.5238		
	LN/LN/GND:	11.560	(6.834	GND RETURN KA)		
BUS-0288	3P Duty:	12.132	2.07	Z1= 9.9147	12.703	12.419
	SLG DUTY:	8.769	1.59	Z2= 9.9147	8.935	
480. VOLTS	LN/LN:	10.506		Z0= 21.5238		
	LN/LN/GND:	11.560	(6.834	GND RETURN KA)		
BUS-0289	3P Duty:	3.450	0.34	Z1= 34.8634	3.450	3.450
	SLG DUTY:	2.057	0.26	Z2= 34.8634	2.057	
480. VOLTS	LN/LN:	2.988		Z0= 105.9766		
	LN/LN/GND:	3.143	(1.463	GND RETURN KA)		
BUS-0290	3P Duty:	2.459	0.26	Z1= 48.9130	2.459	2.459
	SLG DUTY:	1.452	0.20	Z2= 48.9130	1.452	
480. VOLTS	LN/LN:	2.130		Z0= 150.8706		
	LN/LN/GND:	2.228	(1.030	GND RETURN KA)		
BUS-0291	3P Duty:	1.986	0.22	Z1= 60.5591	1.986	1.986
	SLG DUTY:	1.169	0.17	Z2= 60.5591	1.169	
480. VOLTS	LN/LN:	1.720		Z0= 187.8814		
	LN/LN/GND:	1.795	(0.827	GND RETURN KA)		
BUS-0292	3P Duty:	1.665	0.20	Z1= 72.2496	1.665	1.665
	SLG DUTY:	0.977	0.16	Z2= 72.2496	0.977	
480. VOLTS	LN/LN:	1.442		Z0= 224.9489		
	LN/LN/GND:	1.502	(0.691	GND RETURN KA)		
BUS-0293	3P Duty:	2.020	0.23	Z1= 59.5443	2.020	2.020
	SLG DUTY:	1.189	0.18	Z2= 59.5443	1.189	
480. VOLTS	LN/LN:	1.749		Z0= 184.6603		
	LN/LN/GND:	1.825	(0.842	GND RETURN KA)		
BUS-0294	3P Duty:	1.937	0.22	Z1= 62.0820	1.937	1.937
	SLG DUTY:	1.139	0.17	Z2= 62.0820	1.139	
480. VOLTS	LN/LN:	1.678		Z0= 192.7138		
	LN/LN/GND:	1.750	(0.807	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
BUS-0295	3P Duty:	1.525	0.19	Z1= 78.8688	1.525	1.525
	SLG DUTY:	0.894	0.15	Z2= 78.8688	0.894	
480. VOLTS	LN/LN:	1.321		Z0= 245.9155		
	LN/LN/GND:	1.375	(0.632	GND RETURN KA)		
BUS-0296	3P Duty:	3.096	0.31	Z1= 38.8549	3.096	3.096
	SLG DUTY:	1.839	0.24	Z2= 38.8549	1.839	
480. VOLTS	LN/LN:	2.681		Z0= 118.7746		
	LN/LN/GND:	2.814	(1.306	GND RETURN KA)		
BUS-0310	3P Duty:	6.469	0.30	Z1= 18.5946	6.469	6.469
	SLG DUTY:	3.889	0.20	Z2= 18.5946	3.889	
480. VOLTS	LN/LN:	5.602		Z0= 55.8272		
	LN/LN/GND:	5.937	(2.774	GND RETURN KA)		
BUS-0311	3P Duty:	6.299	0.29	Z1= 19.0965	6.299	6.299
	SLG DUTY:	3.783	0.20	Z2= 19.0965	3.783	
480. VOLTS	LN/LN:	5.455		Z0= 57.4384		
	LN/LN/GND:	5.777	(2.697	GND RETURN KA)		
BUS-0312	3P Duty:	6.469	0.30	Z1= 18.5946	6.469	6.469
	SLG DUTY:	3.889	0.20	Z2= 18.5946	3.889	
480. VOLTS	LN/LN:	5.602		Z0= 55.8272		
	LN/LN/GND:	5.937	(2.774	GND RETURN KA)		
BUS-0313	3P Duty:	6.299	0.29	Z1= 19.0965	6.299	6.299
	SLG DUTY:	3.783	0.20	Z2= 19.0965	3.783	
480. VOLTS	LN/LN:	5.455		Z0= 57.4384		
	LN/LN/GND:	5.777	(2.697	GND RETURN KA)		
BUS-0314	3P Duty:	4.118	0.22	Z1= 29.2087	4.118	4.118
	SLG DUTY:	2.439	0.15	Z2= 29.2087	2.439	
480. VOLTS	LN/LN:	3.566		Z0= 89.7033		
	LN/LN/GND:	3.742	(1.731	GND RETURN KA)		
BUS-0315	3P Duty:	4.048	0.21	Z1= 29.7171	4.048	4.048
	SLG DUTY:	2.396	0.15	Z2= 29.7171	2.396	
480. VOLTS	LN/LN:	3.505		Z0= 91.3178		
	LN/LN/GND:	3.677	(1.700	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
BUS-0316	3P Duty:	4.118	0.22	Z1= 29.2087	4.118	4.118
	SLG DUTY:	2.439	0.15	Z2= 29.2087	2.439	
480. VOLTS	LN/LN:	3.566		Z0= 89.7033		
	LN/LN/GND:	3.742	(1.731	GND RETURN KA)		
BUS-0317	3P Duty:	4.048	0.21	Z1= 29.7171	4.048	4.048
	SLG DUTY:	2.396	0.15	Z2= 29.7171	2.396	
480. VOLTS	LN/LN:	3.505		Z0= 91.3178		
	LN/LN/GND:	3.677	(1.700	GND RETURN KA)		
BUS-0318	3P Duty:	2.471	0.16	Z1= 48.6680	2.471	2.471
	SLG DUTY:	1.451	0.11	Z2= 48.6680	1.451	
480. VOLTS	LN/LN:	2.140		Z0= 151.5454		
	LN/LN/GND:	2.232	(1.026	GND RETURN KA)		
BUS-0319	3P Duty:	2.446	0.16	Z1= 49.1790	2.446	2.446
	SLG DUTY:	1.436	0.11	Z2= 49.1790	1.436	
480. VOLTS	LN/LN:	2.118		Z0= 153.1614		
	LN/LN/GND:	2.209	(1.015	GND RETURN KA)		
BUS-0320	3P Duty:	5.287	0.25	Z1= 22.7519	5.287	5.287
	SLG DUTY:	3.152	0.17	Z2= 22.7519	3.152	
480. VOLTS	LN/LN:	4.578		Z0= 69.1709		
	LN/LN/GND:	4.825	(2.242	GND RETURN KA)		
BUS-0321	3P Duty:	2.471	0.16	Z1= 48.6680	2.471	2.471
	SLG DUTY:	1.451	0.11	Z2= 48.6680	1.451	
480. VOLTS	LN/LN:	2.140		Z0= 151.5454		
	LN/LN/GND:	2.232	(1.026	GND RETURN KA)		
BUS-0322	3P Duty:	2.446	0.16	Z1= 49.1790	2.446	2.446
	SLG DUTY:	1.436	0.11	Z2= 49.1790	1.436	
480. VOLTS	LN/LN:	2.118		Z0= 153.1614		
	LN/LN/GND:	2.209	(1.015	GND RETURN KA)		
BUS-0323	3P Duty:	2.471	0.16	Z1= 48.6680	2.471	2.471
	SLG DUTY:	1.451	0.11	Z2= 48.6680	1.451	
480. VOLTS	LN/LN:	2.140		Z0= 151.5454		
	LN/LN/GND:	2.232	(1.026	GND RETURN KA)		

UNBALANCED FAULT REPORT

(FOR APPLICATION OF LOW VOLTAGE BREAKERS)

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
BUS-0324	3P Duty:	2.446	0.16	Z1= 49.1790	2.446	2.446
	SLG DUTY:	1.436	0.11	Z2= 49.1790	1.436	
480. VOLTS	LN/LN:	2.118		Z0= 153.1614		
	LN/LN/GND:	2.209	(1.015	GND RETURN KA)		
BUS-0325	3P Duty:	2.255	0.15	Z1= 53.3454	2.255	2.255
	SLG DUTY:	1.323	0.11	Z2= 53.3454	1.323	
480. VOLTS	LN/LN:	1.953		Z0= 166.0898		
	LN/LN/GND:	2.033	(0.936	GND RETURN KA)		
BUS-0326	3P Duty:	4.958	0.24	Z1= 24.2600	4.958	4.958
	SLG DUTY:	2.950	0.16	Z2= 24.2600	2.950	
480. VOLTS	LN/LN:	4.294		Z0= 74.0119		
	LN/LN/GND:	4.520	(2.096	GND RETURN KA)		
BUS-0327	3P Duty:	4.857	0.24	Z1= 24.7668	4.857	4.857
	SLG DUTY:	2.888	0.16	Z2= 24.7668	2.888	
480. VOLTS	LN/LN:	4.206		Z0= 75.6258		
	LN/LN/GND:	4.426	(2.052	GND RETURN KA)		
BUS-0328	3P Duty:	4.958	0.24	Z1= 24.2600	4.958	4.958
	SLG DUTY:	2.950	0.16	Z2= 24.2600	2.950	
480. VOLTS	LN/LN:	4.294		Z0= 74.0119		
	LN/LN/GND:	4.520	(2.096	GND RETURN KA)		
BUS-0329	3P Duty:	4.857	0.24	Z1= 24.7668	4.857	4.857
	SLG DUTY:	2.888	0.16	Z2= 24.7668	2.888	
480. VOLTS	LN/LN:	4.206		Z0= 75.6258		
	LN/LN/GND:	4.426	(2.052	GND RETURN KA)		
BUS-0330	3P Duty:	11.135	0.46	Z1= 10.8024	11.135	11.135
	SLG DUTY:	6.965	0.30	Z2= 10.8024	6.965	
480. VOLTS	LN/LN:	9.643		Z0= 30.5451		
	LN/LN/GND:	10.432	(5.036	GND RETURN KA)		
BUS-0331	3P Duty:	3.101	0.30	Z1= 38.7913	3.101	3.101
	SLG DUTY:	1.873	0.21	Z2= 38.7913	1.873	
480. VOLTS	LN/LN:	2.685		Z0= 115.5263		
	LN/LN/GND:	2.845	(1.339	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
BUS-0332	3P Duty:	8.566	0.90	Z1= 14.0416	8.574	8.570
	SLG DUTY:	5.998	0.62	Z2= 14.0416	5.998	
480. VOLTS	LN/LN:	7.418		Z0= 32.8725		
	LN/LN/GND:	8.317	(4.557	GND RETURN KA)		
BUS-0333	3P Duty:	4.637	0.43	Z1= 25.9369	4.637	4.637
	SLG DUTY:	2.885	0.30	Z2= 25.9369	2.885	
480. VOLTS	LN/LN:	4.016		Z0= 73.8019		
	LN/LN/GND:	4.317	(2.085	GND RETURN KA)		
BUS-0337	3P Duty:	1.124	0.15	Z1= 106.9867	1.124	1.124
	SLG DUTY:	0.661	0.11	Z2= 106.9867	0.661	
480. VOLTS	LN/LN:	0.974		Z0= 331.8038		
	LN/LN/GND:	1.014	(0.468	GND RETURN KA)		
BUS-0348	3P Duty:	0.833	0.13	Z1= 144.3827	0.833	0.833
	SLG DUTY:	0.489	0.10	Z2= 144.3827	0.489	
480. VOLTS	LN/LN:	0.721		Z0= 449.7694		
	LN/LN/GND:	0.749	(0.346	GND RETURN KA)		
BUS-0349	3P Duty:	0.963	0.14	Z1= 124.9097	0.963	0.963
	SLG DUTY:	0.566	0.11	Z2= 124.9097	0.566	
480. VOLTS	LN/LN:	0.834		Z0= 388.3589		
	LN/LN/GND:	0.867	(0.400	GND RETURN KA)		
BUS-0350	3P Duty:	0.833	0.13	Z1= 144.3827	0.833	0.833
	SLG DUTY:	0.489	0.10	Z2= 144.3827	0.489	
480. VOLTS	LN/LN:	0.721		Z0= 449.7694		
	LN/LN/GND:	0.749	(0.346	GND RETURN KA)		
BUS-0351	3P Duty:	0.963	0.14	Z1= 124.9097	0.963	0.963
	SLG DUTY:	0.566	0.11	Z2= 124.9097	0.566	
480. VOLTS	LN/LN:	0.834		Z0= 388.3589		
	LN/LN/GND:	0.867	(0.400	GND RETURN KA)		
BUS-0352	3P Duty:	0.963	0.14	Z1= 124.9097	0.963	0.963
	SLG DUTY:	0.566	0.11	Z2= 124.9097	0.566	
480. VOLTS	LN/LN:	0.834		Z0= 388.3589		
	LN/LN/GND:	0.867	(0.400	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
BUS-0353	3P Duty:	0.867	0.13	Z1= 138.7446	0.867	0.867
	SLG DUTY:	0.509	0.10	Z2= 138.7446	0.509	
480. VOLTS	LN/LN:	0.751		Z0= 431.9921		
	LN/LN/GND:	0.780	(	0.360 GND RETURN KA)		
BUS-0354	3P Duty:	0.963	0.14	Z1= 124.9097	0.963	0.963
	SLG DUTY:	0.566	0.11	Z2= 124.9097	0.566	
480. VOLTS	LN/LN:	0.834		Z0= 388.3589		
	LN/LN/GND:	0.867	(	0.400 GND RETURN KA)		
BUS-0355	3P Duty:	0.963	0.14	Z1= 124.9097	0.963	0.963
	SLG DUTY:	0.566	0.11	Z2= 124.9097	0.566	
480. VOLTS	LN/LN:	0.834		Z0= 388.3589		
	LN/LN/GND:	0.867	(	0.400 GND RETURN KA)		
BUS-0356	3P Duty:	0.963	0.14	Z1= 124.9097	0.963	0.963
	SLG DUTY:	0.566	0.11	Z2= 124.9097	0.566	
480. VOLTS	LN/LN:	0.834		Z0= 388.3589		
	LN/LN/GND:	0.867	(	0.400 GND RETURN KA)		
BUS-0357	3P Duty:	0.963	0.14	Z1= 124.9097	0.963	0.963
	SLG DUTY:	0.566	0.11	Z2= 124.9097	0.566	
480. VOLTS	LN/LN:	0.834		Z0= 388.3589		
	LN/LN/GND:	0.867	(	0.400 GND RETURN KA)		
BUS-0358	3P Duty:	0.963	0.14	Z1= 124.9097	0.963	0.963
	SLG DUTY:	0.566	0.11	Z2= 124.9097	0.566	
480. VOLTS	LN/LN:	0.834		Z0= 388.3589		
	LN/LN/GND:	0.867	(	0.400 GND RETURN KA)		
BUS-0359	3P Duty:	0.963	0.14	Z1= 124.9097	0.963	0.963
	SLG DUTY:	0.566	0.11	Z2= 124.9097	0.566	
480. VOLTS	LN/LN:	0.834		Z0= 388.3589		
	LN/LN/GND:	0.867	(	0.400 GND RETURN KA)		
BUS-0360	3P Duty:	0.963	0.14	Z1= 124.9097	0.963	0.963
	SLG DUTY:	0.566	0.11	Z2= 124.9097	0.566	
480. VOLTS	LN/LN:	0.834		Z0= 388.3589		
	LN/LN/GND:	0.867	(	0.400 GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
BUS-0361	3P Duty:	0.963	0.14	Z1= 124.9097	0.963	0.963
	SLG DUTY:	0.566	0.11	Z2= 124.9097	0.566	
480. VOLTS	LN/LN:	0.834		Z0= 388.3589		
	LN/LN/GND:	0.867	(0.400	GND RETURN KA)		
BUS-0362	3P Duty:	0.833	0.13	Z1= 144.3827	0.833	0.833
	SLG DUTY:	0.489	0.10	Z2= 144.3827	0.489	
480. VOLTS	LN/LN:	0.721		Z0= 449.7694		
	LN/LN/GND:	0.749	(0.346	GND RETURN KA)		
BUS-0363	3P Duty:	0.963	0.14	Z1= 124.9097	0.963	0.963
	SLG DUTY:	0.566	0.11	Z2= 124.9097	0.566	
480. VOLTS	LN/LN:	0.834		Z0= 388.3589		
	LN/LN/GND:	0.867	(0.400	GND RETURN KA)		
BUS-0364	3P Duty:	0.963	0.14	Z1= 124.9097	0.963	0.963
	SLG DUTY:	0.566	0.11	Z2= 124.9097	0.566	
480. VOLTS	LN/LN:	0.834		Z0= 388.3589		
	LN/LN/GND:	0.867	(0.400	GND RETURN KA)		
BUS-0392	3P Duty:	1.461	0.25	Z1= 82.3068	1.461	1.461
	SLG DUTY:	0.870	0.15	Z2= 82.3068	0.870	
480. VOLTS	LN/LN:	1.266		Z0= 251.1431		
	LN/LN/GND:	1.338	(0.618	GND RETURN KA)		
BUS-0393	3P Duty:	2.003	0.29	Z1= 60.0362	2.003	2.003
	SLG DUTY:	1.207	0.17	Z2= 60.0362	1.207	
480. VOLTS	LN/LN:	1.735		Z0= 179.8240		
	LN/LN/GND:	1.847	(0.861	GND RETURN KA)		
BUS-0394	3P Duty:	2.003	0.29	Z1= 60.0362	2.003	2.003
	SLG DUTY:	1.207	0.17	Z2= 60.0362	1.207	
480. VOLTS	LN/LN:	1.735		Z0= 179.8240		
	LN/LN/GND:	1.847	(0.861	GND RETURN KA)		
BUS-0395	3P Duty:	2.003	0.29	Z1= 60.0362	2.003	2.003
	SLG DUTY:	1.207	0.17	Z2= 60.0362	1.207	
480. VOLTS	LN/LN:	1.735		Z0= 179.8240		
	LN/LN/GND:	1.847	(0.861	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
BUS-0396	3P Duty:	2.378	0.33	Z1= 50.5850	2.378	2.378
	SLG DUTY:	1.448	0.19	Z2= 50.5850	1.448	
480. VOLTS	LN/LN:	2.059		Z0= 149.1686		
	LN/LN/GND:	2.205	(1.037	GND RETURN KA)		
BUS-0397	3P Duty:	2.378	0.33	Z1= 50.5850	2.378	2.378
	SLG DUTY:	1.448	0.19	Z2= 50.5850	1.448	
480. VOLTS	LN/LN:	2.059		Z0= 149.1686		
	LN/LN/GND:	2.205	(1.037	GND RETURN KA)		
BUS-0398	3P Duty:	2.378	0.33	Z1= 50.5851	2.378	2.378
	SLG DUTY:	1.448	0.19	Z2= 50.5851	1.448	
480. VOLTS	LN/LN:	2.059		Z0= 149.1686		
	LN/LN/GND:	2.205	(1.037	GND RETURN KA)		
BUS-0399	3P Duty:	1.461	0.25	Z1= 82.3069	1.461	1.461
	SLG DUTY:	0.870	0.15	Z2= 82.3069	0.870	
480. VOLTS	LN/LN:	1.266		Z0= 251.1431		
	LN/LN/GND:	1.338	(0.618	GND RETURN KA)		
BUS-0400	3P Duty:	1.461	0.25	Z1= 82.3069	1.461	1.461
	SLG DUTY:	0.870	0.15	Z2= 82.3069	0.870	
480. VOLTS	LN/LN:	1.266		Z0= 251.1431		
	LN/LN/GND:	1.338	(0.618	GND RETURN KA)		
BUS-0401	3P Duty:	1.461	0.25	Z1= 82.3068	1.461	1.461
	SLG DUTY:	0.870	0.15	Z2= 82.3068	0.870	
480. VOLTS	LN/LN:	1.266		Z0= 251.1431		
	LN/LN/GND:	1.338	(0.618	GND RETURN KA)		
BUS-0402	3P Duty:	1.461	0.25	Z1= 82.3069	1.461	1.461
	SLG DUTY:	0.870	0.15	Z2= 82.3069	0.870	
480. VOLTS	LN/LN:	1.266		Z0= 251.1431		
	LN/LN/GND:	1.338	(0.618	GND RETURN KA)		
BUS-0403	3P Duty:	1.461	0.25	Z1= 82.3069	1.461	1.461
	SLG DUTY:	0.870	0.15	Z2= 82.3069	0.870	
480. VOLTS	LN/LN:	1.266		Z0= 251.1431		
	LN/LN/GND:	1.338	(0.618	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
BUS-0406	3P Duty:	1.856	0.28	Z1= 64.7990	1.856	1.856
	SLG DUTY:	1.116	0.17	Z2= 64.7990	1.116	
480. VOLTS	LN/LN:	1.608		Z0= 194.6147		
	LN/LN/GND:	1.708	(0.796	GND RETURN KA)		
BUS-0409	3P Duty:	1.298	0.22	Z1= 92.6991	1.298	1.298
	SLG DUTY:	0.771	0.14	Z2= 92.6991	0.771	
480. VOLTS	LN/LN:	1.124		Z0= 283.4549		
	LN/LN/GND:	1.183	(0.548	GND RETURN KA)		
BUS-0410	3P Duty:	1.298	0.22	Z1= 92.6991	1.298	1.298
	SLG DUTY:	0.771	0.14	Z2= 92.6991	0.771	
480. VOLTS	LN/LN:	1.124		Z0= 283.4549		
	LN/LN/GND:	1.183	(0.548	GND RETURN KA)		
BUS-0412	3P Duty:	5.377	0.78	Z1= 22.3684	5.379	5.378
	SLG DUTY:	3.752	0.46	Z2= 22.3684	3.752	
480. VOLTS	LN/LN:	4.657		Z0= 53.3933		
	LN/LN/GND:	5.291	(2.826	GND RETURN KA)		
BUS-0413	3P Duty:	2.542	0.36	Z1= 47.3149	2.542	2.542
	SLG DUTY:	1.558	0.22	Z2= 47.3149	1.558	
480. VOLTS	LN/LN:	2.202		Z0= 138.1303		
	LN/LN/GND:	2.365	(1.118	GND RETURN KA)		
BUS-0414	3P Duty:	2.196	0.32	Z1= 54.7811	2.196	2.196
	SLG DUTY:	1.333	0.19	Z2= 54.7811	1.333	
480. VOLTS	LN/LN:	1.902		Z0= 162.3295		
	LN/LN/GND:	2.031	(0.953	GND RETURN KA)		
BUS-0415	3P Duty:	6.128	1.88	Z1= 19.6266	6.341	6.235
	SLG DUTY:	5.054	1.33	Z2= 19.6266	5.098	
480. VOLTS	LN/LN:	5.307		Z0= 33.1658		
	LN/LN/GND:	6.201	(4.240	GND RETURN KA)		
BUS-0436	3P Duty:	2.780	0.32	Z1= 43.2673	2.780	2.780
	SLG DUTY:	1.641	0.24	Z2= 43.2673	1.641	
480. VOLTS	LN/LN:	2.408		Z0= 133.5974		
	LN/LN/GND:	2.527	(1.163	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
BWP2 DISC	3P Duty:	17.368	3.08	Z1= 6.9253	19.491	18.446
	SLG DUTY:	13.978	2.25	Z2= 6.9253	14.805	
480. VOLTS	LN/LN:	15.042		Z0= 12.0946		
	LN/LN/GND:	16.950	(11.638	GND RETURN KA)		
BWHP1 DISC	3P Duty:	16.251	2.71	Z1= 7.4015	17.775	17.022
	SLG DUTY:	12.754	1.86	Z2= 7.4015	13.180	
480. VOLTS	LN/LN:	14.074		Z0= 13.7038		
	LN/LN/GND:	15.917	(10.419	GND RETURN KA)		
BYPGT1 DISC	3P Duty:	2.736	0.27	Z1= 43.9690	2.736	2.736
	SLG DUTY:	1.638	0.18	Z2= 43.9690	1.638	
480. VOLTS	LN/LN:	2.369		Z0= 132.7866		
	LN/LN/GND:	2.505	(1.167	GND RETURN KA)		
BYPGT2 DISC	3P Duty:	2.736	0.27	Z1= 43.9690	2.736	2.736
	SLG DUTY:	1.638	0.18	Z2= 43.9690	1.638	
480. VOLTS	LN/LN:	2.369		Z0= 132.7866		
	LN/LN/GND:	2.505	(1.167	GND RETURN KA)		
C SUMP PUMP DI	3P Duty:	4.257	0.35	Z1= 28.2534	4.257	4.257
	SLG DUTY:	2.611	0.23	Z2= 28.2534	2.611	
480. VOLTS	LN/LN:	3.687		Z0= 82.2007		
	LN/LN/GND:	3.938	(1.877	GND RETURN KA)		
CC-1 DISC	3P Duty:	2.749	0.26	Z1= 43.7613	2.749	2.749
	SLG DUTY:	1.644	0.18	Z2= 43.7613	1.644	
480. VOLTS	LN/LN:	2.380		Z0= 132.3336		
	LN/LN/GND:	2.513	(1.171	GND RETURN KA)		
CC-3 DISC	3P Duty:	2.749	0.26	Z1= 43.7613	2.749	2.749
	SLG DUTY:	1.644	0.18	Z2= 43.7613	1.644	
480. VOLTS	LN/LN:	2.380		Z0= 132.3336		
	LN/LN/GND:	2.513	(1.171	GND RETURN KA)		
CC2 DISC	3P Duty:	2.736	0.28	Z1= 43.9615	2.736	2.736
	SLG DUTY:	1.639	0.18	Z2= 43.9615	1.639	
480. VOLTS	LN/LN:	2.369		Z0= 132.7866		
	LN/LN/GND:	2.506	(1.167	GND RETURN KA)		

U N B A L A N C E D F A U L T R E P O R T
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
CE WET WELL GT 3P Duty:		1.444	0.13	Z1= 83.2824	1.444	1.444
	SLG DUTY:	0.846	0.09	Z2= 83.2824	0.846	
480. VOLTS	LN/LN:	1.251		Z0= 260.1740		
	LN/LN/GND:	1.300	(0.598	GND RETURN KA)		
CEB-ACCU-1 DIS 3P Duty:		4.868	0.25	Z1= 24.7096	4.868	4.868
	SLG DUTY:	2.922	0.17	Z2= 24.7096	2.922	
480. VOLTS	LN/LN:	4.216		Z0= 74.3328		
	LN/LN/GND:	4.457	(2.084	GND RETURN KA)		
CEB-ACCU-1 TER 3P Duty:		4.076	0.22	Z1= 29.5070	4.076	4.076
	SLG DUTY:	2.431	0.14	Z2= 29.5070	2.431	
480. VOLTS	LN/LN:	3.530		Z0= 89.6578		
	LN/LN/GND:	3.716	(1.729	GND RETURN KA)		
CEB-ACU-1 TERM 3P Duty:		12.068	0.67	Z1= 9.9667	12.069	12.069
	SLG DUTY:	8.044	0.44	Z2= 9.9667	8.044	
480. VOLTS	LN/LN:	10.451		Z0= 25.4523		
	LN/LN/GND:	11.575	(5.966	GND RETURN KA)		
CEB-EF-1 DISC 3P Duty:		1.709	0.14	Z1= 70.3864	1.709	1.709
	SLG DUTY:	1.001	0.09	Z2= 70.3864	1.001	
480. VOLTS	LN/LN:	1.480		Z0= 220.1087		
	LN/LN/GND:	1.543	(0.707	GND RETURN KA)		
CEB-EF-2 DISC 3P Duty:		1.852	0.13	Z1= 64.9510	1.852	1.852
	SLG DUTY:	1.088	0.09	Z2= 64.9510	1.088	
480. VOLTS	LN/LN:	1.604		Z0= 201.9258		
	LN/LN/GND:	1.670	(0.770	GND RETURN KA)		
CEB-FCP-1 DISC 3P Duty:		3.969	0.21	Z1= 30.3090	3.969	3.969
	SLG DUTY:	2.365	0.14	Z2= 30.3090	2.365	
480. VOLTS	LN/LN:	3.437		Z0= 92.2130		
	LN/LN/GND:	3.616	(1.682	GND RETURN KA)		
CEB-FCP-2 TERM 3P Duty:		3.141	0.18	Z1= 38.2947	3.141	3.141
	SLG DUTY:	1.861	0.12	Z2= 38.2947	1.861	
480. VOLTS	LN/LN:	2.720		Z0= 117.5015		
	LN/LN/GND:	2.852	(1.321	GND RETURN KA)		

U N B A L A N C E D F A U L T R E P O R T

(FOR APPLICATION OF LOW VOLTAGE BREAKERS)

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
CEB-P-1 DISC	3P Duty:	3.138	0.18	Z1= 38.3363	3.138	3.138
	SLG DUTY:	1.858	0.12	Z2= 38.3363	1.858	
480. VOLTS	LN/LN:	2.717		Z0= 117.7762		
	LN/LN/GND:	2.846 (	1.318	GND RETURN KA)		
CEB-P-2 DISC	3P Duty:	3.142	0.18	Z1= 38.2775	3.142	3.142
	SLG DUTY:	1.862	0.12	Z2= 38.2775	1.862	
480. VOLTS	LN/LN:	2.721		Z0= 117.5015		
	LN/LN/GND:	2.854 (	1.321	GND RETURN KA)		
CF2 AHU-1 DISC	3P Duty:	1.201	0.30	Z1= 100.1890	1.201	1.201
	SLG DUTY:	0.688	0.13	Z2= 100.1890	0.688	
480. VOLTS	LN/LN:	1.040		Z0= 325.8403		
	LN/LN/GND:	1.100 (	0.481	GND RETURN KA)		
CF2 AHU-3 DISC	3P Duty:	2.050	0.49	Z1= 58.6881	2.050	2.050
	SLG DUTY:	1.169	0.21	Z2= 58.6881	1.169	
480. VOLTS	LN/LN:	1.775		Z0= 192.8785		
	LN/LN/GND:	1.891 (	0.814	GND RETURN KA)		
CHABLWR DISC	3P Duty:	4.363	0.37	Z1= 27.5700	4.363	4.363
	SLG DUTY:	2.667	0.23	Z2= 27.5700	2.667	
480. VOLTS	LN/LN:	3.778		Z0= 80.7714		
	LN/LN/GND:	4.046 (	1.912	GND RETURN KA)		
CN-50-3 FCV	3P Duty:	1.004	0.14	Z1= 119.7873	1.004	1.004
	SLG DUTY:	0.590	0.11	Z2= 119.7873	0.590	
480. VOLTS	LN/LN:	0.870		Z0= 372.1994		
	LN/LN/GND:	0.904 (	0.418	GND RETURN KA)		
CONT TK INT GT	3P Duty:	1.449	0.13	Z1= 83.0137	1.449	1.449
	SLG DUTY:	0.847	0.09	Z2= 83.0137	0.847	
480. VOLTS	LN/LN:	1.255		Z0= 260.0603		
	LN/LN/GND:	1.304 (	0.598	GND RETURN KA)		
CP-70 EMG	3P Duty:	1.454	0.12	Z1= 82.7201	1.454	1.454
	SLG DUTY:	0.852	0.09	Z2= 82.7201	0.852	
480. VOLTS	LN/LN:	1.259		Z0= 258.1954		
	LN/LN/GND:	1.307 (	0.602	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
CP-70 NRM	3P Duty:	2.797	0.19	Z1= 43.0028	2.797	2.797
	SLG DUTY:	1.654	0.13	Z2= 43.0028	1.654	
480. VOLTS	LN/LN:	2.422		Z0= 132.3090		
	LN/LN/GND:	2.533	(1.174	GND RETURN KA)		
CR-1 HSP 5 DIS	3P Duty:	3.293	0.29	Z1= 36.5233	3.293	3.293
	SLG DUTY:	1.926	0.17	Z2= 36.5233	1.926	
480. VOLTS	LN/LN:	2.852		Z0= 114.6047		
	LN/LN/GND:	2.998	(1.359	GND RETURN KA)		
CR-1 HSP 6 DIS	3P Duty:	3.147	0.29	Z1= 38.2209	3.147	3.147
	SLG DUTY:	1.838	0.17	Z2= 38.2209	1.838	
480. VOLTS	LN/LN:	2.725		Z0= 120.1594		
	LN/LN/GND:	2.865	(1.297	GND RETURN KA)		
D SP-2 DISC	3P Duty:	4.356	0.36	Z1= 27.6113	4.356	4.356
	SLG DUTY:	2.665	0.23	Z2= 27.6113	2.665	
480. VOLTS	LN/LN:	3.773		Z0= 80.7714		
	LN/LN/GND:	4.037	(1.912	GND RETURN KA)		
DCH FNL EFF SP	3P Duty:	1.454	0.16	Z1= 82.7380	1.454	1.454
	SLG DUTY:	0.848	0.10	Z2= 82.7380	0.848	
480. VOLTS	LN/LN:	1.259		Z0= 260.1740		
	LN/LN/GND:	1.315	(0.599	GND RETURN KA)		
DOOR OP EE1	3P Duty:	2.710	0.26	Z1= 44.3830	2.710	2.710
	SLG DUTY:	1.622	0.18	Z2= 44.3830	1.622	
480. VOLTS	LN/LN:	2.347		Z0= 134.0768		
	LN/LN/GND:	2.476	(1.156	GND RETURN KA)		
DOOR OP EE2	3P Duty:	2.710	0.26	Z1= 44.3830	2.710	2.710
	SLG DUTY:	1.622	0.18	Z2= 44.3830	1.622	
480. VOLTS	LN/LN:	2.347		Z0= 134.0768		
	LN/LN/GND:	2.476	(1.156	GND RETURN KA)		
DOOR OP FF	3P Duty:	2.690	0.27	Z1= 44.7221	2.690	2.690
	SLG DUTY:	1.611	0.18	Z2= 44.7221	1.611	
480. VOLTS	LN/LN:	2.329		Z0= 135.0341		
	LN/LN/GND:	2.461	(1.148	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
DOOR OPERATOR	3P Duty:	4.346	0.34	Z1= 27.6768	4.346	4.346
	SLG DUTY:	2.661	0.22	Z2= 27.6768	2.661	
480. VOLTS	LN/LN:	3.764		Z0= 80.7714		
	LN/LN/GND:	4.023	(1.911	GND RETURN KA)		
DP-51	3P Duty:	24.626	2.74	Z1= 4.8844	27.002	25.828
	SLG DUTY:	19.688	2.43	Z2= 4.8844	21.122	
480. VOLTS	LN/LN:	21.326		Z0= 8.5752		
	LN/LN/GND:	23.336	(16.386	GND RETURN KA)		
DP-52	3P Duty:	23.539	2.77	Z1= 5.1098	25.854	24.711
	SLG DUTY:	18.467	2.20	Z2= 5.1098	19.494	
480. VOLTS	LN/LN:	20.386		Z0= 9.3873		
	LN/LN/GND:	22.647	(15.143	GND RETURN KA)		
DP-54	3P Duty:	18.818	2.44	Z1= 6.3918	20.198	19.514
	SLG DUTY:	14.114	1.95	Z2= 6.3918	14.662	
480. VOLTS	LN/LN:	16.297		Z0= 12.8719		
	LN/LN/GND:	17.938	(11.254	GND RETURN KA)		
DP-56	3P Duty:	12.010	2.23	Z1= 10.0149	12.710	12.363
	SLG DUTY:	8.340	1.72	Z2= 10.0149	8.556	
480. VOLTS	LN/LN:	10.401		Z0= 23.3874		
	LN/LN/GND:	11.290	(6.367	GND RETURN KA)		
DRILL PRESS	3P Duty:	4.429	1.13	Z1= 27.1568	4.446	4.438
	SLG DUTY:	2.916	0.92	Z2= 27.1568	2.919	
480. VOLTS	LN/LN:	3.836		Z0= 69.9323		
	LN/LN/GND:	4.142	(2.165	GND RETURN KA)		
DROP (NGW) STR	3P Duty:	4.254	0.34	Z1= 28.2727	4.254	4.254
	SLG DUTY:	2.610	0.23	Z2= 28.2727	2.610	
480. VOLTS	LN/LN:	3.684		Z0= 82.2007		
	LN/LN/GND:	3.934	(1.876	GND RETURN KA)		
DROP (SG) STR	3P Duty:	4.254	0.34	Z1= 28.2727	4.254	4.254
	SLG DUTY:	2.610	0.23	Z2= 28.2727	2.610	
480. VOLTS	LN/LN:	3.684		Z0= 82.2007		
	LN/LN/GND:	3.934	(1.876	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
DTE NORTH	3P Duty:	7.385	4.05	Z1= 0.5923	8.813	8.115
	SLG DUTY:	5.971	3.09	Z2= 0.5923	6.706	
13200. VOLTS	LN/LN:	6.395		Z0= 1.0180		
	LN/LN/GND:	7.109	(5.001	GND RETURN KA)		
DTE SOUTH	3P Duty:	6.985	5.24	Z1= 0.6262	8.844	7.943
	SLG DUTY:	5.492	4.33	Z2= 0.6262	6.655	
13200. VOLTS	LN/LN:	6.049		Z0= 1.1384		
	LN/LN/GND:	6.583	(4.522	GND RETURN KA)		
E CONT TK G1 D	3P Duty:	1.444	0.13	Z1= 83.2824	1.444	1.444
	SLG DUTY:	0.846	0.09	Z2= 83.2824	0.846	
480. VOLTS	LN/LN:	1.251		Z0= 260.1740		
	LN/LN/GND:	1.300	(0.598	GND RETURN KA)		
E SUMP PUMP 1	3P Duty:	2.756	0.28	Z1= 43.6513	2.756	2.756
	SLG DUTY:	1.647	0.18	Z2= 43.6513	1.647	
480. VOLTS	LN/LN:	2.386		Z0= 132.3336		
	LN/LN/GND:	2.522	(1.172	GND RETURN KA)		
EBB SUMP PUMP	3P Duty:	3.402	0.43	Z1= 35.3602	3.402	3.402
	SLG DUTY:	2.117	0.25	Z2= 35.3602	2.117	
480. VOLTS	LN/LN:	2.946		Z0= 100.9788		
	LN/LN/GND:	3.193	(1.526	GND RETURN KA)		
EBB SUMP PUMP	3P Duty:	0.970	0.18	Z1= 124.0285	0.970	0.970
	SLG DUTY:	0.569	0.10	Z2= 124.0285	0.569	
480. VOLTS	LN/LN:	0.840		Z0= 387.5099		
	LN/LN/GND:	0.882	(0.402	GND RETURN KA)		
EBB-A HOIST 1	3P Duty:	0.949	0.13	Z1= 126.7789	0.949	0.949
	SLG DUTY:	0.559	0.09	Z2= 126.7789	0.559	
480. VOLTS	LN/LN:	0.822		Z0= 392.6283		
	LN/LN/GND:	0.857	(0.396	GND RETURN KA)		
EBB-A HOIST 1	3P Duty:	1.013	0.14	Z1= 118.6841	1.013	1.013
	SLG DUTY:	0.597	0.09	Z2= 118.6841	0.597	
480. VOLTS	LN/LN:	0.878		Z0= 367.0375		
	LN/LN/GND:	0.916	(0.423	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
EBB-A HOIST 2	3P Duty:	0.949	0.13	Z1= 126.7789	0.949	0.949
	SLG DUTY:	0.559	0.09	Z2= 126.7789	0.559	
480. VOLTS	LN/LN:	0.822		Z0= 392.6283		
	LN/LN/GND:	0.857	(0.396	GND RETURN KA)		
EBB-A HOIST 2	3P Duty:	1.013	0.14	Z1= 118.6841	1.013	1.013
	SLG DUTY:	0.597	0.09	Z2= 118.6841	0.597	
480. VOLTS	LN/LN:	0.878		Z0= 367.0375		
	LN/LN/GND:	0.916	(0.423	GND RETURN KA)		
EBB-EDH-1 LINE	3P Duty:	3.978	0.55	Z1= 30.2355	3.978	3.978
	SLG DUTY:	2.582	0.33	Z2= 30.2355	2.582	
480. VOLTS	LN/LN:	3.445		Z0= 80.9226		
	LN/LN/GND:	3.799	(1.890	GND RETURN KA)		
EBB-EF-10 DISC	3P Duty:	2.692	0.31	Z1= 44.6830	2.692	2.692
	SLG DUTY:	1.639	0.18	Z2= 44.6830	1.639	
480. VOLTS	LN/LN:	2.331		Z0= 131.7253		
	LN/LN/GND:	2.495	(1.174	GND RETURN KA)		
EBB-EF-5 DISC	3P Duty:	4.041	0.51	Z1= 29.7678	4.041	4.041
	SLG DUTY:	2.603	0.29	Z2= 29.7678	2.603	
480. VOLTS	LN/LN:	3.499		Z0= 80.7130		
	LN/LN/GND:	3.855	(1.899	GND RETURN KA)		
EBB-EF-6 DISC	3P Duty:	2.126	0.26	Z1= 56.5642	2.126	2.126
	SLG DUTY:	1.278	0.15	Z2= 56.5642	1.278	
480. VOLTS	LN/LN:	1.842		Z0= 170.0565		
	LN/LN/GND:	1.955	(0.911	GND RETURN KA)		
EBB-EF-7 DISC	3P Duty:	1.419	0.22	Z1= 84.7889	1.419	1.419
	SLG DUTY:	0.843	0.12	Z2= 84.7889	0.843	
480. VOLTS	LN/LN:	1.229		Z0= 259.5708		
	LN/LN/GND:	1.296	(0.598	GND RETURN KA)		
EBB-EF-9 DISC	3P Duty:	0.964	0.17	Z1= 124.8347	0.964	0.964
	SLG DUTY:	0.567	0.10	Z2= 124.8347	0.567	
480. VOLTS	LN/LN:	0.834		Z0= 387.5099		
	LN/LN/GND:	0.875	(0.401	GND RETURN KA)		

U N B A L A N C E D F A U L T R E P O R T
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
EBB-EUH-1 TERM	3P Duty:	6.261	0.85	Z1= 19.2101	6.265	6.263
	SLG DUTY:	4.564	0.50	Z2= 19.2101	4.564	
480. VOLTS	LN/LN:	5.423		Z0= 42.7414		
	LN/LN/GND:	6.278	(3.501	GND RETURN KA)		
EBB-HV-1 DISC	3P Duty:	3.262	0.37	Z1= 36.8770	3.262	3.262
	SLG DUTY:	2.018	0.22	Z2= 36.8770	2.018	
480. VOLTS	LN/LN:	2.825		Z0= 106.1972		
	LN/LN/GND:	3.048	(1.452	GND RETURN KA)		
EF1 DISC	3P Duty:	1.450	0.12	Z1= 82.9304	1.450	1.450
	SLG DUTY:	0.849	0.09	Z2= 82.9304	0.849	
480. VOLTS	LN/LN:	1.256		Z0= 259.1062		
	LN/LN/GND:	1.304	(0.600	GND RETURN KA)		
EF2 DISC	3P Duty:	1.450	0.12	Z1= 82.9304	1.450	1.450
	SLG DUTY:	0.849	0.09	Z2= 82.9304	0.849	
480. VOLTS	LN/LN:	1.256		Z0= 259.1062		
	LN/LN/GND:	1.304	(0.600	GND RETURN KA)		
EF3 DISC	3P Duty:	1.458	0.13	Z1= 82.5239	1.458	1.458
	SLG DUTY:	0.853	0.09	Z2= 82.5239	0.853	
480. VOLTS	LN/LN:	1.262		Z0= 258.1952		
	LN/LN/GND:	1.312	(0.603	GND RETURN KA)		
EF4 DISC	3P Duty:	1.443	0.13	Z1= 83.3324	1.443	1.443
	SLG DUTY:	0.845	0.09	Z2= 83.3324	0.845	
480. VOLTS	LN/LN:	1.250		Z0= 260.7538		
	LN/LN/GND:	1.299	(0.597	GND RETURN KA)		
ELEVATOR CP DI	3P Duty:	1.525	0.19	Z1= 78.8861	1.525	1.525
	SLG DUTY:	0.894	0.16	Z2= 78.8861	0.894	
480. VOLTS	LN/LN:	1.320		Z0= 246.1785		
	LN/LN/GND:	1.373	(0.632	GND RETURN KA)		
ELEVATOR CP IN	3P Duty:	1.432	0.19	Z1= 83.9870	1.432	1.432
	SLG DUTY:	0.839	0.15	Z2= 83.9870	0.839	
480. VOLTS	LN/LN:	1.240		Z0= 262.3025		
	LN/LN/GND:	1.289	(0.593	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
EP THRV CONTRO 3P	Duty:	4.345	0.34	Z1= 27.6816	4.345	4.345
	SLG DUTY:	2.661	0.22	Z2= 27.6816	2.661	
480. VOLTS	LN/LN:	3.763		Z0= 80.7714		
	LN/LN/GND:	4.022	(1.911	GND RETURN KA)		
EPB-EUH-1 DISC 3P	Duty:	4.173	0.85	Z1= 28.8258	4.175	4.174
	SLG DUTY:	2.731	0.52	Z2= 28.8258	2.731	
480. VOLTS	LN/LN:	3.614		Z0= 76.3210		
	LN/LN/GND:	4.011	(2.004	GND RETURN KA)		
EPB-EUH-1 TERM 3P	Duty:	3.880	0.76	Z1= 30.9983	3.881	3.881
	SLG DUTY:	2.500	0.47	Z2= 30.9983	2.500	
480. VOLTS	LN/LN:	3.360		Z0= 84.1501		
	LN/LN/GND:	3.707	(1.822	GND RETURN KA)		
EPBBV DISC 3P	Duty:	1.323	0.12	Z1= 90.8959	1.323	1.323
	SLG DUTY:	0.774	0.09	Z2= 90.8959	0.774	
480. VOLTS	LN/LN:	1.146		Z0= 284.6923		
	LN/LN/GND:	1.191	(0.547	GND RETURN KA)		
EPBBV STARTER 3P	Duty:	1.256	0.12	Z1= 95.7431	1.256	1.256
	SLG DUTY:	0.734	0.09	Z2= 95.7431	0.734	
480. VOLTS	LN/LN:	1.088		Z0= 300.0449		
	LN/LN/GND:	1.130	(0.519	GND RETURN KA)		
EPSEGE DISC 3P	Duty:	1.452	0.13	Z1= 82.8371	1.452	1.452
	SLG DUTY:	0.850	0.09	Z2= 82.8371	0.850	
480. VOLTS	LN/LN:	1.257		Z0= 259.1062		
	LN/LN/GND:	1.307	(0.600	GND RETURN KA)		
EPSEGW DISC 3P	Duty:	1.452	0.13	Z1= 82.8371	1.452	1.452
	SLG DUTY:	0.850	0.09	Z2= 82.8371	0.850	
480. VOLTS	LN/LN:	1.257		Z0= 259.1062		
	LN/LN/GND:	1.307	(0.600	GND RETURN KA)		
EQ INFL GATE 1 3P	Duty:	2.747	0.26	Z1= 43.7939	2.747	2.747
	SLG DUTY:	1.644	0.18	Z2= 43.7939	1.644	
480. VOLTS	LN/LN:	2.379		Z0= 132.3336		
	LN/LN/GND:	2.510	(1.171	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
EQ INFL GATE 1	3P Duty:	2.747	0.26	Z1= 43.7939	2.747	2.747
	SLG DUTY:	1.644	0.18	Z2= 43.7939	1.644	
480. VOLTS	LN/LN:	2.379		Z0= 132.3336		
	LN/LN/GND:	2.510	(1.171	GND RETURN KA)		
EQ INFL GATE 1	3P Duty:	2.747	0.26	Z1= 43.7939	2.747	2.747
	SLG DUTY:	1.644	0.18	Z2= 43.7939	1.644	
480. VOLTS	LN/LN:	2.379		Z0= 132.3336		
	LN/LN/GND:	2.510	(1.171	GND RETURN KA)		
EQ INFL GATE 1	3P Duty:	2.747	0.26	Z1= 43.7939	2.747	2.747
	SLG DUTY:	1.644	0.18	Z2= 43.7939	1.644	
480. VOLTS	LN/LN:	2.379		Z0= 132.3336		
	LN/LN/GND:	2.510	(1.171	GND RETURN KA)		
EQ INFL GATE 2	3P Duty:	2.747	0.26	Z1= 43.7939	2.747	2.747
	SLG DUTY:	1.644	0.18	Z2= 43.7939	1.644	
480. VOLTS	LN/LN:	2.379		Z0= 132.3336		
	LN/LN/GND:	2.510	(1.171	GND RETURN KA)		
EQ INFL GATE 3	3P Duty:	2.747	0.26	Z1= 43.7939	2.747	2.747
	SLG DUTY:	1.644	0.18	Z2= 43.7939	1.644	
480. VOLTS	LN/LN:	2.379		Z0= 132.3336		
	LN/LN/GND:	2.510	(1.171	GND RETURN KA)		
EQ INFL GATE 4	3P Duty:	2.747	0.26	Z1= 43.7939	2.747	2.747
	SLG DUTY:	1.644	0.18	Z2= 43.7939	1.644	
480. VOLTS	LN/LN:	2.379		Z0= 132.3336		
	LN/LN/GND:	2.510	(1.171	GND RETURN KA)		
EQ INFL GATE 9	3P Duty:	2.747	0.26	Z1= 43.7939	2.747	2.747
	SLG DUTY:	1.644	0.18	Z2= 43.7939	1.644	
480. VOLTS	LN/LN:	2.379		Z0= 132.3336		
	LN/LN/GND:	2.510	(1.171	GND RETURN KA)		
EQ-RET-V-1 DIS	3P Duty:	2.750	0.27	Z1= 43.7395	2.750	2.750
	SLG DUTY:	1.645	0.18	Z2= 43.7395	1.645	
480. VOLTS	LN/LN:	2.382		Z0= 132.3336		
	LN/LN/GND:	2.515	(1.171	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
EQ-RET-V-2 DIS	3P Duty:	2.750	0.27	Z1= 43.7395	2.750	2.750
	SLG DUTY:	1.645	0.18	Z2= 43.7395	1.645	
480. VOLTS	LN/LN:	2.382		Z0= 132.3336		
	LN/LN/GND:	2.515	(1.171	GND RETURN KA)		
EQINGT5 DISC	3P Duty:	2.734	0.27	Z1= 43.9951	2.734	2.734
	SLG DUTY:	1.638	0.18	Z2= 43.9951	1.638	
480. VOLTS	LN/LN:	2.368		Z0= 132.7866		
	LN/LN/GND:	2.503	(1.167	GND RETURN KA)		
EQINGT6 DISC	3P Duty:	2.734	0.27	Z1= 43.9951	2.734	2.734
	SLG DUTY:	1.638	0.18	Z2= 43.9951	1.638	
480. VOLTS	LN/LN:	2.368		Z0= 132.7866		
	LN/LN/GND:	2.503	(1.167	GND RETURN KA)		
EQINGT7 DISC	3P Duty:	2.734	0.27	Z1= 43.9951	2.734	2.734
	SLG DUTY:	1.638	0.18	Z2= 43.9951	1.638	
480. VOLTS	LN/LN:	2.368		Z0= 132.7866		
	LN/LN/GND:	2.503	(1.167	GND RETURN KA)		
EQINGT8 DISC	3P Duty:	2.734	0.27	Z1= 43.9951	2.734	2.734
	SLG DUTY:	1.638	0.18	Z2= 43.9951	1.638	
480. VOLTS	LN/LN:	2.368		Z0= 132.7866		
	LN/LN/GND:	2.503	(1.167	GND RETURN KA)		
EQPRM HOIST DI	3P Duty:	5.960	0.61	Z1= 20.1812	5.960	5.960
	SLG DUTY:	3.849	0.41	Z2= 20.1812	3.849	
480. VOLTS	LN/LN:	5.162		Z0= 54.2260		
	LN/LN/GND:	5.648	(2.819	GND RETURN KA)		
EQPT RCPT C	3P Duty:	6.033	0.51	Z1= 19.9374	6.033	6.033
	SLG DUTY:	3.857	0.34	Z2= 19.9374	3.857	
480. VOLTS	LN/LN:	5.225		Z0= 54.3379		
	LN/LN/GND:	5.677	(2.816	GND RETURN KA)		
EQPT RCPT D	3P Duty:	6.215	0.51	Z1= 19.3533	6.215	6.215
	SLG DUTY:	3.971	0.34	Z2= 19.3533	3.971	
480. VOLTS	LN/LN:	5.382		Z0= 52.8655		
	LN/LN/GND:	5.861	(2.897	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
EQPT RCPT E	3P Duty:	13.237	3.99	Z1= 9.0866	15.738	14.516
	SLG DUTY:	11.751	3.08	Z2= 9.0866	13.190	
480. VOLTS	LN/LN:	11.464		Z0= 12.6065		
	LN/LN/GND:	13.098	(10.540	GND RETURN KA)		
EQPT RCPT EBB-	3P Duty:	8.946	1.53	Z1= 13.4454	9.091	9.019
	SLG DUTY:	7.699	0.95	Z2= 13.4454	7.710	
480. VOLTS	LN/LN:	7.747		Z0= 21.5800		
	LN/LN/GND:	9.503	(6.533	GND RETURN KA)		
EQPT RCPT EBB-	3P Duty:	8.379	1.61	Z1= 14.3559	8.545	8.462
	SLG DUTY:	7.441	0.99	Z2= 14.3559	7.454	
480. VOLTS	LN/LN:	7.256		Z0= 21.5800		
	LN/LN/GND:	9.036	(6.449	GND RETURN KA)		
EQPT RCPT EE	3P Duty:	3.999	0.39	Z1= 30.0815	3.999	3.999
	SLG DUTY:	2.454	0.27	Z2= 30.0815	2.454	
480. VOLTS	LN/LN:	3.463		Z0= 87.4235		
	LN/LN/GND:	3.700	(1.764	GND RETURN KA)		
EQPT RCPT EPB-	3P Duty:	4.828	1.07	Z1= 24.9110	4.842	4.835
	SLG DUTY:	3.286	0.63	Z2= 24.9110	3.286	
480. VOLTS	LN/LN:	4.182		Z0= 61.9832		
	LN/LN/GND:	4.709	(2.448	GND RETURN KA)		
EQPT RCPT F	3P Duty:	2.731	0.26	Z1= 44.0359	2.731	2.731
	SLG DUTY:	1.637	0.18	Z2= 44.0359	1.637	
480. VOLTS	LN/LN:	2.365		Z0= 132.7866		
	LN/LN/GND:	2.499	(1.167	GND RETURN KA)		
EQPT RCPT M	3P Duty:	2.256	0.18	Z1= 53.3248	2.256	2.256
	SLG DUTY:	1.329	0.13	Z2= 53.3248	1.329	
480. VOLTS	LN/LN:	1.953		Z0= 165.0142		
	LN/LN/GND:	2.038	(0.942	GND RETURN KA)		
EQPT RCPT RLS-	3P Duty:	4.311	0.43	Z1= 27.8997	4.311	4.311
	SLG DUTY:	2.646	0.31	Z2= 27.8997	2.646	
480. VOLTS	LN/LN:	3.734		Z0= 81.1121		
	LN/LN/GND:	3.992	(1.902	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
EQRETFVCV DISC	3P Duty:	2.732	0.26	Z1= 44.0236	2.732	2.732
	SLG DUTY:	1.637	0.18	Z2= 44.0236	1.637	
480. VOLTS	LN/LN:	2.366		Z0= 132.7866		
	LN/LN/GND:	2.500	(1.167	GND RETURN KA)		
EQRETV3 DISC	3P Duty:	2.737	0.28	Z1= 43.9390	2.737	2.737
	SLG DUTY:	1.639	0.18	Z2= 43.9390	1.639	
480. VOLTS	LN/LN:	2.371		Z0= 132.7866		
	LN/LN/GND:	2.508	(1.167	GND RETURN KA)		
ERU DISC	3P Duty:	2.731	0.26	Z1= 44.0359	2.731	2.731
	SLG DUTY:	1.637	0.18	Z2= 44.0359	1.637	
480. VOLTS	LN/LN:	2.365		Z0= 132.7866		
	LN/LN/GND:	2.499	(1.167	GND RETURN KA)		
ESESP6 DISC	3P Duty:	1.454	0.13	Z1= 82.7283	1.454	1.454
	SLG DUTY:	0.850	0.09	Z2= 82.7283	0.850	
480. VOLTS	LN/LN:	1.259		Z0= 259.1062		
	LN/LN/GND:	1.310	(0.601	GND RETURN KA)		
EUH-E1 TERM	3P Duty:	5.868	0.53	Z1= 20.4982	5.868	5.868
	SLG DUTY:	3.739	0.36	Z2= 20.4982	3.739	
480. VOLTS	LN/LN:	5.082		Z0= 56.2084		
	LN/LN/GND:	5.522	(2.725	GND RETURN KA)		
EUH-E2 TERM	3P Duty:	3.762	0.33	Z1= 31.9720	3.762	3.762
	SLG DUTY:	2.290	0.23	Z2= 31.9720	2.290	
480. VOLTS	LN/LN:	3.258		Z0= 94.1357		
	LN/LN/GND:	3.468	(1.641	GND RETURN KA)		
EUH1 DISC	3P Duty:	1.449	0.12	Z1= 82.9958	1.449	1.449
	SLG DUTY:	0.849	0.09	Z2= 82.9958	0.849	
480. VOLTS	LN/LN:	1.255		Z0= 259.1063		
	LN/LN/GND:	1.302	(0.600	GND RETURN KA)		
EW-1 DISC	3P Duty:	10.801	2.25	Z1= 11.1364	11.447	11.126
	SLG DUTY:	7.657	1.68	Z2= 11.1364	7.837	
480. VOLTS	LN/LN:	9.354		Z0= 25.0849		
	LN/LN/GND:	10.254	(5.903	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
EWH-2 DISC	3P Duty:	18.391	1.82	Z1= 6.5401	18.961	18.677
	SLG DUTY:	14.100	1.34	Z2= 6.5401	14.227	
480. VOLTS	LN/LN:	15.927		Z0= 12.7582		
	LN/LN/GND:	18.032	(11.326	GND RETURN KA)		
EWH-2 TERMS	3P Duty:	17.355	1.72	Z1= 6.9306	17.796	17.576
	SLG DUTY:	13.095	1.27	Z2= 6.9306	13.187	
480. VOLTS	LN/LN:	15.030		Z0= 13.9549		
	LN/LN/GND:	16.945	(10.419	GND RETURN KA)		
F-1-1 DISC	3P Duty:	2.319	0.48	Z1= 51.8684	2.319	2.319
	SLG DUTY:	1.398	0.29	Z2= 51.8684	1.398	
480. VOLTS	LN/LN:	2.008		Z0= 155.7843		
	LN/LN/GND:	2.156	(0.996	GND RETURN KA)		
F-1-1 STARTER	3P Duty:	1.950	0.40	Z1= 61.6692	1.950	1.950
	SLG DUTY:	1.164	0.25	Z2= 61.6692	1.164	
480. VOLTS	LN/LN:	1.689		Z0= 187.8969		
	LN/LN/GND:	1.801	(0.827	GND RETURN KA)		
F-1-2 DISC	3P Duty:	2.298	0.48	Z1= 52.3523	2.298	2.298
	SLG DUTY:	1.384	0.28	Z2= 52.3523	1.384	
480. VOLTS	LN/LN:	1.990		Z0= 157.3878		
	LN/LN/GND:	2.135	(0.986	GND RETURN KA)		
F-1-2 STARTER	3P Duty:	1.847	0.38	Z1= 65.1285	1.847	1.847
	SLG DUTY:	1.099	0.24	Z2= 65.1285	1.099	
480. VOLTS	LN/LN:	1.599		Z0= 199.1531		
	LN/LN/GND:	1.702	(0.780	GND RETURN KA)		
F-1-3 DISC	3P Duty:	2.276	0.47	Z1= 52.8371	2.276	2.276
	SLG DUTY:	1.371	0.28	Z2= 52.8371	1.371	
480. VOLTS	LN/LN:	1.971		Z0= 158.9915		
	LN/LN/GND:	2.115	(0.976	GND RETURN KA)		
F-1-3 STARTER	3P Duty:	1.550	0.32	Z1= 77.5809	1.550	1.550
	SLG DUTY:	0.917	0.21	Z2= 77.5809	0.917	
480. VOLTS	LN/LN:	1.343		Z0= 239.4003		
	LN/LN/GND:	1.422	(0.649	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
F-1-4 DISC	3P Duty:	2.256	0.47	Z1= 53.3229	2.256	2.256
	SLG DUTY:	1.357	0.28	Z2= 53.3229	1.357	
480. VOLTS	LN/LN:	1.954		Z0= 160.5956		
	LN/LN/GND:	2.095	(0.966	GND RETURN KA)		
F-1-4 STARTER	3P Duty:	1.483	0.31	Z1= 81.0854	1.483	1.483
	SLG DUTY:	0.876	0.20	Z2= 81.0854	0.876	
480. VOLTS	LN/LN:	1.285		Z0= 250.6793		
	LN/LN/GND:	1.359	(0.620	GND RETURN KA)		
F-1-5 DISC	3P Duty:	1.878	0.41	Z1= 64.0482	1.878	1.878
	SLG DUTY:	1.118	0.24	Z2= 64.0482	1.118	
480. VOLTS	LN/LN:	1.626		Z0= 195.9363		
	LN/LN/GND:	1.734	(0.793	GND RETURN KA)		
F-1-5 STARTER	3P Duty:	1.307	0.29	Z1= 92.0244	1.307	1.307
	SLG DUTY:	0.769	0.18	Z2= 92.0244	0.769	
480. VOLTS	LN/LN:	1.132		Z0= 286.1467		
	LN/LN/GND:	1.195	(0.544	GND RETURN KA)		
F-1-6 DISC	3P Duty:	1.864	0.41	Z1= 64.5398	1.864	1.864
	SLG DUTY:	1.109	0.24	Z2= 64.5398	1.109	
480. VOLTS	LN/LN:	1.614		Z0= 197.5446		
	LN/LN/GND:	1.720	(0.787	GND RETURN KA)		
F-1-6 STARTER	3P Duty:	1.344	0.30	Z1= 89.5052	1.344	1.344
	SLG DUTY:	0.791	0.19	Z2= 89.5052	0.791	
480. VOLTS	LN/LN:	1.164		Z0= 278.0837		
	LN/LN/GND:	1.229	(0.560	GND RETURN KA)		
F-1-7 DISC	3P Duty:	1.850	0.40	Z1= 65.0323	1.850	1.850
	SLG DUTY:	1.100	0.24	Z2= 65.0323	1.100	
480. VOLTS	LN/LN:	1.602		Z0= 199.1530		
	LN/LN/GND:	1.707	(0.780	GND RETURN KA)		
F-1-7 STARTER	3P Duty:	1.543	0.34	Z1= 77.9683	1.543	1.543
	SLG DUTY:	0.912	0.21	Z2= 77.9683	0.912	
480. VOLTS	LN/LN:	1.336		Z0= 241.0113		
	LN/LN/GND:	1.416	(0.645	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
F-1-8 DISC	3P Duty:	1.836	0.40	Z1= 65.5257	1.836	1.836
	SLG DUTY:	1.092	0.24	Z2= 65.5257	1.092	
480. VOLTS	LN/LN:	1.590		Z0= 200.7616		
	LN/LN/GND:	1.694 (	0.774	GND RETURN KA)		
F-1-8 STARTER	3P Duty:	1.594	0.35	Z1= 75.4689	1.594	1.594
	SLG DUTY:	0.943	0.21	Z2= 75.4689	0.943	
480. VOLTS	LN/LN:	1.380		Z0= 232.9568		
	LN/LN/GND:	1.464 (	0.668	GND RETURN KA)		
F-2-1 DISC	3P Duty:	6.361	1.96	Z1= 18.9082	6.615	6.489
	SLG DUTY:	4.650	1.03	Z2= 18.9082	4.661	
480. VOLTS	LN/LN:	5.509		Z0= 41.5790		
	LN/LN/GND:	6.349 (	3.584	GND RETURN KA)		
F-2-1 STARTER	3P Duty:	4.545	0.90	Z1= 26.4651	4.549	4.547
	SLG DUTY:	2.937	0.54	Z2= 26.4651	2.937	
480. VOLTS	LN/LN:	3.936		Z0= 71.6507		
	LN/LN/GND:	4.358 (	2.141	GND RETURN KA)		
F-2-12 DISC	3P Duty:	6.256	1.85	Z1= 19.2266	6.462	6.359
	SLG DUTY:	4.531	0.98	Z2= 19.2266	4.539	
480. VOLTS	LN/LN:	5.418		Z0= 43.0048		
	LN/LN/GND:	6.228 (	3.475	GND RETURN KA)		
F-2-12 STARTER	3P Duty:	4.473	0.88	Z1= 26.8890	4.477	4.475
	SLG DUTY:	2.880	0.53	Z2= 26.8890	2.880	
480. VOLTS	LN/LN:	3.874		Z0= 73.2048		
	LN/LN/GND:	4.284 (	2.097	GND RETURN KA)		
F-2-13 DISC	3P Duty:	1.591	0.35	Z1= 75.5835	1.591	1.591
	SLG DUTY:	0.934	0.21	Z2= 75.5835	0.934	
480. VOLTS	LN/LN:	1.378		Z0= 236.1784		
	LN/LN/GND:	1.459 (	0.659	GND RETURN KA)		
F-2-13 STARTER	3P Duty:	1.038	0.25	Z1= 115.8631	1.038	1.038
	SLG DUTY:	0.605	0.16	Z2= 115.8631	0.605	
480. VOLTS	LN/LN:	0.899		Z0= 365.2113		
	LN/LN/GND:	0.944 (	0.427	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
F-2-18 DISC	3P Duty:	1.581	0.35	Z1= 76.0809	1.581	1.581
	SLG DUTY:	0.928	0.21	Z2= 76.0809	0.928	
480. VOLTS	LN/LN:	1.369		Z0= 237.7893		
	LN/LN/GND:	1.449	(0.655	GND RETURN KA)		
F-2-18 STARTER	3P Duty:	1.397	0.31	Z1= 86.1026	1.397	1.397
	SLG DUTY:	0.818	0.19	Z2= 86.1026	0.818	
480. VOLTS	LN/LN:	1.210		Z0= 270.0219		
	LN/LN/GND:	1.277	(0.577	GND RETURN KA)		
F-2-19 DISC	3P Duty:	1.571	0.34	Z1= 76.5795	1.571	1.571
	SLG DUTY:	0.922	0.21	Z2= 76.5795	0.922	
480. VOLTS	LN/LN:	1.360		Z0= 239.4003		
	LN/LN/GND:	1.439	(0.651	GND RETURN KA)		
F-2-19 STARTER	3P Duty:	1.389	0.31	Z1= 86.6035	1.389	1.389
	SLG DUTY:	0.813	0.19	Z2= 86.6035	0.813	
480. VOLTS	LN/LN:	1.203		Z0= 271.6342		
	LN/LN/GND:	1.269	(0.574	GND RETURN KA)		
F-2-24 DISC	3P Duty:	1.560	0.34	Z1= 77.0795	1.560	1.560
	SLG DUTY:	0.916	0.21	Z2= 77.0795	0.916	
480. VOLTS	LN/LN:	1.351		Z0= 241.0114		
	LN/LN/GND:	1.430	(0.646	GND RETURN KA)		
F-2-24 STARTER	3P Duty:	1.003	0.24	Z1= 119.9060	1.003	1.003
	SLG DUTY:	0.585	0.15	Z2= 119.9060	0.585	
480. VOLTS	LN/LN:	0.869		Z0= 378.1258		
	LN/LN/GND:	0.911	(0.412	GND RETURN KA)		
F-2-6 DISC	3P Duty:	6.467	2.09	Z1= 18.5987	6.780	6.624
	SLG DUTY:	4.773	1.08	Z2= 18.5987	4.788	
480. VOLTS	LN/LN:	5.601		Z0= 40.1678		
	LN/LN/GND:	6.472	(3.699	GND RETURN KA)		
F-2-6 STARTER	3P Duty:	2.124	0.38	Z1= 56.6385	2.124	2.124
	SLG DUTY:	1.263	0.25	Z2= 56.6385	1.263	
480. VOLTS	LN/LN:	1.839		Z0= 173.4363		
	LN/LN/GND:	1.956	(0.896	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
F-2-7 DISC	3P Duty:	6.151	1.75	Z1= 19.5535	6.318	6.235
	SLG DUTY:	4.416	0.94	Z2= 19.5535	4.421	
480. VOLTS	LN/LN:	5.327		Z0= 44.4436		
	LN/LN/GND:	6.108	(3.371	GND RETURN KA)		
F-2-7 STARTER	3P Duty:	2.161	0.38	Z1= 55.6477	2.161	2.161
	SLG DUTY:	1.286	0.25	Z2= 55.6477	1.286	
480. VOLTS	LN/LN:	1.872		Z0= 170.2248		
	LN/LN/GND:	1.992	(0.913	GND RETURN KA)		
F-5-1 DISC	3P Duty:	4.348	0.35	Z1= 27.6638	4.348	4.348
	SLG DUTY:	2.662	0.22	Z2= 27.6638	2.662	
480. VOLTS	LN/LN:	3.765		Z0= 80.7714		
	LN/LN/GND:	4.026	(1.911	GND RETURN KA)		
F-5-2 DISC	3P Duty:	4.348	0.35	Z1= 27.6638	4.348	4.348
	SLG DUTY:	2.662	0.22	Z2= 27.6638	2.662	
480. VOLTS	LN/LN:	3.765		Z0= 80.7714		
	LN/LN/GND:	4.026	(1.911	GND RETURN KA)		
F-54-1 DISC	3P Duty:	1.755	0.20	Z1= 68.5517	1.755	1.755
	SLG DUTY:	1.029	0.16	Z2= 68.5517	1.029	
480. VOLTS	LN/LN:	1.520		Z0= 213.6606		
	LN/LN/GND:	1.582	(0.728	GND RETURN KA)		
F-54-1 STR	3P Duty:	1.704	0.20	Z1= 70.5872	1.704	1.704
	SLG DUTY:	0.999	0.16	Z2= 70.5872	0.999	
480. VOLTS	LN/LN:	1.476		Z0= 220.1092		
	LN/LN/GND:	1.536	(0.707	GND RETURN KA)		
F-54-2 DISC	3P Duty:	2.385	0.25	Z1= 50.4273	2.385	2.385
	SLG DUTY:	1.408	0.20	Z2= 50.4273	1.408	
480. VOLTS	LN/LN:	2.066		Z0= 155.6934		
	LN/LN/GND:	2.160	(0.998	GND RETURN KA)		
F-54-2 STR	3P Duty:	2.293	0.25	Z1= 52.4499	2.293	2.293
	SLG DUTY:	1.352	0.19	Z2= 52.4499	1.352	
480. VOLTS	LN/LN:	1.986		Z0= 162.1264		
	LN/LN/GND:	2.076	(0.958	GND RETURN KA)		

UNBALANCED FAULT REPORT

(FOR APPLICATION OF LOW VOLTAGE BREAKERS)

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
F-54-4 DISC	3P Duty:	4.488	0.42	Z1= 26.7997	4.488	4.488
	SLG DUTY:	2.696	0.32	Z2= 26.7997	2.696	
480. VOLTS	LN/LN:	3.887		Z0= 80.5062		
	LN/LN/GND:	4.105	(1.923	GND RETURN KA)		
F-54-4 STR	3P Duty:	4.044	0.38	Z1= 29.7425	4.044	4.044
	SLG DUTY:	2.417	0.29	Z2= 29.7425	2.417	
480. VOLTS	LN/LN:	3.502		Z0= 90.0297		
	LN/LN/GND:	3.690	(1.721	GND RETURN KA)		
F-54-5 DISC	3P Duty:	10.830	1.43	Z1= 11.1064	10.962	10.896
	SLG DUTY:	7.494	1.09	Z2= 11.1064	7.518	
480. VOLTS	LN/LN:	9.379		Z0= 26.2447		
	LN/LN/GND:	10.295	(5.695	GND RETURN KA)		
F-54-5 STR	3P Duty:	9.048	0.99	Z1= 13.2940	9.063	9.056
	SLG DUTY:	5.952	0.75	Z2= 13.2940	5.953	
480. VOLTS	LN/LN:	7.836		Z0= 34.4073		
	LN/LN/GND:	8.524	(4.409	GND RETURN KA)		
F-6-1 DISC	3P Duty:	4.258	0.35	Z1= 28.2484	4.258	4.258
	SLG DUTY:	2.611	0.23	Z2= 28.2484	2.611	
480. VOLTS	LN/LN:	3.688		Z0= 82.2007		
	LN/LN/GND:	3.939	(1.877	GND RETURN KA)		
F-6-2 DISC	3P Duty:	4.258	0.35	Z1= 28.2484	4.258	4.258
	SLG DUTY:	2.611	0.23	Z2= 28.2484	2.611	
480. VOLTS	LN/LN:	3.688		Z0= 82.2007		
	LN/LN/GND:	3.939	(1.877	GND RETURN KA)		
F-6-4 DISC	3P Duty:	4.347	0.34	Z1= 27.6686	4.347	4.347
	SLG DUTY:	2.662	0.22	Z2= 27.6686	2.662	
480. VOLTS	LN/LN:	3.765		Z0= 80.7714		
	LN/LN/GND:	4.025	(1.911	GND RETURN KA)		
F-60-5	3P Duty:	0.897	0.14	Z1= 134.1323	0.897	0.897
	SLG DUTY:	0.526	0.10	Z2= 134.1323	0.526	
480. VOLTS	LN/LN:	0.777		Z0= 417.4473		
	LN/LN/GND:	0.807	(0.372	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
F-60-6	3P Duty:	0.897	0.14	Z1= 134.1323	0.897	0.897
	SLG DUTY:	0.526	0.10	Z2= 134.1323	0.526	
480. VOLTS	LN/LN:	0.777		Z0= 417.4473		
	LN/LN/GND:	0.807	(0.372	GND RETURN KA)		
F-7-1 DISC	3P Duty:	3.384	0.27	Z1= 35.5485	3.384	3.384
	SLG DUTY:	2.040	0.18	Z2= 35.5485	2.040	
480. VOLTS	LN/LN:	2.930		Z0= 106.2601		
	LN/LN/GND:	3.106	(1.457	GND RETURN KA)		
F-8-6 DISC	3P Duty:	2.764	0.23	Z1= 43.5179	2.764	2.764
	SLG DUTY:	1.652	0.15	Z2= 43.5179	1.652	
480. VOLTS	LN/LN:	2.394		Z0= 131.7909		
	LN/LN/GND:	2.524	(1.176	GND RETURN KA)		
FASB-1 LCP	3P Duty:	16.608	2.58	Z1= 7.2424	18.006	17.314
	SLG DUTY:	13.070	1.77	Z2= 7.2424	13.439	
480. VOLTS	LN/LN:	14.383		Z0= 13.3558		
	LN/LN/GND:	16.324	(10.687	GND RETURN KA)		
FASB1 DISC	3P Duty:	14.027	2.06	Z1= 8.5748	14.672	14.352
	SLG DUTY:	10.336	1.34	Z2= 8.5748	10.430	
480. VOLTS	LN/LN:	12.148		Z0= 18.1322		
	LN/LN/GND:	13.670	(8.100	GND RETURN KA)		
FCB-1-EF DISC	3P Duty:	8.574	0.59	Z1= 14.0290	8.574	8.574
	SLG DUTY:	5.418	0.42	Z2= 14.0290	5.418	
480. VOLTS	LN/LN:	7.425		Z0= 38.9604		
	LN/LN/GND:	8.037	(3.937	GND RETURN KA)		
FCBV-1 VFD	3P Duty:	15.507	1.74	Z1= 7.7564	15.921	15.715
	SLG DUTY:	11.695	1.23	Z2= 7.7564	11.765	
480. VOLTS	LN/LN:	13.430		Z0= 15.6748		
	LN/LN/GND:	15.196	(9.290	GND RETURN KA)		
FDSP1 DISC	3P Duty:	1.454	0.15	Z1= 82.7178	1.454	1.454
	SLG DUTY:	0.849	0.10	Z2= 82.7178	0.849	
480. VOLTS	LN/LN:	1.259		Z0= 260.0603		
	LN/LN/GND:	1.312	(0.599	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
FDSP2 DISC	3P Duty:	1.449	0.15	Z1= 82.9835	1.449	1.449
	SLG DUTY:	0.847	0.10	Z2= 82.9835	0.847	
480. VOLTS	LN/LN:	1.255		Z0= 260.1740		
	LN/LN/GND:	1.309	(0.598	GND RETURN KA)		
FDSP4 DISC	3P Duty:	1.462	0.14	Z1= 82.2727	1.462	1.462
	SLG DUTY:	0.854	0.09	Z2= 82.2727	0.854	
480. VOLTS	LN/LN:	1.266		Z0= 258.1953		
	LN/LN/GND:	1.319	(0.603	GND RETURN KA)		
FLRDRNSP3 DISC	3P Duty:	1.457	0.15	Z1= 82.5414	1.457	1.457
	SLG DUTY:	0.851	0.10	Z2= 82.5414	0.851	
480. VOLTS	LN/LN:	1.262		Z0= 259.1062		
	LN/LN/GND:	1.315	(0.601	GND RETURN KA)		
GDWU-1 DISC	3P Duty:	4.344	0.34	Z1= 27.6876	4.344	4.344
	SLG DUTY:	2.661	0.22	Z2= 27.6876	2.661	
480. VOLTS	LN/LN:	3.762		Z0= 80.7714		
	LN/LN/GND:	4.021	(1.911	GND RETURN KA)		
GDWU-2 DISC	3P Duty:	4.344	0.34	Z1= 27.6876	4.344	4.344
	SLG DUTY:	2.661	0.22	Z2= 27.6876	2.661	
480. VOLTS	LN/LN:	3.762		Z0= 80.7714		
	LN/LN/GND:	4.021	(1.911	GND RETURN KA)		
GP-3 DISC TERM	3P Duty:	4.273	0.38	Z1= 28.1522	4.273	4.273
	SLG DUTY:	2.616	0.24	Z2= 28.1522	2.616	
480. VOLTS	LN/LN:	3.700		Z0= 82.2007		
	LN/LN/GND:	3.958	(1.878	GND RETURN KA)		
GRIT BLOWER 2	3P Duty:	4.356	0.36	Z1= 27.6113	4.356	4.356
	SLG DUTY:	2.665	0.23	Z2= 27.6113	2.665	
480. VOLTS	LN/LN:	3.773		Z0= 80.7714		
	LN/LN/GND:	4.037	(1.912	GND RETURN KA)		
GRTBLWR3 DISC	3P Duty:	4.266	0.36	Z1= 28.1947	4.266	4.266
	SLG DUTY:	2.614	0.23	Z2= 28.1947	2.614	
480. VOLTS	LN/LN:	3.695		Z0= 82.2007		
	LN/LN/GND:	3.950	(1.877	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
GSP1 DISC	3P Duty:	4.363	0.37	Z1= 27.5700	4.363	4.363
	SLG DUTY:	2.667	0.23	Z2= 27.5700	2.667	
480. VOLTS	LN/LN:	3.778		Z0= 80.7714		
	LN/LN/GND:	4.046	(1.912	GND RETURN KA)		
GSP2 DISC	3P Duty:	4.363	0.37	Z1= 27.5700	4.363	4.363
	SLG DUTY:	2.667	0.23	Z2= 27.5700	2.667	
480. VOLTS	LN/LN:	3.778		Z0= 80.7714		
	LN/LN/GND:	4.046	(1.912	GND RETURN KA)		
GSP4 DISC	3P Duty:	4.363	0.37	Z1= 27.5700	4.363	4.363
	SLG DUTY:	2.667	0.23	Z2= 27.5700	2.667	
480. VOLTS	LN/LN:	3.778		Z0= 80.7714		
	LN/LN/GND:	4.046	(1.912	GND RETURN KA)		
HEAT REC UNIT	3P Duty:	7.941	0.69	Z1= 15.1462	7.942	7.942
	SLG DUTY:	5.337	0.46	Z2= 15.1462	5.337	
480. VOLTS	LN/LN:	6.877		Z0= 38.1246		
	LN/LN/GND:	7.631	(3.974	GND RETURN KA)		
HOIST D DISC	3P Duty:	4.357	0.36	Z1= 27.6072	4.357	4.357
	SLG DUTY:	2.665	0.23	Z2= 27.6072	2.665	
480. VOLTS	LN/LN:	3.773		Z0= 80.7714		
	LN/LN/GND:	4.038	(1.912	GND RETURN KA)		
HOIST EPB-B DI	3P Duty:	4.508	1.00	Z1= 26.6814	4.516	4.512
	SLG DUTY:	3.009	0.59	Z2= 26.6814	3.009	
480. VOLTS	LN/LN:	3.904		Z0= 68.5509		
	LN/LN/GND:	4.369	(2.223	GND RETURN KA)		
HOIST EPB-B ST	3P Duty:	3.890	0.81	Z1= 30.9245	3.891	3.890
	SLG DUTY:	2.503	0.48	Z2= 30.9245	2.503	
480. VOLTS	LN/LN:	3.368		Z0= 84.1501		
	LN/LN/GND:	3.720	(1.824	GND RETURN KA)		
HOIST P DISC	3P Duty:	1.458	0.16	Z1= 82.4746	1.458	1.458
	SLG DUTY:	0.850	0.10	Z2= 82.4746	0.850	
480. VOLTS	LN/LN:	1.263		Z0= 260.0603		
	LN/LN/GND:	1.319	(0.599	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
HOIST Q DISC	3P Duty:	1.454	0.16	Z1= 82.7380	1.454	1.454
	SLG DUTY:	0.848	0.10	Z2= 82.7380	0.848	
480. VOLTS	LN/LN:	1.259		Z0= 260.1740		
	LN/LN/GND:	1.315	(0.599	GND RETURN KA)		
HORZ BAND SAW	3P Duty:	2.323	0.48	Z1= 51.7862	2.323	2.323
	SLG DUTY:	1.408	0.39	Z2= 51.7862	1.408	
480. VOLTS	LN/LN:	2.011		Z0= 153.2798		
	LN/LN/GND:	2.126	(1.008	GND RETURN KA)		
HP-PEW-P-1 DIS	3P Duty:	11.625	3.27	Z1= 10.3471	13.220	12.436
	SLG DUTY:	9.680	2.26	Z2= 10.3471	10.265	
480. VOLTS	LN/LN:	10.067		Z0= 16.8073		
	LN/LN/GND:	11.499	(8.244	GND RETURN KA)		
HPPEW2 DISC	3P Duty:	11.128	3.32	Z1= 10.8087	12.693	11.924
	SLG DUTY:	9.365	2.24	Z2= 10.8087	9.917	
480. VOLTS	LN/LN:	9.637		Z0= 17.1956		
	LN/LN/GND:	11.100	(8.026	GND RETURN KA)		
HT BOOST PMP D	3P Duty:	1.444	0.13	Z1= 83.3095	1.444	1.444
	SLG DUTY:	0.846	0.09	Z2= 83.3095	0.846	
480. VOLTS	LN/LN:	1.250		Z0= 260.1740		
	LN/LN/GND:	1.300	(0.598	GND RETURN KA)		
HV-1 DISC	3P Duty:	3.439	0.66	Z1= 34.9745	3.439	3.439
	SLG DUTY:	2.157	0.40	Z2= 34.9745	2.157	
480. VOLTS	LN/LN:	2.978		Z0= 99.0300		
	LN/LN/GND:	3.257	(1.557	GND RETURN KA)		
IFSAB-1 LCP	3P Duty:	7.660	0.80	Z1= 15.7032	7.663	7.661
	SLG DUTY:	4.829	0.60	Z2= 15.7032	4.830	
480. VOLTS	LN/LN:	6.633		Z0= 43.6688		
	LN/LN/GND:	7.139	(3.511	GND RETURN KA)		
IPC LP-EFB	3P Duty:	3.475	1.14	Z1= 79.8673	3.489	3.482
	SLG DUTY:	4.148	1.33	Z2= 79.8673	4.185	
208. VOLTS	LN/LN:	3.010		Z0= 43.3332		
	LN/LN/GND:	3.549	(5.087	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
IPC LP-WFB	3P Duty:	1.735	0.53	Z1= 159.9639	1.735	1.735
	SLG DUTY:	1.802	0.53	Z2= 159.9639	1.802	
208. VOLTS	LN/LN:	1.503		Z0= 142.2990		
	LN/LN/GND:	1.766 (	1.873	GND RETURN KA)		
IRON WORK	3P Duty:	4.675	1.27	Z1= 25.7273	4.708	4.692
	SLG DUTY:	3.119	1.03	Z2= 25.7273	3.126	
480. VOLTS	LN/LN:	4.049		Z0= 64.7218		
	LN/LN/GND:	4.380 (	2.331	GND RETURN KA)		
JC-1 DISC	3P Duty:	4.350	0.35	Z1= 27.6539	4.350	4.350
	SLG DUTY:	2.663	0.22	Z2= 27.6539	2.663	
480. VOLTS	LN/LN:	3.767		Z0= 80.7714		
	LN/LN/GND:	4.028 (	1.911	GND RETURN KA)		
JC-2 DISC	3P Duty:	3.385	0.28	Z1= 35.5302	3.385	3.385
	SLG DUTY:	2.040	0.18	Z2= 35.5302	2.040	
480. VOLTS	LN/LN:	2.932		Z0= 106.2601		
	LN/LN/GND:	3.108 (	1.457	GND RETURN KA)		
Junction Box	3P Duty:	4.839	0.45	Z1= 24.8559	4.839	4.839
	SLG DUTY:	2.919	0.35	Z2= 24.8559	2.919	
480. VOLTS	LN/LN:	4.191		Z0= 74.1827		
	LN/LN/GND:	4.435 (	2.086	GND RETURN KA)		
Junction box.	3P Duty:	2.100	0.31	Z1= 57.2687	2.100	2.100
	SLG DUTY:	1.271	0.19	Z2= 57.2687	1.271	
480. VOLTS	LN/LN:	1.819		Z0= 170.3991		
	LN/LN/GND:	1.940 (	0.908	GND RETURN KA)		
LBP-6 STARTER	3P Duty:	4.044	0.40	Z1= 29.7403	4.044	4.044
	SLG DUTY:	2.490	0.27	Z2= 29.7403	2.490	
480. VOLTS	LN/LN:	3.503		Z0= 86.1041		
	LN/LN/GND:	3.754 (	1.791	GND RETURN KA)		
LBP-7 STARTER	3P Duty:	4.079	0.39	Z1= 29.4872	4.079	4.079
	SLG DUTY:	2.505	0.27	Z2= 29.4872	2.505	
480. VOLTS	LN/LN:	3.533		Z0= 85.6438		
	LN/LN/GND:	3.776 (	1.801	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
LBP-8 STARTER	3P Duty:	4.079	0.39	Z1= 29.4872	4.079	4.079
	SLG DUTY:	2.505	0.27	Z2= 29.4872	2.505	
480. VOLTS	LN/LN:	3.533		Z0= 85.6438		
	LN/LN/GND:	3.776	(1.801	GND RETURN KA)		
LP-ADM-1	3P Duty:	5.318	3.01	Z1= 52.1948	5.940	5.633
	SLG DUTY:	5.653	2.95	Z2= 52.1948	6.289	
208. VOLTS	LN/LN:	4.606		Z0= 42.9092		
	LN/LN/GND:	5.529	(6.034	GND RETURN KA)		
LP-ADM-1A	3P Duty:	5.243	2.93	Z1= 52.9429	5.824	5.537
	SLG DUTY:	5.522	2.81	Z2= 52.9429	6.082	
208. VOLTS	LN/LN:	4.540		Z0= 44.9323		
	LN/LN/GND:	5.456	(5.832	GND RETURN KA)		
LP-ADM-UPS	3P Duty:	0.042	7.97	Z1=6667.8525	0.042	0.050
	SLG DUTY:	0.037	7.95	Z2=6667.8525	0.037	
208. VOLTS	LN/LN:	0.036		Z0=8892.1299		
	LN/LN/GND:	0.040	(0.034	GND RETURN KA)		
LP-C	3P Duty:	1.793	0.58	Z1= 154.8442	1.793	1.793
	SLG DUTY:	1.796	0.56	Z2= 154.8442	1.796	
208. VOLTS	LN/LN:	1.552		Z0= 154.1099		
	LN/LN/GND:	1.817	(1.799	GND RETURN KA)		
LP-CEB-A	3P Duty:	3.239	0.74	Z1= 85.6912	3.240	3.240
	SLG DUTY:	3.259	0.72	Z2= 85.6912	3.259	
208. VOLTS	LN/LN:	2.805		Z0= 84.2235		
	LN/LN/GND:	3.295	(3.278	GND RETURN KA)		
LP-CEB-B	3P Duty:	3.170	0.74	Z1= 87.5635	3.171	3.170
	SLG DUTY:	3.143	0.70	Z2= 87.5635	3.144	
208. VOLTS	LN/LN:	2.745		Z0= 89.9117		
	LN/LN/GND:	3.213	(3.116	GND RETURN KA)		
LP-D	3P Duty:	1.761	2.65	Z1= 157.6272	1.918	1.840
	SLG DUTY:	1.796	2.67	Z2= 157.6272	1.960	
208. VOLTS	LN/LN:	1.525		Z0= 148.3342		
	LN/LN/GND:	1.774	(1.833	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
LP-E	3P Duty:	4.017	2.66	Z1= 69.0943	4.381	4.201
	SLG DUTY:	4.182	2.66	Z2= 69.0943	4.558	
208. VOLTS	LN/LN:	3.479		Z0= 60.9205		
	LN/LN/GND:	4.105	(4.361	GND RETURN KA)		
LP-EBB-A	3P Duty:	3.146	0.86	Z1= 88.2364	3.148	3.147
	SLG DUTY:	3.199	0.80	Z2= 88.2364	3.201	
208. VOLTS	LN/LN:	2.724		Z0= 84.2235		
	LN/LN/GND:	3.282	(3.250	GND RETURN KA)		
LP-EE	3P Duty:	0.438	1.41	Z1= 633.3162	0.438	0.441
	SLG DUTY:	0.441	1.40	Z2= 633.3162	0.441	
208. VOLTS	LN/LN:	0.380		Z0= 623.1559		
	LN/LN/GND:	0.440	(0.443	GND RETURN KA)		
LP-F	3P Duty:	3.908	2.37	Z1= 71.0224	4.175	4.043
	SLG DUTY:	4.011	2.17	Z2= 71.0224	4.227	
208. VOLTS	LN/LN:	3.385		Z0= 65.7965		
	LN/LN/GND:	4.073	(4.114	GND RETURN KA)		
LP-FF	3P Duty:	0.473	1.79	Z1= 587.0339	0.473	0.480
	SLG DUTY:	0.464	1.64	Z2= 587.0339	0.464	
208. VOLTS	LN/LN:	0.409		Z0= 623.1559		
	LN/LN/GND:	0.484	(0.455	GND RETURN KA)		
LP-LSE	3P Duty:	1.815	0.59	Z1= 152.9339	1.815	1.815
	SLG DUTY:	1.834	0.57	Z2= 152.9339	1.834	
208. VOLTS	LN/LN:	1.572		Z0= 148.1987		
	LN/LN/GND:	1.848	(1.854	GND RETURN KA)		
LP-M	3P Duty:	3.226	0.76	Z1= 86.0380	3.227	3.227
	SLG DUTY:	3.336	0.75	Z2= 86.0380	3.336	
208. VOLTS	LN/LN:	2.794		Z0= 77.5765		
	LN/LN/GND:	3.290	(3.453	GND RETURN KA)		
LP-N	3P Duty:	3.370	0.78	Z1= 82.3644	3.371	3.371
	SLG DUTY:	3.466	0.76	Z2= 82.3644	3.466	
208. VOLTS	LN/LN:	2.919		Z0= 75.5928		
	LN/LN/GND:	3.457	(3.566	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
LP-O	3P Duty:	2.469	2.23	Z1= 112.4028	2.613	2.542
	SLG DUTY:	2.498	2.01	Z2= 112.4028	2.606	
208. VOLTS	LN/LN:	2.139		Z0= 109.0817		
	LN/LN/GND:	2.568	(2.523	GND RETURN KA)		
LP-Q	3P Duty:	3.211	0.75	Z1= 86.4540	3.211	3.211
	SLG DUTY:	3.324	0.75	Z2= 86.4540	3.325	
208. VOLTS	LN/LN:	2.780		Z0= 77.5765		
	LN/LN/GND:	3.275	(3.447	GND RETURN KA)		
LP-RLS	3P Duty:	1.713	2.51	Z1= 162.0025	1.848	1.781
	SLG DUTY:	1.736	2.43	Z2= 162.0025	1.862	
208. VOLTS	LN/LN:	1.484		Z0= 155.7037		
	LN/LN/GND:	1.742	(1.759	GND RETURN KA)		
LP-T	3P Duty:	2.530	2.65	Z1= 109.6915	2.758	2.645
	SLG DUTY:	2.620	2.60	Z2= 109.6915	2.845	
208. VOLTS	LN/LN:	2.191		Z0= 98.4137		
	LN/LN/GND:	2.594	(2.717	GND RETURN KA)		
LP-U	3P Duty:	2.492	2.23	Z1= 111.4047	2.636	2.564
	SLG DUTY:	2.521	2.01	Z2= 111.4047	2.629	
208. VOLTS	LN/LN:	2.158		Z0= 108.0997		
	LN/LN/GND:	2.592	(2.546	GND RETURN KA)		
LP-V	3P Duty:	1.488	1.73	Z1= 186.5674	1.526	1.507
	SLG DUTY:	1.520	1.65	Z2= 186.5674	1.553	
208. VOLTS	LN/LN:	1.288		Z0= 174.8580		
	LN/LN/GND:	1.527	(1.553	GND RETURN KA)		
LP-W	3P Duty:	1.479	1.72	Z1= 187.7333	1.517	1.498
	SLG DUTY:	1.514	1.65	Z2= 187.7333	1.547	
208. VOLTS	LN/LN:	1.280		Z0= 174.8580		
	LN/LN/GND:	1.520	(1.550	GND RETURN KA)		
LP-WBB-A	3P Duty:	3.453	0.76	Z1= 80.3765	3.454	3.454
	SLG DUTY:	3.467	0.74	Z2= 80.3765	3.467	
208. VOLTS	LN/LN:	2.991		Z0= 79.5058		
	LN/LN/GND:	3.503	(3.479	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
LP-WBB-B	3P Duty:	3.388	0.75	Z1= 81.9328	3.389	3.388
	SLG DUTY:	3.358	0.72	Z2= 81.9328	3.358	
208. VOLTS	LN/LN:	2.934		Z0= 84.2235		
	LN/LN/GND:	3.426	(	3.327 GND RETURN KA)		
LP-WPB-A	3P Duty:	1.747	0.57	Z1= 158.8421	1.748	1.747
	SLG DUTY:	1.783	0.56	Z2= 158.8421	1.783	
208. VOLTS	LN/LN:	1.513		Z0= 149.3801		
	LN/LN/GND:	1.782	(	1.820 GND RETURN KA)		
LP-WPB-B	3P Duty:	1.731	0.57	Z1= 160.3879	1.731	1.731
	SLG DUTY:	1.754	0.55	Z2= 160.3879	1.754	
208. VOLTS	LN/LN:	1.499		Z0= 154.1099		
	LN/LN/GND:	1.761	(	1.777 GND RETURN KA)		
LSE-ACCU-1	3P Duty:	6.233	0.59	Z1= 19.2965	6.233	6.233
	SLG DUTY:	4.036	0.41	Z2= 19.2965	4.036	
480. VOLTS	LN/LN:	5.398		Z0= 51.5428		
	LN/LN/GND:	5.897	(	2.961 GND RETURN KA)		
LSE-ACU-1	3P Duty:	3.901	0.37	Z1= 30.8310	3.901	3.901
	SLG DUTY:	2.391	0.26	Z2= 30.8310	2.391	
480. VOLTS	LN/LN:	3.379		Z0= 89.8157		
	LN/LN/GND:	3.606	(	1.718 GND RETURN KA)		
LSE-PPU-1	3P Duty:	2.912	0.29	Z1= 41.2994	2.912	2.912
	SLG DUTY:	1.754	0.20	Z2= 41.2994	1.754	
480. VOLTS	LN/LN:	2.522		Z0= 123.5742		
	LN/LN/GND:	2.668	(	1.252 GND RETURN KA)		
MB-EF-1 DISC	3P Duty:	3.216	0.70	Z1= 37.4059	3.216	3.216
	SLG DUTY:	2.006	0.56	Z2= 37.4059	2.006	
480. VOLTS	LN/LN:	2.785		Z0= 105.6905		
	LN/LN/GND:	2.973	(	1.453 GND RETURN KA)		
MCC-51A	3P Duty:	29.554	3.35	Z1= 4.0698	33.787	31.707
	SLG DUTY:	24.609	2.67	Z2= 4.0698	26.846	
480. VOLTS	LN/LN:	25.595		Z0= 6.5637		
	LN/LN/GND:	28.754	(	21.025 GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
MCC-51B	3P Duty:	29.816	3.43	Z1= 4.0341	34.251	32.073
	SLG DUTY:	24.736	2.69	Z2= 4.0341	27.030	
480. VOLTS	LN/LN:	25.822		Z0= 6.5637		
	LN/LN/GND:	29.028	(21.072	GND RETURN KA)		
MCC-52A	3P Duty:	29.594	3.35	Z1= 4.0643	33.831	31.749
	SLG DUTY:	24.628	2.67	Z2= 4.0643	26.865	
480. VOLTS	LN/LN:	25.629		Z0= 6.5637		
	LN/LN/GND:	28.789	(21.032	GND RETURN KA)		
MCC-52B	3P Duty:	30.177	3.45	Z1= 3.9859	34.720	32.490
	SLG DUTY:	25.166	2.73	Z2= 3.9859	27.567	
480. VOLTS	LN/LN:	26.134		Z0= 6.4083		
	LN/LN/GND:	29.400	(21.521	GND RETURN KA)		
MCC-53 A	3P Duty:	29.720	3.38	Z1= 4.0472	34.047	31.921
	SLG DUTY:	24.687	2.68	Z2= 4.0472	26.949	
480. VOLTS	LN/LN:	25.738		Z0= 6.5637		
	LN/LN/GND:	28.909	(21.054	GND RETURN KA)		
MCC-53B	3P Duty:	29.731	3.41	Z1= 4.0456	34.114	31.961
	SLG DUTY:	24.696	2.69	Z2= 4.0456	26.976	
480. VOLTS	LN/LN:	25.748		Z0= 6.5637		
	LN/LN/GND:	28.947	(21.058	GND RETURN KA)		
MCC-54 A	3P Duty:	28.840	3.30	Z1= 4.1706	32.846	30.877
	SLG DUTY:	23.784	2.60	Z2= 4.1706	25.825	
480. VOLTS	LN/LN:	24.976		Z0= 6.8752		
	LN/LN/GND:	28.020	(20.178	GND RETURN KA)		
MCC-54B	3P Duty:	29.095	3.34	Z1= 4.1342	33.235	31.200
	SLG DUTY:	23.904	2.62	Z2= 4.1342	25.980	
480. VOLTS	LN/LN:	25.197		Z0= 6.8752		
	LN/LN/GND:	28.279	(20.222	GND RETURN KA)		
MCC-55 A	3P Duty:	29.381	3.33	Z1= 4.0939	33.549	31.501
	SLG DUTY:	24.527	2.66	Z2= 4.0939	26.748	
480. VOLTS	LN/LN:	25.444		Z0= 6.5637		
	LN/LN/GND:	28.595	(20.995	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
MCC-55B	3P Duty:	29.646	3.39	Z1= 4.0573	33.968	31.845
	SLG DUTY:	24.656	2.68	Z2= 4.0573	26.919	
480. VOLTS	LN/LN:	25.674		Z0= 6.5637		
	LN/LN/GND:	28.866	(21.043	GND RETURN KA)		
MCC-56 A	3P Duty:	13.375	2.33	Z1= 8.9929	14.245	13.813
	SLG DUTY:	9.406	1.78	Z2= 8.9929	9.677	
480. VOLTS	LN/LN:	11.583		Z0= 20.5153		
	LN/LN/GND:	12.607	(7.229	GND RETURN KA)		
MCC-56B	3P Duty:	13.268	2.33	Z1= 9.0656	14.131	13.703
	SLG DUTY:	9.295	1.77	Z2= 9.0656	9.560	
480. VOLTS	LN/LN:	11.490		Z0= 20.8344		
	LN/LN/GND:	12.502	(7.128	GND RETURN KA)		
MCC-ADM-A	3P Duty:	11.882	3.34	Z1= 10.1230	13.569	12.740
	SLG DUTY:	8.680	2.42	Z2= 10.1230	9.304	
480. VOLTS	LN/LN:	10.290		Z0= 21.4674		
	LN/LN/GND:	11.263	(6.815	GND RETURN KA)		
MCC-ADM-A.	3P Duty:	11.882	3.34	Z1= 10.1230	13.569	12.740
	SLG DUTY:	8.680	2.42	Z2= 10.1230	9.304	
480. VOLTS	LN/LN:	10.290		Z0= 21.4674		
	LN/LN/GND:	11.263	(6.815	GND RETURN KA)		
MCC-C	3P Duty:	14.647	3.39	Z1= 8.2123	16.786	15.735
	SLG DUTY:	13.426	2.75	Z2= 8.2123	14.731	
480. VOLTS	LN/LN:	12.684		Z0= 10.5164		
	LN/LN/GND:	14.664	(12.364	GND RETURN KA)		
MCC-CEB-A	3P Duty:	23.870	3.96	Z1= 5.0391	28.343	26.156
	SLG DUTY:	22.596	3.23	Z2= 5.0391	25.622	
480. VOLTS	LN/LN:	20.672		Z0= 5.9282		
	LN/LN/GND:	24.195	(21.402	GND RETURN KA)		
MCC-CEB-B	3P Duty:	23.431	4.31	Z1= 5.1335	28.357	25.955
	SLG DUTY:	22.778	3.52	Z2= 5.1335	26.330	
480. VOLTS	LN/LN:	20.291		Z0= 5.6084		
	LN/LN/GND:	23.994	(22.113	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
MCC-D	3P Duty:	15.314	4.19	Z1= 7.8543	18.415	16.902
	SLG DUTY:	14.488	3.49	Z2= 7.8543	16.715	
480. VOLTS	LN/LN:	13.262		Z0= 9.2313		
	LN/LN/GND:	15.391	(13.728	GND RETURN KA)		
MCC-D.	3P Duty:	15.314	4.19	Z1= 7.8544	18.415	16.902
	SLG DUTY:	14.488	3.49	Z2= 7.8544	16.715	
480. VOLTS	LN/LN:	13.262		Z0= 9.2313		
	LN/LN/GND:	15.391	(13.728	GND RETURN KA)		
MCC-E	3P Duty:	13.475	5.18	Z1= 8.9265	17.019	15.301
	SLG DUTY:	12.109	4.25	Z2= 8.9265	14.615	
480. VOLTS	LN/LN:	11.669		Z0= 11.9646		
	LN/LN/GND:	13.159	(10.988	GND RETURN KA)		
MCC-E.	3P Duty:	13.475	5.18	Z1= 8.9265	17.019	15.301
	SLG DUTY:	12.109	4.25	Z2= 8.9265	14.615	
480. VOLTS	LN/LN:	11.669		Z0= 11.9646		
	LN/LN/GND:	13.159	(10.988	GND RETURN KA)		
MCC-E..	3P Duty:	13.475	5.18	Z1= 8.9265	17.019	15.301
	SLG DUTY:	12.109	4.25	Z2= 8.9265	14.615	
480. VOLTS	LN/LN:	11.669		Z0= 11.9646		
	LN/LN/GND:	13.159	(10.988	GND RETURN KA)		
MCC-EBB-A	3P Duty:	10.847	4.89	Z1= 11.0886	13.519	12.222
	SLG DUTY:	11.463	4.04	Z2= 11.0886	13.670	
480. VOLTS	LN/LN:	9.394		Z0= 9.3600		
	LN/LN/GND:	11.596	(12.130	GND RETURN KA)		
MCC-EBB-A.	3P Duty:	10.847	4.89	Z1= 11.0886	13.519	12.222
	SLG DUTY:	11.463	4.04	Z2= 11.0886	13.670	
480. VOLTS	LN/LN:	9.394		Z0= 9.3600		
	LN/LN/GND:	11.596	(12.130	GND RETURN KA)		
MCC-EBB-B	3P Duty:	9.982	4.84	Z1= 12.0502	12.410	11.231
	SLG DUTY:	10.802	4.05	Z2= 12.0502	12.894	
480. VOLTS	LN/LN:	8.644		Z0= 9.3600		
	LN/LN/GND:	10.827	(11.750	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
MCC-EBB-B.	3P Duty:	9.982	4.84	Z1= 12.0502	12.410	11.231
	SLG DUTY:	10.802	4.05	Z2= 12.0502	12.894	
480. VOLTS	LN/LN:	8.644		Z0= 9.3600		
	LN/LN/GND:	10.827	(11.750	GND RETURN KA)		
MCC-EE	3P Duty:	12.846	4.15	Z1= 9.3635	15.413	14.160
	SLG DUTY:	11.289	3.22	Z2= 9.3635	12.789	
480. VOLTS	LN/LN:	11.125		Z0= 13.3030		
	LN/LN/GND:	12.636	(10.048	GND RETURN KA)		
MCC-EPB-A	3P Duty:	6.573	2.23	Z1= 18.2984	6.957	6.767
	SLG DUTY:	4.901	1.14	Z2= 18.2984	4.921	
480. VOLTS	LN/LN:	5.693		Z0= 38.7725		
	LN/LN/GND:	6.595	(3.819	GND RETURN KA)		
MCC-EPB-A.	3P Duty:	6.573	2.23	Z1= 18.2984	6.957	6.767
	SLG DUTY:	4.901	1.14	Z2= 18.2984	4.921	
480. VOLTS	LN/LN:	5.693		Z0= 38.7726		
	LN/LN/GND:	6.595	(3.819	GND RETURN KA)		
MCC-EPB-A..	3P Duty:	6.573	2.23	Z1= 18.2985	6.957	6.767
	SLG DUTY:	4.901	1.14	Z2= 18.2985	4.921	
480. VOLTS	LN/LN:	5.693		Z0= 38.7726		
	LN/LN/GND:	6.595	(3.819	GND RETURN KA)		
MCC-EPB-B	3P Duty:	6.180	2.17	Z1= 19.4639	6.513	6.347
	SLG DUTY:	4.756	1.15	Z2= 19.4639	4.776	
480. VOLTS	LN/LN:	5.352		Z0= 38.7725		
	LN/LN/GND:	6.253	(3.776	GND RETURN KA)		
MCC-EPB-B.	3P Duty:	6.180	2.17	Z1= 19.4639	6.513	6.347
	SLG DUTY:	4.756	1.15	Z2= 19.4639	4.776	
480. VOLTS	LN/LN:	5.352		Z0= 38.7725		
	LN/LN/GND:	6.253	(3.776	GND RETURN KA)		
MCC-EPB-B..	3P Duty:	6.180	2.17	Z1= 19.4640	6.513	6.347
	SLG DUTY:	4.756	1.15	Z2= 19.4640	4.776	
480. VOLTS	LN/LN:	5.352		Z0= 38.7726		
	LN/LN/GND:	6.253	(3.776	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
MCC-F	3P Duty:	12.794	5.09	Z1= 9.4017	16.092	14.492
	SLG DUTY:	11.627	4.02	Z2= 9.4017	13.848	
480. VOLTS	LN/LN:	11.080		Z0= 12.2704		
	LN/LN/GND:	12.646	(10.643	GND RETURN KA)		
MCC-F.	3P Duty:	12.794	5.09	Z1= 9.4017	16.092	14.492
	SLG DUTY:	11.627	4.02	Z2= 9.4017	13.848	
480. VOLTS	LN/LN:	11.080		Z0= 12.2704		
	LN/LN/GND:	12.646	(10.643	GND RETURN KA)		
MCC-F..	3P Duty:	12.794	5.09	Z1= 9.4017	16.092	14.492
	SLG DUTY:	11.627	4.02	Z2= 9.4017	13.848	
480. VOLTS	LN/LN:	11.080		Z0= 12.2704		
	LN/LN/GND:	12.646	(10.643	GND RETURN KA)		
MCC-FF	3P Duty:	12.276	3.84	Z1= 9.7981	14.471	13.397
	SLG DUTY:	10.891	2.84	Z2= 9.7981	12.022	
480. VOLTS	LN/LN:	10.631		Z0= 13.6677		
	LN/LN/GND:	12.271	(9.749	GND RETURN KA)		
MCC-M	3P Duty:	20.405	5.11	Z1= 5.8947	25.691	23.128
	SLG DUTY:	17.688	3.98	Z2= 5.8947	21.027	
480. VOLTS	LN/LN:	17.671		Z0= 8.6369		
	LN/LN/GND:	19.846	(15.590	GND RETURN KA)		
MCC-M.	3P Duty:	20.405	5.11	Z1= 5.8947	25.691	23.128
	SLG DUTY:	17.688	3.98	Z2= 5.8947	21.027	
480. VOLTS	LN/LN:	17.671		Z0= 8.6370		
	LN/LN/GND:	19.846	(15.590	GND RETURN KA)		
MCC-N	3P Duty:	21.435	5.76	Z1= 5.6113	27.713	24.681
	SLG DUTY:	18.833	5.03	Z2= 5.6113	23.623	
480. VOLTS	LN/LN:	18.564		Z0= 7.9433		
	LN/LN/GND:	20.648	(16.789	GND RETURN KA)		
MCC-N.	3P Duty:	21.435	5.76	Z1= 5.6114	27.712	24.680
	SLG DUTY:	18.833	5.03	Z2= 5.6114	23.623	
480. VOLTS	LN/LN:	18.564		Z0= 7.9433		
	LN/LN/GND:	20.648	(16.789	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
MCC-P	3P Duty:	20.341	4.40	Z1= 5.9133	24.739	22.596
	SLG DUTY:	17.270	3.18	Z2= 5.9133	19.512	
480. VOLTS	LN/LN:	17.616		Z0= 9.1359		
	LN/LN/GND:	19.966	(14.957	GND RETURN KA)		
MCC-Q	3P Duty:	19.685	3.72	Z1= 6.1102	23.036	21.395
	SLG DUTY:	16.991	2.89	Z2= 6.1102	18.823	
480. VOLTS	LN/LN:	17.048		Z0= 9.0724		
	LN/LN/GND:	19.335	(14.907	GND RETURN KA)		
MCC-R	3P Duty:	41.994	5.47	Z1= 2.8643	53.683	48.028
	SLG DUTY:	39.526	4.54	Z2= 2.8643	48.427	
480. VOLTS	LN/LN:	36.368		Z0= 3.4081		
	LN/LN/GND:	41.827	(37.302	GND RETURN KA)		
MCC-RLS-A	3P Duty:	14.834	4.49	Z1= 8.1087	18.129	16.525
	SLG DUTY:	13.417	3.71	Z2= 8.1087	15.689	
480. VOLTS	LN/LN:	12.846		Z0= 10.7018		
	LN/LN/GND:	14.568	(12.236	GND RETURN KA)		
MCC-RLS-B	3P Duty:	12.474	3.98	Z1= 9.6428	14.827	13.677
	SLG DUTY:	10.480	2.91	Z2= 9.6428	11.624	
480. VOLTS	LN/LN:	10.803		Z0= 15.2602		
	LN/LN/GND:	12.208	(9.006	GND RETURN KA)		
MCC-S	3P Duty:	42.334	5.50	Z1= 2.8413	54.185	48.453
	SLG DUTY:	39.731	4.55	Z2= 2.8413	48.704	
480. VOLTS	LN/LN:	36.662		Z0= 3.4081		
	LN/LN/GND:	42.188	(37.395	GND RETURN KA)		
MCC-WBB-A	3P Duty:	36.223	6.17	Z1= 3.3205	47.543	42.087
	SLG DUTY:	34.767	5.00	Z2= 3.3205	43.549	
480. VOLTS	LN/LN:	31.370		Z0= 3.7454		
	LN/LN/GND:	36.346	(33.399	GND RETURN KA)		
MCC-WBB-A.	3P Duty:	36.223	6.17	Z1= 3.3206	47.543	42.087
	SLG DUTY:	34.767	5.00	Z2= 3.3206	43.549	
480. VOLTS	LN/LN:	31.370		Z0= 3.7454		
	LN/LN/GND:	36.345	(33.399	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
MCC-WBB-B	3P Duty:	33.198	5.78	Z1= 3.6231	42.956	38.243
	SLG DUTY:	32.484	4.75	Z2= 3.6231	40.209	
480. VOLTS	LN/LN:	28.751		Z0= 3.8727		
	LN/LN/GND:	33.708	(31.770	GND RETURN KA)		
MCC-WBB-B.	3P Duty:	33.198	5.78	Z1= 3.6231	42.955	38.243
	SLG DUTY:	32.484	4.75	Z2= 3.6231	40.209	
480. VOLTS	LN/LN:	28.750		Z0= 3.8727		
	LN/LN/GND:	33.708	(31.770	GND RETURN KA)		
MCC-WPB-A	3P Duty:	12.825	2.34	Z1= 9.3790	13.671	13.251
	SLG DUTY:	9.232	1.79	Z2= 9.3790	9.504	
480. VOLTS	LN/LN:	11.106		Z0= 20.4841		
	LN/LN/GND:	12.161	(7.185	GND RETURN KA)		
MCC-WPB-A.	3P Duty:	12.825	2.34	Z1= 9.3790	13.671	13.251
	SLG DUTY:	9.232	1.79	Z2= 9.3790	9.504	
480. VOLTS	LN/LN:	11.106		Z0= 20.4841		
	LN/LN/GND:	12.160	(7.185	GND RETURN KA)		
MCC-WPB-B	3P Duty:	12.449	2.34	Z1= 9.6621	13.272	12.864
	SLG DUTY:	9.102	1.80	Z2= 9.6621	9.373	
480. VOLTS	LN/LN:	10.781		Z0= 20.4930		
	LN/LN/GND:	11.853	(7.143	GND RETURN KA)		
MCC-WPB-B.	3P Duty:	12.449	2.34	Z1= 9.6621	13.272	12.864
	SLG DUTY:	9.101	1.80	Z2= 9.6621	9.373	
480. VOLTS	LN/LN:	10.781		Z0= 20.4930		
	LN/LN/GND:	11.853	(7.143	GND RETURN KA)		
MCC-XA	3P Duty:	16.722	2.79	Z1= 7.1932	18.398	17.570
	SLG DUTY:	11.846	1.95	Z2= 7.1932	12.311	
480. VOLTS	LN/LN:	14.481		Z0= 16.2119		
	LN/LN/GND:	15.841	(9.132	GND RETURN KA)		
MCC-XB	3P Duty:	40.244	4.27	Z1= 2.9888	48.604	44.527
	SLG DUTY:	36.772	3.23	Z2= 2.9888	41.696	
480. VOLTS	LN/LN:	34.852		Z0= 3.8678		
	LN/LN/GND:	40.501	(33.741	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
METAL LATHE	3P Duty:	4.803	1.35	Z1= 25.0451	4.848	4.825
	SLG DUTY:	3.226	1.10	Z2= 25.0451	3.237	
480. VOLTS	LN/LN:	4.159		Z0= 62.2049		
	LN/LN/GND:	4.502	(2.420	GND RETURN KA)		
MILL MACH	3P Duty:	3.979	0.93	Z1= 30.2324	3.983	3.981
	SLG DUTY:	2.563	0.76	Z2= 30.2324	2.563	
480. VOLTS	LN/LN:	3.446		Z0= 80.8991		
	LN/LN/GND:	3.706	(1.883	GND RETURN KA)		
MOD VALVE 1 DI	3P Duty:	1.453	0.16	Z1= 82.7599	1.453	1.453
	SLG DUTY:	0.848	0.10	Z2= 82.7599	0.848	
480. VOLTS	LN/LN:	1.259		Z0= 260.1738		
	LN/LN/GND:	1.314	(0.599	GND RETURN KA)		
MOD VALVE 3 DI	3P Duty:	1.325	0.15	Z1= 90.7765	1.325	1.325
	SLG DUTY:	0.773	0.09	Z2= 90.7765	0.773	
480. VOLTS	LN/LN:	1.148		Z0= 285.7599		
	LN/LN/GND:	1.198	(0.545	GND RETURN KA)		
MOD VALVE 5 DI	3P Duty:	1.217	0.15	Z1= 98.8156	1.217	1.217
	SLG DUTY:	0.709	0.09	Z2= 98.8156	0.709	
480. VOLTS	LN/LN:	1.054		Z0= 311.3479		
	LN/LN/GND:	1.100	(0.500	GND RETURN KA)		
MOD VALVE 7 DI	3P Duty:	1.125	0.14	Z1= 106.8811	1.125	1.125
	SLG DUTY:	0.656	0.09	Z2= 106.8811	0.656	
480. VOLTS	LN/LN:	0.975		Z0= 336.9374		
	LN/LN/GND:	1.016	(0.462	GND RETURN KA)		
MPPEWP1 DISC	3P Duty:	10.756	2.23	Z1= 11.1832	11.377	11.069
	SLG DUTY:	8.531	1.47	Z2= 11.1832	8.650	
480. VOLTS	LN/LN:	9.315		Z0= 20.4196		
	LN/LN/GND:	10.693	(6.990	GND RETURN KA)		
MPPEWP2 DISC	3P Duty:	10.341	2.28	Z1= 11.6314	10.980	10.663
	SLG DUTY:	8.287	1.48	Z2= 11.6314	8.405	
480. VOLTS	LN/LN:	8.956		Z0= 20.8561		
	LN/LN/GND:	10.354	(6.825	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
MU HV2 DISC	3P Duty:	1.458	0.18	Z1= 82.4822	1.458	1.458
	SLG DUTY:	0.850	0.10	Z2= 82.4822	0.850	
480. VOLTS	LN/LN:	1.263		Z0= 260.1740		
	LN/LN/GND:	1.322	(0.599	GND RETURN KA)		
MV10 DISC	3P Duty:	1.447	0.16	Z1= 83.1294	1.447	1.447
	SLG DUTY:	0.844	0.10	Z2= 83.1294	0.844	
480. VOLTS	LN/LN:	1.253		Z0= 261.6645		
	LN/LN/GND:	1.308	(0.595	GND RETURN KA)		
MV11 DISC	3P Duty:	1.433	0.16	Z1= 83.9335	1.433	1.433
	SLG DUTY:	0.836	0.10	Z2= 83.9335	0.836	
480. VOLTS	LN/LN:	1.241		Z0= 264.2230		
	LN/LN/GND:	1.296	(0.589	GND RETURN KA)		
MV12 DISC	3P Duty:	1.419	0.16	Z1= 84.7398	1.419	1.419
	SLG DUTY:	0.828	0.10	Z2= 84.7398	0.828	
480. VOLTS	LN/LN:	1.229		Z0= 266.7815		
	LN/LN/GND:	1.283	(0.584	GND RETURN KA)		
MV2 DISC	3P Duty:	1.466	0.16	Z1= 82.0619	1.466	1.466
	SLG DUTY:	0.855	0.10	Z2= 82.0619	0.855	
480. VOLTS	LN/LN:	1.269		Z0= 258.1951		
	LN/LN/GND:	1.325	(0.603	GND RETURN KA)		
MV4 DISC	3P Duty:	1.452	0.15	Z1= 82.8641	1.452	1.452
	SLG DUTY:	0.847	0.10	Z2= 82.8641	0.847	
480. VOLTS	LN/LN:	1.257		Z0= 260.7538		
	LN/LN/GND:	1.312	(0.597	GND RETURN KA)		
MV6 DISC	3P Duty:	1.438	0.15	Z1= 83.6685	1.438	1.438
	SLG DUTY:	0.839	0.09	Z2= 83.6685	0.839	
480. VOLTS	LN/LN:	1.245		Z0= 263.3124		
	LN/LN/GND:	1.300	(0.591	GND RETURN KA)		
MV8 DISC	3P Duty:	1.424	0.15	Z1= 84.4750	1.424	1.424
	SLG DUTY:	0.831	0.09	Z2= 84.4750	0.831	
480. VOLTS	LN/LN:	1.233		Z0= 265.8711		
	LN/LN/GND:	1.287	(0.586	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
MV9 DISC	3P Duty:	1.461	0.16	Z1= 82.3274	1.461	1.461
	SLG DUTY:	0.852	0.10	Z2= 82.3274	0.852	
480. VOLTS	LN/LN:	1.265		Z0= 259.1060		
	LN/LN/GND:	1.321	(0.601	GND RETURN KA)		
N EQPT RCPT	3P Duty:	2.268	0.18	Z1= 53.0370	2.268	2.268
	SLG DUTY:	1.336	0.13	Z2= 53.0370	1.336	
480. VOLTS	LN/LN:	1.964		Z0= 164.0893		
	LN/LN/GND:	2.049	(0.947	GND RETURN KA)		
OZNTR DISC	3P Duty:	8.307	1.14	Z1= 14.4790	8.341	8.324
	SLG DUTY:	5.995	0.79	Z2= 14.4790	5.997	
480. VOLTS	LN/LN:	7.194		Z0= 32.0708		
	LN/LN/GND:	8.127	(4.628	GND RETURN KA)		
P-53-06 DISC	3P Duty:	5.794	0.55	Z1= 20.7582	5.794	5.794
	SLG DUTY:	3.564	0.42	Z2= 20.7582	3.564	
480. VOLTS	LN/LN:	5.018		Z0= 60.0706		
	LN/LN/GND:	5.353	(2.565	GND RETURN KA)		
P-53-06 STR	3P Duty:	4.898	0.46	Z1= 24.5588	4.898	4.898
	SLG DUTY:	2.972	0.36	Z2= 24.5588	2.972	
480. VOLTS	LN/LN:	4.242		Z0= 72.6098		
	LN/LN/GND:	4.500	(2.128	GND RETURN KA)		
P-53-07 DISC.	3P Duty:	3.416	0.33	Z1= 35.2114	3.416	3.416
	SLG DUTY:	2.030	0.25	Z2= 35.2114	2.030	
480. VOLTS	LN/LN:	2.958		Z0= 107.5712		
	LN/LN/GND:	3.106	(1.442	GND RETURN KA)		
P-53-07 STR	3P Duty:	3.067	0.30	Z1= 39.2122	3.067	3.067
	SLG DUTY:	1.817	0.23	Z2= 39.2122	1.817	
480. VOLTS	LN/LN:	2.656		Z0= 120.3732		
	LN/LN/GND:	2.784	(1.290	GND RETURN KA)		
P-53-20 DISC	3P Duty:	5.848	0.54	Z1= 20.5676	5.848	5.848
	SLG DUTY:	3.576	0.42	Z2= 20.5676	3.576	
480. VOLTS	LN/LN:	5.065		Z0= 60.0662		
	LN/LN/GND:	5.388	(2.569	GND RETURN KA)		

U N B A L A N C E D F A U L T R E P O R T
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
P-53-20 STR	3P Duty:	4.933	0.45	Z1= 24.3835	4.933	4.933
	SLG DUTY:	2.980	0.35	Z2= 24.3835	2.980	
480. VOLTS	LN/LN:	4.272		Z0= 72.6058		
	LN/LN/GND:	4.522	(2.130	GND RETURN KA)		
P-53-21 DISC	3P Duty:	5.312	0.50	Z1= 22.6453	5.312	5.312
	SLG DUTY:	3.243	0.39	Z2= 22.6453	3.243	
480. VOLTS	LN/LN:	4.600		Z0= 66.3213		
	LN/LN/GND:	4.892	(2.327	GND RETURN KA)		
P-53-21 STR	3P Duty:	4.540	0.43	Z1= 26.4930	4.540	4.540
	SLG DUTY:	2.742	0.33	Z2= 26.4930	2.742	
480. VOLTS	LN/LN:	3.932		Z0= 78.9271		
	LN/LN/GND:	4.163	(1.960	GND RETURN KA)		
PAB-E1 DV & BO	3P Duty:	2.196	0.32	Z1= 54.7811	2.196	2.196
	SLG DUTY:	1.333	0.19	Z2= 54.7811	1.333	
480. VOLTS	LN/LN:	1.902		Z0= 162.3295		
	LN/LN/GND:	2.031	(0.953	GND RETURN KA)		
PAB-E1 LCP	3P Duty:	3.650	0.51	Z1= 32.9508	3.650	3.650
	SLG DUTY:	2.347	0.32	Z2= 32.9508	2.347	
480. VOLTS	LN/LN:	3.161		Z0= 89.3928		
	LN/LN/GND:	3.466	(1.713	GND RETURN KA)		
PAB-E1 STR IN	3P Duty:	2.899	6.14	Z1= 4.7872	3.801	3.366
	SLG DUTY:	2.404	5.45	Z2= 4.7872	3.070	
4160. VOLTS	LN/LN:	2.511		Z0= 7.7496		
	LN/LN/GND:	2.734	(2.053	GND RETURN KA)		
PAB-E2 DV & BO	3P Duty:	1.856	0.28	Z1= 64.7990	1.856	1.856
	SLG DUTY:	1.116	0.17	Z2= 64.7990	1.116	
480. VOLTS	LN/LN:	1.608		Z0= 194.6147		
	LN/LN/GND:	1.708	(0.796	GND RETURN KA)		
PAB-E2 LCP	3P Duty:	3.036	0.43	Z1= 39.6133	3.036	3.036
	SLG DUTY:	1.905	0.27	Z2= 39.6133	1.905	
480. VOLTS	LN/LN:	2.630		Z0= 111.5252		
	LN/LN/GND:	2.850	(1.379	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
PAB-E2 STR IN	3P Duty:	2.366	5.87	Z1= 5.8662	3.071	2.731
	SLG DUTY:	2.137	5.38	Z2= 5.8662	2.722	
4160. VOLTS	LN/LN:	2.049		Z0= 7.7496		
	LN/LN/GND:	2.284	(1.949	GND RETURN KA)		
PAB-E3 DV & BO	3P Duty:	1.621	0.24	Z1= 74.2182	1.621	1.621
	SLG DUTY:	0.972	0.16	Z2= 74.2182	0.972	
480. VOLTS	LN/LN:	1.404		Z0= 223.7232		
	LN/LN/GND:	1.484	(0.692	GND RETURN KA)		
PAB-E3 LCP	3P Duty:	2.334	0.34	Z1= 51.5347	2.334	2.334
	SLG DUTY:	1.430	0.22	Z2= 51.5347	1.430	
480. VOLTS	LN/LN:	2.021		Z0= 150.3369		
	LN/LN/GND:	2.164	(1.027	GND RETURN KA)		
PAB-E3 STR IN	3P Duty:	2.899	6.14	Z1= 4.7872	3.801	3.366
	SLG DUTY:	2.404	5.45	Z2= 4.7872	3.070	
4160. VOLTS	LN/LN:	2.511		Z0= 7.7496		
	LN/LN/GND:	2.734	(2.053	GND RETURN KA)		
PAB-W1 VALVES	3P Duty:	6.648	0.31	Z1= 18.0933	6.648	6.648
	SLG DUTY:	4.002	0.21	Z2= 18.0933	4.002	
480. VOLTS	LN/LN:	5.757		Z0= 54.2164		
	LN/LN/GND:	6.106	(2.856	GND RETURN KA)		
PAB-W2 VALVES	3P Duty:	5.064	0.24	Z1= 23.7534	5.064	5.064
	SLG DUTY:	3.014	0.17	Z2= 23.7534	3.014	
480. VOLTS	LN/LN:	4.385		Z0= 72.3981		
	LN/LN/GND:	4.619	(2.143	GND RETURN KA)		
PAB-W3 VALVES	3P Duty:	4.191	0.22	Z1= 28.7005	4.191	4.191
	SLG DUTY:	2.483	0.15	Z2= 28.7005	2.483	
480. VOLTS	LN/LN:	3.629		Z0= 88.0889		
	LN/LN/GND:	3.810	(1.762	GND RETURN KA)		
PC-E1 DISC	3P Duty:	0.587	0.14	Z1= 204.9698	0.587	0.587
	SLG DUTY:	0.341	0.10	Z2= 204.9698	0.341	
480. VOLTS	LN/LN:	0.508		Z0= 647.5467		
	LN/LN/GND:	0.529	(0.241	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
PC-E2 DISC	3P Duty:	0.745	0.17	Z1= 161.3948	0.745	0.745
	SLG DUTY:	0.435	0.11	Z2= 161.3948	0.435	
480. VOLTS	LN/LN:	0.645		Z0= 506.8513		
	LN/LN/GND:	0.674	(	0.307 GND RETURN KA)		
PC-E3 DISC	3P Duty:	0.768	0.17	Z1= 156.7012	0.768	0.768
	SLG DUTY:	0.447	0.11	Z2= 156.7012	0.447	
480. VOLTS	LN/LN:	0.665		Z0= 494.0634		
	LN/LN/GND:	0.694	(	0.315 GND RETURN KA)		
PC-E4 DISC	3P Duty:	0.533	0.14	Z1= 225.7217	0.533	0.533
	SLG DUTY:	0.310	0.09	Z2= 225.7217	0.310	
480. VOLTS	LN/LN:	0.461		Z0= 711.5110		
	LN/LN/GND:	0.481	(	0.219 GND RETURN KA)		
PC-WPB-EF-2 DI	3P Duty:	3.123	0.31	Z1= 38.5109	3.123	3.123
	SLG DUTY:	1.849	0.23	Z2= 38.5109	1.849	
480. VOLTS	LN/LN:	2.705		Z0= 118.3772		
	LN/LN/GND:	2.842	(	1.312 GND RETURN KA)		
PC-WPB-P-2 DIS	3P Duty:	1.973	0.20	Z1= 60.9531	1.973	1.973
	SLG DUTY:	1.159	0.15	Z2= 60.9531	1.159	
480. VOLTS	LN/LN:	1.709		Z0= 189.6191		
	LN/LN/GND:	1.782	(	0.820 GND RETURN KA)		
PCDR W1 DISC	3P Duty:	1.308	0.18	Z1= 91.9509	1.308	1.308
	SLG DUTY:	0.765	0.14	Z2= 91.9509	0.765	
480. VOLTS	LN/LN:	1.133		Z0= 287.8680		
	LN/LN/GND:	1.178	(	0.541 GND RETURN KA)		
PCDR-W2 DISC	3P Duty:	2.130	0.24	Z1= 56.4737	2.130	2.130
	SLG DUTY:	1.254	0.18	Z2= 56.4737	1.254	
480. VOLTS	LN/LN:	1.845		Z0= 174.9998		
	LN/LN/GND:	1.926	(	0.888 GND RETURN KA)		
PDP UV 2A	3P Duty:	14.235	1.63	Z1= 8.4499	14.536	14.386
	SLG DUTY:	10.692	1.23	Z2= 8.4499	10.757	
480. VOLTS	LN/LN:	12.328		Z0= 17.1355		
	LN/LN/GND:	13.846	(	8.492 GND RETURN KA)		

U N B A L A N C E D F A U L T R E P O R T
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
PDP UV 2B	3P Duty:	14.235	1.63	Z1= 8.4499	14.536	14.386
	SLG DUTY:	10.692	1.23	Z2= 8.4499	10.757	
480. VOLTS	LN/LN:	12.328		Z0= 17.1355		
	LN/LN/GND:	13.846 (	8.492	GND RETURN KA)		
PDP-E1 DISC	3P Duty:	4.714	1.05	Z1= 25.5180	4.725	4.719
	SLG DUTY:	3.065	0.59	Z2= 25.5180	3.065	
480. VOLTS	LN/LN:	4.082		Z0= 68.5509		
	LN/LN/GND:	4.542 (	2.238	GND RETURN KA)		
PDP-W1 DISC	3P Duty:	3.357	0.40	Z1= 35.8267	3.357	3.357
	SLG DUTY:	1.982	0.27	Z2= 35.8267	1.982	
480. VOLTS	LN/LN:	2.908		Z0= 110.7689		
	LN/LN/GND:	3.066 (	1.403	GND RETURN KA)		
PEW STRAINER D	3P Duty:	1.448	0.12	Z1= 83.0849	1.448	1.448
	SLG DUTY:	0.847	0.09	Z2= 83.0849	0.847	
480. VOLTS	LN/LN:	1.254		Z0= 260.0603		
	LN/LN/GND:	1.302 (	0.598	GND RETURN KA)		
PEWP1 DISC	3P Duty:	17.207	3.63	Z1= 6.9903	20.020	18.641
	SLG DUTY:	13.627	2.46	Z2= 6.9903	14.644	
480. VOLTS	LN/LN:	14.902		Z0= 12.6417		
	LN/LN/GND:	16.752 (	11.222	GND RETURN KA)		
PEWP2 DISC	3P Duty:	16.274	3.12	Z1= 7.3912	18.322	17.313
	SLG DUTY:	12.679	2.03	Z2= 7.3912	13.243	
480. VOLTS	LN/LN:	14.093		Z0= 13.8914		
	LN/LN/GND:	15.908 (	10.310	GND RETURN KA)		
PEWP3 ATS NRM	3P Duty:	20.535	4.76	Z1= 5.8574	25.440	23.056
	SLG DUTY:	17.703	3.87	Z2= 5.8574	20.904	
480. VOLTS	LN/LN:	17.784		Z0= 8.6912		
	LN/LN/GND:	19.915 (	15.541	GND RETURN KA)		
PEWP3 DISC	3P Duty:	16.768	2.94	Z1= 7.1734	18.645	17.719
	SLG DUTY:	13.269	2.09	Z2= 7.1734	13.912	
480. VOLTS	LN/LN:	14.521		Z0= 13.0079		
	LN/LN/GND:	16.357 (	10.916	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
PMPRM HOIST DI 3P Duty:		4.065	0.45	Z1= 29.5909	4.065	4.065
	SLG DUTY:	2.496	0.29	Z2= 29.5909	2.496	
480. VOLTS	LN/LN:	3.520		Z0= 86.1041		
	LN/LN/GND:	3.780	(1.793	GND RETURN KA)		
PP-ADM-1 3P Duty:		2.634	3.45	Z1= 45.6610	3.030	2.836
	SLG DUTY:	2.846	3.44	Z2= 45.6610	3.273	
480. VOLTS	LN/LN:	2.281		Z0= 35.4506		
	LN/LN/GND:	2.753	(3.096	GND RETURN KA)		
PP-ADM-2 3P Duty:		2.125	1.68	Z1= 56.5959	2.175	2.150
	SLG DUTY:	1.940	1.20	Z2= 56.5959	1.950	
480. VOLTS	LN/LN:	1.841		Z0= 76.1920		
	LN/LN/GND:	2.248	(1.752	GND RETURN KA)		
PP-EBB-A 3P Duty:		9.414	4.25	Z1= 12.7763	11.363	10.412
	SLG DUTY:	9.801	3.35	Z2= 12.7763	11.205	
480. VOLTS	LN/LN:	8.153		Z0= 11.3995		
	LN/LN/GND:	10.109	(10.183	GND RETURN KA)		
PP-EBB-B 3P Duty:		7.720	1.48	Z1= 15.5795	7.829	7.775
	SLG DUTY:	6.483	0.88	Z2= 15.5795	6.488	
480. VOLTS	LN/LN:	6.686		Z0= 26.4502		
	LN/LN/GND:	8.141	(5.398	GND RETURN KA)		
PP-LSE 3P Duty:		12.156	2.09	Z1= 9.8952	12.742	12.450
	SLG DUTY:	10.177	1.53	Z2= 9.8952	10.341	
480. VOLTS	LN/LN:	10.527		Z0= 16.0387		
	LN/LN/GND:	12.235	(8.663	GND RETURN KA)		
PP-LSE CKT #14 3P Duty:		0.975	0.14	Z1= 123.3728	0.975	0.975
	SLG DUTY:	0.573	0.11	Z2= 123.3728	0.573	
480. VOLTS	LN/LN:	0.844		Z0= 383.5110		
	LN/LN/GND:	0.878	(0.405	GND RETURN KA)		
PP-LSE CKT #2 3P Duty:		0.975	0.14	Z1= 123.3728	0.975	0.975
	SLG DUTY:	0.573	0.11	Z2= 123.3728	0.573	
480. VOLTS	LN/LN:	0.844		Z0= 383.5110		
	LN/LN/GND:	0.878	(0.405	GND RETURN KA)		

UNBALANCED FAULT REPORT

(FOR APPLICATION OF LOW VOLTAGE BREAKERS)

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
PP-LSE CKT #26	3P Duty:	0.975	0.14	Z1= 123.3728	0.975	0.975
	SLG DUTY:	0.573	0.11	Z2= 123.3728	0.573	
480. VOLTS	LN/LN:	0.844		Z0= 383.5110		
	LN/LN/GND:	0.878	(0.405	GND RETURN KA)		
PP-LSE CKT #8	3P Duty:	0.975	0.14	Z1= 123.3728	0.975	0.975
	SLG DUTY:	0.573	0.11	Z2= 123.3728	0.573	
480. VOLTS	LN/LN:	0.844		Z0= 383.5110		
	LN/LN/GND:	0.878	(0.405	GND RETURN KA)		
PP-MTB	3P Duty:	5.327	1.84	Z1= 22.5790	5.498	5.413
	SLG DUTY:	3.691	1.50	Z2= 22.5790	3.747	
480. VOLTS	LN/LN:	4.613		Z0= 52.9220		
	LN/LN/GND:	4.999	(2.815	GND RETURN KA)		
PP-MTB DISC SW	3P Duty:	5.564	1.92	Z1= 21.6174	5.772	5.669
	SLG DUTY:	3.880	1.57	Z2= 21.6174	3.951	
480. VOLTS	LN/LN:	4.819		Z0= 50.0621		
	LN/LN/GND:	5.224	(2.970	GND RETURN KA)		
PP-UV	3P Duty:	1.619	0.17	Z1= 74.3042	1.619	1.619
	SLG DUTY:	0.950	0.13	Z2= 74.3042	0.950	
480. VOLTS	LN/LN:	1.402		Z0= 231.2696		
	LN/LN/GND:	1.459	(0.672	GND RETURN KA)		
PP-WBB-A	3P Duty:	29.334	4.33	Z1= 4.1004	35.549	32.520
	SLG DUTY:	27.051	3.30	Z2= 4.1004	30.822	
480. VOLTS	LN/LN:	25.404		Z0= 5.1806		
	LN/LN/GND:	29.593	(25.019	GND RETURN KA)		
PP-WBB-B	3P Duty:	28.409	2.47	Z1= 4.2339	30.569	29.499
	SLG DUTY:	25.018	1.70	Z2= 4.2339	25.636	
480. VOLTS	LN/LN:	24.603		Z0= 6.1578		
	LN/LN/GND:	29.357	(22.042	GND RETURN KA)		
PP-Z	3P Duty:	4.757	1.46	Z1= 25.2864	4.820	4.788
	SLG DUTY:	3.215	1.19	Z2= 25.2864	3.231	
480. VOLTS	LN/LN:	4.119		Z0= 62.1064		
	LN/LN/GND:	4.458	(2.419	GND RETURN KA)		

U N B A L A N C E D F A U L T R E P O R T
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
PSCP-E1 DISC	3P Duty:	4.029	0.80	Z1= 29.8558	4.030	4.029
	SLG DUTY:	2.538	0.47	Z2= 29.8558	2.538	
480. VOLTS	LN/LN:	3.489		Z0= 84.1501		
	LN/LN/GND:	3.830 (	1.832	GND RETURN KA)		
PSCP-E2 DISC	3P Duty:	3.895	0.82	Z1= 30.8846	3.896	3.895
	SLG DUTY:	2.505	0.48	Z2= 30.8846	2.505	
480. VOLTS	LN/LN:	3.373		Z0= 84.1501		
	LN/LN/GND:	3.726 (	1.824	GND RETURN KA)		
PSCP-W1 DISC	3P Duty:	6.762	0.63	Z1= 17.7886	6.762	6.762
	SLG DUTY:	4.193	0.49	Z2= 17.7886	4.193	
480. VOLTS	LN/LN:	5.856		Z0= 50.7911		
	LN/LN/GND:	6.262 (	3.029	GND RETURN KA)		
PSCP-W2 DISC	3P Duty:	4.389	0.44	Z1= 27.4026	4.389	4.389
	SLG DUTY:	2.642	0.33	Z2= 27.4026	2.642	
480. VOLTS	LN/LN:	3.801		Z0= 82.0944		
	LN/LN/GND:	4.025 (	1.886	GND RETURN KA)		
PSLP-E1 VFD IN	3P Duty:	4.043	0.86	Z1= 29.7483	4.046	4.045
	SLG DUTY:	2.543	0.48	Z2= 29.7483	2.543	
480. VOLTS	LN/LN:	3.502		Z0= 84.1501		
	LN/LN/GND:	3.850 (	1.834	GND RETURN KA)		
PSLP-E2 VFD IN	3P Duty:	3.651	0.83	Z1= 32.9470	3.653	3.652
	SLG DUTY:	2.314	0.46	Z2= 32.9470	2.314	
480. VOLTS	LN/LN:	3.162		Z0= 92.0232		
	LN/LN/GND:	3.481 (	1.674	GND RETURN KA)		
PSLP-E3 VFD IN	3P Duty:	3.518	0.75	Z1= 34.1865	3.519	3.519
	SLG DUTY:	2.166	0.42	Z2= 34.1865	2.166	
480. VOLTS	LN/LN:	3.047		Z0= 99.9298		
	LN/LN/GND:	3.322 (	1.550	GND RETURN KA)		
PSLP-W1 VFD IN	3P Duty:	6.915	0.71	Z1= 17.3954	6.916	6.915
	SLG DUTY:	4.331	0.55	Z2= 17.3954	4.331	
480. VOLTS	LN/LN:	5.988		Z0= 48.8504		
	LN/LN/GND:	6.418 (	3.142	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
PSLP-W2 INPUT	3P Duty:	8.165	0.90	Z1= 14.7307	8.173	8.169
	SLG DUTY:	5.298	0.70	Z2= 14.7307	5.298	
480. VOLTS	LN/LN:	7.071		Z0= 39.0256		
	LN/LN/GND:	7.661	(3.901	GND RETURN KA)		
PSLPG-W1 VFD I	3P Duty:	2.544	0.23	Z1= 47.2798	2.544	2.544
	SLG DUTY:	1.499	0.18	Z2= 47.2798	1.499	
480. VOLTS	LN/LN:	2.203		Z0= 146.3121		
	LN/LN/GND:	2.300	(1.062	GND RETURN KA)		
PSLPG-W2 INPUT	3P Duty:	4.602	0.41	Z1= 26.1386	4.602	4.602
	SLG DUTY:	2.775	0.31	Z2= 26.1386	2.775	
480. VOLTS	LN/LN:	3.985		Z0= 78.0230		
	LN/LN/GND:	4.216	(1.983	GND RETURN KA)		
PSLPM-E1 LCP	3P Duty:	3.890	0.81	Z1= 30.9243	3.891	3.890
	SLG DUTY:	2.503	0.48	Z2= 30.9243	2.503	
480. VOLTS	LN/LN:	3.368		Z0= 84.1501		
	LN/LN/GND:	3.720	(1.824	GND RETURN KA)		
PSLPM-E2 LCP	3P Duty:	3.630	0.74	Z1= 33.1354	3.631	3.630
	SLG DUTY:	2.306	0.44	Z2= 33.1354	2.306	
480. VOLTS	LN/LN:	3.144		Z0= 92.0232		
	LN/LN/GND:	3.453	(1.671	GND RETURN KA)		
RASP-E1 VFD IN	3P Duty:	2.035	0.43	Z1= 59.1030	2.035	2.035
	SLG DUTY:	1.209	0.21	Z2= 59.1030	1.209	
480. VOLTS	LN/LN:	1.762		Z0= 181.9108		
	LN/LN/GND:	1.888	(0.856	GND RETURN KA)		
RASP-E2 VFD IN	3P Duty:	2.021	0.45	Z1= 59.5206	2.021	2.021
	SLG DUTY:	1.207	0.22	Z2= 59.5206	1.207	
480. VOLTS	LN/LN:	1.750		Z0= 181.9108		
	LN/LN/GND:	1.881	(0.855	GND RETURN KA)		
RASP-E3 VFD IN	3P Duty:	2.035	0.43	Z1= 59.1169	2.035	2.035
	SLG DUTY:	1.209	0.21	Z2= 59.1169	1.209	
480. VOLTS	LN/LN:	1.762		Z0= 181.9108		
	LN/LN/GND:	1.888	(0.856	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
RASP-E4 VFD IN 3P Duty:		2.020	0.46	Z1= 59.5347	2.020	2.020
	SLG DUTY:	1.206	0.22	Z2= 59.5347	1.206	
480. VOLTS	LN/LN:	1.750		Z0= 181.9108		
	LN/LN/GND:	1.881	(0.855	GND RETURN KA)		
RASP-E5 VFD IN 3P Duty:		2.034	0.44	Z1= 59.1452	2.034	2.034
	SLG DUTY:	1.209	0.21	Z2= 59.1452	1.209	
480. VOLTS	LN/LN:	1.761		Z0= 181.9108		
	LN/LN/GND:	1.887	(0.855	GND RETURN KA)		
RASP-E6 VFD IN 3P Duty:		2.020	0.47	Z1= 59.5561	2.020	2.020
	SLG DUTY:	1.206	0.22	Z2= 59.5561	1.206	
480. VOLTS	LN/LN:	1.749		Z0= 181.9108		
	LN/LN/GND:	1.880	(0.855	GND RETURN KA)		
RASP-E7 VFD IN 3P Duty:		2.034	0.44	Z1= 59.1381	2.034	2.034
	SLG DUTY:	1.209	0.21	Z2= 59.1381	1.209	
480. VOLTS	LN/LN:	1.761		Z0= 181.9108		
	LN/LN/GND:	1.888	(0.856	GND RETURN KA)		
RASP-E8 VFD IN 3P Duty:		2.020	0.46	Z1= 59.5418	2.020	2.020
	SLG DUTY:	1.206	0.22	Z2= 59.5418	1.206	
480. VOLTS	LN/LN:	1.749		Z0= 181.9108		
	LN/LN/GND:	1.880	(0.855	GND RETURN KA)		
RASP-W1 VFD IN 3P Duty:		14.004	0.52	Z1= 8.5890	14.004	14.004
	SLG DUTY:	8.887	0.34	Z2= 8.5890	8.887	
480. VOLTS	LN/LN:	12.128		Z0= 23.7411		
	LN/LN/GND:	13.196	(6.462	GND RETURN KA)		
RASP-W2 VFD IN 3P Duty:		13.700	0.55	Z1= 8.7795	13.700	13.700
	SLG DUTY:	8.796	0.36	Z2= 8.7795	8.796	
480. VOLTS	LN/LN:	11.865		Z0= 23.8451		
	LN/LN/GND:	12.987	(6.422	GND RETURN KA)		
RASP-W3 VFD IN 3P Duty:		14.004	0.52	Z1= 8.5890	14.004	14.004
	SLG DUTY:	8.887	0.34	Z2= 8.5890	8.887	
480. VOLTS	LN/LN:	12.128		Z0= 23.7411		
	LN/LN/GND:	13.196	(6.462	GND RETURN KA)		

U N B A L A N C E D F A U L T R E P O R T
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
RASP-W4 VFD IN 3P Duty:		13.700	0.55	Z1= 8.7795	13.700	13.700
	SLG DUTY:	8.796	0.36	Z2= 8.7795	8.796	
480. VOLTS	LN/LN:	11.865		Z0= 23.8451		
	LN/LN/GND:	12.987 (	6.422	GND RETURN KA)		
RBDP-2 DISC 3P Duty:		10.279	1.85	Z1= 11.7013	10.619	10.450
	SLG DUTY:	7.948	1.23	Z2= 11.7013	7.996	
480. VOLTS	LN/LN:	8.902		Z0= 22.5860		
	LN/LN/GND:	10.192 (	6.398	GND RETURN KA)		
RBDP-4 DISC 3P Duty:		10.279	1.85	Z1= 11.7013	10.619	10.450
	SLG DUTY:	7.948	1.23	Z2= 11.7013	7.996	
480. VOLTS	LN/LN:	8.902		Z0= 22.5860		
	LN/LN/GND:	10.192 (	6.398	GND RETURN KA)		
RBDP1 DISC 3P Duty:		8.793	1.43	Z1= 13.6798	8.901	8.847
	SLG DUTY:	6.410	0.89	Z2= 13.6798	6.416	
480. VOLTS	LN/LN:	7.615		Z0= 29.8680		
	LN/LN/GND:	8.669 (	4.964	GND RETURN KA)		
RBDP3 DISC 3P Duty:		8.793	1.43	Z1= 13.6798	8.901	8.847
	SLG DUTY:	6.410	0.89	Z2= 13.6798	6.416	
480. VOLTS	LN/LN:	7.615		Z0= 29.8680		
	LN/LN/GND:	8.669 (	4.964	GND RETURN KA)		
RECIRCV PAB-E1 3P Duty:		2.296	0.32	Z1= 52.3891	2.296	2.296
	SLG DUTY:	1.399	0.20	Z2= 52.3891	1.399	
480. VOLTS	LN/LN:	1.988		Z0= 154.2614		
	LN/LN/GND:	2.126 (	1.002	GND RETURN KA)		
RECIRCV PAB-E2 3P Duty:		1.927	0.27	Z1= 62.4295	1.927	1.927
	SLG DUTY:	1.162	0.17	Z2= 62.4295	1.162	
480. VOLTS	LN/LN:	1.669		Z0= 186.5419		
	LN/LN/GND:	1.773 (	0.830	GND RETURN KA)		
RECIRCV PAB-E3 3P Duty:		1.501	0.23	Z1= 80.1402	1.501	1.501
	SLG DUTY:	0.896	0.15	Z2= 80.1402	0.896	
480. VOLTS	LN/LN:	1.300		Z0= 243.0663		
	LN/LN/GND:	1.372 (	0.638	GND RETURN KA)		

U N B A L A N C E D F A U L T R E P O R T

(FOR APPLICATION OF LOW VOLTAGE BREAKERS)

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
RETBSNRFCV STA 3P Duty:		2.745	0.25	Z1= 43.8215	2.745	2.745
SLG DUTY:		1.643	0.17	Z2= 43.8215	1.643	
480. VOLTS LN/LN:		2.377		Z0= 132.3336		
LN/LN/GND:		2.508	(1.171	GND RETURN KA)		
RF # 5 DISC 3P Duty:		2.733	0.27	Z1= 44.0081	2.733	2.733
SLG DUTY:		1.638	0.18	Z2= 44.0081	1.638	
480. VOLTS LN/LN:		2.367		Z0= 132.7866		
LN/LN/GND:		2.502	(1.167	GND RETURN KA)		
RF # 6 DISC 3P Duty:		2.733	0.27	Z1= 44.0174	2.733	2.733
SLG DUTY:		1.638	0.18	Z2= 44.0174	1.638	
480. VOLTS LN/LN:		2.366		Z0= 132.7866		
LN/LN/GND:		2.501	(1.167	GND RETURN KA)		
RF-1 DISC 3P Duty:		3.430	0.63	Z1= 35.0718	3.430	3.430
SLG DUTY:		2.154	0.39	Z2= 35.0718	2.154	
480. VOLTS LN/LN:		2.970		Z0= 99.0300		
LN/LN/GND:		3.244	(1.556	GND RETURN KA)		
RIVER VALVE DI 3P Duty:		1.448	0.12	Z1= 83.0849	1.448	1.448
SLG DUTY:		0.847	0.09	Z2= 83.0849	0.847	
480. VOLTS LN/LN:		1.254		Z0= 260.0603		
LN/LN/GND:		1.302	(0.598	GND RETURN KA)		
RLS-ACCU-1 3P Duty:		2.755	0.23	Z1= 43.6658	2.755	2.755
SLG DUTY:		1.646	0.16	Z2= 43.6658	1.646	
480. VOLTS LN/LN:		2.386		Z0= 132.2139		
LN/LN/GND:		2.511	(1.172	GND RETURN KA)		
RLS-ACCU-1 DIS 3P Duty:		3.369	0.28	Z1= 35.6986	3.369	3.369
SLG DUTY:		2.031	0.19	Z2= 35.6986	2.031	
480. VOLTS LN/LN:		2.918		Z0= 106.7070		
LN/LN/GND:		3.088	(1.450	GND RETURN KA)		
RLS-ACU-1 3P Duty:		6.999	0.60	Z1= 17.1851	6.999	6.999
SLG DUTY:		4.554	0.41	Z2= 17.1851	4.554	
480. VOLTS LN/LN:		6.061		Z0= 45.5407		
LN/LN/GND:		6.631	(3.348	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
RLS-EF-1 DISC	3P Duty:	2.697	0.27	Z1= 44.6011	2.697	2.697
	SLG DUTY:	1.607	0.19	Z2= 44.6011	1.607	
480. VOLTS	LN/LN:	2.336		Z0= 135.6610		
	LN/LN/GND:	2.461	(1.143	GND RETURN KA)		
RLS-EF-2 DISC	3P Duty:	4.794	0.46	Z1= 25.0910	4.794	4.794
	SLG DUTY:	2.960	0.32	Z2= 25.0910	2.960	
480. VOLTS	LN/LN:	4.152		Z0= 72.2717		
	LN/LN/GND:	4.455	(2.132	GND RETURN KA)		
RLS-PPU-1	3P Duty:	7.378	0.79	Z1= 16.3025	7.381	7.379
	SLG DUTY:	4.897	0.56	Z2= 16.3025	4.897	
480. VOLTS	LN/LN:	6.390		Z0= 41.7933		
	LN/LN/GND:	7.035	(3.632	GND RETURN KA)		
RLS-SF-1 DISC	3P Duty:	1.755	0.20	Z1= 68.5305	1.755	1.755
	SLG DUTY:	1.034	0.14	Z2= 68.5305	1.034	
480. VOLTS	LN/LN:	1.520		Z0= 212.2076		
	LN/LN/GND:	1.590	(0.732	GND RETURN KA)		
ROOF FAN 10 DI	3P Duty:	2.856	0.20	Z1= 42.1200	2.856	2.856
	SLG DUTY:	1.684	0.14	Z2= 42.1200	1.684	
480. VOLTS	LN/LN:	2.473		Z0= 130.3196		
	LN/LN/GND:	2.590	(1.192	GND RETURN KA)		
ROOF FAN 11 DI	3P Duty:	2.825	0.21	Z1= 42.5798	2.825	2.825
	SLG DUTY:	1.662	0.14	Z2= 42.5798	1.662	
480. VOLTS	LN/LN:	2.446		Z0= 132.1992		
	LN/LN/GND:	2.562	(1.176	GND RETURN KA)		
ROOF FAN 12 DI	3P Duty:	2.856	0.20	Z1= 42.1200	2.856	2.856
	SLG DUTY:	1.684	0.14	Z2= 42.1200	1.684	
480. VOLTS	LN/LN:	2.473		Z0= 130.3196		
	LN/LN/GND:	2.590	(1.192	GND RETURN KA)		
RS-SAP-1 DISC	3P Duty:	2.010	0.22	Z1= 59.8280	2.010	2.010
	SLG DUTY:	1.177	0.16	Z2= 59.8280	1.177	
480. VOLTS	LN/LN:	1.741		Z0= 187.0665		
	LN/LN/GND:	1.818	(0.832	GND RETURN KA)		

U N B A L A N C E D F A U L T R E P O R T
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
S-1-1 DISC	3P Duty:	1.639	0.21	Z1= 73.3956	1.639	1.639
	SLG DUTY:	0.966	0.15	Z2= 73.3956	0.966	
480. VOLTS	LN/LN:	1.419		Z0= 227.2032		
	LN/LN/GND:	1.485	(0.684	GND RETURN KA)		
S-21-1 DISC	3P Duty:	2.235	0.46	Z1= 53.8097	2.235	2.235
	SLG DUTY:	1.344	0.28	Z2= 53.8097	1.344	
480. VOLTS	LN/LN:	1.936		Z0= 162.1998		
	LN/LN/GND:	2.075	(0.957	GND RETURN KA)		
S-21-1 STARTER	3P Duty:	1.966	0.41	Z1= 61.1688	1.966	1.966
	SLG DUTY:	1.174	0.25	Z2= 61.1688	1.174	
480. VOLTS	LN/LN:	1.703		Z0= 186.2894		
	LN/LN/GND:	1.816	(0.834	GND RETURN KA)		
S-21-2 DISC	3P Duty:	2.215	0.46	Z1= 54.2975	2.215	2.215
	SLG DUTY:	1.331	0.28	Z2= 54.2975	1.331	
480. VOLTS	LN/LN:	1.918		Z0= 163.8043		
	LN/LN/GND:	2.055	(0.947	GND RETURN KA)		
S-21-2 STARTER	3P Duty:	1.741	0.36	Z1= 69.0957	1.741	1.741
	SLG DUTY:	1.034	0.22	Z2= 69.0957	1.034	
480. VOLTS	LN/LN:	1.508		Z0= 212.0252		
	LN/LN/GND:	1.602	(0.733	GND RETURN KA)		
S-21-3 DISC	3P Duty:	1.822	0.40	Z1= 66.0200	1.822	1.822
	SLG DUTY:	1.083	0.24	Z2= 66.0200	1.083	
480. VOLTS	LN/LN:	1.578		Z0= 202.3703		
	LN/LN/GND:	1.680	(0.768	GND RETURN KA)		
S-21-3 STARTER	3P Duty:	1.486	0.33	Z1= 80.9680	1.486	1.486
	SLG DUTY:	0.877	0.20	Z2= 80.9680	0.877	
480. VOLTS	LN/LN:	1.287		Z0= 250.6792		
	LN/LN/GND:	1.362	(0.621	GND RETURN KA)		
S-21-4 DISC	3P Duty:	1.808	0.40	Z1= 66.5153	1.808	1.808
	SLG DUTY:	1.075	0.24	Z2= 66.5153	1.075	
480. VOLTS	LN/LN:	1.566		Z0= 203.9792		
	LN/LN/GND:	1.668	(0.762	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
S-21-4 STARTER	3P Duty:	1.626	0.36	Z1= 73.9715	1.626	1.626
	SLG DUTY:	0.963	0.22	Z2= 73.9715	0.963	
480. VOLTS	LN/LN:	1.408		Z0= 228.1250		
	LN/LN/GND:	1.495	(0.682	GND RETURN KA)		
S-54-2 DISC	3P Duty:	2.385	0.25	Z1= 50.4273	2.385	2.385
	SLG DUTY:	1.408	0.20	Z2= 50.4273	1.408	
480. VOLTS	LN/LN:	2.066		Z0= 155.6934		
	LN/LN/GND:	2.160	(0.998	GND RETURN KA)		
S-54-2 STR	3P Duty:	2.293	0.25	Z1= 52.4499	2.293	2.293
	SLG DUTY:	1.352	0.19	Z2= 52.4499	1.352	
480. VOLTS	LN/LN:	1.986		Z0= 162.1264		
	LN/LN/GND:	2.076	(0.958	GND RETURN KA)		
SC-1 DISC	3P Duty:	4.258	0.35	Z1= 28.2451	4.258	4.258
	SLG DUTY:	2.612	0.23	Z2= 28.2451	2.612	
480. VOLTS	LN/LN:	3.688		Z0= 82.2007		
	LN/LN/GND:	3.940	(1.877	GND RETURN KA)		
SC-2 DISC	3P Duty:	4.348	0.35	Z1= 27.6605	4.348	4.348
	SLG DUTY:	2.662	0.22	Z2= 27.6605	2.662	
480. VOLTS	LN/LN:	3.766		Z0= 80.7714		
	LN/LN/GND:	4.027	(1.911	GND RETURN KA)		
SC-3 DISC	3P Duty:	4.348	0.35	Z1= 27.6605	4.348	4.348
	SLG DUTY:	2.662	0.22	Z2= 27.6605	2.662	
480. VOLTS	LN/LN:	3.766		Z0= 80.7714		
	LN/LN/GND:	4.027	(1.911	GND RETURN KA)		
SC-E1 DISC	3P Duty:	0.562	0.11	Z1= 213.9453	0.562	0.562
	SLG DUTY:	0.329	0.07	Z2= 213.9453	0.329	
480. VOLTS	LN/LN:	0.487		Z0= 669.0408		
	LN/LN/GND:	0.506	(0.233	GND RETURN KA)		
SC-E2 DISC	3P Duty:	0.561	0.11	Z1= 214.2603	0.561	0.561
	SLG DUTY:	0.329	0.07	Z2= 214.2603	0.329	
480. VOLTS	LN/LN:	0.486		Z0= 669.0408		
	LN/LN/GND:	0.506	(0.233	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
SC-E3 DISC	3P Duty:	0.324	0.09	Z1= 371.5661	0.324	0.324
	SLG DUTY:	0.189	0.06	Z2= 371.5661	0.189	
480. VOLTS	LN/LN:	0.280		Z0=1168.1665		
	LN/LN/GND:	0.291	(0.133	GND RETURN KA)		
SC-E4 DISC	3P Duty:	0.323	0.09	Z1= 371.8540	0.323	0.323
	SLG DUTY:	0.189	0.06	Z2= 371.8540	0.189	
480. VOLTS	LN/LN:	0.280		Z0=1168.1665		
	LN/LN/GND:	0.291	(0.133	GND RETURN KA)		
SCDR-W1 DISC	3P Duty:	0.610	0.07	Z1= 197.1443	0.610	0.610
	SLG DUTY:	0.356	0.05	Z2= 197.1443	0.356	
480. VOLTS	LN/LN:	0.528		Z0= 620.5773		
	LN/LN/GND:	0.546	(0.251	GND RETURN KA)		
SCDR-W2 DISC	3P Duty:	0.610	0.07	Z1= 197.2191	0.610	0.610
	SLG DUTY:	0.356	0.05	Z2= 197.2191	0.356	
480. VOLTS	LN/LN:	0.528		Z0= 620.6637		
	LN/LN/GND:	0.546	(0.251	GND RETURN KA)		
SCP-6	3P Duty:	12.794	5.09	Z1= 9.4017	16.092	14.492
	SLG DUTY:	11.627	4.02	Z2= 9.4017	13.848	
480. VOLTS	LN/LN:	11.080		Z0= 12.2704		
	LN/LN/GND:	12.646	(10.643	GND RETURN KA)		
SCP-8	3P Duty:	13.475	5.18	Z1= 8.9265	17.019	15.301
	SLG DUTY:	12.109	4.25	Z2= 8.9265	14.615	
480. VOLTS	LN/LN:	11.669		Z0= 11.9646		
	LN/LN/GND:	13.159	(10.988	GND RETURN KA)		
SCREW CONV 3 S	3P Duty:	4.356	0.36	Z1= 27.6113	4.356	4.356
	SLG DUTY:	2.665	0.23	Z2= 27.6113	2.665	
480. VOLTS	LN/LN:	3.773		Z0= 80.7714		
	LN/LN/GND:	4.037	(1.912	GND RETURN KA)		
SCRNCNV DISC	3P Duty:	4.346	0.34	Z1= 27.6768	4.346	4.346
	SLG DUTY:	2.661	0.22	Z2= 27.6768	2.661	
480. VOLTS	LN/LN:	3.764		Z0= 80.7714		
	LN/LN/GND:	4.023	(1.911	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
SCTY GATE STAR 3P	Duty:	4.774	0.68	Z1= 25.1969	4.774	4.774
	SLG DUTY:	3.068	0.50	Z2= 25.1969	3.068	
480. VOLTS	LN/LN:	4.134		Z0= 67.9289		
	LN/LN/GND:	4.481	(2.248	GND RETURN KA)		
SE ISO VALVE D 3P	Duty:	1.448	0.12	Z1= 83.0849	1.448	1.448
	SLG DUTY:	0.847	0.09	Z2= 83.0849	0.847	
480. VOLTS	LN/LN:	1.254		Z0= 260.0603		
	LN/LN/GND:	1.302	(0.598	GND RETURN KA)		
SECURITY GATE 3P	Duty:	5.757	0.88	Z1= 20.8943	5.761	5.759
	SLG DUTY:	3.845	0.65	Z2= 20.8943	3.845	
480. VOLTS	LN/LN:	4.985		Z0= 52.7855		
	LN/LN/GND:	5.464	(2.865	GND RETURN KA)		
SEG1 DISC 3P	Duty:	1.452	0.13	Z1= 82.8372	1.452	1.452
	SLG DUTY:	0.850	0.09	Z2= 82.8372	0.850	
480. VOLTS	LN/LN:	1.257		Z0= 259.1062		
	LN/LN/GND:	1.307	(0.600	GND RETURN KA)		
SEP1 VFD IN 3P	Duty:	17.175	3.79	Z1= 7.0033	20.188	18.713
	SLG DUTY:	13.898	2.75	Z2= 7.0033	15.246	
480. VOLTS	LN/LN:	14.874		Z0= 12.0479		
	LN/LN/GND:	16.657	(11.632	GND RETURN KA)		
SEP2 VFD IN 3P	Duty:	17.926	4.00	Z1= 6.7097	21.327	19.665
	SLG DUTY:	14.661	3.05	Z2= 6.7097	16.425	
480. VOLTS	LN/LN:	15.525		Z0= 11.2525		
	LN/LN/GND:	17.321	(12.373	GND RETURN KA)		
SEP3 VFD IN 3P	Duty:	17.044	3.43	Z1= 7.0570	19.587	18.338
	SLG DUTY:	13.555	2.41	Z2= 7.0570	14.519	
480. VOLTS	LN/LN:	14.761		Z0= 12.6417		
	LN/LN/GND:	16.590	(11.197	GND RETURN KA)		
SEP4 VFD IN 3P	Duty:	16.144	2.69	Z1= 7.4504	17.632	16.897
	SLG DUTY:	12.747	1.86	Z2= 7.4504	13.173	
480. VOLTS	LN/LN:	13.981		Z0= 13.6131		
	LN/LN/GND:	15.822	(10.457	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
SEP5 VFD IN	3P Duty:	17.175	3.79	Z1= 7.0033	20.188	18.713
	SLG DUTY:	13.898	2.75	Z2= 7.0033	15.246	
480. VOLTS	LN/LN:	14.874		Z0= 12.0479		
	LN/LN/GND:	16.657	(11.632	GND RETURN KA)		
SEP6 VFD IN	3P Duty:	17.926	4.00	Z1= 6.7097	21.327	19.665
	SLG DUTY:	14.661	3.05	Z2= 6.7097	16.425	
480. VOLTS	LN/LN:	15.525		Z0= 11.2525		
	LN/LN/GND:	17.321	(12.373	GND RETURN KA)		
SEPPMP DISC TE	3P Duty:	7.987	0.77	Z1= 15.0600	7.989	7.988
	SLG DUTY:	5.356	0.48	Z2= 15.0600	5.356	
480. VOLTS	LN/LN:	6.917		Z0= 38.1246		
	LN/LN/GND:	7.689	(3.980	GND RETURN KA)		
SF1 DISC	3P Duty:	1.430	0.13	Z1= 84.1417	1.430	1.430
	SLG DUTY:	0.836	0.09	Z2= 84.1417	0.836	
480. VOLTS	LN/LN:	1.238		Z0= 263.3125		
	LN/LN/GND:	1.287	(0.591	GND RETURN KA)		
SF1FF DISC	3P Duty:	4.007	0.53	Z1= 30.0185	4.007	4.007
	SLG DUTY:	2.446	0.30	Z2= 30.0185	2.446	
480. VOLTS	LN/LN:	3.470		Z0= 88.3682		
	LN/LN/GND:	3.735	(1.751	GND RETURN KA)		
SF2EE DISC	3P Duty:	1.538	0.35	Z1= 78.2210	1.538	1.538
	SLG DUTY:	0.894	0.17	Z2= 78.2210	0.894	
480. VOLTS	LN/LN:	1.332		Z0= 248.5509		
	LN/LN/GND:	1.412	(0.628	GND RETURN KA)		
SF3FF DISC	3P Duty:	3.992	0.50	Z1= 30.1307	3.992	3.992
	SLG DUTY:	2.441	0.30	Z2= 30.1307	2.441	
480. VOLTS	LN/LN:	3.457		Z0= 88.3682		
	LN/LN/GND:	3.717	(1.749	GND RETURN KA)		
SF4EE DISC	3P Duty:	4.041	0.48	Z1= 29.7638	4.041	4.041
	SLG DUTY:	2.468	0.29	Z2= 29.7638	2.468	
480. VOLTS	LN/LN:	3.500		Z0= 87.4235		
	LN/LN/GND:	3.754	(1.768	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
SLC 4 DISC	3P Duty:	3.507	0.46	Z1= 34.2953	3.507	3.507
	SLG DUTY:	2.039	0.23	Z2= 34.2953	2.039	
480. VOLTS	LN/LN:	3.037		Z0= 109.0107		
	LN/LN/GND:	3.220	(1.432	GND RETURN KA)		
SLC 5 DISC	3P Duty:	3.310	0.46	Z1= 36.3415	3.310	3.310
	SLG DUTY:	1.919	0.23	Z2= 36.3415	1.919	
480. VOLTS	LN/LN:	2.866		Z0= 116.0153		
	LN/LN/GND:	3.039	(1.347	GND RETURN KA)		
SLC 6 DISC	3P Duty:	2.393	0.28	Z1= 50.2543	2.393	2.393
	SLG DUTY:	1.391	0.16	Z2= 50.2543	1.391	
480. VOLTS	LN/LN:	2.073		Z0= 159.2818		
	LN/LN/GND:	2.179	(0.979	GND RETURN KA)		
SLC 7 DISC	3P Duty:	2.243	0.28	Z1= 53.6143	2.243	2.243
	SLG DUTY:	1.302	0.15	Z2= 53.6143	1.302	
480. VOLTS	LN/LN:	1.943		Z0= 170.3971		
	LN/LN/GND:	2.043	(0.916	GND RETURN KA)		
SLC-1 DISC	3P Duty:	2.746	0.26	Z1= 43.8065	2.746	2.746
	SLG DUTY:	1.644	0.18	Z2= 43.8065	1.644	
480. VOLTS	LN/LN:	2.378		Z0= 132.3336		
	LN/LN/GND:	2.509	(1.171	GND RETURN KA)		
SLC-3 DISC	3P Duty:	2.746	0.26	Z1= 43.8065	2.746	2.746
	SLG DUTY:	1.644	0.18	Z2= 43.8065	1.644	
480. VOLTS	LN/LN:	2.378		Z0= 132.3336		
	LN/LN/GND:	2.509	(1.171	GND RETURN KA)		
SLC2 DISC	3P Duty:	2.733	0.27	Z1= 44.0081	2.733	2.733
	SLG DUTY:	1.638	0.18	Z2= 44.0081	1.638	
480. VOLTS	LN/LN:	2.367		Z0= 132.7866		
	LN/LN/GND:	2.502	(1.167	GND RETURN KA)		
SLDG F-50-1	3P Duty:	0.857	0.13	Z1= 140.2822	0.857	0.857
	SLG DUTY:	0.503	0.10	Z2= 140.2822	0.503	
480. VOLTS	LN/LN:	0.743		Z0= 436.8404		
	LN/LN/GND:	0.771	(0.356	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
SLDG F-50-2	3P Duty:	0.857	0.13	Z1= 140.2822	0.857	0.857
	SLG DUTY:	0.503	0.10	Z2= 140.2822	0.503	
480. VOLTS	LN/LN:	0.743		Z0= 436.8404		
	LN/LN/GND:	0.771	(	0.356 GND RETURN KA)		
SLDG F-50-3	3P Duty:	0.748	0.13	Z1= 160.7886	0.748	0.748
	SLG DUTY:	0.439	0.10	Z2= 160.7886	0.439	
480. VOLTS	LN/LN:	0.648		Z0= 501.4876		
	LN/LN/GND:	0.672	(	0.310 GND RETURN KA)		
SLDG F-50-4	3P Duty:	0.748	0.13	Z1= 160.7886	0.748	0.748
	SLG DUTY:	0.439	0.10	Z2= 160.7886	0.439	
480. VOLTS	LN/LN:	0.648		Z0= 501.4876		
	LN/LN/GND:	0.672	(	0.310 GND RETURN KA)		
SLDG F-60-1	3P Duty:	0.897	0.14	Z1= 134.1323	0.897	0.897
	SLG DUTY:	0.526	0.10	Z2= 134.1323	0.526	
480. VOLTS	LN/LN:	0.777		Z0= 417.4473		
	LN/LN/GND:	0.807	(	0.372 GND RETURN KA)		
SLDG F-60-2	3P Duty:	0.897	0.14	Z1= 134.1323	0.897	0.897
	SLG DUTY:	0.526	0.10	Z2= 134.1323	0.526	
480. VOLTS	LN/LN:	0.777		Z0= 417.4473		
	LN/LN/GND:	0.807	(	0.372 GND RETURN KA)		
SLDG F-60-3	3P Duty:	0.897	0.14	Z1= 134.1323	0.897	0.897
	SLG DUTY:	0.526	0.10	Z2= 134.1323	0.526	
480. VOLTS	LN/LN:	0.777		Z0= 417.4473		
	LN/LN/GND:	0.807	(	0.372 GND RETURN KA)		
SLDG F-60-4	3P Duty:	0.736	0.13	Z1= 163.3524	0.736	0.736
	SLG DUTY:	0.432	0.10	Z2= 163.3524	0.432	
480. VOLTS	LN/LN:	0.638		Z0= 509.5689		
	LN/LN/GND:	0.662	(	0.305 GND RETURN KA)		
SLDG S-50-1	3P Duty:	0.780	0.13	Z1= 154.1230	0.780	0.780
	SLG DUTY:	0.458	0.10	Z2= 154.1230	0.458	
480. VOLTS	LN/LN:	0.676		Z0= 480.4767		
	LN/LN/GND:	0.701	(	0.324 GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
SLDG S-50-2	3P Duty:	0.857	0.13	Z1= 140.2822	0.857	0.857
	SLG DUTY:	0.503	0.10	Z2= 140.2822	0.503	
480. VOLTS	LN/LN:	0.743		Z0= 436.8404		
	LN/LN/GND:	0.771	(	0.356 GND RETURN KA)		
SLDG S-50-3	3P Duty:	0.857	0.13	Z1= 140.2822	0.857	0.857
	SLG DUTY:	0.503	0.10	Z2= 140.2822	0.503	
480. VOLTS	LN/LN:	0.743		Z0= 436.8404		
	LN/LN/GND:	0.771	(	0.356 GND RETURN KA)		
SLDG S-50-4	3P Duty:	0.857	0.13	Z1= 140.2822	0.857	0.857
	SLG DUTY:	0.503	0.10	Z2= 140.2822	0.503	
480. VOLTS	LN/LN:	0.743		Z0= 436.8404		
	LN/LN/GND:	0.771	(	0.356 GND RETURN KA)		
SLDG S-50-5	3P Duty:	0.857	0.13	Z1= 140.2822	0.857	0.857
	SLG DUTY:	0.503	0.10	Z2= 140.2822	0.503	
480. VOLTS	LN/LN:	0.743		Z0= 436.8404		
	LN/LN/GND:	0.771	(	0.356 GND RETURN KA)		
SLDG S-60-1	3P Duty:	0.836	0.13	Z1= 143.8701	0.836	0.836
	SLG DUTY:	0.490	0.10	Z2= 143.8701	0.490	
480. VOLTS	LN/LN:	0.724		Z0= 448.1533		
	LN/LN/GND:	0.752	(	0.347 GND RETURN KA)		
SLDG S-60-2	3P Duty:	0.836	0.13	Z1= 143.8701	0.836	0.836
	SLG DUTY:	0.490	0.10	Z2= 143.8701	0.490	
480. VOLTS	LN/LN:	0.724		Z0= 448.1533		
	LN/LN/GND:	0.752	(	0.347 GND RETURN KA)		
SLG-3 DISC	3P Duty:	4.258	0.35	Z1= 28.2484	4.258	4.258
	SLG DUTY:	2.611	0.23	Z2= 28.2484	2.611	
480. VOLTS	LN/LN:	3.688		Z0= 82.2007		
	LN/LN/GND:	3.939	(	1.877 GND RETURN KA)		
SLG-4 DISC	3P Duty:	4.258	0.35	Z1= 28.2484	4.258	4.258
	SLG DUTY:	2.611	0.23	Z2= 28.2484	2.611	
480. VOLTS	LN/LN:	3.688		Z0= 82.2007		
	LN/LN/GND:	3.939	(	1.877 GND RETURN KA)		

U N B A L A N C E D F A U L T R E P O R T
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
SLGT-5 DISC	3P Duty:	4.348	0.35	Z1= 27.6638	4.348	4.348
	SLG DUTY:	2.662	0.22	Z2= 27.6638	2.662	
480. VOLTS	LN/LN:	3.765		Z0= 80.7714		
	LN/LN/GND:	4.026	(1.911	GND RETURN KA)		
SLGT1 DISC	3P Duty:	6.985	0.71	Z1= 17.2197	6.986	6.986
	SLG DUTY:	4.640	0.47	Z2= 17.2197	4.640	
480. VOLTS	LN/LN:	6.049		Z0= 44.2167		
	LN/LN/GND:	6.692	(3.437	GND RETURN KA)		
SLGT2 DISC	3P Duty:	2.736	0.27	Z1= 43.9690	2.736	2.736
	SLG DUTY:	1.638	0.18	Z2= 43.9690	1.638	
480. VOLTS	LN/LN:	2.369		Z0= 132.7866		
	LN/LN/GND:	2.505	(1.167	GND RETURN KA)		
SLP1 DISC	3P Duty:	2.756	0.28	Z1= 43.6513	2.756	2.756
	SLG DUTY:	1.647	0.18	Z2= 43.6513	1.647	
480. VOLTS	LN/LN:	2.386		Z0= 132.3336		
	LN/LN/GND:	2.522	(1.172	GND RETURN KA)		
SLP2 DISC	3P Duty:	2.756	0.28	Z1= 43.6513	2.756	2.756
	SLG DUTY:	1.647	0.18	Z2= 43.6513	1.647	
480. VOLTS	LN/LN:	2.386		Z0= 132.3336		
	LN/LN/GND:	2.522	(1.172	GND RETURN KA)		
SLP3 DISC	3P Duty:	2.743	0.30	Z1= 43.8482	2.743	2.743
	SLG DUTY:	1.641	0.19	Z2= 43.8482	1.641	
480. VOLTS	LN/LN:	2.376		Z0= 132.7866		
	LN/LN/GND:	2.515	(1.168	GND RETURN KA)		
SLUDGE CND LCP	3P Duty:	3.518	0.75	Z1= 34.1865	3.519	3.519
	SLG DUTY:	2.166	0.42	Z2= 34.1865	2.166	
480. VOLTS	LN/LN:	3.047		Z0= 99.9298		
	LN/LN/GND:	3.322	(1.550	GND RETURN KA)		
SMP2 DISC	3P Duty:	2.736	0.28	Z1= 43.9615	2.736	2.736
	SLG DUTY:	1.639	0.18	Z2= 43.9615	1.639	
480. VOLTS	LN/LN:	2.369		Z0= 132.7866		
	LN/LN/GND:	2.506	(1.167	GND RETURN KA)		

U N B A L A N C E D F A U L T R E P O R T
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
SP NGB DISC	3P Duty:	4.266	0.36	Z1= 28.1947	4.266	4.266
	SLG DUTY:	2.614	0.23	Z2= 28.1947	2.614	
480. VOLTS	LN/LN:	3.695		Z0= 82.2007		
	LN/LN/GND:	3.950 (	1.877	GND RETURN KA)		
SSC-1 DISC	3P Duty:	4.266	0.36	Z1= 28.1947	4.266	4.266
	SLG DUTY:	2.614	0.23	Z2= 28.1947	2.614	
480. VOLTS	LN/LN:	3.695		Z0= 82.2007		
	LN/LN/GND:	3.950 (	1.877	GND RETURN KA)		
SSC-2 DISC	3P Duty:	4.356	0.36	Z1= 27.6113	4.356	4.356
	SLG DUTY:	2.665	0.23	Z2= 27.6113	2.665	
480. VOLTS	LN/LN:	3.773		Z0= 80.7714		
	LN/LN/GND:	4.037 (	1.912	GND RETURN KA)		
SSCP-E1 DISC	3P Duty:	1.356	0.33	Z1= 88.6967	1.356	1.356
	SLG DUTY:	0.794	0.15	Z2= 88.6967	0.794	
480. VOLTS	LN/LN:	1.174		Z0= 278.5732		
	LN/LN/GND:	1.248 (	0.560	GND RETURN KA)		
SSCP-W1 DISC	3P Duty:	6.957	0.25	Z1= 17.2883	6.957	6.957
	SLG DUTY:	4.157	0.16	Z2= 17.2883	4.157	
480. VOLTS	LN/LN:	6.025		Z0= 52.4255		
	LN/LN/GND:	6.368 (	2.958	GND RETURN KA)		
SSCP-W2 DISC	3P Duty:	6.907	0.27	Z1= 17.4152	6.907	6.907
	SLG DUTY:	4.142	0.17	Z2= 17.4152	4.142	
480. VOLTS	LN/LN:	5.981		Z0= 52.5185		
	LN/LN/GND:	6.341 (	2.951	GND RETURN KA)		
STWP 1 DISC	3P Duty:	5.595	0.39	Z1= 21.4999	5.595	5.595
	SLG DUTY:	3.298	0.26	Z2= 21.4999	3.298	
480. VOLTS	LN/LN:	4.845		Z0= 66.7803		
	LN/LN/GND:	5.140 (	2.331	GND RETURN KA)		
STWP 2 DISC	3P Duty:	5.078	0.47	Z1= 23.6847	5.078	5.078
	SLG DUTY:	2.988	0.26	Z2= 23.6847	2.988	
480. VOLTS	LN/LN:	4.398		Z0= 73.7719		
	LN/LN/GND:	4.665 (	2.111	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
SUB 1 BUS A	3P Duty:	16.541	4.96	Z1= 7.2717	20.684	18.674
	SLG DUTY:	16.170	5.06	Z2= 7.2717	20.307	
480. VOLTS	LN/LN:	14.325		Z0= 7.7734		
	LN/LN/GND:	16.254	(15.815	GND RETURN KA)		
SUB 1 BUS B	3P Duty:	16.354	5.33	Z1= 7.3549	20.782	18.638
	SLG DUTY:	16.078	5.30	Z2= 7.3549	20.406	
480. VOLTS	LN/LN:	14.163		Z0= 7.7333		
	LN/LN/GND:	16.204	(15.812	GND RETURN KA)		
SUB 1 PRIMARY	3P Duty:	5.395	1.54	Z1= 0.8107	5.486	5.441
	SLG DUTY:	4.214	1.42	Z2= 0.8107	4.264	
13200. VOLTS	LN/LN:	4.673		Z0= 1.4934		
	LN/LN/GND:	5.042	(3.456	GND RETURN KA)		
SUB 1 PRIMARY	3P Duty:	6.266	2.76	Z1= 0.6980	6.878	6.575
	SLG DUTY:	4.853	2.55	Z2= 0.6980	5.250	
13200. VOLTS	LN/LN:	5.426		Z0= 1.3082		
	LN/LN/GND:	5.839	(3.959	GND RETURN KA)		
SUB 2 BUS A	3P Duty:	13.694	5.27	Z1= 8.7838	17.363	15.586
	SLG DUTY:	12.543	5.03	Z2= 8.7838	15.736	
480. VOLTS	LN/LN:	11.859		Z0= 11.2000		
	LN/LN/GND:	13.218	(11.572	GND RETURN KA)		
SUB 2 BUS B	3P Duty:	13.106	5.39	Z1= 9.1778	16.696	14.958
	SLG DUTY:	12.218	5.10	Z2= 9.1778	15.375	
480. VOLTS	LN/LN:	11.350		Z0= 11.1799		
	LN/LN/GND:	12.769	(11.442	GND RETURN KA)		
SUB 2 PRIMARY	3P Duty:	5.676	1.70	Z1= 0.7705	5.815	5.746
	SLG DUTY:	4.438	1.54	Z2= 0.7705	4.512	
13200. VOLTS	LN/LN:	4.916		Z0= 1.4168		
	LN/LN/GND:	5.324	(3.642	GND RETURN KA)		
SUB 2 PRIMARY	3P Duty:	6.588	3.55	Z1= 0.6639	7.629	7.119
	SLG DUTY:	5.123	3.15	Z2= 0.6639	5.778	
13200. VOLTS	LN/LN:	5.706		Z0= 1.2347		
	LN/LN/GND:	6.170	(4.189	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
SUB 3 BUS A	3P Duty:	38.990	6.91	Z1= 3.0849	52.397	45.957
	SLG DUTY:	39.633	7.03	Z2= 3.0849	53.443	
480. VOLTS	LN/LN:	33.766		Z0= 2.9350		
	LN/LN/GND:	39.113	(40.297	GND RETURN KA)		
SUB 3 BUS B	3P Duty:	36.262	6.95	Z1= 3.3170	48.786	42.772
	SLG DUTY:	37.671	7.05	Z2= 3.3170	50.829	
480. VOLTS	LN/LN:	31.404		Z0= 2.9450		
	LN/LN/GND:	36.893	(39.193	GND RETURN KA)		
SUB 3 PRIMARY	3P Duty:	7.059	3.61	Z1= 0.6196	8.206	7.643
	SLG DUTY:	5.628	2.81	Z2= 0.6196	6.200	
13200. VOLTS	LN/LN:	6.113		Z0= 1.0971		
	LN/LN/GND:	6.756	(4.670	GND RETURN KA)		
SUB 3 PRIMARY	3P Duty:	6.743	4.49	Z1= 0.6486	8.241	7.512
	SLG DUTY:	5.255	3.81	Z2= 0.6486	6.184	
13200. VOLTS	LN/LN:	5.840		Z0= 1.2011		
	LN/LN/GND:	6.333	(4.303	GND RETURN KA)		
SUB 4 BUS A	3P Duty:	21.070	5.49	Z1= 5.7087	26.957	24.109
	SLG DUTY:	18.908	5.39	Z2= 5.7087	24.089	
480. VOLTS	LN/LN:	18.247		Z0= 7.6667		
	LN/LN/GND:	20.156	(17.149	GND RETURN KA)		
SUB 4 BUS B	3P Duty:	21.678	6.04	Z1= 5.5486	28.320	25.117
	SLG DUTY:	19.232	5.69	Z2= 5.5486	24.796	
480. VOLTS	LN/LN:	18.774		Z0= 7.6667		
	LN/LN/GND:	20.768	(17.281	GND RETURN KA)		
SUB 4 PRIMARY	3P Duty:	6.146	2.06	Z1= 0.7117	6.432	6.290
	SLG DUTY:	4.820	1.80	Z2= 0.7117	4.964	
13200. VOLTS	LN/LN:	5.323		Z0= 1.3015		
	LN/LN/GND:	5.804	(3.961	GND RETURN KA)		
SUB 4 PRIMARY	3P Duty:	6.777	4.35	Z1= 0.6454	8.221	7.517
	SLG DUTY:	5.286	3.70	Z2= 0.6454	6.179	
13200. VOLTS	LN/LN:	5.869		Z0= 1.1930		
	LN/LN/GND:	6.367	(4.330	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
SUB 5 BUS A	3P Duty:	43.957	6.62	Z1= 2.7364	58.547	51.530
	SLG DUTY:	42.742	6.84	Z2= 2.7364	57.317	
480. VOLTS	LN/LN:	38.068		Z0= 2.9700		
	LN/LN/GND:	43.123	(41.591	GND RETURN KA)		
SUB 5 BUS B	3P Duty:	44.488	7.00	Z1= 2.7037	59.932	52.517
	SLG DUTY:	43.074	7.10	Z2= 2.7037	58.195	
480. VOLTS	LN/LN:	38.528		Z0= 2.9700		
	LN/LN/GND:	43.703	(41.747	GND RETURN KA)		
SUB 5 PRIMARY	3P Duty:	7.151	3.80	Z1= 0.6116	8.408	7.793
	SLG DUTY:	5.714	2.91	Z2= 0.6116	6.341	
13200. VOLTS	LN/LN:	6.193		Z0= 1.0780		
	LN/LN/GND:	6.855	(4.748	GND RETURN KA)		
SUB 5 PRIMARY	3P Duty:	6.823	4.81	Z1= 0.6410	8.470	7.670
	SLG DUTY:	5.326	4.01	Z2= 0.6410	6.341	
13200. VOLTS	LN/LN:	5.909		Z0= 1.1834		
	LN/LN/GND:	6.417	(4.364	GND RETURN KA)		
SUB 6 BUS A	3P Duty:	11.352	5.74	Z1= 10.5958	14.667	13.066
	SLG DUTY:	12.504	5.60	Z2= 10.5958	16.067	
480. VOLTS	LN/LN:	9.831		Z0= 7.6667		
	LN/LN/GND:	12.083	(13.917	GND RETURN KA)		
SUB 6 BUS B	3P Duty:	10.392	5.60	Z1= 11.5741	13.352	11.921
	SLG DUTY:	11.710	5.50	Z2= 11.5741	14.990	
480. VOLTS	LN/LN:	9.000		Z0= 7.6667		
	LN/LN/GND:	11.240	(13.411	GND RETURN KA)		
SUB 7 BUS A	3P Duty:	28.285	5.98	Z1= 4.2524	36.872	32.730
	SLG DUTY:	29.279	6.14	Z2= 4.2524	38.389	
480. VOLTS	LN/LN:	24.496		Z0= 3.8200		
	LN/LN/GND:	28.669	(30.343	GND RETURN KA)		
SUB 7 BUS B	3P Duty:	26.895	6.20	Z1= 4.4722	35.334	31.267
	SLG DUTY:	28.225	6.30	Z2= 4.4722	37.206	
480. VOLTS	LN/LN:	23.292		Z0= 3.8400		
	LN/LN/GND:	27.548	(29.694	GND RETURN KA)		

U N B A L A N C E D F A U L T R E P O R T
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
=====						
SUB 7 XFMR A P 3P Duty:		7.166	3.72	Z1= 0.6104	8.387	7.789
SLG DUTY:		5.731	2.87	Z2= 0.6104	6.339	
13200. VOLTS LN/LN:		6.206		Z0= 1.0739		
LN/LN/GND:		6.871	(4.765	GND RETURN KA)		
SUB 7 XFMR B P 3P Duty:		6.838	4.69	Z1= 0.6396	8.443	7.663
SLG DUTY:		5.342	3.94	Z2= 0.6396	6.334	
13200. VOLTS LN/LN:		5.922		Z0= 1.1787		
LN/LN/GND:		6.431	(4.380	GND RETURN KA)		
SUB 8 BUS A 3P Duty:		2.915	6.51	Z1= 4.7615	3.869	3.410
SLG DUTY:		2.422	5.88	Z2= 4.7615	3.146	
4160. VOLTS LN/LN:		2.524		Z0= 7.6667		
LN/LN/GND:		2.746	(2.072	GND RETURN KA)		
SUB 8 BUS B 3P Duty:		2.375	6.04	Z1= 5.8425	3.104	2.753
SLG DUTY:		2.152	5.70	Z2= 5.8425	2.775	
4160. VOLTS LN/LN:		2.057		Z0= 7.6667		
LN/LN/GND:		2.290	(1.966	GND RETURN KA)		
SUB 8 PRIMARY 3P Duty:		7.098	3.72	Z1= 0.6162	8.306	7.715
SLG DUTY:		5.663	2.88	Z2= 0.6162	6.268	
13200. VOLTS LN/LN:		6.147		Z0= 1.0893		
LN/LN/GND:		6.798	(4.702	GND RETURN KA)		
SUB 8 PRIMARY 3P Duty:		6.775	4.67	Z1= 0.6456	8.356	7.587
SLG DUTY:		5.283	3.93	Z2= 0.6456	6.262	
13200. VOLTS LN/LN:		5.868		Z0= 1.1944		
LN/LN/GND:		6.367	(4.326	GND RETURN KA)		
SUB SP-1 DISC 3P Duty:		4.266	0.36	Z1= 28.1947	4.266	4.266
SLG DUTY:		2.614	0.23	Z2= 28.1947	2.614	
480. VOLTS LN/LN:		3.695		Z0= 82.2007		
LN/LN/GND:		3.950	(1.877	GND RETURN KA)		
SUB SP-2 DISC 3P Duty:		4.356	0.36	Z1= 27.6113	4.356	4.356
SLG DUTY:		2.665	0.23	Z2= 27.6113	2.665	
480. VOLTS LN/LN:		3.773		Z0= 80.7714		
LN/LN/GND:		4.037	(1.912	GND RETURN KA)		

U N B A L A N C E D F A U L T R E P O R T
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
SUMP PUMP 1 DI 3P Duty:		2.271	0.30	Z1= 52.9666	2.271	2.271
	SLG DUTY:	1.377	0.17	Z2= 52.9666	1.377	
480. VOLTS	LN/LN:	1.967		Z0= 157.2759		
	LN/LN/GND:	2.101	(0.984	GND RETURN KA)		
SUMP PUMP 3 DI 3P Duty:		0.905	0.17	Z1= 132.8504	0.905	0.905
	SLG DUTY:	0.532	0.10	Z2= 132.8504	0.532	
480. VOLTS	LN/LN:	0.784		Z0= 413.1014		
	LN/LN/GND:	0.822	(0.376	GND RETURN KA)		
SWP LCP	3P Duty:	8.777	1.94	Z1= 13.7042	9.112	8.945
	SLG DUTY:	5.870	1.27	Z2= 13.7042	5.912	
480. VOLTS	LN/LN:	7.601		Z0= 34.5084		
	LN/LN/GND:	8.320	(4.380	GND RETURN KA)		
SWPSO VALVE DI 3P Duty:		2.600	0.31	Z1= 46.2698	2.600	2.600
	SLG DUTY:	1.532	0.23	Z2= 46.2698	1.532	
480. VOLTS	LN/LN:	2.251		Z0= 143.2111		
	LN/LN/GND:	2.360	(1.085	GND RETURN KA)		
SWPSO-SG DISC 3P Duty:		2.600	0.31	Z1= 46.2698	2.600	2.600
	SLG DUTY:	1.532	0.23	Z2= 46.2698	1.532	
480. VOLTS	LN/LN:	2.251		Z0= 143.2111		
	LN/LN/GND:	2.360	(1.085	GND RETURN KA)		
TABLET FDR DIS 3P Duty:		3.763	0.36	Z1= 31.9603	3.763	3.763
	SLG DUTY:	2.298	0.25	Z2= 31.9603	2.298	
480. VOLTS	LN/LN:	3.259		Z0= 93.6630		
	LN/LN/GND:	3.473	(1.648	GND RETURN KA)		
TEMP ADM1 DISC 3P Duty:		5.653	0.90	Z1= 21.2764	5.658	5.656
	SLG DUTY:	3.799	0.66	Z2= 21.2764	3.799	
480. VOLTS	LN/LN:	4.896		Z0= 53.2556		
	LN/LN/GND:	5.385	(2.837	GND RETURN KA)		
TEMP ADM2 DISC 3P Duty:		5.653	0.90	Z1= 21.2764	5.658	5.656
	SLG DUTY:	3.799	0.66	Z2= 21.2764	3.799	
480. VOLTS	LN/LN:	4.896		Z0= 53.2556		
	LN/LN/GND:	5.385	(2.837	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
TEMP PUMPS	3P Duty:	1.446	0.12	Z1= 83.1724	1.446	1.446
	SLG DUTY:	0.846	0.09	Z2= 83.1724	0.846	
480. VOLTS	LN/LN:	1.252		Z0= 260.0603		
	LN/LN/GND:	1.299	(0.598	GND RETURN KA)		
TER FIL EFF SP	3P Duty:	1.458	0.16	Z1= 82.4746	1.458	1.458
	SLG DUTY:	0.850	0.10	Z2= 82.4746	0.850	
480. VOLTS	LN/LN:	1.263		Z0= 260.0603		
	LN/LN/GND:	1.319	(0.599	GND RETURN KA)		
TFB-MPC	3P Duty:	1.457	0.90	Z1= 190.5693	1.458	1.457
	SLG DUTY:	1.470	0.89	Z2= 190.5693	1.472	
208. VOLTS	LN/LN:	1.261		Z0= 185.2614		
	LN/LN/GND:	1.472	(1.484	GND RETURN KA)		
TGS DISC	3P Duty:	3.613	0.49	Z1= 33.2882	3.613	3.613
	SLG DUTY:	2.242	0.36	Z2= 33.2882	2.242	
480. VOLTS	LN/LN:	3.129		Z0= 95.0621		
	LN/LN/GND:	3.355	(1.619	GND RETURN KA)		
UDSP1 DISC	3P Duty:	1.463	0.17	Z1= 82.2213	1.463	1.463
	SLG DUTY:	0.851	0.10	Z2= 82.2213	0.851	
480. VOLTS	LN/LN:	1.267		Z0= 260.0603		
	LN/LN/GND:	1.325	(0.599	GND RETURN KA)		
UDSP2 DISC	3P Duty:	1.454	0.16	Z1= 82.7380	1.454	1.454
	SLG DUTY:	0.848	0.10	Z2= 82.7380	0.848	
480. VOLTS	LN/LN:	1.259		Z0= 260.1740		
	LN/LN/GND:	1.315	(0.599	GND RETURN KA)		
UH EE	3P Duty:	2.445	0.24	Z1= 49.1875	2.445	2.445
	SLG DUTY:	1.459	0.16	Z2= 49.1875	1.459	
480. VOLTS	LN/LN:	2.118		Z0= 149.3791		
	LN/LN/GND:	2.228	(1.038	GND RETURN KA)		
UH EE DISC	3P Duty:	2.709	0.26	Z1= 44.4014	2.709	2.709
	SLG DUTY:	1.622	0.18	Z2= 44.4014	1.622	
480. VOLTS	LN/LN:	2.346		Z0= 134.0768		
	LN/LN/GND:	2.474	(1.156	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
UH FF	3P Duty:	2.688	0.26	Z1= 44.7410	2.688	2.688
	SLG DUTY:	1.610	0.18	Z2= 44.7410	1.610	
480. VOLTS	LN/LN:	2.328		Z0= 135.0341		
	LN/LN/GND:	2.459	(1.147	GND RETURN KA)		
UPS-ADM-1 INPU	3P Duty:	4.936	2.22	Z1= 56.2388	5.220	5.079
	SLG DUTY:	4.949	1.81	Z2= 56.2388	5.101	
208. VOLTS	LN/LN:	4.274		Z0= 56.8399		
	LN/LN/GND:	5.262	(4.932	GND RETURN KA)		
UPS-ADM-1 OUTP	3P Duty:	0.042	8.00	Z1=6666.6660	0.042	0.050
	SLG DUTY:	0.037	8.00	Z2=6666.6660	0.037	
208. VOLTS	LN/LN:	0.036		Z0=8888.8887		
	LN/LN/GND:	0.040	(0.034	GND RETURN KA)		
UV 2A	3P Duty:	2.987	1.90	Z1= 40.2748	3.093	3.040
	SLG DUTY:	3.192	1.90	Z2= 40.2748	3.306	
480. VOLTS	LN/LN:	2.586		Z0= 32.4937		
	LN/LN/GND:	3.103	(3.428	GND RETURN KA)		
UV 2B	3P Duty:	2.987	1.90	Z1= 40.2748	3.093	3.040
	SLG DUTY:	3.192	1.90	Z2= 40.2748	3.306	
480. VOLTS	LN/LN:	2.586		Z0= 32.4937		
	LN/LN/GND:	3.103	(3.428	GND RETURN KA)		
UV-1A	3P Duty:	2.749	2.82	Z1= 43.7607	3.030	2.891
	SLG DUTY:	2.935	2.91	Z2= 43.7607	3.257	
480. VOLTS	LN/LN:	2.380		Z0= 35.4440		
	LN/LN/GND:	2.824	(3.148	GND RETURN KA)		
UV-1A PD LINE	3P Duty:	2.766	2.85	Z1= 43.4784	3.057	2.913
	SLG DUTY:	2.966	2.98	Z2= 43.4784	3.308	
480. VOLTS	LN/LN:	2.396		Z0= 34.7172		
	LN/LN/GND:	2.840	(3.197	GND RETURN KA)		
UV-1B	3P Duty:	3.223	2.73	Z1= 37.3225	3.530	3.378
	SLG DUTY:	3.489	2.82	Z2= 37.3225	3.847	
480. VOLTS	LN/LN:	2.791		Z0= 28.7821		
	LN/LN/GND:	3.340	(3.804	GND RETURN KA)		

UNBALANCED FAULT REPORT

(FOR APPLICATION OF LOW VOLTAGE BREAKERS)

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
UV-1B PD LINE	3P Duty:	3.247	2.76	Z1= 37.0386	3.566	3.409
	SLG DUTY:	3.534	2.90	Z2= 37.0386	3.917	
480. VOLTS	LN/LN:	2.812		Z0= 28.0521		
	LN/LN/GND:	3.362	(3.875	GND RETURN KA)		
VFD CFG-1 INPU	3P Duty:	29.145	3.55	Z1= 4.1269	33.755	31.494
	SLG DUTY:	23.455	2.63	Z2= 4.1269	25.521	
480. VOLTS	LN/LN:	25.241		Z0= 7.1874		
	LN/LN/GND:	28.257	(19.553	GND RETURN KA)		
VFD CFG-2 INPU	3P Duty:	29.396	3.60	Z1= 4.0918	34.152	31.820
	SLG DUTY:	23.568	2.65	Z2= 4.0918	25.666	
480. VOLTS	LN/LN:	25.458		Z0= 7.1874		
	LN/LN/GND:	28.511	(19.594	GND RETURN KA)		
VFD CFG-3 INPU	3P Duty:	32.551	3.93	Z1= 3.6951	38.565	35.625
	SLG DUTY:	27.147	2.97	Z2= 3.6951	30.244	
480. VOLTS	LN/LN:	28.190		Z0= 5.9435		
	LN/LN/GND:	31.757	(23.210	GND RETURN KA)		
W CONT GT2 DIS	3P Duty:	1.444	0.13	Z1= 83.2824	1.444	1.444
	SLG DUTY:	0.846	0.09	Z2= 83.2824	0.846	
480. VOLTS	LN/LN:	1.251		Z0= 260.1740		
	LN/LN/GND:	1.300	(0.598	GND RETURN KA)		
W1 FLOW VALVES	3P Duty:	3.458	0.20	Z1= 34.7814	3.458	3.458
	SLG DUTY:	2.040	0.14	Z2= 34.7814	2.040	
480. VOLTS	LN/LN:	2.995		Z0= 107.4664		
	LN/LN/GND:	3.136	(1.446	GND RETURN KA)		
WA MAIN BOV	3P Duty:	3.654	0.19	Z1= 32.9145	3.654	3.654
	SLG DUTY:	2.159	0.14	Z2= 32.9145	2.159	
480. VOLTS	LN/LN:	3.165		Z0= 101.4603		
	LN/LN/GND:	3.313	(1.531	GND RETURN KA)		
WAS VALVE W1	3P Duty:	3.175	0.18	Z1= 37.8850	3.175	3.175
	SLG DUTY:	1.872	0.13	Z2= 37.8850	1.872	
480. VOLTS	LN/LN:	2.750		Z0= 117.1579		
	LN/LN/GND:	2.873	(1.326	GND RETURN KA)		

UNBALANCED FAULT REPORT

(FOR APPLICATION OF LOW VOLTAGE BREAKERS)

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
=====	=====	=====	=====	=====	=====	=====
WAS VALVE W1 D 3P	Duty:	5.087	0.25	Z1= 23.6436	5.087	5.087
	SLG DUTY:	3.031	0.17	Z2= 23.6436	3.031	
480. VOLTS	LN/LN:	4.406		Z0= 71.9501		
	LN/LN/GND:	4.641	(2.156	GND RETURN KA)		
WAS VALVE W2 3P	Duty:	2.663	0.16	Z1= 45.1652	2.663	2.663
	SLG DUTY:	1.566	0.12	Z2= 45.1652	1.566	
480. VOLTS	LN/LN:	2.306		Z0= 140.2340		
	LN/LN/GND:	2.405	(1.108	GND RETURN KA)		
WASP-E1 VFD IN 3P	Duty:	1.454	0.25	Z1= 82.7199	1.454	1.454
	SLG DUTY:	0.861	0.15	Z2= 82.7199	0.861	
480. VOLTS	LN/LN:	1.259		Z0= 254.3364		
	LN/LN/GND:	1.329	(0.611	GND RETURN KA)		
WASP-E2 VFD IN 3P	Duty:	1.447	0.26	Z1= 83.1157	1.447	1.447
	SLG DUTY:	0.860	0.15	Z2= 83.1157	0.860	
480. VOLTS	LN/LN:	1.253		Z0= 254.3364		
	LN/LN/GND:	1.326	(0.611	GND RETURN KA)		
WASP-W1 VFD IN 3P	Duty:	6.946	0.24	Z1= 17.3166	6.946	6.946
	SLG DUTY:	4.153	0.16	Z2= 17.3166	4.153	
480. VOLTS	LN/LN:	6.015		Z0= 52.4255		
	LN/LN/GND:	6.352	(2.957	GND RETURN KA)		
WASP-W2 VFD IN 3P	Duty:	6.895	0.26	Z1= 17.4448	6.895	6.895
	SLG DUTY:	4.139	0.17	Z2= 17.4448	4.139	
480. VOLTS	LN/LN:	5.971		Z0= 52.5185		
	LN/LN/GND:	6.325	(2.950	GND RETURN KA)		
WASV E1 3P	Duty:	1.239	0.20	Z1= 97.0866	1.239	1.239
	SLG DUTY:	0.737	0.13	Z2= 97.0866	0.737	
480. VOLTS	LN/LN:	1.073		Z0= 296.4159		
	LN/LN/GND:	1.128	(0.523	GND RETURN KA)		
WASV E2 3P	Duty:	1.239	0.20	Z1= 97.0866	1.239	1.239
	SLG DUTY:	0.737	0.13	Z2= 97.0866	0.737	
480. VOLTS	LN/LN:	1.073		Z0= 296.4159		
	LN/LN/GND:	1.128	(0.523	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
WASV E3	3P Duty:	1.169	0.20	Z1= 102.8607	1.169	1.169
	SLG DUTY:	0.693	0.13	Z2= 102.8607	0.693	
480. VOLTS	LN/LN:	1.013		Z0= 315.7709		
	LN/LN/GND:	1.064	(0.492	GND RETURN KA)		
WASV E4	3P Duty:	1.169	0.20	Z1= 102.8607	1.169	1.169
	SLG DUTY:	0.693	0.13	Z2= 102.8607	0.693	
480. VOLTS	LN/LN:	1.013		Z0= 315.7709		
	LN/LN/GND:	1.064	(0.492	GND RETURN KA)		
WBB-EF-1 DISC	3P Duty:	6.950	0.25	Z1= 17.3055	6.950	6.950
	SLG DUTY:	4.155	0.16	Z2= 17.3055	4.155	
480. VOLTS	LN/LN:	6.019		Z0= 52.4255		
	LN/LN/GND:	6.359	(2.957	GND RETURN KA)		
WBB-EF-2 DISC	3P Duty:	7.587	0.28	Z1= 15.8528	7.587	7.587
	SLG DUTY:	4.574	0.18	Z2= 15.8528	4.574	
480. VOLTS	LN/LN:	6.571		Z0= 47.4130		
	LN/LN/GND:	6.981	(3.265	GND RETURN KA)		
WBB-EF-3 DISC	3P Duty:	3.602	0.15	Z1= 33.3891	3.602	3.602
	SLG DUTY:	2.120	0.10	Z2= 33.3891	2.120	
480. VOLTS	LN/LN:	3.120		Z0= 103.5600		
	LN/LN/GND:	3.257	(1.501	GND RETURN KA)		
WBB-EF-4 DISC	3P Duty:	2.785	0.14	Z1= 43.1815	2.785	2.785
	SLG DUTY:	1.636	0.09	Z2= 43.1815	1.636	
480. VOLTS	LN/LN:	2.412		Z0= 134.3515		
	LN/LN/GND:	2.514	(1.157	GND RETURN KA)		
WBB-EF-5 DISC	3P Duty:	1.947	0.11	Z1= 61.7847	1.947	1.947
	SLG DUTY:	1.140	0.08	Z2= 61.7847	1.140	
480. VOLTS	LN/LN:	1.686		Z0= 193.2103		
	LN/LN/GND:	1.752	(0.805	GND RETURN KA)		
WBB-EF-6 DISC	3P Duty:	1.475	0.12	Z1= 81.5447	1.475	1.475
	SLG DUTY:	0.859	0.08	Z2= 81.5447	0.859	
480. VOLTS	LN/LN:	1.277		Z0= 257.1953		
	LN/LN/GND:	1.332	(0.606	GND RETURN KA)		

UNBALANCED FAULT REPORT

(FOR APPLICATION OF LOW VOLTAGE BREAKERS)

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
WBB-EF-7 DISC	3P Duty:	2.427	0.12	Z1= 49.5593	2.427	2.427
	SLG DUTY:	1.422	0.08	Z2= 49.5593	1.422	
480. VOLTS	LN/LN:	2.102		Z0= 154.7345		
	LN/LN/GND:	2.186	(1.005	GND RETURN KA)		
WBB-H1	3P Duty:	6.811	0.30	Z1= 17.6602	6.811	6.811
	SLG DUTY:	4.091	0.19	Z2= 17.6602	4.091	
480. VOLTS	LN/LN:	5.898		Z0= 53.1209		
	LN/LN/GND:	6.258	(2.916	GND RETURN KA)		
WBB-H1 DISC	3P Duty:	9.483	0.38	Z1= 12.6835	9.483	9.483
	SLG DUTY:	5.813	0.24	Z2= 12.6835	5.813	
480. VOLTS	LN/LN:	8.213		Z0= 37.0097		
	LN/LN/GND:	8.812	(4.172	GND RETURN KA)		
WBB-H2	3P Duty:	4.991	0.23	Z1= 24.0974	4.991	4.991
	SLG DUTY:	2.957	0.15	Z2= 24.0974	2.957	
480. VOLTS	LN/LN:	4.323		Z0= 74.0086		
	LN/LN/GND:	4.543	(2.098	GND RETURN KA)		
WBB-H2 DISC	3P Duty:	6.317	0.26	Z1= 19.0396	6.317	6.317
	SLG DUTY:	3.769	0.17	Z2= 19.0396	3.769	
480. VOLTS	LN/LN:	5.471		Z0= 57.8661		
	LN/LN/GND:	5.776	(2.680	GND RETURN KA)		
WBB-HV-1 DISC	3P Duty:	4.270	0.20	Z1= 28.1689	4.270	4.270
	SLG DUTY:	2.522	0.14	Z2= 28.1689	2.522	
480. VOLTS	LN/LN:	3.698		Z0= 86.9290		
	LN/LN/GND:	3.876	(1.787	GND RETURN KA)		
WBB-HV-2	3P Duty:	10.283	0.46	Z1= 11.6974	10.283	10.283
	SLG DUTY:	6.414	0.31	Z2= 11.6974	6.414	
480. VOLTS	LN/LN:	8.905		Z0= 33.1951		
	LN/LN/GND:	9.609	(4.635	GND RETURN KA)		
WBB-HV-2 DISC	3P Duty:	12.548	0.55	Z1= 9.5855	12.548	12.548
	SLG DUTY:	8.013	0.37	Z2= 9.5855	8.013	
480. VOLTS	LN/LN:	10.867		Z0= 26.2333		
	LN/LN/GND:	11.850	(5.841	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
WBB-P-1 DISC	3P Duty:	2.099	0.14	Z1= 57.3017	2.099	2.099
	SLG DUTY:	1.224	0.08	Z2= 57.3017	1.224	
480. VOLTS	LN/LN:	1.818		Z0= 180.3261		
	LN/LN/GND:	1.897	(0.864	GND RETURN KA)		
WBB-P-2 DISC	3P Duty:	2.096	0.15	Z1= 57.3808	2.096	2.096
	SLG DUTY:	1.224	0.09	Z2= 57.3808	1.224	
480. VOLTS	LN/LN:	1.815		Z0= 180.4141		
	LN/LN/GND:	1.896	(0.863	GND RETURN KA)		
WEST AESG W1	3P Duty:	2.671	0.17	Z1= 45.0332	2.671	2.671
	SLG DUTY:	1.571	0.12	Z2= 45.0332	1.571	
480. VOLTS	LN/LN:	2.313		Z0= 139.7760		
	LN/LN/GND:	2.412	(1.112	GND RETURN KA)		
WEST AESG W2	3P Duty:	1.586	0.13	Z1= 75.8609	1.586	1.586
	SLG DUTY:	0.928	0.10	Z2= 75.8609	0.928	
480. VOLTS	LN/LN:	1.373		Z0= 237.2050		
	LN/LN/GND:	1.426	(0.656	GND RETURN KA)		
WEST AESGW1 DI	3P Duty:	2.832	0.17	Z1= 42.4792	2.832	2.832
	SLG DUTY:	1.667	0.12	Z2= 42.4792	1.667	
480. VOLTS	LN/LN:	2.452		Z0= 131.6975		
	LN/LN/GND:	2.559	(1.180	GND RETURN KA)		
WFB-EUH-TERM's	3P Duty:	1.609	0.49	Z1= 172.5603	1.609	1.609
	SLG DUTY:	1.580	0.47	Z2= 172.5603	1.580	
208. VOLTS	LN/LN:	1.393		Z0= 182.1457		
	LN/LN/GND:	1.621	(1.552	GND RETURN KA)		
WHM DISC	3P Duty:	2.256	0.18	Z1= 53.3248	2.256	2.256
	SLG DUTY:	1.329	0.13	Z2= 53.3248	1.329	
480. VOLTS	LN/LN:	1.953		Z0= 165.0142		
	LN/LN/GND:	2.038	(0.942	GND RETURN KA)		
WPB-EF-1 DISC	3P Duty:	2.213	0.22	Z1= 54.3475	2.213	2.213
	SLG DUTY:	1.299	0.17	Z2= 54.3475	1.299	
480. VOLTS	LN/LN:	1.917		Z0= 169.2244		
	LN/LN/GND:	2.000	(0.919	GND RETURN KA)		

U N B A L A N C E D F A U L T R E P O R T
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
WPB-H1 DISC	3P Duty:	5.549	0.54	Z1= 21.6759	5.549	5.549
	SLG DUTY:	3.398	0.41	Z2= 21.6759	3.398	
480. VOLTS	LN/LN:	4.806		Z0= 63.1905		
	LN/LN/GND:	5.121 (	2.441	GND RETURN KA)		
WPB-H1 HOIST	3P Duty:	4.546	0.44	Z1= 26.4599	4.546	4.546
	SLG DUTY:	2.743	0.34	Z2= 26.4599	2.743	
480. VOLTS	LN/LN:	3.937		Z0= 78.9271		
	LN/LN/GND:	4.170 (	1.960	GND RETURN KA)		
WPB-HV-1	3P Duty:	2.340	0.22	Z1= 51.4068	2.340	2.340
	SLG DUTY:	1.379	0.17	Z2= 51.4068	1.379	
480. VOLTS	LN/LN:	2.026		Z0= 159.0395		
	LN/LN/GND:	2.115 (	0.977	GND RETURN KA)		
WPB-HV-1 DISC	3P Duty:	2.672	0.25	Z1= 45.0114	2.672	2.672
	SLG DUTY:	1.579	0.19	Z2= 45.0114	1.579	
480. VOLTS	LN/LN:	2.314		Z0= 138.6868		
	LN/LN/GND:	2.420 (	1.120	GND RETURN KA)		
WPB-P-1 DISC	3P Duty:	1.746	0.18	Z1= 68.8772	1.746	1.746
	SLG DUTY:	1.023	0.14	Z2= 68.8772	1.023	
480. VOLTS	LN/LN:	1.512		Z0= 215.1295		
	LN/LN/GND:	1.574 (	0.723	GND RETURN KA)		
WPE-SAP-2 DISC	3P Duty:	2.007	0.23	Z1= 59.9409	2.007	2.007
	SLG DUTY:	1.177	0.16	Z2= 59.9409	1.177	
480. VOLTS	LN/LN:	1.738		Z0= 187.0691		
	LN/LN/GND:	1.816 (	0.832	GND RETURN KA)		
WPSE GATE E DI	3P Duty:	1.457	0.13	Z1= 82.5639	1.457	1.457
	SLG DUTY:	0.853	0.09	Z2= 82.5639	0.853	
480. VOLTS	LN/LN:	1.262		Z0= 258.1953		
	LN/LN/GND:	1.311 (	0.603	GND RETURN KA)		
WPSE GATE W DI	3P Duty:	1.457	0.13	Z1= 82.5634	1.457	1.457
	SLG DUTY:	0.853	0.09	Z2= 82.5634	0.853	
480. VOLTS	LN/LN:	1.262		Z0= 258.1954		
	LN/LN/GND:	1.311 (	0.603	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
WPSE SMPL PMP	3P Duty:	1.466	0.16	Z1= 82.0237	1.466	1.466
	SLG DUTY:	0.855	0.10	Z2= 82.0237	0.855	
480. VOLTS	LN/LN:	1.270		Z0= 258.1954		
	LN/LN/GND:	1.326 (	0.603	GND RETURN KA)		
WSE-SAP-3	DIS 3P Duty:	3.608	0.16	Z1= 33.3400	3.608	3.608
	SLG DUTY:	2.121	0.11	Z2= 33.3400	2.121	
480. VOLTS	LN/LN:	3.124		Z0= 103.5601		
	LN/LN/GND:	3.265 (	1.501	GND RETURN KA)		
WTR-CRC-PMP-1	3P Duty:	9.232	0.84	Z1= 13.0286	9.237	9.235
	SLG DUTY:	6.396	0.57	Z2= 13.0286	6.396	
480. VOLTS	LN/LN:	7.995		Z0= 31.0934		
	LN/LN/GND:	8.942 (	4.833	GND RETURN KA)		
WTR-CRC-PMP-2	3P Duty:	9.232	0.84	Z1= 13.0286	9.237	9.235
	SLG DUTY:	6.396	0.57	Z2= 13.0286	6.396	
480. VOLTS	LN/LN:	7.995		Z0= 31.0934		
	LN/LN/GND:	8.942 (	4.833	GND RETURN KA)		
WW BYP GATE E	3P Duty:	1.457	0.13	Z1= 82.5639	1.457	1.457
	SLG DUTY:	0.853	0.09	Z2= 82.5639	0.853	
480. VOLTS	LN/LN:	1.262		Z0= 258.1954		
	LN/LN/GND:	1.311 (	0.603	GND RETURN KA)		
WWRDP2 DISC	3P Duty:	3.304	0.39	Z1= 36.4075	3.304	3.304
	SLG DUTY:	1.939	0.21	Z2= 36.4075	1.939	
480. VOLTS	LN/LN:	2.861		Z0= 113.8477		
	LN/LN/GND:	3.032 (	1.368	GND RETURN KA)		
WWRDP3 DISC	3P Duty:	3.262	0.40	Z1= 36.8696	3.262	3.262
	SLG DUTY:	1.910	0.22	Z2= 36.8696	1.910	
480. VOLTS	LN/LN:	2.825		Z0= 115.7453		
	LN/LN/GND:	2.994 (	1.347	GND RETURN KA)		
WWWRESDP1 DISC	3P Duty:	3.277	0.40	Z1= 36.7009	3.277	3.277
	SLG DUTY:	1.924	0.22	Z2= 36.7009	1.924	
480. VOLTS	LN/LN:	2.838		Z0= 114.7858		
	LN/LN/GND:	3.009 (	1.357	GND RETURN KA)		

U N B A L A N C E D F A U L T R E P O R T
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
Wireway	3P Duty:	1.508	0.26	Z1= 79.7781	1.508	1.508
	SLG DUTY:	0.898	0.16	Z2= 79.7781	0.898	
480. VOLTS	LN/LN:	1.306		Z0= 243.0661		
	LN/LN/GND:	1.381	(0.638	GND RETURN KA)		
Wireway.	3P Duty:	1.508	0.26	Z1= 79.7781	1.508	1.508
	SLG DUTY:	0.898	0.16	Z2= 79.7781	0.898	
480. VOLTS	LN/LN:	1.306		Z0= 243.0661		
	LN/LN/GND:	1.381	(0.638	GND RETURN KA)		

F A U L T S T U D Y S U M M A R Y
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

BUS RECORD NO NAME	VOLTAGE L-L	A V A I L A B L E 3 PHASE	F A U L T X/R	D U T I E S (KA) LINE/GRND	X/R
=====					
15 KV BUS 1	13200.	7.210	3.88	5.772	2.95
15 KV BUS 1 Li	13200.	7.210	3.88	5.772	2.95
15 KV BUS 2	13200.	6.874	4.94	5.374	4.10
15 KV BUS 2 Li	13200.	6.874	4.94	5.374	4.10
15 KV BUS 3	13200.	1.505	7.43	0.076	0.04
78IN GC DISC	480.	1.311	0.15	0.770	0.10
AC2 DISC	480.	1.468	0.20	0.852	0.11
AC2F DISC	480.	2.733	0.27	1.638	0.18
ADM ACCU1 DISC	480.	4.675	0.47	2.816	0.36
ADM ACU1 DISC	480.	8.357	1.16	5.421	0.82
ADM-CH-1 DISC	480.	9.323	1.57	6.356	1.20
ADM-EF-1 DISC	480.	2.262	0.24	1.329	0.19
ADM-EF-2 DISC	480.	2.261	0.24	1.329	0.18
ADM-HVAC-1 DIS	480.	5.642	0.64	3.450	0.47
ADM-HVAC-2 DIS	480.	2.668	0.30	1.570	0.22
ADM-P-1 DISC	480.	3.226	0.33	1.910	0.25
ADM-P-2 DISC	480.	2.663	0.29	1.569	0.21
ADM-P-3 DISC	480.	8.116	1.04	5.227	0.76
ADM-P-4 DISC	480.	7.503	0.93	4.760	0.67
ADM-SUP LCP	480.	2.201	0.26	1.310	0.18
ADP-E1 DISC	480.	1.621	0.63	0.925	0.16
ADP-E2 DISC	480.	5.950	1.36	4.234	0.72
ADP-W1 DISC	480.	5.605	0.30	3.326	0.19
AIR COMP 1 DIS	480.	2.751	0.27	1.645	0.18
AIR COMP 1P DI	480.	3.236	0.35	1.903	0.21
AIR WASH MV DI	480.	1.444	0.13	0.846	0.09
ALTERNATOR P	208.	0.138	1.81	0.139	1.81
AT-E1 FCV BF-6	480.	1.444	0.23	0.859	0.14
AT-E2 FCV BF-6	480.	1.631	0.25	0.975	0.15
AT-E3 Z1 FCV	480.	0.858	0.18	0.505	0.12
AT-E3 Z2 FCV	480.	1.008	0.20	0.594	0.12
AT-E3 Z3 FCV	480.	1.139	0.21	0.673	0.13
AT-E4 Z1 FCV	480.	0.858	0.18	0.505	0.12
AT-E4 Z2 FCV	480.	1.008	0.20	0.594	0.12
AT-E4 Z3 FCV	480.	1.139	0.21	0.673	0.13
AT-W2 FCV JB	480.	2.498	0.17	1.466	0.12
ATS PEWP2 NRM	480.	19.609	4.44	16.665	3.30
ATS PP-UV-EMG	480.	3.428	0.34	2.063	0.26
ATS PP-UV-LOAD	480.	1.650	0.17	0.969	0.13
ATS PP-UV-NRM	480.	1.650	0.17	0.969	0.13
ATS-51 EMG	480.	27.246	3.06	22.124	2.56
ATS-51 LOAD	480.	26.452	2.94	21.457	2.51
ATS-51 NRM	480.	26.452	2.94	21.457	2.51
ATS-52 EMG	480.	26.696	3.07	21.519	2.42

F A U L T S T U D Y S U M M A R Y
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

BUS RECORD NO NAME	VOLTAGE L-L	A V A I L A B L E 3 PHASE	F A U L T X/R	D U T I E S (KA) LINE/GRND	X/R
ATS-52 LOAD	480.	25.903	2.97	20.788	2.35
ATS-52 NRM	480.	25.904	2.97	20.788	2.35
ATS-54 EMG	480.	23.758	2.81	18.560	2.21
ATS-54 LOAD	480.	22.064	2.67	17.050	2.11
ATS-54 NRM	480.	22.064	2.67	17.050	2.11
ATS-55 EMG	480.	24.129	2.83	19.017	2.24
ATS-55 LOAD	480.	21.905	2.64	16.985	2.11
ATS-55 NRM	480.	21.905	2.64	16.985	2.11
ATS-ADM EMG	480.	11.985	3.34	8.775	2.42
ATS-ADM LOAD	480.	11.985	3.34	8.775	2.42
ATS-ADM NRM	480.	10.815	2.86	8.328	2.31
ATS-CEB LOAD	480.	21.339	2.58	19.390	1.85
ATS-CEB-EMG	480.	20.548	2.07	17.607	1.47
ATS-CEB-NRM	480.	21.339	2.58	19.390	1.85
ATS-EBB NORM	480.	9.691	4.52	10.280	3.66
ATS-EBB-EMG	480.	10.502	4.53	10.874	3.62
ATS-EBB-LOAD	480.	9.691	4.52	10.280	3.66
ATS-LSE EMG	480.	12.365	2.14	10.406	1.60
ATS-LSE LOAD	480.	12.664	2.27	10.816	1.67
ATS-LSE NRM	480.	12.664	2.27	10.816	1.67
ATS-RLS EMG	480.	13.659	2.58	11.734	1.91
ATS-RLS LOAD	480.	11.608	2.56	9.361	1.83
ATS-RLS NRM	480.	11.608	2.56	9.361	1.83
ATS-WBB NORM	480.	30.921	4.95	29.232	3.88
ATS-WBB-EMG	480.	32.899	4.95	30.251	3.81
ATS-WBB-LOAD	480.	30.921	4.95	29.232	3.88
ATS-WPB-EMG	480.	10.193	1.29	6.865	1.00
ATS-WPB-LOAD	480.	8.902	1.09	5.914	0.84
ATS-WPB-NORM	480.	8.902	1.09	5.914	0.84
B-54-1 DISC	480.	3.408	0.20	2.010	0.14
B-54-1 MTR VAL	480.	3.360	0.20	1.981	0.14
B-54-2 DISC	480.	3.408	0.20	2.010	0.14
B-54-2 MTR VAL	480.	3.360	0.20	1.981	0.14
B-54-3 DISC	480.	3.408	0.20	2.010	0.14
B-54-3 MTR VAL	480.	3.360	0.20	1.981	0.14
BAR SCREEN 2 T	480.	4.356	0.36	2.665	0.23
BF - 64- 29	480.	1.240	0.21	0.735	0.13
BF- 64- 30	480.	1.376	0.22	0.818	0.14
BF-64-07	480.	1.020	0.18	0.602	0.12
BF-64-08	480.	1.111	0.19	0.657	0.12
BSCRN-3 STR	480.	4.266	0.36	2.614	0.23

F A U L T S T U D Y S U M M A R Y
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

BUS RECORD NO NAME	VOLTAGE L-L	A V A I L A B L E 3 PHASE	F A U L T X/R	D U T I E S (KA) LINE/GRND	X/R
=====					
BSN-OUT-GT-1 D	480.	2.747	0.26	1.644	0.18
BSN-OUT-GT-3 D	480.	2.747	0.26	1.644	0.18
BSNHST DISC	480.	4.065	0.45	2.496	0.29
BSNINFLGT-1 DI	480.	2.747	0.26	1.644	0.18
BSNINFLGT-3 DI	480.	2.747	0.26	1.644	0.18
BSNINFLGT2 DIS	480.	2.734	0.27	1.638	0.18
BSNOUTGT2 DISC	480.	2.734	0.27	1.638	0.18
BT1-1M DISC	480.	10.797	1.69	7.201	1.20
BT2-1M DISC	480.	10.731	1.70	7.136	1.21
BTAB-1 DISC	480.	1.468	0.23	0.834	0.13
BTAB-2 DISC	480.	1.450	0.32	0.831	0.14
BTAB-3 DISC	480.	1.345	0.33	0.769	0.14
BUS-0097	480.	1.068	0.20	0.624	0.13
BUS-0099	480.	1.068	0.20	0.624	0.13
BUS-0101	480.	1.068	0.20	0.624	0.13
BUS-0103	480.	1.068	0.20	0.624	0.13
BUS-0105	480.	1.068	0.20	0.624	0.13
BUS-0107	480.	1.068	0.20	0.624	0.13
BUS-0109	480.	1.068	0.20	0.624	0.13
BUS-0111	480.	1.068	0.20	0.624	0.13
BUS-0113	480.	1.068	0.20	0.624	0.13
BUS-0115	480.	1.068	0.20	0.624	0.13
BUS-0117	480.	1.068	0.20	0.624	0.13
BUS-0119	480.	1.068	0.20	0.624	0.13
BUS-0121	480.	1.068	0.20	0.624	0.13
BUS-0123	480.	1.068	0.20	0.624	0.13
BUS-0125	480.	1.068	0.20	0.624	0.13
BUS-0127	480.	1.068	0.20	0.624	0.13
BUS-0141	480.	0.827	0.17	0.484	0.12
BUS-0143	480.	0.827	0.17	0.484	0.12
BUS-0145	480.	0.827	0.17	0.484	0.12
BUS-0147	480.	0.827	0.17	0.484	0.12
BUS-0149	480.	0.827	0.17	0.484	0.12
BUS-0151	480.	0.827	0.17	0.484	0.12
BUS-0153	480.	0.827	0.17	0.484	0.12
BUS-0155	480.	0.827	0.17	0.484	0.12
BUS-0157	480.	0.827	0.17	0.484	0.12
BUS-0159	480.	0.827	0.17	0.484	0.12
BUS-0161	480.	0.827	0.17	0.484	0.12
BUS-0163	480.	0.827	0.17	0.484	0.12
BUS-0165	480.	0.827	0.17	0.484	0.12

F A U L T S T U D Y S U M M A R Y
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

BUS RECORD NO NAME	VOLTAGE L-L	A V A I L A B L E 3 PHASE	F A U L T X/R	D U T I E S (KA) LINE/GRND	X/R
=====					
BUS-0167	480.	0.827	0.17	0.484	0.12
BUS-0169	480.	0.827	0.17	0.484	0.12
BUS-0171	480.	0.827	0.17	0.484	0.12
BUS-0178	480.	6.189	1.90	5.124	1.34
BUS-0179	480.	1.384	0.22	0.825	0.14
BUS-0180	480.	1.384	0.22	0.825	0.14
BUS-0181	480.	6.069	1.86	4.985	1.32
BUS-0182	480.	2.091	0.30	1.263	0.17
BUS-0188	480.	2.501	0.34	1.528	0.20
BUS-0272	480.	11.095	1.41	7.574	1.08
BUS-0273	480.	1.880	0.21	1.104	0.17
BUS-0274	480.	1.470	0.18	0.861	0.14
BUS-0275	480.	1.850	0.21	1.086	0.16
BUS-0276	480.	1.589	0.19	0.931	0.15
BUS-0277	480.	2.234	0.24	1.315	0.19
BUS-0278	480.	2.007	0.22	1.179	0.17
BUS-0279	480.	1.957	0.22	1.150	0.17
BUS-0281	480.	2.954	0.29	1.748	0.23
BUS-0287	480.	12.132	2.07	8.769	1.59
BUS-0288	480.	12.132	2.07	8.769	1.59
BUS-0289	480.	3.450	0.34	2.057	0.26
BUS-0290	480.	2.459	0.26	1.452	0.20
BUS-0291	480.	1.986	0.22	1.169	0.17
BUS-0292	480.	1.665	0.20	0.977	0.16
BUS-0293	480.	2.020	0.23	1.189	0.18
BUS-0294	480.	1.937	0.22	1.139	0.17
BUS-0295	480.	1.525	0.19	0.894	0.15
BUS-0296	480.	3.096	0.31	1.839	0.24
BUS-0310	480.	6.469	0.30	3.889	0.20
BUS-0311	480.	6.299	0.29	3.783	0.20
BUS-0312	480.	6.469	0.30	3.889	0.20
BUS-0313	480.	6.299	0.29	3.783	0.20
BUS-0314	480.	4.118	0.22	2.439	0.15
BUS-0315	480.	4.048	0.21	2.396	0.15
BUS-0316	480.	4.118	0.22	2.439	0.15
BUS-0317	480.	4.048	0.21	2.396	0.15
BUS-0318	480.	2.471	0.16	1.451	0.11
BUS-0319	480.	2.446	0.16	1.436	0.11
BUS-0320	480.	5.287	0.25	3.152	0.17
BUS-0321	480.	2.471	0.16	1.451	0.11
BUS-0322	480.	2.446	0.16	1.436	0.11

F A U L T S T U D Y S U M M A R Y
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

BUS RECORD NO NAME	VOLTAGE L-L	A V A I L A B L E 3 PHASE	F A U L T X/R	D U T I E S (KA) LINE/GRND	X/R
=====					
BUS-0323	480.	2.471	0.16	1.451	0.11
BUS-0324	480.	2.446	0.16	1.436	0.11
BUS-0325	480.	2.255	0.15	1.323	0.11
BUS-0326	480.	4.958	0.24	2.950	0.16
BUS-0327	480.	4.857	0.24	2.888	0.16
BUS-0328	480.	4.958	0.24	2.950	0.16
BUS-0329	480.	4.857	0.24	2.888	0.16
BUS-0330	480.	11.135	0.46	6.965	0.30
BUS-0331	480.	3.101	0.30	1.873	0.21
BUS-0332	480.	8.566	0.90	5.998	0.62
BUS-0333	480.	4.637	0.43	2.885	0.30
BUS-0337	480.	1.124	0.15	0.661	0.11
BUS-0348	480.	0.833	0.13	0.489	0.10
BUS-0349	480.	0.963	0.14	0.566	0.11
BUS-0350	480.	0.833	0.13	0.489	0.10
BUS-0351	480.	0.963	0.14	0.566	0.11
BUS-0352	480.	0.963	0.14	0.566	0.11
BUS-0353	480.	0.867	0.13	0.509	0.10
BUS-0354	480.	0.963	0.14	0.566	0.11
BUS-0355	480.	0.963	0.14	0.566	0.11
BUS-0356	480.	0.963	0.14	0.566	0.11
BUS-0357	480.	0.963	0.14	0.566	0.11
BUS-0358	480.	0.963	0.14	0.566	0.11
BUS-0359	480.	0.963	0.14	0.566	0.11
BUS-0360	480.	0.963	0.14	0.566	0.11
BUS-0361	480.	0.963	0.14	0.566	0.11
BUS-0362	480.	0.833	0.13	0.489	0.10
BUS-0363	480.	0.963	0.14	0.566	0.11
BUS-0364	480.	0.963	0.14	0.566	0.11
BUS-0392	480.	1.461	0.25	0.870	0.15
BUS-0393	480.	2.003	0.29	1.207	0.17
BUS-0394	480.	2.003	0.29	1.207	0.17
BUS-0395	480.	2.003	0.29	1.207	0.17
BUS-0396	480.	2.378	0.33	1.448	0.19
BUS-0397	480.	2.378	0.33	1.448	0.19
BUS-0398	480.	2.378	0.33	1.448	0.19
BUS-0399	480.	1.461	0.25	0.870	0.15
BUS-0400	480.	1.461	0.25	0.870	0.15
BUS-0401	480.	1.461	0.25	0.870	0.15
BUS-0402	480.	1.461	0.25	0.870	0.15
BUS-0403	480.	1.461	0.25	0.870	0.15

F A U L T S T U D Y S U M M A R Y
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

BUS RECORD NO NAME	VOLTAGE L-L	A V A I L A B L E 3 PHASE	F A U L T X/R	D U T I E S (KA) LINE/GRND	X/R
=====					
BUS-0406	480.	1.856	0.28	1.116	0.17
BUS-0409	480.	1.298	0.22	0.771	0.14
BUS-0410	480.	1.298	0.22	0.771	0.14
BUS-0412	480.	5.377	0.78	3.752	0.46
BUS-0413	480.	2.542	0.36	1.558	0.22
BUS-0414	480.	2.196	0.32	1.333	0.19
BUS-0415	480.	6.128	1.88	5.054	1.33
BUS-0436	480.	2.780	0.32	1.641	0.24
BWP2 DISC	480.	17.368	3.08	13.978	2.25
BWWP1 DISC	480.	16.251	2.71	12.754	1.86
BYPGT1 DISC	480.	2.736	0.27	1.638	0.18
BYPGT2 DISC	480.	2.736	0.27	1.638	0.18
C SUMP PUMP DI	480.	4.257	0.35	2.611	0.23
CC-1 DISC	480.	2.749	0.26	1.644	0.18
CC-3 DISC	480.	2.749	0.26	1.644	0.18
CC2 DISC	480.	2.736	0.28	1.639	0.18
CE WET WELL GT	480.	1.444	0.13	0.846	0.09
CEB-ACCU-1 DIS	480.	4.868	0.25	2.922	0.17
CEB-ACCU-1 TER	480.	4.076	0.22	2.431	0.14
CEB-ACU-1 TERM	480.	12.068	0.67	8.044	0.44
CEB-EF-1 DISC	480.	1.709	0.14	1.001	0.09
CEB-EF-2 DISC	480.	1.852	0.13	1.088	0.09
CEB-FCP-1 DISC	480.	3.969	0.21	2.365	0.14
CEB-FCP-2 TERM	480.	3.141	0.18	1.861	0.12
CEB-P-1 DISC	480.	3.138	0.18	1.858	0.12
CEB-P-2 DISC	480.	3.142	0.18	1.862	0.12
CF2 AHU-1 DISC	480.	1.201	0.30	0.688	0.13
CF2 AHU-3 DISC	480.	2.050	0.49	1.169	0.21
CHABLWR DISC	480.	4.363	0.37	2.667	0.23
CN-50-3 FCV	480.	1.004	0.14	0.590	0.11
CONT TK INT GT	480.	1.449	0.13	0.847	0.09
CP-70 EMG	480.	1.454	0.12	0.852	0.09
CP-70 NRM	480.	2.797	0.19	1.654	0.13
CR-1 HSP 5 DIS	480.	3.293	0.29	1.926	0.17
CR-1 HSP 6 DIS	480.	3.147	0.29	1.838	0.17
D SP-2 DISC	480.	4.356	0.36	2.665	0.23
DCH FNL EFF SP	480.	1.454	0.16	0.848	0.10
DOOR OP EE1	480.	2.710	0.26	1.622	0.18
DOOR OP EE2	480.	2.710	0.26	1.622	0.18
DOOR OP FF	480.	2.690	0.27	1.611	0.18
DOOR OPERATOR	480.	4.346	0.34	2.661	0.22

F A U L T S T U D Y S U M M A R Y
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

BUS RECORD NO NAME	VOLTAGE L-L	A V A I L A B L E 3 PHASE	F A U L T X/R	D U T I E S (KA) LINE/GRND	X/R
DP-51	480.	24.626	2.74	19.688	2.43
DP-52	480.	23.539	2.77	18.467	2.20
DP-54	480.	18.818	2.44	14.114	1.95
DP-56	480.	12.010	2.23	8.340	1.72
DRILL PRESS	480.	4.429	1.13	2.916	0.92
DROP (NGW) STR	480.	4.254	0.34	2.610	0.23
DROP (SG) STR	480.	4.254	0.34	2.610	0.23
DTE NORTH	13200.	7.385	4.05	5.971	3.09
DTE SOUTH	13200.	6.985	5.24	5.492	4.33
E CONT TK G1 D	480.	1.444	0.13	0.846	0.09
E SUMP PUMP 1	480.	2.756	0.28	1.647	0.18
EBB SUMP PUMP	480.	3.402	0.43	2.117	0.25
EBB SUMP PUMP	480.	0.970	0.18	0.569	0.10
EBB-A HOIST 1	480.	0.949	0.13	0.559	0.09
EBB-A HOIST 1	480.	1.013	0.14	0.597	0.09
EBB-A HOIST 2	480.	0.949	0.13	0.559	0.09
EBB-A HOIST 2	480.	1.013	0.14	0.597	0.09
EBB-EDH-1 LINE	480.	3.978	0.55	2.582	0.33
EBB-EF-10 DISC	480.	2.692	0.31	1.639	0.18
EBB-EF-5 DISC	480.	4.041	0.51	2.603	0.29
EBB-EF-6 DISC	480.	2.126	0.26	1.278	0.15
EBB-EF-7 DISC	480.	1.419	0.22	0.843	0.12
EBB-EF-9 DISC	480.	0.964	0.17	0.567	0.10
EBB-EUH-1 TERM	480.	6.261	0.85	4.564	0.50
EBB-HV-1 DISC	480.	3.262	0.37	2.018	0.22
EF1 DISC	480.	1.450	0.12	0.849	0.09
EF2 DISC	480.	1.450	0.12	0.849	0.09
EF3 DISC	480.	1.458	0.13	0.853	0.09
EF4 DISC	480.	1.443	0.13	0.845	0.09
ELEVATOR CP DI	480.	1.525	0.19	0.894	0.16
ELEVATOR CP IN	480.	1.432	0.19	0.839	0.15
EP THRV CONTRO	480.	4.345	0.34	2.661	0.22
EPB-EUH-1 DISC	480.	4.173	0.85	2.731	0.52
EPB-EUH-1 TERM	480.	3.880	0.76	2.500	0.47
EPBBV DISC	480.	1.323	0.12	0.774	0.09
EPBBV STARTER	480.	1.256	0.12	0.734	0.09
EPSEGE DISC	480.	1.452	0.13	0.850	0.09
EPSEGW DISC	480.	1.452	0.13	0.850	0.09
EQ INFL GATE 1	480.	2.747	0.26	1.644	0.18
EQ INFL GATE 1	480.	2.747	0.26	1.644	0.18
EQ INFL GATE 1	480.	2.747	0.26	1.644	0.18

F A U L T S T U D Y S U M M A R Y
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

BUS RECORD NO NAME	VOLTAGE L-L	A V A I L A B L E 3 PHASE	F A U L T X/R	D U T I E S (KA) LINE/GRND	X/R
EQ INFL GATE 1	480.	2.747	0.26	1.644	0.18
EQ INFL GATE 2	480.	2.747	0.26	1.644	0.18
EQ INFL GATE 3	480.	2.747	0.26	1.644	0.18
EQ INFL GATE 4	480.	2.747	0.26	1.644	0.18
EQ INFL GATE 9	480.	2.747	0.26	1.644	0.18
EQ-RET-V-1 DIS	480.	2.750	0.27	1.645	0.18
EQ-RET-V-2 DIS	480.	2.750	0.27	1.645	0.18
EQINGT5 DISC	480.	2.734	0.27	1.638	0.18
EQINGT6 DISC	480.	2.734	0.27	1.638	0.18
EQINGT7 DISC	480.	2.734	0.27	1.638	0.18
EQINGT8 DISC	480.	2.734	0.27	1.638	0.18
EQPRM HOIST DI	480.	5.960	0.61	3.849	0.41
EQPT RCPT C	480.	6.033	0.51	3.857	0.34
EQPT RCPT D	480.	6.215	0.51	3.971	0.34
EQPT RCPT E	480.	13.237	3.99	11.751	3.08
EQPT RCPT EBB-	480.	8.946	1.53	7.699	0.95
EQPT RCPT EBB-	480.	8.379	1.61	7.441	0.99
EQPT RCPT EE	480.	3.999	0.39	2.454	0.27
EQPT RCPT EPB-	480.	4.828	1.07	3.286	0.63
EQPT RCPT F	480.	2.731	0.26	1.637	0.18
EQPT RCPT M	480.	2.256	0.18	1.329	0.13
EQPT RCPT RLS-	480.	4.311	0.43	2.646	0.31
EQRETFV3 DISC	480.	2.732	0.26	1.637	0.18
EQRETV3 DISC	480.	2.737	0.28	1.639	0.18
ERU DISC	480.	2.731	0.26	1.637	0.18
ESESP6 DISC	480.	1.454	0.13	0.850	0.09
EUH-E1 TERM	480.	5.868	0.53	3.739	0.36
EUH-E2 TERM	480.	3.762	0.33	2.290	0.23
EUH1 DISC	480.	1.449	0.12	0.849	0.09
EWB-1 DISC	480.	10.801	2.25	7.657	1.68
EWB-2 DISC	480.	18.391	1.82	14.100	1.34
EWB-2 TERMS	480.	17.355	1.72	13.095	1.27
F-1-1 DISC	480.	2.319	0.48	1.398	0.29
F-1-1 STARTER	480.	1.950	0.40	1.164	0.25
F-1-2 DISC	480.	2.298	0.48	1.384	0.28
F-1-2 STARTER	480.	1.847	0.38	1.099	0.24
F-1-3 DISC	480.	2.276	0.47	1.371	0.28
F-1-3 STARTER	480.	1.550	0.32	0.917	0.21
F-1-4 DISC	480.	2.256	0.47	1.357	0.28
F-1-4 STARTER	480.	1.483	0.31	0.876	0.20
F-1-5 DISC	480.	1.878	0.41	1.118	0.24

F A U L T S T U D Y S U M M A R Y
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

BUS RECORD NO NAME	VOLTAGE L-L	A V A I L A B L E 3 PHASE	F A U L T X/R	D U T I E S (KA) LINE/GRND	X/R
F-1-5 STARTER	480.	1.307	0.29	0.769	0.18
F-1-6 DISC	480.	1.864	0.41	1.109	0.24
F-1-6 STARTER	480.	1.344	0.30	0.791	0.19
F-1-7 DISC	480.	1.850	0.40	1.100	0.24
F-1-7 STARTER	480.	1.543	0.34	0.912	0.21
F-1-8 DISC	480.	1.836	0.40	1.092	0.24
F-1-8 STARTER	480.	1.594	0.35	0.943	0.21
F-2-1 DISC	480.	6.361	1.96	4.650	1.03
F-2-1 STARTER	480.	4.545	0.90	2.937	0.54
F-2-12 DISC	480.	6.256	1.85	4.531	0.98
F-2-12 STARTER	480.	4.473	0.88	2.880	0.53
F-2-13 DISC	480.	1.591	0.35	0.934	0.21
F-2-13 STARTER	480.	1.038	0.25	0.605	0.16
F-2-18 DISC	480.	1.581	0.35	0.928	0.21
F-2-18 STARTER	480.	1.397	0.31	0.818	0.19
F-2-19 DISC	480.	1.571	0.34	0.922	0.21
F-2-19 STARTER	480.	1.389	0.31	0.813	0.19
F-2-24 DISC	480.	1.560	0.34	0.916	0.21
F-2-24 STARTER	480.	1.003	0.24	0.585	0.15
F-2-6 DISC	480.	6.467	2.09	4.773	1.08
F-2-6 STARTER	480.	2.124	0.38	1.263	0.25
F-2-7 DISC	480.	6.151	1.75	4.416	0.94
F-2-7 STARTER	480.	2.161	0.38	1.286	0.25
F-5-1 DISC	480.	4.348	0.35	2.662	0.22
F-5-2 DISC	480.	4.348	0.35	2.662	0.22
F-54-1 DISC	480.	1.755	0.20	1.029	0.16
F-54-1 STR	480.	1.704	0.20	0.999	0.16
F-54-2 DISC	480.	2.385	0.25	1.408	0.20
F-54-2 STR	480.	2.293	0.25	1.352	0.19
F-54-4 DISC	480.	4.488	0.42	2.696	0.32
F-54-4 STR	480.	4.044	0.38	2.417	0.29
F-54-5 DISC	480.	10.830	1.43	7.494	1.09
F-54-5 STR	480.	9.048	0.99	5.952	0.75
F-6-1 DISC	480.	4.258	0.35	2.611	0.23
F-6-2 DISC	480.	4.258	0.35	2.611	0.23
F-6-4 DISC	480.	4.347	0.34	2.662	0.22
F-60-5	480.	0.897	0.14	0.526	0.10
F-60-6	480.	0.897	0.14	0.526	0.10
F-7-1 DISC	480.	3.384	0.27	2.040	0.18
F-8-6 DISC	480.	2.764	0.23	1.652	0.15
FASB-1 LCP	480.	16.608	2.58	13.070	1.77

F A U L T S T U D Y S U M M A R Y
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

BUS RECORD NO NAME	VOLTAGE L-L	A V A I L A B L E 3 PHASE	F A U L T X/R	D U T I E S (KA) LINE/GRND	X/R
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FASB1 DISC	480.	14.027	2.06	10.336	1.34
FCB-1-EF DISC	480.	8.574	0.59	5.418	0.42
FCBV-1 VFD	480.	15.507	1.74	11.695	1.23
FDSP1 DISC	480.	1.454	0.15	0.849	0.10
FDSP2 DISC	480.	1.449	0.15	0.847	0.10

FDSP4 DISC	480.	1.462	0.14	0.854	0.09
FLRDRNSP3 DISC	480.	1.457	0.15	0.851	0.10
GDWU-1 DISC	480.	4.344	0.34	2.661	0.22
GDWU-2 DISC	480.	4.344	0.34	2.661	0.22
GP-3 DISC TERM	480.	4.273	0.38	2.616	0.24

GRIT BLOWER 2	480.	4.356	0.36	2.665	0.23
GRTBLWR3 DISC	480.	4.266	0.36	2.614	0.23
GSP1 DISC	480.	4.363	0.37	2.667	0.23
GSP2 DISC	480.	4.363	0.37	2.667	0.23
GSP4 DISC	480.	4.363	0.37	2.667	0.23

HEAT REC UNIT	480.	7.941	0.69	5.337	0.46
HOIST D DISC	480.	4.357	0.36	2.665	0.23
HOIST EPB-B DI	480.	4.508	1.00	3.009	0.59
HOIST EPB-B ST	480.	3.890	0.81	2.503	0.48
HOIST P DISC	480.	1.458	0.16	0.850	0.10

HOIST Q DISC	480.	1.454	0.16	0.848	0.10
HORZ BAND SAW	480.	2.323	0.48	1.408	0.39
HP-PEW-P-1 DIS	480.	11.625	3.27	9.680	2.26
HPPEW2 DISC	480.	11.128	3.32	9.365	2.24
HT BOOST PMP D	480.	1.444	0.13	0.846	0.09

HV-1 DISC	480.	3.439	0.66	2.157	0.40
IFSAB-1 LCP	480.	7.660	0.80	4.829	0.60
IPC LP-EFB	208.	3.475	1.14	4.148	1.33
IPC LP-WFB	208.	1.735	0.53	1.802	0.53
IRON WORK	480.	4.675	1.27	3.119	1.03

JC-1 DISC	480.	4.350	0.35	2.663	0.22
JC-2 DISC	480.	3.385	0.28	2.040	0.18
Junction Box	480.	4.839	0.45	2.919	0.35
Junction box.	480.	2.100	0.31	1.271	0.19
LBP-6 STARTER	480.	4.044	0.40	2.490	0.27

LBP-7 STARTER	480.	4.079	0.39	2.505	0.27
LBP-8 STARTER	480.	4.079	0.39	2.505	0.27
LP-ADM-1	208.	5.318	3.01	5.653	2.95
LP-ADM-1A	208.	5.243	2.93	5.522	2.81
LP-ADM-UPS	208.	0.042	7.97	0.037	7.95

LP-C	208.	1.793	0.58	1.796	0.56
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F A U L T S T U D Y S U M M A R Y
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

BUS RECORD NO NAME	VOLTAGE L-L	A V A I L A B L E 3 PHASE	F A U L T X/R	D U T I E S (KA) LINE/GRND	X/R
LP-CEB-A	208.	3.239	0.74	3.259	0.72
LP-CEB-B	208.	3.170	0.74	3.143	0.70
LP-D	208.	1.761	2.65	1.796	2.67
LP-E	208.	4.017	2.66	4.182	2.66
LP-EBB-A	208.	3.146	0.86	3.199	0.80
LP-EE	208.	0.438	1.41	0.441	1.40
LP-F	208.	3.908	2.37	4.011	2.17
LP-FF	208.	0.473	1.79	0.464	1.64
LP-LSE	208.	1.815	0.59	1.834	0.57
LP-M	208.	3.226	0.76	3.336	0.75
LP-N	208.	3.370	0.78	3.466	0.76
LP-O	208.	2.469	2.23	2.498	2.01
LP-Q	208.	3.211	0.75	3.324	0.75
LP-RLS	208.	1.713	2.51	1.736	2.43
LP-T	208.	2.530	2.65	2.620	2.60
LP-U	208.	2.492	2.23	2.521	2.01
LP-V	208.	1.488	1.73	1.520	1.65
LP-W	208.	1.479	1.72	1.514	1.65
LP-WBB-A	208.	3.453	0.76	3.467	0.74
LP-WBB-B	208.	3.388	0.75	3.358	0.72
LP-WPB-A	208.	1.747	0.57	1.783	0.56
LP-WPB-B	208.	1.731	0.57	1.754	0.55
LSE-ACCU-1	480.	6.233	0.59	4.036	0.41
LSE-ACU-1	480.	3.901	0.37	2.391	0.26
LSE-PPU-1	480.	2.912	0.29	1.754	0.20
MB-EF-1 DISC	480.	3.216	0.70	2.006	0.56
MCC-51A	480.	29.554	3.35	24.609	2.67
MCC-51B	480.	29.816	3.43	24.736	2.69
MCC-52A	480.	29.594	3.35	24.628	2.67
MCC-52B	480.	30.177	3.45	25.166	2.73
MCC-53 A	480.	29.720	3.38	24.687	2.68
MCC-53B	480.	29.731	3.41	24.696	2.69
MCC-54 A	480.	28.840	3.30	23.784	2.60
MCC-54B	480.	29.095	3.34	23.904	2.62
MCC-55 A	480.	29.381	3.33	24.527	2.66
MCC-55B	480.	29.646	3.39	24.656	2.68
MCC-56 A	480.	13.375	2.33	9.406	1.78
MCC-56B	480.	13.268	2.33	9.295	1.77
MCC-ADM-A	480.	11.882	3.34	8.680	2.42
MCC-ADM-A.	480.	11.882	3.34	8.680	2.42
MCC-C	480.	14.647	3.39	13.426	2.75

F A U L T S T U D Y S U M M A R Y
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

BUS RECORD NO NAME	VOLTAGE L-L	A V A I L A B L E 3 PHASE	F A U L T X/R	D U T I E S LINE/GRND	(KA) X/R
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MCC-CEB-A	480.	23.870	3.96	22.596	3.23
MCC-CEB-B	480.	23.431	4.31	22.778	3.52
MCC-D	480.	15.314	4.19	14.488	3.49
MCC-D.	480.	15.314	4.19	14.488	3.49
MCC-E	480.	13.475	5.18	12.109	4.25
MCC-E.	480.	13.475	5.18	12.109	4.25
MCC-E..	480.	13.475	5.18	12.109	4.25
MCC-EBB-A	480.	10.847	4.89	11.463	4.04
MCC-EBB-A.	480.	10.847	4.89	11.463	4.04
MCC-EBB-B	480.	9.982	4.84	10.802	4.05
MCC-EBB-B.	480.	9.982	4.84	10.802	4.05
MCC-EE	480.	12.846	4.15	11.289	3.22
MCC-EPB-A	480.	6.573	2.23	4.901	1.14
MCC-EPB-A.	480.	6.573	2.23	4.901	1.14
MCC-EPB-A..	480.	6.573	2.23	4.901	1.14
MCC-EPB-B	480.	6.180	2.17	4.756	1.15
MCC-EPB-B.	480.	6.180	2.17	4.756	1.15
MCC-EPB-B..	480.	6.180	2.17	4.756	1.15
MCC-F	480.	12.794	5.09	11.627	4.02
MCC-F.	480.	12.794	5.09	11.627	4.02
MCC-F..	480.	12.794	5.09	11.627	4.02
MCC-FF	480.	12.276	3.84	10.891	2.84
MCC-M	480.	20.405	5.11	17.688	3.98
MCC-M.	480.	20.405	5.11	17.688	3.98
MCC-N	480.	21.435	5.76	18.833	5.03
MCC-N.	480.	21.435	5.76	18.833	5.03
MCC-P	480.	20.341	4.40	17.270	3.18
MCC-Q	480.	19.685	3.72	16.991	2.89
MCC-R	480.	41.994	5.47	39.526	4.54
MCC-RLS-A	480.	14.834	4.49	13.417	3.71
MCC-RLS-B	480.	12.474	3.98	10.480	2.91
MCC-S	480.	42.334	5.50	39.731	4.55
MCC-WBB-A	480.	36.223	6.17	34.767	5.00
MCC-WBB-A.	480.	36.223	6.17	34.767	5.00
MCC-WBB-B	480.	33.198	5.78	32.484	4.75
MCC-WBB-B.	480.	33.198	5.78	32.484	4.75
MCC-WPB-A	480.	12.825	2.34	9.232	1.79
MCC-WPB-A.	480.	12.825	2.34	9.232	1.79
MCC-WPB-B	480.	12.449	2.34	9.102	1.80
MCC-WPB-B.	480.	12.449	2.34	9.101	1.80
MCC-XA	480.	16.722	2.79	11.846	1.95

F A U L T S T U D Y S U M M A R Y
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

BUS RECORD NO NAME	VOLTAGE L-L	A V A I L A B L E 3 PHASE	F A U L T X/R	D U T I E S (KA) LINE/GRND	X/R
MCC-XB	480.	40.244	4.27	36.772	3.23
METAL LATHE	480.	4.803	1.35	3.226	1.10
MILL MACH	480.	3.979	0.93	2.563	0.76
MOD VALVE 1 DI	480.	1.453	0.16	0.848	0.10
MOD VALVE 3 DI	480.	1.325	0.15	0.773	0.09
MOD VALVE 5 DI	480.	1.217	0.15	0.709	0.09
MOD VALVE 7 DI	480.	1.125	0.14	0.656	0.09
MPPEWP1 DISC	480.	10.756	2.23	8.531	1.47
MPPEWP2 DISC	480.	10.341	2.28	8.287	1.48
MU HV2 DISC	480.	1.458	0.18	0.850	0.10
MV10 DISC	480.	1.447	0.16	0.844	0.10
MV11 DISC	480.	1.433	0.16	0.836	0.10
MV12 DISC	480.	1.419	0.16	0.828	0.10
MV2 DISC	480.	1.466	0.16	0.855	0.10
MV4 DISC	480.	1.452	0.15	0.847	0.10
MV6 DISC	480.	1.438	0.15	0.839	0.09
MV8 DISC	480.	1.424	0.15	0.831	0.09
MV9 DISC	480.	1.461	0.16	0.852	0.10
N EQPT RCPT	480.	2.268	0.18	1.336	0.13
OZNTR DISC	480.	8.307	1.14	5.995	0.79
P-53-06 DISC	480.	5.794	0.55	3.564	0.42
P-53-06 STR	480.	4.898	0.46	2.972	0.36
P-53-07 DISC	480.	3.416	0.33	2.030	0.25
P-53-07 STR	480.	3.067	0.30	1.817	0.23
P-53-20 DISC	480.	5.848	0.54	3.576	0.42
P-53-20 STR	480.	4.933	0.45	2.980	0.35
P-53-21 DISC	480.	5.312	0.50	3.243	0.39
P-53-21 STR	480.	4.540	0.43	2.742	0.33
PAB-E1 DV & BO	480.	2.196	0.32	1.333	0.19
PAB-E1 LCP	480.	3.650	0.51	2.347	0.32
PAB-E1 STR IN	4160.	2.899	6.14	2.404	5.45
PAB-E2 DV & BO	480.	1.856	0.28	1.116	0.17
PAB-E2 LCP	480.	3.036	0.43	1.905	0.27
PAB-E2 STR IN	4160.	2.366	5.87	2.137	5.38
PAB-E3 DV & BO	480.	1.621	0.24	0.972	0.16
PAB-E3 LCP	480.	2.334	0.34	1.430	0.22
PAB-E3 STR IN	4160.	2.899	6.14	2.404	5.45
PAB-W1 VALVES	480.	6.648	0.31	4.002	0.21
PAB-W2 VALVES	480.	5.064	0.24	3.014	0.17
PAB-W3 VALVES	480.	4.191	0.22	2.483	0.15
PC-E1 DISC	480.	0.587	0.14	0.341	0.10

F A U L T S T U D Y S U M M A R Y
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

BUS RECORD NO NAME	VOLTAGE L-L	A V A I L A B L E 3 PHASE	F A U L T X/R	D U T I E S (KA) LINE/GRND	X/R
PC-E2 DISC	480.	0.745	0.17	0.435	0.11
PC-E3 DISC	480.	0.768	0.17	0.447	0.11
PC-E4 DISC	480.	0.533	0.14	0.310	0.09
PC-WPB-EF-2 DI	480.	3.123	0.31	1.849	0.23
PC-WPB-P-2 DIS	480.	1.973	0.20	1.159	0.15
PCDR W1 DISC	480.	1.308	0.18	0.765	0.14
PCDR-W2 DISC	480.	2.130	0.24	1.254	0.18
PDP UV 2A	480.	14.235	1.63	10.692	1.23
PDP UV 2B	480.	14.235	1.63	10.692	1.23
PDP-E1 DISC	480.	4.714	1.05	3.065	0.59
PDP-W1 DISC	480.	3.357	0.40	1.982	0.27
PEW STRAINER D	480.	1.448	0.12	0.847	0.09
PEWP1 DISC	480.	17.207	3.63	13.627	2.46
PEWP2 DISC	480.	16.274	3.12	12.679	2.03
PEWP3 ATS NRM	480.	20.535	4.76	17.703	3.87
PEWP3 DISC	480.	16.768	2.94	13.269	2.09
PMPRM HOIST DI	480.	4.065	0.45	2.496	0.29
PP-ADM-1	480.	2.634	3.45	2.846	3.44
PP-ADM-2	480.	2.125	1.68	1.940	1.20
PP-EBB-A	480.	9.414	4.25	9.801	3.35
PP-EBB-B	480.	7.720	1.48	6.483	0.88
PP-LSE	480.	12.156	2.09	10.177	1.53
PP-LSE CKT #14	480.	0.975	0.14	0.573	0.11
PP-LSE CKT #2	480.	0.975	0.14	0.573	0.11
PP-LSE CKT #26	480.	0.975	0.14	0.573	0.11
PP-LSE CKT #8	480.	0.975	0.14	0.573	0.11
PP-MTB	480.	5.327	1.84	3.691	1.50
PP-MTB DISC SW	480.	5.564	1.92	3.880	1.57
PP-UV	480.	1.619	0.17	0.950	0.13
PP-WBB-A	480.	29.334	4.33	27.051	3.30
PP-WBB-B	480.	28.409	2.47	25.018	1.70
PP-Z	480.	4.757	1.46	3.215	1.19
PSCP-E1 DISC	480.	4.029	0.80	2.538	0.47
PSCP-E2 DISC	480.	3.895	0.82	2.505	0.48
PSCP-W1 DISC	480.	6.762	0.63	4.193	0.49
PSCP-W2 DISC	480.	4.389	0.44	2.642	0.33
PSLP-E1 VFD IN	480.	4.043	0.86	2.543	0.48
PSLP-E2 VFD IN	480.	3.651	0.83	2.314	0.46
PSLP-E3 VFD IN	480.	3.518	0.75	2.166	0.42
PSLP-W1 VFD IN	480.	6.915	0.71	4.331	0.55
PSLP-W2 INPUT	480.	8.165	0.90	5.298	0.70

F A U L T S T U D Y S U M M A R Y
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

BUS RECORD NO NAME	VOLTAGE L-L	A V A I L A B L E 3 PHASE	F A U L T X/R	D U T I E S LINE/GRND	(KA) X/R
=====					
PSLPG-W1 VFD I	480.	2.544	0.23	1.499	0.18
PSLPG-W2 INPUT	480.	4.602	0.41	2.775	0.31
PSLPM-E1 LCP	480.	3.890	0.81	2.503	0.48
PSLPM-E2 LCP	480.	3.630	0.74	2.306	0.44
RASP-E1 VFD IN	480.	2.035	0.43	1.209	0.21
RASP-E2 VFD IN	480.	2.021	0.45	1.207	0.22
RASP-E3 VFD IN	480.	2.035	0.43	1.209	0.21
RASP-E4 VFD IN	480.	2.020	0.46	1.206	0.22
RASP-E5 VFD IN	480.	2.034	0.44	1.209	0.21
RASP-E6 VFD IN	480.	2.020	0.47	1.206	0.22
RASP-E7 VFD IN	480.	2.034	0.44	1.209	0.21
RASP-E8 VFD IN	480.	2.020	0.46	1.206	0.22
RASP-W1 VFD IN	480.	14.004	0.52	8.887	0.34
RASP-W2 VFD IN	480.	13.700	0.55	8.796	0.36
RASP-W3 VFD IN	480.	14.004	0.52	8.887	0.34
RASP-W4 VFD IN	480.	13.700	0.55	8.796	0.36
RBDP-2 DISC	480.	10.279	1.85	7.948	1.23
RBDP-4 DISC	480.	10.279	1.85	7.948	1.23
RBDP1 DISC	480.	8.793	1.43	6.410	0.89
RBDP3 DISC	480.	8.793	1.43	6.410	0.89
RECIRCV PAB-E1	480.	2.296	0.32	1.399	0.20
RECIRCV PAB-E2	480.	1.927	0.27	1.162	0.17
RECIRCV PAB-E3	480.	1.501	0.23	0.896	0.15
RETBSNRFCV STA	480.	2.745	0.25	1.643	0.17
RF # 5 DISC	480.	2.733	0.27	1.638	0.18
RF # 6 DISC	480.	2.733	0.27	1.638	0.18
RF-1 DISC	480.	3.430	0.63	2.154	0.39
RIVER VALVE DI	480.	1.448	0.12	0.847	0.09
RLS-ACCU-1	480.	2.755	0.23	1.646	0.16
RLS-ACCU-1 DIS	480.	3.369	0.28	2.031	0.19
RLS-ACU-1	480.	6.999	0.60	4.554	0.41
RLS-EF-1 DISC	480.	2.697	0.27	1.607	0.19
RLS-EF-2 DISC	480.	4.794	0.46	2.960	0.32
RLS-PPU-1	480.	7.378	0.79	4.897	0.56
RLS-SF-1 DISC	480.	1.755	0.20	1.034	0.14
ROOF FAN 10 DI	480.	2.856	0.20	1.684	0.14
ROOF FAN 11 DI	480.	2.825	0.21	1.662	0.14
ROOF FAN 12 DI	480.	2.856	0.20	1.684	0.14
RS-SAP-1 DISC	480.	2.010	0.22	1.177	0.16
S-1-1 DISC	480.	1.639	0.21	0.966	0.15
S-21-1 DISC	480.	2.235	0.46	1.344	0.28

F A U L T S T U D Y S U M M A R Y
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

BUS RECORD NO NAME	VOLTAGE L-L	A V A I L A B L E 3 PHASE	F A U L T X/R	D U T I E S (KA) LINE/GRND	X/R
S-21-1 STARTER	480.	1.966	0.41	1.174	0.25
S-21-2 DISC	480.	2.215	0.46	1.331	0.28
S-21-2 STARTER	480.	1.741	0.36	1.034	0.22
S-21-3 DISC	480.	1.822	0.40	1.083	0.24
S-21-3 STARTER	480.	1.486	0.33	0.877	0.20
S-21-4 DISC	480.	1.808	0.40	1.075	0.24
S-21-4 STARTER	480.	1.626	0.36	0.963	0.22
S-54-2 DISC	480.	2.385	0.25	1.408	0.20
S-54-2 STR	480.	2.293	0.25	1.352	0.19
SC-1 DISC	480.	4.258	0.35	2.612	0.23
SC-2 DISC	480.	4.348	0.35	2.662	0.22
SC-3 DISC	480.	4.348	0.35	2.662	0.22
SC-E1 DISC	480.	0.562	0.11	0.329	0.07
SC-E2 DISC	480.	0.561	0.11	0.329	0.07
SC-E3 DISC	480.	0.324	0.09	0.189	0.06
SC-E4 DISC	480.	0.323	0.09	0.189	0.06
SCDR-W1 DISC	480.	0.610	0.07	0.356	0.05
SCDR-W2 DISC	480.	0.610	0.07	0.356	0.05
SCP-6	480.	12.794	5.09	11.627	4.02
SCP-8	480.	13.475	5.18	12.109	4.25
SCREW CONV 3 S	480.	4.356	0.36	2.665	0.23
SCRNCNV DISC	480.	4.346	0.34	2.661	0.22
SCTY GATE STAR	480.	4.774	0.68	3.068	0.50
SE ISO VALVE D	480.	1.448	0.12	0.847	0.09
SECURITY GATE	480.	5.757	0.88	3.845	0.65
SEG1 DISC	480.	1.452	0.13	0.850	0.09
SEP1 VFD IN	480.	17.175	3.79	13.898	2.75
SEP2 VFD IN	480.	17.926	4.00	14.661	3.05
SEP3 VFD IN	480.	17.044	3.43	13.555	2.41
SEP4 VFD IN	480.	16.144	2.69	12.747	1.86
SEP5 VFD IN	480.	17.175	3.79	13.898	2.75
SEP6 VFD IN	480.	17.926	4.00	14.661	3.05
SEPPMP DISC TE	480.	7.987	0.77	5.356	0.48
SF1 DISC	480.	1.430	0.13	0.836	0.09
SF1FF DISC	480.	4.007	0.53	2.446	0.30
SF2EE DISC	480.	1.538	0.35	0.894	0.17
SF3FF DISC	480.	3.992	0.50	2.441	0.30
SF4EE DISC	480.	4.041	0.48	2.468	0.29
SLC 4 DISC	480.	3.507	0.46	2.039	0.23
SLC 5 DISC	480.	3.310	0.46	1.919	0.23
SLC 6 DISC	480.	2.393	0.28	1.391	0.16

F A U L T S T U D Y S U M M A R Y
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

BUS RECORD NO NAME	VOLTAGE L-L	A V A I L A B L E 3 PHASE	F A U L T X/R	D U T I E S (KA) LINE/GRND	X/R
SLC 7 DISC	480.	2.243	0.28	1.302	0.15
SLC-1 DISC	480.	2.746	0.26	1.644	0.18
SLC-3 DISC	480.	2.746	0.26	1.644	0.18
SLC2 DISC	480.	2.733	0.27	1.638	0.18
SLDG F-50-1	480.	0.857	0.13	0.503	0.10
SLDG F-50-2	480.	0.857	0.13	0.503	0.10
SLDG F-50-3	480.	0.748	0.13	0.439	0.10
SLDG F-50-4	480.	0.748	0.13	0.439	0.10
SLDG F-60-1	480.	0.897	0.14	0.526	0.10
SLDG F-60-2	480.	0.897	0.14	0.526	0.10
SLDG F-60-3	480.	0.897	0.14	0.526	0.10
SLDG F-60-4	480.	0.736	0.13	0.432	0.10
SLDG S-50-1	480.	0.780	0.13	0.458	0.10
SLDG S-50-2	480.	0.857	0.13	0.503	0.10
SLDG S-50-3	480.	0.857	0.13	0.503	0.10
SLDG S-50-4	480.	0.857	0.13	0.503	0.10
SLDG S-50-5	480.	0.857	0.13	0.503	0.10
SLDG S-60-1	480.	0.836	0.13	0.490	0.10
SLDG S-60-2	480.	0.836	0.13	0.490	0.10
SLG-3 DISC	480.	4.258	0.35	2.611	0.23
SLG-4 DISC	480.	4.258	0.35	2.611	0.23
SLGT-5 DISC	480.	4.348	0.35	2.662	0.22
SLGT1 DISC	480.	6.985	0.71	4.640	0.47
SLGT2 DISC	480.	2.736	0.27	1.638	0.18
SLP1 DISC	480.	2.756	0.28	1.647	0.18
SLP2 DISC	480.	2.756	0.28	1.647	0.18
SLP3 DISC	480.	2.743	0.30	1.641	0.19
SLUDGE CND LCP	480.	3.518	0.75	2.166	0.42
SMP2 DISC	480.	2.736	0.28	1.639	0.18
SP NGB DISC	480.	4.266	0.36	2.614	0.23
SSC-1 DISC	480.	4.266	0.36	2.614	0.23
SSC-2 DISC	480.	4.356	0.36	2.665	0.23
SSCP-E1 DISC	480.	1.356	0.33	0.794	0.15
SSCP-W1 DISC	480.	6.957	0.25	4.157	0.16
SSCP-W2 DISC	480.	6.907	0.27	4.142	0.17
STWP 1 DISC	480.	5.595	0.39	3.298	0.26
STWP 2 DISC	480.	5.078	0.47	2.988	0.26
SUB 1 BUS A	480.	16.541	4.96	16.170	5.06
SUB 1 BUS B	480.	16.354	5.33	16.078	5.30
SUB 1 PRIMARY	13200.	5.395	1.54	4.214	1.42
SUB 1 PRIMARY	13200.	6.266	2.76	4.853	2.55

F A U L T S T U D Y S U M M A R Y
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

BUS RECORD NO NAME	VOLTAGE A V A I L A B L E		F A U L T D U T I E S (KA)		
	L-L	3 PHASE	X/R	LINE/GRND	X/R
=====					
SUB 2 BUS A	480.	13.694	5.27	12.543	5.03
SUB 2 BUS B	480.	13.106	5.39	12.218	5.10
SUB 2 PRIMARY	13200.	5.676	1.70	4.438	1.54
SUB 2 PRIMARY	13200.	6.588	3.55	5.123	3.15
SUB 3 BUS A	480.	38.990	6.91	39.633	7.03
SUB 3 BUS B	480.	36.262	6.95	37.671	7.05
SUB 3 PRIMARY	13200.	7.059	3.61	5.628	2.81
SUB 3 PRIMARY	13200.	6.743	4.49	5.255	3.81
SUB 4 BUS A	480.	21.070	5.49	18.908	5.39
SUB 4 BUS B	480.	21.678	6.04	19.232	5.69
SUB 4 PRIMARY	13200.	6.146	2.06	4.820	1.80
SUB 4 PRIMARY	13200.	6.777	4.35	5.286	3.70
SUB 5 BUS A	480.	43.957	6.62	42.742	6.84
SUB 5 BUS B	480.	44.488	7.00	43.074	7.10
SUB 5 PRIMARY	13200.	7.151	3.80	5.714	2.91
SUB 5 PRIMARY	13200.	6.823	4.81	5.326	4.01
SUB 6 BUS A	480.	11.352	5.74	12.504	5.60
SUB 6 BUS B	480.	10.392	5.60	11.710	5.50
SUB 7 BUS A	480.	28.285	5.98	29.279	6.14
SUB 7 BUS B	480.	26.895	6.20	28.225	6.30
SUB 7 XFMR A P	13200.	7.166	3.72	5.731	2.87
SUB 7 XFMR B P	13200.	6.838	4.69	5.342	3.94
SUB 8 BUS A	4160.	2.915	6.51	2.422	5.88
SUB 8 BUS B	4160.	2.375	6.04	2.152	5.70
SUB 8 PRIMARY	13200.	7.098	3.72	5.663	2.88
SUB 8 PRIMARY	13200.	6.775	4.67	5.283	3.93
SUB SP-1 DISC	480.	4.266	0.36	2.614	0.23
SUB SP-2 DISC	480.	4.356	0.36	2.665	0.23
SUMP PUMP 1 DI	480.	2.271	0.30	1.377	0.17
SUMP PUMP 3 DI	480.	0.905	0.17	0.532	0.10
SWP LCP	480.	8.777	1.94	5.870	1.27
SWPSO VALVE DI	480.	2.600	0.31	1.532	0.23
SWPSO-SG DISC	480.	2.600	0.31	1.532	0.23
TABLET FDR DIS	480.	3.763	0.36	2.298	0.25
TEMP ADM1 DISC	480.	5.653	0.90	3.799	0.66
TEMP ADM2 DISC	480.	5.653	0.90	3.799	0.66
TEMP PUMPS	480.	1.446	0.12	0.846	0.09
TER FIL EFF SP	480.	1.458	0.16	0.850	0.10
TFB-MPC	208.	1.457	0.90	1.470	0.89
TGS DISC	480.	3.613	0.49	2.242	0.36
UDSP1 DISC	480.	1.463	0.17	0.851	0.10

F A U L T S T U D Y S U M M A R Y
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

BUS RECORD NO NAME	VOLTAGE L-L	A V A I L A B L E 3 PHASE	F A U L T X/R	D U T I E S (KA) LINE/GRND	X/R
UDSP2 DISC	480.	1.454	0.16	0.848	0.10
UH EE	480.	2.445	0.24	1.459	0.16
UH EE DISC	480.	2.709	0.26	1.622	0.18
UH FF	480.	2.688	0.26	1.610	0.18
UPS-ADM-1 INPU	208.	4.936	2.22	4.949	1.81
UPS-ADM-1 OUTP	208.	0.042	8.00	0.037	8.00
UV 2A	480.	2.987	1.90	3.192	1.90
UV 2B	480.	2.987	1.90	3.192	1.90
UV-1A	480.	2.749	2.82	2.935	2.91
UV-1A PD LINE	480.	2.766	2.85	2.966	2.98
UV-1B	480.	3.223	2.73	3.489	2.82
UV-1B PD LINE	480.	3.247	2.76	3.534	2.90
VFD CFG-1 INPU	480.	29.145	3.55	23.455	2.63
VFD CFG-2 INPU	480.	29.396	3.60	23.568	2.65
VFD CFG-3 INPU	480.	32.551	3.93	27.147	2.97
W CONT GT2 DIS	480.	1.444	0.13	0.846	0.09
W1 FLOW VALVES	480.	3.458	0.20	2.040	0.14
WA MAIN BOV	480.	3.654	0.19	2.159	0.14
WAS VALVE W1	480.	3.175	0.18	1.872	0.13
WAS VALVE W1 D	480.	5.087	0.25	3.031	0.17
WAS VALVE W2	480.	2.663	0.16	1.566	0.12
WASP-E1 VFD IN	480.	1.454	0.25	0.861	0.15
WASP-E2 VFD IN	480.	1.447	0.26	0.860	0.15
WASP-W1 VFD IN	480.	6.946	0.24	4.153	0.16
WASP-W2 VFD IN	480.	6.895	0.26	4.139	0.17
WASV E1	480.	1.239	0.20	0.737	0.13
WASV E2	480.	1.239	0.20	0.737	0.13
WASV E3	480.	1.169	0.20	0.693	0.13
WASV E4	480.	1.169	0.20	0.693	0.13
WBB-EF-1 DISC	480.	6.950	0.25	4.155	0.16
WBB-EF-2 DISC	480.	7.587	0.28	4.574	0.18
WBB-EF-3 DISC	480.	3.602	0.15	2.120	0.10
WBB-EF-4 DISC	480.	2.785	0.14	1.636	0.09
WBB-EF-5 DISC	480.	1.947	0.11	1.140	0.08
WBB-EF-6 DISC	480.	1.475	0.12	0.859	0.08
WBB-EF-7 DISC	480.	2.427	0.12	1.422	0.08
WBB-H1	480.	6.811	0.30	4.091	0.19
WBB-H1 DISC	480.	9.483	0.38	5.813	0.24
WBB-H2	480.	4.991	0.23	2.957	0.15
WBB-H2 DISC	480.	6.317	0.26	3.769	0.17
WBB-HV-1 DISC	480.	4.270	0.20	2.522	0.14

F A U L T S T U D Y S U M M A R Y
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

BUS RECORD NO NAME	VOLTAGE L-L	A V A I L A B L E 3 PHASE	F A U L T X/R	D U T I E S (KA) LINE/GRND	X/R
=====					
WBB-HV-2	480.	10.283	0.46	6.414	0.31
WBB-HV-2 DISC	480.	12.548	0.55	8.013	0.37
WBB-P-1 DISC	480.	2.099	0.14	1.224	0.08
WBB-P-2 DISC	480.	2.096	0.15	1.224	0.09
WEST AESG W1	480.	2.671	0.17	1.571	0.12
WEST AESG W2	480.	1.586	0.13	0.928	0.10
WEST AESGW1 DI	480.	2.832	0.17	1.667	0.12
WFB-EUH-TERM's	208.	1.609	0.49	1.580	0.47
WHM DISC	480.	2.256	0.18	1.329	0.13
WPB-EF-1 DISC	480.	2.213	0.22	1.299	0.17
WPB-H1 DISC	480.	5.549	0.54	3.398	0.41
WPB-H1 HOIST	480.	4.546	0.44	2.743	0.34
WPB-HV-1	480.	2.340	0.22	1.379	0.17
WPB-HV-1 DISC	480.	2.672	0.25	1.579	0.19
WPB-P-1 DISC	480.	1.746	0.18	1.023	0.14
WPE-SAP-2 DISC	480.	2.007	0.23	1.177	0.16
WPSE GATE E DI	480.	1.457	0.13	0.853	0.09
WPSE GATE W DI	480.	1.457	0.13	0.853	0.09
WPSE SMPL PMP	480.	1.466	0.16	0.855	0.10
WSE-SAP-3 DIS	480.	3.608	0.16	2.121	0.11
WTR-CRC-PMP-1	480.	9.232	0.84	6.396	0.57
WTR-CRC-PMP-2	480.	9.232	0.84	6.396	0.57
WW BYP GATE E	480.	1.457	0.13	0.853	0.09
WWRDP2 DISC	480.	3.304	0.39	1.939	0.21
WWRDP3 DISC	480.	3.262	0.40	1.910	0.22
WWWRESDP1 DISC	480.	3.277	0.40	1.924	0.22
Wireway	480.	1.508	0.26	0.898	0.16
Wireway.	480.	1.508	0.26	0.898	0.16

1044 FAULTED BUSES, 1603 BRANCHES, 466 CONTRIBUTIONS
UNBALANCED FAULTS REQUESTED

*** SHORT CIRCUIT STUDY COMPLETE ***

THREE PHASE MOMENTARY DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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15 KV BUS 1  E/Z:      6.963 KA AT  -73.97 DEG ( 159.20 MVA) X/R:      3.82
SYM*1.6:     11.141 KA      MOMENTARY BASED ON X/R:      8.197 KA
SYM*2.7:     18.800 KA      CREST BASED ON X/R:      14.173 KA
VOLTAGE:     13200.  EQUIV. IMPEDANCE=  0.3022 + J  1.0519 OHMS
M11.102      SUB 2 PRIMARY      0.064 KA      ANG:      97.61
M11.103      SUB 3 PRIMARY      0.147 KA      ANG:      94.80
M11.104      SUB 4 PRIMARY      0.135 KA      ANG:      98.38
M11.108      SUB 8 PRIMARY      0.213 KA      ANG:      98.07
15 KV BUS 1 LI 15 KV BUS 1 Li  6.131 KA      ANG:     -252.75
M11.101      SUB 1 PRIMARY      0.057 KA      ANG:      97.17
M11.105      SUB 5 PRIMARY      0.228 KA      ANG:      96.79

15 KV BUS 1 Li E/Z:      6.963 KA AT  -73.97 DEG ( 159.20 MVA) X/R:      3.82
SYM*1.6:     11.141 KA      MOMENTARY BASED ON X/R:      8.197 KA
SYM*2.7:     18.801 KA      CREST BASED ON X/R:      14.173 KA
VOLTAGE:     13200.  EQUIV. IMPEDANCE=  0.3022 + J  1.0519 OHMS
M11.100      DTE NORTH          6.131 KA      ANG:     -72.75
15 KV BUS 1 LI 15 KV BUS 1      0.844 KA      ANG:     -82.89

15 KV BUS 2  E/Z:      6.653 KA AT  -78.04 DEG ( 152.10 MVA) X/R:      4.90
SYM*1.6:     10.644 KA      MOMENTARY BASED ON X/R:      8.296 KA
SYM*2.7:     17.962 KA      CREST BASED ON X/R:      14.365 KA
VOLTAGE:     13200.  EQUIV. IMPEDANCE=  0.2373 + J  1.1207 OHMS
M11.202      SUB 2 PRIMARY      0.048 KA      ANG:      97.23
M11.203      SUB 3 PRIMARY      0.078 KA      ANG:      94.55
M11.204      SUB 4 PRIMARY      0.136 KA      ANG:      97.77
M11.208      SUB 8 PRIMARY      0.134 KA      ANG:      97.85
15 KV BUS 2 LI 15 KV BUS 2 Li  5.961 KA      ANG:     -257.48
M11.201      SUB 1 PRIMARY      0.039 KA      ANG:      97.09
M11.205      SUB 5 PRIMARY      0.260 KA      ANG:      97.07

15 KV BUS 2 Li E/Z:      6.653 KA AT  -78.05 DEG ( 152.10 MVA) X/R:      4.90
SYM*1.6:     10.644 KA      MOMENTARY BASED ON X/R:      8.296 KA
SYM*2.7:     17.962 KA      CREST BASED ON X/R:      14.365 KA
VOLTAGE:     13200.  EQUIV. IMPEDANCE=  0.2373 + J  1.1207 OHMS
M11.200      DTE SOUTH          5.961 KA      ANG:     -77.48
15 KV BUS 2 LI 15 KV BUS 2      0.694 KA      ANG:     -82.91

15 KV BUS 3  E/Z:      1.505 KA AT  -82.34 DEG ( 34.41 MVA) X/R:      7.43
SYM*1.6:      2.408 KA      MOMENTARY BASED ON X/R:      2.052 KA
SYM*2.7:      4.063 KA      CREST BASED ON X/R:      3.523 KA
VOLTAGE:     13200.  EQUIV. IMPEDANCE=  0.6752 + J  5.0189 OHMS
M11.118      BUS-0280           0.000 KA      ANG:     -37.34
M11.217      BUS G2             0.752 KA      ANG:      97.66
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T H R E E P H A S E M O M E N T A R Y D U T Y R E P O R T

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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CONTRIBUTIONS TO 15 KV BUS 3 (CONTINUED)

M11.117

BUS G1

0.752 KA

ANG: -262.34

78IN GC DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

AC2 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

AC2F DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

ADM ACCU1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

ADM ACU1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

ADM-CH-1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

ADM-EF-1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

ADM-EF-2 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

ADM-HVAC-1 DIS VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

ADM-HVAC-2 DIS VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

ADM-P-1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

ADM-P-2 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

ADM-P-3 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

ADM-P-4 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

ADM-SUP LCP VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

ADP-E1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

ADP-E2 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

ADP-W1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

AIR COMP 1 DIS VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

AIR COMP 1P DI VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

AIR WASH MV DI VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

THREE PHASE MOMENTARY DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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ALTERNATOR P	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
AT-E1 FCV BF-6	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
AT-E2 FCV BF-6	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
AT-E3 Z1 FCV	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
AT-E3 Z2 FCV	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
AT-E3 Z3 FCV	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
AT-E4 Z1 FCV	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
AT-E4 Z2 FCV	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
AT-E4 Z3 FCV	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
AT-W2 FCV JB	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS PEWP2 NRM	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS PP-UV-EMG	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS PP-UV-LOAD	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS PP-UV-NRM	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-51 EMG	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-51 LOAD	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-51 NRM	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-52 EMG	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-52 LOAD	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-52 NRM	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-54 EMG	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-54 LOAD	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)

THREE PHASE MOMENTARY DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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ATS-54 NRM	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-55 EMG	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-55 LOAD	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-55 NRM	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-ADM EMG	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-ADM LOAD	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-ADM NRM	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-CEB LOAD	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-CEB-EMG	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-CEB-NRM	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-EBB NORM	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-EBB-EMG	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-EBB-LOAD	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-LSE EMG	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-LSE LOAD	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-LSE NRM	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-RLS EMG	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-RLS LOAD	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-RLS NRM	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-WBB NORM	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-WBB-EMG	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-WBB-LOAD	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)

THREE PHASE MOMENTARY DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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ATS-WPB-EMG	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-WPB-LOAD	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-WPB-NORM	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
B-54-1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
B-54-1 MTR VAL	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
B-54-2 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
B-54-2 MTR VAL	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
B-54-3 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
B-54-3 MTR VAL	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BAR SCREEN 2 T	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BF - 64- 29	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BF- 64- 30	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BF-64-07	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BF-64-08	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BSCRN-3 STR	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BSN-OUT-GT-1 D	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BSN-OUT-GT-3 D	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BSNHST DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BSNINFLGT-1 DI	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BSNINFLGT-3 DI	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BSNINFLGT2 DIS	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BSNOUTGT2 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)

THREE PHASE MOMENTARY DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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=====
BT1-1M DISC    VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BT2-1M DISC    VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BTAB-1 DISC    VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BTAB-2 DISC    VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BTAB-3 DISC    VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0097       VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0099       VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0101       VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0103       VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0105       VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0107       VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0109       VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0111       VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0113       VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0115       VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0117       VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0119       VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0121       VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0123       VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0125       VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0127       VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
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THREE PHASE MOMENTARY DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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=====
BUS-0141      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0143      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0145      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0147      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0149      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0151      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0153      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0155      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0157      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0159      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0161      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0163      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0165      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0167      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0169      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0171      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0178      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0179      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0180      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0181      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0182      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0188      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
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THREE PHASE MOMENTARY DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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=====
BUS-0272      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0273      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0274      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0275      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0276      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0277      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0278      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0279      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0281      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0287      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0288      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0289      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0290      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0291      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0292      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0293      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0294      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0295      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0296      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0310      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0311      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0312      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
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THREE PHASE MOMENTARY DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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BUS-0313	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0314	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0315	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0316	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0317	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0318	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0319	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0320	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0321	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0322	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0323	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0324	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0325	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0326	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0327	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0328	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0329	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0330	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0331	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0332	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0333	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0337	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)

THREE PHASE MOMENTARY DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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=====
BUS-0348      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0349      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0350      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0351      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0352      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0353      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0354      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0355      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0356      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0357      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0358      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0359      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0360      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0361      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0362      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0363      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0364      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0392      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0393      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0394      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0395      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0396      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
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THREE PHASE MOMENTARY DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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=====
BUS-0397      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0398      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0399      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0400      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0401      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0402      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0403      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0406      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0409      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0410      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0412      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0413      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0414      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0415      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0436      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BWP2 DISC     VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BWWP1 DISC    VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BYPGT1 DISC   VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BYPGT2 DISC   VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
C SUMP PUMP DI VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
CC-1 DISC     VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
CC-3 DISC     VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
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THREE PHASE MOMENTARY DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

=====

CC2 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
CE WET WELL GT VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
CEB-ACCU-1 DIS VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
CEB-ACCU-1 TER VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
CEB-ACU-1 TERM VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
CEB-EF-1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
CEB-EF-2 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
CEB-FCP-1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
CEB-FCP-2 TERM VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
CEB-P-1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
CEB-P-2 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
CF2 AHU-1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
CF2 AHU-3 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
CHABLWR DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
CN-50-3 FCV VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
CONT TK INT GT VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
CP-70 EMG VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
CP-70 NRM VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
CR-1 HSP 5 DIS VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
CR-1 HSP 6 DIS VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
D SP-2 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
DCH FNL EFF SP VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

THREE PHASE MOMENTARY DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

=====

DOOR OP EE1 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

DOOR OP EE2 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

DOOR OP FF VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

DOOR OPERATOR VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

DP-51 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

DP-52 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

DP-54 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

DP-56 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

DRILL PRESS VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

DROP (NGW) STR VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

DROP (SG) STR VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

DTE NORTH E/Z: 7.139 KA AT -75.00 DEG (163.22 MVA) X/R: 4.01
SYM*1.6: 11.423 KA MOMENTARY BASED ON X/R: 8.500 KA
SYM*2.7: 19.276 KA CREST BASED ON X/R: 14.710 KA
VOLTAGE: 13200. EQUIV. IMPEDANCE= 0.2762 + J 1.0311 OHMS
CONTRIBUTIONS: DC-8266 6.307 KA ANG: -73.98
M11.100 15 KV BUS 1 Li 0.841 KA ANG: 97.31

DTE SOUTH E/Z: 6.764 KA AT -78.88 DEG (154.65 MVA) X/R: 5.23
SYM*1.6: 10.823 KA MOMENTARY BASED ON X/R: 8.559 KA
SYM*2.7: 18.263 KA CREST BASED ON X/R: 14.810 KA
VOLTAGE: 13200. EQUIV. IMPEDANCE= 0.2173 + J 1.1055 OHMS
CONTRIBUTIONS: DC-9798 6.073 KA ANG: -78.44
M11.200 15 KV BUS 2 Li 0.693 KA ANG: 97.21

E CONT TK G1 D VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

E SUMP PUMP 1 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

EBB SUMP PUMP VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

EBB SUMP PUMP VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

THREE PHASE MOMENTARY DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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EBB-A HOIST 1 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EBB-A HOIST 1 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EBB-A HOIST 2 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EBB-A HOIST 2 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EBB-EDH-1 LINE VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EBB-EF-10 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EBB-EF-5 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EBB-EF-6 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EBB-EF-7 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EBB-EF-9 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EBB-EUH-1 TERM VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EBB-HV-1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EF1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EF2 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EF3 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EF4 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
ELEVATOR CP DI VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
ELEVATOR CP IN VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EP THRV CONTRO VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EPB-EUH-1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EPB-EUH-1 TERM VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EPBBV DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

THREE PHASE MOMENTARY DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

=====

EPBBV STARTER VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EPSEGE DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EPSEGW DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EQ INFL GATE 1 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EQ INFL GATE 1 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EQ INFL GATE 1 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EQ INFL GATE 1 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EQ INFL GATE 2 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EQ INFL GATE 3 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EQ INFL GATE 4 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EQ INFL GATE 9 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EQ-RET-V-1 DIS VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EQ-RET-V-2 DIS VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EQINGT5 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EQINGT6 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EQINGT7 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EQINGT8 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EQPRM HOIST DI VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EQPT RCPT C VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EQPT RCPT D VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EQPT RCPT E VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EQPT RCPT EBB- VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

THREE PHASE MOMENTARY DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

=====

EQPT RCPT EBB- VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EQPT RCPT EE VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EQPT RCPT EPB- VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EQPT RCPT F VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EQPT RCPT M VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EQPT RCPT RLS- VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EQRETFCV DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EQRETV3 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
ERU DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EESP6 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EUH-E1 TERM VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EUH-E2 TERM VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EUH1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EWH-1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EWH-2 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
EWH-2 TERMS VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
F-1-1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
F-1-1 STARTER VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
F-1-2 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
F-1-2 STARTER VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
F-1-3 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
F-1-3 STARTER VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

THREE PHASE MOMENTARY DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

=====

F-1-4 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

F-1-4 STARTER VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

F-1-5 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

F-1-5 STARTER VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

F-1-6 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

F-1-6 STARTER VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

F-1-7 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

F-1-7 STARTER VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

F-1-8 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

F-1-8 STARTER VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

F-2-1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

F-2-1 STARTER VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

F-2-12 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

F-2-12 STARTER VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

F-2-13 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

F-2-13 STARTER VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

F-2-18 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

F-2-18 STARTER VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

F-2-19 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

F-2-19 STARTER VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

F-2-24 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

F-2-24 STARTER VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

THREE PHASE MOMENTARY DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

=====

F-2-6 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-2-6 STARTER	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-2-7 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-2-7 STARTER	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-5-1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-5-2 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-54-1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-54-1 STR	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-54-2 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-54-2 STR	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-54-4 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-54-4 STR	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-54-5 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-54-5 STR	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-6-1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-6-2 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-6-4 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-60-5	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-60-6	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-7-1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-8-6 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
FASB-1 LCP	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)

T H R E E P H A S E M O M E N T A R Y D U T Y R E P O R T

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

=====

FASB1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
FCB-1-EF DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
FCBV-1 VFD	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
FDSP1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
FDSP2 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
FDSP4 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
FLRDRNSP3 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
GDWU-1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
GDWU-2 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
GP-3 DISC TERM	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
GRIT BLOWER 2	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
GRTBLWR3 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
GSP1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
GSP2 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
GSP4 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
HEAT REC UNIT	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
HOIST D DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
HOIST EPB-B DI	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
HOIST EPB-B ST	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
HOIST P DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
HOIST Q DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
HORZ BAND SAW	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)

THREE PHASE MOMENTARY DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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=====
HP-PEW-P-1 DIS VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
HPPEW2 DISC VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
HT BOOST PMP D VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
HV-1 DISC VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
IFSAB-1 LCP VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
IPC LP-EFB VOLTAGE: 208. ( SEE LOW VOLTAGE REPORT )
IPC LP-WFB VOLTAGE: 208. ( SEE LOW VOLTAGE REPORT )
IRON WORK VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
JC-1 DISC VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
JC-2 DISC VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
Junction Box VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
Junction box. VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
LBP-6 STARTER VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
LBP-7 STARTER VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
LBP-8 STARTER VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
LP-ADM-1 VOLTAGE: 208. ( SEE LOW VOLTAGE REPORT )
LP-ADM-1A VOLTAGE: 208. ( SEE LOW VOLTAGE REPORT )
LP-ADM-UPS VOLTAGE: 208. ( SEE LOW VOLTAGE REPORT )
LP-C VOLTAGE: 208. ( SEE LOW VOLTAGE REPORT )
LP-CEB-A VOLTAGE: 208. ( SEE LOW VOLTAGE REPORT )
LP-CEB-B VOLTAGE: 208. ( SEE LOW VOLTAGE REPORT )
LP-D VOLTAGE: 208. ( SEE LOW VOLTAGE REPORT )
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THREE PHASE MOMENTARY DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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LP-E	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
LP-EBB-A	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
LP-EE	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
LP-F	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
LP-FF	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
LP-LSE	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
LP-M	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
LP-N	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
LP-O	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
LP-Q	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
LP-RLS	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
LP-T	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
LP-U	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
LP-V	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
LP-W	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
LP-WBB-A	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
LP-WBB-B	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
LP-WPB-A	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
LP-WPB-B	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
LSE-ACCU-1	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
LSE-ACU-1	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
LSE-PPU-1	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)

THREE PHASE MOMENTARY DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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=====
MB-EF-1 DISC  VOLTAGE:   480.  ( SEE LOW VOLTAGE REPORT )
MCC-51A       VOLTAGE:   480.  ( SEE LOW VOLTAGE REPORT )
MCC-51B       VOLTAGE:   480.  ( SEE LOW VOLTAGE REPORT )
MCC-52A       VOLTAGE:   480.  ( SEE LOW VOLTAGE REPORT )
MCC-52B       VOLTAGE:   480.  ( SEE LOW VOLTAGE REPORT )
MCC-53 A      VOLTAGE:   480.  ( SEE LOW VOLTAGE REPORT )
MCC-53B       VOLTAGE:   480.  ( SEE LOW VOLTAGE REPORT )
MCC-54 A      VOLTAGE:   480.  ( SEE LOW VOLTAGE REPORT )
MCC-54B       VOLTAGE:   480.  ( SEE LOW VOLTAGE REPORT )
MCC-55 A      VOLTAGE:   480.  ( SEE LOW VOLTAGE REPORT )
MCC-55B       VOLTAGE:   480.  ( SEE LOW VOLTAGE REPORT )
MCC-56 A      VOLTAGE:   480.  ( SEE LOW VOLTAGE REPORT )
MCC-56B       VOLTAGE:   480.  ( SEE LOW VOLTAGE REPORT )
MCC-ADM-A     VOLTAGE:   480.  ( SEE LOW VOLTAGE REPORT )
MCC-ADM-A.    VOLTAGE:   480.  ( SEE LOW VOLTAGE REPORT )
MCC-C         VOLTAGE:   480.  ( SEE LOW VOLTAGE REPORT )
MCC-CEB-A     VOLTAGE:   480.  ( SEE LOW VOLTAGE REPORT )
MCC-CEB-B     VOLTAGE:   480.  ( SEE LOW VOLTAGE REPORT )
MCC-D         VOLTAGE:   480.  ( SEE LOW VOLTAGE REPORT )
MCC-D.        VOLTAGE:   480.  ( SEE LOW VOLTAGE REPORT )
MCC-E         VOLTAGE:   480.  ( SEE LOW VOLTAGE REPORT )
MCC-E.        VOLTAGE:   480.  ( SEE LOW VOLTAGE REPORT )
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THREE PHASE MOMENTARY DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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=====
MCC-E..      VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
MCC-EBB-A    VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
MCC-EBB-A.   VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
MCC-EBB-B    VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
MCC-EBB-B.   VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
MCC-EE       VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
MCC-EPB-A    VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
MCC-EPB-A.   VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
MCC-EPB-A..  VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
MCC-EPB-B    VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
MCC-EPB-B.   VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
MCC-EPB-B..  VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
MCC-F        VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
MCC-F.       VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
MCC-F..      VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
MCC-FF       VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
MCC-M        VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
MCC-M.       VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
MCC-N        VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
MCC-N.       VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
MCC-P        VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
MCC-Q        VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
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THREE PHASE MOMENTARY DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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=====
MCC-R          VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
MCC-RLS-A      VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
MCC-RLS-B      VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
MCC-S          VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
MCC-WBB-A      VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
MCC-WBB-A.     VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
MCC-WBB-B      VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
MCC-WBB-B.     VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
MCC-WPB-A      VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
MCC-WPB-A.     VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
MCC-WPB-B      VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
MCC-WPB-B.     VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
MCC-XA         VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
MCC-XB         VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
METAL LATHE    VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
MILL MACH      VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
MOD VALVE 1 DI VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
MOD VALVE 3 DI VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
MOD VALVE 5 DI VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
MOD VALVE 7 DI VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
MPPEWP1 DISC   VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
MPPEWP2 DISC   VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
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THREE PHASE MOMENTARY DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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MU HV2 DISC      VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
MV10 DISC        VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
MV11 DISC        VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
MV12 DISC        VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
MV2 DISC         VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
MV4 DISC         VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
MV6 DISC         VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
MV8 DISC         VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
MV9 DISC         VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
N EQPT RCPT      VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
OZNTR DISC       VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
P-53-06 DISC     VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
P-53-06 STR      VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
P-53-07 DISC     VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
P-53-07 STR      VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
P-53-20 DISC     VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
P-53-20 STR      VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
P-53-21 DISC     VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
P-53-21 STR      VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
PAB-E1 DV & BO   VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
PAB-E1 LCP       VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
PAB-E1 STR IN    E/Z:      2.730 KA AT -80.02 DEG ( 19.67 MVA) X/R:      6.23
                  SYM*1.6:  4.368 KA      MOMENTARY BASED ON X/R:      3.590 KA
                  SYM*2.7:  7.372 KA      CREST BASED ON X/R:      6.193 KA
                  VOLTAGE:  4160. EQUIV. IMPEDANCE= 0.1524 + J 0.8664 OHMS
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THREE PHASE MOMENTARY DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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=====
CONTRIBUTIONS TO PAB-E1 STR IN (CONTINUED)
PAB-E1 STARTER PAB-E1 STR OUT 0.523 KA ANG: 96.17
M05.001 SUB 8 BUS A 2.208 KA ANG: -79.12

PAB-E2 DV & BO VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )

PAB-E2 LCP VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )

PAB-E2 STR IN E/Z: 2.208 KA AT -79.64 DEG ( 15.91 MVA) X/R: 5.90
SYM*1.6: 3.533 KA MOMENTARY BASED ON X/R: 2.869 KA
SYM*2.7: 5.961 KA CREST BASED ON X/R: 4.955 KA
VOLTAGE: 4160. EQUIV. IMPEDANCE= 0.1957 + J 1.0701 OHMS
PAB-E2 STARTER PAB-E2 STR OUT 0.523 KA ANG: -83.83
M05.006 SUB 8 BUS B 1.686 KA ANG: -78.34

PAB-E3 DV & BO VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )

PAB-E3 LCP VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )

PAB-E3 STR IN E/Z: 2.730 KA AT -80.02 DEG ( 19.67 MVA) X/R: 6.23
SYM*1.6: 4.368 KA MOMENTARY BASED ON X/R: 3.590 KA
SYM*2.7: 7.372 KA CREST BASED ON X/R: 6.193 KA
VOLTAGE: 4160. EQUIV. IMPEDANCE= 0.1524 + J 0.8664 OHMS
PAB-E3 STARTER PAB-E3 STR OUT 0.523 KA ANG: -83.83
M05.004 SUB 8 BUS A 2.208 KA ANG: -79.12

PAB-W1 VALVES VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )

PAB-W2 VALVES VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )

PAB-W3 VALVES VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )

PC-E1 DISC VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )

PC-E2 DISC VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )

PC-E3 DISC VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )

PC-E4 DISC VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )

PC-WPB-EF-2 DI VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )

PC-WPB-P-2 DIS VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
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THREE PHASE MOMENTARY DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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=====
PCDR W1 DISC  VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
PCDR-W2 DISC  VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
PDP UV 2A     VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
PDP UV 2B     VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
PDP-E1 DISC   VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
PDP-W1 DISC   VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
PEW STRAINER D VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
PEWP1 DISC    VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
PEWP2 DISC    VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
PEWP3 ATS NRM VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
PEWP3 DISC    VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
PMPRM HOIST DI VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
PP-ADM-1      VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
PP-ADM-2      VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
PP-EBB-A      VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
PP-EBB-B      VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
PP-LSE        VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
PP-LSE CKT #14 VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
PP-LSE CKT #2  VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
PP-LSE CKT #26 VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
PP-LSE CKT #8  VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
PP-MTB        VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
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THREE PHASE MOMENTARY DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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PP-MTB DISC SW VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PP-UV VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PP-WBB-A VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PP-WBB-B VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PP-Z VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PSCP-E1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PSCP-E2 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PSCP-W1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PSCP-W2 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PSLP-E1 VFD IN VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PSLP-E2 VFD IN VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PSLP-E3 VFD IN VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PSLP-W1 VFD IN VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PSLP-W2 INPUT VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PSLPG-W1 VFD I VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PSLPG-W2 INPUT VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PSLPM-E1 LCP VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PSLPM-E2 LCP VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

RASP-E1 VFD IN VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

RASP-E2 VFD IN VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

RASP-E3 VFD IN VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

RASP-E4 VFD IN VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

THREE PHASE MOMENTARY DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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RASP-E5 VFD IN VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

RASP-E6 VFD IN VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

RASP-E7 VFD IN VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

RASP-E8 VFD IN VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

RASP-W1 VFD IN VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

RASP-W2 VFD IN VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

RASP-W3 VFD IN VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

RASP-W4 VFD IN VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

RBDP-2 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

RBDP-4 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

RBDP1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

RBDP3 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

RECIRCV PAB-E1 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

RECIRCV PAB-E2 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

RECIRCV PAB-E3 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

RETBSNRFCV STA VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

RF # 5 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

RF # 6 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

RF-1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

RIVER VALVE DI VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

RLS-ACCU-1 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

RLS-ACCU-1 DIS VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

THREE PHASE MOMENTARY DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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RLS-ACU-1	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
RLS-EF-1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
RLS-EF-2 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
RLS-PPU-1	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
RLS-SF-1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ROOF FAN 10 DI	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ROOF FAN 11 DI	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ROOF FAN 12 DI	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
RS-SAP-1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
S-1-1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
S-21-1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
S-21-1 STARTER	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
S-21-2 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
S-21-2 STARTER	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
S-21-3 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
S-21-3 STARTER	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
S-21-4 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
S-21-4 STARTER	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
S-54-2 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
S-54-2 STR	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SC-1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SC-2 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)

THREE PHASE MOMENTARY DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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SC-3 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SC-E1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SC-E2 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SC-E3 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SC-E4 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SCDR-W1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SCDR-W2 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SCP-6	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SCP-8	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SCREW CONV 3 S	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SCRNCNV DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SCTY GATE STAR	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SE ISO VALVE D	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SECURITY GATE	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SEG1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SEP1 VFD IN	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SEP2 VFD IN	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SEP3 VFD IN	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SEP4 VFD IN	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SEP5 VFD IN	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SEP6 VFD IN	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SEPPMP DISC TE	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)

THREE PHASE MOMENTARY DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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SF1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SF1FF DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SF2EE DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SF3FF DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SF4EE DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLC 4 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLC 5 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLC 6 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLC 7 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLC-1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLC-3 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLC2 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLDG F-50-1	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLDG F-50-2	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLDG F-50-3	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLDG F-50-4	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLDG F-60-1	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLDG F-60-2	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLDG F-60-3	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLDG F-60-4	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLDG S-50-1	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLDG S-50-2	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)

THREE PHASE MOMENTARY DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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SLDG S-50-3  VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
SLDG S-50-4  VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
SLDG S-50-5  VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
SLDG S-60-1  VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
SLDG S-60-2  VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
SLG-3 DISC   VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
SLG-4 DISC   VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
SLGT-5 DISC  VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
SLGT1 DISC   VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
SLGT2 DISC   VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
SLP1 DISC    VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
SLP2 DISC    VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
SLP3 DISC    VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
SLUDGE CND LCP VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
SMP2 DISC    VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
SP NGB DISC  VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
SSC-1 DISC   VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
SSC-2 DISC   VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
SSCP-E1 DISC VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
SSCP-W1 DISC VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
SSCP-W2 DISC VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
STWP 1 DISC  VOLTAGE:  480.  ( SEE LOW VOLTAGE REPORT )
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THREE PHASE MOMENTARY DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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STWP 2 DISC    VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )

SUB 1 BUS A    VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )

SUB 1 BUS B    VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )

SUB 1 PRIMARY  E/Z:        5.253 KA AT  -55.52 DEG ( 120.10 MVA) X/R:    1.54
                SYM*1.6:    8.405 KA      MOMENTARY BASED ON X/R:    5.342 KA
                SYM*2.7:   14.183 KA      CREST BASED ON X/R:    8.400 KA
                VOLTAGE: 13200.  EQUIV. IMPEDANCE= 0.8212 + J 1.1960 OHMS
                M11.101      15 KV BUS 1      5.203 KA      ANG:   -55.24
                SUB 1 XFMR A  SUB 1 BUS A      0.057 KA      ANG:    96.95

SUB 1 PRIMARY  E/Z:        6.079 KA AT  -69.61 DEG ( 138.98 MVA) X/R:    2.76
                SYM*1.6:    9.726 KA      MOMENTARY BASED ON X/R:    6.675 KA
                SYM*2.7:   16.413 KA      CREST BASED ON X/R:   11.353 KA
                VOLTAGE: 13200.  EQUIV. IMPEDANCE= 0.4368 + J 1.1752 OHMS
                M11.201      15 KV BUS 2      6.041 KA      ANG:   -69.53
                SUB 1 XFMR B  SUB 1 BUS B      0.039 KA      ANG:    97.03

SUB 2 BUS A    VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )

SUB 2 BUS B    VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )

SUB 2 PRIMARY  E/Z:        5.514 KA AT  -57.96 DEG ( 126.07 MVA) X/R:    1.69
                SYM*1.6:    8.823 KA      MOMENTARY BASED ON X/R:    5.648 KA
                SYM*2.7:   14.888 KA      CREST BASED ON X/R:    9.020 KA
                VOLTAGE: 13200.  EQUIV. IMPEDANCE= 0.7332 + J 1.1716 OHMS
                M11.102      15 KV BUS 1      5.456 KA      ANG:   -57.68
                SUB 2 XFMR A  SUB 2 BUS A      0.064 KA      ANG:    97.41

SUB 2 PRIMARY  E/Z:        6.382 KA AT  -73.82 DEG ( 145.92 MVA) X/R:    3.55
                SYM*1.6:   10.212 KA      MOMENTARY BASED ON X/R:    7.390 KA
                SYM*2.7:   17.232 KA      CREST BASED ON X/R:   12.752 KA
                VOLTAGE: 13200.  EQUIV. IMPEDANCE= 0.3328 + J 1.1468 OHMS
                M11.202      15 KV BUS 2      6.334 KA      ANG:   -73.75
                SUB 2 XFMR B  SUB 2 BUS B      0.048 KA      ANG:    97.20

SUB 3 BUS A    VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )

SUB 3 BUS B    VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )

SUB 3 PRIMARY  E/Z:        6.821 KA AT  -72.91 DEG ( 155.95 MVA) X/R:    3.57
                SYM*1.6:   10.914 KA      MOMENTARY BASED ON X/R:    7.907 KA
                SYM*2.7:   18.417 KA      CREST BASED ON X/R:   13.645 KA
                VOLTAGE: 13200.  EQUIV. IMPEDANCE= 0.3283 + J 1.0679 OHMS
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THREE PHASE MOMENTARY DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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CONTRIBUTIONS TO SUB 3 PRIMARY (CONTINUED)
M11.103      15 KV BUS 1      6.677 KA      ANG:  -72.64
SUB 3 XFMR A  SUB 3 BUS A      0.147 KA      ANG:  94.77

SUB 3 PRIMARY E/Z:      6.530 KA AT -76.93 DEG ( 149.29 MVA) X/R:      4.47
SYM*1.6:      10.447 KA      MOMENTARY BASED ON X/R:      7.972 KA
SYM*2.7:      17.630 KA      CREST BASED ON X/R:      13.807 KA
VOLTAGE: 13200. EQUIV. IMPEDANCE= 0.2640 + J 1.1369 OHMS
M11.203      15 KV BUS 2      6.453 KA      ANG:  -76.83
SUB 3 XFMR B  SUB 3 BUS B      0.078 KA      ANG:  94.54

SUB 4 BUS A   VOLTAGE:      480. ( SEE LOW VOLTAGE REPORT )

SUB 4 BUS B   VOLTAGE:      480. ( SEE LOW VOLTAGE REPORT )

SUB 4 PRIMARY E/Z:      5.958 KA AT -62.42 DEG ( 136.23 MVA) X/R:      2.06
SYM*1.6:      9.534 KA      MOMENTARY BASED ON X/R:      6.235 KA
SYM*2.7:      16.088 KA      CREST BASED ON X/R:      10.264 KA
VOLTAGE: 13200. EQUIV. IMPEDANCE= 0.5921 + J 1.1337 OHMS
M11.104      15 KV BUS 1      5.831 KA      ANG:  -61.98
SUB 4 XFMR A  SUB 4 BUS A      0.135 KA      ANG:  98.09

SUB 4 PRIMARY E/Z:      6.561 KA AT -76.55 DEG ( 150.00 MVA) X/R:      4.33
SYM*1.6:      10.497 KA      MOMENTARY BASED ON X/R:      7.951 KA
SYM*2.7:      17.714 KA      CREST BASED ON X/R:      13.771 KA
VOLTAGE: 13200. EQUIV. IMPEDANCE= 0.2702 + J 1.1298 OHMS
M11.204      15 KV BUS 2      6.425 KA      ANG:  -76.43
SUB 4 XFMR B  SUB 4 BUS B      0.136 KA      ANG:  97.73

SUB 5 BUS A   VOLTAGE:      480. ( SEE LOW VOLTAGE REPORT )

SUB 5 BUS B   VOLTAGE:      480. ( SEE LOW VOLTAGE REPORT )

SUB 5 PRIMARY E/Z:      6.907 KA AT -73.66 DEG ( 157.91 MVA) X/R:      3.74
SYM*1.6:      11.051 KA      MOMENTARY BASED ON X/R:      8.093 KA
SYM*2.7:      18.649 KA      CREST BASED ON X/R:      13.986 KA
VOLTAGE: 13200. EQUIV. IMPEDANCE= 0.3104 + J 1.0588 OHMS
M11.105      15 KV BUS 1      6.683 KA      ANG:  -73.34
SUB 5 XFMR A  SUB 5 BUS A      0.228 KA      ANG:  96.78

SUB 5 PRIMARY E/Z:      6.605 KA AT -77.73 DEG ( 151.00 MVA) X/R:      4.77
SYM*1.6:      10.567 KA      MOMENTARY BASED ON X/R:      8.186 KA
SYM*2.7:      17.832 KA      CREST BASED ON X/R:      14.176 KA
VOLTAGE: 13200. EQUIV. IMPEDANCE= 0.2453 + J 1.1275 OHMS
M11.205      15 KV BUS 2      6.346 KA      ANG:  -77.51
SUB 5 XFMR B  SUB 5 BUS B      0.260 KA      ANG:  97.06
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THREE PHASE MOMENTARY DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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SUB 6 BUS A   VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
SUB 6 BUS B   VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
SUB 7 BUS A   VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
SUB 7 BUS B   VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )

SUB 7 XFMR A P E/Z:      6.922 KA AT  -73.41 DEG ( 158.25 MVA) X/R:      3.67
                  SYM*1.6:  11.075 KA      MOMENTARY BASED ON X/R:      8.074 KA
                  SYM*2.7:  18.688 KA      CREST BASED ON X/R:     13.946 KA
                  VOLTAGE: 13200.  EQUIV. IMPEDANCE=  0.3144 + J  1.0552 OHMS
SUB 7 XFMR A   SUB 7 BUS A      0.000 KA      ANG:    -27.11
M11.107        15 KV BUS 1      6.922 KA      ANG:    -73.41

SUB 7 XFMR B P E/Z:      6.619 KA AT  -77.49 DEG ( 151.33 MVA) X/R:      4.67
                  SYM*1.6:  10.591 KA      MOMENTARY BASED ON X/R:      8.162 KA
                  SYM*2.7:  17.872 KA      CREST BASED ON X/R:     14.137 KA
                  VOLTAGE: 13200.  EQUIV. IMPEDANCE=  0.2494 + J  1.1240 OHMS
SUB 7 XFMR B   SUB 7 BUS B      0.000 KA      ANG:      4.10
M11.207        15 KV BUS 2      6.619 KA      ANG:   -77.49

SUB 8 BUS A   E/Z:      2.744 KA AT  -80.63 DEG ( 19.77 MVA) X/R:      6.56
                  SYM*1.6:  4.390 KA      MOMENTARY BASED ON X/R:      3.648 KA
                  SYM*2.7:  7.408 KA      CREST BASED ON X/R:      6.284 KA
                  VOLTAGE: 4160.  EQUIV. IMPEDANCE=  0.1425 + J  0.8637 OHMS
M05.003        SUB 6 XFMR A P    0.033 KA      ANG:     97.61
M05.004        PAB-E3 STR IN    0.523 KA      ANG:     96.36
M05.001        PAB-E1 STR IN    0.523 KA      ANG:     96.36
SUB 8 XFMR A   SUB 8 PRIMARY    1.668 KA      ANG:   -258.72

SUB 8 BUS B   E/Z:      2.216 KA AT  -80.05 DEG ( 15.97 MVA) X/R:      6.04
                  SYM*1.6:  3.545 KA      MOMENTARY BASED ON X/R:      2.895 KA
                  SYM*2.7:  5.983 KA      CREST BASED ON X/R:      4.996 KA
                  VOLTAGE: 4160.  EQUIV. IMPEDANCE=  0.1873 + J  1.0676 OHMS
M05.006        PAB-E2 STR IN    0.523 KA      ANG:     96.36
M05.008        SUB 6 XFMR B P    0.032 KA      ANG:   -253.89
SUB 8 XFMR B   SUB 8 PRIMARY    1.663 KA      ANG:   -259.04
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THREE PHASE MOMENTARY DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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SUB 8 PRIMARY	E/Z:	6.858 KA AT	-73.40 DEG (156.80 MVA)	X/R:	3.67
	SYM*1.6:	10.973 KA	MOMENTARY BASED ON X/R:		8.001 KA
	SYM*2.7:	18.517 KA	CREST BASED ON X/R:		13.820 KA
	VOLTAGE:	13200.	EQUIV. IMPEDANCE=	0.3175 + J 1.0649	OHMS
SUB 8 XFMR A	SUB 8 BUS A		0.213 KA	ANG:	98.04
M11.108	15 KV BUS 1		6.647 KA	ANG:	-73.12

SUB 8 PRIMARY	E/Z:	6.560 KA AT	-77.42 DEG (149.98 MVA)	X/R:	4.65
	SYM*1.6:	10.496 KA	MOMENTARY BASED ON X/R:		8.080 KA
	SYM*2.7:	17.711 KA	CREST BASED ON X/R:		13.995 KA
	VOLTAGE:	13200.	EQUIV. IMPEDANCE=	0.2530 + J 1.1339	OHMS
SUB 8 XFMR B	SUB 8 BUS B		0.134 KA	ANG:	97.83
M11.208	15 KV BUS 2		6.426 KA	ANG:	-77.32

SUB SP-1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

SUB SP-2 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

SUMP PUMP 1 DI VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

SUMP PUMP 3 DI VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

SWP LCP VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

SWPSO VALVE DI VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

SWPSO-SG DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

TABLET FDR DIS VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

TEMP ADM1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

TEMP ADM2 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

TEMP PUMPS VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

TER FIL EFF SP VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

TFB-MPC VOLTAGE: 208. (SEE LOW VOLTAGE REPORT)

TGS DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

UDSP1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

UDSP2 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

UH EE VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

UH EE DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

THREE PHASE MOMENTARY DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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UH FF          VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
UPS-ADM-1 INPU VOLTAGE:  208. ( SEE LOW VOLTAGE REPORT )
UPS-ADM-1 OUTP VOLTAGE:  208. ( SEE LOW VOLTAGE REPORT )
UV 2A          VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
UV 2B          VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
UV-1A          VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
UV-1A PD LINE  VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
UV-1B          VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
UV-1B PD LINE  VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
VFD CFG-1 INPU VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
VFD CFG-2 INPU VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
VFD CFG-3 INPU VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
W CONT GT2 DIS VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
W1 FLOW VALVES VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
WA MAIN BOV    VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
WAS VALVE W1   VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
WAS VALVE W1 D VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
WAS VALVE W2   VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
WASP-E1 VFD IN VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
WASP-E2 VFD IN VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
WASP-W1 VFD IN VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
WASP-W2 VFD IN VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
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THREE PHASE MOMENTARY DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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WASV E1	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
WASV E2	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
WASV E3	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
WASV E4	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
WBB-EF-1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
WBB-EF-2 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
WBB-EF-3 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
WBB-EF-4 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
WBB-EF-5 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
WBB-EF-6 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
WBB-EF-7 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
WBB-H1	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
WBB-H1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
WBB-H2	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
WBB-H2 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
WBB-HV-1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
WBB-HV-2	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
WBB-HV-2 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
WBB-P-1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
WBB-P-2 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
WEST AESG W1	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
WEST AESG W2	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)

THREE PHASE MOMENTARY DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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=====
WEST AESGW1 DI VOLTAGE:    480. ( SEE LOW VOLTAGE REPORT )
WFB-EUH-TERM's VOLTAGE:   208. ( SEE LOW VOLTAGE REPORT )
WHM DISC      VOLTAGE:    480. ( SEE LOW VOLTAGE REPORT )
WPB-EF-1 DISC VOLTAGE:    480. ( SEE LOW VOLTAGE REPORT )
WPB-H1 DISC   VOLTAGE:    480. ( SEE LOW VOLTAGE REPORT )
WPB-H1 HOIST  VOLTAGE:    480. ( SEE LOW VOLTAGE REPORT )
WPB-HV-1      VOLTAGE:    480. ( SEE LOW VOLTAGE REPORT )
WPB-HV-1 DISC VOLTAGE:    480. ( SEE LOW VOLTAGE REPORT )
WPB-P-1 DISC  VOLTAGE:    480. ( SEE LOW VOLTAGE REPORT )
WPE-SAP-2 DISC VOLTAGE:    480. ( SEE LOW VOLTAGE REPORT )
WPSE GATE E DI VOLTAGE:    480. ( SEE LOW VOLTAGE REPORT )
WPSE GATE W DI VOLTAGE:    480. ( SEE LOW VOLTAGE REPORT )
WPSE SMPL PMP VOLTAGE:    480. ( SEE LOW VOLTAGE REPORT )
WSE-SAP-3 DIS VOLTAGE:    480. ( SEE LOW VOLTAGE REPORT )
WTR-CRC-PMP-1 VOLTAGE:    480. ( SEE LOW VOLTAGE REPORT )
WTR-CRC-PMP-2 VOLTAGE:    480. ( SEE LOW VOLTAGE REPORT )
WW BYP GATE E VOLTAGE:    480. ( SEE LOW VOLTAGE REPORT )
WWRDP2 DISC   VOLTAGE:    480. ( SEE LOW VOLTAGE REPORT )
WWRDP3 DISC   VOLTAGE:    480. ( SEE LOW VOLTAGE REPORT )
WWWRESDP1 DISC VOLTAGE:    480. ( SEE LOW VOLTAGE REPORT )
Wireway        VOLTAGE:    480. ( SEE LOW VOLTAGE REPORT )
Wireway.       VOLTAGE:    480. ( SEE LOW VOLTAGE REPORT )
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T H R E E P H A S E M O M E N T A R Y D U T Y R E P O R T

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

=====

UNBALANCED MOMENTARY DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT TYPE	E/Z KA	X/R	EQUIVALENT IMPEDANCE (PU)	MOMENTARY FAULT DUTIES E/Z * 1.6 @ 0.5 CYCLE	
=====						
15 KV BUS 1 13200.	3P Duty:	6.96	3.8	Z1= 0.6282	11.14	8.20
	SLG DUTY:	5.66	2.9	Z2= 0.6282	9.06	6.30
	VOLTS LN/LN:	6.03		Z0= 1.0650		
	LN/LN/GND:	6.70 (	4.76	GND RETURN KA)		
15 KV BUS 1 Li 13200.	3P Duty:	6.96	3.8	Z1= 0.6281	11.14	8.20
	SLG DUTY:	5.66	2.9	Z2= 0.6281	9.06	6.30
	VOLTS LN/LN:	6.03		Z0= 1.0650		
	LN/LN/GND:	6.70 (	4.76	GND RETURN KA)		
15 KV BUS 2 13200.	3P Duty:	6.65	4.9	Z1= 0.6575	10.64	8.30
	SLG DUTY:	5.28	4.1	Z2= 0.6575	8.45	6.32
	VOLTS LN/LN:	5.76		Z0= 1.1710		
	LN/LN/GND:	6.28 (	4.38	GND RETURN KA)		
15 KV BUS 2 Li 13200.	3P Duty:	6.65	4.9	Z1= 0.6575	10.64	8.30
	SLG DUTY:	5.28	4.1	Z2= 0.6575	8.45	6.32
	VOLTS LN/LN:	5.76		Z0= 1.1710		
	LN/LN/GND:	6.28 (	4.38	GND RETURN KA)		
15 KV BUS 3 13200.	3P Duty:	1.50	7.4	Z1= 2.9064	2.41	2.05
	SLG DUTY:	0.08	0.0	Z2= 4.1412	0.12	0.08
	VOLTS LN/LN:	1.08		Z0= 172.5654		
	LN/LN/GND:	1.10 (	0.04	GND RETURN KA)		
DTE NORTH 13200.	3P Duty:	7.14	4.0	Z1= 0.6127	11.42	8.50
	SLG DUTY:	5.86	3.1	Z2= 0.6127	9.38	6.58
	VOLTS LN/LN:	6.18		Z0= 1.0180		
	LN/LN/GND:	6.89 (	4.96	GND RETURN KA)		
DTE SOUTH 13200.	3P Duty:	6.76	5.2	Z1= 0.6466	10.82	8.56
	SLG DUTY:	5.40	4.3	Z2= 0.6466	8.64	6.55
	VOLTS LN/LN:	5.86		Z0= 1.1384		
	LN/LN/GND:	6.40 (	4.49	GND RETURN KA)		
PAB-E1 STR IN 4160.	3P Duty:	2.73	6.2	Z1= 5.0833	4.37	3.59
	SLG DUTY:	2.32	5.5	Z2= 5.0833	3.72	2.98
	VOLTS LN/LN:	2.36		Z0= 7.7496		
	LN/LN/GND:	2.59 (	2.02	GND RETURN KA)		

UNBALANCED MOMENTARY DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT TYPE	E/Z KA	X/R	EQUIVALENT IMPEDANCE (PU)	MOMENTARY FAULT DUTIES E/Z * 1.6 @ 0.5 CYCLE	
=====						
PAB-E2 STR IN 4160.	3P Duty:	2.21	5.9	Z1= 6.2861	3.53	2.87
	SLG DUTY:	2.05	5.4	Z2= 6.2861	3.28	2.61
	VOLTS LN/LN:	1.91		Z0= 7.7496		
	LN/LN/GND:	2.15 (	1.91	GND RETURN KA)		
PAB-E3 STR IN 4160.	3P Duty:	2.73	6.2	Z1= 5.0833	4.37	3.59
	SLG DUTY:	2.32	5.5	Z2= 5.0833	3.72	2.98
	VOLTS LN/LN:	2.36		Z0= 7.7496		
	LN/LN/GND:	2.59 (	2.02	GND RETURN KA)		
SUB 1 PRIMARY 13200.	3P Duty:	5.25	1.5	Z1= 0.8327	8.40	5.34
	SLG DUTY:	4.16	1.4	Z2= 0.8327	6.65	4.21
	VOLTS LN/LN:	4.55		Z0= 1.4934		
	LN/LN/GND:	4.93 (	3.44	GND RETURN KA)		
SUB 1 PRIMARY 13200.	3P Duty:	6.08	2.8	Z1= 0.7195	9.73	6.67
	SLG DUTY:	4.78	2.6	Z2= 0.7195	7.64	5.17
	VOLTS LN/LN:	5.26		Z0= 1.3082		
	LN/LN/GND:	5.68 (	3.93	GND RETURN KA)		
SUB 2 PRIMARY 13200.	3P Duty:	5.51	1.7	Z1= 0.7932	8.82	5.65
	SLG DUTY:	4.37	1.5	Z2= 0.7932	6.99	4.44
	VOLTS LN/LN:	4.78		Z0= 1.4168		
	LN/LN/GND:	5.19 (	3.62	GND RETURN KA)		
SUB 2 PRIMARY 13200.	3P Duty:	6.38	3.6	Z1= 0.6853	10.21	7.39
	SLG DUTY:	5.04	3.2	Z2= 0.6853	8.06	5.69
	VOLTS LN/LN:	5.53		Z0= 1.2347		
	LN/LN/GND:	6.00 (	4.16	GND RETURN KA)		
SUB 3 PRIMARY 13200.	3P Duty:	6.82	3.6	Z1= 0.6412	10.91	7.91
	SLG DUTY:	5.52	2.8	Z2= 0.6412	8.84	6.09
	VOLTS LN/LN:	5.91		Z0= 1.0971		
	LN/LN/GND:	6.55 (	4.63	GND RETURN KA)		
SUB 3 PRIMARY 13200.	3P Duty:	6.53	4.5	Z1= 0.6698	10.45	7.97
	SLG DUTY:	5.17	3.8	Z2= 0.6698	8.27	6.08
	VOLTS LN/LN:	5.65		Z0= 1.2011		
	LN/LN/GND:	6.15 (	4.27	GND RETURN KA)		

UNBALANCED MOMENTARY DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT TYPE	E/Z KA	X/R	EQUIVALENT IMPEDANCE (PU)	MOMENTARY FAULT DUTIES E/Z * 1.6 @ 0.5 CYCLE	
=====						
SUB 4 PRIMARY 13200.	3P Duty:	5.96	2.1	Z1= 0.7341	9.53	6.24
	SLG DUTY:	4.74	1.8	Z2= 0.7341	7.59	4.88
	VOLTS LN/LN:	5.16		Z0= 1.3015		
	LN/LN/GND:	5.65	(	3.93 GND RETURN KA)		
SUB 4 PRIMARY 13200.	3P Duty:	6.56	4.3	Z1= 0.6667	10.50	7.95
	SLG DUTY:	5.20	3.7	Z2= 0.6667	8.32	6.08
	VOLTS LN/LN:	5.68		Z0= 1.1930		
	LN/LN/GND:	6.18	(	4.30 GND RETURN KA)		
SUB 5 PRIMARY 13200.	3P Duty:	6.91	3.7	Z1= 0.6333	11.05	8.09
	SLG DUTY:	5.61	2.9	Z2= 0.6333	8.97	6.22
	VOLTS LN/LN:	5.98		Z0= 1.0780		
	LN/LN/GND:	6.64	(	4.71 GND RETURN KA)		
SUB 5 PRIMARY 13200.	3P Duty:	6.60	4.8	Z1= 0.6622	10.57	8.19
	SLG DUTY:	5.24	4.0	Z2= 0.6622	8.38	6.23
	VOLTS LN/LN:	5.72		Z0= 1.1834		
	LN/LN/GND:	6.23	(	4.33 GND RETURN KA)		
SUB 7 XFMR A P 13200.	3P Duty:	6.92	3.7	Z1= 0.6319	11.07	8.07
	SLG DUTY:	5.62	2.9	Z2= 0.6319	9.00	6.22
	VOLTS LN/LN:	5.99		Z0= 1.0739		
	LN/LN/GND:	6.66	(	4.73 GND RETURN KA)		
SUB 7 XFMR B P 13200.	3P Duty:	6.62	4.7	Z1= 0.6608	10.59	8.16
	SLG DUTY:	5.25	3.9	Z2= 0.6608	8.40	6.23
	VOLTS LN/LN:	5.73		Z0= 1.1787		
	LN/LN/GND:	6.24	(	4.35 GND RETURN KA)		
SUB 8 BUS A 4160.	3P Duty:	2.74	6.6	Z1= 5.0584	4.39	3.65
	SLG DUTY:	2.34	5.9	Z2= 5.0584	3.75	3.05
	VOLTS LN/LN:	2.38		Z0= 7.6667		
	LN/LN/GND:	2.60	(	2.04 GND RETURN KA)		
SUB 8 BUS B 4160.	3P Duty:	2.22	6.0	Z1= 6.2634	3.55	2.89
	SLG DUTY:	2.06	5.7	Z2= 6.2634	3.30	2.66
	VOLTS LN/LN:	1.92		Z0= 7.6667		
	LN/LN/GND:	2.16	(	1.93 GND RETURN KA)		

UNBALANCED MOMENTARY DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT TYPE	E/Z KA	X/R	EQUIVALENT IMPEDANCE (PU)	MOMENTARY FAULT DUTIES E/Z * 1.6 @ 0.5 CYCLE	
=====						
	3P Duty:	6.86	3.7	Z1= 0.6378	10.97	8.00
SUB 8 PRIMARY	SLG DUTY:	5.56	2.9	Z2= 0.6378	8.90	6.15
13200.	VOLTS LN/LN:	5.94		Z0= 1.0893		
	LN/LN/GND:	6.59	(	4.67 GND RETURN KA)		
	3P Duty:	6.56	4.6	Z1= 0.6668	10.50	8.08
SUB 8 PRIMARY	SLG DUTY:	5.19	3.9	Z2= 0.6668	8.31	6.16
13200.	VOLTS LN/LN:	5.68		Z0= 1.1944		
	LN/LN/GND:	6.18	(	4.30 GND RETURN KA)		

M O M E N T A R Y D U T Y S U M M A R Y R E P O R T

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

SOLUTION METHOD : E/Z

=====					
BUS RECORD	VOLTAGE	* 3	P H A S E *	* * *	SLG * * *
NO NAME	L-L	KA	X/R	KA	X/R
=====					
15 KV BUS 1	13200.	8.197	3.82	6.301	2.95
15 KV BUS 1 Li	13200.	8.197	3.82	6.301	2.95
15 KV BUS 2	13200.	8.296	4.90	6.319	4.09
15 KV BUS 2 Li	13200.	8.296	4.90	6.319	4.09
15 KV BUS 3	13200.	2.052	7.43	0.076	0.04
DTE NORTH	13200.	8.500	4.01	6.583	3.09
DTE SOUTH	13200.	8.559	5.23	6.546	4.34
PAB-E1 STR IN	4160.	3.590	6.23	2.976	5.51
PAB-E2 STR IN	4160.	2.869	5.90	2.614	5.42
PAB-E3 STR IN	4160.	3.590	6.23	2.976	5.51
SUB 1 PRIMARY	13200.	5.342	1.54	4.206	1.42
SUB 1 PRIMARY	13200.	6.675	2.76	5.170	2.56
SUB 2 PRIMARY	13200.	5.648	1.69	4.445	1.54
SUB 2 PRIMARY	13200.	7.390	3.55	5.685	3.16
SUB 3 PRIMARY	13200.	7.907	3.57	6.085	2.81
SUB 3 PRIMARY	13200.	7.972	4.47	6.081	3.81
SUB 4 PRIMARY	13200.	6.235	2.06	4.884	1.80
SUB 4 PRIMARY	13200.	7.951	4.33	6.076	3.71
SUB 5 PRIMARY	13200.	8.093	3.74	6.220	2.91
SUB 5 PRIMARY	13200.	8.186	4.77	6.234	4.01
SUB 7 XFMR A P	13200.	8.074	3.67	6.219	2.86
SUB 7 XFMR B P	13200.	8.162	4.67	6.227	3.94
SUB 8 BUS A	4160.	3.648	6.56	3.046	5.92
SUB 8 BUS B	4160.	2.895	6.04	2.661	5.71
SUB 8 PRIMARY	13200.	8.001	3.67	6.151	2.87
SUB 8 PRIMARY	13200.	8.080	4.65	6.157	3.94

31 FAULTED BUSES, 1603 BRANCHES, 466 CONTRIBUTIONS
UNBALANCED FAULTS REQUESTED

*** SHORT CIRCUIT STUDY COMPLETE ***

THREE PHASE INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO
NACD OPTION: INTERPOLATED

```
=====
15 KV BUS 1  E/Z:      6.605 KA AT -73.54 DEG ( 151.01 MVA) X/R:      3.65
VOLTAGE: 13200. EQUIV. IMPEDANCE= 0.3270 + J 1.1065 OHMS
M11.102      SUB 2 PRIMARY      0.029 KA      ANG:      96.56
M11.103      SUB 3 PRIMARY      0.102 KA      ANG:      94.38
M11.104      SUB 4 PRIMARY      0.064 KA      ANG:      96.98
M11.108      SUB 8 PRIMARY      0.161 KA      ANG:      97.49
15 KV BUS 1 LI 15 KV BUS 1 Li 6.131 KA      ANG: -252.75
M11.101      SUB 1 PRIMARY      0.024 KA      ANG:      96.34
M11.105      SUB 5 PRIMARY      0.102 KA      ANG:      96.20
```

```
GENERATOR NAME -- AT BUS -- KA VOLTS PU LOCAL/REMOTE
DC-8266          6.131 0.04 R
TOTAL REMOTE:    6.131 KA NACD RATIO: 0.9283
```

```
          SYM2      SYM3      SYM5      SYM8
MULT. FACT: 1.000 1.000 1.000 1.000
DUTY (KA) : 6.605 6.605 6.605 6.605
```

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          TOT2      TOT3      TOT5      TOT8
MULT. FACT: 1.033 1.000 1.000 1.000
DUTY (KA) : 6.826 6.605 6.605 6.605
```

```
15 KV BUS 1 Li E/Z:      6.605 KA AT -73.54 DEG ( 151.01 MVA) X/R:      3.65
VOLTAGE: 13200. EQUIV. IMPEDANCE= 0.3270 + J 1.1065 OHMS
M11.100      DTE NORTH      6.131 KA      ANG: -72.75
15 KV BUS 1 LI 15 KV BUS 1 0.482 KA      ANG: -83.62
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```
GENERATOR NAME -- AT BUS -- KA VOLTS PU LOCAL/REMOTE
DC-8266          6.131 0.04 R
TOTAL REMOTE:    6.131 KA NACD RATIO: 0.9283
```

```
          SYM2      SYM3      SYM5      SYM8
MULT. FACT: 1.000 1.000 1.000 1.000
DUTY (KA) : 6.605 6.605 6.605 6.605
```

```
          TOT2      TOT3      TOT5      TOT8
MULT. FACT: 1.033 1.000 1.000 1.000
DUTY (KA) : 6.826 6.605 6.605 6.605
```

```
15 KV BUS 2  E/Z:      6.327 KA AT -77.84 DEG ( 144.65 MVA) X/R:      4.78
VOLTAGE: 13200. EQUIV. IMPEDANCE= 0.2538 + J 1.1775 OHMS
M11.202      SUB 2 PRIMARY      0.021 KA      ANG:      96.37
M11.203      SUB 3 PRIMARY      0.053 KA      ANG:      94.20
M11.204      SUB 4 PRIMARY      0.064 KA      ANG:      96.68
```

THREE PHASE INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO
NACD OPTION: INTERPOLATED

=====

CONTRIBUTIONS TO 15 KV BUS 2 (CONTINUED)

M11.208	SUB 8 PRIMARY	0.095 KA	ANG:	97.06
15 KV BUS 2 LI	15 KV BUS 2 Li	5.961 KA	ANG:	-257.48
M11.201	SUB 1 PRIMARY	0.016 KA	ANG:	96.30
M11.205	SUB 5 PRIMARY	0.118 KA	ANG:	96.45

GENERATOR NAME	-- AT BUS --	KA	VOLTS PU	LOCAL/REMOTE
DC-9798		5.961	0.02	R
TOTAL REMOTE:		5.961 KA	NACD RATIO:	0.9422

	SYM2	SYM3	SYM5	SYM8
MULT. FACT:	1.000	1.000	1.000	1.000
DUTY (KA) :	6.327	6.327	6.327	6.327

	TOT2	TOT3	TOT5	TOT8
MULT. FACT:	1.047	1.000	1.000	1.000
DUTY (KA) :	6.626	6.327	6.327	6.327

15 KV BUS 2 Li	E/Z:	6.327 KA AT	-77.84 DEG (144.65 MVA)	X/R:	4.78
	VOLTAGE:	13200.	EQUIV. IMPEDANCE=	0.2537 + J	1.1775 OHMS
M11.200	DTE SOUTH		5.961 KA	ANG:	-77.48
15 KV BUS 2 LI	15 KV BUS 2		0.368 KA	ANG:	-83.69

GENERATOR NAME	-- AT BUS --	KA	VOLTS PU	LOCAL/REMOTE
DC-9798		5.961	0.02	R
TOTAL REMOTE:		5.961 KA	NACD RATIO:	0.9422

	SYM2	SYM3	SYM5	SYM8
MULT. FACT:	1.000	1.000	1.000	1.000
DUTY (KA) :	6.327	6.327	6.327	6.327

	TOT2	TOT3	TOT5	TOT8
MULT. FACT:	1.047	1.000	1.000	1.000
DUTY (KA) :	6.626	6.327	6.327	6.327

15 KV BUS 3	E/Z:	1.505 KA AT	-82.34 DEG (34.41 MVA)	X/R:	7.43
	VOLTAGE:	13200.	EQUIV. IMPEDANCE=	0.6752 + J	5.0189 OHMS
CONTRIBUTIONS:		BUS G2	0.752 KA	ANG:	97.66
M11.117	BUS G1		0.752 KA	ANG:	-262.34

GENERATOR NAME	-- AT BUS --	KA	VOLTS PU	LOCAL/REMOTE
GEN 1		0.752	0.00	L
GEN 2		0.752	0.00	L
TOTAL REMOTE:		0.000 KA	NACD RATIO:	0.0000

THREE PHASE INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO
NACD OPTION: INTERPOLATED

=====

	SYM2	SYM3	SYM5	SYM8
MULT. FACT:	1.000	1.000	1.000	1.000
DUTY (KA) :	1.505	1.505	1.505	1.505
	TOT2	TOT3	TOT5	TOT8
MULT. FACT:	1.114	1.023	1.000	1.000
DUTY (KA) :	1.676	1.539	1.505	1.505

78IN GC DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
AC2 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
AC2F DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ADM ACCU1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ADM ACU1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ADM-CH-1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ADM-EF-1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ADM-EF-2 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ADM-HVAC-1 DIS	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ADM-HVAC-2 DIS	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ADM-P-1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ADM-P-2 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ADM-P-3 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ADM-P-4 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ADM-SUP LCP	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ADP-E1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ADP-E2 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)

T H R E E P H A S E I N T E R R U P T I N G D U T Y R E P O R T

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

=====

ADP-W1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
AIR COMP 1 DIS VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
AIR COMP 1P DI VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
AIR WASH MV DI VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
ALTERNATOR P VOLTAGE: 208. (SEE LOW VOLTAGE REPORT)
AT-E1 FCV BF-6 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
AT-E2 FCV BF-6 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
AT-E3 Z1 FCV VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
AT-E3 Z2 FCV VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
AT-E3 Z3 FCV VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
AT-E4 Z1 FCV VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
AT-E4 Z2 FCV VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
AT-E4 Z3 FCV VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
AT-W2 FCV JB VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
ATS PEWP2 NRM VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
ATS PP-UV-EMG VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
ATS PP-UV-LOAD VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
ATS PP-UV-NRM VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
ATS-51 EMG VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
ATS-51 LOAD VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
ATS-51 NRM VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)
ATS-52 EMG VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

T H R E E P H A S E I N T E R R U P T I N G D U T Y R E P O R T

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

=====

ATS-52 LOAD	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-52 NRM	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-54 EMG	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-54 LOAD	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-54 NRM	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-55 EMG	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-55 LOAD	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-55 NRM	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-ADM EMG	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-ADM LOAD	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-ADM NRM	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-CEB LOAD	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-CEB-EMG	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-CEB-NRM	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-EBB NORM	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-EBB-EMG	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-EBB-LOAD	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-LSE EMG	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-LSE LOAD	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-LSE NRM	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-RLS EMG	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-RLS LOAD	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)

THREE PHASE INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

=====

ATS-RLS NRM	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-WBB NORM	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-WBB-EMG	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-WBB-LOAD	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-WPB-EMG	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-WPB-LOAD	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
ATS-WPB-NORM	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
B-54-1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
B-54-1 MTR VAL	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
B-54-2 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
B-54-2 MTR VAL	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
B-54-3 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
B-54-3 MTR VAL	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BAR SCREEN 2 T	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BF - 64- 29	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BF- 64- 30	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BF-64-07	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BF-64-08	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BSCRN-3 STR	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BSN-OUT-GT-1 D	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BSN-OUT-GT-3 D	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BSNHST DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)

T H R E E P H A S E I N T E R R U P T I N G D U T Y R E P O R T

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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=====
BSNINFLGT-1 DI VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
BSNINFLGT-3 DI VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
BSNINFLGT2 DIS VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
BSNOUTGT2 DISC VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
BT1-1M DISC VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
BT2-1M DISC VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
BTAB-1 DISC VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
BTAB-2 DISC VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
BTAB-3 DISC VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
BUS-0097 VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
BUS-0099 VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
BUS-0101 VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
BUS-0103 VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
BUS-0105 VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
BUS-0107 VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
BUS-0109 VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
BUS-0111 VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
BUS-0113 VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
BUS-0115 VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
BUS-0117 VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
BUS-0119 VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
BUS-0121 VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
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THREE PHASE INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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=====
BUS-0123      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0125      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0127      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0141      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0143      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0145      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0147      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0149      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0151      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0153      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0155      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0157      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0159      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0161      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0163      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0165      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0167      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0169      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0171      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0178      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0179      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0180      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
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THREE PHASE INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

=====

BUS-0181	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0182	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0188	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0272	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0273	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0274	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0275	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0276	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0277	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0278	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0279	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0281	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0287	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0288	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0289	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0290	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0291	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0292	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0293	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0294	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0295	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0296	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)

T H R E E P H A S E I N T E R R U P T I N G D U T Y R E P O R T

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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=====
BUS-0310      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0311      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0312      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0313      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0314      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0315      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0316      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0317      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0318      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0319      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0320      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0321      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0322      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0323      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0324      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0325      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0326      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0327      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0328      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0329      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0330      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0331      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
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T H R E E P H A S E I N T E R R U P T I N G D U T Y R E P O R T

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

=====

BUS-0332	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0333	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0337	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0348	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0349	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0350	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0351	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0352	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0353	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0354	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0355	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0356	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0357	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0358	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0359	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0360	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0361	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0362	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0363	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0364	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0392	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
BUS-0393	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)

THREE PHASE INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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=====
BUS-0394      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0395      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0396      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0397      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0398      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0399      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0400      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0401      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0402      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0403      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0406      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0409      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0410      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0412      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0413      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0414      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0415      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BUS-0436      VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BWP2 DISC     VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BWWP1 DISC    VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BYPGT1 DISC   VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
BYPGT2 DISC   VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
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THREE PHASE INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

=====

C SUMP PUMP DI VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

CC-1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

CC-3 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

CC2 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

CE WET WELL GT VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

CEB-ACCU-1 DIS VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

CEB-ACCU-1 TER VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

CEB-ACU-1 TERM VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

CEB-EF-1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

CEB-EF-2 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

CEB-FCP-1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

CEB-FCP-2 TERM VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

CEB-P-1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

CEB-P-2 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

CF2 AHU-1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

CF2 AHU-3 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

CHABLWR DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

CN-50-3 FCV VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

CONT TK INT GT VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

CP-70 EMG VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

CP-70 NRM VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

CR-1 HSP 5 DIS VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

THREE PHASE INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

CR-1 HSP 6 DIS VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

D SP-2 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

DCH FNL EFF SP VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

DOOR OP EE1 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

DOOR OP EE2 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

DOOR OP FF VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

DOOR OPERATOR VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

DP-51 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

DP-52 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

DP-54 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

DP-56 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

DRILL PRESS VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

DROP (NGW) STR VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

DROP (SG) STR VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

DTE NORTH E/Z: 6.782 KA AT -74.65 DEG (155.05 MVA) X/R: 3.87
VOLTAGE: 13200. EQUIV. IMPEDANCE= 0.2974 + J 1.0837 OHMS
CONTRIBUTIONS: DC-8266 6.307 KA ANG: -73.98
M11.100 15 KV BUS 1 Li 0.481 KA ANG: 96.49

GENERATOR NAME	-- AT BUS --	KA	VOLTS PU	LOCAL/REMOTE
DC-8266		6.307	0.00	R
TOTAL REMOTE:		6.307 KA	NACD RATIO:	0.9300

	SYM2	SYM3	SYM5	SYM8
MULT. FACT:	1.000	1.000	1.000	1.000
DUTY (KA) :	6.782	6.782	6.782	6.782

	TOT2	TOT3	TOT5	TOT8
MULT. FACT:	1.036	1.000	1.000	1.000
DUTY (KA) :	7.026	6.782	6.782	6.782

THREE PHASE INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO
NACD OPTION: INTERPOLATED

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=====
DTE SOUTH      E/Z:      6.439 KA AT  -78.73 DEG ( 147.22 MVA) X/R:      5.13
                VOLTAGE: 13200. EQUIV. IMPEDANCE= 0.2313 + J 1.1607 OHMS
                CONTRIBUTIONS: DC-9798          6.073 KA      ANG:    -78.44
                M11.200      15 KV BUS 2 Li      0.368 KA      ANG:    96.38
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GENERATOR NAME -- AT BUS -- KA    VOLTS PU  LOCAL/REMOTE
DC-9798          6.073    0.00      R
TOTAL REMOTE:    6.073 KA  NACD RATIO: 0.9431
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	SYM2	SYM3	SYM5	SYM8
MULT. FACT:	1.000	1.000	1.000	1.000
DUTY (KA) :	6.439	6.439	6.439	6.439

	TOT2	TOT3	TOT5	TOT8
MULT. FACT:	1.054	1.000	1.000	1.000
DUTY (KA) :	6.789	6.439	6.439	6.439

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E CONT TK G1 D VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
E SUMP PUMP 1 VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
EBB SUMP PUMP VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
EBB SUMP PUMP VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
EBB-A HOIST 1 VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
EBB-A HOIST 1 VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
EBB-A HOIST 2 VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
EBB-A HOIST 2 VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
EBB-EDH-1 LINE VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
EBB-EF-10 DISC VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
EBB-EF-5 DISC  VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
EBB-EF-6 DISC  VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
EBB-EF-7 DISC  VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
EBB-EF-9 DISC  VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
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THREE PHASE INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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EBB-EUH-1 TERM VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

EBB-HV-1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

EF1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

EF2 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

EF3 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

EF4 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

ELEVATOR CP DI VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

ELEVATOR CP IN VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

EP THRV CONTRO VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

EPB-EUH-1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

EPB-EUH-1 TERM VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

EPBBV DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

EPBBV STARTER VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

EPSEGE DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

EPSEGW DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

EQ INFL GATE 1 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

EQ INFL GATE 1 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

EQ INFL GATE 1 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

EQ INFL GATE 1 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

EQ INFL GATE 2 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

EQ INFL GATE 3 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

EQ INFL GATE 4 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

THREE PHASE INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

=====

EQ INFL GATE 9 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

EQ-RET-V-1 DIS VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

EQ-RET-V-2 DIS VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

EQINGT5 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

EQINGT6 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

EQINGT7 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

EQINGT8 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

EQPRM HOIST DI VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

EQPT RCPT C VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

EQPT RCPT D VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

EQPT RCPT E VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

EQPT RCPT EBB- VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

EQPT RCPT EBB- VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

EQPT RCPT EE VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

EQPT RCPT EPB- VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

EQPT RCPT F VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

EQPT RCPT M VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

EQPT RCPT RLS- VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

EQRETFCV DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

EQRETV3 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

ERU DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

ESESP6 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

THREE PHASE INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

=====

EUH-E1 TERM	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
EUH-E2 TERM	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
EUH1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
EWB-1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
EWB-2 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
EWB-2 TERMS	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-1-1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-1-1 STARTER	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-1-2 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-1-2 STARTER	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-1-3 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-1-3 STARTER	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-1-4 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-1-4 STARTER	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-1-5 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-1-5 STARTER	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-1-6 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-1-6 STARTER	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-1-7 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-1-7 STARTER	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-1-8 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-1-8 STARTER	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)

T H R E E P H A S E I N T E R R U P T I N G D U T Y R E P O R T

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

=====

F-2-1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

F-2-1 STARTER VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

F-2-12 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

F-2-12 STARTER VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

F-2-13 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

F-2-13 STARTER VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

F-2-18 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

F-2-18 STARTER VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

F-2-19 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

F-2-19 STARTER VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

F-2-24 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

F-2-24 STARTER VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

F-2-6 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

F-2-6 STARTER VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

F-2-7 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

F-2-7 STARTER VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

F-5-1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

F-5-2 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

F-54-1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

F-54-1 STR VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

F-54-2 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

F-54-2 STR VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

THREE PHASE INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

=====

F-54-4 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-54-4 STR	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-54-5 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-54-5 STR	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-6-1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-6-2 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-6-4 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-60-5	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-60-6	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-7-1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
F-8-6 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
FASB-1 LCP	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
FASB1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
FCB-1-EF DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
FCBV-1 VFD	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
FDSP1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
FDSP2 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
FDSP4 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
FLRDRNSP3 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
GDWU-1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
GDWU-2 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
GP-3 DISC TERM	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)

THREE PHASE INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

=====

GRIT BLOWER 2	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
GRTBLWR3 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
GSP1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
GSP2 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
GSP4 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
HEAT REC UNIT	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
HOIST D DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
HOIST EPB-B DI	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
HOIST EPB-B ST	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
HOIST P DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
HOIST Q DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
HORZ BAND SAW	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
HP-PEW-P-1 DIS	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
HPPEW2 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
HT BOOST PMP D	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
HV-1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
IFSAB-1 LCP	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
IPC LP-EFB	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
IPC LP-WFB	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
IRON WORK	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
JC-1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
JC-2 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)

THREE PHASE INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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Junction Box	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
Junction box.	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
LBP-6 STARTER	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
LBP-7 STARTER	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
LBP-8 STARTER	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
LP-ADM-1	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
LP-ADM-1A	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
LP-ADM-UPS	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
LP-C	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
LP-CEB-A	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
LP-CEB-B	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
LP-D	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
LP-E	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
LP-EBB-A	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
LP-EE	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
LP-F	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
LP-FF	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
LP-LSE	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
LP-M	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
LP-N	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
LP-O	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
LP-Q	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)

THREE PHASE INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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LP-RLS	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
LP-T	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
LP-U	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
LP-V	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
LP-W	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
LP-WBB-A	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
LP-WBB-B	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
LP-WPB-A	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
LP-WPB-B	VOLTAGE:	208.	(SEE LOW VOLTAGE REPORT)
LSE-ACCU-1	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
LSE-ACU-1	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
LSE-PPU-1	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
MB-EF-1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
MCC-51A	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
MCC-51B	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
MCC-52A	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
MCC-52B	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
MCC-53 A	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
MCC-53B	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
MCC-54 A	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
MCC-54B	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
MCC-55 A	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)

THREE PHASE INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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=====
MCC-55B      VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
MCC-56 A     VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
MCC-56B      VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
MCC-ADM-A    VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
MCC-ADM-A.   VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
MCC-C        VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
MCC-CEB-A    VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
MCC-CEB-B    VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
MCC-D        VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
MCC-D.       VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
MCC-E        VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
MCC-E.       VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
MCC-E. .     VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
MCC-EBB-A    VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
MCC-EBB-A.   VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
MCC-EBB-B    VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
MCC-EBB-B.   VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
MCC-EE       VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
MCC-EPB-A    VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
MCC-EPB-A.   VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
MCC-EPB-A. . VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
MCC-EPB-B    VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
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THREE PHASE INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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=====
MCC-EPB-B.    VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
MCC-EPB-B..   VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
MCC-F         VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
MCC-F.        VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
MCC-F..       VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
MCC-FF        VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
MCC-M         VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
MCC-M.        VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
MCC-N         VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
MCC-N.        VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
MCC-P         VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
MCC-Q         VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
MCC-R         VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
MCC-RLS-A     VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
MCC-RLS-B     VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
MCC-S         VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
MCC-WBB-A     VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
MCC-WBB-A.    VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
MCC-WBB-B     VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
MCC-WBB-B.    VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
MCC-WPB-A     VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
MCC-WPB-A.    VOLTAGE:    480.  ( SEE LOW VOLTAGE REPORT )
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THREE PHASE INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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=====
MCC-WPB-B      VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
MCC-WPB-B.     VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
MCC-XA         VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
MCC-XB         VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
METAL LATHE    VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
MILL MACH      VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
MOD VALVE 1 DI VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
MOD VALVE 3 DI VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
MOD VALVE 5 DI VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
MOD VALVE 7 DI VOLTAGE:  480. ( SEE LOW VOLTAGE REPORT )
MPPEWP1 DISC   VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
MPPEWP2 DISC   VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
MU HV2 DISC    VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
MV10 DISC      VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
MV11 DISC      VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
MV12 DISC      VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
MV2 DISC       VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
MV4 DISC       VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
MV6 DISC       VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
MV8 DISC       VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
MV9 DISC       VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
N EQPT RCPT    VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
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THREE PHASE INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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OZNTR DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

P-53-06 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

P-53-06 STR VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

P-53-07 DISC. VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

P-53-07 STR VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

P-53-20 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

P-53-20 STR VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

P-53-21 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

P-53-21 STR VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PAB-E1 DV & BO VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PAB-E1 LCP VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PAB-E1 STR IN E/Z: 2.360 KA AT -79.62 DEG (17.00 MVA) X/R: 5.96
VOLTAGE: 4160. EQUIV. IMPEDANCE= 0.1835 + J 1.0012 OHMS
PAB-E1 STARTER PAB-E1 STR OUT 0.349 KA ANG: 96.03
M05.001 SUB 8 BUS A 2.012 KA ANG: -78.86

GENERATOR NAME -- AT BUS -- KA VOLTS PU LOCAL/REMOTE
DC-8266 1.572 0.92 R
TOTAL REMOTE: 1.572 KA NACD RATIO: 0.6661

	SYM2	SYM3	SYM5	SYM8
MULT. FACT:	1.000	1.000	1.000	1.000
DUTY (KA) :	2.360	2.360	2.360	2.360

	TOT2	TOT3	TOT5	TOT8
MULT. FACT:	1.071	1.001	1.000	1.000
DUTY (KA) :	2.526	2.362	2.360	2.360

PAB-E2 DV & BO VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PAB-E2 LCP VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

THREE PHASE INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO
NACD OPTION: INTERPOLATED

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PAB-E2 STR IN E/Z:      2.010 KA AT -79.39 DEG ( 14.48 MVA) X/R:      5.68
VOLTAGE:      4160. EQUIV. IMPEDANCE= 0.2200 + J 1.1746 OHMS
PAB-E2 STARTER PAB-E2 STR OUT 0.349 KA ANG: -83.97
M05.006 SUB 8 BUS B 1.662 KA ANG: -78.43
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GENERATOR NAME -- AT BUS -- KA VOLTS PU LOCAL/REMOTE
DC-9798 1.577 0.92 R
TOTAL REMOTE: 1.577 KA NACD RATIO: 0.7847
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	SYM2	SYM3	SYM5	SYM8
MULT. FACT:	1.000	1.000	1.000	1.000
DUTY (KA) :	2.010	2.010	2.010	2.010

	TOT2	TOT3	TOT5	TOT8
MULT. FACT:	1.065	1.000	1.000	1.000
DUTY (KA) :	2.141	2.010	2.010	2.010

PAB-E3 DV & BO VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PAB-E3 LCP VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

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PAB-E3 STR IN E/Z:      2.360 KA AT -79.62 DEG ( 17.00 MVA) X/R:      5.96
VOLTAGE:      4160. EQUIV. IMPEDANCE= 0.1835 + J 1.0012 OHMS
PAB-E3 STARTER PAB-E3 STR OUT 0.349 KA ANG: -83.97
M05.004 SUB 8 BUS A 2.012 KA ANG: -78.86
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GENERATOR NAME -- AT BUS -- KA VOLTS PU LOCAL/REMOTE
DC-8266 1.572 0.92 R
TOTAL REMOTE: 1.572 KA NACD RATIO: 0.6661
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	SYM2	SYM3	SYM5	SYM8
MULT. FACT:	1.000	1.000	1.000	1.000
DUTY (KA) :	2.360	2.360	2.360	2.360

	TOT2	TOT3	TOT5	TOT8
MULT. FACT:	1.071	1.001	1.000	1.000
DUTY (KA) :	2.526	2.362	2.360	2.360

PAB-W1 VALVES VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PAB-W2 VALVES VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PAB-W3 VALVES VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PC-E1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PC-E2 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

THREE PHASE INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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PC-E3 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
PC-E4 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
PC-WPB-EF-2 DI	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
PC-WPB-P-2 DIS	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
PCDR W1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
PCDR-W2 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
PDP UV 2A	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
PDP UV 2B	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
PDP-E1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
PDP-W1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
PEW STRAINER D	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
PEWP1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
PEWP2 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
PEWP3 ATS NRM	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
PEWP3 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
PMPRM HOIST DI	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
PP-ADM-1	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
PP-ADM-2	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
PP-EBB-A	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
PP-EBB-B	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
PP-LSE	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
PP-LSE CKT #14	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)

THREE PHASE INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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PP-LSE CKT #2 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PP-LSE CKT #26 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PP-LSE CKT #8 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PP-MTB VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PP-MTB DISC SW VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PP-UV VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PP-WBB-A VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PP-WBB-B VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PP-Z VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PSCP-E1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PSCP-E2 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PSCP-W1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PSCP-W2 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PSLP-E1 VFD IN VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PSLP-E2 VFD IN VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PSLP-E3 VFD IN VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PSLP-W1 VFD IN VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PSLP-W2 INPUT VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PSLPG-W1 VFD I VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PSLPG-W2 INPUT VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PSLPM-E1 LCP VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PSLPM-E2 LCP VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

THREE PHASE INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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RASP-E1 VFD IN VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
RASP-E2 VFD IN VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
RASP-E3 VFD IN VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
RASP-E4 VFD IN VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
RASP-E5 VFD IN VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
RASP-E6 VFD IN VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
RASP-E7 VFD IN VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
RASP-E8 VFD IN VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
RASP-W1 VFD IN VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
RASP-W2 VFD IN VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
RASP-W3 VFD IN VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
RASP-W4 VFD IN VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
RBDP-2 DISC VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
RBDP-4 DISC VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
RBDP1 DISC VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
RBDP3 DISC VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
RECIRCV PAB-E1 VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
RECIRCV PAB-E2 VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
RECIRCV PAB-E3 VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
RETBSNRFCV STA VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
RF # 5 DISC VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
RF # 6 DISC VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
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THREE PHASE INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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RF-1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

RIVER VALVE DI VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

RLS-ACCU-1 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

RLS-ACCU-1 DIS VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

RLS-ACU-1 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

RLS-EF-1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

RLS-EF-2 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

RLS-PPU-1 VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

RLS-SF-1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

ROOF FAN 10 DI VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

ROOF FAN 11 DI VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

ROOF FAN 12 DI VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

RS-SAP-1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

S-1-1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

S-21-1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

S-21-1 STARTER VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

S-21-2 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

S-21-2 STARTER VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

S-21-3 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

S-21-3 STARTER VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

S-21-4 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

S-21-4 STARTER VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

THREE PHASE INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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S-54-2 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
S-54-2 STR	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SC-1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SC-2 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SC-3 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SC-E1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SC-E2 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SC-E3 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SC-E4 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SCDR-W1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SCDR-W2 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SCP-6	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SCP-8	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SCREW CONV 3 S	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SCRNCNV DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SCTY GATE STAR	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SE ISO VALVE D	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SECURITY GATE	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SEG1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SEP1 VFD IN	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SEP2 VFD IN	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SEP3 VFD IN	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)

THREE PHASE INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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SEP4 VFD IN	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SEP5 VFD IN	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SEP6 VFD IN	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SEPPMP DISC TE	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SF1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SF1FF DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SF2EE DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SF3FF DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SF4EE DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLC 4 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLC 5 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLC 6 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLC 7 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLC-1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLC-3 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLC2 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLDG F-50-1	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLDG F-50-2	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLDG F-50-3	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLDG F-50-4	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLDG F-60-1	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLDG F-60-2	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)

THREE PHASE INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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SLDG F-60-3	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLDG F-60-4	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLDG S-50-1	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLDG S-50-2	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLDG S-50-3	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLDG S-50-4	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLDG S-50-5	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLDG S-60-1	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLDG S-60-2	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLG-3 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLG-4 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLGT-5 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLGT1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLGT2 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLP1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLP2 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLP3 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SLUDGE CND LCP	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SMP2 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SP NGB DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SSC-1 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)
SSC-2 DISC	VOLTAGE:	480.	(SEE LOW VOLTAGE REPORT)

THREE PHASE INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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SSCP-E1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

SSCP-W1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

SSCP-W2 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

STWP 1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

STWP 2 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

SUB 1 BUS A VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

SUB 1 BUS B VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

SUB 1 PRIMARY E/Z: 5.038 KA AT -55.74 DEG (115.18 MVA) X/R: 1.53
VOLTAGE: 13200. EQUIV. IMPEDANCE= 0.8516 + J 1.2502 OHMS
M11.101 15 KV BUS 1 5.016 KA ANG: -55.61
SUB 1 XFMR A SUB 1 BUS A 0.024 KA ANG: 96.24

GENERATOR NAME -- AT BUS -- KA VOLTS PU LOCAL/REMOTE
DC-8266 4.673 0.39 R
TOTAL REMOTE: 4.673 KA NACD RATIO: 0.9277

	SYM2	SYM3	SYM5	SYM8
MULT. FACT:	1.000	1.000	1.000	1.000
DUTY (KA) :	5.038	5.038	5.038	5.038

	TOT2	TOT3	TOT5	TOT8
MULT. FACT:	1.009	1.000	1.000	1.000
DUTY (KA) :	5.081	5.038	5.038	5.038

SUB 1 PRIMARY E/Z: 5.803 KA AT -69.75 DEG (132.67 MVA) X/R: 2.76
VOLTAGE: 13200. EQUIV. IMPEDANCE= 0.4546 + J 1.2321 OHMS
M11.201 15 KV BUS 2 5.787 KA ANG: -69.71
SUB 1 XFMR B SUB 1 BUS B 0.016 KA ANG: 96.27

GENERATOR NAME -- AT BUS -- KA VOLTS PU LOCAL/REMOTE
DC-9798 5.466 0.18 R
TOTAL REMOTE: 5.466 KA NACD RATIO: 0.9420

	SYM2	SYM3	SYM5	SYM8
MULT. FACT:	1.000	1.000	1.000	1.000
DUTY (KA) :	5.803	5.803	5.803	5.803

THREE PHASE INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO
NACD OPTION: INTERPOLATED

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	TOT2	TOT3	TOT5	TOT8
MULT. FACT:	1.023	1.000	1.000	1.000
DUTY (KA) :	5.939	5.803	5.803	5.803

SUB 2 BUS A VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

SUB 2 BUS B VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

SUB 2 PRIMARY E/Z: 5.278 KA AT -58.10 DEG (120.66 MVA) X/R: 1.68
VOLTAGE: 13200. EQUIV. IMPEDANCE= 0.7630 + J 1.2260 OHMS
M11.102 15 KV BUS 1 5.252 KA ANG: -57.97
SUB 2 XFMR A SUB 2 BUS A 0.029 KA ANG: 96.47

GENERATOR NAME	-- AT BUS --	KA	VOLTS PU	LOCAL/REMOTE
DC-8266		4.896	0.34	R
TOTAL REMOTE:	4.896 KA	NACD RATIO:	0.9277	

	SYM2	SYM3	SYM5	SYM8
MULT. FACT:	1.000	1.000	1.000	1.000
DUTY (KA) :	5.278	5.278	5.278	5.278

	TOT2	TOT3	TOT5	TOT8
MULT. FACT:	1.010	1.000	1.000	1.000
DUTY (KA) :	5.332	5.278	5.278	5.278

SUB 2 PRIMARY E/Z: 6.080 KA AT -73.79 DEG (139.00 MVA) X/R: 3.52
VOLTAGE: 13200. EQUIV. IMPEDANCE= 0.3500 + J 1.2037 OHMS
M11.202 15 KV BUS 2 6.059 KA ANG: -73.75
SUB 2 XFMR B SUB 2 BUS B 0.021 KA ANG: 96.36

GENERATOR NAME	-- AT BUS --	KA	VOLTS PU	LOCAL/REMOTE
DC-9798		5.727	0.10	R
TOTAL REMOTE:	5.727 KA	NACD RATIO:	0.9421	

	SYM2	SYM3	SYM5	SYM8
MULT. FACT:	1.000	1.000	1.000	1.000
DUTY (KA) :	6.080	6.080	6.080	6.080

	TOT2	TOT3	TOT5	TOT8
MULT. FACT:	1.032	1.000	1.000	1.000
DUTY (KA) :	6.276	6.080	6.080	6.080

THREE PHASE INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

SUB 3 BUS A VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

SUB 3 BUS B VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

SUB 3 PRIMARY E/Z: 6.475 KA AT -72.52 DEG (148.04 MVA) X/R: 3.43
VOLTAGE: 13200. EQUIV. IMPEDANCE= 0.3534 + J 1.1227 OHMS
M11.103 15 KV BUS 1 6.376 KA ANG: -72.32
SUB 3 XFMR A SUB 3 BUS A 0.102 KA ANG: 94.36

GENERATOR NAME -- AT BUS -- KA VOLTS PU LOCAL/REMOTE
DC-8266 6.009 0.06 R
TOTAL REMOTE: 6.009 KA NACD RATIO: 0.9280

	SYM2	SYM3	SYM5	SYM8
MULT. FACT:	1.000	1.000	1.000	1.000
DUTY (KA) :	6.475	6.475	6.475	6.475

	TOT2	TOT3	TOT5	TOT8
MULT. FACT:	1.031	1.000	1.000	1.000
DUTY (KA) :	6.674	6.475	6.475	6.475

SUB 3 PRIMARY E/Z: 6.215 KA AT -76.77 DEG (142.08 MVA) X/R: 4.38
VOLTAGE: 13200. EQUIV. IMPEDANCE= 0.2806 + J 1.1938 OHMS
M11.203 15 KV BUS 2 6.162 KA ANG: -76.69
SUB 3 XFMR B SUB 3 BUS B 0.053 KA ANG: 94.19

GENERATOR NAME -- AT BUS -- KA VOLTS PU LOCAL/REMOTE
DC-9798 5.854 0.05 R
TOTAL REMOTE: 5.854 KA NACD RATIO: 0.9420

	SYM2	SYM3	SYM5	SYM8
MULT. FACT:	1.000	1.000	1.000	1.000
DUTY (KA) :	6.215	6.215	6.215	6.215

	TOT2	TOT3	TOT5	TOT8
MULT. FACT:	1.043	1.000	1.000	1.000
DUTY (KA) :	6.479	6.215	6.215	6.215

SUB 4 BUS A VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

SUB 4 BUS B VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

SUB 4 PRIMARY E/Z: 5.678 KA AT -62.32 DEG (129.82 MVA) X/R: 2.02
VOLTAGE: 13200. EQUIV. IMPEDANCE= 0.6235 + J 1.1886 OHMS
M11.104 15 KV BUS 1 5.618 KA ANG: -62.09
SUB 4 XFMR A SUB 4 BUS A 0.064 KA ANG: 96.84

THREE PHASE INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO
NACD OPTION: INTERPOLATED

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GENERATOR NAME -- AT BUS -- KA VOLTS PU LOCAL/REMOTE
DC-8266 5.265 0.26 R
TOTAL REMOTE: 5.265 KA NACD RATIO: 0.9273

	SYM2	SYM3	SYM5	SYM8
MULT. FACT:	1.000	1.000	1.000	1.000
DUTY (KA) :	5.678	5.678	5.678	5.678

	TOT2	TOT3	TOT5	TOT8
MULT. FACT:	1.014	1.000	1.000	1.000
DUTY (KA) :	5.759	5.678	5.678	5.678

SUB 4 PRIMARY E/Z: 6.242 KA AT -76.39 DEG (142.70 MVA) X/R: 4.25
VOLTAGE: 13200. EQUIV. IMPEDANCE= 0.2874 + J 1.1867 OHMS
M11.204 15 KV BUS 2 6.178 KA ANG: -76.31
SUB 4 XFMR B SUB 4 BUS B 0.064 KA ANG: 96.67

GENERATOR NAME -- AT BUS -- KA VOLTS PU LOCAL/REMOTE
DC-9798 5.880 0.05 R
TOTAL REMOTE: 5.880 KA NACD RATIO: 0.9421

	SYM2	SYM3	SYM5	SYM8
MULT. FACT:	1.000	1.000	1.000	1.000
DUTY (KA) :	6.242	6.242	6.242	6.242

	TOT2	TOT3	TOT5	TOT8
MULT. FACT:	1.041	1.000	1.000	1.000
DUTY (KA) :	6.497	6.242	6.242	6.242

SUB 5 BUS A VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

SUB 5 BUS B VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

SUB 5 PRIMARY E/Z: 6.553 KA AT -73.24 DEG (149.81 MVA) X/R: 3.58
VOLTAGE: 13200. EQUIV. IMPEDANCE= 0.3355 + J 1.1136 OHMS
M11.105 15 KV BUS 1 6.453 KA ANG: -73.07
SUB 5 XFMR A SUB 5 BUS A 0.102 KA ANG: 96.20

GENERATOR NAME -- AT BUS -- KA VOLTS PU LOCAL/REMOTE
DC-8266 6.082 0.04 R
TOTAL REMOTE: 6.082 KA NACD RATIO: 0.9282

THREE PHASE INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO
NACD OPTION: INTERPOLATED

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	SYM2	SYM3	SYM5	SYM8
MULT. FACT:	1.000	1.000	1.000	1.000
DUTY (KA) :	6.553	6.553	6.553	6.553

	TOT2	TOT3	TOT5	TOT8
MULT. FACT:	1.033	1.000	1.000	1.000
DUTY (KA) :	6.766	6.553	6.553	6.553

SUB 5 PRIMARY E/Z: 6.282 KA AT -77.52 DEG (143.61 MVA) X/R: 4.66
VOLTAGE: 13200. EQUIV. IMPEDANCE= 0.2622 + J 1.1846 OHMS
M11.205 15 KV BUS 2 6.164 KA ANG: -77.41
SUB 5 XFMR B SUB 5 BUS B 0.118 KA ANG: 96.45

GENERATOR NAME	-- AT BUS --	KA	VOLTS PU	LOCAL/REMOTE
DC-9798		5.917	0.03	R
TOTAL REMOTE:	5.917 KA	NACD RATIO:	0.9420	

	SYM2	SYM3	SYM5	SYM8
MULT. FACT:	1.000	1.000	1.000	1.000
DUTY (KA) :	6.282	6.282	6.282	6.282

	TOT2	TOT3	TOT5	TOT8
MULT. FACT:	1.046	1.000	1.000	1.000
DUTY (KA) :	6.569	6.282	6.282	6.282

SUB 6 BUS A VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

SUB 6 BUS B VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

SUB 7 BUS A VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

SUB 7 BUS B VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

SUB 7 XFMR A P E/Z: 6.567 KA AT -73.01 DEG (150.15 MVA) X/R: 3.52
VOLTAGE: 13200. EQUIV. IMPEDANCE= 0.3391 + J 1.1098 OHMS
CONTRIBUTIONS: 15 KV BUS 1 6.567 KA ANG: -73.01

GENERATOR NAME	-- AT BUS --	KA	VOLTS PU	LOCAL/REMOTE
DC-8266		6.096	0.05	R
TOTAL REMOTE:	6.096 KA	NACD RATIO:	0.9283	

THREE PHASE INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO
NACD OPTION: INTERPOLATED

=====

	SYM2	SYM3	SYM5	SYM8
MULT. FACT:	1.000	1.000	1.000	1.000
DUTY (KA) :	6.567	6.567	6.567	6.567

	TOT2	TOT3	TOT5	TOT8
MULT. FACT:	1.032	1.000	1.000	1.000
DUTY (KA) :	6.777	6.567	6.567	6.567

SUB 7 XFMR B P E/Z: 6.296 KA AT -77.31 DEG (143.96 MVA) X/R: 4.57
VOLTAGE: 13200. EQUIV. IMPEDANCE= 0.2659 + J 1.1808 OHMS
CONTRIBUTIONS: 15 KV BUS 2 6.296 KA ANG: -77.31

GENERATOR NAME	-- AT BUS --	KA	VOLTS PU	LOCAL/REMOTE
DC-9798		5.932	0.03	R
TOTAL REMOTE:	5.932 KA	NACD RATIO:	0.9422	

	SYM2	SYM3	SYM5	SYM8
MULT. FACT:	1.000	1.000	1.000	1.000
DUTY (KA) :	6.296	6.296	6.296	6.296

	TOT2	TOT3	TOT5	TOT8
MULT. FACT:	1.045	1.000	1.000	1.000
DUTY (KA) :	6.579	6.296	6.296	6.296

SUB 8 BUS A E/Z: 2.371 KA AT -80.22 DEG (17.08 MVA) X/R: 6.28
VOLTAGE: 4160. EQUIV. IMPEDANCE= 0.1722 + J 0.9983 OHMS
M05.003 SUB 6 XFMR A P 0.013 KA ANG: 96.49
M05.004 PAB-E3 STR IN 0.349 KA ANG: 96.16
M05.001 PAB-E1 STR IN 0.349 KA ANG: 96.16
SUB 8 XFMR A SUB 8 PRIMARY 1.662 KA ANG: -258.67

GENERATOR NAME	-- AT BUS --	KA	VOLTS PU	LOCAL/REMOTE
DC-8266		1.581	0.92	R
TOTAL REMOTE:	1.581 KA	NACD RATIO:	0.6667	

	SYM2	SYM3	SYM5	SYM8
MULT. FACT:	1.000	1.000	1.000	1.000
DUTY (KA) :	2.371	2.371	2.371	2.371

	TOT2	TOT3	TOT5	TOT8
MULT. FACT:	1.082	1.003	1.000	1.000
DUTY (KA) :	2.566	2.377	2.371	2.371

THREE PHASE INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO
NACD OPTION: INTERPOLATED

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=====
SUB 8 BUS B  E/Z:      2.018 KA AT -79.86 DEG ( 14.54 MVA) X/R:      5.87
VOLTAGE:    4160.  EQUIV. IMPEDANCE= 0.2095 + J 1.1717 OHMS
M05.006      PAB-E2 STR IN      0.349 KA      ANG:      96.16
M05.008      SUB 6 XFMR B P      0.013 KA      ANG:     100.03
SUB 8 XFMR B  SUB 8 PRIMARY      1.657 KA      ANG:    -259.02
```

```
GENERATOR NAME -- AT BUS -- KA  VOLTS PU  LOCAL/REMOTE
DC-9798              1.585    0.92          R
TOTAL REMOTE:      1.585 KA  NACD RATIO: 0.7853
```

```
          SYM2      SYM3      SYM5      SYM8
MULT. FACT:  1.000    1.000    1.000    1.000
DUTY (KA) :   2.018    2.018    2.018    2.018
```

```
          TOT2      TOT3      TOT5      TOT8
MULT. FACT:  1.072    1.001    1.000    1.000
DUTY (KA) :   2.163    2.019    2.018    2.018
```

```
SUB 8 PRIMARY E/Z:      6.509 KA AT -72.99 DEG ( 148.81 MVA) X/R:      3.52
VOLTAGE:    13200. EQUIV. IMPEDANCE= 0.3425 + J 1.1197 OHMS
SUB 8 XFMR A  SUB 8 BUS A      0.161 KA      ANG:      97.47
M11.108      15 KV BUS 1      6.350 KA      ANG:    -72.75
```

```
GENERATOR NAME -- AT BUS -- KA  VOLTS PU  LOCAL/REMOTE
DC-8266              6.040    0.05          R
TOTAL REMOTE:      6.040 KA  NACD RATIO: 0.9279
```

```
          SYM2      SYM3      SYM5      SYM8
MULT. FACT:  1.000    1.000    1.000    1.000
DUTY (KA) :   6.509    6.509    6.509    6.509
```

```
          TOT2      TOT3      TOT5      TOT8
MULT. FACT:  1.032    1.000    1.000    1.000
DUTY (KA) :   6.716    6.509    6.509    6.509
```

```
SUB 8 PRIMARY E/Z:      6.242 KA AT -77.24 DEG ( 142.70 MVA) X/R:      4.55
VOLTAGE:    13200. EQUIV. IMPEDANCE= 0.2696 + J 1.1908 OHMS
SUB 8 XFMR B  SUB 8 BUS B      0.095 KA      ANG:      97.05
M11.208      15 KV BUS 2      6.147 KA      ANG:    -77.15
```

```
GENERATOR NAME -- AT BUS -- KA  VOLTS PU  LOCAL/REMOTE
DC-9798              5.880    0.04          R
TOTAL REMOTE:      5.880 KA  NACD RATIO: 0.9420
```

THREE PHASE INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

NACD OPTION: INTERPOLATED

=====

	SYM2	SYM3	SYM5	SYM8
MULT. FACT:	1.000	1.000	1.000	1.000
DUTY (KA) :	6.242	6.242	6.242	6.242

	TOT2	TOT3	TOT5	TOT8
MULT. FACT:	1.045	1.000	1.000	1.000
DUTY (KA) :	6.520	6.242	6.242	6.242

SUB SP-1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

SUB SP-2 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

SUMP PUMP 1 DI VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

SUMP PUMP 3 DI VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

SWP LCP VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

SWPSO VALVE DI VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

SWPSO-SG DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

TABLET FDR DIS VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

TEMP ADM1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

TEMP ADM2 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

TEMP PUMPS VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

TER FIL EFF SP VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

TFB-MPC VOLTAGE: 208. (SEE LOW VOLTAGE REPORT)

TGS DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

UDSP1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

UDSP2 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

UH EE VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

THREE PHASE INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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=====
UH EE DISC      VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
UH FF           VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
UPS-ADM-1 INPU  VOLTAGE:   208. ( SEE LOW VOLTAGE REPORT )
UPS-ADM-1 OUTP  VOLTAGE:   208. ( SEE LOW VOLTAGE REPORT )
UV 2A           VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
UV 2B           VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
UV-1A           VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
UV-1A PD LINE   VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
UV-1B           VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
UV-1B PD LINE   VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
VFD CFG-1 INPU  VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
VFD CFG-2 INPU  VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
VFD CFG-3 INPU  VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
W CONT GT2 DIS  VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
W1 FLOW VALVES  VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
WA MAIN BOV     VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
WAS VALVE W1    VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
WAS VALVE W1 D  VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
WAS VALVE W2    VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
WASP-E1 VFD IN  VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
WASP-E2 VFD IN  VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
WASP-W1 VFD IN  VOLTAGE:   480. ( SEE LOW VOLTAGE REPORT )
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THREE PHASE INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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=====
WASP-W2 VFD IN VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
WASV E1 VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
WASV E2 VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
WASV E3 VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
WASV E4 VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
WBB-EF-1 DISC VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
WBB-EF-2 DISC VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
WBB-EF-3 DISC VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
WBB-EF-4 DISC VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
WBB-EF-5 DISC VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
WBB-EF-6 DISC VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
WBB-EF-7 DISC VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
WBB-H1 VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
WBB-H1 DISC VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
WBB-H2 VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
WBB-H2 DISC VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
WBB-HV-1 DISC VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
WBB-HV-2 VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
WBB-HV-2 DISC VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
WBB-P-1 DISC VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
WBB-P-2 DISC VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
WEST AESG W1 VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
```

THREE PHASE INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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=====
WEST AESG W2 VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
WEST AESGW1 DI VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
WFB-EUH-TERM's VOLTAGE: 208. ( SEE LOW VOLTAGE REPORT )
WHM DISC VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
WPB-EF-1 DISC VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
WPB-H1 DISC VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
WPB-H1 HOIST VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
WPB-HV-1 VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
WPB-HV-1 DISC VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
WPB-P-1 DISC VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
WPE-SAP-2 DISC VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
WPSE GATE E DI VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
WPSE GATE W DI VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
WPSE SMPL PMP VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
WSE-SAP-3 DIS VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
WTR-CRC-PMP-1 VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
WTR-CRC-PMP-2 VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
WW BYP GATE E VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
WWRDP2 DISC VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
WWRDP3 DISC VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
WWWRESDP1 DISC VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
Wireway VOLTAGE: 480. ( SEE LOW VOLTAGE REPORT )
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THREE PHASE INTERRUPTING DUTY REPORT
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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Wireway. VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

UNBALANCED INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

NACD OPTION: INTERPOLATED

LOCATION	FAULT TYPE	E/Z KA	X/R	ANSI DECREMENT 3 PHASE	AC/DC FACT. SLG	INTERRUPTING DUTIES (KA) 3 PHASE SLG	
15 KV BUS 1	3P Duty:	6.61	3.6	SYM2:	1.00	1.00	6.61 5.50
VOLTS: 13200.0	SLG:	5.50	2.9	SYM3:	1.00	1.00	6.61 5.50
NACD: 0.928	LN/LN:	5.72		SYM5:	1.00	1.00	6.61 5.50
	LN/LN/GND:	6.39		SYM8:	1.00	1.00	6.61 5.50
	GND RETURN:	4.71		TOT2:	1.03	1.02	6.83 5.64
	Z1(PU):	0.66220		TOT3:	1.00	1.00	6.61 5.50
	Z2(PU):	0.66220		TOT5:	1.00	1.00	6.61 5.50
	Z0(PU):	1.06502		TOT8:	1.00	1.00	6.61 5.50
15 KV BUS 1 Li	3P Duty:	6.61	3.6	SYM2:	1.00	1.00	6.61 5.50
VOLTS: 13200.0	SLG:	5.50	2.9	SYM3:	1.00	1.00	6.61 5.50
NACD: 0.928	LN/LN:	5.72		SYM5:	1.00	1.00	6.61 5.50
	LN/LN/GND:	6.39		SYM8:	1.00	1.00	6.61 5.50
	GND RETURN:	4.71		TOT2:	1.03	1.02	6.83 5.64
	Z1(PU):	0.66219		TOT3:	1.00	1.00	6.61 5.50
	Z2(PU):	0.66219		TOT5:	1.00	1.00	6.61 5.50
	Z0(PU):	1.06500		TOT8:	1.00	1.00	6.61 5.50
15 KV BUS 2	3P Duty:	6.33	4.8	SYM2:	1.00	1.00	6.33 5.14
VOLTS: 13200.0	SLG:	5.14	4.1	SYM3:	1.00	1.00	6.33 5.14
NACD: 0.942	LN/LN:	5.48		SYM5:	1.00	1.00	6.33 5.14
	LN/LN/GND:	6.00		SYM8:	1.00	1.00	6.33 5.14
	GND RETURN:	4.33		TOT2:	1.05	1.04	6.63 5.34
	Z1(PU):	0.69132		TOT3:	1.00	1.00	6.33 5.14
	Z2(PU):	0.69132		TOT5:	1.00	1.00	6.33 5.14
	Z0(PU):	1.17098		TOT8:	1.00	1.00	6.33 5.14
15 KV BUS 2 Li	3P Duty:	6.33	4.8	SYM2:	1.00	1.00	6.33 5.14
VOLTS: 13200.0	SLG:	5.14	4.1	SYM3:	1.00	1.00	6.33 5.14
NACD: 0.942	LN/LN:	5.48		SYM5:	1.00	1.00	6.33 5.14
	LN/LN/GND:	6.00		SYM8:	1.00	1.00	6.33 5.14
	GND RETURN:	4.33		TOT2:	1.05	1.04	6.63 5.34
	Z1(PU):	0.69131		TOT3:	1.00	1.00	6.33 5.14
	Z2(PU):	0.69131		TOT5:	1.00	1.00	6.33 5.14
	Z0(PU):	1.17097		TOT8:	1.00	1.00	6.33 5.14

UNBALANCED INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

NACD OPTION: INTERPOLATED

LOCATION	FAULT TYPE	E/Z KA	X/R	ANSI DECREMENT 3 PHASE	AC/DC FACT. SLG	INTERRUPTING DUTIES (KA) 3 PHASE	SLG
15 KV BUS 3	3P Duty:	1.50	7.4	SYM2:	1.00	1.00	1.50
VOLTS: 13200.0	SLG:	0.08	0.0	SYM3:	1.00	1.00	1.50
NACD: 0.000	LN/LN:	1.08		SYM5:	1.00	1.00	1.50
	LN/LN/GND:	1.10		SYM8:	1.00	1.00	1.50
	GND RETURN:	0.04		TOT2:	1.11	1.00	1.68
	Z1(PU):	2.90638		TOT3:	1.02	1.00	1.54
	Z2(PU):	4.14121		TOT5:	1.00	1.00	1.50
	Z0(PU):	172.56535		TOT8:	1.00	1.00	1.50
DTE NORTH	3P Duty:	6.78	3.9	SYM2:	1.00	1.00	6.78
VOLTS: 13200.0	SLG:	5.70	3.1	SYM3:	1.00	1.00	6.78
NACD: 0.930	LN/LN:	5.87		SYM5:	1.00	1.00	6.78
	LN/LN/GND:	6.58		SYM8:	1.00	1.00	6.78
	GND RETURN:	4.90		TOT2:	1.04	1.03	7.03
	Z1(PU):	0.64494		TOT3:	1.00	1.00	6.78
	Z2(PU):	0.64494		TOT5:	1.00	1.00	6.78
	Z0(PU):	1.01800		TOT8:	1.00	1.00	6.78
DTE SOUTH	3P Duty:	6.44	5.1	SYM2:	1.00	1.00	6.44
VOLTS: 13200.0	SLG:	5.26	4.3	SYM3:	1.00	1.00	6.44
NACD: 0.943	LN/LN:	5.58		SYM5:	1.00	1.00	6.44
	LN/LN/GND:	6.12		SYM8:	1.00	1.00	6.44
	GND RETURN:	4.44		TOT2:	1.05	1.04	6.79
	Z1(PU):	0.67926		TOT3:	1.00	1.00	6.44
	Z2(PU):	0.67926		TOT5:	1.00	1.00	6.44
	Z0(PU):	1.13843		TOT8:	1.00	1.00	6.44
PAB-E1 STR IN	3P Duty:	2.36	6.0	SYM2:	1.00	1.00	2.36
VOLTS: 4160.0	SLG:	2.13	5.4	SYM3:	1.00	1.00	2.36
NACD: 0.666	LN/LN:	2.04		SYM5:	1.00	1.00	2.36
	LN/LN/GND:	2.28		SYM8:	1.00	1.00	2.36
	GND RETURN:	1.95		TOT2:	1.07	1.05	2.53
	Z1(PU):	5.88198		TOT3:	1.00	1.00	2.36
	Z2(PU):	5.88198		TOT5:	1.00	1.00	2.36
	Z0(PU):	7.74964		TOT8:	1.00	1.00	2.36

UNBALANCED INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

NACD OPTION: INTERPOLATED

LOCATION	FAULT TYPE	E/Z KA	X/R	ANSI 3 PHASE	AC/DC DECREMENT FACT. SLG	INTERRUPTING DUTIES (KA) 3 PHASE SLG	
PAB-E2 STR IN	3P Duty:	2.01	5.7	SYM2:	1.00	1.00	2.01 1.93
VOLTS:	4160.0 SLG:	1.93	5.3	SYM3:	1.00	1.00	2.01 1.93
NACD:	0.785 LN/LN:	1.74		SYM5:	1.00	1.00	2.01 1.93
	LN/LN/GND:	1.98		SYM8:	1.00	1.00	2.01 1.93
	GND RETURN:	1.86		TOT2:	1.07	1.05	2.14 2.03
	Z1(PU):	6.90541		TOT3:	1.00	1.00	2.01 1.93
	Z2(PU):	6.90541		TOT5:	1.00	1.00	2.01 1.93
	Z0(PU):	7.74964		TOT8:	1.00	1.00	2.01 1.93
PAB-E3 STR IN	3P Duty:	2.36	6.0	SYM2:	1.00	1.00	2.36 2.13
VOLTS:	4160.0 SLG:	2.13	5.4	SYM3:	1.00	1.00	2.36 2.13
NACD:	0.666 LN/LN:	2.04		SYM5:	1.00	1.00	2.36 2.13
	LN/LN/GND:	2.28		SYM8:	1.00	1.00	2.36 2.13
	GND RETURN:	1.95		TOT2:	1.07	1.05	2.53 2.24
	Z1(PU):	5.88198		TOT3:	1.00	1.00	2.36 2.14
	Z2(PU):	5.88198		TOT5:	1.00	1.00	2.36 2.13
	Z0(PU):	7.74964		TOT8:	1.00	1.00	2.36 2.13
SUB 1 PRIMARY	3P Duty:	5.04	1.5	SYM2:	1.00	1.00	5.04 4.06
VOLTS:	13200.0 SLG:	4.06	1.4	SYM3:	1.00	1.00	5.04 4.06
NACD:	0.928 LN/LN:	4.36		SYM5:	1.00	1.00	5.04 4.06
	LN/LN/GND:	4.75		SYM8:	1.00	1.00	5.04 4.06
	GND RETURN:	3.40		TOT2:	1.01	1.01	5.08 4.09
	Z1(PU):	0.86819		TOT3:	1.00	1.00	5.04 4.06
	Z2(PU):	0.86819		TOT5:	1.00	1.00	5.04 4.06
	Z0(PU):	1.49336		TOT8:	1.00	1.00	5.04 4.06
SUB 1 PRIMARY	3P Duty:	5.80	2.8	SYM2:	1.00	1.00	5.80 4.66
VOLTS:	13200.0 SLG:	4.66	2.6	SYM3:	1.00	1.00	5.80 4.66
NACD:	0.942 LN/LN:	5.03		SYM5:	1.00	1.00	5.80 4.66
	LN/LN/GND:	5.46		SYM8:	1.00	1.00	5.80 4.66
	GND RETURN:	3.89		TOT2:	1.02	1.02	5.94 4.76
	Z1(PU):	0.75374		TOT3:	1.00	1.00	5.80 4.66
	Z2(PU):	0.75374		TOT5:	1.00	1.00	5.80 4.66
	Z0(PU):	1.30825		TOT8:	1.00	1.00	5.80 4.66

UNBALANCED INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

NACD OPTION: INTERPOLATED

LOCATION	FAULT TYPE	E/Z KA	X/R	ANSI DECREMENT 3 PHASE	AC/DC FACT. SLG	INTERRUPTING DUTIES 3 PHASE	(KA) SLG
=====							
SUB 2 PRIMARY	3P Duty:	5.28	1.7	SYM2:	1.00	1.00	5.28
VOLTS: 13200.0	SLG:	4.27	1.5	SYM3:	1.00	1.00	4.27
NACD: 0.928	LN/LN:	4.57		SYM5:	1.00	1.00	4.27
	LN/LN/GND:	4.99		SYM8:	1.00	1.00	4.27
	GND RETURN:	3.58		TOT2:	1.01	1.01	5.33
	Z1(PU):	0.82877		TOT3:	1.00	1.00	4.27
	Z2(PU):	0.82877		TOT5:	1.00	1.00	4.27
	Z0(PU):	1.41683		TOT8:	1.00	1.00	4.27
SUB 2 PRIMARY	3P Duty:	6.08	3.5	SYM2:	1.00	1.00	6.08
VOLTS: 13200.0	SLG:	4.91	3.2	SYM3:	1.00	1.00	4.91
NACD: 0.942	LN/LN:	5.27		SYM5:	1.00	1.00	4.91
	LN/LN/GND:	5.74		SYM8:	1.00	1.00	4.91
	GND RETURN:	4.12		TOT2:	1.03	1.03	5.05
	Z1(PU):	0.71944		TOT3:	1.00	1.00	4.91
	Z2(PU):	0.71944		TOT5:	1.00	1.00	4.91
	Z0(PU):	1.23470		TOT8:	1.00	1.00	4.91
SUB 3 PRIMARY	3P Duty:	6.48	3.4	SYM2:	1.00	1.00	6.48
VOLTS: 13200.0	SLG:	5.37	2.8	SYM3:	1.00	1.00	5.37
NACD: 0.928	LN/LN:	5.61		SYM5:	1.00	1.00	5.37
	LN/LN/GND:	6.24		SYM8:	1.00	1.00	5.37
	GND RETURN:	4.58		TOT2:	1.03	1.02	5.49
	Z1(PU):	0.67549		TOT3:	1.00	1.00	5.37
	Z2(PU):	0.67549		TOT5:	1.00	1.00	5.37
	Z0(PU):	1.09706		TOT8:	1.00	1.00	5.37
SUB 3 PRIMARY	3P Duty:	6.21	4.4	SYM2:	1.00	1.00	6.21
VOLTS: 13200.0	SLG:	5.03	3.8	SYM3:	1.00	1.00	5.03
NACD: 0.942	LN/LN:	5.38		SYM5:	1.00	1.00	5.03
	LN/LN/GND:	5.88		SYM8:	1.00	1.00	5.03
	GND RETURN:	4.23		TOT2:	1.04	1.04	5.21
	Z1(PU):	0.70381		TOT3:	1.00	1.00	5.03
	Z2(PU):	0.70381		TOT5:	1.00	1.00	5.03
	Z0(PU):	1.20111		TOT8:	1.00	1.00	5.03

UNBALANCED INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

NACD OPTION: INTERPOLATED

LOCATION	FAULT TYPE	E/Z KA	X/R	ANSI DECREMENT 3 PHASE	AC/DC FACT. SLG	INTERRUPTING DUTIES (KA) 3 PHASE	SLG
SUB 4 PRIMARY	3P Duty:	5.68	2.0	SYM2:	1.00	1.00	5.68 4.62
VOLTS: 13200.0	SLG:	4.62	1.8	SYM3:	1.00	1.00	5.68 4.62
NACD: 0.927	LN/LN:	4.92		SYM5:	1.00	1.00	5.68 4.62
	LN/LN/GND:	5.41		SYM8:	1.00	1.00	5.68 4.62
	GND RETURN:	3.89		TOT2:	1.01	1.01	5.76 4.67
	Z1(PU):	0.77032		TOT3:	1.00	1.00	5.68 4.62
	Z2(PU):	0.77032		TOT5:	1.00	1.00	5.68 4.62
	Z0(PU):	1.30150		TOT8:	1.00	1.00	5.68 4.62
SUB 4 PRIMARY	3P Duty:	6.24	4.2	SYM2:	1.00	1.00	6.24 5.06
VOLTS: 13200.0	SLG:	5.06	3.7	SYM3:	1.00	1.00	6.24 5.06
NACD: 0.942	LN/LN:	5.41		SYM5:	1.00	1.00	6.24 5.06
	LN/LN/GND:	5.91		SYM8:	1.00	1.00	6.24 5.06
	GND RETURN:	4.25		TOT2:	1.04	1.03	6.50 5.23
	Z1(PU):	0.70077		TOT3:	1.00	1.00	6.24 5.06
	Z2(PU):	0.70077		TOT5:	1.00	1.00	6.24 5.06
	Z0(PU):	1.19305		TOT8:	1.00	1.00	6.24 5.06
SUB 5 PRIMARY	3P Duty:	6.55	3.6	SYM2:	1.00	1.00	6.55 5.45
VOLTS: 13200.0	SLG:	5.45	2.9	SYM3:	1.00	1.00	6.55 5.45
NACD: 0.928	LN/LN:	5.67		SYM5:	1.00	1.00	6.55 5.45
	LN/LN/GND:	6.33		SYM8:	1.00	1.00	6.55 5.45
	GND RETURN:	4.65		TOT2:	1.03	1.02	6.77 5.58
	Z1(PU):	0.66751		TOT3:	1.00	1.00	6.55 5.45
	Z2(PU):	0.66751		TOT5:	1.00	1.00	6.55 5.45
	Z0(PU):	1.07798		TOT8:	1.00	1.00	6.55 5.45
SUB 5 PRIMARY	3P Duty:	6.28	4.7	SYM2:	1.00	1.00	6.28 5.10
VOLTS: 13200.0	SLG:	5.10	4.0	SYM3:	1.00	1.00	6.28 5.10
NACD: 0.942	LN/LN:	5.44		SYM5:	1.00	1.00	6.28 5.10
	LN/LN/GND:	5.95		SYM8:	1.00	1.00	6.28 5.10
	GND RETURN:	4.29		TOT2:	1.05	1.04	6.57 5.29
	Z1(PU):	0.69631		TOT3:	1.00	1.00	6.28 5.10
	Z2(PU):	0.69631		TOT5:	1.00	1.00	6.28 5.10
	Z0(PU):	1.18345		TOT8:	1.00	1.00	6.28 5.10

UNBALANCED INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

NACD OPTION: INTERPOLATED

LOCATION	FAULT TYPE	E/Z KA	X/R	ANSI DECREMENT 3 PHASE	AC/DC FACT. SLG	INTERRUPTING DUTIES (KA) 3 PHASE	SLG
SUB 7 XFMR A P 3P Duty:		6.57	3.5	SYM2:	1.00	1.00	6.57 5.46
VOLTS: 13200.0	SLG:	5.46	2.8	SYM3:	1.00	1.00	6.57 5.46
NACD: 0.928	LN/LN:	5.69		SYM5:	1.00	1.00	6.57 5.46
	LN/LN/GND:	6.34		SYM8:	1.00	1.00	6.57 5.46
	GND RETURN:	4.67		TOT2:	1.03	1.02	6.78 5.59
	Z1(PU):	0.66601		TOT3:	1.00	1.00	6.57 5.46
	Z2(PU):	0.66601		TOT5:	1.00	1.00	6.57 5.46
	Z0(PU):	1.07385		TOT8:	1.00	1.00	6.57 5.46
SUB 7 XFMR B P 3P Duty:		6.30	4.6	SYM2:	1.00	1.00	6.30 5.11
VOLTS: 13200.0	SLG:	5.11	3.9	SYM3:	1.00	1.00	6.30 5.11
NACD: 0.942	LN/LN:	5.45		SYM5:	1.00	1.00	6.30 5.11
	LN/LN/GND:	5.97		SYM8:	1.00	1.00	6.30 5.11
	GND RETURN:	4.30		TOT2:	1.04	1.04	6.58 5.30
	Z1(PU):	0.69466		TOT3:	1.00	1.00	6.30 5.11
	Z2(PU):	0.69466		TOT5:	1.00	1.00	6.30 5.11
	Z0(PU):	1.17870		TOT8:	1.00	1.00	6.30 5.11
SUB 8 BUS A 3P Duty:		2.37	6.3	SYM2:	1.00	1.00	2.37 2.15
VOLTS: 4160.0	SLG:	2.15	5.8	SYM3:	1.00	1.00	2.37 2.15
NACD: 0.667	LN/LN:	2.05		SYM5:	1.00	1.00	2.37 2.15
	LN/LN/GND:	2.29		SYM8:	1.00	1.00	2.37 2.15
	GND RETURN:	1.97		TOT2:	1.08	1.07	2.57 2.29
	Z1(PU):	5.85363		TOT3:	1.00	1.00	2.38 2.16
	Z2(PU):	5.85363		TOT5:	1.00	1.00	2.37 2.15
	Z0(PU):	7.66669		TOT8:	1.00	1.00	2.37 2.15
SUB 8 BUS B 3P Duty:		2.02	5.9	SYM2:	1.00	1.00	2.02 1.94
VOLTS: 4160.0	SLG:	1.94	5.6	SYM3:	1.00	1.00	2.02 1.94
NACD: 0.785	LN/LN:	1.75		SYM5:	1.00	1.00	2.02 1.94
	LN/LN/GND:	1.99		SYM8:	1.00	1.00	2.02 1.94
	GND RETURN:	1.87		TOT2:	1.07	1.06	2.16 2.07
	Z1(PU):	6.87823		TOT3:	1.00	1.00	2.02 1.95
	Z2(PU):	6.87823		TOT5:	1.00	1.00	2.02 1.94
	Z0(PU):	7.66669		TOT8:	1.00	1.00	2.02 1.94

UNBALANCED INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

NACD OPTION: INTERPOLATED

LOCATION	FAULT TYPE	E/Z KA	X/R	ANSI AC/DC DECREMENT 3 PHASE	FACT. SLG	INTERRUPTING DUTIES 3 PHASE	(KA) SLG	
=====								
SUB 8 PRIMARY	3P Duty:	6.51	3.5	SYM2:	1.00	1.00	6.51	5.40
VOLTS: 13200.0	SLG:	5.40	2.8	SYM3:	1.00	1.00	6.51	5.40
NACD: 0.928	LN/LN:	5.64		SYM5:	1.00	1.00	6.51	5.40
	LN/LN/GND:	6.28		SYM8:	1.00	1.00	6.51	5.40
	GND RETURN:	4.61		TOT2:	1.03	1.02	6.72	5.53
	Z1(PU):	0.67199		TOT3:	1.00	1.00	6.51	5.40
	Z2(PU):	0.67199		TOT5:	1.00	1.00	6.51	5.40
	Z0(PU):	1.08932		TOT8:	1.00	1.00	6.51	5.40
SUB 8 PRIMARY	3P Duty:	6.24	4.5	SYM2:	1.00	1.00	6.24	5.06
VOLTS: 13200.0	SLG:	5.06	3.9	SYM3:	1.00	1.00	6.24	5.06
NACD: 0.942	LN/LN:	5.41		SYM5:	1.00	1.00	6.24	5.06
	LN/LN/GND:	5.91		SYM8:	1.00	1.00	6.24	5.06
	GND RETURN:	4.25		TOT2:	1.04	1.04	6.52	5.24
	Z1(PU):	0.70075		TOT3:	1.00	1.00	6.24	5.06
	Z2(PU):	0.70075		TOT5:	1.00	1.00	6.24	5.06
	Z0(PU):	1.19437		TOT8:	1.00	1.00	6.24	5.06

I N T E R R U P T I N G D U T Y S U M M A R Y R E P O R T

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

NACD OPTION: INTERPOLATED

BUS RECORD NO NAME	VOLTAGE L-L	NACD RATIO	* 3 P H A S E *		* * * S L G * * *	
			E/Z KA	X/R	E/Z KA	X/R
15 KV BUS 1	13200.	0.928	6.605	3.65	5.502	2.91
15 KV BUS 1 Li	13200.	0.928	6.605	3.65	5.502	2.91
15 KV BUS 2	13200.	0.942	6.327	4.78	5.142	4.07
15 KV BUS 2 Li	13200.	0.942	6.327	4.78	5.142	4.07
15 KV BUS 3	13200.	0.000	1.505	7.43	0.076	0.04
DTE NORTH	13200.	0.930	6.782	3.87	5.697	3.06
DTE SOUTH	13200.	0.943	6.439	5.13	5.258	4.32
PAB-E1 STR IN	4160.	0.666	2.360	5.96	2.134	5.43
PAB-E2 STR IN	4160.	0.785	2.010	5.68	1.931	5.32
PAB-E3 STR IN	4160.	0.666	2.360	5.96	2.134	5.43
SUB 1 PRIMARY	13200.	0.928	5.038	1.53	4.064	1.42
SUB 1 PRIMARY	13200.	0.942	5.803	2.76	4.661	2.56
SUB 2 PRIMARY	13200.	0.928	5.278	1.68	4.270	1.54
SUB 2 PRIMARY	13200.	0.942	6.080	3.52	4.910	3.15
SUB 3 PRIMARY	13200.	0.928	6.475	3.43	5.369	2.77
SUB 3 PRIMARY	13200.	0.942	6.215	4.38	5.033	3.79
SUB 4 PRIMARY	13200.	0.927	5.678	2.02	4.621	1.79
SUB 4 PRIMARY	13200.	0.942	6.242	4.25	5.060	3.69
SUB 5 PRIMARY	13200.	0.928	6.553	3.58	5.448	2.87
SUB 5 PRIMARY	13200.	0.942	6.282	4.66	5.097	3.98
SUB 7 XFMR A P	13200.	0.928	6.567	3.52	5.464	2.83
SUB 7 XFMR B P	13200.	0.942	6.296	4.57	5.113	3.92
SUB 8 BUS A	4160.	0.667	2.371	6.28	2.149	5.82
SUB 8 BUS B	4160.	0.785	2.018	5.87	1.944	5.63
SUB 8 PRIMARY	13200.	0.928	6.509	3.52	5.402	2.83
SUB 8 PRIMARY	13200.	0.942	6.242	4.55	5.058	3.91

31 FAULTED BUSES, 1603 BRANCHES, 466 CONTRIBUTIONS
UNBALANCED FAULTS REQUESTED

*** SHORT CIRCUIT STUDY COMPLETE ***

Ann Arbor Wastewater Treatment Plant

May 06, 2016 13:00:59

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A_FAULT SHORT CIRCUIT ANALYSIS REPORT
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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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CFG-1 BACK DR 3P Duty: 5.616 KA AT -24.32 DEG ( 4.67 MVA) X/R: 0.62
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0450 + J 0.0203 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 5.616 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 5.616 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 5.616 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 5.616 KA
CONTRIBUTIONS: 50 HP CFG-1 BA 0.392 KA ANG: -84.29
CBL-0179 CFG-1 PNL 5.430 KA ANG: -20.73

CFG-1 BOWL DR 3P Duty: 17.517 KA AT -68.19 DEG ( 14.56 MVA) X/R: 3.08
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0059 + J 0.0147 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 17.517 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 17.517 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 17.517 KA
CONTRIBUTIONS: 250 HP CFG-1 B 1.960 KA ANG: -84.29
CBL-0180 CFG-1 PNL 15.643 KA ANG: -66.19

CFG-1 PNL 3P Duty: 29.146 KA AT -73.26 DEG ( 24.23 MVA) X/R: 3.55
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0027 + J 0.0091 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 29.146 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 29.146 KA
CBL-0180 CFG-1 BOWL DR 1.868 KA ANG: 97.04
CBL-0179 CFG-1 BACK DR 0.384 KA ANG: 99.19
VFD CFG-1 VFD CFG-1 INPU 26.927 KA ANG: -252.48

CFG-2 BACK DR 3P Duty: 6.907 KA AT -25.81 DEG ( 5.74 MVA) X/R: 0.64
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0361 + J 0.0175 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 6.907 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 6.907 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 6.907 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 6.907 KA
CONTRIBUTIONS: 50 HP CFG-2 BA 0.392 KA ANG: -84.29
CBL-0168 CFG-2 PNL 6.711 KA ANG: -22.96

CFG-2 BOWL DR 3P Duty: 17.605 KA AT -68.33 DEG ( 14.64 MVA) X/R: 3.09
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0058 + J 0.0146 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 17.605 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 17.605 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 17.605 KA
CONTRIBUTIONS: 250 HP CFG-2 B 1.960 KA ANG: -84.29
CBL-0169 CFG-2 PNL 15.730 KA ANG: -66.36

CFG-2 PNL 3P Duty: 29.397 KA AT -73.59 DEG ( 24.44 MVA) X/R: 3.60

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0027 + J 0.0090 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 29.397 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 29.397 KA
CBL-0169 CFG-2 BOWL DR 1.868 KA ANG: 97.04
CBL-0168 CFG-2 BACK DR 0.386 KA ANG: 98.46
VFD CFG-2 VFD CFG-2 INPU 27.174 KA ANG: -252.84

CFG-3 BACK DR 3P Duty: 5.738 KA AT -23.35 DEG ( 4.77 MVA) X/R: 0.47
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0443 + J 0.0191 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 5.738 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 5.738 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 5.738 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 5.738 KA
CONTRIBUTIONS: 50 HP CFG-3 BA 0.392 KA ANG: -78.46
CBL-0171 CFG-3 PNL 5.523 KA ANG: -20.01

CFG-3 BOWL DR 3P Duty: 18.615 KA AT -68.69 DEG ( 15.48 MVA) X/R: 3.10
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0054 + J 0.0139 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 18.615 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 18.615 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 18.615 KA
CONTRIBUTIONS: 250 HP CFG-3 B 1.960 KA ANG: -84.29
CBL-0172 CFG-3 PNL 16.736 KA ANG: -66.88

CFG-3 PNL 3P Duty: 32.553 KA AT -75.15 DEG ( 27.06 MVA) X/R: 3.93
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0022 + J 0.0082 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 32.553 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 32.553 KA
CBL-0172 CFG-3 BOWL DR 1.868 KA ANG: 97.04
CBL-0171 CFG-3 BACK DR 0.382 KA ANG: -255.13
VFD CFG-3 VFD CFG-3 INPU 30.322 KA ANG: -254.67

FCB-1 DISC 3P Duty: 8.546 KA AT -36.25 DEG ( 7.11 MVA) X/R: 0.87
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0262 + J 0.0192 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 8.546 KA
MOLDED CASE CIRCUIT BREAKER < 10KA 8.546 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 8.546 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 8.546 KA
P13.004A FCB-1 TERM 0.284 KA ANG: 95.89
P13.004 VFD FCB-1 OUT 8.359 KA ANG: -214.80

PAB-E1 STR OUT 3P Duty: 2.899 KA AT -79.93 DEG ( 20.89 MVA) X/R: 6.14
VOLTAGE: 4160. EQUIV. IMPEDANCE= 0.1448 + J 0.8157 OHMS
M05.002 PAB-E1 MTR TER 0.523 KA ANG: -83.83

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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CONTRIBUTIONS TO PAB-E1 STR OUT (CONTINUED)
PAB-E1 STARTER PAB-E1 STR IN 2.377 KA ANG: -79.07

PAB-E2 STR OUT 3P Duty: 2.366 KA AT -79.59 DEG ( 17.05 MVA) X/R: 5.87
VOLTAGE: 4160. EQUIV. IMPEDANCE= 0.1834 + J 0.9985 OHMS
M05.007 PAB-E2 MTR TER 0.523 KA ANG: 96.17
PAB-E2 STARTER PAB-E2 STR IN 1.845 KA ANG: -258.39

PAB-E3 STR OUT 3P Duty: 2.899 KA AT -79.93 DEG ( 20.89 MVA) X/R: 6.14
VOLTAGE: 4160. EQUIV. IMPEDANCE= 0.1448 + J 0.8157 OHMS
M05.005 PAB-E3 MTR TER 0.523 KA ANG: 96.17
PAB-E3 STARTER PAB-E3 STR IN 2.377 KA ANG: -259.07

RVSS SRP2 OUT 3P Duty: 12.474 KA AT -74.27 DEG ( 10.37 MVA) X/R: 3.98
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0060 + J 0.0214 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 12.474 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 13.220 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 12.474 KA
P03.202 SRP-2 JBOX 0.707 KA ANG: -83.94
RVSS SCREW PUM MCC-RLS-B 11.778 KA ANG: -73.69

RVSS SRP4 OUT 3P Duty: 12.474 KA AT -74.27 DEG ( 10.37 MVA) X/R: 3.98
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0060 + J 0.0214 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 12.474 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 13.220 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 12.474 KA
P03.204 SRP-4 JBOX 0.706 KA ANG: -83.87
RVSS SCREW PUM MCC-RLS-B 11.779 KA ANG: -73.70

SEP2 VFD OUT 3P Duty: 17.927 KA AT -75.02 DEG ( 14.90 MVA) X/R: 4.00
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0040 + J 0.0149 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 17.927 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 19.016 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 17.927 KA
CBL-0090 BUS-0129 1.043 KA ANG: 96.42
SEP2 VFD SEP2 VFD IN 16.896 KA ANG: -74.49

SEP3 DISC 3P Duty: 17.045 KA AT -72.08 DEG ( 14.17 MVA) X/R: 3.43
VOLTAGE: 480. EQUIV. IMPEDANCE= 0.0050 + J 0.0155 OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER 17.045 KA
MOLDED CASE CIRCUIT BREAKER < 20KA 17.393 KA
MOLDED CASE CIRCUIT BREAKER > 20KA 17.045 KA
CBL-0117 BUS-0174 0.872 KA ANG: 96.30
SEP3 VFD SEP3 VFD IN 16.191 KA ANG: -71.46

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THREE PHASE FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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SEP6 VFD OUT  3P Duty: 17.927 KA AT  -75.02 DEG ( 14.90 MVA) X/R:      4.00
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.0040 + J  0.0149  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  17.927 KA
MOLDED CASE CIRCUIT BREAKER < 20KA  19.016 KA
MOLDED CASE CIRCUIT BREAKER > 20KA  17.927 KA
CBL-0091      BUS-0130      1.043 KA      ANG:   -83.58
SEP6 VFD      SEP6 VFD IN    16.896 KA      ANG:   -74.49

SRP-1 RVSS OUT 3P Duty: 14.834 KA AT  -76.01 DEG ( 12.33 MVA) X/R:      4.49
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.0045 + J  0.0181  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  14.834 KA
MOLDED CASE CIRCUIT BREAKER < 20KA  16.180 KA
MOLDED CASE CIRCUIT BREAKER > 20KA  14.834 KA
P03.103      SRP-1 JBOX      0.707 KA      ANG:   -83.94
RVSS SCREW PUM MCC-RLS-A      14.135 KA      ANG:   -75.61

SRP-3 RVSS OUT 3P Duty: 14.834 KA AT  -76.01 DEG ( 12.33 MVA) X/R:      4.49
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.0045 + J  0.0181  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  14.834 KA
MOLDED CASE CIRCUIT BREAKER < 20KA  16.180 KA
MOLDED CASE CIRCUIT BREAKER > 20KA  14.834 KA
P03.104      SRP-3 JBOX      0.707 KA      ANG:   -83.94
RVSS SCREW PUM MCC-RLS-A      14.135 KA      ANG:   -75.61

SRP-5 RVSS OUT 3P Duty: 14.834 KA AT  -76.01 DEG ( 12.33 MVA) X/R:      4.49
VOLTAGE:      480.  EQUIV. IMPEDANCE=  0.0045 + J  0.0181  OHMS
LOW VOLTAGE POWER CIRCUIT BREAKER  14.834 KA
MOLDED CASE CIRCUIT BREAKER < 20KA  16.180 KA
MOLDED CASE CIRCUIT BREAKER > 20KA  14.834 KA
P03.105      SRP-5 JBOX      0.704 KA      ANG:   -83.66
RVSS SCREW PUM MCC-RLS-A      14.136 KA      ANG:   -75.63
    
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UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
CFG-1 BACK DR	3P Duty:	5.616	0.62	Z1= 21.4194	5.616	5.616
	SLG DUTY:	3.310	0.35	Z2= 21.4194	3.310	
480. VOLTS	LN/LN:	4.863		Z0= 66.6069		
	LN/LN/GND:	5.178	(2.338	GND RETURN KA)		
CFG-1 BOWL DR	3P Duty:	17.517	3.08	Z1= 6.8667	19.665	18.607
	SLG DUTY:	12.177	2.01	Z2= 6.8667	12.700	
480. VOLTS	LN/LN:	15.170		Z0= 16.0527		
	LN/LN/GND:	16.587	(9.287	GND RETURN KA)		
CFG-1 PNL	3P Duty:	29.146	3.55	Z1= 4.1268	33.757	31.495
	SLG DUTY:	23.455	2.63	Z2= 4.1268	25.521	
480. VOLTS	LN/LN:	25.242		Z0= 7.1874		
	LN/LN/GND:	28.257	(19.553	GND RETURN KA)		
CFG-2 BACK DR	3P Duty:	6.907	0.64	Z1= 17.4137	6.908	6.907
	SLG DUTY:	4.110	0.38	Z2= 17.4137	4.110	
480. VOLTS	LN/LN:	5.982		Z0= 53.3448		
	LN/LN/GND:	6.380	(2.914	GND RETURN KA)		
CFG-2 BOWL DR	3P Duty:	17.605	3.09	Z1= 6.8321	19.777	18.707
	SLG DUTY:	12.207	2.01	Z2= 6.8321	12.732	
480. VOLTS	LN/LN:	15.247		Z0= 16.0527		
	LN/LN/GND:	16.672	(9.296	GND RETURN KA)		
CFG-2 PNL	3P Duty:	29.397	3.60	Z1= 4.0916	34.154	31.822
	SLG DUTY:	23.569	2.65	Z2= 4.0916	25.667	
480. VOLTS	LN/LN:	25.459		Z0= 7.1874		
	LN/LN/GND:	28.512	(19.594	GND RETURN KA)		
CFG-3 BACK DR	3P Duty:	5.738	0.47	Z1= 20.9635	5.738	5.738
	SLG DUTY:	3.369	0.31	Z2= 20.9635	3.369	
480. VOLTS	LN/LN:	4.969		Z0= 65.5935		
	LN/LN/GND:	5.283	(2.376	GND RETURN KA)		
CFG-3 BOWL DR	3P Duty:	18.615	3.10	Z1= 6.4614	20.920	19.785
	SLG DUTY:	13.093	2.05	Z2= 6.4614	13.687	
480. VOLTS	LN/LN:	16.121		Z0= 14.7794		
	LN/LN/GND:	17.665	(10.048	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
CFG-3 PNL	3P Duty:	32.553	3.93	Z1= 3.6949	38.567	35.627
	SLG DUTY:	27.148	2.97	Z2= 3.6949	30.245	
480. VOLTS	LN/LN:	28.192		Z0= 5.9436		
	LN/LN/GND:	31.759	(23.211	GND RETURN KA)		
FCB-1 DISC	3P Duty:	8.546	0.87	Z1= 14.0742	8.552	8.549
	SLG DUTY:	5.456	0.56	Z2= 14.0742	5.456	
480. VOLTS	LN/LN:	7.401		Z0= 38.5188		
	LN/LN/GND:	8.065	(3.977	GND RETURN KA)		
PAB-E1 STR OUT	3P Duty:	2.899	6.14	Z1= 4.7871	3.802	3.367
	SLG DUTY:	2.404	5.45	Z2= 4.7871	3.070	
4160. VOLTS	LN/LN:	2.511		Z0= 7.7496		
	LN/LN/GND:	2.734	(2.053	GND RETURN KA)		
PAB-E2 STR OUT	3P Duty:	2.366	5.87	Z1= 5.8660	3.071	2.731
	SLG DUTY:	2.137	5.38	Z2= 5.8660	2.722	
4160. VOLTS	LN/LN:	2.049		Z0= 7.7496		
	LN/LN/GND:	2.284	(1.949	GND RETURN KA)		
PAB-E3 STR OUT	3P Duty:	2.899	6.14	Z1= 4.7871	3.802	3.367
	SLG DUTY:	2.404	5.45	Z2= 4.7871	3.070	
4160. VOLTS	LN/LN:	2.511		Z0= 7.7496		
	LN/LN/GND:	2.734	(2.053	GND RETURN KA)		
RVSS SRP2 OUT	3P Duty:	12.474	3.98	Z1= 9.6425	14.828	13.677
	SLG DUTY:	10.480	2.91	Z2= 9.6425	11.624	
480. VOLTS	LN/LN:	10.803		Z0= 15.2602		
	LN/LN/GND:	12.208	(9.006	GND RETURN KA)		
RVSS SRP4 OUT	3P Duty:	12.474	3.98	Z1= 9.6425	14.828	13.677
	SLG DUTY:	10.480	2.91	Z2= 9.6425	11.624	
480. VOLTS	LN/LN:	10.803		Z0= 15.2602		
	LN/LN/GND:	12.208	(9.006	GND RETURN KA)		
SEP2 VFD OUT	3P Duty:	17.927	4.00	Z1= 6.7096	21.327	19.665
	SLG DUTY:	14.662	3.05	Z2= 6.7096	16.425	
480. VOLTS	LN/LN:	15.525		Z0= 11.2526		
	LN/LN/GND:	17.321	(12.373	GND RETURN KA)		

UNBALANCED FAULT REPORT
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)
PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

LOCATION VOLTAGE	FAULT DUTIES	KA (RMS)	X/R	EQUIVALENT (PU) FAULT IMPEDANCE	ASYM. KA AT 0.5 CYCLES * MAX. RMS	AVG. RMS *
SEP3 DISC	3P Duty:	17.045	3.43	Z1= 7.0569	19.587	18.339
	SLG DUTY:	13.556	2.41	Z2= 7.0569	14.519	
480. VOLTS	LN/LN:	14.761		Z0= 12.6418		
	LN/LN/GND:	16.591	(11.197	GND RETURN KA)		
SEP6 VFD OUT	3P Duty:	17.927	4.00	Z1= 6.7096	21.327	19.665
	SLG DUTY:	14.662	3.05	Z2= 6.7096	16.425	
480. VOLTS	LN/LN:	15.525		Z0= 11.2526		
	LN/LN/GND:	17.321	(12.373	GND RETURN KA)		
SRP-1 RVSS OUT	3P Duty:	14.834	4.49	Z1= 8.1084	18.129	16.525
	SLG DUTY:	13.417	3.71	Z2= 8.1084	15.689	
480. VOLTS	LN/LN:	12.847		Z0= 10.7018		
	LN/LN/GND:	14.568	(12.236	GND RETURN KA)		
SRP-3 RVSS OUT	3P Duty:	14.834	4.49	Z1= 8.1084	18.129	16.525
	SLG DUTY:	13.417	3.71	Z2= 8.1084	15.689	
480. VOLTS	LN/LN:	12.847		Z0= 10.7018		
	LN/LN/GND:	14.568	(12.236	GND RETURN KA)		
SRP-5 RVSS OUT	3P Duty:	14.834	4.49	Z1= 8.1084	18.129	16.525
	SLG DUTY:	13.417	3.71	Z2= 8.1084	15.689	
480. VOLTS	LN/LN:	12.847		Z0= 10.7018		
	LN/LN/GND:	14.568	(12.236	GND RETURN KA)		

F A U L T S T U D Y S U M M A R Y
(FOR APPLICATION OF LOW VOLTAGE BREAKERS)

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

BUS RECORD NO NAME	VOLTAGE L-L	A V A I L A B L E 3 PHASE	F A U L T X/R	D U T I E S (KA) LINE/GRND	X/R
CFG-1 BACK DR	480.	5.616	0.62	3.310	0.35
CFG-1 BOWL DR	480.	17.517	3.08	12.177	2.01
CFG-1 PNL	480.	29.146	3.55	23.455	2.63
CFG-2 BACK DR	480.	6.907	0.64	4.110	0.38
CFG-2 BOWL DR	480.	17.605	3.09	12.207	2.01
CFG-2 PNL	480.	29.397	3.60	23.569	2.65
CFG-3 BACK DR	480.	5.738	0.47	3.369	0.31
CFG-3 BOWL DR	480.	18.615	3.10	13.093	2.05
CFG-3 PNL	480.	32.553	3.93	27.148	2.97
FCB-1 DISC	480.	8.546	0.87	5.456	0.56
PAB-E1 STR OUT	4160.	2.899	6.14	2.404	5.45
PAB-E2 STR OUT	4160.	2.366	5.87	2.137	5.38
PAB-E3 STR OUT	4160.	2.899	6.14	2.404	5.45
RVSS SRP2 OUT	480.	12.474	3.98	10.480	2.91
RVSS SRP4 OUT	480.	12.474	3.98	10.480	2.91
SEP2 VFD OUT	480.	17.927	4.00	14.662	3.05
SEP3 DISC	480.	17.045	3.43	13.556	2.41
SEP6 VFD OUT	480.	17.927	4.00	14.662	3.05
SRP-1 RVSS OUT	480.	14.834	4.49	13.417	3.71
SRP-3 RVSS OUT	480.	14.834	4.49	13.417	3.71
SRP-5 RVSS OUT	480.	14.834	4.49	13.417	3.71

97 FAULTED BUSES, 1603 BRANCHES, 466 CONTRIBUTIONS
UNBALANCED FAULTS REQUESTED

*** SHORT CIRCUIT STUDY COMPLETE ***

THREE PHASE MOMENTARY DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

=====

CFG-1 BACK DR VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

CFG-1 BOWL DR VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

CFG-1 PNL VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

CFG-2 BACK DR VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

CFG-2 BOWL DR VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

CFG-2 PNL VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

CFG-3 BACK DR VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

CFG-3 BOWL DR VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

CFG-3 PNL VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

FCB-1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PAB-E1 STR OUT E/Z: 2.730 KA AT -80.02 DEG (19.67 MVA) X/R: 6.23
SYM*1.6: 4.368 KA MOMENTARY BASED ON X/R: 3.590 KA
SYM*2.7: 7.372 KA CREST BASED ON X/R: 6.193 KA
VOLTAGE: 4160. EQUIV. IMPEDANCE= 0.1524 + J 0.8664 OHMS
M05.002 PAB-E1 MTR TER 0.523 KA ANG: -83.83
PAB-E1 STARTER PAB-E1 STR IN 2.208 KA ANG: -79.12

PAB-E2 STR OUT E/Z: 2.208 KA AT -79.64 DEG (15.91 MVA) X/R: 5.90
SYM*1.6: 3.533 KA MOMENTARY BASED ON X/R: 2.869 KA
SYM*2.7: 5.961 KA CREST BASED ON X/R: 4.955 KA
VOLTAGE: 4160. EQUIV. IMPEDANCE= 0.1957 + J 1.0701 OHMS
M05.007 PAB-E2 MTR TER 0.523 KA ANG: 96.17
PAB-E2 STARTER PAB-E2 STR IN 1.686 KA ANG: -258.34

PAB-E3 STR OUT E/Z: 2.730 KA AT -80.02 DEG (19.67 MVA) X/R: 6.23
SYM*1.6: 4.368 KA MOMENTARY BASED ON X/R: 3.590 KA
SYM*2.7: 7.372 KA CREST BASED ON X/R: 6.193 KA
VOLTAGE: 4160. EQUIV. IMPEDANCE= 0.1524 + J 0.8664 OHMS
M05.005 PAB-E3 MTR TER 0.523 KA ANG: 96.17
PAB-E3 STARTER PAB-E3 STR IN 2.208 KA ANG: -259.12

T H R E E P H A S E M O M E N T A R Y D U T Y R E P O R T

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

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RVSS SRP2 OUT VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

RVSS SRP4 OUT VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

SEP2 VFD OUT VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

SEP3 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

SEP6 VFD OUT VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

SRP-1 RVSS OUT VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

SRP-3 RVSS OUT VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

SRP-5 RVSS OUT VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

UNBALANCED MOMENTARY DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

LOCATION	FAULT	E/Z	X/R	EQUIVALENT	MOMENTARY	FAULT DUTIES
VOLTAGE	TYPE	KA		IMPEDANCE (PU)	E/Z * 1.6	@ 0.5 CYCLE
=====						
PAB-E1 STR OUT 4160.	3P Duty:	2.73	6.2	Z1= 5.0833	4.37	3.59
	SLG DUTY:	2.32	5.5	Z2= 5.0833	3.72	2.98
	VOLTS LN/LN:	2.36		Z0= 7.7496		
	LN/LN/GND:	2.59 (	2.02	GND RETURN KA)		
PAB-E2 STR OUT 4160.	3P Duty:	2.21	5.9	Z1= 6.2861	3.53	2.87
	SLG DUTY:	2.05	5.4	Z2= 6.2861	3.28	2.61
	VOLTS LN/LN:	1.91		Z0= 7.7496		
	LN/LN/GND:	2.15 (	1.91	GND RETURN KA)		
PAB-E3 STR OUT 4160.	3P Duty:	2.73	6.2	Z1= 5.0833	4.37	3.59
	SLG DUTY:	2.32	5.5	Z2= 5.0833	3.72	2.98
	VOLTS LN/LN:	2.36		Z0= 7.7496		
	LN/LN/GND:	2.59 (	2.02	GND RETURN KA)		

M O M E N T A R Y D U T Y S U M M A R Y R E P O R T

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

SOLUTION METHOD : E/Z

=====					
BUS RECORD	VOLTAGE	* 3	P H A S E *	* * *	SLG * * *
NO NAME	L-L		KA X/R	KA	X/R
=====					
PAB-E1 STR OUT	4160.	3.590	6.23	2.976	5.51
PAB-E2 STR OUT	4160.	2.869	5.90	2.614	5.42
PAB-E3 STR OUT	4160.	3.590	6.23	2.976	5.51

6 FAULTED BUSES, 1603 BRANCHES, 466 CONTRIBUTIONS
UNBALANCED FAULTS REQUESTED

*** SHORT CIRCUIT STUDY COMPLETE ***

THREE PHASE INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO

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CFG-1 BACK DR VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

CFG-1 BOWL DR VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

CFG-1 PNL VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

CFG-2 BACK DR VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

CFG-2 BOWL DR VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

CFG-2 PNL VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

CFG-3 BACK DR VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

CFG-3 BOWL DR VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

CFG-3 PNL VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

FCB-1 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

PAB-E1 STR OUT E/Z: 2.360 KA AT -79.62 DEG (17.00 MVA) X/R: 5.96
VOLTAGE: 4160. EQUIV. IMPEDANCE= 0.1835 + J 1.0012 OHMS
M05.002 PAB-E1 MTR TER 0.349 KA ANG: -83.97
PAB-E1 STARTER PAB-E1 STR IN 2.012 KA ANG: -78.86

GENERATOR NAME	-- AT BUS --	KA	VOLTS PU	LOCAL/REMOTE
DC-8266		1.572	0.92	R
TOTAL REMOTE:		1.572 KA	NACD RATIO:	0.6661

	SYM2	SYM3	SYM5	SYM8
MULT. FACT:	1.000	1.000	1.000	1.000
DUTY (KA) :	2.360	2.360	2.360	2.360

	TOT2	TOT3	TOT5	TOT8
MULT. FACT:	1.071	1.001	1.000	1.000
DUTY (KA) :	2.526	2.362	2.360	2.360

PAB-E2 STR OUT E/Z: 2.010 KA AT -79.39 DEG (14.48 MVA) X/R: 5.68
VOLTAGE: 4160. EQUIV. IMPEDANCE= 0.2200 + J 1.1746 OHMS
M05.007 PAB-E2 MTR TER 0.349 KA ANG: 96.03
PAB-E2 STARTER PAB-E2 STR IN 1.662 KA ANG: -258.43

GENERATOR NAME	-- AT BUS --	KA	VOLTS PU	LOCAL/REMOTE
DC-9798		1.577	0.92	R
TOTAL REMOTE:		1.577 KA	NACD RATIO:	0.7847

THREE PHASE INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000
MODEL TRANSFORMER TAPS: NO
NACD OPTION: INTERPOLATED

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	SYM2	SYM3	SYM5	SYM8
MULT. FACT:	1.000	1.000	1.000	1.000
DUTY (KA) :	2.010	2.010	2.010	2.010

	TOT2	TOT3	TOT5	TOT8
MULT. FACT:	1.065	1.000	1.000	1.000
DUTY (KA) :	2.141	2.010	2.010	2.010

PAB-E3 STR OUT E/Z: 2.360 KA AT -79.62 DEG (17.00 MVA) X/R: 5.96
VOLTAGE: 4160. EQUIV. IMPEDANCE= 0.1835 + J 1.0012 OHMS
M05.005 PAB-E3 MTR TER 0.349 KA ANG: 96.03
PAB-E3 STARTER PAB-E3 STR IN 2.012 KA ANG: -258.86

GENERATOR NAME	-- AT BUS --	KA	VOLTS PU	LOCAL/REMOTE
DC-8266		1.572	0.92	R
TOTAL REMOTE:	1.572 KA	NACD RATIO:	0.6661	

	SYM2	SYM3	SYM5	SYM8
MULT. FACT:	1.000	1.000	1.000	1.000
DUTY (KA) :	2.360	2.360	2.360	2.360

	TOT2	TOT3	TOT5	TOT8
MULT. FACT:	1.071	1.001	1.000	1.000
DUTY (KA) :	2.526	2.362	2.360	2.360

RVSS SRP2 OUT VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

RVSS SRP4 OUT VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

SEP2 VFD OUT VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

SEP3 DISC VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

SEP6 VFD OUT VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

SRP-1 RVSS OUT VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

SRP-3 RVSS OUT VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

SRP-5 RVSS OUT VOLTAGE: 480. (SEE LOW VOLTAGE REPORT)

UNBALANCED INTERRUPTING DUTY REPORT

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

NACD OPTION: INTERPOLATED

LOCATION	FAULT TYPE	E/Z KA	X/R	ANSI DECREMENT 3 PHASE	AC/DC FACT. SLG	INTERRUPTING DUTIES (KA) 3 PHASE	SLG
PAB-E1 STR OUT 3P Duty:		2.36	6.0	SYM2:	1.00	1.00	2.36
VOLTS: 4160.0	SLG:	2.13	5.4	SYM3:	1.00	1.00	2.36
NACD: 0.666	LN/LN:	2.04		SYM5:	1.00	1.00	2.36
	LN/LN/GND:	2.28		SYM8:	1.00	1.00	2.36
	GND RETURN:	1.95		TOT2:	1.07	1.05	2.53
	Z1(PU):	5.88198		TOT3:	1.00	1.00	2.36
	Z2(PU):	5.88198		TOT5:	1.00	1.00	2.36
	Z0(PU):	7.74964		TOT8:	1.00	1.00	2.36
PAB-E2 STR OUT 3P Duty:		2.01	5.7	SYM2:	1.00	1.00	2.01
VOLTS: 4160.0	SLG:	1.93	5.3	SYM3:	1.00	1.00	2.01
NACD: 0.785	LN/LN:	1.74		SYM5:	1.00	1.00	2.01
	LN/LN/GND:	1.98		SYM8:	1.00	1.00	2.01
	GND RETURN:	1.86		TOT2:	1.07	1.05	2.14
	Z1(PU):	6.90541		TOT3:	1.00	1.00	2.01
	Z2(PU):	6.90541		TOT5:	1.00	1.00	2.01
	Z0(PU):	7.74964		TOT8:	1.00	1.00	2.01
PAB-E3 STR OUT 3P Duty:		2.36	6.0	SYM2:	1.00	1.00	2.36
VOLTS: 4160.0	SLG:	2.13	5.4	SYM3:	1.00	1.00	2.36
NACD: 0.666	LN/LN:	2.04		SYM5:	1.00	1.00	2.36
	LN/LN/GND:	2.28		SYM8:	1.00	1.00	2.36
	GND RETURN:	1.95		TOT2:	1.07	1.05	2.53
	Z1(PU):	5.88198		TOT3:	1.00	1.00	2.36
	Z2(PU):	5.88198		TOT5:	1.00	1.00	2.36
	Z0(PU):	7.74964		TOT8:	1.00	1.00	2.36

I N T E R R U P T I N G D U T Y S U M M A R Y R E P O R T

PRE FAULT VOLTAGE: 1.0000

MODEL TRANSFORMER TAPS: NO

NACD OPTION: INTERPOLATED

```
=====
BUS RECORD      VOLTAGE  NACD      * 3 P H A S E *      * * * S L G * * *
NO NAME          L-L      RATIO      E/Z KA      X/R      E/Z KA      X/R
=====
PAB-E1 STR OUT   4160.  0.666      2.360      5.96      2.134      5.43
PAB-E2 STR OUT   4160.  0.785      2.010      5.68      1.931      5.32
PAB-E3 STR OUT   4160.  0.666      2.360      5.96      2.134      5.43
=====
```

6 FAULTED BUSES, 1603 BRANCHES, 466 CONTRIBUTIONS
UNBALANCED FAULTS REQUESTED

*** SHORT CIRCUIT STUDY COMPLETE ***

CHAPTER 6

ARC FLASH ANALYSIS

6.0 Arc Flash Study

6.1 Objective

The Arc Flash Study is performed to calculate the incident heat energy developed by electric arcs which occur in or about electrical equipment. The study evaluates arc flash incident energy exposure and calculates an incident energy level in units of calories per centimeter squared (cal/cm^2). In accordance with revisions in the 2015 edition of NFPA 70E, arc flash exposure is now reported as an incident energy level only, and the employer determines the appropriate level of Personal Protective Equipment (PPE) that a worker must wear to limit injury from arc flash incident energy exposure. Equipment for which calculated incident energy levels exceed $40 \text{ cal}/\text{cm}^2$ is reported as “Dangerous”, meaning there is no safe level of personal protective equipment available for working on the equipment while energized. Such equipment can only be worked on de-energized.

Only qualified, trained electricians, who are familiar with safe work rules and procedures, and the hazards of electrical equipment, should perform work on electrical equipment. Assessment of an appropriate level of PPE for the calculated arc flash incident energy level for a given equipment does not imply that it is safe to work on or near exposed energized conductors, or during certain load interrupting activities such as energizing/de-energizing or racking breakers.

6.2 Methodology

The Arc Flash analysis was performed using the latest version 7.0 of SKM PowerTools software which is based on, and conforms to IEEE Standard 1584 / NFPA 70E-2015 Annex D.4.

The incident energy associated with an arc flash depends on the short circuit current available at the equipment, the minimum fault current that will sustain the arc, the total clearing time of the protective device upstream of the arc location at the maximum fault current and the minimum current that will sustain the arc, and the distance from the arc.

Maximum arcing time for the calculations is limited to 2 seconds per IEEE Standard 1584, Annex B, which allows that a person working in an

unrestricted space will retreat from the arc location before 2 seconds of exposure.

For 240 Volts and below, the study reports calculated values from incident energy equations. The exception for systems fed from transformers size 125kVA and below is not applied. Line side and load side contributions are included. In the case of a panel or equipment with a main breaker, the Arc Flash incident energy at the incoming terminals is calculated based on the next upstream device clearing the fault, and the value is reported as "LineSide".

6.3 Scenarios

- 1) Worst case results of all scenarios
- 2) Base – Normal, plant on DTE North and DTE South
- 3) DTE contribution at 50% of maximum
- 4) Entire Plant on Generators (Emergency Mode)
- 5) "ARMS" switch at 480V substation feeder breakers "On"
- 6) "ARMS" function applied to 13.2kV feeder breakers

6.4 Results

Results for each of the scenarios are presented in a separate section. Each scenario report is complete with Arc Flash data and calculated results in tabular form, along with evaluation of protective device and bus capability to withstand available fault currents.

The PTW software scans each of the above scenarios and compiles a table comprised of the worst-case arc flash incident energy results at each reported bus. In the case of a panel or equipment with a main breaker, the Arc Flash incident energy at the incoming terminals is calculated based on the next upstream device clearing the fault, and the value is reported as "LineSide".

The highest arc fault incident energy levels were found at Substation 3 Bus A, at 85 cal/cm², Substation 3 Bus B, at 84 cal/cm², Substation 5 Bus A, at 78 cal/cm², Substation 5 Bus B, at 77 cal/cm², Substation 7 Bus A, at 68 cal/cm², and Substation 7 Bus B, at 68 cal/cm². These levels are equivalent to a PPE category of "Dangerous", and work within this equipment must be performed with the equipment de-energized.

High arc fault current incident energy levels, greater than 25 cal/cm², were found at automatic transfer switch ATS-ADM, motor control center MCC-ADM-A and MCC-XA, Substation 1 Bus A and B, Substation 2 Bus A and B, and Substation 4 Bus A and B. These levels are equivalent to a PPE level 4.

6.5 Arc Reduction Maintenance Switch - “ARMS”

The new 480V feeder breakers supplied by Square D Company for this project include an ARMS switch. As implemented by Square D, engaging the ARMS switch disables intentional delay settings programmed into the trip element, effectively forcing the breaker to trip at a near instantaneous level. A reduction in tripping time reduces arcing time and the incident energy associated with the arc. The ARMS function is effective in reducing incident energy when the arcing fault current is within the short time delay region of the TCC. See example in Section 6.6.2. The ARMS function is not effective when the arcing fault current is outside the short time delay region of the TCC. See example in Section 6.6.3. The effectiveness of the ARMS function on each of the new 480V substation feeder breakers can be seen by comparing the “Incident Energy” column values for a respective bus in table 6.6.5 “AF Results - Worst Case Compilation” with those in table 6.6.9 “AF Results - ARMS ‘ON’ at 480V Feeder Breakers”.

Comment 1:

The ARMS switch is locally mounted at the 480V unit substation feeder breaker. There is no indication at the served load that the ARMS function has been engaged. Proper use of the ARMS function requires that workers comply with strict adherence to written plant safety lockout/tagout procedures and have an understanding of the amount of incident energy reduction, if any, obtained by engaging the ARMS function.

Comment 2:

The Schweitzer SEL-551 protective relays on the 13.2kV Bus 1 and Bus 2 switchgear and the Square D Sepam S20 protective relays on the 4,160V Substation 8 Bus A and Bus B switchgear have the capability of being programmed with additional time/overcurrent settings that are switch selectable via rear panel digital input terminals. The high incident energy

levels calculated on the unit substation 480V secondary buses in Section 6.4 could be greatly reduced by configuring the alternate group of time/overcurrent settings as an ARMS function on the primary side feeder breakers. See example in Section 6.6.4. Refer to the “Incident Energy” column values for a respective bus in table 6.6.10 “AF Results - ARMS ‘ON’ at 13.2kV Feeder Breakers”.

Per contract documents, the Medium Voltage Switchgear as specified is not configured with an ARMS function, and would require engineering, hard wiring, and software re-programming to implement such a feature.

6.6 Data

- 6.6.1 ARMS Instruction Bulletin Excerpt - Square D
- 6.6.2 Example of IE Reduction with ARMS ‘ON’
- 6.6.3 Example of no IE Reduction with ARMS ‘ON’
- 6.6.4 Example of ARMS applied at 13.2kV Feeder Breaker
- 6.6.5 AF Results - Worst Case Compilation
- 6.6.6 AF Results - DTE Contribution at 100% of Maximum
- 6.6.7 AF Results - DTE Contribution at 50% of Maximum
- 6.6.8 AF Results - Entire Plant on Generators
- 6.6.9 AF Results - ARMS ‘ON’ at 480V Feeder Breakers
- 6.6.10 AF Results - ARMS ‘ON’ at 13.2kV Feeder Breakers

6.6.1 ARMS Instruction Bulletin Excerpt - Square D

Alternate Maintenance Setting (AMS) Switch



Conmutador de ajuste de mantenimiento alternativo (AMS)

Interrupteur de réglage d'entretien alternatif (AMS)

Instruction Bulletin
Boletín de instrucciones
Directives d'utilisation

80298-171-01

Retain for Future Use. /
Conservar para uso futuro. /
À conserver pour usage ultérieur.



SQUARE D

by **Schneider** Electric

892

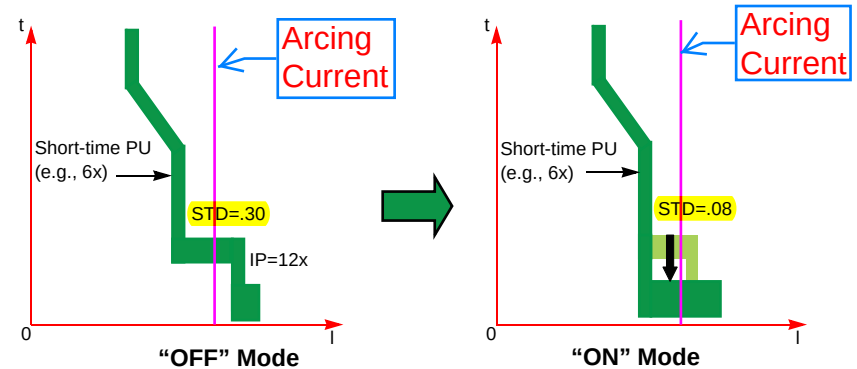
AMS Switch Application

When the AMS Switch is Turned "ON"

The AMS switch can be turned "ON" to reduce circuit breaker tripping time. In the "OFF" mode, a typical short-time delay (STD) setting is 0.3 seconds. The STD setting can be reduced to 0.08 seconds when the switch is in the "ON" mode. See Figure 1.

This is almost equivalent to setting the instantaneous pickup down to the short-time pickup (e.g., instantaneous pickup from 12x to 6x—the difference is that instantaneous maximum clearing time is 0.05 seconds, and unrestrained AMS switch maximum clearing time is 0.08 seconds).

Figure 1: AMS Switch "OFF" and "ON" Mode



For an AMS-controlled breaker to be effective for arc-flash reduction, the breaker's short-time current pickup setting (considering the positive tolerance) must be set below 85% of the minimum arcing current at the system location where it is expected to provide "fast" interruption (considering all fault current scenarios in an arc flash study).

For example, if a switchgear main circuit breaker is to provide "fast" interruption for an arcing fault in a feeder breaker cell, its short-time current pickup setting (considering the positive tolerance) would need to be set below 85% of the arcing fault current at the switchgear main bus. To ensure coordination, the main and feeder circuit breakers should be coordinated via a time-current coordination analysis (as usual). This application should be documented in the arc flash analysis and safety practices so future breaker adjustments will not result in the arc flash hazard unknowingly increasing for the workers.



Do not use a short-time delay I²T "ON" breaker trip-unit setting with an AMS switch.

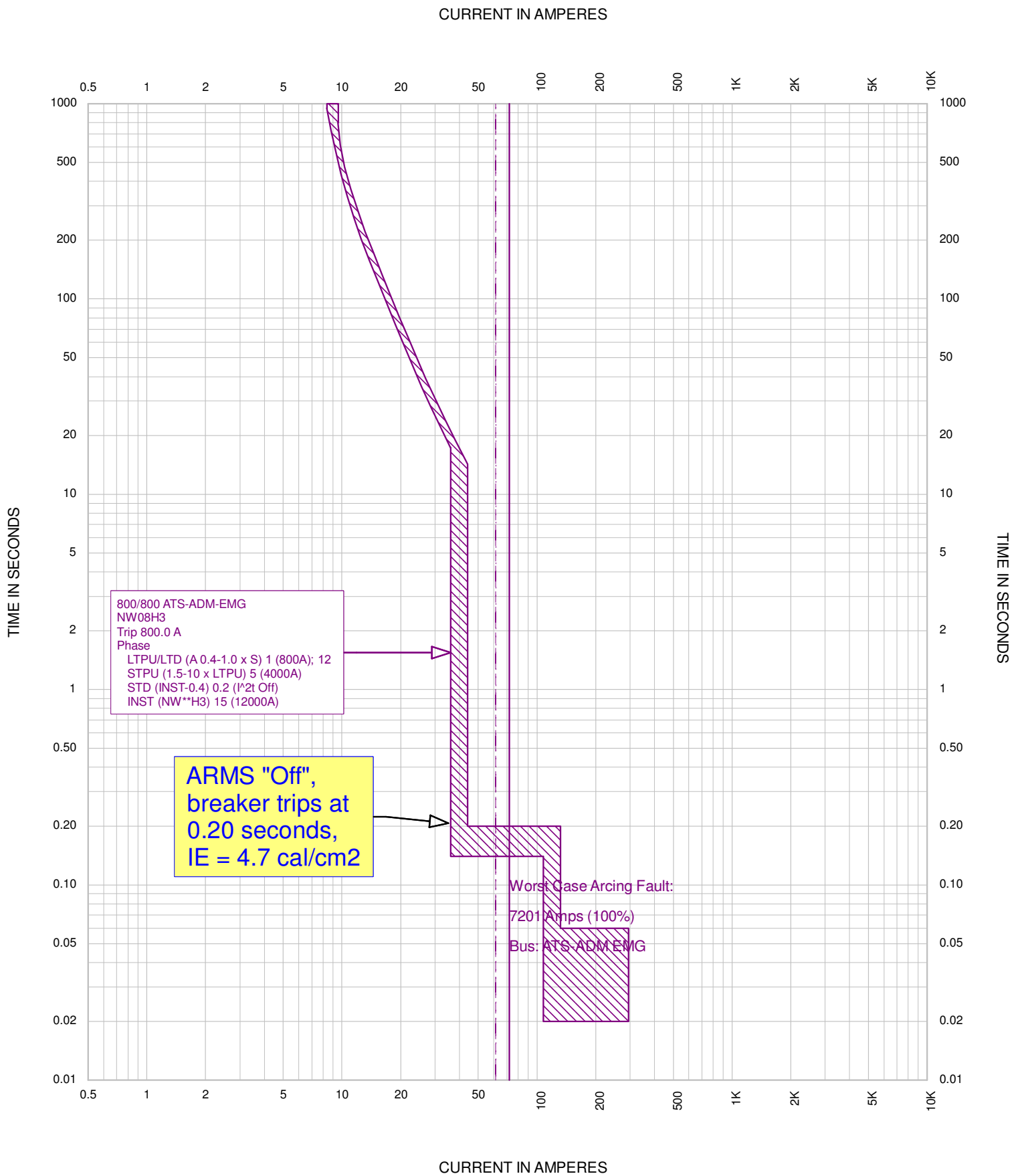
Nuisance Tripping

When the AMS switch is "ON" (breaker is in maintenance PU mode), the breaker's short-time delay setting is overridden and the breaker will trip with no intentional delay. As a result, the potential for nuisance tripping increases. Nuisance tripping can be caused by a motor starting, transformer inrush, or some other momentary power disturbance.

Other Considerations

The use of the AMS switch should be integrated into the overall safety policy. Lock-out / tag-out procedures require the use of personal protective equipment (PPE), so adding the necessary steps to ensure the AMS switch is turned to the "ON" position when it should be and turned back to the "OFF" position, as well as using appropriate PPE for each of these modes, are critical for proper application of the AMS switch.

6.6.2 Example of IE Reduction with ARMS 'ON'



Online: TCC S7A,B_MCC-ADM-A

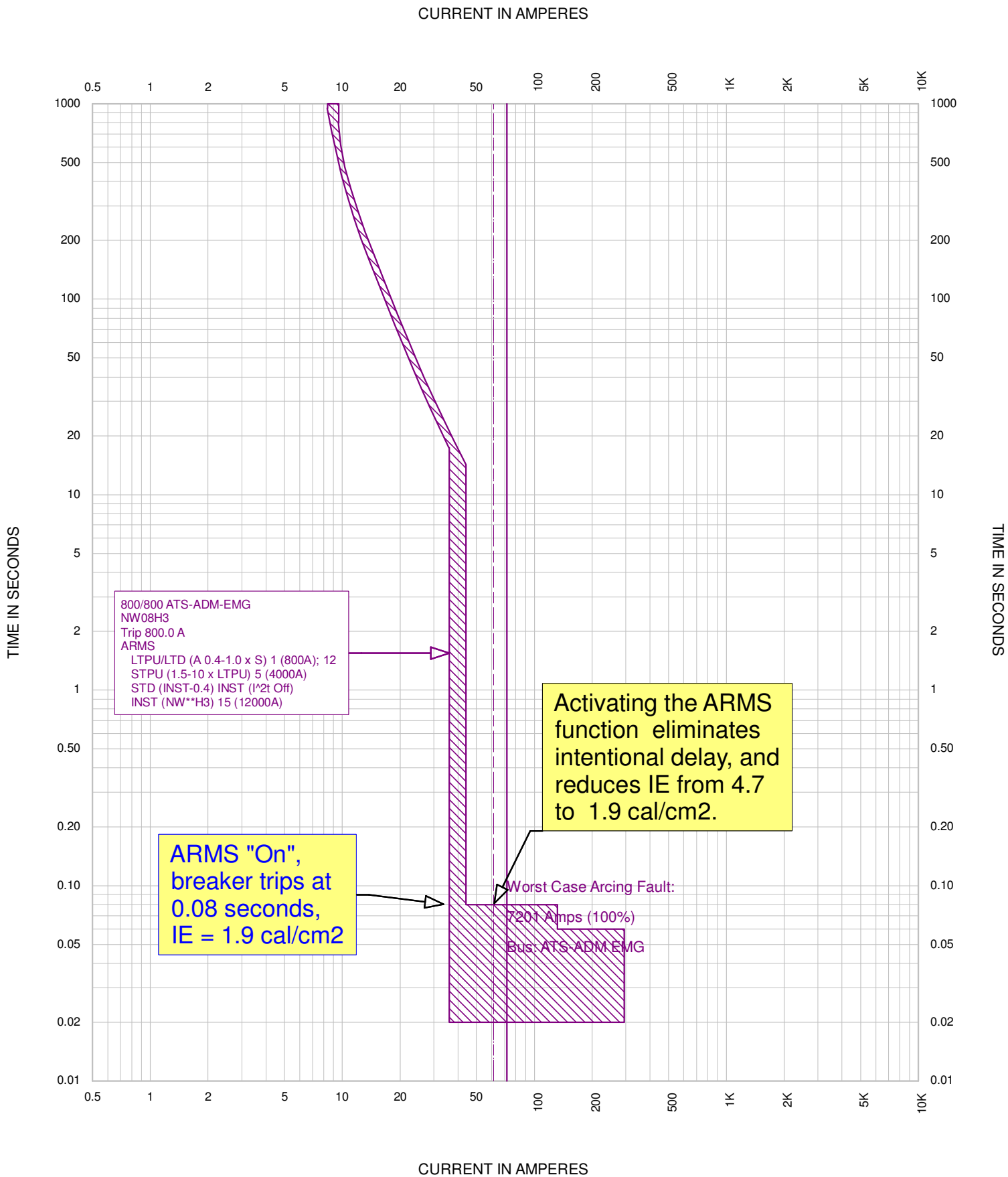
Current Scale x 100

Reference Voltage: 480

March 30, 2016 12:55 PM

AAWWTP

S7A_ATS-ADM-A-EMG_ARMS "Off"



Online: TCC S7A,B_MCC-ADM-A

Current Scale x 100

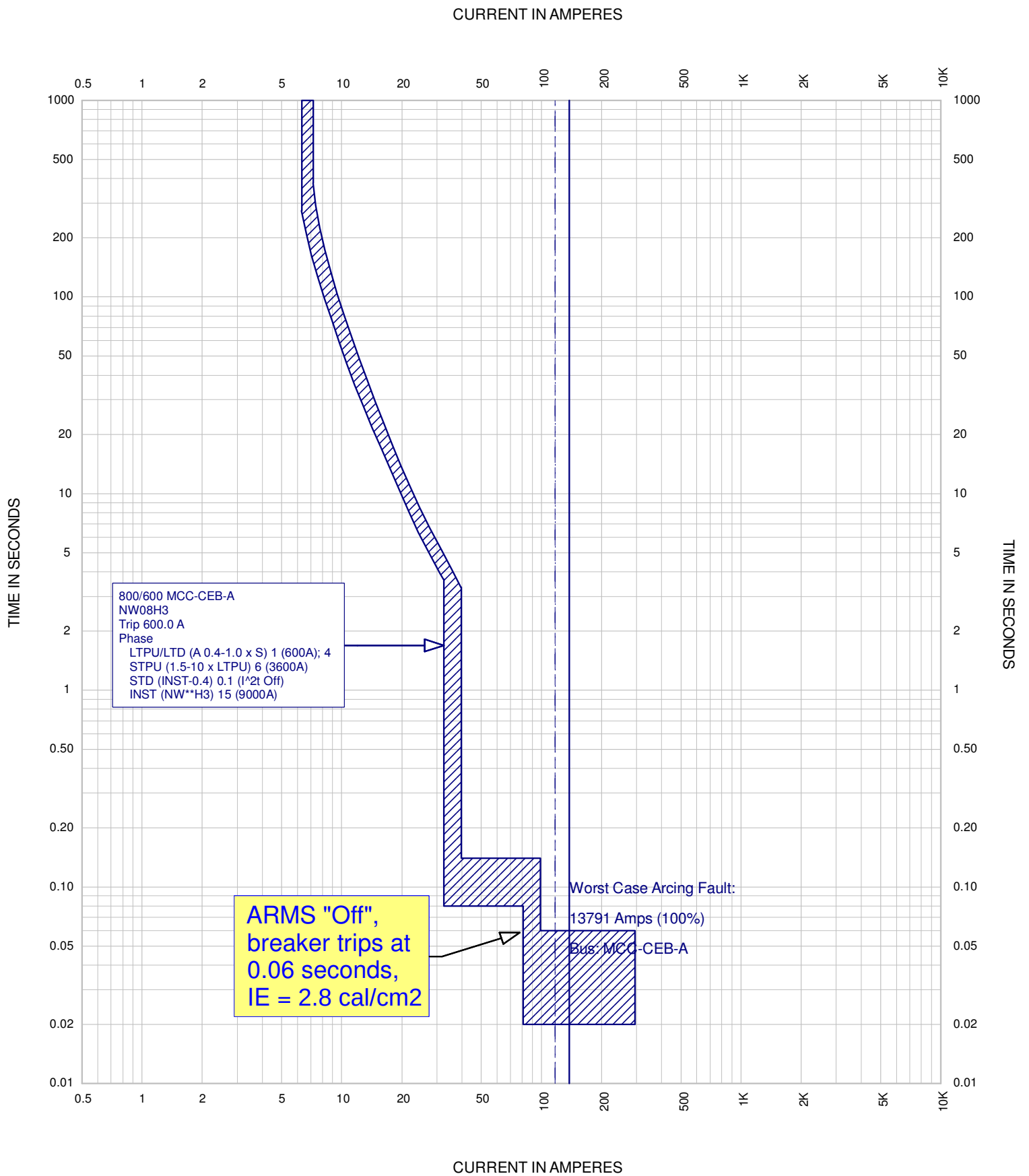
Reference Voltage: 480

March 30, 2016 1:43 PM

AAWWTP

S7A_ATS-ADM-A-EMG_ARMS "On"

6.6.3 Example of no IE Reduction with ARMS 'ON'



Online: TCC S7A,B_MCC-CEB-A,B

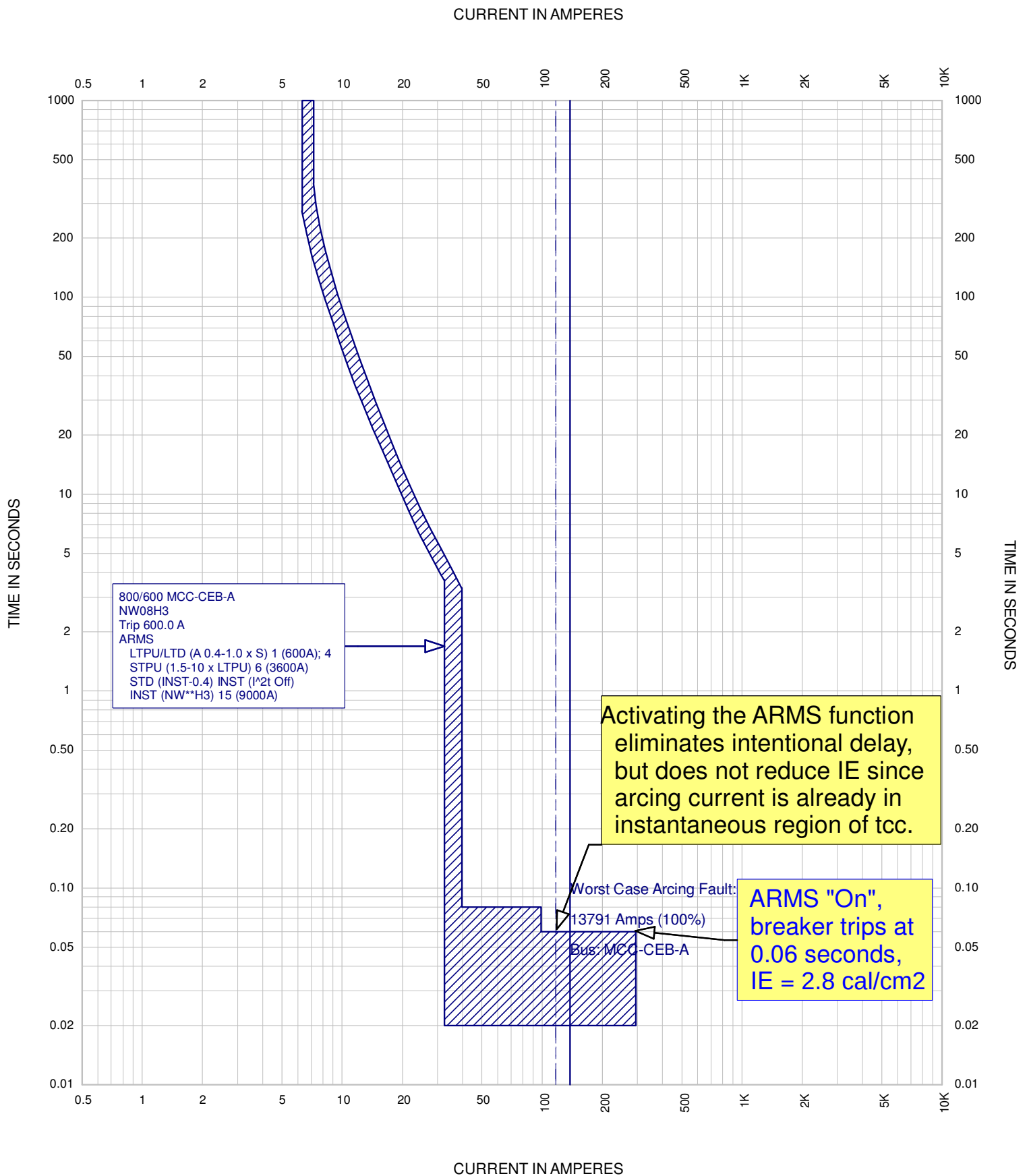
Current Scale x 100

Reference Voltage: 480

March 30, 2016 1:20 PM

AAWWTP

S7A_MCC-CEB-A_ARMS "Off"



Online: TCC S7A,B_MCC-CEB-A,B

Current Scale x 100

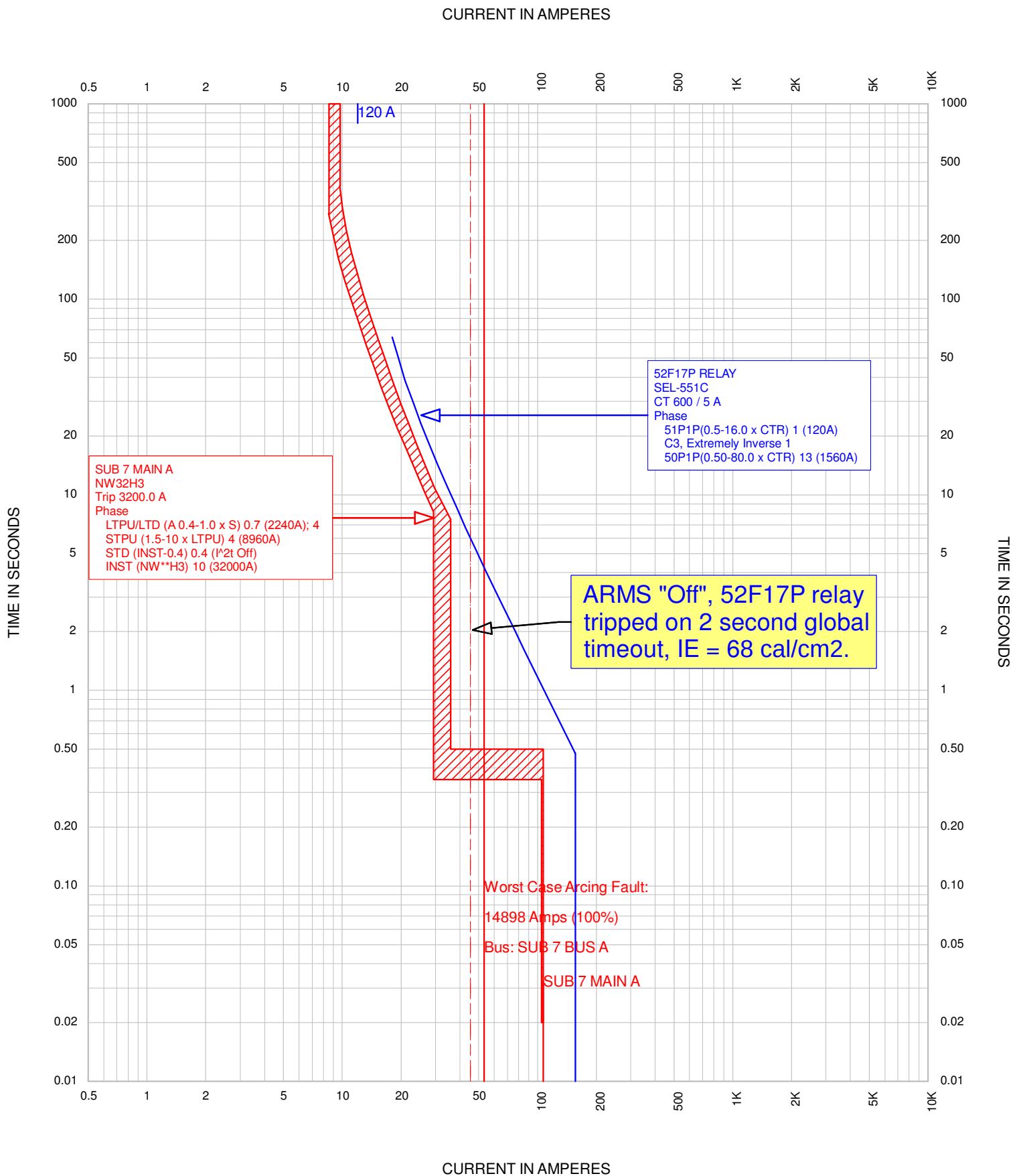
Reference Voltage: 480

April 14, 2016 1:16 PM

AAWWTP

S7A_MCC-CEB-A_ARMS "On"

6.6.4 Example of ARMS applied at 13.2kV Feeder Breaker



Online: TCC 52F17,27_S7A,B

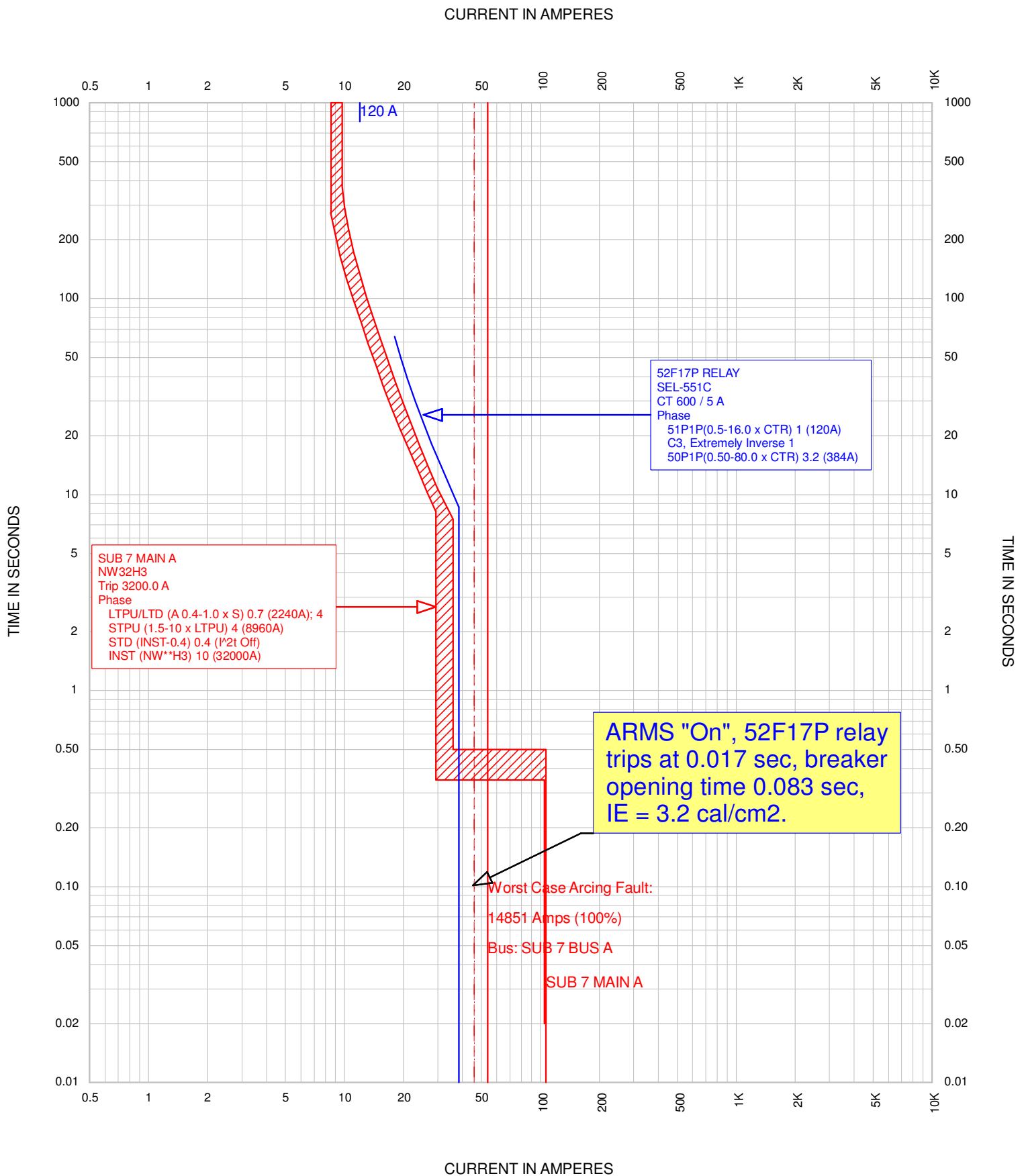
Current Scale x 10

Reference Voltage: 13200

April 5, 2016 12:08 PM

AAWWTP

52F17_S7A_SEL551 ARMS "Off"



Online: TCC 52F17,27_S7A,B

Current Scale x 10

Reference Voltage: 13200

April 5, 2016 1:08 PM

AAWWTP

52F17_S7A_SEL551 ARMS "On"

6.6.5 AF Results - “Worst Case” Compilation

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
1	15 KV BUS 1 (52M1P RELAY LineSide)	FU DTE North	13.20	15.72	6.36	6.13	0.1633	0.0830	Yes	SWG	152	105	36	3.4	(*S5)	# 0014-Loa
2	15 KV BUS 1 LineSide	FU DTE North	13.20	15.72	6.36	6.13	0.1633	0.0830	Yes	SWG	152	105	36	3.4	(*S5)	# 0011
3	15 KV BUS 2 (52M2P RELAY LineSide)	FU DTE South	13.20	3.91	3.10	2.60	0.8499	0.0830	Yes	SWG	152	89	36	2.9	(*N3) (*S3)	# 0035-Loa
4	15 KV BUS 2 LineSide	FU DTE South	13.20	15.72	6.15	5.92	0.1736	0.0830	Yes	SWG	152	103	36	3.3	(*S5)	# 0002
5	15 KV BUS 3	52GT1P RELAY	13.20	15.72	14.22	13.69	0.0042	0.0830	Yes	SWG	152	53	36	1.7	(*S5)	# 0003
6	78IN GC DISC	PD 78IN GATE CONTROLLER	0.48	1.36	1.36	1.19	0.0222	0.0000	Yes	PNL	25	3	18	0.07	(*S0)	# 0492
7	AC2 DISC	FU 0743	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0568
8	AC2F DISC	FU 0574	0.48	2.79	2.79	1.87	0.0083	0.0000	Yes	PNL	25	2	18	0.05	(*N3) (*S5)	# 0073
9	ADM ACCU1 DISC	PD ADM-ACCU-1	0.48	4.69	4.69	3.43	0.0162	0.0000	Yes	PNL	25	5	18	0.17	(*S5)	# 0492
10	ADM ACU1 DISC	PD ADM-ACU-1	0.48	8.12	8.12	5.49	0.0162	0.0000	Yes	PNL	25	7	18	0.28	(*S5)	# 0492
11	ADM-CH-1 DISC	PD ADM-CH-1	0.48	9.06	9.06	6.03	0.0175	0.0000	Yes	PNL	25	8	18	0.34	(*N20b) (*S5)	# 0492
12	ADM-EF-1 DISC	MCP ADM-EF-1	0.48	2.31	2.31	1.88	0.005	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0492
13	ADM-EF-2 DISC	MCP ADM-EF-2	0.48	2.31	2.31	1.88	0.005	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0492
14	ADM-HVAC-1 DISC	PD ADM-HVAC-1	0.48	5.60	5.60	4.00	0.0162	0.0000	Yes	PNL	25	6	18	0.20	(*S5)	# 0492
15	ADM-HVAC-2 DISC	PD ADM-HVAC-2	0.48	2.71	2.71	2.15	0.0162	0.0000	Yes	PNL	25	4	18	0.10	(*S0)	# 0492
16	ADM-P-1 DISC	MCP ADM-P-1	0.48	3.27	3.27	2.52	0.005	0.0000	Yes	PNL	25	2	18	0.04	(*S0)	# 0492
17	ADM-P-2 DISC	MCP ADM-P-2	0.48	2.71	2.71	2.15	0.005	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0492
18	ADM-P-3 DISC	MCP ADM-P-3	0.48	7.92	7.92	5.37	0.005	0.0000	Yes	PNL	25	4	18	0.08	(*S5)	# 0492
19	ADM-P-4 DISC	MCP ADM-P-4	0.48	7.35	7.35	5.04	0.005	0.0000	Yes	PNL	25	3	18	0.08	(*S5)	# 0492
20	ADM-SUP LCP	PD 0561	0.48	2.25	2.25	1.83	0.0192	0.0000	Yes	PNL	25	4	18	0.10	(*S5)	# 0185
21	ADP-E1 DISC	MCP ADP-E1	0.48	1.66	1.51	1.29	0.055	0.0000	Yes	PNL	25	6	18	0.22	(*S0)	# 0031
22	ADP-E2 DISC	MCP ADP-E2	0.48	5.76	5.46	3.88	0.04	0.0000	Yes	PNL	25	11	18	0.51	(*S0)	# 0027
23	ADP-W1 DISC	MCP ADP-W1	0.48	5.76	5.76	4.09	0.005	0.0000	Yes	PNL	25	3	18	0.06	(*S0)	# 0028
24	AIR COMP 1 DISC	FU AIR COMP 1	0.48	2.82	2.82	1.89	0.0083	0.0000	Yes	PNL	25	2	18	0.05	(*N3) (*S0)	# 0475
25	AIR COMP 1P DISC	FU 0687	0.48	3.27	3.27	2.52	0.0083	0.0000	Yes	PNL	25	3	18	0.06	(*S0)	# 0136
26	AIR WASH MV DISC	FU 0754	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0568
27	ALTERNATOR P	FU 0685	0.208	0.14	0.14	0.14	0.1908	0.0000	Yes	PNL	25	2	18	0.01	(*N11) (*S4)	# 0027
28	AT-E1 FCV BF-64-25	FB AT-E1 FCV	0.48	1.47	1.47	1.27	0.0211	0.0000	Yes	PNL	25	3	18	0.08	(*S5)	# 0161
29	AT-E2 FCV BF-64-26	FB AT-E2 FCV	0.48	1.66	1.66	1.41	0.0195	0.0000	Yes	PNL	25	3	18	0.08	(*S5)	# 0161
30	AT-E3 Z1 FCV	FB AT-E3 Z2 FCV	0.48	0.85	0.85	0.67	0.6603	0.0000	Yes	PNL	25	18	18	1.2	(*N3) (*N16) (*S4)	# 0038
31	AT-E3 Z2 FCV	FB AT-E3 Z2 FCV	0.48	0.99	0.99	0.76	0.3368	0.0000	Yes	PNL	25	13	18	0.70	(*N3) (*N16) (*S4)	# 0039
32	AT-E3 Z3 FCV	FB AT-E3 Z2 FCV	0.48	1.12	1.12	0.86	0.0347	0.0000	Yes	PNL	25	4	18	0.08	(*N3) (*S4)	# 0040
33	AT-E4 Z1 FCV	FB AT-E4 Z2 FCV	0.48	0.85	0.85	0.67	0.6603	0.0000	Yes	PNL	25	18	18	1.2	(*N3) (*N16) (*S4)	# 0041
34	AT-E4 Z2 FCV	FB AT-E4 Z2 FCV	0.48	0.99	0.99	0.76	0.3368	0.0000	Yes	PNL	25	13	18	0.70	(*N3) (*N16) (*S4)	# 0042
35	AT-E4 Z3 FCV	FB AT-E4 Z2 FCV	0.48	1.12	1.12	0.86	0.0347	0.0000	Yes	PNL	25	4	18	0.08	(*N3) (*S4)	# 0043
36	ATS PEWP2 NRM	FU PEW PUMP 2	0.48	16.82	15.42	7.97	0.04	0.0000	Yes	PNL	25	17	18	1.1	(*N3) (*S4)	# 0043
37	ATS PP-UV-EMG	FB ATS-PP-UV-EMG	0.48	3.55	3.55	2.71	0.0188	0.0000	Yes	PNL	25	5	18	0.15	(*S5)	# 0045
38	ATS PP-UV-LOAD	FU ATS-PP-UV-NRM	0.48	1.70	1.70	1.23	0.0464	0.0000	Yes	PNL	25	5	18	0.16	(*N3) (*S0)	# 0046
39	ATS PP-UV-NRM	FU ATS-PP-UV-NRM	0.48	1.70	1.70	1.23	0.0464	0.0000	Yes	PNL	25	5	18	0.16	(*N3) (*S0)	# 0047
40	ATS-51 EMG	MB MCC-51B	0.48	39.33	39.33	21.12	0.0102	0.0000	Yes	PNL	25	14	18	0.76	(*N5) (*N21b) (*S5)	# 0047

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
41	ATS-51 LOAD	MB MCC-51A	0.48	38.15	38.15	20.58	0.0103	0.0000	Yes	PNL	25	14	18	0.75	(*N5) (*N21b) (*S5)	# 0047
42	ATS-51 NRM	MB MCC-51A	0.48	38.15	38.15	20.58	0.0103	0.0000	Yes	PNL	25	14	18	0.75	(*N5) (*N21b) (*S5)	# 0047
43	ATS-52 EMG	MB MCC-52B	0.48	38.35	38.35	20.67	0.0103	0.0000	Yes	PNL	25	14	18	0.75	(*N5) (*N21b) (*S5)	# 0047
44	ATS-52 LOAD	MB MCC-52A	0.48	37.00	37.00	20.05	0.0105	0.0000	Yes	PNL	25	13	18	0.74	(*N5) (*N21b) (*S5)	# 0047
45	ATS-52 NRM	MB MCC-52A	0.48	37.00	37.00	20.05	0.0105	0.0000	Yes	PNL	25	13	18	0.74	(*N5) (*N21b) (*S5)	# 0047
46	ATS-54 EMG	MB MCC-54B	0.48	32.43	32.43	17.91	0.011	0.0000	Yes	PNL	25	13	18	0.69	(*N5) (*N21b) (*S5)	# 0054
47	ATS-54 LOAD	MB MCC-54A	0.48	29.67	29.67	16.61	0.0114	0.0000	Yes	PNL	25	12	18	0.65	(*N5) (*N21b) (*S5)	# 0054
48	ATS-54 NRM	MB MCC-54A	0.48	29.67	29.67	16.61	0.0114	0.0000	Yes	PNL	25	12	18	0.65	(*N5) (*N21b) (*S5)	# 0054
49	ATS-55 EMG	FB ATS-55 EMG	0.48	33.47	33.47	18.40	0.0109	0.0000	Yes	PNL	25	13	18	0.70	(*N21b) (*S5)	# 0055
50	ATS-55 LOAD	FB ATS-55 NRM	0.48	29.67	29.67	16.61	0.0114	0.0000	Yes	PNL	25	12	18	0.65	(*N21b) (*S5)	# 0056
51	ATS-55 NRM	FB ATS-55 NRM	0.48	29.67	29.67	16.61	0.0114	0.0000	Yes	PNL	25	12	18	0.65	(*N21b) (*S5)	# 0057
52	ATS-ADM EMG	800/800 ATS-ADM-EMG	0.48	10.17	10.17	4.17	2	0.0000	Yes	PNL	25	119	18	26	(*N3) (*N9) (*N16) (*S4)	# 0488
53	ATS-ADM LOAD	800/800 ATS-ADM-EMG	0.48	10.17	10.17	4.17	2	0.0000	Yes	PNL	25	119	18	26	(*N3) (*N9) (*N16) (*S4)	# 0017
54	ATS-ADM NRM	800/800 ATS-ADM-NRM	0.48	10.16	10.16	4.17	2	0.0000	Yes	PNL	25	119	18	26	(*N3) (*N9) (*N16) (*S4)	# 0046
55	ATS-CEB LOAD	FB ATS-CEB NRM	0.48	23.39	23.39	13.55	0.0175	0.0000	Yes	PNL	25	14	18	0.81	(*S5)	# 0047
56	ATS-CEB-EMG	FB ATS-CEB EMG	0.48	21.73	21.73	12.72	0.0175	0.0000	Yes	PNL	25	14	18	0.75	(*S5)	# 0048
57	ATS-CEB-NRM	FB ATS-CEB NRM	0.48	23.39	23.39	13.55	0.0175	0.0000	Yes	PNL	25	14	18	0.81	(*S5)	# 0049
58	ATS-EBB NORM	FB ATS-EBB NORM	0.48	8.71	8.71	5.83	0.04	0.0000	Yes	PNL	25	13	18	0.74	(*S5)	# 0040
59	ATS-EBB-EMG	FB ATS-EBB-EMG	0.48	9.43	9.43	6.23	0.04	0.0000	Yes	PNL	25	14	18	0.80	(*S5)	# 0040
60	ATS-EBB-LOAD	FB ATS-EBB NORM	0.48	8.71	8.71	5.83	0.04	0.0000	Yes	PNL	25	13	18	0.74	(*S5)	# 0040
61	ATS-LSE EMG	FB ATS-LSE-EMG	0.48	12.79	12.79	8.09	0.0526	0.0000	Yes	PNL	25	20	18	1.4	(*S5)	# 0043
62	ATS-LSE LOAD	FB ATS-LSE-NRM	0.48	12.92	12.92	8.16	0.0525	0.0000	Yes	PNL	25	20	18	1.4	(*S5)	# 0043
63	ATS-LSE NRM	FB ATS-LSE-NRM	0.48	12.92	12.92	8.16	0.0525	0.0000	Yes	PNL	25	20	18	1.4	(*S5)	# 0043
64	ATS-PP-UV-EMG	FB ATS-PP-UV-EMG	0.48	3.53	3.53	2.70	0.0188	0.0000	Yes	PNL	25	5	18	0.15	(*N21b) (*S2)	# 0064
65	ATS-PP-UV-LOAD	FU ATS-PP-UV-NRM	0.48	1.65	1.65	1.19	0.0508	0.0000	Yes	PNL	25	5	18	0.17	(*N3) (*S4)	# 0065
66	ATS-PP-UV-NRM	FU ATS-PP-UV-NRM	0.48	1.65	1.65	1.19	0.0508	0.0000	Yes	PNL	25	5	18	0.17	(*N3) (*S4)	# 0066
67	ATS-RLS EMG	FB ATS-RLS EMG	0.48	14.20	14.20	8.85	0.0162	0.0000	Yes	PNL	25	10	18	0.47	(*S5)	# 0043
68	ATS-RLS LOAD	FB ATS-RLS NRM	0.48	11.90	11.90	7.61	0.0162	0.0000	Yes	PNL	25	9	18	0.40	(*S5)	# 0043
69	ATS-RLS NRM	FB ATS-RLS NRM	0.48	11.90	11.90	7.61	0.0162	0.0000	Yes	PNL	25	9	18	0.40	(*S5)	# 0043
70	ATS-WBB NORM	FB ATS-WBB-NORM	0.48	34.03	34.03	18.67	0.05	0.0000	Yes	PNL	25	33	18	3.3	(*S5)	# 0049
71	ATS-WBB-EMG	FB ATS-WBB-EMG	0.48	35.76	35.76	19.48	0.05	0.0000	Yes	PNL	25	34	18	3.4	(*S5)	# 0050
72	ATS-WBB-LOAD	FB ATS-WBB-NORM	0.48	34.03	34.03	18.67	0.05	0.0000	Yes	PNL	25	33	18	3.3	(*S5)	# 0051
73	ATS-WPB-EMG	FB ATS-WPB-EMG	0.48	10.46	10.46	6.81	0.0162	0.0000	Yes	PNL	25	9	18	0.36	(*S5)	# 0052
74	ATS-WPB-LOAD	FB ATS-WPB-NORM	0.48	9.21	9.21	6.11	0.0162	0.0000	Yes	PNL	25	8	18	0.32	(*S5)	# 0053
75	ATS-WPB-NORM	FB ATS-WPB-NORM	0.48	9.21	9.21	6.11	0.0162	0.0000	Yes	PNL	25	8	18	0.32	(*S5)	# 0054
76	AT-W2 FCV JB	PD AT-W2 FCV	0.48	2.57	2.57	2.06	0.0162	0.0000	Yes	PNL	25	4	18	0.10	(*S5)	# 0161
77	B-54-1 DISC	PD W1 FLOW VALVES	0.48	3.51	3.51	2.68	0.0162	0.0000	Yes	PNL	25	5	18	0.13	(*S5)	# 0067
78	B-54-1 MTR VALVE.	PD W1 FLOW VALVES	0.48	3.46	3.46	2.65	0.0162	0.0000	Yes	PNL	25	5	18	0.13	(*S5)	# 0161
79	B-54-2 DISC	PD W1 FLOW VALVES	0.48	3.51	3.51	2.68	0.0162	0.0000	Yes	PNL	25	5	18	0.13	(*S5)	# 0069

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
80	B-54-2 MTR VALVE.	PD W1 FLOW VALVES	0.48	3.46	3.46	2.65	0.0162	0.0000	Yes	PNL	25	5	18	0.13	(*S5)	# 0161
81	B-54-3 DISC	PD W1 FLOW VALVES	0.48	3.51	3.51	2.68	0.0162	0.0000	Yes	PNL	25	5	18	0.13	(*S5)	# 0071
82	B-54-3 MTR VALVE.	PD W1 FLOW VALVES	0.48	3.46	3.46	2.65	0.0162	0.0000	Yes	PNL	25	5	18	0.13	(*S5)	# 0161
83	BAR SCREEN 2 TERM	FU BAR SCREEN 2	0.48	4.46	4.46	3.29	0.0042	0.0000	Yes	PNL	25	2	18	0.04	(*S5)	# 0492
84	BF - 64- 29	FB AT-E1 FCV	0.48	1.22	1.22	0.93	0.0301	0.0000	Yes	PNL	25	3	18	0.08	(*N3) (*S4)	# 0092
85	BF- 64- 30	FB AT-E2 FCV	0.48	1.40	1.40	1.22	0.0218	0.0000	Yes	PNL	25	3	18	0.07	(*S5)	# 0161
86	BF-64-07	FB AT-E1 FCV	0.48	1.01	1.01	0.79	0.0534	0.0000	Yes	PNL	25	4	18	0.11	(*N3) (*S4)	# 0094
87	BF-64-08	FB AT-E2 FCV	0.48	1.10	1.10	0.84	0.036	0.0000	Yes	PNL	25	4	18	0.08	(*N3) (*S4)	# 0095
88	BSCRN-3 STR	FU BAR SCREEN 3	0.48	4.39	4.39	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04	(*S0)	# 0492
89	BSNHST DISC	FU 0521	0.48	4.10	4.10	3.06	0.0042	0.0000	Yes	PNL	25	2	18	0.04	(*S5)	# 0073
90	BSNINFLGT-1 DISC	FU BASIN INFL GATE 1	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0475
91	BSNINFLGT2 DISC	FU 0535	0.48	2.79	2.79	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S5)	# 0073
92	BSNINFLGT-3 DISC	FU BASIN INFL GATE 3	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0475
93	BSN-OUT-GT-1 DISC	FU BASIN OUT GATE 1	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0475
94	BSNOUTGT2 DISC	FU 0536	0.48	2.79	2.79	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S5)	# 0073
95	BSN-OUT-GT-3 DISC	FU BASIN OUT GATE 3	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0475
96	BT1-1M DISC	MCP BT1-1M	0.48	12.36	11.96	7.60	0.015	0.0000	Yes	PNL	25	9	18	0.38	(*N21b) (*S5)	# 0072
97	BT2-1M DISC	MCP BT2-1M	0.48	12.23	11.82	7.53	0.015	0.0000	Yes	PNL	25	9	18	0.38	(*N21b) (*S5)	# 0073
98	BTAB-1 DISC	MCP BTAB-1	0.48	1.44	1.44	1.25	0.015	0.0000	Yes	PNL	25	3	18	0.05	(*S0)	# 0074
99	BTAB-2 DISC	MCP BTAB-2	0.48	1.44	1.44	1.25	0.015	0.0000	Yes	PNL	25	3	18	0.05	(*S5)	# 0076
100	BTAB-3 DISC	MCP BTAB-3	0.48	1.33	1.33	1.17	0.015	0.0000	Yes	PNL	25	3	18	0.05	(*S0)	# 0075
101	BUS G1	52GT1P RELAY	13.20	15.61	14.86	14.32	0.0042	0.0830	Yes	SWG	152	53	36	1.7	(*N5) (*S5)	# 0019
102	BUS G2	52GT1P RELAY	13.20	15.63	14.89	14.34	0.0042	0.0830	Yes	SWG	152	53	36	1.7	(*N5) (*S5)	# 0020
103	BUS-0097	MCP AXMX-E1A	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01	(*S0)	# 0256
104	BUS-0099	MCP AXMX-E1B	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01	(*S0)	# 0256
105	BUS-0101	MCP AXMX-E1C	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01	(*S0)	# 0256
106	BUS-0103	MCP ANMX-E1A	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01	(*S0)	# 0256
107	BUS-0105	MCP ANMX-E1B	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01	(*S0)	# 0256
108	BUS-0107	MCP ANMX-E1C	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01	(*S0)	# 0256
109	BUS-0109	MCP ANMX-E1D	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01	(*S0)	# 0256
110	BUS-0111	MCP SWMX-E1	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01	(*S0)	# 0256
111	BUS-0113	MCP ANMX-E3A	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01	(*S0)	# 0256
112	BUS-0115	MCP ANMX-E3B	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01	(*S0)	# 0256
113	BUS-0117	MCP ANMX-E3C	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01	(*S0)	# 0256
114	BUS-0119	MCP ANMX-E3D	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01	(*S0)	# 0256
115	BUS-0121	MCP AXMX-E3A	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01	(*S0)	# 0256
116	BUS-0123	MCP AXMX-E3B	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01	(*S0)	# 0256
117	BUS-0125	MCP AXMX-E3C	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01	(*S0)	# 0256
118	BUS-0127	MCP SWMX-E3	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01	(*S0)	# 0256
119	BUS-0141	MCP AXMX-E2A	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01	(*S5)	# 0093
120	BUS-0143	MCP AXMX-E2B	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01	(*S5)	# 0094

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
121	BUS-0145	MCP AXMX-E2C	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01	(*S5)	# 0095
122	BUS-0147	MCP ANMX-E2A	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01	(*S5)	# 0096
123	BUS-0149	MCP ANMX-E2B	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01	(*S5)	# 0097
124	BUS-0151	MCP ANMX-E2C	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01	(*S5)	# 0098
125	BUS-0153	MCP ANMX-E2D	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01	(*S5)	# 0099
126	BUS-0155	MCP SWMX-E2	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01	(*S5)	# 0100
127	BUS-0157	MCP ANMX-E4A	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01	(*S5)	# 0101
128	BUS-0159	MCP ANMX-E4B	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01	(*S5)	# 0102
129	BUS-0161	MCP ANMX-E4C	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01	(*S5)	# 0103
130	BUS-0163	MCP ANMX-E4D	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01	(*S5)	# 0104
131	BUS-0165	MCP AXMX-E4A	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01	(*S5)	# 0105
132	BUS-0167	MCP AXMX-E4B	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01	(*S5)	# 0106
133	BUS-0169	MCP AXMX-E4C	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01	(*S5)	# 0107
134	BUS-0171	MCP SWMX-E4	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01	(*S5)	# 0108
135	BUS-0178	FB EWH-2	0.48	5.84	5.84	4.14	0.0161	0.0000	Yes	PNL	25	6	18	0.21	(*S5)	# 0161
136	BUS-0179	FB WASV E1 P-65-1	0.48	1.41	1.41	1.23	0.0216	0.0000	Yes	PNL	25	3	18	0.07	(*S5)	# 0109
137	BUS-0180	FB WASV E2 P-65-2	0.48	1.41	1.41	1.23	0.0216	0.0000	Yes	PNL	25	3	18	0.07	(*S5)	# 0110
138	BUS-0181	FB EWH-2	0.48	5.74	5.74	4.08	0.0161	0.0000	Yes	PNL	25	6	18	0.20	(*S5)	# 0111
139	BUS-0182	FB AT-E1 FCV	0.48	2.11	2.11	1.74	0.0166	0.0000	Yes	PNL	25	4	18	0.08	(*S5)	# 0161
140	BUS-0188	FB AT-E2 FCV	0.48	2.52	2.52	2.02	0.0162	0.0000	Yes	PNL	25	4	18	0.10	(*S5)	# 0161
141	BUS-0272	PD P-53-07	0.48	11.38	11.38	7.33	0.0162	0.0000	Yes	PNL	25	9	18	0.38	(*N21b) (*S5)	# 0113
142	BUS-0273	MCP AXMX-W1A	0.48	1.94	1.94	1.62	0.005	0.0000	Yes	PNL	25	2	18	0.02	(*S0)	# 0492
143	BUS-0274	MCP AXMX-W1B	0.48	1.52	1.52	1.31	0.005	0.0000	Yes	PNL	25	1	18	0.02	(*S0)	# 0492
144	BUS-0275	MCP AXMX-W1C	0.48	1.91	1.91	1.60	0.005	0.0000	Yes	PNL	25	2	18	0.02	(*S0)	# 0492
145	BUS-0276	MCP ANMX-W1A	0.48	1.64	1.64	1.40	0.005	0.0000	Yes	PNL	25	1	18	0.02	(*S0)	# 0492
146	BUS-0277	MCP ANMX-W1B	0.48	2.31	2.31	1.87	0.005	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0492
147	BUS-0278	MCP ANMX-W1C	0.48	2.07	2.07	1.71	0.005	0.0000	Yes	PNL	25	2	18	0.02	(*S0)	# 0492
148	BUS-0279	MCP ANMX-W1D	0.48	2.02	2.02	1.67	0.005	0.0000	Yes	PNL	25	2	18	0.02	(*S0)	# 0492
149	BUS-0281	MCP SWMX-W1	0.48	3.05	3.05	2.37	0.005	0.0000	Yes	PNL	25	2	18	0.04	(*S0)	# 0492
150	BUS-0287	PD F-54-5	0.48	12.23	12.23	7.79	0.0162	0.0000	Yes	PNL	25	9	18	0.41	(*S2)	# 0122
151	BUS-0288	PD P-53-06	0.48	12.23	12.23	7.79	0.0162	0.0000	Yes	PNL	25	9	18	0.41	(*S2)	# 0122
152	BUS-0289	MCP AXMX-W2A	0.48	3.55	3.55	2.71	0.005	0.0000	Yes	PNL	25	2	18	0.04	(*S5)	# 0492
153	BUS-0290	MCP AXMX-W2B	0.48	2.53	2.53	2.03	0.005	0.0000	Yes	PNL	25	2	18	0.03	(*S5)	# 0492
154	BUS-0291	MCP AXMX-W2C	0.48	2.04	2.04	1.69	0.005	0.0000	Yes	PNL	25	2	18	0.02	(*S5)	# 0492
155	BUS-0292	MCP ANMX-W2A	0.48	1.71	1.71	1.45	0.005	0.0000	Yes	PNL	25	2	18	0.02	(*S5)	# 0492
156	BUS-0293	MCP ANMX-W2B	0.48	2.08	2.08	1.71	0.005	0.0000	Yes	PNL	25	2	18	0.02	(*S5)	# 0492
157	BUS-0294	MCP ANMX-W2C	0.48	1.99	1.99	1.65	0.005	0.0000	Yes	PNL	25	2	18	0.02	(*S5)	# 0492
158	BUS-0295	MCP ANMX-W2D	0.48	1.57	1.57	1.35	0.005	0.0000	Yes	PNL	25	1	18	0.02	(*S5)	# 0492
159	BUS-0296	MCP SWMX-W2	0.48	3.19	3.19	2.47	0.005	0.0000	Yes	PNL	25	2	18	0.04	(*S5)	# 0492
160	BUS-0310	PD PAB-W1 VALVES	0.48	6.70	6.70	4.66	0.0162	0.0000	Yes	PNL	25	7	18	0.24	(*S5)	# 0147
161	BUS-0311	PD PAB-W1 VALVES	0.48	6.52	6.52	4.55	0.0162	0.0000	Yes	PNL	25	7	18	0.23	(*S5)	# 0161

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
162	BUS-0312	PD PAB-W1 VALVES	0.48	6.70	6.70	4.66	0.0162	0.0000	Yes	PNL	25	7	18	0.24	(*S5)	# 0148
163	BUS-0313	PD PAB-W1 VALVES	0.48	6.52	6.52	4.55	0.0162	0.0000	Yes	PNL	25	7	18	0.23	(*S5)	# 0161
164	BUS-0314	PD PAB-W3 VALVES	0.48	4.25	4.25	3.16	0.0162	0.0000	Yes	PNL	25	5	18	0.15	(*S5)	# 0149
165	BUS-0315	PD PAB-W3 VALVES	0.48	4.18	4.18	3.11	0.0162	0.0000	Yes	PNL	25	5	18	0.15	(*S5)	# 0161
166	BUS-0316	PD PAB-W3 VALVES	0.48	4.25	4.25	3.16	0.0162	0.0000	Yes	PNL	25	5	18	0.15	(*S5)	# 0150
167	BUS-0317	PD PAB-W3 VALVES	0.48	4.18	4.18	3.11	0.0162	0.0000	Yes	PNL	25	5	18	0.15	(*S5)	# 0161
168	BUS-0318	PD AT-W2 FCV	0.48	2.55	2.55	2.04	0.0162	0.0000	Yes	PNL	25	4	18	0.10	(*S5)	# 0151
169	BUS-0319	PD AT-W2 FCV	0.48	2.52	2.52	2.02	0.0162	0.0000	Yes	PNL	25	4	18	0.10	(*S5)	# 0161
170	BUS-0320	PD WAS VALVE W2	0.48	5.47	5.47	3.92	0.0162	0.0000	Yes	PNL	25	6	18	0.20	(*S5)	# 0152
171	BUS-0321	PD AT-W2 FCV	0.48	2.55	2.55	2.04	0.0162	0.0000	Yes	PNL	25	4	18	0.10	(*S5)	# 0153
172	BUS-0322	PD AT-W2 FCV	0.48	2.52	2.52	2.02	0.0162	0.0000	Yes	PNL	25	4	18	0.10	(*S5)	# 0161
173	BUS-0323	PD AT-W2 FCV	0.48	2.55	2.55	2.04	0.0162	0.0000	Yes	PNL	25	4	18	0.10	(*S5)	# 0154
174	BUS-0324	PD AT-W2 FCV	0.48	2.52	2.52	2.02	0.0162	0.0000	Yes	PNL	25	4	18	0.10	(*S5)	# 0161
175	BUS-0325	PD WEST AESG W2	0.48	2.33	2.33	1.89	0.0162	0.0000	Yes	PNL	25	4	18	0.09	(*S5)	# 0155
176	BUS-0326	PD PAB-W2 VALVES	0.48	5.12	5.12	3.70	0.0162	0.0000	Yes	PNL	25	6	18	0.18	(*S5)	# 0156
177	BUS-0327	PD PAB-W2 VALVES	0.48	5.02	5.02	3.64	0.0162	0.0000	Yes	PNL	25	6	18	0.18	(*S5)	# 0161
178	BUS-0328	PD PAB-W2 VALVES	0.48	5.12	5.12	3.70	0.0162	0.0000	Yes	PNL	25	6	18	0.18	(*S5)	# 0157
179	BUS-0329	PD PAB-W2 VALVES	0.48	5.02	5.02	3.64	0.0162	0.0000	Yes	PNL	25	6	18	0.18	(*S5)	# 0161
180	BUS-0330	PD WA MAIN BOV	0.48	11.62	11.62	7.45	0.0162	0.0000	Yes	PNL	25	9	18	0.39	(*N21b) (*S5)	# 0158
181	BUS-0331	FB LSE-PPU-1	0.48	3.19	3.19	2.47	0.0162	0.0000	Yes	PNL	25	4	18	0.12	(*S5)	# 0159
182	BUS-0332	FB LSE-ACCU-1	0.48	8.76	8.76	5.86	0.0162	0.0000	Yes	PNL	25	8	18	0.30	(*S5)	# 0160
183	BUS-0333	FB LSE-ACU-1	0.48	4.76	4.76	3.48	0.0175	0.0000	Yes	PNL	25	6	18	0.19	(*S5)	# 0161
184	BUS-0337	FB CN-50-3 FCV	0.48	1.12	1.12	0.86	0.0348	0.0000	Yes	PNL	25	4	18	0.08	(*N3) (*S4)	# 0164
185	BUS-0348	FB SLDG'S F-50-3,4	0.48	0.83	0.83	0.66	0.6971	0.0000	Yes	PNL	25	18	18	1.2	(*N3) (*N16) (*S4)	# 0167
186	BUS-0349	FB SLDG'S F-60-1,2,3	0.48	0.96	0.96	0.75	0.3761	0.0000	Yes	PNL	25	14	18	0.76	(*N3) (*N16) (*S4)	# 0168
187	BUS-0350	FB SLDG'S F-50-3,4	0.48	0.83	0.83	0.66	0.6971	0.0000	Yes	PNL	25	18	18	1.2	(*N3) (*N16) (*S4)	# 0169
188	BUS-0351	FB SLDG'S F-60-1,2,3	0.48	0.96	0.96	0.75	0.3761	0.0000	Yes	PNL	25	14	18	0.76	(*N3) (*N16) (*S4)	# 0170
189	BUS-0352	FB SLDG'S F-60-1,2,3	0.48	0.96	0.96	0.75	0.3761	0.0000	Yes	PNL	25	14	18	0.76	(*N3) (*N16) (*S4)	# 0171
190	BUS-0353	FB SLDG'S S-50-1,2,3,4,5	0.48	0.87	0.87	0.68	0.5882	0.0000	Yes	PNL	25	17	18	1.1	(*N3) (*N16) (*S4)	# 0172
191	BUS-0354	FB SLDG'S S-50-1,2,3,4,5	0.48	0.96	0.96	0.75	0.3761	0.0000	Yes	PNL	25	14	18	0.76	(*N3) (*N16) (*S4)	# 0173
192	BUS-0355	FB SLDG'S S-50-1,2,3,4,5	0.48	0.96	0.96	0.75	0.3761	0.0000	Yes	PNL	25	14	18	0.76	(*N3) (*N16) (*S4)	# 0174
193	BUS-0356	FB SLDG'S S-50-1,2,3,4,5	0.48	0.96	0.96	0.75	0.3761	0.0000	Yes	PNL	25	14	18	0.76	(*N3) (*N16) (*S4)	# 0175
194	BUS-0357	FB SLDG'S S-50-1,2,3,4,5	0.48	0.96	0.96	0.75	0.3761	0.0000	Yes	PNL	25	14	18	0.76	(*N3) (*N16) (*S4)	# 0176
195	BUS-0358	FB SLDG'S S-50-1,2,3,4,5	0.48	0.96	0.96	0.75	0.3761	0.0000	Yes	PNL	25	14	18	0.76	(*N3) (*N16) (*S4)	# 0177
196	BUS-0359	FB SLDG'S S-50-1,2,3,4,5	0.48	0.96	0.96	0.75	0.3761	0.0000	Yes	PNL	25	14	18	0.76	(*N3) (*N16) (*S4)	# 0178
197	BUS-0360	FB SLDG's S-60-1,2	0.48	0.96	0.96	0.75	0.3761	0.0000	Yes	PNL	25	14	18	0.76	(*N3) (*N16) (*S4)	# 0179
198	BUS-0361	FB SLDG's S-60-1,2	0.48	0.96	0.96	0.75	0.3761	0.0000	Yes	PNL	25	14	18	0.76	(*N3) (*N16) (*S4)	# 0180
199	BUS-0362	FB SLDG's S-60-1,2	0.48	0.83	0.83	0.66	0.6971	0.0000	Yes	PNL	25	18	18	1.2	(*N3) (*N16) (*S4)	# 0181
200	BUS-0363	FB EAST JC GATES	0.48	0.96	0.96	0.75	0.3761	0.0000	Yes	PNL	25	14	18	0.76	(*N3) (*N16) (*S4)	# 0182
201	BUS-0364	FB EAST JC GATES	0.48	0.96	0.96	0.75	0.3761	0.0000	Yes	PNL	25	14	18	0.76	(*N3) (*N16) (*S4)	# 0183
202	BUS-0392	FB AT-E3 Z2 FCV	0.48	1.48	1.48	1.28	0.021	0.0000	Yes	PNL	25	3	18	0.08	(*S5)	# 0185

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
203	BUS-0393	FB AT-E1 FCV	0.48	2.03	2.03	1.68	0.0171	0.0000	Yes	PNL	25	4	18	0.08	(*S5)	# 0186
204	BUS-0394	FB AT-E1 FCV	0.48	2.03	2.03	1.68	0.0171	0.0000	Yes	PNL	25	4	18	0.08	(*S5)	# 0187
205	BUS-0395	FB AT-E1 FCV	0.48	2.03	2.03	1.68	0.0171	0.0000	Yes	PNL	25	4	18	0.08	(*S5)	# 0188
206	BUS-0396	FB AT-E2 FCV	0.48	2.40	2.40	1.94	0.0162	0.0000	Yes	PNL	25	4	18	0.09	(*S5)	# 0189
207	BUS-0397	FB AT-E2 FCV	0.48	2.40	2.40	1.94	0.0162	0.0000	Yes	PNL	25	4	18	0.09	(*S5)	# 0190
208	BUS-0398	FB AT-E2 FCV	0.48	2.40	2.40	1.94	0.0162	0.0000	Yes	PNL	25	4	18	0.09	(*S5)	# 0191
209	BUS-0399	FB AT-E3 Z2 FCV	0.48	1.48	1.48	1.28	0.021	0.0000	Yes	PNL	25	3	18	0.08	(*S5)	# 0192
210	BUS-0400	FB AT-E3 Z2 FCV	0.48	1.48	1.48	1.28	0.021	0.0000	Yes	PNL	25	3	18	0.08	(*S5)	# 0193
211	BUS-0401	FB AT-E4 Z2 FCV	0.48	1.48	1.48	1.28	0.021	0.0000	Yes	PNL	25	3	18	0.08	(*S5)	# 0194
212	BUS-0402	FB AT-E4 Z2 FCV	0.48	1.48	1.48	1.28	0.021	0.0000	Yes	PNL	25	3	18	0.08	(*S5)	# 0195
213	BUS-0403	FB AT-E4 Z2 FCV	0.48	1.48	1.48	1.28	0.021	0.0000	Yes	PNL	25	3	18	0.08	(*S5)	# 0196
214	BUS-0406	FB PAB-E2 DV & BOV1	0.48	1.88	1.88	1.57	0.018	0.0000	Yes	PNL	25	3	18	0.08	(*S5)	# 0161
215	BUS-0409	FB WASV E3	0.48	1.28	1.28	0.96	0.028	0.0000	Yes	PNL	25	3	18	0.07	(*N3) (*S4)	# 0198
216	BUS-0410	FB WASV E4	0.48	1.28	1.28	0.96	0.028	0.0000	Yes	PNL	25	3	18	0.07	(*N3) (*S4)	# 0199
217	BUS-0412	FB EBB-EDH-1	0.48	5.18	5.18	3.74	0.0162	0.0000	Yes	PNL	25	6	18	0.19	(*S5)	# 0200
218	BUS-0413	FB PAB-E1 DV & BOV	0.48	2.55	2.55	2.04	0.0162	0.0000	Yes	PNL	25	4	18	0.10	(*S5)	# 0161
219	BUS-0414	FB PAB-E1 DV & BOV	0.48	2.21	2.21	1.81	0.0162	0.0000	Yes	PNL	25	4	18	0.08	(*S5)	# 0161
220	BUS-0415	FB EWH-2	0.48	5.79	5.79	4.11	0.0161	0.0000	Yes	PNL	25	6	18	0.20	(*S5)	# 0203
221	BUS-0436	PD SWPSO-SG	0.48	2.82	2.82	2.23	0.0162	0.0000	Yes	PNL	25	4	18	0.11	(*S0)	# 0201
222	BWP2 DISC	FU BACKWASH PUMP 2	0.48	13.91	13.24	8.28	0.0083	0.0000	Yes	PNL	25	7	18	0.24	(*S2)	# 0568
223	BWWP1 DISC	FU 0668	0.48	12.97	12.29	7.76	0.0083	0.0000	Yes	PNL	25	6	18	0.22	(*N21b) (*S2)	# 0136
224	BYPGT1 DISC	FU 0564	0.48	2.79	2.79	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S5)	# 0073
225	BYPGT2 DISC	FU 0554	0.48	2.79	2.79	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S5)	# 0073
226	C SUMP PUMP DISC	FU C SUMP PUMP	0.48	4.39	4.39	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04	(*S0)	# 0492
227	CC-1 DISC	FU CROSS COLL 1	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0475
228	CC2 DISC	FU 0528	0.48	2.79	2.79	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S5)	# 0073
229	CC-3 DISC	FU CROSS COLL 3	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0475
230	CE WET WELL GT DISC	FU 0745	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0568
231	CEB-ACCU-1 DISC	PD CEB-ACCU-1	0.48	5.04	5.04	3.65	0.0162	0.0000	Yes	PNL	25	6	18	0.18	(*S5)	# 0023
232	CEB-ACCU-1 TERM	PD CEB-ACCU-1	0.48	4.22	4.22	3.14	0.0162	0.0000	Yes	PNL	25	5	18	0.15	(*S0)	# 0088
233	CEB-ACU-1 TERM	PD CEB-ACU-1	0.48	12.60	12.60	7.99	0.0162	0.0000	Yes	PNL	25	10	18	0.42	(*N21b) (*S5)	# 0023
234	CEB-EF-1 DISC	MCP CEB-EF-1	0.48	1.76	1.76	1.49	0.005	0.0000	Yes	PNL	25	2	18	0.02	(*S0)	# 0023
235	CEB-EF-2 DISC	MCP CEB-EF-2	0.48	1.91	1.91	1.60	0.005	0.0000	Yes	PNL	25	2	18	0.02	(*S5)	# 0023
236	CEB-FCP-1 DISC	MCP CEB-FCP-1	0.48	4.11	4.11	3.07	0.005	0.0000	Yes	PNL	25	2	18	0.05	(*S0)	# 0023
237	CEB-FCP-2 TERM	PD CEP-FCP-2	0.48	3.25	3.25	2.51	0.0162	0.0000	Yes	PNL	25	4	18	0.12	(*S5)	# 0023
238	CEB-P-1 DISC	MCP CEB-P-1	0.48	3.25	3.25	2.51	0.005	0.0000	Yes	PNL	25	2	18	0.04	(*S0)	# 0023
239	CEB-P-2 DISC	MCP CEB-P-2	0.48	3.25	3.25	2.51	0.005	0.0000	Yes	PNL	25	2	18	0.04	(*S5)	# 0023
240	CF2 AHU-1 DISC	MCP AHU-1	0.48	1.20	1.20	1.07	0.015	0.0000	Yes	PNL	25	2	18	0.04	(*S0)	# 0154
241	CF2 AHU-3 DISC	MCP AHU-3	0.48	2.01	2.01	1.67	0.015	0.0000	Yes	PNL	25	3	18	0.07	(*S5)	# 0155
242	CFG-1 BACK DR DISC	FU CFG-1	0.48	5.57	4.98	2.90	1.169	0.0000	Yes	PNL	25	67	18	10	(*N3) (*N16) (*S4)	# 0159
243	CFG-1 BOWL DR DISC	FU CFG-1	0.48	21.50	19.42	11.39	0.0083	0.0000	Yes	PNL	25	9	18	0.36	(*N21b) (*S5)	# 0159

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
244	CFG-2 BACK DR DISC	MB CFG-2	0.48	6.83	6.15	3.62	0.023	0.0000	Yes	PNL	25	8	18	0.29	(*N3) (*S4)	# 0159
245	CFG-2 BOWL DR DISC	MB CFG-2	0.48	16.56	14.45	7.48	0.0128	0.0000	Yes	PNL	25	9	18	0.36	(*N3) (*S4)	# 0159
246	CFG-3 BACK DR DISC	FU CFG-3	0.48	5.69	5.11	2.94	1.091	0.0000	Yes	PNL	25	65	18	9.9	(*N3) (*N16) (*S4)	# 0159
247	CFG-3 BOWL DR DISC	FU CFG-3	0.48	23.07	21.00	12.19	0.0083	0.0000	Yes	PNL	25	9	18	0.38	(*N21b) (*S5)	# 0159
248	CHABLWR DISC	FU CHANNEL AIR BLOWER	0.48	4.46	4.46	3.29	0.0042	0.0000	Yes	PNL	25	2	18	0.04	(*S5)	# 0492
249	CN-50-3 FCV	FB CN-50-3 FCV	0.48	1.00	1.00	0.78	0.0592	0.0000	Yes	PNL	25	5	18	0.12	(*N3) (*S4)	# 0111
250	CONT TK INT GT DISC	FU 0682	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S2)	# 0136
251	CP-70 EMG	FU CP70 EMG TERM	0.48	1.50	1.50	1.29		0.0000	Yes	PNL	25	7	18	0.25	(*N4) (*S0)	# 0568
252	CP-70 NRM	FU 0756	0.48	2.89	2.89	2.27		0.0000	Yes	PNL	25	7	18	0.25	(*N4) (*S0)	# 0568
253	CR-1 HSP 5 DISC	MCP HSP 5	0.48	3.38	3.38	2.60	0.015	0.0000	Yes	PNL	25	4	18	0.12	(*S5)	# 0165
254	CR-1 HSP 6 DISC	MCP HSP 6	0.48	3.23	3.23	2.50	0.015	0.0000	Yes	PNL	25	4	18	0.11	(*S5)	# 0166
255	D SP-2 DISC	FU D SUMP PUMP 2	0.48	4.46	4.46	3.29	0.0042	0.0000	Yes	PNL	25	2	18	0.04	(*S5)	# 0492
256	DCH FNL EFF SP DISC	FU 0751	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0568
257	DOOR OP EE1	FU 0905	0.48	2.78	2.78	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0099
258	DOOR OP EE2	FU 0906	0.48	2.78	2.78	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0099
259	DOOR OP FF	FU 0919	0.48	2.74	2.74	2.17	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S5)	# 0099
260	DOOR OPERATOR STR	FU DOOR OPERATOR	0.48	4.46	4.46	3.29	0.0042	0.0000	Yes	PNL	25	2	18	0.04	(*S5)	# 0492
261	DP-51	MB MCC-51A	0.48	34.50	34.50	18.89	0.0108	0.0000	Yes	PNL	25	13	18	0.71	(*N5) (*N21b) (*S5)	# 0267
262	DP-52 (MB DP-52 LineSide)	MB MCC-52A	0.48	32.43	32.43	17.91	0.011	0.0000	Yes	PNL	25	13	18	0.69	(*N5) (*N21b) (*S5)	# 0250-Line
263	DP-54 (MB DP-54 LineSide)	MB MCC-54A	0.48	24.18	24.18	13.94	0.0122	0.0000	Yes	PNL	25	12	18	0.58	(*N5) (*N21b) (*S5)	# 0252-Line
264	DP-55 (MB DP-55 LineSide)	FB ATS-55 NRM	0.48	25.35	25.35	14.52	0.012	0.0000	Yes	PNL	25	12	18	0.60	(*S5)	# 0254-Line
265	DP-56 (MB DP-56 LineSide)	FB DP-56	0.48	14.03	14.03	7.01	0.2	0.0000	Yes	PNL	25	41	18	4.7	(*N3) (*N16) (*N21b) (*S5)	# 0256-Line
266	DRILL PRESS	FB DRILL PRESS	0.48	4.61	4.61	3.38	0.0162	0.0000	Yes	PNL	25	5	18	0.17	(*S5)	# 0161
267	DROP (NGW) STR	FU DOOR OP (NGW)	0.48	4.39	4.39	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04	(*S0)	# 0492
268	DROP (SG) STR	FU DOOR OP (SG)	0.48	4.39	4.39	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04	(*S0)	# 0492
269	E CONT TK G1 DISC	FU 0747	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0568
270	E SUMP PUMP 1 DISC	FU E SUMP PUMP 1	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0475
271	EBB SUMP PUMP 2 DISC	MCP EBB SUMP PUMP 2	0.48	3.42	3.42	2.62	0.005	0.0000	Yes	PNL	25	2	18	0.04	(*S0)	# 0126
272	EBB SUMP PUMP 4 DISC	MCP EBB SUMP PUMP 4	0.48	0.99	0.99	0.77	0.04	0.0000	Yes	PNL	25	4	18	0.08	(*N3) (*S0)	# 0127
273	EBB-A HOIST 1	PD EBB-A HOIST1	0.48	0.94	0.94	0.73	0.4246	0.0000	Yes	PNL	25	14	18	0.83	(*N3) (*N16) (*S4)	# 0118
274	EBB-A HOIST 1 DISC	PD EBB-A HOIST1	0.48	1.01	1.01	0.78	0.0543	0.0000	Yes	PNL	25	4	18	0.12	(*N3) (*S4)	# 0119
275	EBB-A HOIST 2	PD EBB-A HOIST2	0.48	0.94	0.94	0.73	0.4246	0.0000	Yes	PNL	25	14	18	0.83	(*N3) (*N16) (*S4)	# 0120
276	EBB-A HOIST 2 DISC	PD EBB-A HOIST2	0.48	1.01	1.01	0.78	0.0543	0.0000	Yes	PNL	25	4	18	0.12	(*N3) (*S4)	# 0121
277	EBB-EDH-1 LINE'	FB EBB-EDH-1	0.48	3.92	3.92	2.95	0.0162	0.0000	Yes	PNL	25	5	18	0.14	(*S5)	# 0161
278	EBB-EF-10 DISC	MCP EBB-EF-10	0.48	2.73	2.73	2.17	0.005	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0133
279	EBB-EF-5 DISC	MCP EBB-EF-5	0.48	3.99	3.99	2.99	0.005	0.0000	Yes	PNL	25	2	18	0.05	(*S5)	# 0134
280	EBB-EF-6 DISC	MCP EBB-EF-6	0.48	2.17	2.17	1.78	0.005	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0135
281	EBB-EF-7 DISC	MCP EBB-EF-7	0.48	1.44	1.44	1.25	0.005	0.0000	Yes	PNL	25	1	18	0.02	(*S5)	# 0136

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
282	EBB-EF-9 DISC	MCP EBB-EF-9	0.48	0.98	0.98	0.90	0.005	0.0000	Yes	PNL	25	1	18	0.01	(*S5)	# 0137
283	EBB-EUH-1 TERM	PD EBB-EUH-1	0.48	5.98	5.98	4.23	0.0162	0.0000	Yes	PNL	25	6	18	0.21	(*S5)	# 0118
284	EBB-HV-1 DISC	PD EBB-HV-1	0.48	3.29	3.29	2.54	0.0162	0.0000	Yes	PNL	25	4	18	0.12	(*S0)	# 0139
285	EBB-HV-1 STR	PD EBB-HV-1	0.48	2.52	2.52	2.02	0.0162	0.0000	Yes	PNL	25	4	18	0.10	(*S0)	# 0108
286	EF1 DISC	FU 0646	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0136
287	EF2 DISC	FU 0646	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0136
288	EF3 DISC	FU EF-3,4,1	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S2)	# 0568
289	EF4 DISC	FU EF-3,4,1	0.48	1.48	1.48	1.28	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S2)	# 0568
290	ELEVATOR CP DISC	PD ELEVATOR CP	0.48	1.57	1.57	1.35	0.0171	0.0000	Yes	PNL	25	3	18	0.07	(*S0)	# 0492
291	ELEVATOR CP INPUT	FU ELEVATOR CP	0.48	1.47	1.47	1.28		0.0000	Yes	PNL	25	7	18	0.25	(*N4) (*S0)	# 0492
292	EP THRV CONTROLLER	FU E. PLANT THR VALVE	0.48	4.46	4.46	3.29	0.0042	0.0000	Yes	PNL	25	2	18	0.04	(*S5)	# 0133
293	EPBBV DISC	PD 0650	0.48	1.32	1.32	0.99	0.1486	0.0000	Yes	PNL	25	9	18	0.40	(*N3) (*S4)	# 0136
294	EPBBV STARTER	PD 0650	0.48	1.25	1.25	0.93	0.1949	0.0000	Yes	PNL	25	11	18	0.50	(*N3) (*N16) (*S4)	# 0136
295	EPB-EUH-1 DISC	PD EPB-EUH-1	0.48	3.89	3.89	2.93	0.0162	0.0000	Yes	PNL	25	5	18	0.14	(*S5)	# 0180
296	EPB-EUH-1 TERM	PD EPB-EUH-1	0.48	3.64	3.64	2.77	0.0162	0.0000	Yes	PNL	25	5	18	0.13	(*S5)	# 0152
297	EPSEGE DISC	FU 0654	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0136
298	EPSEGW DISC	FU 0656	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0136
299	EQ INFL GATE 1 STR	FU EQ INFL GATE 1	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0475
300	EQ INFL GATE 10 STR	FU EQ INFL GATE 10	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0475
301	EQ INFL GATE 11 STR	FU EQ INFL GATE 11	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0475
302	EQ INFL GATE 12 STR	FU EQ INFL GATE 12	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0475
303	EQ INFL GATE 2 STR	FU EQ INFL GATE 2	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0475
304	EQ INFL GATE 3 STR	FU EQ INFL GATE 3	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0475
305	EQ INFL GATE 4 STR	FU EQ INFL GATE 4	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0475
306	EQ INFL GATE 9 STR	FU EQ INFL GATE 9	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0475
307	EQINGT5 DISC	FU 0565	0.48	2.79	2.79	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S5)	# 0073
308	EQINGT6 DISC	FU 0566	0.48	2.79	2.79	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S5)	# 0073
309	EQINGT7 DISC	FU 0577	0.48	2.79	2.79	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S5)	# 0073
310	EQINGT8 DISC	FU 0578	0.48	2.79	2.79	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S5)	# 0073
311	EQPRM HOIST DISC	FU 0576	0.48	5.97	5.97	4.22	0.0042	0.0000	Yes	PNL	25	3	18	0.05	(*S5)	# 0073
312	EQPT RCPT C	FU WELDER OUTLET C	0.48	6.22	6.22	4.37	0.0042	0.0000	Yes	PNL	25	3	18	0.06	(*S5)	# 0492
313	EQPT RCPT D	FU WELDER OUTLET D	0.48	6.37	6.37	4.46	0.0042	0.0000	Yes	PNL	25	3	18	0.06	(*S5)	# 0430
314	EQPT RCPT E	FU WELD RCPT E	0.48	12.80	12.80	8.09	0.0042	0.0000	Yes	PNL	25	4	18	0.11	(*N21b) (*S5)	# 0403
315	EQPT RCPT EBB-A	PD EBB-A WELD RCPT	0.48	8.24	8.24	5.56	0.0162	0.0000	Yes	PNL	25	8	18	0.29	(*N20b) (*S5)	# 0173
316	EQPT RCPT EBB-B	PD WELD RCPT EBB-B	0.48	7.70	7.70	5.24	0.0162	0.0000	Yes	PNL	25	7	18	0.27	(*S5)	# 0174
317	EQPT RCPT EE	FU 0908	0.48	4.08	4.08	3.05		0.0000	Yes	PNL	25	7	18	0.25	(*N4) (*S0)	# 0430
318	EQPT RCPT EPB-B	PD EQRCPT-EPB-B	0.48	4.43	4.43	3.27	0.0162	0.0000	Yes	PNL	25	5	18	0.16	(*N5)	# 0177
319	EQPT RCPT F	FU 0559	0.48	2.79	2.79	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S5)	# 0407
320	EQPT RCPT M	FU 0663	0.48	2.34	2.34	1.89		0.0000	Yes	PNL	25	7	18	0.25	(*N4) (*S0)	# 0136
321	EQPT RCPT RLS-B	PD WELD OUTLET RLS-B	0.48	4.43	4.43	3.27	0.0162	0.0000	Yes	PNL	25	5	18	0.16	(*S5)	# 0430
322	EQRETCV DISC	FU 0553	0.48	2.79	2.79	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S5)	# 0073

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
323	EQ-RET-V-1 DISC	FU EQ RET VALVE 1	0.48	2.82	2.82	2.22	0.0083	0.0000	Yes	PNL	25	3	18	0.05	(*S0)	# 0475
324	EQ-RET-V-2 DISC	FU EQ RET VALVE 2	0.48	2.82	2.82	2.22	0.0083	0.0000	Yes	PNL	25	3	18	0.05	(*S0)	# 0475
325	EQRET3 DISC	FU 0557	0.48	2.79	2.79	2.20	0.0083	0.0000	Yes	PNL	25	3	18	0.05	(*S5)	# 0073
326	ERU DISC	FU 0573	0.48	2.69	2.69	1.82	0.0268	0.0000	Yes	PNL	25	5	18	0.14	(*N3) (*S4)	# 0073
327	ESESP6 DISC	FU 0660	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0136
328	EUH1 DISC	FU 0662	0.48	1.50	1.50	1.30		0.0000	Yes	PNL	25	7	18	0.25	(*N4) (*S0)	# 0136
329	EUH-E1 TERM	PD-0538	0.48	5.92	5.92	4.19	0.0151	0.0000	Yes	PNL	25	6	18	0.20	(*S5)	# 0132
330	EUH-E2 TERM	PD-0539	0.48	3.84	3.84	2.90	0.0162	0.0000	Yes	PNL	25	5	18	0.14	(*S0)	# 0132
331	EWB-1 DISC	PD EWB-1	0.48	10.41	10.41	6.79	0.0162	0.0000	Yes	PNL	25	9	18	0.35	(*N21b) (*S5)	# 0492
332	EWB-2 DISC	PD EWB-2	0.48	19.65	19.65	11.68	0.0161	0.0000	Yes	PNL	25	12	18	0.63	(*N21b) (*S5)	# 0568
333	EWB-2 TERMS	PD EWB-2	0.48	18.50	18.50	11.09	0.0161	0.0000	Yes	PNL	25	12	18	0.60	(*N21b) (*S5)	# 0162
334	F-1-1 DISC	PD F-1-1	0.48	2.25	2.25	1.84	0.0162	0.0000	Yes	PNL	25	4	18	0.09	(*S5)	# 0160
335	F-1-1 STARTER	PD F-1-1	0.48	1.91	1.91	1.60	0.0166	0.0000	Yes	PNL	25	3	18	0.08	(*S5)	# 0188
336	F-1-2 DISC	PD F-1-1	0.48	2.23	2.23	1.82	0.0162	0.0000	Yes	PNL	25	4	18	0.09	(*S5)	# 0160
337	F-1-2 STARTER	PD F-1-1	0.48	1.82	1.82	1.53	0.0167	0.0000	Yes	PNL	25	3	18	0.07	(*S5)	# 0190
338	F-1-3 DISC	PD F-1-1	0.48	2.21	2.21	1.81	0.0162	0.0000	Yes	PNL	25	4	18	0.08	(*S5)	# 0160
339	F-1-3 STARTER	PD F-1-1	0.48	1.54	1.54	1.32	0.0172	0.0000	Yes	PNL	25	3	18	0.06	(*S5)	# 0350
340	F-1-4 DISC	PD F-1-1	0.48	2.19	2.19	1.80	0.0162	0.0000	Yes	PNL	25	4	18	0.08	(*S5)	# 0160
341	F-1-4 STARTER	PD F-1-1	0.48	1.42	1.42	1.05	0.022	0.0000	Yes	PNL	25	3	18	0.06	(*N3) (*S4)	# 0194
342	F-1-5 DISC	PD F-1-5	0.48	1.84	1.84	1.55	0.0167	0.0000	Yes	PNL	25	3	18	0.07	(*S5)	# 0160
343	F-1-5 STARTER	PD F-1-5	0.48	1.26	1.26	0.95	0.0264	0.0000	Yes	PNL	25	3	18	0.07	(*N3) (*S4)	# 0500
344	F-1-6 DISC	PD F-1-5	0.48	1.83	1.83	1.54	0.0167	0.0000	Yes	PNL	25	3	18	0.07	(*S5)	# 0160
345	F-1-6 STARTER	PD F-1-5	0.48	1.29	1.29	0.97	0.0254	0.0000	Yes	PNL	25	3	18	0.07	(*N3) (*S4)	# 0500
346	F-1-7 DISC	PD F-1-5	0.48	1.82	1.82	1.53	0.0167	0.0000	Yes	PNL	25	3	18	0.07	(*S5)	# 0160
347	F-1-7 STARTER	PD F-1-5	0.48	1.53	1.53	1.32	0.0172	0.0000	Yes	PNL	25	3	18	0.06	(*S5)	# 0500
348	F-1-8 DISC	PD F-1-5	0.48	1.80	1.80	1.52	0.0167	0.0000	Yes	PNL	25	3	18	0.07	(*S5)	# 0160
349	F-1-8 STARTER	PD F-1-5	0.48	1.57	1.57	1.35	0.0171	0.0000	Yes	PNL	25	3	18	0.07	(*S5)	# 0500
350	F-2-1 DISC	PD F-2-6	0.48	5.63	5.63	4.02	0.0162	0.0000	Yes	PNL	25	6	18	0.20	(*S0)	# 0160
351	F-2-1 STARTER	PD F-2-6	0.48	4.19	4.19	3.12	0.0162	0.0000	Yes	PNL	25	5	18	0.15	(*S0)	# 0204
352	F-2-12 DISC	PD F-2-6	0.48	5.55	5.55	3.97	0.0162	0.0000	Yes	PNL	25	6	18	0.20	(*S0)	# 0160
353	F-2-12 STARTER	PD F-2-6	0.48	4.13	4.13	3.08	0.0162	0.0000	Yes	PNL	25	5	18	0.15	(*S0)	# 0206
354	F-2-13 DISC	PD F-2-13	0.48	1.58	1.58	1.35	0.0171	0.0000	Yes	PNL	25	3	18	0.07	(*S0)	# 0160
355	F-2-13 STARTER	PD F-2-13	0.48	1.00	1.00	0.78	0.0371	0.0000	Yes	PNL	25	3	18	0.08	(*N3) (*S4)	# 0208
356	F-2-18 DISC	PD F-2-13	0.48	1.57	1.57	1.35	0.0171	0.0000	Yes	PNL	25	3	18	0.07	(*S0)	# 0160
357	F-2-18 STARTER	PD F-2-13	0.48	1.34	1.34	1.00	0.0241	0.0000	Yes	PNL	25	3	18	0.07	(*N3) (*S4)	# 0210
358	F-2-19 DISC	PD F-2-13	0.48	1.56	1.56	1.34	0.0171	0.0000	Yes	PNL	25	3	18	0.06	(*S0)	# 0160
359	F-2-19 STARTER	PD F-2-13	0.48	1.33	1.33	1.00	0.0243	0.0000	Yes	PNL	25	3	18	0.07	(*N3) (*S4)	# 0212
360	F-2-24 DISC	PD F-2-13	0.48	1.55	1.55	1.33	0.0172	0.0000	Yes	PNL	25	3	18	0.06	(*S0)	# 0160
361	F-2-24 STARTER	PD F-2-13	0.48	0.97	0.97	0.76	0.039	0.0000	Yes	PNL	25	3	18	0.08	(*N3) (*S4)	# 0214
362	F-2-6 DISC	PD F-2-6	0.48	5.72	5.72	4.07	0.0162	0.0000	Yes	PNL	25	6	18	0.20	(*S0)	# 0160
363	F-2-6 STARTER	PD F-2-6	0.48	2.09	2.09	1.72	0.0163	0.0000	Yes	PNL	25	3	18	0.08	(*S0)	# 0217

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
364	F-2-7 DISC	PD F-2-6	0.48	5.47	5.47	3.92	0.0162	0.0000	Yes	PNL	25	6	18	0.20	(*S0)	# 0160
365	F-2-7 STARTER	PD F-2-6	0.48	2.12	2.12	1.74	0.0163	0.0000	Yes	PNL	25	4	18	0.08	(*S0)	# 0219
366	F-5-1 DISC	FU F-5-1	0.48	4.46	4.46	3.29	0.0042	0.0000	Yes	PNL	25	2	18	0.04	(*S5)	# 0492
367	F-5-2 DISC	FU 5-5-2	0.48	4.46	4.46	3.29	0.0042	0.0000	Yes	PNL	25	2	18	0.04	(*S5)	# 0492
368	F-54-1 DISC	PD F-54-4	0.48	1.81	1.81	1.52	0.0184	0.0000	Yes	PNL	25	3	18	0.08	(*S0)	# 0492
369	F-54-1 STR	PD F-54-4	0.48	1.76	1.76	1.49	0.0187	0.0000	Yes	PNL	25	3	18	0.08	(*S0)	# 0492
370	F-54-2 DISC	PD F-54-5	0.48	2.45	2.45	1.98	0.0162	0.0000	Yes	PNL	25	4	18	0.09	(*S5)	# 0492
371	F-54-2 STR	PD F-54-5	0.48	2.36	2.36	1.91	0.0162	0.0000	Yes	PNL	25	4	18	0.09	(*S5)	# 0492
372	F-54-4 DISC	PD F-54-4	0.48	4.61	4.61	3.38	0.0162	0.0000	Yes	PNL	25	5	18	0.17	(*S0)	# 0492
373	F-54-4 STR	PD F-54-4	0.48	4.16	4.16	3.10	0.0162	0.0000	Yes	PNL	25	5	18	0.15	(*S0)	# 0492
374	F-54-5 DISC	PD F-54-5	0.48	11.22	11.22	7.24	0.0162	0.0000	Yes	PNL	25	9	18	0.38	(*N21b) (*S5)	# 0492
375	F-54-5 STR	PD F-54-5	0.48	9.35	9.35	6.19	0.0162	0.0000	Yes	PNL	25	8	18	0.32	(*N20b) (*S5)	# 0492
376	F-60-5	FB EAST JC GATES	0.48	0.89	0.89	0.70	0.5093	0.0000	Yes	PNL	25	16	18	0.96	(*N3) (*N16) (*S4)	# 0365
377	F-60-6	FB EAST JC GATES	0.48	0.89	0.89	0.70	0.5093	0.0000	Yes	PNL	25	16	18	0.96	(*N3) (*N16) (*S4)	# 0366
378	F-6-1 DISC	FU F-6-1	0.48	4.39	4.39	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04	(*S0)	# 0492
379	F-6-2 DISC	FU F-6-2	0.48	4.39	4.39	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04	(*S0)	# 0492
380	F-6-4 DISC	FB GATE OPERATORS	0.48	4.46	4.46	3.29	0.0158	0.0000	Yes	PNL	25	5	18	0.16	(*S5)	# 0492
381	F-7-1 DISC	FB GATE OPERATORS	0.48	3.47	3.47	2.66	0.0165	0.0000	Yes	PNL	25	5	18	0.13	(*S5)	# 0492
382	F-8-6 DISC	FB GATE OPERATORS	0.48	2.84	2.84	2.24	0.0171	0.0000	Yes	PNL	25	4	18	0.11	(*S5)	# 0492
383	FASB1 DISC	PD 0672	0.48	14.32	13.65	8.50	0.0147	0.0000	Yes	PNL	25	10	18	0.43	(*N21b) (*S5)	# 0136
384	FASB-1 LCP	PD 0672	0.48	16.91	16.22	9.85	0.0143	0.0000	Yes	PNL	25	10	18	0.49	(*N20b) (*S5)	# 0206
385	FCB-1 DISC	PD 0724	0.48	8.56	8.56	5.74	0.0146	0.0000	Yes	PNL	25	7	18	0.27	(*S2)	# 0568
386	FCB-1-EF DISC	PD 0724	0.48	8.70	8.70	5.82	0.0146	0.0000	Yes	PNL	25	7	18	0.27	(*S2)	# 0568
387	FCBV-1 VFD	PD 0724	0.48	15.50	15.50	9.53	0.0137	0.0000	Yes	PNL	25	10	18	0.43	(*N21b) (*S2)	# 0568
388	FDSP1 DISC	FU 0679	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S2)	# 0136
389	FDSP2 DISC	FU 0739	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0568
390	FDSP4 DISC	FU FLOOR DRN SP 4	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S2)	# 0568
391	FLRDRNSP3 DISC	FU 0657	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0136
392	GDWU-1 DISC	FU GRIT DEWATER UNIT 1	0.48	4.46	4.46	3.29	0.0042	0.0000	Yes	PNL	25	2	18	0.04	(*S5)	# 0492
393	GDWU-2 DISC	FU GRIT DEWATER UNIT 2	0.48	4.46	4.46	3.29	0.0042	0.0000	Yes	PNL	25	2	18	0.04	(*S5)	# 0492
394	GP-3 DISC TERM	FU GP-3	0.48	4.39	4.39	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04	(*S0)	# 0492
395	GRIT BLOWER 2 DISC	FU GRIT BLOWER 2	0.48	4.46	4.46	3.29	0.0042	0.0000	Yes	PNL	25	2	18	0.04	(*S5)	# 0492
396	GRTBLWR3 DISC	FU GRIT BLOWER 3	0.48	4.39	4.39	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04	(*S0)	# 0492
397	GSP1 DISC	FU GRIT SLURRY PUMP 1	0.48	4.46	4.46	3.29	0.0042	0.0000	Yes	PNL	25	2	18	0.04	(*S5)	# 0492
398	GSP2 DISC	FU GRIT SLURRY PUMP 2	0.48	4.46	4.46	3.29	0.0042	0.0000	Yes	PNL	25	2	18	0.04	(*S5)	# 0492
399	GSP4 DISC	FU GRIT SLURRY PUMP 4	0.48	4.46	4.46	3.29	0.0042	0.0000	Yes	PNL	25	2	18	0.04	(*S5)	# 0492
400	HEAT REC UNIT DISC	FU HEAT RECOVERY UNIT	0.48	8.12	8.12	5.49	0.0042	0.0000	Yes	PNL	25	3	18	0.07	(*S5)	# 0492
401	HOIST D DISC	FU HOIST D	0.48	4.46	4.46	3.29	0.0042	0.0000	Yes	PNL	25	2	18	0.04	(*S5)	# 0492
402	HOIST EPB-B DISC	PD HOIST EPB-B	0.48	4.16	4.16	3.10	0.0162	0.0000	Yes	PNL	25	5	18	0.15	(*S5)	# 0180
403	HOIST EPB-B STARTER	PD HOIST EPB-B	0.48	3.64	3.64	2.77	0.0162	0.0000	Yes	PNL	25	5	18	0.13	(*S5)	# 0177
404	HOIST P DISC	FU 0695	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S2)	# 0136

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
405	HOIST Q DISC	FU 0750	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0568
406	HORZ BAND SAW	FB HORZ BAND SAW	0.48	2.40	2.40	1.94	0.0162	0.0000	Yes	PNL	25	4	18	0.09	(*S5)	# 0161
407	HPPEW2 DISC	FU 0546	0.48	10.80	10.09	6.54	0.0083	0.0000	Yes	PNL	25	6	18	0.19	(*N21b) (*S5)	# 0073
408	HP-PEW-P-1 DISC	FU HP PEW PUMP 1	0.48	11.33	10.62	6.84	0.0083	0.0000	Yes	PNL	25	6	18	0.20	(*N21b) (*S5)	# 0475
409	HT BOOST PMP DISC	FU 0753	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0568
410	HV-1 DISC	PD HV-1	0.48	3.26	3.26	2.52	0.0162	0.0000	Yes	PNL	25	4	18	0.12	(*S5)	# 0180
411	IFSAB-1 LCP	PD IFSAB-1	0.48	7.83	7.83	5.32	0.0162	0.0000	Yes	PNL	25	7	18	0.27	(*S5)	# 0122
412	IPC LP-EFB (MB IPC LP-EFB LineSide)	FB IPC LP-EFB	0.208	3.39	3.39	1.63	2	0.0000	Yes	PNL	25	63	18	9.4	(*N3) (*N9) (*N16) (*S4)	# 0291-Line
413	IPC LP-WFB (MB IPC LP-WFB LineSide)	PD IPC LP-WFB	0.208	1.79	1.79	1.30	2	0.0000	Yes	PNL	25	54	18	7.3	(*N9) (*S5)	# 0311-Line
414	IRON WORK	FU PP-MTB	0.48	4.81	4.81	3.51		0.0000	Yes	PNL	25	7	18	0.25	(*N4) (*N5) (*S0)	# 0161
415	JC-1 DISC	FU JIB CRANES	0.48	4.46	4.46	3.29	0.0042	0.0000	Yes	PNL	25	2	18	0.04	(*S5)	# 0492
416	JC-1 LCP TERM	FU JIB CRANES	0.48	3.47	3.47	2.66	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S5)	# 0230
417	JC-2 DISC	FU JIB CRANES	0.48	3.47	3.47	2.66	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S5)	# 0492
418	JC-3 LCP TERM	FU JIB CRANES	0.48	2.84	2.84	2.24	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S5)	# 0232
419	Junction box.	FB PAB-E2 DV & BOV1	0.48	2.12	2.12	1.74	0.0166	0.0000	Yes	PNL	25	4	18	0.08	(*S5)	# 0161
420	LBP-6 STARTER	FU SCREW PUMP 6	0.48	3.93	3.68	2.24	0.4625	0.0000	Yes	PNL	25	33	18	3.2	(*N3) (*N16) (*S4)	# 0184
421	LBP-7 STARTER	FU SCREW PUMP 7	0.48	3.98	3.75	2.24	0.4656	0.0000	Yes	PNL	25	33	18	3.2	(*N3) (*N16) (*S4)	# 0275
422	LBP-8 STARTER	FU SCREW PUMP 8	0.48	3.98	3.75	2.24	0.4656	0.0000	Yes	PNL	25	33	18	3.2	(*N3) (*N16) (*S4)	# 0277
423	LP-ADM-1 (MB LP-ADM-1 LineSide)	PD XFMR-LP-ADM-1	0.208	5.14	5.14	2.18	2	0.0000	Yes	PNL	25	76	18	13	(*N3) (*N9) (*N16) (*S4)	# 0005-Line
424	LP-ADM-1A	MB LP-ADM-1A	0.208	5.33	5.33	2.80	0.0171	0.0000	Yes	PNL	25	5	18	0.14	(*S0)	# 0026
425	LP-ADM-UPS	MB LP-ADM-UPS	0.208	0.04	0.04	0.04	2	0.0000	Yes	PNL	25	3	18	0.04	(*N9) (*N11) (*S0)	# 0026
426	LP-C	FU XFMR LP-C	0.208	1.79	1.79	1.30		0.0000	Yes	PNL	25	44	18	5.2	(*N4) (*N5) (*N9) (*S4)	# 0242
427	LP-CEB-A	MB LP-CEB-A	0.208	3.35	3.35	2.02	2	0.0000	Yes	PNL	25	73	18	12	(*N9) (*S5)	# 0030
428	LP-CEB-B	MB LP-CEB-A	0.208	3.28	3.28	1.99	2	0.0000	Yes	PNL	25	72	18	12	(*N9) (*S5)	# 0030
429	LP-D	FU XFMR LP-D PRI	0.208	1.75	1.75	1.28		0.0000	Yes	PNL	25	45	18	5.4	(*N4) (*N9) (*S4)	# 0242
430	LP-E	FU XFMR-LP-E	0.208	3.94	3.94	1.92		0.0000	Yes	PNL	25	13	18	0.70	(*N3) (*N4) (*N5) (*S4)	# 0192
431	LP-EBB-A	MB LP-EBB-A	0.208	3.19	3.19	1.95	2	0.0000	Yes	PNL	25	70	18	11	(*N9) (*S5)	# 0193
432	LP-EE	FU 0904	0.208	0.44	0.44	0.37	0.5461	0.0000	Yes	PNL	25	6	18	0.12	(*N3) (*N11) (*N16) (*S4)	# 0194
433	LP-F	FU 0502	0.208	3.83	3.83	1.88		0.0000	Yes	PNL	25	13	18	0.69	(*N3) (*N4) (*S4)	# 0196
434	LP-FF	FU XFMR-LP-FF	0.208	0.47	0.47	0.47	0.161	0.0000	Yes	PNL	25	3	18	0.04	(*N11) (*S4)	# 0194
435	LP-LSE	PD-LP-LSE XFMR	0.208	1.87	1.87	1.34	2	0.0000	Yes	PNL	25	55	18	7.5	(*N9) (*S5)	# 0161
436	LP-M	FU 0645	0.208	3.20	3.20	1.66		0.0000	Yes	PNL	25	12	18	0.66	(*N3) (*N4) (*S4)	# 0257
437	LP-N	FU 0699	0.208	3.35	3.35	2.02		0.0000	Yes	PNL	25	66	18	10	(*N4) (*N5) (*N9) (*S4)	# 0257
438	LP-O	PD XFMR LP-O	0.208	2.51	2.51	1.65	1.988	0.0000	Yes	PNL	25	62	18	9.2	(*S5)	# 0199
439	LP-Q	FU 0734	0.208	3.18	3.18	1.95		0.0000	Yes	PNL	25	71	18	11	(*N4) (*N5) (*N9) (*S4)	# 0257

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
440	LP-RLS (MB-LP-RLS LineSide)	FB ATS-RLS NRM	0.208	1.77	1.77	1.29	2	0.0000	Yes	PNL	25	54	18	7.2	(*N9) (*S5)	# 0252-Line
441	LP-T	PD XFMR LP-T	0.208	2.57	2.57	1.67	1.946	0.0000	Yes	PNL	25	62	18	9.2	(*S5)	# 0200
442	LP-U	PD XFMR LP-U	0.208	2.53	2.53	1.66	1.971	0.0000	Yes	PNL	25	62	18	9.2	(*S5)	# 0199
443	LP-V	PD-0635	0.208	1.65	1.65	1.23	2	0.0000	Yes	PNL	25	52	18	6.8	(*N9) (*S0)	# 0202
444	LP-W	PD-0636	0.208	1.97	1.97	1.39	2	0.0000	Yes	PNL	25	56	18	7.8	(*N9) (*S5)	# 0203
445	LP-WBB-A	MB-WBB-A	0.208	3.57	3.57	2.11	2	0.0000	Yes	PNL	25	75	18	12	(*N9) (*S5)	# 0193
446	LP-WBB-B	MB-WBB-A	0.208	3.50	3.50	2.08	2	0.0000	Yes	PNL	25	74	18	12	(*N9) (*S5)	# 0193
447	LP-WPB-A (MB LP-WPB-B LineSide)	FB ATS-WPB-NORM	0.208	1.80	1.80	1.31	2	0.0000	Yes	PNL	25	54	18	7.3	(*N9) (*S5)	# 0010-Line
448	LP-WPB-B	MB LP-WPB-B	0.208	1.78	1.78	1.10	1.937	0.0000	Yes	PNL	25	48	18	5.9	(*N3) (*N21b) (*S3)	# 0122
449	LSE-ACCU-1	FB LSE-ACCU-1	0.48	6.39	6.39	4.47	0.0162	0.0000	Yes	PNL	25	7	18	0.23	(*S5)	# 0161
450	LSE-ACU-1	FB LSE-ACU-1	0.48	4.01	4.01	3.00	0.0175	0.0000	Yes	PNL	25	5	18	0.16	(*S5)	# 0161
451	LSE-PPU-1	FB LSE-PPU-1	0.48	2.99	2.99	2.34	0.0162	0.0000	Yes	PNL	25	4	18	0.11	(*S5)	# 0161
452	MB-EF-1 DISC	FB MB-EF-1	0.48	3.33	3.33	2.56	0.0162	0.0000	Yes	PNL	25	5	18	0.12	(*S5)	# 0453
453	MCC-51A (MB MCC-51A LineSide)	800/800 MCC-51A	0.48	44.87	44.87	23.64	0.066	0.0000	Yes	MCC	25	46	18	5.6	(*N20a) (*S5)	# 0369-Line
454	MCC-51B (MB MCC-51B LineSide)	800/800 MCC-51B	0.48	44.87	44.87	23.64	0.066	0.0000	Yes	MCC	25	46	18	5.6	(*N20a) (*S5)	# 0367-Line
455	MCC-52A (MB MCC-52A LineSide)	800/800 MCC-52A	0.48	44.87	44.87	23.64	0.066	0.0000	Yes	MCC	25	46	18	5.6	(*N20a) (*S5)	# 0371-Line
456	MCC-52B (MB MCC-52B LineSide)	800/800 MCC-52B	0.48	45.84	45.84	24.08	0.066	0.0000	Yes	MCC	25	46	18	5.7	(*N20a) (*S5)	# 0373-Line
457	MCC-53 A (MB MCC-53A LineSide)	800/600 MCC-53A	0.48	44.87	44.87	23.64	0.066	0.0000	Yes	MCC	25	46	18	5.6	(*N20a) (*S5)	# 0375-Line
458	MCC-53B (MB MCC-53B LineSide)	800/600 MCC-53B	0.48	44.87	44.87	23.64	0.066	0.0000	Yes	MCC	25	46	18	5.6	(*N21a) (*S5)	# 0377-Line
459	MCC-54 A (MB MCC-54A LineSide)	800/800 MCC-54A	0.48	43.05	43.05	22.82	0.066	0.0000	Yes	MCC	25	45	18	5.3	(*N20a) (*S5)	# 0379-Line
460	MCC-54B (MB MCC-54B LineSide)	800/800 MCC-54B	0.48	43.05	43.05	22.82	0.066	0.0000	Yes	MCC	25	45	18	5.3	(*N20a) (*S5)	# 0381-Line
461	MCC-55 A (MB MCC-55A LineSide)	800/600 MCC-55A	0.48	44.87	44.87	23.64	0.066	0.0000	Yes	MCC	25	46	18	5.6	(*N20a) (*S5)	# 0383-Line
462	MCC-55B (MB MCC-55B LineSide)	800/600 MCC-55B	0.48	44.87	44.87	23.64	0.066	0.0000	Yes	MCC	25	46	18	5.6	(*N20a) (*S5)	# 0385-Line
463	MCC-56 A (MB MCC-56A LineSide)	800/600 MCC-56A	0.48	12.60	12.15	4.42	0.218	0.0000	Yes	MCC	25	37	18	4.0	(*N3) (*N16) (*S4)	# 0387-Line
464	MCC-56B (MB MCC-56B LineSide)	800/600 MCC-56B	0.48	12.61	12.16	4.39	0.218	0.0000	Yes	MCC	25	37	18	3.9	(*N3) (*N16) (*S4)	# 0389-Line
465	MCC-ADM-A (MB MCC-ADM-A LineSide)	800/800 ATS-ADM-EMG	0.48	10.08	10.08	4.15	2	0.0000	Yes	MCC	25	118	18	26	(*N3) (*N9) (*N16) (*S4)	# 0012-Line
466	MCC-C	800/200 MCC-C	0.48	15.17	15.17	8.43	0.2	0.0000	Yes	MCC	25	47	18	5.8	(*N16) (*S5)	# 0283
467	MCC-CEB-A	800/600 MCC-CEB-A	0.48	25.33	25.33	14.50	0.06	0.0000	Yes	MCC	25	31	18	3.0	(*S5)	# 0034
468	MCC-CEB-B	800/600 MCC-CEB-B	0.48	25.87	25.87	14.77	0.06	0.0000	Yes	MCC	25	32	18	3.0	(*S5)	# 0035
469	MCC-D	800/200 MCC-D	0.48	15.61	15.61	8.89	0.2	0.0000	Yes	MCC	25	48	18	6.1	(*N16) (*S5)	# 0286
470	MCC-E	FU HP PEW PUMP 1	0.48	12.81	0.73	0.46	0.0833	0.0000	Yes	MCC	25	23	18	1.7	(*S0)	# 0215

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
471	MCC-EBB-A	800/600 MCC-EBB-A	0.48	9.69	9.34	6.15	0.14	0.0000	Yes	MCC	25	29	18	2.6	(*S5)	# 0218
472	MCC-EBB-B	800/600 MCC-EBB-B	0.48	8.94	8.59	5.73	0.14	0.0000	Yes	MCC	25	28	18	2.5	(*S5)	# 0220
473	MCC-EE	FU MCC-EE	0.48	12.24	12.24	7.79		0.0000	Yes	MCC	25	7	18	0.25	(*N4) (*S0)	# 0222
474	MCC-EPB-A (MB MCC-EPB-A LineSide)	800/200 MCC-EPB-A	0.48	5.79	5.79	4.11	0.14	0.0000	Yes	MCC	25	22	18	1.7	(*S5)	# 0256-Line
475	MCC-EPB-B (MB MCC-EPB-B LineSide)	800/200 MCC-EPB-B	0.48	5.52	5.52	3.95	0.14	0.0000	Yes	MCC	25	22	18	1.6	(*S5)	# 0256-Line
476	MCC-F	800/400 MCC-F	0.48	12.30	10.43	6.64	0.06	0.0000	Yes	MCC	25	21	18	1.5	(*S5)	# 0229
477	MCC-FF	FU 0560	0.48	11.53	11.53	7.41		0.0000	Yes	MCC	25	7	18	0.25	(*N4) (*S0)	# 0222
478	MCC-M	FB-MCC-M	0.48	18.45	14.50	8.70	0.32	0.0000	Yes	MCC	25	64	18	9.5	(*S3)	# 0322
479	MCC-M.	FB-MCC-M	0.48	20.71	15.74	7.73	0.32	0.0000	Yes	MCC	25	61	18	8.8	(*N3) (*N16) (*S5)	# 0530
480	MCC-N	FB-MCC-N	0.48	21.35	17.61	8.00	0.32	0.0000	Yes	MCC	25	62	18	9.1	(*N3) (*N16) (*S5)	# 0322
481	MCC-N.	FB-MCC-N	0.48	21.35	17.61	8.00	0.32	0.0000	Yes	MCC	25	62	18	9.1	(*N3) (*N16) (*S5)	# 0532
482	MCC-P	FB-MCC-P	0.48	20.24	17.78	10.52	0.05	0.0000	Yes	MCC	25	25	18	2.0	(*S2)	# 0322
483	MCC-Q	FB-MCC-Q	0.48	19.97	18.92	11.22	0.05	0.0000	Yes	MCC	25	25	18	2.0	(*S5)	# 0322
484	MCC-R	800/800 MCC-R	0.48	80.73	75.59	36.56	0.066	0.0000	Yes	MCC	25	64	18	9.6	(*N21a) (*N21b) (*S5)	# 0322
485	MCC-RLS-A (MB MCC-RLS-A LineSide)	800/600 MCC-RLS-A	0.48	15.43	13.27	8.17	0.2	0.0000	Yes	MCC	25	47	18	5.8	(*N16) (*S5)	# 0314-Line
486	MCC-RLS-B (MB MCC-RLS-B LineSide)	800/400 MCC-RLS-B	0.48	12.78	11.35	7.18	0.2	0.0000	Yes	MCC	25	43	18	4.9	(*N16) (*S5)	# 0274-Line
487	MCC-S	800/800 MCC-S	0.48	80.43	76.82	37.17	0.066	0.0000	Yes	MCC	25	64	18	9.5	(*N20a) (*N21b) (*S5)	# 0322
488	MCC-WBB-A	1600/1440 MCC-WBB-A	0.48	39.58	34.93	18.74	0.2	0.0000	Yes	MCC	25	80	18	14	(*N16) (*S5)	# 0233
489	MCC-WBB-B	1600/1440 MCC-WBB-B	0.48	36.74	34.41	18.60	0.2	0.0000	Yes	MCC	25	79	18	13	(*N16) (*S5)	# 0235
490	MCC-WPB-A (MB MCC-WPB-A LineSide)	800/400 MCC-WPB-A	0.48	13.18	13.18	8.30	0.14	0.0000	Yes	MCC	25	36	18	3.7	(*S5)	# 0287-Loa
491	MCC-WPB-B (MB MCC-WPB-B LineSide)	800/400 MCC-WPB-B	0.48	12.95	12.95	8.18	0.14	0.0000	Yes	MCC	25	36	18	3.7	(*S5)	# 0485-Loa
492	MCC-XA	800/800 MCC-XA	0.48	15.57	14.37	4.82	2	0.0000	Yes	MCC	25	132	18	32	(*N3) (*N9) (*N16) (*S4)	# 0322
493	MCC-XB	800/800 MCC-XB	0.48	72.94	70.93	34.82	0.066	0.0000	Yes	MCC	25	60	18	8.7	(*N20a) (*N21b) (*S5)	# 0322
494	METAL LATHE	FU PP-MTB	0.48	4.94	4.94	3.59		0.0000	Yes	PNL	25	7	18	0.25	(*N4) (*N5) (*S0)	# 0161
495	MILL MACH	FB MILL MACH	0.48	4.13	4.13	3.08	0.0162	0.0000	Yes	PNL	25	5	18	0.15	(*S5)	# 0161
496	MOD VALVE 1 DISC	FU 0746	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0568
497	MOD VALVE 3 DISC	FU 0746	0.48	1.36	1.36	1.19	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0568
498	MOD VALVE 5 DISC	FU 0746	0.48	1.25	1.25	1.11	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0568
499	MOD VALVE 7 DISC	FU 0746	0.48	1.16	1.16	1.04	0.0083	0.0000	Yes	PNL	25	2	18	0.02	(*S0)	# 0568
500	MPPEWP1 DISC	FU MP PEW PUMP 1	0.48	9.70	9.30	6.12	0.0083	0.0000	Yes	PNL	25	5	18	0.17	(*S4)	# 0475
501	MPPEWP2 DISC	FU 0548	0.48	9.88	9.47	6.22	0.0083	0.0000	Yes	PNL	25	6	18	0.17	(*S2)	# 0073
502	MU HV2 DISC	FU 0749	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0568
503	MV10 DISC	FU 0659	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0136
504	MV11 DISC	FU 0659	0.48	1.47	1.47	1.28	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0136

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
505	MV12 DISC	FU 0659	0.48	1.46	1.46	1.27	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0136
506	MV2 DISC	FU 0711	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S2)	# 0568
507	MV4 DISC	FU 0711	0.48	1.48	1.48	1.28	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S2)	# 0568
508	MV6 DISC	FU 0711	0.48	1.47	1.47	1.27	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S2)	# 0568
509	MV8 DISC	FU 0711	0.48	1.46	1.46	1.26	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S2)	# 0568
510	MV9 DISC	FU 0659	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0136
511	N EQPT RCPT	FU 0715	0.48	2.33	2.33	1.89		0.0000	Yes	PNL	25	7	18	0.25	(*N4) (*S0)	# 0568
512	OZNTR DISC	FU 0917	0.48	8.07	8.07	5.46		0.0000	Yes	PNL	25	7	18	0.25	(*N4) (*S0)	# 0099
513	P-53-06 DISC	PD P-53-06	0.48	5.97	5.97	4.22	0.0162	0.0000	Yes	PNL	25	6	18	0.21	(*S5)	# 0492
514	P-53-06 STR	PD P-53-06	0.48	5.04	5.04	3.65	0.0162	0.0000	Yes	PNL	25	6	18	0.18	(*S5)	# 0492
515	P-53-07 DISC.	PD P-53-07	0.48	3.52	3.52	2.69	0.0162	0.0000	Yes	PNL	25	5	18	0.13	(*S0)	# 0492
516	P-53-07 STR	PD P-53-07	0.48	3.16	3.16	2.45	0.0162	0.0000	Yes	PNL	25	4	18	0.12	(*S0)	# 0492
517	P-53-20 DISC	PD P-53-07	0.48	6.00	6.00	4.24	0.0162	0.0000	Yes	PNL	25	6	18	0.21	(*S5)	# 0492
518	P-53-20 STR	PD P-53-07	0.48	5.06	5.06	3.67	0.0162	0.0000	Yes	PNL	25	6	18	0.18	(*S5)	# 0492
519	P-53-21 DISC	PD P-53-06	0.48	5.47	5.47	3.92	0.0162	0.0000	Yes	PNL	25	6	18	0.20	(*S5)	# 0492
520	P-53-21 STR	PD P-53-06	0.48	4.67	4.67	3.42	0.0162	0.0000	Yes	PNL	25	5	18	0.17	(*S5)	# 0492
521	PAB-E1 DV & BOV	FB PAB-E1 DV & BOV	0.48	2.21	2.21	1.81	0.0162	0.0000	Yes	PNL	25	4	18	0.08	(*S5)	# 0161
522	PAB-E1 LCP	FB PAB-E1 LCP	0.48	3.63	3.63	2.76	0.0162	0.0000	Yes	PNL	25	5	18	0.13	(*S5)	# 0161
523	PAB-E1 STR IN	PD PAB-E1 RELAY	4.16	2.90	2.36	2.34	0.0167	0.0830	Yes	SWG	104	8	36	0.27	(*S5)	# 0250
524	PAB-E2 DV & BOV1	FB PAB-E2 DV & BOV1	0.48	1.88	1.88	1.57	0.018	0.0000	Yes	PNL	25	3	18	0.08	(*S5)	# 0161
525	PAB-E2 LCP	FB PAB-E2 LCP	0.48	3.04	3.04	2.37	0.0162	0.0000	Yes	PNL	25	4	18	0.11	(*S5)	# 0161
526	PAB-E2 STR IN	PD PAB-E2 RELAY	4.16	2.36	1.83	1.82	0.0167	0.0830	Yes	SWG	104	7	36	0.23	(*S5)	# 0252
527	PAB-E3 DV & BOV	FB PAB-E3 DV & BOV	0.48	1.65	1.65	1.41	0.0195	0.0000	Yes	PNL	25	3	18	0.08	(*S5)	# 0161
528	PAB-E3 LCP	FB PAB-E3 LCP	0.48	2.36	2.36	1.91	0.0162	0.0000	Yes	PNL	25	4	18	0.09	(*S5)	# 0161
529	PAB-E3 STR IN	PD PAB-E3 RELAY	4.16	2.90	2.36	2.34	0.0167	0.0830	Yes	SWG	104	8	36	0.27	(*S5)	# 0254
530	PAB-W1 VALVES JB	PD PAB-W1 VALVES	0.48	6.89	6.89	4.77	0.0162	0.0000	Yes	PNL	25	7	18	0.24	(*S5)	# 0106
531	PAB-W2 VALVES JB	PD PAB-W2 VALVES	0.48	5.23	5.23	3.77	0.0162	0.0000	Yes	PNL	25	6	18	0.19	(*S5)	# 0161
532	PAB-W3 VALVES JB	PD PAB-W3 VALVES	0.48	4.33	4.33	3.21	0.0162	0.0000	Yes	PNL	25	5	18	0.16	(*S5)	# 0106
533	PCDR W1 DISC	MCP PCDR-W1	0.48	1.35	1.35	1.19	0.005	0.0000	Yes	PNL	25	1	18	0.02	(*S0)	# 0492
534	PCDR-W2 DISC	MCP PCDR-W2	0.48	2.19	2.19	1.79	0.005	0.0000	Yes	PNL	25	2	18	0.03	(*S5)	# 0492
535	PC-E1 DISC	MCP PC-E1	0.48	0.60	0.60	0.60	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11) (*S0)	# 0256
536	PC-E2 DISC	MCP PC-E2	0.48	0.75	0.75	0.72	0.005	0.0000	Yes	PNL	25	1	18	0.01	(*S5)	# 0180
537	PC-E3 DISC	MCP PC-E3	0.48	0.78	0.78	0.74	0.005	0.0000	Yes	PNL	25	1	18	0.01	(*S0)	# 0256
538	PC-E4 DISC	MCP PC-E4	0.48	0.54	0.54	0.54	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11) (*S5)	# 0180
539	PC-WPB-EF-2 DISC	MCP WPB-EF-2	0.48	3.20	3.20	2.48	0.005	0.0000	Yes	PNL	25	2	18	0.04	(*S5)	# 0492
540	PC-WPB-P-2 DISC	MCP WPB-P-2	0.48	2.03	2.03	1.68	0.005	0.0000	Yes	PNL	25	2	18	0.02	(*S5)	# 0492
541	PDP UV 2A	FB-PDP-UV-2A	0.48	14.37	14.37	6.25	0.2	0.0000	Yes	MCC	25	40	18	4.4	(*N3) (*N16) (*S5)	# 0322
542	PDP UV 2B	FB-PDP-UV-2B	0.48	14.37	14.37	6.25	0.2	0.0000	Yes	MCC	25	40	18	4.4	(*N3) (*N16) (*S5)	# 0322
543	PDP-E1 DISC	MCP PDP-E1	0.48	4.31	4.31	3.20	0.005	0.0000	Yes	PNL	25	3	18	0.05	(*S0)	# 0256
544	PDP-W1 DISC	MCP PDP-W1	0.48	3.42	3.42	2.62	0.005	0.0000	Yes	PNL	25	2	18	0.04	(*S0)	# 0492
545	PEW STRAINER DISC	FU 0697	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S2)	# 0136

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
546	PEWP1 DISC	FB-MCC-P	0.48	15.00	13.59	7.14	0.05	0.0000	Yes	PNL	25	19	18	1.3	(*N3) (*N5) (*N21b) (*S2)	# 0136
547	PEWP2 DISC	FU PEW PUMP 2	0.48	16.29	14.89	7.73	0.0446	0.0000	Yes	PNL	25	18	18	1.2	(*N3) (*S4)	# 0568
548	PEWP3 ATS NRM	FU PEW PUMP 3	0.48	18.82	17.43	8.86	0.0273	0.0000	Yes	PNL	25	15	18	0.86	(*N3) (*N21b) (*S4)	# 0576
549	PEWP3 DISC	FU PEW PUMP 3	0.48	15.83	14.45	7.53	0.049	0.0000	Yes	PNL	25	19	18	1.3	(*N3) (*N21b) (*S4)	# 0568
550	PMPRM HOIST DISC	FU 0575	0.48	4.10	4.10	3.06	0.0042	0.0000	Yes	PNL	25	2	18	0.04	(*S5)	# 0073
551	PP-ADM-1	PD XFMR PP-ADM-1	0.48	2.53	2.53	1.58	0.9202	0.0000	Yes	PNL	25	39	18	4.2	(*N3) (*N5) (*N16) (*S4)	# 0036
552	PP-ADM-2	PD XFMR PP-ADM-1	0.48	2.06	2.06	1.35	1.255	0.0000	Yes	PNL	25	42	18	4.8	(*N3) (*N5) (*N16) (*S4)	# 0036
553	PP-EBB-A	FB ATS-EBB NORM	0.48	8.49	8.49	5.70	0.04	0.0000	Yes	PNL	25	13	18	0.72	(*S5)	# 0278
554	PP-EBB-B	FB PP-EBB-B	0.48	7.15	7.15	4.92	0.0165	0.0000	Yes	PNL	25	7	18	0.25	(*S5)	# 0278
555	PP-LSE (MB PP-LSE LineSide)	FB ATS-LSE-NRM	0.48	12.40	12.40	7.88	0.0529	0.0000	Yes	PNL	25	19	18	1.4	(*S5)	# 0075-Line
556	PP-LSE CKT #14	FB SLDG'S S-50-1,2,3,4,5	0.48	1.00	1.00	0.78	0.0575	0.0000	Yes	PNL	25	4	18	0.12	(*N3) (*S0)	# 0618
557	PP-LSE CKT #19	FB SLDG'S F-50-3,4	0.48	0.97	0.97	0.75	0.3569	0.0000	Yes	PNL	25	13	18	0.73	(*N3) (*N16) (*S4)	# 0074
558	PP-LSE CKT #2	FB SLDG'S F-60-1,2,3	0.48	1.00	1.00	0.78	0.0575	0.0000	Yes	PNL	25	4	18	0.12	(*N3) (*S0)	# 0620
559	PP-LSE CKT #26	FB EAST JC GATES	0.48	1.00	1.00	0.78	0.0575	0.0000	Yes	PNL	25	4	18	0.12	(*N3) (*S0)	# 0621
560	PP-LSE CKT #8	FB SLDG's S-60-1,2	0.48	1.00	1.00	0.78	0.0575	0.0000	Yes	PNL	25	4	18	0.12	(*N3) (*S0)	# 0622
561	PP-MTB	FU PP-MTB	0.48	5.48	5.48	3.92		0.0000	Yes	PNL	25	7	18	0.25	(*N4) (*S0)	# 0074
562	PP-MTB DISC SW	800/250 PP-MTB	0.48	5.72	5.72	4.07	0.14	0.0000	Yes	PNL	25	23	18	1.8	(*S2)	# 0435
563	PP-UV	FU ATS-PP-UV-NRM	0.48	1.62	1.62	1.17	0.0537	0.0000	Yes	PNL	25	6	18	0.18	(*N3) (*S4)	# 0374
564	PP-WBB-A	FB ATS-WBB-NORM	0.48	32.16	32.16	17.79	0.05	0.0000	Yes	PNL	25	32	18	3.1	(*S5)	# 0079
565	PP-WBB-B	PD PP-WBB-B	0.48	31.03	31.03	17.25	0.0175	0.0000	Yes	PNL	25	17	18	1.0	(*S5)	# 0074
566	PP-Z	FU PP-MTB	0.48	4.89	4.89	3.56		0.0000	Yes	PNL	25	7	18	0.25	(*N4) (*N5) (*S0)	# 0074
567	PSCP-E1 DISC	MCP PSLMP-E4	0.48	3.75	3.75	2.84	0.005	0.0000	Yes	PNL	25	2	18	0.04	(*S0)	# 0256
568	PSCP-E2 DISC	MCP PSCP-E2	0.48	3.64	3.64	2.77	0.005	0.0000	Yes	PNL	25	2	18	0.04	(*S5)	# 0180
569	PSCP-W1 DISC	MCP PSCP-W1	0.48	6.93	6.93	4.80	0.005	0.0000	Yes	PNL	25	3	18	0.08	(*S5)	# 0492
570	PSCP-W2 DISC	MCP PSCP-W2	0.48	4.51	4.51	3.32	0.005	0.0000	Yes	PNL	25	3	18	0.05	(*S5)	# 0492
571	PSLP-E1 VFD IN	PD PSLP-E1	0.48	3.75	3.75	2.84	0.0162	0.0000	Yes	PNL	25	5	18	0.14	(*S0)	# 0617
572	PSLP-E2 VFD IN	PD PSLP-E2	0.48	3.42	3.42	2.62	0.0162	0.0000	Yes	PNL	25	5	18	0.13	(*S5)	# 0177
573	PSLP-E3 VFD IN	PD PSLP-E3	0.48	3.31	3.31	2.55	0.0162	0.0000	Yes	PNL	25	4	18	0.12	(*S0)	# 0619
574	PSLPG-W1 VFD IN	PD PSLPG-W1	0.48	2.63	2.63	2.09	0.0162	0.0000	Yes	PNL	25	4	18	0.10	(*S0)	# 0492
575	PSLPG-W2 INPUT	PD PSLPG-W2	0.48	4.74	4.74	3.47	0.0162	0.0000	Yes	PNL	25	6	18	0.17	(*S5)	# 0492
576	PSLPM-E1 LCP	PD PSLPM-E1	0.48	3.64	3.64	2.77	0.0162	0.0000	Yes	PNL	25	5	18	0.13	(*S5)	# 0177
577	PSLPM-E2 LCP	PD PSLPM-E2	0.48	3.42	3.42	2.62	0.0162	0.0000	Yes	PNL	25	5	18	0.13	(*S5)	# 0177
578	PSLP-W1 VFD IN	PD PSLP-W1	0.48	7.10	7.10	4.89	0.0162	0.0000	Yes	PNL	25	7	18	0.25	(*S5)	# 0492
579	PSLP-W2 INPUT	PD PSLP-W2	0.48	8.43	8.43	5.67	0.0162	0.0000	Yes	PNL	25	8	18	0.29	(*S5)	# 0492
580	RASP-E1 VFD IN	PD RASP-E1	0.48	2.03	2.03	1.68	0.021	0.0000	Yes	PNL	25	4	18	0.10	(*S0)	# 0302
581	RASP-E2 VFD IN	PD RASP-E2	0.48	1.99	1.99	1.65	0.0191	0.0000	Yes	PNL	25	4	18	0.09	(*S5)	# 0461
582	RASP-E3 VFD IN	PD RASP-E3	0.48	2.03	2.03	1.68	0.021	0.0000	Yes	PNL	25	4	18	0.10	(*S0)	# 0302
583	RASP-E4 VFD IN	PD RASP-E4	0.48	1.99	1.99	1.65	0.0191	0.0000	Yes	PNL	25	4	18	0.09	(*S5)	# 0463

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
584	RASP-E5 VFD IN	PD RASP-E5	0.48	2.03	2.03	1.68	0.021	0.0000	Yes	PNL	25	4	18	0.10	(*S0)	# 0302
585	RASP-E6 VFD IN	PD RASP-E6	0.48	1.99	1.99	1.65	0.0191	0.0000	Yes	PNL	25	4	18	0.09	(*S5)	# 0465
586	RASP-E7 VFD IN	PD RASP-E7	0.48	2.03	2.03	1.68	0.021	0.0000	Yes	PNL	25	4	18	0.10	(*S0)	# 0302
587	RASP-E8 VFD IN	PD RASP-E8	0.48	1.99	1.99	1.65	0.0191	0.0000	Yes	PNL	25	4	18	0.09	(*S5)	# 0467
588	RASP-W1 VFD IN	PD RASP-W1	0.48	14.66	14.66	9.09	0.0162	0.0000	Yes	PNL	25	10	18	0.49	(*N21b) (*S5)	# 0028
589	RASP-W2 VFD IN	PD RASP-W2	0.48	14.37	14.37	8.94	0.0162	0.0000	Yes	PNL	25	10	18	0.48	(*N21b) (*S5)	# 0492
590	RASP-W3 VFD IN	PD RASP-W3	0.48	14.66	14.66	9.09	0.0162	0.0000	Yes	PNL	25	10	18	0.49	(*N21b) (*S5)	# 0028
591	RASP-W4 VFD IN	PD RASP-W4	0.48	14.37	14.37	8.94	0.0162	0.0000	Yes	PNL	25	10	18	0.48	(*N21b) (*S5)	# 0492
592	RBDP1 DISC	FU 0523	0.48	8.41	8.41	4.81	0.0083	0.0000	Yes	PNL	25	5	18	0.13	(*N3) (*S2)	# 0073
593	RBDP-2 DISC	FU RB DRAIN PUMP 2	0.48	10.00	10.00	6.55	0.0042	0.0000	Yes	PNL	25	4	18	0.09	(*N21b) (*S5)	# 0475
594	RBDP3 DISC	FU 0542	0.48	8.41	8.41	4.81	0.0083	0.0000	Yes	PNL	25	5	18	0.13	(*N3) (*S2)	# 0073
595	RBDP-4 DISC	FU RB DRAIN PUMP 4	0.48	10.00	10.00	6.55	0.0042	0.0000	Yes	PNL	25	4	18	0.09	(*N21b) (*S5)	# 0475
596	RECIRCV PAB-E1	FB RECIRCV PAB-E1	0.48	2.32	2.32	1.88	0.0162	0.0000	Yes	PNL	25	4	18	0.09	(*S5)	# 0161
597	RECIRCV PAB-E2	FB RECIRCV PAB-E2	0.48	1.95	1.95	1.63	0.0175	0.0000	Yes	PNL	25	4	18	0.08	(*S5)	# 0161
598	RECIRCV PAB-E3	FB RECIRCV PAB-E3	0.48	1.53	1.53	1.32	0.0206	0.0000	Yes	PNL	25	3	18	0.08	(*S5)	# 0161
599	RETBSNRFCV STARTER	FU RET BSN RF CV	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0475
600	RF # 5 DISC	FU 0530	0.48	2.79	2.79	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S5)	# 0073
601	RF # 6 DISC	FU 0555	0.48	2.79	2.79	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S5)	# 0073
602	RF-1 DISC	MCP RF-1	0.48	3.26	3.26	2.52	0.005	0.0000	Yes	PNL	25	2	18	0.04	(*S5)	# 0180
603	RIVER VALVE DISC	FU 0689	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*N21b) (*S1)	# 0136
604	RLS-ACCU-1	PD RLS-ACCU-1	0.48	2.85	2.85	2.25	0.0162	0.0000	Yes	PNL	25	4	18	0.11	(*S0)	# 0417
605	RLS-ACCU-1 DISC	PD RLS-ACCU-1	0.48	3.49	3.49	2.67	0.0162	0.0000	Yes	PNL	25	5	18	0.13	(*S0)	# 0492
606	RLS-ACU-1	PD RLS-ACU-1	0.48	7.24	7.24	4.97	0.0162	0.0000	Yes	PNL	25	7	18	0.25	(*S5)	# 0417
607	RLS-EF-1 DISC	MCP RLS-EF-1	0.48	2.77	2.77	2.19	0.005	0.0000	Yes	PNL	25	2	18	0.03	(*S5)	# 0430
608	RLS-EF-2 DISC	MCP RLS-EF-2	0.48	4.93	4.93	3.58	0.005	0.0000	Yes	PNL	25	3	18	0.05	(*S5)	# 0430
609	RLS-PPU-1	PD RLS-PPU-1	0.48	7.57	7.57	5.17	0.0162	0.0000	Yes	PNL	25	7	18	0.26	(*S5)	# 0563
610	RLS-SF-1 DISC	MCP RLS-SF-1	0.48	1.80	1.80	1.52	0.005	0.0000	Yes	PNL	25	2	18	0.02	(*S5)	# 0430
611	ROOF FAN 10 DISC	FU 0722	0.48	2.93	2.93	2.30	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S2)	# 0568
612	ROOF FAN 11 DISC	FU 0693	0.48	2.90	2.90	2.27	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S2)	# 0136
613	ROOF FAN 12 DISC	FU 0731	0.48	2.93	2.93	2.30	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S2)	# 0568
614	RS-SAP-1 DISC	MCP RS-SAP-1	0.48	2.07	2.07	1.71	0.005	0.0000	Yes	PNL	25	2	18	0.02	(*S0)	# 0492
615	S-1-1 DISC	PD 48IN GATE S-1-1	0.48	1.68	1.68	1.43	0.0169	0.0000	Yes	PNL	25	3	18	0.07	(*S5)	# 0430
616	S-21-1 DISC	PD F-1-1	0.48	2.18	2.18	1.78	0.0162	0.0000	Yes	PNL	25	4	18	0.08	(*S5)	# 0160
617	S-21-1 STARTER	PD F-1-1	0.48	1.93	1.93	1.61	0.0166	0.0000	Yes	PNL	25	3	18	0.08	(*S5)	# 0498
618	S-21-2 DISC	PD F-1-1	0.48	2.16	2.16	1.77	0.0163	0.0000	Yes	PNL	25	4	18	0.08	(*S5)	# 0160
619	S-21-2 STARTER	PD F-1-1	0.48	1.72	1.72	1.45	0.0169	0.0000	Yes	PNL	25	3	18	0.07	(*S5)	# 0500
620	S-21-3 DISC	PD F-1-5	0.48	1.79	1.79	1.51	0.0168	0.0000	Yes	PNL	25	3	18	0.07	(*S5)	# 0160
621	S-21-3 STARTER	PD F-1-5	0.48	1.42	1.42	1.05	0.022	0.0000	Yes	PNL	25	3	18	0.06	(*N3) (*S4)	# 0500
622	S-21-4 DISC	PD F-1-5	0.48	1.78	1.78	1.50	0.0168	0.0000	Yes	PNL	25	3	18	0.07	(*S5)	# 0160
623	S-21-4 STARTER	PD F-1-5	0.48	1.60	1.60	1.37	0.0171	0.0000	Yes	PNL	25	3	18	0.07	(*S5)	# 0500
624	S-54-2 DISC	PD F-54-5	0.48	2.45	2.45	1.98	0.0162	0.0000	Yes	PNL	25	4	18	0.09	(*S5)	# 0689

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
625	S-54-2 STR	PD F-54-5	0.48	2.36	2.36	1.91	0.0162	0.0000	Yes	PNL	25	4	18	0.09	(*S5)	# 0690
626	SC-1 DISC	FU SC-1	0.48	4.39	4.39	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04	(*S0)	# 0492
627	SC-2 DISC	FU SCREEN COMP SC-2	0.48	4.46	4.46	3.29	0.0042	0.0000	Yes	PNL	25	2	18	0.04	(*S5)	# 0492
628	SC-3 DISC	FU SCREEN COMP SC-3	0.48	4.46	4.46	3.29	0.0042	0.0000	Yes	PNL	25	2	18	0.04	(*S5)	# 0492
629	SCDR-W1 DISC	MCP SCDR-W1	0.48	0.63	0.63	0.63	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11) (*S0)	# 0028
630	SCDR-W2 DISC	MCP SCDR-W2	0.48	0.63	0.63	0.63	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11) (*S5)	# 0492
631	SC-E1 DISC	MCP SEC-CLAR-E1	0.48	0.58	0.58	0.58	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11) (*S0)	# 0511
632	SC-E2 DISC	MCP CLARIFIER SC-E2	0.48	0.58	0.58	0.58	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11) (*S5)	# 0512
633	SC-E3 DISC	MCP SEC-CLAR-E3	0.48	0.33	0.33	0.33	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11) (*S0)	# 0513
634	SC-E4 DISC	MCP CLARIFIER SC-E4	0.48	0.33	0.33	0.33	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11) (*S2)	# 0514
635	SCP-6	FU SCREW PUMP 6	0.48	12.30	11.58	7.37	0.0083	0.0000	Yes	PNL	25	6	18	0.21	(*N21b) (*S5)	# 0681
636	SCP-7	FU SCREW PUMP 7	0.48	13.01	12.29	7.76	0.0083	0.0000	Yes	PNL	25	6	18	0.22	(*S5)	# 0682
637	SCP-8	FU SCREW PUMP 8	0.48	13.01	12.29	7.76	0.0083	0.0000	Yes	PNL	25	6	18	0.22	(*N21b) (*S5)	# 0683
638	SCREW CONV 3 STR	FU SCREW CONV 3	0.48	4.46	4.46	3.29	0.0042	0.0000	Yes	PNL	25	2	18	0.04	(*S5)	# 0492
639	SCRNCNV DISC	FU SCREENINGS CONV	0.48	4.46	4.46	3.29	0.0042	0.0000	Yes	PNL	25	2	18	0.04	(*S5)	# 0492
640	SCTY GATE STARTER	FU SECURITY GATE	0.48	4.83	4.83	3.52	0.0042	0.0000	Yes	PNL	25	2	18	0.04	(*S0)	# 0475
641	SE ISO VALVE DISC	FU 0688	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*N21b) (*S1)	# 0136
642	SECURITY GATE DISC	FU SECURITY GATE	0.48	5.79	5.79	4.11	0.0042	0.0000	Yes	PNL	25	3	18	0.05	(*S5)	# 0475
643	SEG1 DISC	FU 0664	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0136
644	SEP1 VFD IN	FU SEC EFF PUMP 1	0.48	14.76	14.76	9.14		0.0000	Yes	PNL	25	10	18	0.49	(*N4) (*N21b) (*S4)	# 0664
645	SEP2 VFD IN	FU SEC EFF PUMP 2	0.48	16.60	15.57	9.48		0.0000	Yes	PNL	25	10	18	0.46	(*N4) (*N21b) (*S4)	# 0568
646	SEP3 VFD IN	FU SEC EFF PUMP #3	0.48	15.88	14.85	9.10		0.0000	Yes	PNL	25	10	18	0.48	(*N4) (*N21b) (*S4)	# 0136
647	SEP4 VFD IN	FU SEC EFF PUMP #4	0.48	14.30	13.30	7.03	0.0182	0.0000	Yes	PNL	25	10	18	0.45	(*N3) (*N21b) (*S4)	# 0668
648	SEP5 VFD IN	FU SEC EFF PUMP 5	0.48	13.24	12.22	6.54	0.0242	0.0000	Yes	PNL	25	11	18	0.55	(*N3) (*N21b) (*S4)	# 0669
649	SEP6 VFD IN	FU SEC EFF PUMP 6	0.48	16.60	15.57	8.06	0.0107	0.0000	Yes	PNL	25	8	18	0.30	(*N3) (*N21b) (*S4)	# 0591
650	SEPPMP DISC TERM	FU SEPTIC PUMP	0.48	8.12	8.12	5.49	0.0042	0.0000	Yes	PNL	25	3	18	0.07	(*S5)	# 0492
651	SF1 DISC	FU EF-3,4,1	0.48	1.47	1.47	1.27	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S2)	# 0568
652	SF1FF DISC	FU 0920	0.48	4.00	4.00	3.00	0.0042	0.0000	Yes	PNL	25	2	18	0.04	(*S5)	# 0099
653	SF2EE DISC	FU 0909	0.48	1.54	1.54	1.33	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0099
654	SF3FF DISC	FU 0922	0.48	4.00	4.00	3.00	0.0042	0.0000	Yes	PNL	25	2	18	0.04	(*S5)	# 0099
655	SF4EE DISC	FU 0911	0.48	4.08	4.08	3.05	0.0042	0.0000	Yes	PNL	25	2	18	0.04	(*S0)	# 0099
656	SLC 4 DISC	MCP SLC -4	0.48	3.54	3.54	2.70	0.015	0.0000	Yes	PNL	25	4	18	0.12	(*S5)	# 0602
657	SLC 5 DISC	MCP SLC -5	0.48	3.33	3.33	2.57	0.015	0.0000	Yes	PNL	25	4	18	0.11	(*S5)	# 0603
658	SLC 6 DISC	FB SLC -6	0.48	2.44	2.44	1.96	0.0195	0.0000	Yes	PNL	25	4	18	0.11	(*S5)	# 0604
659	SLC 7 DISC	FB SLC -7	0.48	2.28	2.28	1.86	0.02	0.0000	Yes	PNL	25	4	18	0.11	(*S5)	# 0605
660	SLC-1 DISC	FU SLUDGE COLL 1	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0475
661	SLC2 DISC	FU 0527	0.48	2.79	2.79	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S5)	# 0073
662	SLC-3 DISC	FU SLUDGE COLL 3	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0475
663	SLDG F-50-1	FB SLDG'S S-50-1,2,3,4,5	0.48	0.86	0.86	0.68	0.6165	0.0000	Yes	PNL	25	17	18	1.1	(*N3) (*N16) (*S4)	# 0681
664	SLDG F-50-2	FB SLDG'S S-50-1,2,3,4,5	0.48	0.86	0.86	0.68	0.6165	0.0000	Yes	PNL	25	17	18	1.1	(*N3) (*N16) (*S4)	# 0682
665	SLDG F-50-3	FB SLDG'S F-50-3,4	0.48	0.75	0.75	0.60	0.7767	0.0000	Yes	PNL	25	18	18	1.2	(*N3) (*N16) (*S4)	# 0118

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
666	SLDG F-50-4	FB SLDG'S F-50-3,4	0.48	0.75	0.75	0.60	0.7767	0.0000	Yes	PNL	25	18	18	1.2	(*N3) (*N16) (*S4)	# 0118
667	SLDG F-60-1	FB SLDG'S F-60-1,2,3	0.48	0.89	0.89	0.70	0.5093	0.0000	Yes	PNL	25	16	18	0.96	(*N3) (*N16) (*S4)	# 0685
668	SLDG F-60-2	FB SLDG'S F-60-1,2,3	0.48	0.89	0.89	0.70	0.5093	0.0000	Yes	PNL	25	16	18	0.96	(*N3) (*N16) (*S4)	# 0686
669	SLDG F-60-3	FB SLDG'S F-60-1,2,3	0.48	0.89	0.89	0.70	0.5093	0.0000	Yes	PNL	25	16	18	0.96	(*N3) (*N16) (*S4)	# 0687
670	SLDG F-60-4	FB SLDG's S-60-1,2	0.48	0.73	0.73	0.60	0.7888	0.0000	Yes	PNL	25	18	18	1.2	(*N3) (*N16) (*S4)	# 0688
671	SLDG S-50-1	FB SLDG'S S-50-1,2,3,4,5	0.48	0.78	0.78	0.63	0.7453	0.0000	Yes	PNL	25	18	18	1.2	(*N3) (*N16) (*S4)	# 0689
672	SLDG S-50-2	FB SLDG'S S-50-1,2,3,4,5	0.48	0.86	0.86	0.68	0.6165	0.0000	Yes	PNL	25	17	18	1.1	(*N3) (*N16) (*S4)	# 0690
673	SLDG S-50-3	FB SLDG'S S-50-1,2,3,4,5	0.48	0.86	0.86	0.68	0.6165	0.0000	Yes	PNL	25	17	18	1.1	(*N3) (*N16) (*S4)	# 0691
674	SLDG S-50-4	FB SLDG'S S-50-1,2,3,4,5	0.48	0.86	0.86	0.68	0.6165	0.0000	Yes	PNL	25	17	18	1.1	(*N3) (*N16) (*S4)	# 0692
675	SLDG S-50-5	FB SLDG'S S-50-1,2,3,4,5	0.48	0.86	0.86	0.68	0.6165	0.0000	Yes	PNL	25	17	18	1.1	(*N3) (*N16) (*S4)	# 0693
676	SLDG S-60-1	FB SLDG's S-60-1,2	0.48	0.83	0.83	0.66	0.6866	0.0000	Yes	PNL	25	18	18	1.2	(*N3) (*N16) (*S4)	# 0694
677	SLDG S-60-2	FB SLDG's S-60-1,2	0.48	0.83	0.83	0.66	0.6866	0.0000	Yes	PNL	25	18	18	1.2	(*N3) (*N16) (*S4)	# 0695
678	SLG-3 DISC	FU SLUICE GATE 3	0.48	4.39	4.39	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04	(*S0)	# 0492
679	SLG-4 DISC	FU SLUICE GATE 4	0.48	4.39	4.39	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04	(*S0)	# 0492
680	SLGT1 DISC	FU 0562	0.48	6.96	6.96	4.81	0.0042	0.0000	Yes	PNL	25	3	18	0.06	(*S5)	# 0073
681	SLGT2 DISC	FU 0563	0.48	2.79	2.79	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S5)	# 0073
682	SLGT-5 DISC	FU SLUICE GATE 5	0.48	4.46	4.46	3.29	0.0042	0.0000	Yes	PNL	25	2	18	0.04	(*S5)	# 0492
683	SLP1 DISC	FU SLUDGE PUMP 1	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0475
684	SLP2 DISC	FU SLUDGE PUMP 2	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0475
685	SLP3 DISC	FU 0551	0.48	2.79	2.79	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S5)	# 0073
686	SLUDGE CND LCP	PD PSLPM-E3	0.48	3.31	3.31	2.55	0.0162	0.0000	Yes	PNL	25	4	18	0.12	(*S0)	# 0349
687	SMP2 DISC	FU 0525	0.48	2.79	2.79	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03	(*S5)	# 0073
688	SP NGB DISC	FU SUMP PUMP NGB	0.48	4.39	4.39	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04	(*S0)	# 0492
689	SSC-1 DISC	FU SSC-1	0.48	4.39	4.39	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04	(*S0)	# 0492
690	SSC-2 DISC	FU SSC-2	0.48	4.46	4.46	3.29	0.0042	0.0000	Yes	PNL	25	2	18	0.04	(*S5)	# 0492
691	SSCP-E1 DISC	MCP SEC SCUM PMP-E1	0.48	1.36	1.36	1.19	0.04	0.0000	Yes	PNL	25	5	18	0.13	(*S0)	# 0554
692	SSCP-E1TERM	MCP SEC SCUM PMP-E1	0.48	1.29	1.29	1.14	0.04	0.0000	Yes	PNL	25	5	18	0.13	(*S2)	# 0558
693	SSCP-W1 DISC	MCP SSCP-W1	0.48	7.20	7.20	4.95	0.005	0.0000	Yes	PNL	25	3	18	0.08	(*S5)	# 0028
694	SSCP-W2 DISC	MCP SSCP-W2	0.48	7.15	7.15	4.92	0.005	0.0000	Yes	PNL	25	3	18	0.08	(*S5)	# 0492
695	STWP 1 DISC	MCP STWP -1	0.48	5.75	5.75	4.09	0.015	0.0000	Yes	PNL	25	6	18	0.19	(*S5)	# 0629
696	STWP 2 DISC	MCP STWP -2	0.48	5.22	5.22	3.76	0.015	0.0000	Yes	PNL	25	6	18	0.17	(*S5)	# 0630
697	SUB 1 BUS A (SUB 1 MAIN A LineSide)	52F11P RELAY	0.48	17.24	15.11	8.69	1.917	0.0830	Yes	SWG	32	247	24	37	(*N9) (*N16) (*S5)	# 0486-Line
698	SUB 1 BUS B (SUB 1 MAIN B LineSide)	52F21P RELAY	0.48	16.76	15.36	8.87	1.917	0.0830	Yes	SWG	32	249	24	38	(*N9) (*N16) (*S5)	# 0488-Line
699	SUB 1 PRIMARY SWITCH A	52F11P RELAY	13.20	8.75	8.70	8.46	0.0167	0.0830	Yes	SWG	152	32	36	1.1	(*S5)	# 0047
700	SUB 1 PRIMARY SWITCH B	52F21P RELAY	13.20	12.54	12.50	12.08	0.0167	0.0830	Yes	SWG	152	47	36	1.5	(*S5)	# 0047
701	SUB 2 BUS A (SUB 2 MAIN A LineSide)	52F12P RELAY	0.48	13.26	10.68	6.41	1.917	0.0830	Yes	SWG	32	201	24	27	(*N9) (*N16) (*S5)	# 0629-Loa
702	SUB 2 BUS B (SUB 2 MAIN B LineSide)	52F22P RELAY	0.48	12.66	10.79	6.53	1.917	0.0830	Yes	SWG	32	201	24	27	(*N9) (*N16) (*S5)	# 0633-Loa
703	SUB 2 PRIMARY SWITCH A	52F12P RELAY	13.20	9.60	9.53	9.26	0.0167	0.0830	Yes	SWG	152	35	36	1.2	(*S5)	# 0047

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
704	SUB 2 PRIMARY SWITCH B	52F22P RELAY	13.20	14.17	14.12	13.62	0.0167	0.0830	Yes	SWG	152	54	36	1.8	(*S5)	# 0047
705	SUB 3 BUS A (SUB 3 MAIN A LineSide)	52F13P RELAY	0.48	42.95	38.33	18.92	1.917	0.0830	Yes	SWG	32	434	24	85	(*N9) (*N16) (*S5)	# 0018-Line
706	SUB 3 BUS B (SUB 3 MAIN B LineSide)	52F23P RELAY	0.48	40.54	38.22	18.97	1.917	0.0830	Yes	SWG	32	432	24	84	(*N9) (*N16) (*S5)	# 0019-Line
707	SUB 3 PRIMARY SWITCH A	52F13P RELAY	13.20	15.05	14.90	14.36	0.0167	0.0830	Yes	SWG	152	57	36	1.9	(*S5)	# 0047
708	SUB 3 PRIMARY SWITCH B	52F23P RELAY	13.20	15.04	14.96	14.42	0.0167	0.0830	Yes	SWG	152	57	36	1.9	(*S5)	# 0047
709	SUB 4 BUS A (SUB 4 MAIN A LineSide)	52F14P RELAY	0.48	21.42	15.43	8.55	1.917	0.0830	Yes	SWG	32	252	24	38	(*N9) (*N16) (*S5)	# 0502-Line
710	SUB 4 BUS B (SUB 4 MAIN B LineSide)	52F24P RELAY	0.48	21.61	15.57	8.62	1.917	0.0830	Yes	SWG	32	253	24	38	(*N9) (*N16) (*S5)	# 0502-Line
711	SUB 4 PRIMARY SWITCH A	52F14P RELAY	13.20	11.20	11.06	10.71	0.0167	0.0830	Yes	SWG	152	42	36	1.4	(*S5)	# 0047
712	SUB 4 PRIMARY SWITCH B	52F24P RELAY	13.20	15.19	15.03	14.48	0.0167	0.0830	Yes	SWG	152	58	36	1.9	(*S5)	# 0047
713	SUB 5 BUS A (SUB 5 MAIN A LineSide)	SUB 5 XFMR A PRI FUSE	0.48	43.71	34.54	17.00	2	0.0000	Yes	SWG	32	408	24	78	(*N9) (*S0)	# 0656-Line
714	SUB 5 BUS B (SUB 5 MAIN B LineSide)	SUB 5 XFMR B PRI FUSE	0.48	44.62	33.95	16.65	2	0.0000	Yes	SWG	32	405	24	77	(*N9) (*S2)	# 0659-Line
715	SUB 5 PRIMARY SWITCH A	52F15P RELAY	13.20	15.45	15.15	14.60	0.0167	0.0830	Yes	SWG	152	59	36	1.9	(*S5)	# 0047
716	SUB 5 PRIMARY SWITCH B	52F25P RELAY	13.20	15.45	15.15	14.60	0.0167	0.0830	Yes	SWG	152	59	36	1.9	(*S5)	# 0047
717	SUB 6 BUS A (SUB 6 MAIN A LineSide)	PD SUB 6 XFMR A RELAY	0.48	10.15	9.79	5.17	1.917	0.0830	Yes	SWG	32	167	24	21	(*N9) (*N16) (*S5)	# 0020-Line
718	SUB 6 BUS B (SUB 6 MAIN B LineSide)	PD SUB 6 XFMR B RELAY	0.48	9.32	8.98	5.17	1.917	0.0830	Yes	SWG	32	167	24	21	(*N9) (*N16) (*S5)	# 0021-Line
719	SUB 7 BUS A (SUB 7 MAIN A LineSide)	52F17P RELAY	0.48	30.17	30.17	15.62	1.917	0.0830	Yes	SWG	32	374	24	68	(*N9) (*N16) (*S5)	# 0022-Line
720	SUB 7 BUS B (SUB 7 MAIN B LineSide)	52F27P RELAY	0.48	30.03	30.03	15.56	1.917	0.0830	Yes	SWG	32	373	24	68	(*N9) (*N16) (*S5)	# 0023-Line
721	SUB 7 XFMR A PRI	52F17P RELAY	13.20	15.53	15.53	14.96	0.0167	0.0830	Yes	SWG	152	59	36	1.9	(*S5)	# 0048
722	SUB 7 XFMR B PRI	52F27P RELAY	13.20	15.53	15.53	14.96	0.0167	0.0830	Yes	SWG	152	59	36	1.9	(*S5)	# 0048
723	SUB 8 BUS A (SUB 8 MAIN A RELAY LineSide)	52F18P RELAY	4.16	2.86	1.73	1.72	1.873	0.0833	Yes	SWG	104	106	36	3.4	(*N5) (*S2)	# 0026-Line
724	SUB 8 BUS B (SUB 8 MAIN B RELAY LineSide)	52F28P RELAY	4.16	2.29	1.72	1.71	1.896	0.0833	Yes	SWG	104	104	36	3.4	(*N5) (*S0)	# 0028-Line
725	SUB 8 PRIMARY SWITCH A	52F18P RELAY	13.20	15.21	14.99	14.45	0.0167	0.0833	Yes	SWG	152	58	36	1.9	(*S5)	# 0047
726	SUB 8 PRIMARY SWITCH B	52F28P RELAY	13.20	15.21	15.07	14.52	0.0167	0.0833	Yes	SWG	152	58	36	1.9	(*S5)	# 0047
727	SUB SP-1 DISC	FU SUB SUMP PUMP 1	0.48	4.39	4.39	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04	(*S0)	# 0492
728	SUB SP-2 DISC	FU SUB SUMP PUMP 2	0.48	4.46	4.46	3.29	0.0042	0.0000	Yes	PNL	25	2	18	0.04	(*S5)	# 0492
729	SUMP PUMP 1 DISC	MCP SUMP PUMP 1	0.48	2.29	2.29	1.86	0.005	0.0000	Yes	PNL	25	2	18	0.03	(*S5)	# 0816
730	SUMP PUMP 3 DISC	MCP SUMP PUMP 3	0.48	0.92	0.92	0.73	0.0216	0.0000	Yes	PNL	25	2	18	0.04	(*N3) (*S0)	# 0816
731	SWP LCP	PD STORM WATER PUMP CP	0.48	8.36	8.36	5.63	0.05	0.0000	Yes	PNL	25	15	18	0.89	(*N20b) (*S5)	# 0049
732	SWPSO VALVE DISC S - 91 - 4	PD SWPSO-SG	0.48	2.64	2.64	2.10	0.0162	0.0000	Yes	PNL	25	4	18	0.10	(*S0)	# 0492
733	SWPSO-SG DISC S - 91 - 1	PD SWPSO-SG	0.48	2.64	2.64	2.10	0.0162	0.0000	Yes	PNL	25	4	18	0.10	(*S0)	# 0492
734	TABLET FDR DISC	PD-0537	0.48	3.84	3.84	2.90	0.017	0.0000	Yes	PNL	25	5	18	0.15	(*S0)	# 0475
735	TEMP ADM1 DISC	PD 0582	0.48	5.66	5.66	4.03	0.0161	0.0000	Yes	PNL	25	6	18	0.20	(*S5)	# 0073
736	TEMP ADM2 DISC	PD 0583	0.48	5.66	5.66	4.03	0.0161	0.0000	Yes	PNL	25	6	18	0.20	(*S5)	# 0073

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
737	TEMP PUMPS	FU 0683	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S2)	# 0547
738	TER FIL EFF SP DISC	FU 0691	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S2)	# 0136
739	TFB-MPC (MB TFB-MPC LineSide)	FU 0730	0.208	1.50	1.50	1.15		0.0000	Yes	PNL	25	50	18	6.3	(*N4) (*S5)	# 0741-Line
740	TGS DISC	PD 0581	0.48	3.67	3.67	2.78	0.0169	0.0000	Yes	PNL	25	5	18	0.14	(*S5)	# 0073
741	UDSP1 DISC	FU 0681	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S2)	# 0136
742	UDSP2 DISC	FU 0741	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0568
743	UH EE	FU 0907	0.48	2.51	2.51	2.02		0.0000	Yes	PNL	25	7	18	0.25	(*N4) (*S0)	# 0430
744	UH EE DISC	FU 0907	0.48	2.78	2.78	2.20		0.0000	Yes	PNL	25	7	18	0.25	(*N4) (*S0)	# 0099
745	UH FF	FU 0918	0.48	2.74	2.74	2.17		0.0000	Yes	PNL	25	7	18	0.25	(*N4) (*S0)	# 0392
746	UPS-ADM-1 INPUT	PD-UPS-ADM-1	0.208	5.03	5.03	2.68	0.0167	0.0000	Yes	PNL	25	5	18	0.13	(*S0)	# 0492
747	UPS-ADM-1 OUTPUT	MaxTripTime @2.0s	0.208	0.04	0.04	0.04	2	0.0000	Yes	PNL	25	3	18	0.04	(*N2) (*N9) (*N11) (*S0)	# 0492
748	UV 2A	MaxTripTime @2.0s	0.48	5.31	2.11	1.74	2	0.0000	Yes	PNL	25	70	18	11	(*N2) (*N9) (*S2)	# 0781
749	UV 2B	MaxTripTime @2.0s	0.48	5.31	2.11	1.74	2	0.0000	Yes	PNL	25	70	18	11	(*N2) (*N9) (*S2)	# 0782
750	UV-1A	800/200 UV-1A	0.48	2.69	2.69	1.66	0.2706	0.0000	Yes	PNL	25	19	18	1.4	(*N3) (*N5) (*N16) (*S4)	# 0056
751	UV-1A PD LINE SIDE	800/200 UV-1A	0.48	2.71	2.71	1.67	0.2681	0.0000	Yes	PNL	25	19	18	1.4	(*N3) (*N16) (*S4)	# 0056
752	UV-1B	800/200 UV-1B	0.48	3.35	3.35	2.57	0.2	0.0000	Yes	PNL	25	21	18	1.5	(*N5) (*N16) (*S5)	# 0056
753	UV-1B PD LINE SIDE	800/200 UV-1B	0.48	3.38	3.38	2.59	0.2	0.0000	Yes	PNL	25	21	18	1.5	(*N16) (*S5)	# 0056
754	VFD CFG-1 INPUT	800/600 VFD CFG-1	0.48	43.14	40.88	21.66	0.066	0.0000	Yes	PNL	25	45	18	5.4	(*N20a) (*N21b) (*S5)	# 0785
755	VFD CFG-2 INPUT	800/600 VFD CFG-2	0.48	43.14	40.88	21.66	0.066	0.0000	Yes	PNL	25	45	18	5.4	(*N20a) (*N21b) (*S5)	# 0786
756	VFD CFG-3 INPUT	800/600 VFD CFG-3	0.48	50.62	48.34	25.03	0.066	0.0000	Yes	PNL	25	49	18	6.2	(*N20a) (*N21b) (*S5)	# 0787
757	W CONT GT2 DISC	FU 0748	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0568
758	W1 FLOW VALVES JB	PD W1 FLOW VALVES	0.48	3.57	3.57	2.72	0.0162	0.0000	Yes	PNL	25	5	18	0.13	(*S5)	# 0106
759	WA MAIN BOV	PD WA MAIN BOV	0.48	3.77	3.77	2.85	0.0162	0.0000	Yes	PNL	25	5	18	0.14	(*S5)	# 0161
760	WAS VALVE W1	PD WAS VALVE W1	0.48	3.28	3.28	2.53	0.0162	0.0000	Yes	PNL	25	4	18	0.12	(*S5)	# 0161
761	WAS VALVE W1 DISC	PD WAS VALVE W1	0.48	5.26	5.26	3.79	0.0162	0.0000	Yes	PNL	25	6	18	0.19	(*S5)	# 0792
762	WAS VALVE W2	PD WAS VALVE W2	0.48	2.75	2.75	2.17	0.0162	0.0000	Yes	PNL	25	4	18	0.10	(*S5)	# 0161
763	WASP-E1 VFD IN	PD WASP-E1	0.48	1.43	1.43	1.06	0.0218	0.0000	Yes	PNL	25	3	18	0.06	(*N3) (*S4)	# 0302
764	WASP-E2 VFD IN	PD WASP-E2	0.48	1.42	1.42	1.05	0.0221	0.0000	Yes	PNL	25	3	18	0.06	(*N3) (*S4)	# 0627
765	WASP-W1 VFD IN	PD WASP-W1	0.48	7.20	7.20	4.95	0.0162	0.0000	Yes	PNL	25	7	18	0.25	(*S5)	# 0028
766	WASP-W2 VFD IN	PD WASP-W2	0.48	7.15	7.15	4.92	0.0162	0.0000	Yes	PNL	25	7	18	0.25	(*S5)	# 0492
767	WASV E1	FB WASV E1 P-65-1	0.48	1.23	1.23	0.93	0.03	0.0000	Yes	PNL	25	3	18	0.08	(*N3) (*S4)	# 0841
768	WASV E2	FB WASV E2 P-65-2	0.48	1.23	1.23	0.93	0.03	0.0000	Yes	PNL	25	3	18	0.08	(*N3) (*S4)	# 0842
769	WASV E3	FB WASV E3	0.48	1.16	1.16	0.88	0.0331	0.0000	Yes	PNL	25	3	18	0.08	(*N3) (*S4)	# 0843
770	WASV E4	FB WASV E4	0.48	1.16	1.16	0.88	0.0331	0.0000	Yes	PNL	25	3	18	0.08	(*N3) (*S4)	# 0844
771	WBB-EF-1 DISC	MCP WBB-EF-1	0.48	7.20	7.20	4.95	0.005	0.0000	Yes	PNL	25	3	18	0.08	(*S5)	# 0028
772	WBB-EF-2 DISC	MCP WBB-EF-2	0.48	7.87	7.87	5.34	0.005	0.0000	Yes	PNL	25	4	18	0.08	(*S5)	# 0492
773	WBB-EF-3 DISC	MCP WBB-EF-3	0.48	3.73	3.73	2.83	0.005	0.0000	Yes	PNL	25	2	18	0.04	(*S0)	# 0028

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
774	WBB-EF-4 DISC	MCP WBB-EF-4	0.48	2.87	2.87	2.26	0.005	0.0000	Yes	PNL	25	2	18	0.03	(*S5)	# 0492
775	WBB-EF-5 DISC	MCP WBB-EF-5	0.48	2.01	2.01	1.66	0.005	0.0000	Yes	PNL	25	2	18	0.02	(*S5)	# 0492
776	WBB-EF-6 DISC	MCP WBB-EF-6	0.48	1.51	1.51	1.30	0.005	0.0000	Yes	PNL	25	1	18	0.02	(*S5)	# 0492
777	WBB-EF-7 DISC	MCP WBB-EF-7	0.48	2.51	2.51	2.02	0.005	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0028
778	WBB-H1	PD WBB-H1	0.48	7.05	7.05	4.86	0.0162	0.0000	Yes	PNL	25	7	18	0.25	(*S5)	# 0865
779	WBB-H1 DISC	PD WBB-H1	0.48	9.85	9.85	6.47	0.0162	0.0000	Yes	PNL	25	8	18	0.34	(*N20b) (*S5)	# 0492
780	WBB-H2	PD WBB-H2	0.48	5.16	5.16	3.73	0.0162	0.0000	Yes	PNL	25	6	18	0.19	(*S0)	# 0866
781	WBB-H2 DISC	PD WBB-H2	0.48	6.53	6.53	4.56	0.0162	0.0000	Yes	PNL	25	7	18	0.23	(*S5)	# 0028
782	WBB-HV-1 DISC	MCP WBB-HV-1	0.48	4.42	4.42	3.26	0.005	0.0000	Yes	PNL	25	3	18	0.05	(*S0)	# 0028
783	WBB-HV-2	PD WBB-HV-2	0.48	10.72	10.72	6.96	0.0162	0.0000	Yes	PNL	25	9	18	0.36	(*N21b) (*S5)	# 0870
784	WBB-HV-2 DISC	PD WBB-HV-2	0.48	13.14	13.14	8.28	0.0162	0.0000	Yes	PNL	25	10	18	0.44	(*S5)	# 0492
785	WBB-P-1 DISC	MCP WBB-P-1	0.48	2.16	2.16	1.77	0.005	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0028
786	WBB-P-2 DISC	MCP WBB-P-2	0.48	2.15	2.15	1.76	0.005	0.0000	Yes	PNL	25	2	18	0.03	(*S5)	# 0492
787	WEST AESG W1	PD WEST AESG W1	0.48	2.76	2.76	2.18	0.0162	0.0000	Yes	PNL	25	4	18	0.10	(*S5)	# 0161
788	WEST AESG W2	PD WEST AESG W2	0.48	1.63	1.63	1.40	0.0197	0.0000	Yes	PNL	25	3	18	0.08	(*S5)	# 0161
789	WEST AESGW1 DISC	PD WEST AESG W1	0.48	2.92	2.92	2.29	0.0162	0.0000	Yes	PNL	25	4	18	0.11	(*S5)	# 0817
790	WFB-EUH-TERM's	PD WFB-EUH-1	0.208	1.66	1.66	1.23	0.0167	0.0000	Yes	PNL	25	3	18	0.06	(*S5)	# 0162
791	WHM DISC	FU 0665	0.48	2.34	2.34	1.89		0.0000	Yes	PNL	25	7	18	0.25	(*N4) (*S0)	# 0136
792	Wireway	FB AT-E3 Z2 FCV	0.48	1.53	1.53	1.32	0.0206	0.0000	Yes	PNL	25	3	18	0.08	(*S5)	# 0161
793	Wireway.	FB AT-E4 Z2 FCV	0.48	1.53	1.53	1.32	0.0206	0.0000	Yes	PNL	25	3	18	0.08	(*S5)	# 0161
794	WPB-EF-1 DISC	MCP WPB-EF-1	0.48	2.28	2.28	1.86	0.005	0.0000	Yes	PNL	25	2	18	0.03	(*S0)	# 0492
795	WPB-H1 DISC	PD WPB-H1	0.48	5.71	5.71	4.06	0.0162	0.0000	Yes	PNL	25	6	18	0.20	(*S5)	# 0492
796	WPB-H1 HOIST	PD WPB-H1	0.48	4.67	4.67	3.42	0.0162	0.0000	Yes	PNL	25	5	18	0.17	(*S5)	# 0492
797	WPB-HV-1 DISC	PD WPB-HV-1	0.48	2.75	2.75	2.18	0.0162	0.0000	Yes	PNL	25	4	18	0.10	(*S5)	# 0492
798	WPB-P-1 DISC	MCP WPB-P-1	0.48	1.80	1.80	1.52	0.005	0.0000	Yes	PNL	25	2	18	0.02	(*S0)	# 0492
799	WPE-SAP-2 DISC	MCP WPE-SAP-2	0.48	2.06	2.06	1.70	0.005	0.0000	Yes	PNL	25	2	18	0.02	(*S5)	# 0492
800	WPSE GATE E DISC	FU WPSE GATE E MTR	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S2)	# 0568
801	WPSE GATE W DISC	FU 0716	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S2)	# 0568
802	WPSE SMPL PMP DISC	FU 0712	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S2)	# 0568
803	WSE-SAP-3 DISC	MCP WSE-SAP-3	0.48	3.73	3.73	2.83	0.005	0.0000	Yes	PNL	25	2	18	0.04	(*S0)	# 0028
804	WTR-CRC-PMP-1 DISC	MCP WATER CIRC PUMP 1	0.48	9.56	9.56	6.31	0.005	0.0000	Yes	PNL	25	4	18	0.10	(*N20b) (*S5)	# 0492
805	WTR-CRC-PMP-2 DISC	MCP WATER CIRC PUMP 2	0.48	9.56	9.56	6.31	0.005	0.0000	Yes	PNL	25	4	18	0.10	(*N20b) (*S5)	# 0492
806	WW BYP GATE E DISC	FU 0733	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*S2)	# 0568
807	WWRDP2 DISC	FU WWRD PUMP 2	0.48	3.32	3.32	2.56	0.0083	0.0000	Yes	PNL	25	3	18	0.06	(*S2)	# 0568
808	WWRDP3 DISC	FB-MCC-P	0.48	3.27	2.90	2.24	0.32	0.0000	Yes	PNL	25	27	18	2.3	(*N5) (*S5)	# 0136
809	WWWRESDP1 DISC	FU 0652	0.48	3.31	3.31	2.55	0.0083	0.0000	Yes	PNL	25	3	18	0.06	(*S0)	# 0136
810	Level 0: Nonmelting, Flammable Materials with Weight >= 4.5 oz/sq yd	0.0 - 1.2 cal/cm*2												#Level 0 = 669	(*N11) - Out of IEEE 1584 Range, Lee Equation Used. Applicable for Open Air only. Existing Equipment type is not Open Air!	

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm ²)	PPE Level / Notes (*N)	Label #
811	Level 1: Arc-rated FR Shirt & Pants	1.2 - 4.0 cal/cm ²												#Level 1 = 64	(*N2) < 80% Cleared Fault Threshold	
812	Level 2: Arc-rated FR Shirt & Pants	4.0 - 8.0 cal/cm ²												#Level 2 = 32	(*N3) - Arcing Current Low Tolerances Used	
813	Level 3: Arc-rated FR Shirt & Pants & Arc Flash Suit	8.0 - 25.0 cal/cm ²												#Level 3 = 27	(*N4) - Equipment Specific Equations Used	
814	Level 4: Arc-rated FR Shirt & Pants & Arc Flash Suit	25.0 - 40.0 cal/cm ²												#Level 4 = 11	(*N5) - Miscoordinated, Upstream Device Tripped	
815	Level Dangerous!: No FR Category Found	40.0 - 999.0 cal/cm ²												#Danger = 6	(*N9) - Max Arcing Duration Reached	
816														#Equip Eval Failed = 2	(*N16) - Trip Time Recalculated	
817	For additional information refer to NFPA 70 E, Standard for Electrical Safety in the Workplace.													#Bus Equip Eval Failed = 61	(*N20a) - Equipment Evaluation Marginal for Protective Device	
818															(*N20b) - Equipment Evaluation Marginal for Bus	
819															(*N21a) - Equipment Evaluation Failed, OVERDUTIED PROTECTIVE DEVICE EQUIPMENT FOUND - Inappropriate to provide arc-flash hazard results.	
820															(*N21b) - Equipment Evaluation Failed, OVERDUTIED BUS EQUIPMENT FOUND - Inappropriate to provide arc-flash hazard results.	
821															IEEE 1584 - Preferred Method (NFPA 70E 2015 Annex D.4) Bus + Line Side - 80% Cleared Fault Threshold, mis-coordination checked	
822														Worst Case Only for:	Bus + Line Side	
823															Worst Case:	

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
824															(*S0) - Base Project	
825															(*S1) - S1_Sub ARMS on SEL551C	
826															(*S2) - S2_Sub ARMS on SqD Fdr Bkrs	
827															(*S3) - S3_Base w/ 50% DTE SCA Contr.	
828															(*S4) - S4_Entire Plant on Generators	
829															(*S5) - S5_Max Closed Transition	
830																
831																
832																
833																
834																
835																

6.6.6 AF Results - DTE Contribution at 100% of Maximum

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
1	15 KV BUS 1	52M1P RELAY	13.20	7.28	6.36	6.21	0.0935	0.0830	Yes	SWG	152	44	36	1.5		# 0001
2	15 KV BUS 1 (52M1P RELAY LineSide)	FU DTE North	13.20	7.28	6.36	5.28	0.2123	0.0830	Yes	SWG	152	61	36	2.0	(*N3)	# 0014-Loa
3	15 KV BUS 1 LineSide	FU DTE North	13.20	7.29	6.36	5.28	0.2123	0.0830	Yes	SWG	152	61	36	2.0	(*N3)	# 0011
4	15 KV BUS 2	52M2P RELAY	13.20	6.95	6.15	5.10	0.1386	0.0830	Yes	SWG	152	44	36	1.4	(*N3)	# 0002
5	15 KV BUS 2 (52M2P RELAY LineSide)	FU DTE South	13.20	6.95	6.15	5.10	0.2267	0.0830	Yes	SWG	152	61	36	2.0	(*N3)	# 0035-Loa
6	15 KV BUS 2 LineSide	FU DTE South	13.20	6.95	6.15	5.10	0.2267	0.0830	Yes	SWG	152	61	36	2.0	(*N3)	# 0002
7	15 KV BUS 3	52G2P RELAY	13.20	1.50	0.75	0.33	0.35	0.0830	Yes	SWG	152	13	36	0.46	(*N16)	# 0003
8	15 KV BUS 3 (52G2_51V LineSide)	52G2_87H	13.20	1.50	0.75	0.33	0.35	0.0830	Yes	SWG	152	13	36	0.46	(*N16)	# 0049-Loa
9	15 KV BUS 3 (52G2_87H LineSide)	52G2_87R	13.20	1.50	0.75	0.33	0.35	0.0830	Yes	SWG	152	13	36	0.46	(*N16)	# 0050-Loa
10	15 KV BUS 3 (52G2_87R LineSide)	52G2N RELAY	13.20	1.50	0.75	0.33	0.35	0.0830	Yes	SWG	152	13	36	0.46	(*N16)	# 0052-Loa
11	15 KV BUS 3 (52G2N RELAY LineSide)	GEN 2 AMPSENTRY	13.20	1.50	0.75	0.33	1.917	0.0830	Yes	SWG	152	29	36	0.97	(*N9) (*N16)	# 0051-Loa
12	15 KV BUS 3 (52G2P RELAY LineSide)	52G2_87H	13.20	1.50	0.75	0.33	0.35	0.0830	Yes	SWG	152	13	36	0.46	(*N16)	# 0053-Loa
13	78IN GC DISC	PD 78IN GATE CONTROLLER	0.48	1.36	1.36	1.19	0.0222	0.0000	Yes	PNL	25	3	18	0.07		# 0492
14	AC2 DISC	FU 0743	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
15	AC2F DISC	FU 0574	0.48	2.78	2.78	1.87	0.0083	0.0000	Yes	PNL	25	2	18	0.05	(*N3)	# 0073
16	ADM ACCU1 DISC	PD ADM-ACCU-1	0.48	4.68	4.68	3.43	0.0162	0.0000	Yes	PNL	25	5	18	0.17		# 0492
17	ADM ACU1 DISC	PD ADM-ACU-1	0.48	8.02	8.02	5.43	0.0162	0.0000	Yes	PNL	25	7	18	0.28		# 0492
18	ADM-CH-1 DISC	PD ADM-CH-1	0.48	8.91	8.91	5.94	0.0175	0.0000	Yes	PNL	25	8	18	0.33		# 0492
19	ADM-EF-1 DISC	MCP ADM-EF-1	0.48	2.31	2.31	1.88	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
20	ADM-EF-2 DISC	MCP ADM-EF-2	0.48	2.31	2.31	1.88	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
21	ADM-HVAC-1 DISC	PD ADM-HVAC-1	0.48	5.57	5.57	3.98	0.0162	0.0000	Yes	PNL	25	6	18	0.20		# 0492
22	ADM-HVAC-2 DISC	PD ADM-HVAC-2	0.48	2.71	2.71	2.15	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0492
23	ADM-P-1 DISC	MCP ADM-P-1	0.48	3.27	3.27	2.52	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0492
24	ADM-P-2 DISC	MCP ADM-P-2	0.48	2.71	2.71	2.15	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
25	ADM-P-3 DISC	MCP ADM-P-3	0.48	7.83	7.83	5.32	0.005	0.0000	Yes	PNL	25	4	18	0.08		# 0492
26	ADM-P-4 DISC	MCP ADM-P-4	0.48	7.28	7.28	5.00	0.005	0.0000	Yes	PNL	25	3	18	0.08		# 0492
27	ADM-SUP LCP	PD 0561	0.48	2.24	2.24	1.83	0.0192	0.0000	Yes	PNL	25	4	18	0.10		# 0185
28	ADP-E2 DISC	MCP ADP-E2	0.48	5.76	5.46	3.88	0.04	0.0000	Yes	PNL	25	11	18	0.55		# 0027
29	ADP-W1 DISC	MCP ADP-W1	0.48	5.76	5.76	4.09	0.005	0.0000	Yes	PNL	25	3	18	0.06		# 0028
30	AIR COMP 1 DISC	FU AIR COMP 1	0.48	2.82	2.82	1.89	0.0083	0.0000	Yes	PNL	25	2	18	0.05	(*N3)	# 0475
31	AIR COMP 1P DISC	FU 0687	0.48	3.28	3.28	2.15	0.0083	0.0000	Yes	PNL	25	3	18	0.05	(*N3)	# 0136
32	AIR WASH MV DISC	FU 0754	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
33	ALTERNATOR P	FU 0685	0.208	0.14	0.14	0.14	0.1781	0.0000	Yes	PNL	25	2	18	0.01	(*N11)	# 0027
34	AT-E1 FCV BF-64-25	FB AT-E1 FCV	0.48	1.47	1.47	1.27	0.0211	0.0000	Yes	PNL	25	3	18	0.08		# 0034
35	AT-E2 FCV BF-64-26	FB AT-E2 FCV	0.48	1.66	1.66	1.41	0.0195	0.0000	Yes	PNL	25	3	18	0.08		# 0035
36	AT-E3 Z1 FCV	FB AT-E3 Z2 FCV	0.48	0.87	0.87	0.70	0.537	0.0000	Yes	PNL	25	16	18	0.99	(*N3)	# 0036

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
37	AT-E3 Z2 FCV	FB AT-E3 Z2 FCV	0.48	1.03	1.03	0.80	0.0424	0.0000	Yes	PNL	25	4	18	0.09	(*N3)	# 0037
38	AT-E3 Z3 FCV	FB AT-E3 Z2 FCV	0.48	1.16	1.16	0.88	0.033	0.0000	Yes	PNL	25	3	18	0.08	(*N3)	# 0038
39	AT-E4 Z1 FCV	FB AT-E4 Z2 FCV	0.48	0.87	0.87	0.70	0.537	0.0000	Yes	PNL	25	16	18	0.99	(*N3)	# 0039
40	AT-E4 Z2 FCV	FB AT-E4 Z2 FCV	0.48	1.03	1.03	0.80	0.0424	0.0000	Yes	PNL	25	4	18	0.09	(*N3)	# 0040
41	AT-E4 Z3 FCV	FB AT-E4 Z2 FCV	0.48	1.16	1.16	0.88	0.033	0.0000	Yes	PNL	25	3	18	0.08	(*N3)	# 0041
42	ATS PEWP2 NRM	FU PEW PUMP 2	0.48	18.53	17.08	8.70	0.0291	0.0000	Yes	PNL	25	17	18	1.1		# 0043
43	ATS-ADM EMG	800/800 ATS-ADM-EMG	0.48	11.25	11.25	7.25	0.08	0.0000	Yes	PNL	25	24	18	1.9	(*N23)	# 0488
44	ATS-ADM LOAD	800/800 ATS-ADM-EMG	0.48	11.25	11.25	7.25	0.08	0.0000	Yes	PNL	25	24	18	1.9	(*N23)	# 0017
45	ATS-ADM NRM	800/800 ATS-ADM-NRM	0.48	11.13	11.13	7.19	0.08	0.0000	Yes	PNL	25	24	18	1.9	(*N23)	# 0046
46	ATS-CEB LOAD	FB ATS-CEB NRM	0.48	21.92	21.92	12.82	0.0175	0.0000	Yes	PNL	25	14	18	0.76		# 0047
47	ATS-CEB-EMG	FB ATS-CEB EMG	0.48	20.67	20.67	12.19	0.0175	0.0000	Yes	PNL	25	13	18	0.72		# 0048
48	ATS-CEB-NRM	FB ATS-CEB NRM	0.48	21.92	21.92	12.82	0.0175	0.0000	Yes	PNL	25	14	18	0.76		# 0049
49	ATS-EBB NORM	FB ATS-EBB NORM	0.48	8.59	8.59	5.76	0.04	0.0000	Yes	PNL	25	13	18	0.73		# 0040
50	ATS-EBB-EMG	FB ATS-EBB-EMG	0.48	9.40	9.40	6.22	0.04	0.0000	Yes	PNL	25	14	18	0.79		# 0040
51	ATS-EBB-LOAD	FB ATS-EBB NORM	0.48	8.59	8.59	5.76	0.04	0.0000	Yes	PNL	25	13	18	0.73		# 0040
52	ATS-LSE EMG	FB ATS-LSE-EMG	0.48	12.55	12.55	7.96	0.0528	0.0000	Yes	PNL	25	20	18	1.4		# 0043
53	ATS-LSE LOAD	FB ATS-LSE-NRM	0.48	12.54	12.54	7.95	0.0528	0.0000	Yes	PNL	25	20	18	1.4		# 0043
54	ATS-LSE NRM	FB ATS-LSE-NRM	0.48	12.54	12.54	7.95	0.0528	0.0000	Yes	PNL	25	20	18	1.4		# 0043
55	ATS-PP-UV-EMG	FB ATS-PP-UV-EMG	0.48	3.53	3.53	2.70	0.0188	0.0000	Yes	PNL	25	5	18	0.15	(*N21b)	# 0064
56	ATS-PP-UV-LOAD	FU ATS-PP-UV-NRM	0.48	1.70	1.70	1.23	0.0463	0.0000	Yes	PNL	25	5	18	0.16	(*N3) (*N21b)	# 0065
57	ATS-PP-UV-NRM	FU ATS-PP-UV-NRM	0.48	1.70	1.70	1.23	0.0463	0.0000	Yes	PNL	25	5	18	0.16	(*N3) (*N21b)	# 0066
58	ATS-RLS EMG	FB ATS-RLS EMG	0.48	13.90	13.90	8.69	0.0162	0.0000	Yes	PNL	25	10	18	0.46		# 0043
59	ATS-RLS LOAD	FB ATS-RLS NRM	0.48	11.59	11.59	7.44	0.0162	0.0000	Yes	PNL	25	9	18	0.39		# 0043
60	ATS-RLS NRM	FB ATS-RLS NRM	0.48	11.59	11.59	7.44	0.0162	0.0000	Yes	PNL	25	9	18	0.39		# 0043
61	ATS-WBB NORM	FB ATS-WBB-NORM	0.48	31.28	31.28	17.37	0.05	0.0000	Yes	PNL	25	32	18	3.0		# 0049
62	ATS-WBB-EMG	FB ATS-WBB-EMG	0.48	33.44	33.44	18.39	0.05	0.0000	Yes	PNL	25	33	18	3.2		# 0050
63	ATS-WBB-LOAD	FB ATS-WBB-NORM	0.48	31.28	31.28	17.37	0.05	0.0000	Yes	PNL	25	32	18	3.0		# 0051
64	ATS-WPB-EMG	FB ATS-WPB-EMG	0.48	10.31	10.31	6.73	0.0162	0.0000	Yes	PNL	25	9	18	0.35		# 0052
65	ATS-WPB-LOAD	FB ATS-WPB-NORM	0.48	9.03	9.03	6.01	0.0162	0.0000	Yes	PNL	25	8	18	0.31		# 0053
66	ATS-WPB-NORM	FB ATS-WPB-NORM	0.48	9.03	9.03	6.01	0.0162	0.0000	Yes	PNL	25	8	18	0.31		# 0054
67	AT-W2 FCV JB	PD AT-W2 FCV	0.48	2.57	2.57	2.05	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0075
68	B-54-1 DISC	PD W1 FLOW VALVES	0.48	3.50	3.50	2.68	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0067
69	B-54-1 MTR VALVE.	PD W1 FLOW VALVES	0.48	3.45	3.45	2.64	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0069
70	B-54-2 DISC	PD W1 FLOW VALVES	0.48	3.50	3.50	2.68	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0069
71	B-54-2 MTR VALVE.	PD W1 FLOW VALVES	0.48	3.45	3.45	2.64	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0071
72	B-54-3 DISC	PD W1 FLOW VALVES	0.48	3.50	3.50	2.68	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0071
73	B-54-3 MTR VALVE.	PD W1 FLOW VALVES	0.48	3.45	3.45	2.64	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0073
74	BAR SCREEN 2 TERM	FU BAR SCREEN 2	0.48	4.44	4.44	3.28	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
75	BF - 64- 29	FB AT-E1 FCV	0.48	1.26	1.26	0.95	0.0286	0.0000	Yes	PNL	25	3	18	0.07	(*N3)	# 0075
76	BF- 64- 30	FB AT-E2 FCV	0.48	1.40	1.40	1.22	0.0218	0.0000	Yes	PNL	25	3	18	0.07		# 0076
77	BF-64-07	FB AT-E1 FCV	0.48	1.04	1.04	0.81	0.0393	0.0000	Yes	PNL	25	4	18	0.09	(*N3)	# 0077

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
78	BF-64-08	FB AT-E2 FCV	0.48	1.13	1.13	0.87	0.0342	0.0000	Yes	PNL	25	3	18	0.08	(*N3)	# 0078
79	BSCRN-3 STR	FU BAR SCREEN 3	0.48	4.39	4.39	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
80	BSNHST DISC	FU 0521	0.48	4.08	4.08	3.05	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0073
81	BSNINFLGT-1 DISC	FU BASIN INFL GATE 1	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
82	BSNINFLGT2 DISC	FU 0535	0.48	2.78	2.78	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
83	BSNINFLGT-3 DISC	FU BASIN INFL GATE 3	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
84	BSN-OUT-GT-1 DISC	FU BASIN OUT GATE 1	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
85	BSNOUTGT2 DISC	FU 0536	0.48	2.78	2.78	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
86	BSN-OUT-GT-3 DISC	FU BASIN OUT GATE 3	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
87	BT1-1M DISC	MCP BT1-1M	0.48	11.11	10.68	6.90	0.015	0.0000	Yes	PNL	25	10	18	0.43		# 0072
88	BT2-1M DISC	MCP BT2-1M	0.48	11.00	10.58	6.84	0.015	0.0000	Yes	PNL	25	10	18	0.43		# 0073
89	BTAB-1 DISC	MCP BTAB-1	0.48	1.44	1.44	1.25	0.015	0.0000	Yes	PNL	25	3	18	0.05		# 0074
90	BTAB-2 DISC	MCP BTAB-2	0.48	1.43	1.43	1.25	0.015	0.0000	Yes	PNL	25	3	18	0.05		# 0076
91	BTAB-3 DISC	MCP BTAB-3	0.48	1.33	1.33	1.17	0.015	0.0000	Yes	PNL	25	3	18	0.05		# 0075
92	BUS G1	52G2_87R	13.20	1.50	0.75	0.28	0.35	0.0830	Yes	SWG	152	27	36	0.89	(*N2) (*N9)	# 0019
93	BUS G2	52G1_87R	13.20	1.50	0.75	0.28	0.35	0.0830	Yes	SWG	152	27	36	0.89	(*N2) (*N9)	# 0020
94	BUS-0097	MCP AXMX-E1A	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0256
95	BUS-0099	MCP AXMX-E1B	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0078
96	BUS-0101	MCP AXMX-E1C	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0079
97	BUS-0103	MCP ANMX-E1A	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0080
98	BUS-0105	MCP ANMX-E1B	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0081
99	BUS-0107	MCP ANMX-E1C	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0082
100	BUS-0109	MCP ANMX-E1D	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0083
101	BUS-0111	MCP SWMX-E1	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0084
102	BUS-0113	MCP ANMX-E3A	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0085
103	BUS-0115	MCP ANMX-E3B	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0086
104	BUS-0117	MCP ANMX-E3C	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0087
105	BUS-0119	MCP ANMX-E3D	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0088
106	BUS-0121	MCP AXMX-E3A	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0089
107	BUS-0123	MCP AXMX-E3B	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0090
108	BUS-0125	MCP AXMX-E3C	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0091
109	BUS-0127	MCP SWMX-E3	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0092
110	BUS-0141	MCP AXMX-E2A	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0093
111	BUS-0143	MCP AXMX-E2B	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0094
112	BUS-0145	MCP AXMX-E2C	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0095
113	BUS-0147	MCP ANMX-E2A	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0096
114	BUS-0149	MCP ANMX-E2B	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0097
115	BUS-0151	MCP ANMX-E2C	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0098
116	BUS-0153	MCP ANMX-E2D	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0099
117	BUS-0155	MCP SWMX-E2	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0100
118	BUS-0157	MCP ANMX-E4A	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0101

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
119	BUS-0159	MCP ANMX-E4B	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0102
120	BUS-0161	MCP ANMX-E4C	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0103
121	BUS-0163	MCP ANMX-E4D	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0104
122	BUS-0165	MCP AXMX-E4A	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0105
123	BUS-0167	MCP AXMX-E4B	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0106
124	BUS-0169	MCP AXMX-E4C	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0107
125	BUS-0171	MCP SWMX-E4	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0108
126	BUS-0178	FB EWH-2	0.48	5.79	5.79	4.11	0.0161	0.0000	Yes	PNL	25	6	18	0.20		# 0126
127	BUS-0179	FB WASV E1 P-65-1	0.48	1.41	1.41	1.23	0.0216	0.0000	Yes	PNL	25	3	18	0.07		# 0109
128	BUS-0180	FB WASV E2 P-65-2	0.48	1.41	1.41	1.23	0.0216	0.0000	Yes	PNL	25	3	18	0.07		# 0110
129	BUS-0181	FB EWH-2	0.48	5.69	5.69	4.05	0.0161	0.0000	Yes	PNL	25	6	18	0.20		# 0111
130	BUS-0182	FB AT-E1 FCV	0.48	2.11	2.11	1.74	0.0167	0.0000	Yes	PNL	25	4	18	0.08		# 0130
131	BUS-0188	FB AT-E2 FCV	0.48	2.51	2.51	2.02	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0131
132	BUS-0272	PD P-53-07	0.48	11.20	11.20	7.22	0.0162	0.0000	Yes	PNL	25	9	18	0.38		# 0113
133	BUS-0273	MCP AXMX-W1A	0.48	1.94	1.94	1.62	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
134	BUS-0274	MCP AXMX-W1B	0.48	1.52	1.52	1.31	0.005	0.0000	Yes	PNL	25	1	18	0.02		# 0492
135	BUS-0275	MCP AXMX-W1C	0.48	1.91	1.91	1.60	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
136	BUS-0276	MCP ANMX-W1A	0.48	1.64	1.64	1.40	0.005	0.0000	Yes	PNL	25	1	18	0.02		# 0492
137	BUS-0277	MCP ANMX-W1B	0.48	2.31	2.31	1.87	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
138	BUS-0278	MCP ANMX-W1C	0.48	2.07	2.07	1.71	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
139	BUS-0279	MCP ANMX-W1D	0.48	2.02	2.02	1.67	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
140	BUS-0281	MCP SWMX-W1	0.48	3.05	3.05	2.37	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0492
141	BUS-0287	PD F-54-5	0.48	12.23	12.23	7.79	0.0162	0.0000	Yes	PNL	25	9	18	0.41		# 0122
142	BUS-0288	PD P-53-06	0.48	12.23	12.23	7.79	0.0162	0.0000	Yes	PNL	25	9	18	0.41		# 0122
143	BUS-0289	MCP AXMX-W2A	0.48	3.54	3.54	2.70	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0492
144	BUS-0290	MCP AXMX-W2B	0.48	2.52	2.52	2.02	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
145	BUS-0291	MCP AXMX-W2C	0.48	2.04	2.04	1.69	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
146	BUS-0292	MCP ANMX-W2A	0.48	1.71	1.71	1.45	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
147	BUS-0293	MCP ANMX-W2B	0.48	2.07	2.07	1.71	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
148	BUS-0294	MCP ANMX-W2C	0.48	1.99	1.99	1.65	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
149	BUS-0295	MCP ANMX-W2D	0.48	1.57	1.57	1.35	0.005	0.0000	Yes	PNL	25	1	18	0.02		# 0492
150	BUS-0296	MCP SWMX-W2	0.48	3.17	3.17	2.46	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0492
151	BUS-0310	PD PAB-W1 VALVES	0.48	6.65	6.65	4.63	0.0162	0.0000	Yes	PNL	25	7	18	0.23		# 0147
152	BUS-0311	PD PAB-W1 VALVES	0.48	6.48	6.48	4.52	0.0162	0.0000	Yes	PNL	25	7	18	0.23		# 0152
153	BUS-0312	PD PAB-W1 VALVES	0.48	6.65	6.65	4.63	0.0162	0.0000	Yes	PNL	25	7	18	0.23		# 0148
154	BUS-0313	PD PAB-W1 VALVES	0.48	6.48	6.48	4.52	0.0162	0.0000	Yes	PNL	25	7	18	0.23		# 0154
155	BUS-0314	PD PAB-W3 VALVES	0.48	4.24	4.24	3.15	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0149
156	BUS-0315	PD PAB-W3 VALVES	0.48	4.16	4.16	3.10	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0156
157	BUS-0316	PD PAB-W3 VALVES	0.48	4.24	4.24	3.15	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0150
158	BUS-0317	PD PAB-W3 VALVES	0.48	4.16	4.16	3.10	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0158
159	BUS-0318	PD AT-W2 FCV	0.48	2.54	2.54	2.03	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0151

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
160	BUS-0319	PD AT-W2 FCV	0.48	2.51	2.51	2.02	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0160
161	BUS-0320	PD WAS VALVE W2	0.48	5.44	5.44	3.90	0.0162	0.0000	Yes	PNL	25	6	18	0.19		# 0152
162	BUS-0321	PD AT-W2 FCV	0.48	2.54	2.54	2.03	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0153
163	BUS-0322	PD AT-W2 FCV	0.48	2.51	2.51	2.02	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0163
164	BUS-0323	PD AT-W2 FCV	0.48	2.54	2.54	2.03	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0154
165	BUS-0324	PD AT-W2 FCV	0.48	2.51	2.51	2.02	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0165
166	BUS-0325	PD WEST AESG W2	0.48	2.32	2.32	1.88	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0155
167	BUS-0326	PD PAB-W2 VALVES	0.48	5.10	5.10	3.69	0.0162	0.0000	Yes	PNL	25	6	18	0.18		# 0156
168	BUS-0327	PD PAB-W2 VALVES	0.48	5.00	5.00	3.62	0.0162	0.0000	Yes	PNL	25	6	18	0.18		# 0168
169	BUS-0328	PD PAB-W2 VALVES	0.48	5.10	5.10	3.69	0.0162	0.0000	Yes	PNL	25	6	18	0.18		# 0157
170	BUS-0329	PD PAB-W2 VALVES	0.48	5.00	5.00	3.62	0.0162	0.0000	Yes	PNL	25	6	18	0.18		# 0170
171	BUS-0330	PD WA MAIN BOV	0.48	11.43	11.43	7.35	0.0162	0.0000	Yes	PNL	25	9	18	0.39		# 0158
172	BUS-0331	FB LSE-PPU-1	0.48	3.18	3.18	2.46	0.0162	0.0000	Yes	PNL	25	4	18	0.12		# 0159
173	BUS-0332	FB LSE-ACCU-1	0.48	8.61	8.61	5.77	0.0162	0.0000	Yes	PNL	25	8	18	0.30		# 0160
174	BUS-0333	FB LSE-ACU-1	0.48	4.73	4.73	3.46	0.0175	0.0000	Yes	PNL	25	6	18	0.18		# 0161
175	BUS-0337	FB CN-50-3 FCV	0.48	1.16	1.16	0.88	0.033	0.0000	Yes	PNL	25	3	18	0.08	(*N3)	# 0164
176	BUS-0348	FB SLDG'S F-50-3,4	0.48	0.86	0.86	0.68	0.5843	0.0000	Yes	PNL	25	17	18	1.1	(*N3)	# 0167
177	BUS-0349	FB SLDG'S F-60-1,2,3	0.48	0.99	0.99	0.77	0.3122	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0168
178	BUS-0350	FB SLDG'S F-50-3,4	0.48	0.86	0.86	0.68	0.5843	0.0000	Yes	PNL	25	17	18	1.1	(*N3)	# 0169
179	BUS-0351	FB SLDG'S F-60-1,2,3	0.48	0.99	0.99	0.77	0.3122	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0170
180	BUS-0352	FB SLDG'S F-60-1,2,3	0.48	0.99	0.99	0.77	0.3122	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0171
181	BUS-0353	FB SLDG'S S-50-1,2,3,4,5	0.48	0.89	0.89	0.71	0.4918	0.0000	Yes	PNL	25	15	18	0.93	(*N3)	# 0172
182	BUS-0354	FB SLDG'S S-50-1,2,3,4,5	0.48	0.99	0.99	0.77	0.3122	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0173
183	BUS-0355	FB SLDG'S S-50-1,2,3,4,5	0.48	0.99	0.99	0.77	0.3122	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0174
184	BUS-0356	FB SLDG'S S-50-1,2,3,4,5	0.48	0.99	0.99	0.77	0.3122	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0175
185	BUS-0357	FB SLDG'S S-50-1,2,3,4,5	0.48	0.99	0.99	0.77	0.3122	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0176
186	BUS-0358	FB SLDG'S S-50-1,2,3,4,5	0.48	0.99	0.99	0.77	0.3122	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0177
187	BUS-0359	FB SLDG'S S-50-1,2,3,4,5	0.48	0.99	0.99	0.77	0.3122	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0178
188	BUS-0360	FB SLDG's S-60-1,2	0.48	0.99	0.99	0.77	0.3122	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0179
189	BUS-0361	FB SLDG's S-60-1,2	0.48	0.99	0.99	0.77	0.3122	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0180
190	BUS-0362	FB SLDG's S-60-1,2	0.48	0.86	0.86	0.68	0.5843	0.0000	Yes	PNL	25	17	18	1.1	(*N3)	# 0181
191	BUS-0363	FB EAST JC GATES	0.48	0.99	0.99	0.77	0.3122	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0182
192	BUS-0364	FB EAST JC GATES	0.48	0.99	0.99	0.77	0.3122	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0183
193	BUS-0392	FB AT-E3 Z2 FCV	0.48	1.48	1.48	1.28	0.021	0.0000	Yes	PNL	25	3	18	0.08		# 0185
194	BUS-0393	FB AT-E1 FCV	0.48	2.02	2.02	1.68	0.0171	0.0000	Yes	PNL	25	4	18	0.08		# 0186
195	BUS-0394	FB AT-E1 FCV	0.48	2.02	2.02	1.68	0.0171	0.0000	Yes	PNL	25	4	18	0.08		# 0187
196	BUS-0395	FB AT-E1 FCV	0.48	2.02	2.02	1.68	0.0171	0.0000	Yes	PNL	25	4	18	0.08		# 0188
197	BUS-0396	FB AT-E2 FCV	0.48	2.39	2.39	1.93	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0189
198	BUS-0397	FB AT-E2 FCV	0.48	2.39	2.39	1.93	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0190
199	BUS-0398	FB AT-E2 FCV	0.48	2.39	2.39	1.93	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0191
200	BUS-0399	FB AT-E3 Z2 FCV	0.48	1.48	1.48	1.28	0.021	0.0000	Yes	PNL	25	3	18	0.08		# 0192

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
201	BUS-0400	FB AT-E3 Z2 FCV	0.48	1.48	1.48	1.28	0.021	0.0000	Yes	PNL	25	3	18	0.08		# 0193
202	BUS-0401	FB AT-E4 Z2 FCV	0.48	1.48	1.48	1.28	0.021	0.0000	Yes	PNL	25	3	18	0.08		# 0194
203	BUS-0402	FB AT-E4 Z2 FCV	0.48	1.48	1.48	1.28	0.021	0.0000	Yes	PNL	25	3	18	0.08		# 0195
204	BUS-0403	FB AT-E4 Z2 FCV	0.48	1.48	1.48	1.28	0.021	0.0000	Yes	PNL	25	3	18	0.08		# 0196
205	BUS-0406	FB PAB-E2 DV & BOV1	0.48	1.88	1.88	1.57	0.018	0.0000	Yes	PNL	25	3	18	0.08		# 0206
206	BUS-0409	FB WASV E3	0.48	1.32	1.32	1.16	0.0226	0.0000	Yes	PNL	25	3	18	0.07		# 0198
207	BUS-0410	FB WASV E4	0.48	1.32	1.32	1.16	0.0226	0.0000	Yes	PNL	25	3	18	0.07		# 0199
208	BUS-0412	FB EBB-EDH-1	0.48	5.15	5.15	3.72	0.0162	0.0000	Yes	PNL	25	6	18	0.18		# 0200
209	BUS-0413	FB PAB-E1 DV & BOV	0.48	2.55	2.55	2.04	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0210
210	BUS-0414	FB PAB-E1 DV & BOV	0.48	2.21	2.21	1.81	0.0162	0.0000	Yes	PNL	25	4	18	0.08		# 0211
211	BUS-0415	FB EWH-2	0.48	5.74	5.74	4.08	0.0161	0.0000	Yes	PNL	25	6	18	0.20		# 0203
212	BUS-0436	PD SWPSO-SG	0.48	2.82	2.82	2.23	0.0162	0.0000	Yes	PNL	25	4	18	0.11		# 0201
213	BWP2 DISC	FU BACKWASH PUMP 2	0.48	13.91	13.24	8.28	0.0083	0.0000	Yes	PNL	25	9	18	0.38		# 0568
214	BWWP1 DISC	FU 0668	0.48	12.97	12.29	7.76	0.0083	0.0000	Yes	PNL	25	9	18	0.36	(*N21b)	# 0136
215	BYPGT1 DISC	FU 0564	0.48	2.78	2.78	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
216	BYPGT2 DISC	FU 0554	0.48	2.78	2.78	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
217	C SUMP PUMP DISC	FU C SUMP PUMP	0.48	4.39	4.39	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
218	CC-1 DISC	FU CROSS COLL 1	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
219	CC2 DISC	FU 0528	0.48	2.78	2.78	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
220	CC-3 DISC	FU CROSS COLL 3	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
221	CE WET WELL GT DISC	FU 0745	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
222	CEB-ACCU-1 DISC	PD CEB-ACCU-1	0.48	5.04	5.04	3.65	0.0162	0.0000	Yes	PNL	25	6	18	0.18		# 0023
223	CEB-ACCU-1 TERM	PD CEB-ACCU-1	0.48	4.22	4.22	3.14	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0088
224	CEB-ACU-1 TERM	PD CEB-ACU-1	0.48	12.35	12.35	7.86	0.0162	0.0000	Yes	PNL	25	9	18	0.41		# 0023
225	CEB-EF-1 DISC	MCP CEB-EF-1	0.48	1.76	1.76	1.49	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0023
226	CEB-EF-2 DISC	MCP CEB-EF-2	0.48	1.91	1.91	1.59	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0023
227	CEB-FCP-1 DISC	MCP CEB-FCP-1	0.48	4.11	4.11	3.07	0.005	0.0000	Yes	PNL	25	2	18	0.05		# 0023
228	CEB-FCP-2 TERM	PD CEP-FCP-2	0.48	3.24	3.24	2.50	0.0162	0.0000	Yes	PNL	25	4	18	0.12		# 0023
229	CEB-P-1 DISC	MCP CEB-P-1	0.48	3.25	3.25	2.51	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0023
230	CEB-P-2 DISC	MCP CEB-P-2	0.48	3.24	3.24	2.50	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0023
231	CF2 AHU-1 DISC	MCP AHU-1	0.48	1.20	1.20	1.07	0.015	0.0000	Yes	PNL	25	2	18	0.04		# 0154
232	CF2 AHU-3 DISC	MCP AHU-3	0.48	2.01	2.01	1.66	0.015	0.0000	Yes	PNL	25	3	18	0.07		# 0155
233	CFG-1 BACK DR DISC	FU CFG-1	0.48	5.82	5.25	3.17	0.5256	0.0000	Yes	PNL	25	45	18	5.4	(*N3)	# 0159
234	CFG-1 BOWL DR DISC	FU CFG-1	0.48	17.93	15.75	9.49	0.0083	0.0000	Yes	PNL	25	13	18	0.70		# 0159
235	CFG-2 BACK DR DISC	MB CFG-2	0.48	7.11	6.46	4.45	0.0178	0.0000	Yes	PNL	25	9	18	0.40		# 0159
236	CFG-2 BOWL DR DISC	FU CFG-2	0.48	17.99	15.83	8.10	0.0105	0.0000	Yes	PNL	25	13	18	0.70		# 0159
237	CFG-3 BACK DR DISC	FU CFG-3	0.48	5.91	5.35	3.22	0.434	0.0000	Yes	PNL	25	40	18	4.5	(*N3)	# 0159
238	CFG-3 BOWL DR DISC	FU CFG-3	0.48	19.01	16.85	10.06	0.0083	0.0000	Yes	PNL	25	13	18	0.71		# 0159
239	CHABLWR DISC	FU CHANNEL AIR BLOWER	0.48	4.44	4.44	3.28	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
240	CN-50-3 FCV	FB CN-50-3 FCV	0.48	1.03	1.03	0.80	0.0398	0.0000	Yes	PNL	25	4	18	0.09	(*N3)	# 0111
241	CONT TK INT GT DISC	FU 0682	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
242	CP-70 EMG	FU CP70 EMG TERM	0.48	1.50	1.50	1.30		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0568
243	CP-70 NRM	FU 0756	0.48	2.89	2.89	2.27		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0568
244	CR-1 HSP 5 DISC	MCP HSP 5	0.48	3.36	3.36	2.58	0.015	0.0000	Yes	PNL	25	4	18	0.12		# 0165
245	CR-1 HSP 6 DISC	MCP HSP 6	0.48	3.19	3.19	2.47	0.015	0.0000	Yes	PNL	25	4	18	0.11		# 0166
246	D SP-2 DISC	FU D SUMP PUMP 2	0.48	4.44	4.44	3.28	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
247	DCH FNL EFF SP DISC	FU 0751	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
248	DOOR OP EE1	FU 0905	0.48	2.78	2.78	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0099
249	DOOR OP EE2	FU 0906	0.48	2.78	2.78	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0099
250	DOOR OP FF	FU 0919	0.48	2.74	2.74	2.17	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0099
251	DOOR OPERATOR STR	FU DOOR OPERATOR	0.48	4.44	4.44	3.28	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
252	DP-51	MB MCC-51A	0.48	24.84	24.84	14.27	0.0121	0.0000	Yes	PNL	25	12	18	0.59	(*N5)	# 0247
253	DP-51 (MB DP-51 LineSide)	MB MCC-51A	0.48	24.84	24.84	14.27	0.0121	0.0000	Yes	PNL	25	12	18	0.59	(*N5)	# 0248-Line
254	DP-52	MB DP-52	0.48	23.75	23.75	13.73	0.01	0.0000	Yes	PNL	25	10	18	0.47		# 0249
255	DP-52 (MB DP-52 LineSide)	MB MCC-52A	0.48	23.75	23.75	13.73	0.0123	0.0000	Yes	PNL	25	12	18	0.57	(*N5)	# 0250-Line
256	DP-54	MB DP-54	0.48	19.07	19.07	11.38	0.01	0.0000	Yes	PNL	25	9	18	0.38		# 0251
257	DP-54 (MB DP-54 LineSide)	MB MCC-54A	0.48	19.07	19.07	11.38	0.0133	0.0000	Yes	PNL	25	11	18	0.51	(*N5)	# 0252-Line
258	DP-55	MB DP-55	0.48	19.78	19.78	11.74	0.01	0.0000	Yes	PNL	25	9	18	0.39		# 0253
259	DP-55 (MB DP-55 LineSide)	FB ATS-55 NRM	0.48	19.78	19.78	11.74	0.0131	0.0000	Yes	PNL	25	11	18	0.52		# 0254-Line
260	DP-56	MB DP-56	0.48	12.30	12.30	7.83	0.0112	0.0000	Yes	PNL	25	7	18	0.28		# 0255
261	DP-56 (MB DP-56 LineSide)	FB DP-56	0.48	12.30	12.30	6.65	0.2	0.0000	Yes	PNL	25	38	18	4.0	(*N3)	# 0256-Line
262	DRILL PRESS	FB DRILL PRESS	0.48	4.56	4.56	3.35	0.0162	0.0000	Yes	PNL	25	5	18	0.16		# 0266
263	DROP (NGW) STR	FU DOOR OP (NGW)	0.48	4.39	4.39	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
264	DROP (SG) STR	FU DOOR OP (SG)	0.48	4.39	4.39	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
265	E CONT TK G1 DISC	FU 0747	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
266	E SUMP PUMP 1 DISC	FU E SUMP PUMP 1	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
267	EBB SUMP PUMP 2 DISC	MCP EBB SUMP PUMP 2	0.48	3.42	3.42	2.62	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0126
268	EBB SUMP PUMP 4 DISC	MCP EBB SUMP PUMP 4	0.48	0.99	0.99	0.77	0.04	0.0000	Yes	PNL	25	4	18	0.08	(*N3)	# 0127
269	EBB-A HOIST 1	PD EBB-A HOIST1	0.48	0.98	0.98	0.77	0.3282	0.0000	Yes	PNL	25	13	18	0.67	(*N3)	# 0118
270	EBB-A HOIST 1 DISC	PD EBB-A HOIST1	0.48	1.05	1.05	0.81	0.039	0.0000	Yes	PNL	25	4	18	0.09	(*N3)	# 0119
271	EBB-A HOIST 2	PD EBB-A HOIST2	0.48	0.98	0.98	0.77	0.3282	0.0000	Yes	PNL	25	13	18	0.67	(*N3)	# 0120
272	EBB-A HOIST 2 DISC	PD EBB-A HOIST2	0.48	1.05	1.05	0.81	0.039	0.0000	Yes	PNL	25	4	18	0.09	(*N3)	# 0121
273	EBB-EDH-1 LINE'	FB EBB-EDH-1	0.48	3.91	3.91	2.94	0.0162	0.0000	Yes	PNL	25	5	18	0.14		# 0277
274	EBB-EF-10 DISC	MCP EBB-EF-10	0.48	2.73	2.73	2.17	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0133
275	EBB-EF-5 DISC	MCP EBB-EF-5	0.48	3.98	3.98	2.98	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0134
276	EBB-EF-6 DISC	MCP EBB-EF-6	0.48	2.17	2.17	1.78	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0135
277	EBB-EF-7 DISC	MCP EBB-EF-7	0.48	1.44	1.44	1.25	0.005	0.0000	Yes	PNL	25	1	18	0.02		# 0136
278	EBB-EF-9 DISC	MCP EBB-EF-9	0.48	0.98	0.98	0.90	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0137
279	EBB-EUH-1 TERM	PD EBB-EUH-1	0.48	5.94	5.94	4.20	0.0162	0.0000	Yes	PNL	25	6	18	0.21		# 0118

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
280	EBB-HV-1 DISC	PD EBB-HV-1	0.48	3.29	3.29	2.54	0.0162	0.0000	Yes	PNL	25	4	18	0.12		# 0139
281	EBB-HV-1 STR	PD EBB-HV-1	0.48	2.52	2.52	2.02	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0108
282	EF1 DISC	FU 0646	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
283	EF2 DISC	FU 0646	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
284	EF3 DISC	FU EF-3,4,1	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
285	EF4 DISC	FU EF-3,4,1	0.48	1.48	1.48	1.28	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
286	ELEVATOR CP DISC	PD ELEVATOR CP	0.48	1.57	1.57	1.35	0.0171	0.0000	Yes	PNL	25	3	18	0.07		# 0492
287	ELEVATOR CP INPUT	FU ELEVATOR CP	0.48	1.47	1.47	1.28		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0492
288	EP THRV CONTROLLER	FU E. PLANT THR VALVE	0.48	4.44	4.44	3.28	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0133
289	EPBBV DISC	PD 0650	0.48	1.37	1.37	1.02	0.0338	0.0000	Yes	PNL	25	4	18	0.10	(*N3)	# 0136
290	EPBBV STARTER	PD 0650	0.48	1.30	1.30	0.97	0.1566	0.0000	Yes	PNL	25	9	18	0.42	(*N3)	# 0136
291	EPB-EUH-1 DISC	PD EPB-EUH-1	0.48	3.87	3.87	2.92	0.0162	0.0000	Yes	PNL	25	5	18	0.14		# 0180
292	EPB-EUH-1 TERM	PD EPB-EUH-1	0.48	3.63	3.63	2.76	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0152
293	EPSEGE DISC	FU 0654	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
294	EPSEGW DISC	FU 0656	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
295	EQ INFL GATE 1 STR	FU EQ INFL GATE 1	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0115
296	EQ INFL GATE 10 STR	FU EQ INFL GATE 10	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0116
297	EQ INFL GATE 11 STR	FU EQ INFL GATE 11	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0117
298	EQ INFL GATE 12 STR	FU EQ INFL GATE 12	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0118
299	EQ INFL GATE 2 STR	FU EQ INFL GATE 2	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0119
300	EQ INFL GATE 3 STR	FU EQ INFL GATE 3	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0120
301	EQ INFL GATE 4 STR	FU EQ INFL GATE 4	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0121
302	EQ INFL GATE 9 STR	FU EQ INFL GATE 9	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0122
303	EQINGT5 DISC	FU 0565	0.48	2.78	2.78	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
304	EQINGT6 DISC	FU 0566	0.48	2.78	2.78	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
305	EQINGT7 DISC	FU 0577	0.48	2.78	2.78	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
306	EQINGT8 DISC	FU 0578	0.48	2.78	2.78	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
307	EQPRM HOIST DISC	FU 0576	0.48	5.93	5.93	4.19	0.0042	0.0000	Yes	PNL	25	3	18	0.05		# 0073
308	EQPT RCPT C	FU WELDER OUTLET C	0.48	6.21	6.21	4.36	0.0042	0.0000	Yes	PNL	25	3	18	0.06		# 0492
309	EQPT RCPT D	FU WELDER OUTLET D	0.48	6.31	6.31	4.43	0.0042	0.0000	Yes	PNL	25	3	18	0.06		# 0430
310	EQPT RCPT E	FU WELD RCPT E	0.48	12.60	12.60	7.99	0.0042	0.0000	Yes	PNL	25	4	18	0.11		# 0403
311	EQPT RCPT EBB-A	PD EBB-A WELD RCPT	0.48	8.23	8.23	5.56	0.0162	0.0000	Yes	PNL	25	8	18	0.28		# 0173
312	EQPT RCPT EBB-B	PD WELD RCPT EBB-B	0.48	7.61	7.61	5.19	0.0162	0.0000	Yes	PNL	25	7	18	0.26		# 0174
313	EQPT RCPT EE	FU 0908	0.48	4.08	4.08	3.05		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0430
314	EQPT RCPT EPB-B (Welder Receptacle)	PD EQRCPT-EPB-B	0.48	4.41	4.41	3.26	0.0162	0.0000	Yes	PNL	25	5	18	0.16		# 0406
315	EQPT RCPT F	FU 0559	0.48	2.78	2.78	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0407
316	EQPT RCPT M	FU 0663	0.48	2.33	2.33	1.89		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0136
317	EQPT RCPT RLS-B	PD WELD OUTLET RLS-B	0.48	4.41	4.41	3.26	0.0162	0.0000	Yes	PNL	25	5	18	0.16		# 0430
318	EQRETFCV DISC	FU 0553	0.48	2.78	2.78	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
319	EQ-RET-V-1 DISC	FU EQ RET VALVE 1	0.48	2.82	2.82	2.22	0.0083	0.0000	Yes	PNL	25	3	18	0.05		# 0475
320	EQ-RET-V-2 DISC	FU EQ RET VALVE 2	0.48	2.82	2.82	2.22	0.0083	0.0000	Yes	PNL	25	3	18	0.05		# 0475

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
321	EQRETV3 DISC	FU 0557	0.48	2.78	2.78	2.20	0.0083	0.0000	Yes	PNL	25	3	18	0.05		# 0073
322	ERU DISC	FU 0573	0.48	2.78	2.78	1.87	0.0239	0.0000	Yes	PNL	25	5	18	0.13	(*N3)	# 0073
323	ESESP6 DISC	FU 0660	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
324	EUH1 DISC	FU 0662	0.48	1.50	1.50	1.30		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0136
325	EUH-E1 TERM	PD-0538	0.48	5.92	5.92	4.19	0.0151	0.0000	Yes	PNL	25	6	18	0.20		# 0132
326	EUH-E2 TERM	PD-0539	0.48	3.84	3.84	2.90	0.0162	0.0000	Yes	PNL	25	5	18	0.14		# 0132
327	EWB-1 DISC	PD EWB-1	0.48	10.20	10.20	6.67	0.0162	0.0000	Yes	PNL	25	8	18	0.35		# 0492
328	EWB-2 DISC	PD EWB-2	0.48	18.75	18.75	11.22	0.0161	0.0000	Yes	PNL	25	12	18	0.61	(*N21b)	# 0568
329	EWB-2 TERMS	PD EWB-2	0.48	17.71	17.71	10.68	0.0161	0.0000	Yes	PNL	25	12	18	0.57	(*N21b)	# 0162
330	F-1-1 DISC	PD F-1-1	0.48	2.25	2.25	1.83	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0160
331	F-1-1 STARTER	PD F-1-1	0.48	1.91	1.91	1.59	0.0166	0.0000	Yes	PNL	25	3	18	0.08		# 0188
332	F-1-2 DISC	PD F-1-1	0.48	2.23	2.23	1.82	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0160
333	F-1-2 STARTER	PD F-1-1	0.48	1.81	1.81	1.53	0.0167	0.0000	Yes	PNL	25	3	18	0.07		# 0190
334	F-1-3 DISC	PD F-1-1	0.48	2.21	2.21	1.81	0.0162	0.0000	Yes	PNL	25	4	18	0.08		# 0160
335	F-1-3 STARTER	PD F-1-1	0.48	1.53	1.53	1.32	0.0172	0.0000	Yes	PNL	25	3	18	0.06		# 0192
336	F-1-4 DISC	PD F-1-1	0.48	2.19	2.19	1.79	0.0162	0.0000	Yes	PNL	25	4	18	0.08		# 0160
337	F-1-4 STARTER	PD F-1-1	0.48	1.47	1.47	1.08	0.0209	0.0000	Yes	PNL	25	3	18	0.06	(*N3)	# 0194
338	F-1-5 DISC	PD F-1-5	0.48	1.84	1.84	1.54	0.0167	0.0000	Yes	PNL	25	3	18	0.07		# 0160
339	F-1-5 STARTER	PD F-1-5	0.48	1.30	1.30	0.98	0.0252	0.0000	Yes	PNL	25	3	18	0.07	(*N3)	# 0500
340	F-1-6 DISC	PD F-1-5	0.48	1.83	1.83	1.53	0.0167	0.0000	Yes	PNL	25	3	18	0.07		# 0160
341	F-1-6 STARTER	PD F-1-5	0.48	1.33	1.33	1.00	0.0242	0.0000	Yes	PNL	25	3	18	0.07	(*N3)	# 0500
342	F-1-7 DISC	PD F-1-5	0.48	1.81	1.81	1.53	0.0167	0.0000	Yes	PNL	25	3	18	0.07		# 0160
343	F-1-7 STARTER	PD F-1-5	0.48	1.52	1.52	1.32	0.0172	0.0000	Yes	PNL	25	3	18	0.06		# 0500
344	F-1-8 DISC	PD F-1-5	0.48	1.80	1.80	1.52	0.0167	0.0000	Yes	PNL	25	3	18	0.07		# 0160
345	F-1-8 STARTER	PD F-1-5	0.48	1.57	1.57	1.35	0.0171	0.0000	Yes	PNL	25	3	18	0.07		# 0500
346	F-2-1 DISC	PD F-2-6	0.48	5.63	5.63	4.02	0.0162	0.0000	Yes	PNL	25	6	18	0.20		# 0160
347	F-2-1 STARTER	PD F-2-6	0.48	4.19	4.19	3.12	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0204
348	F-2-12 DISC	PD F-2-6	0.48	5.55	5.55	3.97	0.0162	0.0000	Yes	PNL	25	6	18	0.20		# 0160
349	F-2-12 STARTER	PD F-2-6	0.48	4.13	4.13	3.08	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0206
350	F-2-13 DISC	PD F-2-13	0.48	1.58	1.58	1.35	0.0171	0.0000	Yes	PNL	25	3	18	0.07		# 0160
351	F-2-13 STARTER	PD F-2-13	0.48	1.04	1.04	0.81	0.035	0.0000	Yes	PNL	25	3	18	0.08	(*N3)	# 0208
352	F-2-18 DISC	PD F-2-13	0.48	1.57	1.57	1.35	0.0171	0.0000	Yes	PNL	25	3	18	0.07		# 0160
353	F-2-18 STARTER	PD F-2-13	0.48	1.39	1.39	1.03	0.0228	0.0000	Yes	PNL	25	3	18	0.06	(*N3)	# 0210
354	F-2-19 DISC	PD F-2-13	0.48	1.56	1.56	1.34	0.0171	0.0000	Yes	PNL	25	3	18	0.06		# 0160
355	F-2-19 STARTER	PD F-2-13	0.48	1.38	1.38	1.03	0.0229	0.0000	Yes	PNL	25	3	18	0.07	(*N3)	# 0212
356	F-2-24 DISC	PD F-2-13	0.48	1.55	1.55	1.33	0.0172	0.0000	Yes	PNL	25	3	18	0.06		# 0160
357	F-2-24 STARTER	PD F-2-13	0.48	1.01	1.01	0.79	0.0368	0.0000	Yes	PNL	25	3	18	0.08	(*N3)	# 0214
358	F-2-6 DISC	PD F-2-6	0.48	5.72	5.72	4.07	0.0162	0.0000	Yes	PNL	25	6	18	0.20		# 0160
359	F-2-6 STARTER	PD F-2-6	0.48	2.09	2.09	1.72	0.0163	0.0000	Yes	PNL	25	3	18	0.08		# 0217
360	F-2-7 DISC	PD F-2-6	0.48	5.47	5.47	3.91	0.0162	0.0000	Yes	PNL	25	6	18	0.20		# 0160
361	F-2-7 STARTER	PD F-2-6	0.48	2.12	2.12	1.74	0.0163	0.0000	Yes	PNL	25	4	18	0.08		# 0219

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
362	F-5-1 DISC	FU F-5-1	0.48	4.44	4.44	3.28	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
363	F-5-2 DISC	FU 5-5-2	0.48	4.44	4.44	3.28	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
364	F-54-1 DISC	PD F-54-4	0.48	1.81	1.81	1.52	0.0184	0.0000	Yes	PNL	25	3	18	0.08		# 0492
365	F-54-1 STR	PD F-54-4	0.48	1.76	1.76	1.49	0.0187	0.0000	Yes	PNL	25	3	18	0.08		# 0492
366	F-54-2 DISC	PD F-54-5	0.48	2.45	2.45	1.97	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0492
367	F-54-2 STR	PD F-54-5	0.48	2.35	2.35	1.91	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0492
368	F-54-4 DISC	PD F-54-4	0.48	4.61	4.61	3.38	0.0162	0.0000	Yes	PNL	25	5	18	0.17		# 0492
369	F-54-4 STR	PD F-54-4	0.48	4.16	4.16	3.10	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0492
370	F-54-5 DISC	PD F-54-5	0.48	10.94	10.94	7.08	0.0162	0.0000	Yes	PNL	25	9	18	0.37		# 0492
371	F-54-5 STR	PD F-54-5	0.48	9.17	9.17	6.09	0.0162	0.0000	Yes	PNL	25	8	18	0.31	(*N20b)	# 0492
372	F-60-5	FB EAST JC GATES	0.48	0.92	0.92	0.73	0.4249	0.0000	Yes	PNL	25	14	18	0.83	(*N3)	# 0365
373	F-60-6	FB EAST JC GATES	0.48	0.92	0.92	0.73	0.4249	0.0000	Yes	PNL	25	14	18	0.83	(*N3)	# 0366
374	F-6-1 DISC	FU F-6-1	0.48	4.39	4.39	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
375	F-6-2 DISC	FU F-6-2	0.48	4.39	4.39	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
376	F-6-4 DISC	FB GATE OPERATORS	0.48	4.44	4.44	3.28	0.0158	0.0000	Yes	PNL	25	5	18	0.16		# 0492
377	F-7-1 DISC	FB GATE OPERATORS	0.48	3.46	3.46	2.65	0.0165	0.0000	Yes	PNL	25	5	18	0.13		# 0492
378	F-8-6 DISC	FB GATE OPERATORS	0.48	2.83	2.83	2.23	0.0171	0.0000	Yes	PNL	25	4	18	0.11		# 0492
379	FASB1 DISC	PD 0672	0.48	13.65	12.98	8.13	0.0149	0.0000	Yes	PNL	25	11	18	0.55	(*N21b)	# 0136
380	FASB-1 LCP	PD 0672	0.48	15.93	15.23	9.33	0.0144	0.0000	Yes	PNL	25	12	18	0.60		# 0206
381	FCB-1 DISC	PD 0724	0.48	8.56	8.56	5.74	0.0146	0.0000	Yes	PNL	25	7	18	0.27		# 0568
382	FCB-1-EF DISC	PD 0724	0.48	8.70	8.70	5.82	0.0146	0.0000	Yes	PNL	25	7	18	0.27		# 0568
383	FCBV-1 VFD	PD 0724	0.48	15.50	15.50	9.53	0.0137	0.0000	Yes	PNL	25	10	18	0.43	(*N21b)	# 0568
384	FDSP1 DISC	FU 0679	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
385	FDSP2 DISC	FU 0739	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
386	FDSP4 DISC	FU FLOOR DRN SP 4	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
387	FLDRNSP3 DISC	FU 0657	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
388	GDWU-1 DISC	FU GRIT DEWATER UNIT 1	0.48	4.44	4.44	3.28	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
389	GDWU-2 DISC	FU GRIT DEWATER UNIT 2	0.48	4.44	4.44	3.28	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
390	GP-3 DISC TERM	FU GP-3	0.48	4.39	4.39	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
391	GRIT BLOWER 2 DISC	FU GRIT BLOWER 2	0.48	4.44	4.44	3.28	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
392	GRTBLWR3 DISC	FU GRIT BLOWER 3	0.48	4.39	4.39	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
393	GSP1 DISC	FU GRIT SLURRY PUMP 1	0.48	4.44	4.44	3.28	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
394	GSP2 DISC	FU GRIT SLURRY PUMP 2	0.48	4.44	4.44	3.28	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
395	GSP4 DISC	FU GRIT SLURRY PUMP 4	0.48	4.44	4.44	3.28	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
396	HEAT REC UNIT DISC	FU HEAT RECOVERY UNIT	0.48	8.01	8.01	5.43	0.0042	0.0000	Yes	PNL	25	3	18	0.07		# 0492
397	HOIST D DISC	FU HOIST D	0.48	4.44	4.44	3.28	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
398	HOIST EPB-B DISC	PD HOIST EPB-B	0.48	4.14	4.14	3.09	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0180
399	HOIST EPB-B STARTER	PD HOIST EPB-B	0.48	3.63	3.63	2.76	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0177
400	HOIST P DISC	FU 0695	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
401	HOIST Q DISC	FU 0750	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
402	HORZ BAND SAW	FB HORZ BAND SAW	0.48	2.39	2.39	1.93	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0406

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
403	HPPEW2 DISC	FU 0546	0.48	10.57	9.85	6.41	0.0083	0.0000	Yes	PNL	25	8	18	0.33		# 0073
404	HP-PEW-P-1 DISC	FU HP PEW PUMP 1	0.48	11.19	10.48	6.76	0.0083	0.0000	Yes	PNL	25	8	18	0.34		# 0475
405	HT BOOST PMP DISC	FU 0753	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
406	HV-1 DISC	PD HV-1	0.48	3.25	3.25	2.51	0.0162	0.0000	Yes	PNL	25	4	18	0.12		# 0180
407	IFSAB-1 LCP	PD IFSAB-1	0.48	7.78	7.78	5.29	0.0162	0.0000	Yes	PNL	25	7	18	0.27		# 0122
408	IPC LP-EFB	MB IPC LP-EFB	0.208	3.50	3.50	2.08	0.0167	0.0000	Yes	PNL	25	4	18	0.10		# 0193
409	IPC LP-EFB (MB IPC LP-EFB LineSide)	FB IPC LP-EFB	0.208	3.50	3.50	1.77	1.807	0.0000	Yes	PNL	25	62	18	9.0	(*N3)	# 0291-Line
410	IPC LP-WFB	MB IPC LP-WFB	0.208	1.79	1.79	1.10	1.923	0.0000	Yes	PNL	25	48	18	5.9	(*N3)	# 0193
411	IPC LP-WFB (MB IPC LP-WFB LineSide)	PD IPC LP-WFB	0.208	1.79	1.79	1.30	2	0.0000	Yes	PNL	25	54	18	7.3	(*N9)	# 0311-Line
412	IRON WORK	FU PP-MTB	0.48	4.81	4.81	3.51		0.0000	Yes	PNL	25	7	18	0.25	(*N4) (*N5)	# 0416
413	JC-1 DISC	FU JIB CRANES	0.48	4.44	4.44	3.28	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
414	JC-1 LCP TERM	FU JIB CRANES	0.48	3.46	3.46	2.65	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0230
415	JC-2 DISC	FU JIB CRANES	0.48	3.46	3.46	2.65	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0492
416	JC-3 LCP TERM	FU JIB CRANES	0.48	2.83	2.83	2.23	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0232
417	Junction box.	FB PAB-E2 DV & BOV1	0.48	2.12	2.12	1.74	0.0166	0.0000	Yes	PNL	25	4	18	0.08		# 0421
418	LBP-6 STARTER	FU SCREW PUMP 6	0.48	4.08	3.84	2.44	0.2867	0.0000	Yes	PNL	25	26	18	2.1	(*N3)	# 0184
419	LBP-7 STARTER	FU SCREW PUMP 7	0.48	4.16	3.92	2.48	0.218	0.0000	Yes	PNL	25	22	18	1.7	(*N3)	# 0275
420	LBP-8 STARTER	FU SCREW PUMP 8	0.48	4.16	3.92	2.48	0.218	0.0000	Yes	PNL	25	22	18	1.7	(*N3)	# 0277
421	LP-ADM-1	MB LP-ADM-1	0.208	5.41	5.41	2.82	0.0171	0.0000	Yes	PNL	25	5	18	0.14		# 0026
422	LP-ADM-1 (MB LP-ADM-1 LineSide)	PD XFMR-LP-ADM-1	0.208	5.41	5.41	2.82	0.32	0.0000	Yes	PNL	25	30	18	2.7		# 0005-Line
423	LP-ADM-1A	MB LP-ADM-1A	0.208	5.33	5.33	2.80	0.0171	0.0000	Yes	PNL	25	5	18	0.14		# 0026
424	LP-ADM-1A (MB LP-ADM-1A LineSide)	MB LP-ADM-1	0.208	5.33	5.33	2.80	0.0171	0.0000	Yes	PNL	25	5	18	0.14		# 0006-Line
425	LP-ADM-UPS	MB LP-ADM-UPS	0.208	0.04	0.04	0.04	2	0.0000	Yes	PNL	25	3	18	0.04	(*N9) (*N11)	# 0026
426	LP-ADM-UPS (MB LP-ADM-UPS LineSide)	MaxTripTime @2.0s	0.208	0.04	0.04	0.04	2	0.0000	Yes	PNL	25	3	18	0.04	(*N2) (*N9) (*N11)	# 0007-Line
427	LP-C	FU XFMR LP-C	0.208	1.86	1.86	1.33		0.0000	Yes	PNL	25	42	18	4.9	(*N4) (*N5) (*N9)	# 0242
428	LP-C (MB LP-C LineSide)	FU XFMR LP-C	0.208	1.86	1.86	1.33		0.0000	Yes	PNL	25	42	18	4.9	(*N4) (*N9)	# 0265-Line
429	LP-CEB-A	MB LP-CEB-A	0.208	3.34	3.34	2.01	2	0.0000	Yes	PNL	25	72	18	12	(*N9)	# 0030
430	LP-CEB-A (MB LP-CEB-A LineSide)	FB ATS-CEB NRM	0.208	3.34	3.34	2.01	2	0.0000	Yes	PNL	25	72	18	12	(*N9)	# 0008-Line
431	LP-CEB-B	MB LP-CEB-A	0.208	3.27	3.27	1.98	2	0.0000	Yes	PNL	25	72	18	12	(*N9)	# 0030
432	LP-D	FU XFMR LP-D PRI	0.208	1.81	1.81	1.31		0.0000	Yes	PNL	25	44	18	5.1	(*N4) (*N9)	# 0242
433	LP-E	FU XFMR LP-E	0.208	4.12	4.12	2.33		0.0000	Yes	PNL	25	7	18	0.25	(*N4) (*N5)	# 0192
434	LP-E (#MB LP-E LineSide)	FU XFMR LP-E	0.208	4.12	4.12	2.33		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0435-Line
435	LP-EBB-A	MB LP-EBB-A	0.208	3.18	3.18	1.95	2	0.0000	Yes	PNL	25	70	18	11	(*N9)	# 0193
436	LP-EBB-A (MB LP-EBB-A LineSide)	FB XFMR LP-EBB-A	0.208	3.18	3.18	1.95	2	0.0000	Yes	PNL	25	70	18	11	(*N9)	# 0009-Line
437	LP-EE	FU 0904	0.208	0.45	0.45	0.45	0.1747	0.0000	Yes	PNL	25	3	18	0.04	(*N11)	# 0194

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
438	LP-F	FU 0502	0.208	3.98	3.98	2.28		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0196
439	LP-FF	FU XFMR-LP-FF	0.208	0.49	0.49	0.49	0.1504	0.0000	Yes	PNL	25	3	18	0.04	(*N11)	# 0194
440	LP-LSE	PD-LP-LSE XFMR	0.208	1.87	1.87	1.34	2	0.0000	Yes	PNL	25	55	18	7.5	(*N9)	# 0193
441	LP-M	FU 0645	0.208	3.33	3.33	1.71		0.0000	Yes	PNL	25	12	18	0.65	(*N3) (*N4)	# 0257
442	LP-N	MB LP-N	0.208	3.47	3.47	1.76	2	0.0000	Yes	PNL	25	65	18	9.9	(*N3) (*N9)	# 0257
443	LP-N (MB LP-N LineSide)	FU 0699	0.208	3.47	3.47	2.07		0.0000	Yes	PNL	25	62	18	9.2	(*N4) (*N9)	# 0445-Line
444	LP-O	PD XFMR LP-O	0.208	2.52	2.52	1.65	1.977	0.0000	Yes	PNL	25	62	18	9.2		# 0199
445	LP-Q	FU 0734	0.208	3.31	3.31	2.00		0.0000	Yes	PNL	25	67	18	10	(*N4) (*N5) (*N9)	# 0257
446	LP-Q (MB LP-Q LineSide)	FU 0734	0.208	3.31	3.31	2.00		0.0000	Yes	PNL	25	67	18	10	(*N4) (*N9)	# 0448-Line
447	LP-RLS	MB-LP-RLS	0.208	1.76	1.76	1.09	1.961	0.0000	Yes	PNL	25	48	18	5.9	(*N3)	# 0073
448	LP-RLS (MB-LP-RLS LineSide)	FB ATS-RLS NRM	0.208	1.76	1.76	1.29	2	0.0000	Yes	PNL	25	54	18	7.2	(*N9)	# 0252-Line
449	LP-T	PD XFMR LP-T	0.208	2.56	2.56	1.67	1.949	0.0000	Yes	PNL	25	62	18	9.2		# 0200
450	LP-U	PD XFMR LP-U	0.208	2.55	2.55	1.66	1.961	0.0000	Yes	PNL	25	62	18	9.1		# 0201
451	LP-V	PD-0640	0.208	1.62	1.62	1.21	2	0.0000	Yes	PNL	25	51	18	6.7	(*N9)	# 0202
452	LP-V (PD-0640 LineSide)	MB MCC-EPB-A	0.208	1.62	1.62	1.21	2	0.0000	Yes	PNL	25	51	18	6.7	(*N5) (*N9)	# 0454-Line
453	LP-W	PD-0636	0.208	1.97	1.97	1.39	2	0.0000	Yes	PNL	25	56	18	7.8	(*N9)	# 0203
454	LP-W (PD-0636 LineSide)	MB MCC-EPB-B	0.208	1.97	1.97	1.39	2	0.0000	Yes	PNL	25	56	18	7.8	(*N5) (*N9)	# 0456-Line
455	LP-WBB-A	MB-WBB-A	0.208	3.56	3.56	2.11	2	0.0000	Yes	PNL	25	74	18	12	(*N9)	# 0193
456	LP-WBB-A (MB-WBB-A LineSide)	PD LP-WBB XFMR	0.208	3.56	3.56	2.11	2	0.0000	Yes	PNL	25	74	18	12	(*N9)	# 0258-Line
457	LP-WBB-B	MB-WBB-A	0.208	3.49	3.49	2.08	2	0.0000	Yes	PNL	25	74	18	12	(*N9)	# 0193
458	LP-WPB-A	MB LP-WPB-B	0.208	1.80	1.80	1.11	1.907	0.0000	Yes	PNL	25	47	18	5.9	(*N3)	# 0122
459	LP-WPB-A (MB LP-WPB-B LineSide)	FB ATS-WPB-NORM	0.208	1.80	1.80	1.30	2	0.0000	Yes	PNL	25	54	18	7.3	(*N9)	# 0010-Line
460	LP-WPB-B	MB LP-WPB-B	0.208	1.78	1.78	1.10	1.933	0.0000	Yes	PNL	25	48	18	5.9	(*N3)	# 0122
461	LSE-ACCU-1	FB LSE-ACCU-1	0.48	6.32	6.32	4.43	0.0162	0.0000	Yes	PNL	25	6	18	0.22		# 0116
462	LSE-ACU-1	FB LSE-ACU-1	0.48	3.99	3.99	2.99	0.0175	0.0000	Yes	PNL	25	5	18	0.16		# 0117
463	LSE-PPU-1	FB LSE-PPU-1	0.48	2.99	2.99	2.33	0.0162	0.0000	Yes	PNL	25	4	18	0.11		# 0115
464	MB-EF-1 DISC	FB MB-EF-1	0.48	3.31	3.31	2.55	0.0162	0.0000	Yes	PNL	25	4	18	0.12		# 0453
465	MCC-51A	MB MCC-51A	0.48	29.64	29.64	16.59	0.0114	0.0000	Yes	MCC	25	12	18	0.65		# 0368
466	MCC-51A (MB MCC-51A LineSide)	800/800 MCC-51A	0.48	29.64	29.64	16.59	0.066	0.0000	Yes	MCC	25	36	18	3.8		# 0369-Line
467	MCC-51B	MB MCC-51B	0.48	30.01	30.01	16.77	0.0113	0.0000	Yes	MCC	25	12	18	0.66		# 0368
468	MCC-51B (MB MCC-51B LineSide)	800/800 MCC-51B	0.48	30.01	30.01	16.77	0.066	0.0000	Yes	MCC	25	37	18	3.8		# 0367-Line
469	MCC-52A	MB MCC-52A	0.48	29.64	29.64	16.59	0.0114	0.0000	Yes	MCC	25	12	18	0.65		# 0368
470	MCC-52A (MB MCC-52A LineSide)	800/800 MCC-52A	0.48	29.64	29.64	16.59	0.066	0.0000	Yes	MCC	25	36	18	3.8		# 0371-Line
471	MCC-52B	MB MCC-52B	0.48	30.44	30.44	16.97	0.0113	0.0000	Yes	MCC	25	13	18	0.66		# 0368

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
472	MCC-52B (MB MCC-52B LineSide)	800/800 MCC-52B	0.48	30.44	30.44	16.97	0.066	0.0000	Yes	MCC	25	37	18	3.9		# 0373-Line
473	MCC-53 A	MB MCC-53A	0.48	29.64	29.64	16.59	0.0114	0.0000	Yes	MCC	25	12	18	0.65		# 0368
474	MCC-53 A (MB MCC-53A LineSide)	800/600 MCC-53A	0.48	29.64	29.64	16.59	0.066	0.0000	Yes	MCC	25	36	18	3.8		# 0375-Line
475	MCC-53B	MB MCC-53B	0.48	30.01	30.01	16.77	0.0113	0.0000	Yes	MCC	25	12	18	0.66		# 0368
476	MCC-53B (MB MCC-53B LineSide)	800/600 MCC-53B	0.48	30.01	30.01	16.77	0.066	0.0000	Yes	MCC	25	37	18	3.8		# 0377-Line
477	MCC-54 A	MB MCC-54A	0.48	28.85	28.85	16.21	0.0115	0.0000	Yes	MCC	25	12	18	0.64		# 0368
478	MCC-54 A (MB MCC-54A LineSide)	800/800 MCC-54A	0.48	28.85	28.85	16.21	0.066	0.0000	Yes	MCC	25	36	18	3.7		# 0379-Line
479	MCC-54B	MB MCC-54B	0.48	29.20	29.20	16.38	0.0114	0.0000	Yes	MCC	25	12	18	0.65		# 0368
480	MCC-54B (MB MCC-54B LineSide)	800/800 MCC-54B	0.48	29.20	29.20	16.38	0.066	0.0000	Yes	MCC	25	36	18	3.7		# 0381-Line
481	MCC-55 A	MB MCC-55A	0.48	29.64	29.64	16.59	0.0114	0.0000	Yes	MCC	25	12	18	0.65		# 0368
482	MCC-55 A (MB MCC-55A LineSide)	800/600 MCC-55A	0.48	29.64	29.64	16.59	0.066	0.0000	Yes	MCC	25	36	18	3.8		# 0383-Line
483	MCC-55B	MB MCC-55B	0.48	30.01	30.01	16.77	0.0113	0.0000	Yes	MCC	25	12	18	0.66		# 0368
484	MCC-55B (MB MCC-55B LineSide)	800/600 MCC-55B	0.48	30.01	30.01	16.77	0.066	0.0000	Yes	MCC	25	37	18	3.8		# 0385-Line
485	MCC-56 A	800/600 MCC-56A	0.48	13.72	13.26	7.06	0.066	0.0000	Yes	MCC	25	21	18	1.6	(*N3)	# 0368
486	MCC-56 A (MB MCC-56A LineSide)	800/600 MCC-56A	0.48	13.72	13.26	8.30	0.066	0.0000	Yes	MCC	25	24	18	1.9		# 0387-Line
487	MCC-56B	800/600 MCC-56B	0.48	13.58	13.12	6.99	0.066	0.0000	Yes	MCC	25	21	18	1.6	(*N3)	# 0368
488	MCC-56B (MB MCC-56B LineSide)	800/600 MCC-56B	0.48	13.58	13.12	8.23	0.066	0.0000	Yes	MCC	25	24	18	1.9		# 0389-Line
489	MCC-ADM-A	800/800 ATS-ADM-EMG	0.48	11.14	11.14	7.19	0.08	0.0000	Yes	MCC	25	24	18	1.9	(*N5) (*N23)	# 0032
490	MCC-ADM-A (MB MCC-ADM-A LineSide)	800/800 ATS-ADM-EMG	0.48	11.14	11.14	7.19	0.08	0.0000	Yes	MCC	25	24	18	1.9	(*N23)	# 0012-Line
491	MCC-ADM-A (PD STORM WATER PUMP CP LineSide)	PD STORM WATER PUMP CP	0.48	11.14	11.14	7.19	0.05	0.0000	Yes	MCC	25	18	18	1.2		# 0013-Line
492	MCC-ADM-A (PD XFMR-LP-ADM-1 LineSide)	PD XFMR-LP-ADM-1	0.48	11.14	11.14	7.19	0.05	0.0000	Yes	MCC	25	18	18	1.2		# 0011-Line
493	MCC-C	800/200 MCC-C	0.48	14.81	14.81	9.17	0.08	0.0000	Yes	MCC	25	28	18	2.4	(*N23)	# 0283
494	MCC-CEB-A	800/600 MCC-CEB-A	0.48	23.87	23.87	13.79	0.06	0.0000	Yes	MCC	25	30	18	2.8	(*N23)	# 0034
495	MCC-CEB-B	800/600 MCC-CEB-B	0.48	24.06	24.06	13.88	0.06	0.0000	Yes	MCC	25	31	18	2.8	(*N23)	# 0035
496	MCC-D	800/200 MCC-D	0.48	15.04	15.04	9.29	0.08	0.0000	Yes	MCC	25	28	18	2.5	(*N23)	# 0286
497	MCC-E	800/400 MCC-E	0.48	12.81	10.20	6.45	0.06	0.0000	Yes	MCC	25	23	18	1.7		# 0215
498	MCC-EBB-A	800/600 MCC-EBB-A	0.48	9.67	9.31	6.13	0.08	0.0000	Yes	MCC	25	22	18	1.6		# 0218
499	MCC-EBB-B	800/600 MCC-EBB-B	0.48	8.81	8.47	5.66	0.08	0.0000	Yes	MCC	25	21	18	1.5		# 0220
500	MCC-EE	FU MCC-EE	0.48	12.24	12.24	7.79		0.0000	Yes	MCC	25	7	18	0.25	(*N4)	# 0222
501	MCC-EPB-A	MB MCC-EPB-A	0.48	5.80	5.80	4.12	0.0548	0.0000	Yes	MCC	25	13	18	0.70		# 0225
502	MCC-EPB-A (MB MCC-EPB-A LineSide)	800/200 MCC-EPB-A	0.48	5.80	5.80	4.12	0.08	0.0000	Yes	MCC	25	16	18	1.0	(*N23)	# 0256-Line
503	MCC-EPB-B	MB MCC-EPB-B	0.48	5.48	5.48	3.92	0.0555	0.0000	Yes	MCC	25	13	18	0.67		# 0225

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
504	MCC-EPB-B (MB MCC-EPB-B LineSide)	800/200 MCC-EPB-B	0.48	5.48	5.48	3.92	0.08	0.0000	Yes	MCC	25	16	18	0.97	(*N23)	# 0256-Line
505	MCC-F	800/400 MCC-F	0.48	11.99	10.12	6.46	0.06	0.0000	Yes	MCC	25	21	18	1.6		# 0229
506	MCC-FF	FU 0560	0.48	11.53	11.53	7.41		0.0000	Yes	MCC	25	7	18	0.25	(*N4)	# 0222
507	MCC-M	FB-MCC-M	0.48	19.21	15.26	7.74	0.32	0.0000	Yes	MCC	25	59	18	8.4	(*N3)	# 0322
508	MCC-N	FB-MCC-N	0.48	21.35	17.08	8.53	0.32	0.0000	Yes	MCC	25	61	18	8.9	(*N3)	# 0322
509	MCC-P	FB-MCC-P	0.48	20.24	17.78	10.52	0.05	0.0000	Yes	MCC	25	26	18	2.2		# 0322
510	MCC-Q	FB-MCC-Q	0.48	18.64	17.59	10.53	0.05	0.0000	Yes	MCC	25	24	18	2.0		# 0322
511	MCC-R	800/800 MCC-R	0.48	41.85	36.65	19.51	0.066	0.0000	Yes	MCC	25	45	18	5.4		# 0322
512	MCC-RLS-A	MB MCC-RLS-A	0.48	15.07	12.90	7.97	0.14	0.0000	Yes	MCC	25	38	18	4.1		# 0313
513	MCC-RLS-A (MB MCC-RLS-A LineSide)	800/600 MCC-RLS-A	0.48	15.07	12.90	7.97	0.08	0.0000	Yes	MCC	25	28	18	2.5		# 0314-Line
514	MCC-RLS-B	MB MCC-RLS-B	0.48	12.42	10.99	5.93	0.0902	0.0000	Yes	MCC	25	24	18	1.9	(*N3)	# 0273
515	MCC-RLS-B (MB MCC-RLS-B LineSide)	800/400 MCC-RLS-B	0.48	12.42	10.99	6.98	0.08	0.0000	Yes	MCC	25	25	18	2.1		# 0274-Line
516	MCC-S	800/800 MCC-S	0.48	42.53	38.90	20.66	0.066	0.0000	Yes	MCC	25	45	18	5.4		# 0322
517	MCC-WBB-A	1600/1440 MCC-WBB-A	0.48	36.75	32.06	17.39	0.08	0.0000	Yes	MCC	25	46	18	5.6		# 0233
518	MCC-WBB-B	1600/1440 MCC-WBB-B	0.48	33.55	31.23	17.16	0.08	0.0000	Yes	MCC	25	44	18	5.2		# 0235
519	MCC-WPB-A	MB MCC-WPB-A	0.48	12.90	12.90	8.15	0.0506	0.0000	Yes	MCC	25	19	18	1.3		# 0209
520	MCC-WPB-A (MB MCC-WPB-A LineSide)	800/400 MCC-WPB-A	0.48	12.90	12.90	8.15	0.08	0.0000	Yes	MCC	25	26	18	2.1	(*N23)	# 0287-Loa
521	MCC-WPB-B	MB MCC-WPB-B	0.48	12.54	12.54	7.96	0.0509	0.0000	Yes	MCC	25	19	18	1.3		# 0237
522	MCC-WPB-B (MB MCC-WPB-B LineSide)	800/400 MCC-WPB-B	0.48	12.54	12.54	7.96	0.08	0.0000	Yes	MCC	25	25	18	2.1	(*N23)	# 0485-Loa
523	MCC-XA	800/800 MCC-XA	0.48	17.11	15.87	8.18	0.218	0.0000	Yes	MCC	25	47	18	5.8	(*N3)	# 0322
524	MCC-XB	800/800 MCC-XB	0.48	40.49	38.45	20.56	0.066	0.0000	Yes	MCC	25	44	18	5.1		# 0322
525	METAL LATHE	FU PP-MTB	0.48	4.94	4.94	3.59		0.0000	Yes	PNL	25	7	18	0.25	(*N4) (*N5)	# 0522
526	MILL MACH	FB MILL MACH	0.48	4.10	4.10	3.06	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0523
527	MOD VALVE 1 DISC	FU 0746	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
528	MOD VALVE 3 DISC	FU 0746	0.48	1.36	1.36	1.19	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
529	MOD VALVE 5 DISC	FU 0746	0.48	1.25	1.25	1.11	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
530	MOD VALVE 7 DISC	FU 0746	0.48	1.16	1.16	1.04	0.0083	0.0000	Yes	PNL	25	2	18	0.02		# 0568
531	MPPEWP1 DISC	FU MP PEW PUMP 1	0.48	10.42	10.01	5.54	0.0083	0.0000	Yes	PNL	25	7	18	0.24		# 0475
532	MPPEWP2 DISC	FU 0548	0.48	9.88	9.47	6.22	0.0083	0.0000	Yes	PNL	25	7	18	0.26		# 0073
533	MU HV2 DISC	FU 0749	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
534	MV10 DISC	FU 0659	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
535	MV11 DISC	FU 0659	0.48	1.47	1.47	1.28	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
536	MV12 DISC	FU 0659	0.48	1.46	1.46	1.27	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
537	MV2 DISC	FU 0711	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
538	MV4 DISC	FU 0711	0.48	1.48	1.48	1.28	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
539	MV6 DISC	FU 0711	0.48	1.47	1.47	1.27	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
540	MV8 DISC	FU 0711	0.48	1.46	1.46	1.26	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
541	MV9 DISC	FU 0659	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
542	N EQPT RCPT	FU 0715	0.48	2.33	2.33	1.89		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0568
543	OZNR DISC	FU 0917	0.48	8.07	8.07	5.46		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0099
544	P-53-06 DISC	PD P-53-06	0.48	5.91	5.91	4.19	0.0162	0.0000	Yes	PNL	25	6	18	0.21		# 0492
545	P-53-06 STR	PD P-53-06	0.48	5.01	5.01	3.63	0.0162	0.0000	Yes	PNL	25	6	18	0.18		# 0492
546	P-53-07 DISC	PD P-53-07	0.48	3.52	3.52	2.69	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0492
547	P-53-07 STR	PD P-53-07	0.48	3.16	3.16	2.45	0.0162	0.0000	Yes	PNL	25	4	18	0.12		# 0492
548	P-53-20 DISC	PD P-53-07	0.48	5.99	5.99	4.23	0.0162	0.0000	Yes	PNL	25	6	18	0.21		# 0492
549	P-53-20 STR	PD P-53-07	0.48	5.06	5.06	3.67	0.0162	0.0000	Yes	PNL	25	6	18	0.18		# 0492
550	P-53-21 DISC	PD P-53-06	0.48	5.42	5.42	3.89	0.0162	0.0000	Yes	PNL	25	6	18	0.19		# 0492
551	P-53-21 STR	PD P-53-06	0.48	4.64	4.64	3.41	0.0162	0.0000	Yes	PNL	25	5	18	0.17		# 0492
552	PAB-E1 DV & BOV	FB PAB-E1 DV & BOV	0.48	2.21	2.21	1.81	0.0162	0.0000	Yes	PNL	25	4	18	0.08		# 0549
553	PAB-E1 LCP	FB PAB-E1 LCP	0.48	3.61	3.61	2.75	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0550
554	PAB-E1 STR IN	PD PAB-E1 RELAY	4.16	2.84	2.30	2.28	0.0167	0.0830	Yes	SWG	104	8	36	0.27		# 0250
555	PAB-E1 STR IN (FU PAB-E1 LineSide)	PD PAB-E1 RELAY	4.16	2.84	2.30	2.28	0.0167	0.0830	Yes	SWG	104	8	36	0.27		# 0014-Line
556	PAB-E2 DV & BOV1	FB PAB-E2 DV & BOV1	0.48	1.88	1.88	1.57	0.018	0.0000	Yes	PNL	25	3	18	0.08		# 0554
557	PAB-E2 LCP	FB PAB-E2 LCP	0.48	3.03	3.03	2.37	0.0162	0.0000	Yes	PNL	25	4	18	0.11		# 0555
558	PAB-E2 STR IN	PD PAB-E2 RELAY	4.16	2.28	1.75	1.74	0.0167	0.0830	Yes	SWG	104	6	36	0.22		# 0252
559	PAB-E2 STR IN (FU PAB-E2 LineSide)	PD PAB-E2 RELAY	4.16	2.28	1.75	1.74	0.0167	0.0830	Yes	SWG	104	6	36	0.22		# 0015-Line
560	PAB-E3 DV & BOV	FB PAB-E3 DV & BOV	0.48	1.65	1.65	1.41	0.0196	0.0000	Yes	PNL	25	3	18	0.08		# 0559
561	PAB-E3 LCP	FB PAB-E3 LCP	0.48	2.35	2.35	1.91	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0560
562	PAB-E3 STR IN	PD PAB-E3 RELAY	4.16	2.84	2.30	2.28	0.0167	0.0830	Yes	SWG	104	8	36	0.27		# 0254
563	PAB-E3 STR IN (FU PAB-E3 LineSide)	PD PAB-E3 RELAY	4.16	2.84	2.30	2.28	0.0167	0.0830	Yes	SWG	104	8	36	0.27		# 0016-Line
564	PAB-W1 VALVES JB	PD PAB-W1 VALVES	0.48	6.83	6.83	4.74	0.0162	0.0000	Yes	PNL	25	7	18	0.24		# 0106
565	PAB-W2 VALVES JB	PD PAB-W2 VALVES	0.48	5.21	5.21	3.76	0.0162	0.0000	Yes	PNL	25	6	18	0.19		# 0077
566	PAB-W3 VALVES JB	PD PAB-W3 VALVES	0.48	4.31	4.31	3.20	0.0162	0.0000	Yes	PNL	25	5	18	0.16		# 0107
567	PCDR W1 DISC	MCP PCDR-W1	0.48	1.35	1.35	1.19	0.005	0.0000	Yes	PNL	25	1	18	0.02		# 0492
568	PCDR-W2 DISC	MCP PCDR-W2	0.48	2.19	2.19	1.79	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
569	PC-E1 DISC	MCP PC-E1	0.48	0.60	0.60	0.60	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11)	# 0256
570	PC-E2 DISC	MCP PC-E2	0.48	0.75	0.75	0.72	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0180
571	PC-E3 DISC	MCP PC-E3	0.48	0.78	0.78	0.74	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0256
572	PC-E4 DISC	MCP PC-E4	0.48	0.54	0.54	0.54	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11)	# 0180
573	PC-WPB-EF-2 DISC	MCP WPB-EF-2	0.48	3.19	3.19	2.47	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0492
574	PC-WPB-P-2 DISC	MCP WPB-P-2	0.48	2.03	2.03	1.68	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
575	PDP UV 2A	FB-PDP-UV-2A	0.48	14.36	14.36	7.59	0.2	0.0000	Yes	MCC	25	39	18	4.3	(*N3)	# 0322
576	PDP UV 2B	FB-PDP-UV-2B	0.48	14.36	14.36	7.59	0.2	0.0000	Yes	MCC	25	39	18	4.3	(*N3)	# 0322
577	PDP-E1 DISC	MCP PDP-E1	0.48	4.31	4.31	3.20	0.005	0.0000	Yes	PNL	25	3	18	0.05		# 0256
578	PDP-W1 DISC	MCP PDP-W1	0.48	3.42	3.42	2.62	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0492
579	PEW STRAINER DISC	FU 0697	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
580	PEWP1 DISC	FB-MCC-P	0.48	15.00	13.59	7.14	0.05	0.0000	Yes	PNL	25	20	18	1.4	(*N21b)	# 0136

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
581	PEWP2 DISC	FU PEW PUMP 2	0.48	17.89	16.45	8.42	0.0327	0.0000	Yes	PNL	25	18	18	1.2		# 0568
582	PEWP3 ATS NRM	FU PEW PUMP 3	0.48	20.53	19.10	9.59	0.0205	0.0000	Yes	PNL	25	15	18	0.92	(*N21b)	# 0576
583	PEWP3 DISC	FU PEW PUMP 3	0.48	17.05	15.64	8.06	0.0383	0.0000	Yes	PNL	25	19	18	1.3		# 0568
584	PMPRM HOIST DISC	FU 0575	0.48	4.08	4.08	3.05	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0073
585	PP-ADM-1	PD XFMR PP-ADM-1	0.48	2.67	2.67	1.81	0.7071	0.0000	Yes	PNL	25	36	18	3.7	(*N3) (*N5)	# 0036
586	PP-ADM-1 (MB PP-ADM-1 LineSide)	PD XFMR PP-ADM-1	0.48	2.67	2.67	1.81	0.7071	0.0000	Yes	PNL	25	36	18	3.7	(*N3)	# 0017-Line
587	PP-ADM-2	PD XFMR PP-ADM-1	0.48	2.16	2.16	1.51	1.014	0.0000	Yes	PNL	25	40	18	4.3	(*N3) (*N5)	# 0036
588	PP-EBB-A	FB ATS-EBB NORM	0.48	8.37	8.37	5.63	0.04	0.0000	Yes	PNL	25	13	18	0.71		# 0278
589	PP-EBB-B	FB PP-EBB-B	0.48	7.07	7.07	4.88	0.0166	0.0000	Yes	PNL	25	7	18	0.25		# 0278
590	PP-LSE	MB PP-LSE	0.48	12.05	12.05	7.69	0.0175	0.0000	Yes	PNL	25	10	18	0.44		# 0074
591	PP-LSE (MB PP-LSE LineSide)	FB ATS-LSE-NRM	0.48	12.05	12.05	7.69	0.0533	0.0000	Yes	PNL	25	19	18	1.3		# 0075-Line
592	PP-LSE CKT #19	FB SLDG'S F-50-3,4	0.48	1.00	1.00	0.78	0.0575	0.0000	Yes	PNL	25	4	18	0.12	(*N3)	# 0074
593	PP-MTB	FU PP-MTB	0.48	5.48	5.48	3.92		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0074
594	PP-MTB DISC SW	800/250 PP-MTB	0.48	5.72	5.72	4.07	0.08	0.0000	Yes	PNL	25	16	18	1.0	(*N23)	# 0435
595	PP-UV	FU ATS-PP-UV-NRM	0.48	1.67	1.67	1.21	0.049	0.0000	Yes	PNL	25	5	18	0.17	(*N3)	# 0374
596	PP-WBB-A	FB ATS-WBB-NORM	0.48	29.70	29.70	16.62	0.05	0.0000	Yes	PNL	25	31	18	2.9		# 0079
597	PP-WBB-B	PD PP-WBB-B	0.48	28.79	28.79	16.18	0.0175	0.0000	Yes	PNL	25	16	18	0.98		# 0074
598	PP-Z	FU PP-MTB	0.48	4.89	4.89	3.56		0.0000	Yes	PNL	25	7	18	0.25	(*N4) (*N5)	# 0074
599	PP-Z (MB-PP-Z LineSide)	FU PP-MTB	0.48	4.89	4.89	3.56		0.0000	Yes	PNL	25	7	18	0.25	(*N4) (*N5)	# 0601-Line
600	PSCP-E1 DISC	MCP PSLMP-E4	0.48	3.75	3.75	2.84	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0256
601	PSCP-E2 DISC	MCP PSCP-E2	0.48	3.63	3.63	2.76	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0180
602	PSCP-W1 DISC	MCP PSCP-W1	0.48	6.90	6.90	4.78	0.005	0.0000	Yes	PNL	25	3	18	0.07		# 0492
603	PSCP-W2 DISC	MCP PSCP-W2	0.48	4.48	4.48	3.30	0.005	0.0000	Yes	PNL	25	3	18	0.05		# 0492
604	PSLP-E2 VFD IN	PD PSLP-E2	0.48	3.41	3.41	2.61	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0445
605	PSLPG-W1 VFD IN	PD PSLPG-W1	0.48	2.63	2.63	2.09	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0492
606	PSLPG-W2 INPUT	PD PSLPG-W2	0.48	4.71	4.71	3.45	0.0162	0.0000	Yes	PNL	25	5	18	0.17		# 0492
607	PSLPM-E1 LCP	PD PSLPM-E1	0.48	3.63	3.63	2.76	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0450
608	PSLPM-E2 LCP	PD PSLPM-E2	0.48	3.41	3.41	2.61	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0451
609	PSLP-W1 VFD IN	PD PSLP-W1	0.48	7.06	7.06	4.87	0.0162	0.0000	Yes	PNL	25	7	18	0.25		# 0492
610	PSLP-W2 INPUT	PD PSLP-W2	0.48	8.29	8.29	5.59	0.0162	0.0000	Yes	PNL	25	8	18	0.29		# 0492
611	RASP-E1 VFD IN	PD RASP-E1	0.48	2.03	2.03	1.68	0.021	0.0000	Yes	PNL	25	4	18	0.10		# 0302
612	RASP-E2 VFD IN	PD RASP-E2	0.48	1.99	1.99	1.65	0.0191	0.0000	Yes	PNL	25	4	18	0.09		# 0461
613	RASP-E3 VFD IN	PD RASP-E3	0.48	2.03	2.03	1.68	0.021	0.0000	Yes	PNL	25	4	18	0.10		# 0302
614	RASP-E4 VFD IN	PD RASP-E4	0.48	1.99	1.99	1.65	0.0191	0.0000	Yes	PNL	25	4	18	0.09		# 0463
615	RASP-E5 VFD IN	PD RASP-E5	0.48	2.03	2.03	1.68	0.021	0.0000	Yes	PNL	25	4	18	0.10		# 0302
616	RASP-E6 VFD IN	PD RASP-E6	0.48	1.99	1.99	1.65	0.0191	0.0000	Yes	PNL	25	4	18	0.09		# 0465
617	RASP-E7 VFD IN	PD RASP-E7	0.48	2.03	2.03	1.68	0.021	0.0000	Yes	PNL	25	4	18	0.10		# 0302
618	RASP-E8 VFD IN	PD RASP-E8	0.48	1.99	1.99	1.65	0.0191	0.0000	Yes	PNL	25	4	18	0.09		# 0467
619	RASP-W1 VFD IN	PD RASP-W1	0.48	14.45	14.45	8.98	0.0162	0.0000	Yes	PNL	25	10	18	0.48	(*N21b)	# 0028

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
620	RASP-W2 VFD IN	PD RASP-W2	0.48	14.05	14.05	8.77	0.0162	0.0000	Yes	PNL	25	10	18	0.47	(*N21b)	# 0492
621	RASP-W3 VFD IN	PD RASP-W3	0.48	14.45	14.45	8.98	0.0162	0.0000	Yes	PNL	25	10	18	0.48	(*N21b)	# 0028
622	RASP-W4 VFD IN	PD RASP-W4	0.48	14.05	14.05	8.77	0.0162	0.0000	Yes	PNL	25	10	18	0.47	(*N21b)	# 0492
623	RBDP1 DISC	FU 0523	0.48	8.41	8.41	4.81	0.0083	0.0000	Yes	PNL	25	5	18	0.13	(*N3)	# 0073
624	RBDP2 DISC	FU RB DRAIN PUMP 2	0.48	9.90	9.90	6.50	0.0042	0.0000	Yes	PNL	25	4	18	0.09		# 0475
625	RBDP3 DISC	FU 0542	0.48	8.41	8.41	4.81	0.0083	0.0000	Yes	PNL	25	5	18	0.13	(*N3)	# 0073
626	RBDP-4 DISC	FU RB DRAIN PUMP 4	0.48	9.90	9.90	6.50	0.0042	0.0000	Yes	PNL	25	4	18	0.09		# 0475
627	RECIRCV PAB-E1	FB RECIRCV PAB-E1	0.48	2.31	2.31	1.88	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0626
628	RECIRCV PAB-E2	FB RECIRCV PAB-E2	0.48	1.95	1.95	1.62	0.0175	0.0000	Yes	PNL	25	4	18	0.08		# 0627
629	RECIRCV PAB-E3	FB RECIRCV PAB-E3	0.48	1.53	1.53	1.32	0.0206	0.0000	Yes	PNL	25	3	18	0.08		# 0628
630	RETBSNRFCV STARTER	FU RET BSN RF CV	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
631	RF # 5 DISC	FU 0530	0.48	2.78	2.78	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
632	RF # 6 DISC	FU 0555	0.48	2.78	2.78	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
633	RF-1 DISC	MCP RF-1	0.48	3.25	3.25	2.51	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0180
634	RIVER VALVE DISC	FU 0689	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*N21b)	# 0136
635	RLS-ACCU-1	PD RLS-ACCU-1	0.48	2.85	2.85	2.25	0.0162	0.0000	Yes	PNL	25	4	18	0.11		# 0417
636	RLS-ACCU-1 DISC	PD RLS-ACCU-1	0.48	3.49	3.49	2.67	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0492
637	RLS-ACU-1	PD RLS-ACU-1	0.48	7.21	7.21	4.96	0.0162	0.0000	Yes	PNL	25	7	18	0.25		# 0417
638	RLS-EF-1 DISC	MCP RLS-EF-1	0.48	2.77	2.77	2.19	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0430
639	RLS-EF-2 DISC	MCP RLS-EF-2	0.48	4.90	4.90	3.56	0.005	0.0000	Yes	PNL	25	3	18	0.05		# 0430
640	RLS-PPU-1	PD RLS-PPU-1	0.48	7.48	7.48	5.12	0.0162	0.0000	Yes	PNL	25	7	18	0.26		# 0563
641	RLS-SF-1 DISC	MCP RLS-SF-1	0.48	1.80	1.80	1.52	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0430
642	ROOF FAN 10 DISC	FU 0722	0.48	2.93	2.93	2.30	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0568
643	ROOF FAN 11 DISC	FU 0693	0.48	2.90	2.90	2.27	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0136
644	ROOF FAN 12 DISC	FU 0731	0.48	2.93	2.93	2.30	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0568
645	RS-SAP-1 DISC	MCP RS-SAP-1	0.48	2.07	2.07	1.71	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
646	S-1-1 DISC	PD 48IN GATE S-1-1	0.48	1.68	1.68	1.43	0.0169	0.0000	Yes	PNL	25	3	18	0.07		# 0430
647	S-21-1 DISC	PD F-1-1	0.48	2.17	2.17	1.78	0.0162	0.0000	Yes	PNL	25	4	18	0.08		# 0160
648	S-21-1 STARTER	PD F-1-1	0.48	1.92	1.92	1.60	0.0166	0.0000	Yes	PNL	25	3	18	0.08		# 0498
649	S-21-2 DISC	PD F-1-1	0.48	2.15	2.15	1.77	0.0163	0.0000	Yes	PNL	25	4	18	0.08		# 0160
650	S-21-2 STARTER	PD F-1-1	0.48	1.71	1.71	1.45	0.0169	0.0000	Yes	PNL	25	3	18	0.07		# 0500
651	S-21-3 DISC	PD F-1-5	0.48	1.79	1.79	1.51	0.0168	0.0000	Yes	PNL	25	3	18	0.07		# 0160
652	S-21-3 STARTER	PD F-1-5	0.48	1.47	1.47	1.08	0.0209	0.0000	Yes	PNL	25	3	18	0.06	(*N3)	# 0500
653	S-21-4 DISC	PD F-1-5	0.48	1.77	1.77	1.50	0.0168	0.0000	Yes	PNL	25	3	18	0.07		# 0160
654	S-21-4 STARTER	PD F-1-5	0.48	1.60	1.60	1.37	0.0171	0.0000	Yes	PNL	25	3	18	0.07		# 0500
655	S-54-2 DISC	PD F-54-5	0.48	2.45	2.45	1.97	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0680
656	S-54-2 STR	PD F-54-5	0.48	2.35	2.35	1.91	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0681
657	SC-1 DISC	FU SC-1	0.48	4.39	4.39	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
658	SC-2 DISC	FU SCREEN COMP SC-2	0.48	4.44	4.44	3.28	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
659	SC-3 DISC	FU SCREEN COMP SC-3	0.48	4.44	4.44	3.28	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
660	SCDR-W1 DISC	MCP SCDR-W1	0.48	0.63	0.63	0.63	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11)	# 0028

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
661	SCDR-W2 DISC	MCP SCDR-W2	0.48	0.63	0.63	0.63	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11)	# 0492
662	SC-E1 DISC	MCP SEC-CLAR-E1	0.48	0.58	0.58	0.58	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11)	# 0511
663	SC-E2 DISC	MCP CLARIFIER SC-E2	0.48	0.58	0.58	0.58	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11)	# 0512
664	SC-E3 DISC	MCP SEC-CLAR-E3	0.48	0.33	0.33	0.33	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11)	# 0513
665	SC-E4 DISC	MCP CLARIFIER SC-E4	0.48	0.33	0.33	0.33	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11)	# 0514
666	SCREW CONV 3 STR	FU SCREW CONV 3	0.48	4.44	4.44	3.28	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
667	SCRCNCV DISC	FU SCREENINGS CONV	0.48	4.44	4.44	3.28	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
668	SCTY GATE STARTER	FU SECURITY GATE	0.48	4.83	4.83	3.52	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0475
669	SE ISO VALVE DISC	FU 0688	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*N21b)	# 0136
670	SECURITY GATE DISC	FU SECURITY GATE	0.48	5.78	5.78	4.10	0.0042	0.0000	Yes	PNL	25	3	18	0.05		# 0475
671	SEG1 DISC	FU 0664	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
672	SEP1 VFD IN	FU SEC EFF PUMP 1	0.48	16.13	16.13	9.86		0.0000	Yes	PNL	25	10	18	0.45	(*N4) (*N21b)	# 0664
673	SEP2 VFD IN	FU SEC EFF PUMP 2	0.48	17.97	16.90	10.18	0.0083	0.0000	Yes	PNL	25	12	18	0.62	(*N21b)	# 0568
674	SEP3 VFD IN	FU SEC EFF PUMP #3	0.48	17.12	16.06	9.74	0.0083	0.0000	Yes	PNL	25	12	18	0.65	(*N21b)	# 0136
675	SEP4 VFD IN	FU SEC EFF PUMP #4	0.48	15.57	14.53	7.59	0.0135	0.0000	Yes	PNL	25	11	18	0.55		# 0668
676	SEP5 VFD IN	FU SEC EFF PUMP 5	0.48	14.35	13.29	7.03	0.0182	0.0000	Yes	PNL	25	12	18	0.62	(*N21b)	# 0669
677	SEP6 VFD IN	FU SEC EFF PUMP 6	0.48	17.97	16.90	10.18	0.0083	0.0000	Yes	PNL	25	11	18	0.50	(*N21b)	# 0591
678	SEPPMP DISC TERM	FU SEPTIC PUMP	0.48	8.01	8.01	5.43	0.0042	0.0000	Yes	PNL	25	3	18	0.07		# 0492
679	SF1 DISC	FU EF-3,4,1	0.48	1.47	1.47	1.27	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
680	SF1FF DISC	FU 0920	0.48	3.99	3.99	2.99	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0099
681	SF2EE DISC	FU 0909	0.48	1.54	1.54	1.33	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0099
682	SF3FF DISC	FU 0922	0.48	3.99	3.99	2.99	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0099
683	SF4EE DISC	FU 0911	0.48	4.08	4.08	3.05	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0099
684	SLC 4 DISC	MCP SLC -4	0.48	3.51	3.51	2.68	0.015	0.0000	Yes	PNL	25	4	18	0.12		# 0602
685	SLC 5 DISC	MCP SLC -5	0.48	3.29	3.29	2.54	0.015	0.0000	Yes	PNL	25	4	18	0.11		# 0603
686	SLC 6 DISC	FB SLC -6	0.48	2.43	2.43	1.96	0.0195	0.0000	Yes	PNL	25	4	18	0.11		# 0604
687	SLC 7 DISC	FB SLC -7	0.48	2.26	2.26	1.84	0.0201	0.0000	Yes	PNL	25	4	18	0.11		# 0605
688	SLC-1 DISC	FU SLUDGE COLL 1	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
689	SLC2 DISC	FU 0527	0.48	2.78	2.78	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
690	SLC-3 DISC	FU SLUDGE COLL 3	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
691	SLDG F-50-1	FB SLDG'S S-50-1,2,3,4,5	0.48	0.88	0.88	0.70	0.5158	0.0000	Yes	PNL	25	16	18	0.97	(*N3)	# 0681
692	SLDG F-50-2	FB SLDG'S S-50-1,2,3,4,5	0.48	0.88	0.88	0.70	0.5158	0.0000	Yes	PNL	25	16	18	0.97	(*N3)	# 0682
693	SLDG F-50-3	FB SLDG'S F-50-3,4	0.48	0.77	0.77	0.62	0.7471	0.0000	Yes	PNL	25	18	18	1.2	(*N3)	# 0118
694	SLDG F-50-4	FB SLDG'S F-50-3,4	0.48	0.77	0.77	0.62	0.7471	0.0000	Yes	PNL	25	18	18	1.2	(*N3)	# 0118
695	SLDG F-60-1	FB SLDG'S F-60-1,2,3	0.48	0.92	0.92	0.73	0.4249	0.0000	Yes	PNL	25	14	18	0.83	(*N3)	# 0685
696	SLDG F-60-2	FB SLDG'S F-60-1,2,3	0.48	0.92	0.92	0.73	0.4249	0.0000	Yes	PNL	25	14	18	0.83	(*N3)	# 0686
697	SLDG F-60-3	FB SLDG'S F-60-1,2,3	0.48	0.92	0.92	0.73	0.4249	0.0000	Yes	PNL	25	14	18	0.83	(*N3)	# 0687
698	SLDG F-60-4	FB SLDG's S-60-1,2	0.48	0.76	0.76	0.62	0.7588	0.0000	Yes	PNL	25	18	18	1.2	(*N3)	# 0688
699	SLDG S-50-1	FB SLDG'S S-50-1,2,3,4,5	0.48	0.80	0.80	0.65	0.7165	0.0000	Yes	PNL	25	18	18	1.2	(*N3)	# 0689
700	SLDG S-50-2	FB SLDG'S S-50-1,2,3,4,5	0.48	0.88	0.88	0.70	0.5158	0.0000	Yes	PNL	25	16	18	0.97	(*N3)	# 0690
701	SLDG S-50-3	FB SLDG'S S-50-1,2,3,4,5	0.48	0.88	0.88	0.70	0.5158	0.0000	Yes	PNL	25	16	18	0.97	(*N3)	# 0691

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
702	SLDG S-50-4	FB SLDG'S S-50-1,2,3,4,5	0.48	0.88	0.88	0.70	0.5158	0.0000	Yes	PNL	25	16	18	0.97	(*N3)	# 0692
703	SLDG S-50-5	FB SLDG'S S-50-1,2,3,4,5	0.48	0.88	0.88	0.70	0.5158	0.0000	Yes	PNL	25	16	18	0.97	(*N3)	# 0693
704	SLDG S-60-1	FB SLDG's S-60-1,2	0.48	0.86	0.86	0.69	0.5754	0.0000	Yes	PNL	25	17	18	1.1	(*N3)	# 0694
705	SLDG S-60-2	FB SLDG's S-60-1,2	0.48	0.86	0.86	0.69	0.5754	0.0000	Yes	PNL	25	17	18	1.1	(*N3)	# 0695
706	SLG-3 DISC	FU SLUICE GATE 3	0.48	4.39	4.39	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
707	SLG-4 DISC	FU SLUICE GATE 4	0.48	4.39	4.39	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
708	SLGT1 DISC	FU 0562	0.48	6.89	6.89	4.77	0.0042	0.0000	Yes	PNL	25	3	18	0.06		# 0073
709	SLGT2 DISC	FU 0563	0.48	2.78	2.78	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
710	SLGT-5 DISC	FU SLUICE GATE 5	0.48	4.44	4.44	3.28	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
711	SLP1 DISC	FU SLUDGE PUMP 1	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
712	SLP2 DISC	FU SLUDGE PUMP 2	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
713	SLP3 DISC	FU 0551	0.48	2.78	2.78	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
714	SLUDGE CND LCP	PD PSLPM-E3	0.48	3.31	3.31	2.55	0.0162	0.0000	Yes	PNL	25	4	18	0.12		# 0349
715	SMP2 DISC	FU 0525	0.48	2.78	2.78	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
716	SP NGB DISC	FU SUMP PUMP NGB	0.48	4.39	4.39	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
717	SSC-1 DISC	FU SSC-1	0.48	4.39	4.39	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
718	SSC-2 DISC	FU SSC-2	0.48	4.44	4.44	3.28	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
719	SSCP-E1 DISC	MCP SEC SCUM PMP-E1	0.48	1.36	1.36	1.19	0.04	0.0000	Yes	PNL	25	5	18	0.13		# 0554
720	SSCP-E1TERM	MCP SEC SCUM PMP-E1	0.48	1.29	1.29	1.14	0.04	0.0000	Yes	PNL	25	5	18	0.13		# 0558
721	SSCP-W1 DISC	MCP SSCP-W1	0.48	7.20	7.20	4.95	0.005	0.0000	Yes	PNL	25	3	18	0.08		# 0028
722	SSCP-W2 DISC	MCP SSCP-W2	0.48	7.09	7.09	4.89	0.005	0.0000	Yes	PNL	25	3	18	0.08		# 0492
723	STWP 1 DISC	MCP STWP -1	0.48	5.63	5.63	4.02	0.015	0.0000	Yes	PNL	25	6	18	0.19		# 0629
724	STWP 2 DISC	MCP STWP -2	0.48	5.10	5.10	3.69	0.015	0.0000	Yes	PNL	25	5	18	0.17		# 0630
725	SUB 1 BUS A	SUB 1 MAIN A	0.48	16.76	14.61	8.44	0.5	0.0000	Yes	SWG	32	95	24	9.1		# 0487
726	SUB 1 BUS A (SUB 1 MAIN A LineSide)	52F11P RELAY	0.48	16.76	14.61	8.44	1.917	0.0830	Yes	SWG	32	242	24	36	(*N9)	# 0486-Line
727	SUB 1 BUS B	SUB 1 MAIN B	0.48	16.10	14.69	8.54	0.5	0.0000	Yes	SWG	32	95	24	9.1		# 0487
728	SUB 1 BUS B (SUB 1 MAIN B LineSide)	52F21P RELAY	0.48	16.10	14.69	8.54	1.917	0.0830	Yes	SWG	32	242	24	36	(*N9)	# 0488-Line
729	SUB 1 PRIMARY SWITCH A	52F11P RELAY	13.20	5.49	5.43	5.32	0.0167	0.0830	Yes	SWG	152	19	36	0.64		# 0047
730	SUB 1 PRIMARY SWITCH B	52F21P RELAY	13.20	6.34	6.30	6.16	0.0167	0.0830	Yes	SWG	152	22	36	0.75		# 0047
731	SUB 2 BUS A	SUB 2 MAIN A	0.48	13.05	10.45	6.29	0.32	0.0000	Yes	SWG	32	59	24	4.5		# 0364
732	SUB 2 BUS A (SUB 2 MAIN A LineSide)	52F12P RELAY	0.48	13.05	10.45	6.29	1.917	0.0830	Yes	SWG	32	198	24	27	(*N9)	# 0629-Loa
733	SUB 2 BUS B	SUB 2 MAIN B	0.48	12.33	10.46	6.36	0.32	0.0000	Yes	SWG	32	58	24	4.4		# 0364
734	SUB 2 BUS B (SUB 2 MAIN B LineSide)	52F22P RELAY	0.48	12.33	10.46	6.36	1.917	0.0830	Yes	SWG	32	197	24	27	(*N9)	# 0633-Loa
735	SUB 2 PRIMARY SWITCH A	52F12P RELAY	13.20	5.76	5.69	5.58	0.0167	0.0830	Yes	SWG	152	20	36	0.68		# 0047
736	SUB 2 PRIMARY SWITCH B	52F22P RELAY	13.20	6.66	6.61	6.46	0.0167	0.0830	Yes	SWG	152	23	36	0.79		# 0047
737	SUB 3 BUS A	SUB 3 MAIN A	0.48	39.55	34.90	17.47	0.5	0.0000	Yes	SWG	32	161	24	20		# 0367
738	SUB 3 BUS A (SUB 3 MAIN A LineSide)	52F13P RELAY	0.48	39.55	34.90	17.47	1.917	0.0830	Yes	SWG	32	409	24	78	(*N9)	# 0018-Line
739	SUB 3 BUS B	SUB 3 MAIN B	0.48	36.65	34.34	17.40	0.5	0.0000	Yes	SWG	32	159	24	19		# 0368

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
740	SUB 3 BUS B (SUB 3 MAIN B LineSide)	52F23P RELAY	0.48	36.65	34.34	17.40	1.917	0.0830	Yes	SWG	32	404	24	76	(*N9)	# 0019-Line
741	SUB 3 PRIMARY SWITCH A	52F13P RELAY	13.20	7.14	6.99	6.82	0.0167	0.0830	Yes	SWG	152	25	36	0.85		# 0047
742	SUB 3 PRIMARY SWITCH B	52F23P RELAY	13.20	6.82	6.74	6.58	0.0167	0.0830	Yes	SWG	152	24	36	0.81		# 0047
743	SUB 4 BUS A	SUB 4 MAIN A	0.48	19.88	14.90	8.36	0.32	0.0000	Yes	SWG	32	74	24	6.3		# 0501
744	SUB 4 BUS A (SUB 4 MAIN A LineSide)	52F14P RELAY	0.48	19.88	14.90	8.36	1.917	0.0830	Yes	SWG	32	246	24	37	(*N9)	# 0502-Line
745	SUB 4 BUS B	SUB 4 MAIN B	0.48	21.59	14.87	8.23	0.32	0.0000	Yes	SWG	32	75	24	6.4		# 0503
746	SUB 4 BUS B (SUB 4 MAIN B LineSide)	52F24P RELAY	0.48	21.59	14.87	8.23	1.917	0.0830	Yes	SWG	32	246	24	37	(*N9)	# 0502-Line
747	SUB 4 PRIMARY SWITCH A	52F14P RELAY	13.20	6.23	6.10	5.96	0.0167	0.0830	Yes	SWG	152	22	36	0.73		# 0047
748	SUB 4 PRIMARY SWITCH B	52F24P RELAY	13.20	6.85	6.68	6.53	0.0167	0.0830	Yes	SWG	152	24	36	0.81		# 0047
749	SUB 5 BUS A	SUB 5 MAIN A	0.48	43.69	34.52	16.99	0.3	0.0000	Yes	SWG	32	117	24	12		# 0506
750	SUB 5 BUS A (SUB 5 MAIN A LineSide)	SUB 5 XFMR A PRI FUSE	0.48	43.69	34.52	16.99	2	0.0000	Yes	SWG	32	408	24	78	(*N9)	# 0656-Line
751	SUB 5 BUS B	SUB 5 MAIN B	0.48	44.62	33.95	16.65	0.3	0.0000	Yes	SWG	32	117	24	12		# 0506
752	SUB 5 BUS B (SUB 5 MAIN B LineSide)	SUB 5 XFMR B PRI FUSE	0.48	44.62	33.95	16.65	2	0.0000	Yes	SWG	32	405	24	77	(*N9)	# 0659-Line
753	SUB 5 PRIMARY SWITCH A	52F15P RELAY	13.20	7.23	6.96	6.79	0.0167	0.0830	Yes	SWG	152	26	36	0.86		# 0047
754	SUB 5 PRIMARY SWITCH B	52F25P RELAY	13.20	6.90	6.59	6.44	0.0167	0.0830	Yes	SWG	152	24	36	0.82		# 0047
755	SUB 6 BUS A	SUB 6 MAIN A	0.48	10.12	9.76	6.13	0.32	0.0000	Yes	SWG	32	50	24	3.5		# 0371
756	SUB 6 BUS A (SUB 6 MAIN A LineSide)	PD SUB 6 XFMR A RELAY	0.48	10.12	9.76	6.13	1.917	0.0830	Yes	SWG	32	166	24	21	(*N9)	# 0020-Line
757	SUB 6 BUS B	SUB 6 MAIN B	0.48	9.18	8.84	5.65	0.32	0.0000	Yes	SWG	32	49	24	3.4		# 0372
758	SUB 6 BUS B (SUB 6 MAIN B LineSide)	PD SUB 6 XFMR B RELAY	0.48	9.18	8.84	5.65	1.917	0.0830	Yes	SWG	32	165	24	20	(*N9)	# 0021-Line
759	SUB 7 BUS A	SUB 7 MAIN A	0.48	28.11	28.11	12.66	2	0.0000	Yes	SWG	32	317	24	53	(*N3) (*N9)	# 0046
760	SUB 7 BUS A (SUB 7 MAIN A LineSide)	52F17P RELAY	0.48	28.11	28.11	14.89	1.917	0.0830	Yes	SWG	32	357	24	64	(*N9)	# 0022-Line
761	SUB 7 BUS B	SUB 7 MAIN B	0.48	27.61	27.61	14.67	0.5	0.0000	Yes	SWG	32	138	24	16		# 0046
762	SUB 7 BUS B (SUB 7 MAIN B LineSide)	52F27P RELAY	0.48	27.61	27.61	14.67	1.917	0.0830	Yes	SWG	32	353	24	63	(*N9)	# 0023-Line
763	SUB 7 XFMR A PRI	52F17P RELAY	13.20	7.24	7.24	7.07	0.0167	0.0830	Yes	SWG	152	26	36	0.86		# 0047
764	SUB 7 XFMR B PRI	52F27P RELAY	13.20	6.91	6.91	6.75	0.0167	0.0830	Yes	SWG	152	24	36	0.82		# 0048
765	SUB 8 BUS A	SUB 8 MAIN A RELAY	4.16	2.86	1.73	1.46	1.785	0.0830	Yes	SWG	104	84	36	2.7	(*N3)	# 0378
766	SUB 8 BUS A (SUB 8 MAIN A RELAY LineSide)	52F18P RELAY	4.16	2.86	1.73	1.72	1.873	0.0833	Yes	SWG	104	106	36	3.4	(*N5)	# 0026-Line
767	SUB 8 BUS B	SUB 8 MAIN B RELAY	4.16	2.29	1.72	1.45	1.807	0.0830	Yes	SWG	104	83	36	2.7	(*N3)	# 0379
768	SUB 8 BUS B (SUB 8 MAIN B RELAY LineSide)	52F28P RELAY	4.16	2.29	1.72	1.71	1.896	0.0833	Yes	SWG	104	104	36	3.4	(*N5)	# 0028-Line
769	SUB 8 PRIMARY SWITCH A	52F18P RELAY	13.20	7.17	6.95	6.79	0.0167	0.0833	Yes	SWG	152	25	36	0.85		# 0047
770	SUB 8 PRIMARY SWITCH B	52F28P RELAY	13.20	6.85	6.71	6.56	0.0167	0.0833	Yes	SWG	152	24	36	0.81		# 0047
771	SUB SP-1 DISC	FU SUB SUMP PUMP 1	0.48	4.39	4.39	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
772	SUB SP-2 DISC	FU SUB SUMP PUMP 2	0.48	4.44	4.44	3.28	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
773	SWP LCP	PD STORM WATER PUMP CP	0.48	8.24	8.24	5.56	0.05	0.0000	Yes	PNL	25	15	18	0.88		# 0049
774	SWPSO VALVE DISC S - 91 - 4	PD SWPSO-SG	0.48	2.64	2.64	2.10	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0492
775	SWPSO-SG DISC S - 91 - 1	PD SWPSO-SG	0.48	2.64	2.64	2.10	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0492
776	TABLET FDR DISC	PD-0537	0.48	3.84	3.84	2.90	0.017	0.0000	Yes	PNL	25	5	18	0.15		# 0475
777	TEMP ADM1 DISC	PD 0582	0.48	5.61	5.61	4.00	0.0161	0.0000	Yes	PNL	25	6	18	0.20		# 0073
778	TEMP ADM2 DISC	PD 0583	0.48	5.61	5.61	4.00	0.0161	0.0000	Yes	PNL	25	6	18	0.20		# 0073
779	TEMP PUMPS	FU 0683	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0547
780	TER FIL EFF SP DISC	FU 0691	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
781	TFB-MPC	MB TFB-MPC	0.208	1.50	1.50	1.15	0.0167	0.0000	Yes	PNL	25	3	18	0.05		# 0257
782	TFB-MPC (MB TFB-MPC LineSide)	FU 0730	0.208	1.50	1.50	1.15		0.0000	Yes	PNL	25	50	18	6.3	(*N4)	# 0784-Line
783	TGS DISC	PD 0581	0.48	3.65	3.65	2.77	0.017	0.0000	Yes	PNL	25	5	18	0.14		# 0073
784	UDSP1 DISC	FU 0681	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
785	UDSP2 DISC	FU 0741	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
786	UH EE DISC	FU 0907	0.48	2.78	2.78	2.20		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0099
787	UH FF	FU 0918	0.48	2.74	2.74	2.17		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0392
788	UPS-ADM-1 INPUT	PD-UPS-ADM-1	0.208	5.02	5.02	2.68	0.0167	0.0000	Yes	PNL	25	5	18	0.13		# 0492
789	UPS-ADM-1 OUTPUT	MaxTripTime @2.0s	0.208	0.04	0.04	0.04	2	0.0000	Yes	PNL	25	3	18	0.04	(*N2) (*N9) (*N11)	# 0492
790	UV 2A	FB-PDP-UV-2A	0.48	5.31	3.06	1.87	0.2735	0.0000	Yes	PNL	25	70	18	11	(*N2) (*N9)	# 0781
791	UV 2B	FB-PDP-UV-2B	0.48	5.31	3.06	1.87	0.2735	0.0000	Yes	PNL	25	70	18	11	(*N2) (*N9)	# 0782
792	UV-1A	800/200 UV-1A	0.48	2.84	2.84	2.24	0.08	0.0000	Yes	PNL	25	11	18	0.53	(*N5) (*N23)	# 0056
793	UV-1A PD LINE SIDE	800/200 UV-1A	0.48	2.86	2.86	2.25	0.08	0.0000	Yes	PNL	25	11	18	0.53	(*N23)	# 0056
794	UV-1B	800/200 UV-1B	0.48	3.32	3.32	2.56	0.08	0.0000	Yes	PNL	25	12	18	0.61	(*N5) (*N23)	# 0056
795	UV-1B PD LINE SIDE	800/200 UV-1B	0.48	3.35	3.35	2.57	0.08	0.0000	Yes	PNL	25	12	18	0.61	(*N23)	# 0056
796	VFD CFG-1 INPUT	800/600 VFD CFG-1	0.48	29.45	27.15	15.21	0.066	0.0000	Yes	PNL	25	37	18	3.9	(*N21b)	# 0785
797	VFD CFG-2 INPUT	800/600 VFD CFG-2	0.48	29.80	27.50	15.38	0.066	0.0000	Yes	PNL	25	37	18	3.9		# 0786
798	VFD CFG-3 INPUT	800/600 VFD CFG-3	0.48	32.92	30.62	16.88	0.066	0.0000	Yes	PNL	25	39	18	4.3		# 0787
799	W CONT GT2 DISC	FU 0748	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
800	W1 FLOW VALVES JB	PD W1 FLOW VALVES	0.48	3.56	3.56	2.71	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0108
801	WA MAIN BOV	PD WA MAIN BOV	0.48	3.76	3.76	2.84	0.0162	0.0000	Yes	PNL	25	5	18	0.14		# 0801
802	WAS VALVE W1	PD WAS VALVE W1	0.48	3.27	3.27	2.52	0.0162	0.0000	Yes	PNL	25	4	18	0.12		# 0802
803	WAS VALVE W1 DISC	PD WAS VALVE W1	0.48	5.23	5.23	3.77	0.0162	0.0000	Yes	PNL	25	6	18	0.19		# 0792
804	WAS VALVE W2	PD WAS VALVE W2	0.48	2.74	2.74	2.17	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0074
805	WASP-E1 VFD IN	PD WASP-E1	0.48	1.48	1.48	1.09	0.0206	0.0000	Yes	PNL	25	3	18	0.06	(*N3)	# 0302
806	WASP-E2 VFD IN	PD WASP-E2	0.48	1.46	1.46	1.08	0.0211	0.0000	Yes	PNL	25	3	18	0.06	(*N3)	# 0627
807	WASP-W1 VFD IN	PD WASP-W1	0.48	7.20	7.20	4.95	0.0162	0.0000	Yes	PNL	25	7	18	0.25		# 0028
808	WASP-W2 VFD IN	PD WASP-W2	0.48	7.09	7.09	4.89	0.0162	0.0000	Yes	PNL	25	7	18	0.25		# 0492
809	WASV E1	FB WASV E1 P-65-1	0.48	1.27	1.27	0.95	0.0285	0.0000	Yes	PNL	25	3	18	0.07	(*N3)	# 0809
810	WASV E2	FB WASV E2 P-65-2	0.48	1.27	1.27	0.95	0.0285	0.0000	Yes	PNL	25	3	18	0.07	(*N3)	# 0810
811	WASV E3	FB WASV E3	0.48	1.19	1.19	0.91	0.0314	0.0000	Yes	PNL	25	3	18	0.08	(*N3)	# 0811
812	WASV E4	FB WASV E4	0.48	1.19	1.19	0.91	0.0314	0.0000	Yes	PNL	25	3	18	0.08	(*N3)	# 0812

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm ²)	PPE Level / Notes (*N)	Label #
813	WBB-EF-1 DISC	MCP WBB-EF-1	0.48	7.20	7.20	4.95	0.005	0.0000	Yes	PNL	25	3	18	0.08		# 0028
814	WBB-EF-2 DISC	MCP WBB-EF-2	0.48	7.80	7.80	5.31	0.005	0.0000	Yes	PNL	25	4	18	0.08		# 0492
815	WBB-EF-3 DISC	MCP WBB-EF-3	0.48	3.73	3.73	2.83	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0028
816	WBB-EF-4 DISC	MCP WBB-EF-4	0.48	2.87	2.87	2.26	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
817	WBB-EF-5 DISC	MCP WBB-EF-5	0.48	2.00	2.00	1.66	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
818	WBB-EF-6 DISC	MCP WBB-EF-6	0.48	1.51	1.51	1.30	0.005	0.0000	Yes	PNL	25	1	18	0.02		# 0492
819	WBB-EF-7 DISC	MCP WBB-EF-7	0.48	2.51	2.51	2.02	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0028
820	WBB-H1 DISC	PD WBB-H1	0.48	9.73	9.73	6.41	0.0162	0.0000	Yes	PNL	25	8	18	0.33	(*N20b)	# 0492
821	WBB-H2 DISC	PD WBB-H2	0.48	6.53	6.53	4.56	0.0162	0.0000	Yes	PNL	25	7	18	0.23		# 0028
822	WBB-HV-1 DISC	MCP WBB-HV-1	0.48	4.42	4.42	3.26	0.005	0.0000	Yes	PNL	25	3	18	0.05		# 0028
823	WBB-HV-2 DISC	PD WBB-HV-2	0.48	12.87	12.87	8.14	0.0162	0.0000	Yes	PNL	25	10	18	0.43		# 0492
824	WBB-P-1 DISC	MCP WBB-P-1	0.48	2.16	2.16	1.77	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0028
825	WBB-P-2 DISC	MCP WBB-P-2	0.48	2.14	2.14	1.76	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
826	WEST AESG W1	PD WEST AESG W1	0.48	2.75	2.75	2.18	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0826
827	WEST AESG W2	PD WEST AESG W2	0.48	1.63	1.63	1.39	0.0197	0.0000	Yes	PNL	25	3	18	0.08		# 0076
828	WEST AESGW1 DISC	PD WEST AESG W1	0.48	2.92	2.92	2.29	0.0162	0.0000	Yes	PNL	25	4	18	0.11		# 0817
829	WFB-EUH-TERM's	PD WFB-EUH-1	0.208	1.66	1.66	1.23	0.0167	0.0000	Yes	PNL	25	3	18	0.06		# 0107
830	WHM DISC	FU 0665	0.48	2.33	2.33	1.89		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0136
831	Wireway	FB AT-E3 Z2 FCV	0.48	1.53	1.53	1.32	0.0206	0.0000	Yes	PNL	25	3	18	0.08		# 0831
832	Wireway.	FB AT-E4 Z2 FCV	0.48	1.53	1.53	1.32	0.0206	0.0000	Yes	PNL	25	3	18	0.08		# 0832
833	WPB-EF-1 DISC	MCP WPB-EF-1	0.48	2.28	2.28	1.86	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
834	WPB-H1 DISC	PD WPB-H1	0.48	5.66	5.66	4.03	0.0162	0.0000	Yes	PNL	25	6	18	0.20		# 0492
835	WPB-H1 HOIST	PD WPB-H1	0.48	4.64	4.64	3.41	0.0162	0.0000	Yes	PNL	25	5	18	0.17		# 0492
836	WPB-HV-1 DISC	PD WPB-HV-1	0.48	2.74	2.74	2.17	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0492
837	WPB-P-1 DISC	MCP WPB-P-1	0.48	1.80	1.80	1.52	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
838	WPE-SAP-2 DISC	MCP WPE-SAP-2	0.48	2.05	2.05	1.70	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
839	WPSE GATE E DISC	FU WPSE GATE E MTR	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
840	WPSE GATE W DISC	FU 0716	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
841	WPSE SMPL PMP DISC	FU 0712	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
842	WSE-SAP-3 DISC	MCP WSE-SAP-3	0.48	3.73	3.73	2.83	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0028
843	WTR-CRC-PMP-1 DISC	MCP WATER CIRC PUMP 1	0.48	9.47	9.47	6.26	0.005	0.0000	Yes	PNL	25	4	18	0.10		# 0492
844	WTR-CRC-PMP-2 DISC	MCP WATER CIRC PUMP 2	0.48	9.47	9.47	6.26	0.005	0.0000	Yes	PNL	25	4	18	0.10		# 0492
845	WW BYP GATE E DISC	FU 0733	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
846	WWRDP2 DISC	FU WWRD PUMP 2	0.48	3.32	3.32	2.56	0.0083	0.0000	Yes	PNL	25	3	18	0.06		# 0568
847	WWRDP3 DISC	FB-MCC-P	0.48	3.28	2.88	2.22	0.32	0.0000	Yes	PNL	25	27	18	2.3	(*N5)	# 0136
848	WWWRESDP1 DISC	FU 0652	0.48	3.30	3.30	2.54	0.0083	0.0000	Yes	PNL	25	3	18	0.06		# 0136
849	Level 0: Nonmelting, Flammable Materials with Weight >= 4.5 oz/sq yd	0.0 - 1.2 cal/cm*2												#Level 0 = 701	(*N11) - Out of IEEE 1584 Range, Lee Equation Used. Applicable for Open Air only. Existing Equipment type is not Open Air!	

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm ²)	PPE Level / Notes (*N)	Label #
850	Level 1: Arc-rated FR Shirt & Pants	1.2 - 4.0 cal/cm ²												#Level 1 = 71	(*N2) < 99% Cleared Fault Threshold	
851	Level 2: Arc-rated FR Shirt & Pants	4.0 - 8.0 cal/cm ²												#Level 2 = 34	(*N3) - Arcing Current Low Tolerances Used	
852	Level 3: Arc-rated FR Shirt & Pants & Arc Flash Suit	8.0 - 25.0 cal/cm ²												#Level 3 = 29	(*N4) - Equipment Specific Equations Used	
853	Level 4: Arc-rated FR Shirt & Pants & Arc Flash Suit	25.0 - 40.0 cal/cm ²												#Level 4 = 6	(*N5) - Miscoordinated, Upstream Device Tripped	
854	Level Dangerous!: No FR Category Found	40.0 - 999.0 cal/cm ²												#Danger = 7	(*N9) - Max Arcing Duration Reached	
855														#Equip Eval Failed = 0	(*N16) - Trip Time Recalculated	
856	For additional information refer to NFPA 70 E, Standard for Electrical Safety in the Workplace.													#Bus Equip Eval Failed = 22	(*N20b) - Equipment Evaluation Marginal for Bus	
857															(*N21b) - Equipment Evaluation Failed, OVERDUTIED BUS EQUIPMENT FOUND - Inappropriate to provide arc-flash hazard results.	
858															(*N23) - Use Maintenance Mode Function	
859															IEEE 1584 - Preferred Method (NFPA 70E 2015 Annex D.4) Bus + Line Side Report (Include Line Side + Load Side Contributions), - 99% Cleared Fault Threshold, include Ind. Motors >= 50.0hp for 5.0 Cycles), mis-coordination checked	

6.6.7 AF Results - DTE Contribution at 50% of Maximum

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
1	15 KV BUS 1	52M1P RELAY	13.20	4.15	3.23	2.70	0.4984	0.0830	Yes	SWG	152	58	36	1.9	(*N3)	# 0001
2	15 KV BUS 1 (52M1P RELAY LineSide)	FU DTE North	13.20	4.15	3.23	2.70	0.7833	0.0830	Yes	SWG	152	86	36	2.8	(*N3)	# 0014-Loa
3	15 KV BUS 1 LineSide	FU DTE North	13.20	4.15	3.23	2.70	0.7833	0.0830	Yes	SWG	152	86	36	2.8	(*N3)	# 0011
4	15 KV BUS 2	52M2P RELAY	13.20	3.91	3.10	2.60	0.5391	0.0830	Yes	SWG	152	59	36	1.9	(*N3)	# 0002
5	15 KV BUS 2 (52M2P RELAY LineSide)	FU DTE South	13.20	3.91	3.10	2.60	0.8499	0.0830	Yes	SWG	152	89	36	2.9	(*N3)	# 0035-Loa
6	15 KV BUS 2 LineSide	FU DTE South	13.20	3.91	3.10	2.60	0.8498	0.0830	Yes	SWG	152	89	36	2.9	(*N3)	# 0002
7	15 KV BUS 3	52G2P RELAY	13.20	1.50	0.75	0.33	0.35	0.0830	Yes	SWG	152	13	36	0.46	(*N16)	# 0003
8	15 KV BUS 3 (52G2_51V LineSide)	52G2P RELAY	13.20	1.50	0.75	0.33	0.35	0.0830	Yes	SWG	152	13	36	0.46	(*N16)	# 0049-Loa
9	15 KV BUS 3 (52G2_87H LineSide)	52G2_87R	13.20	1.50	0.75	0.33	0.35	0.0830	Yes	SWG	152	13	36	0.46	(*N16)	# 0050-Loa
10	15 KV BUS 3 (52G2_87R LineSide)	52G2N RELAY	13.20	1.50	0.75	0.33	0.35	0.0830	Yes	SWG	152	13	36	0.46	(*N16)	# 0052-Loa
11	15 KV BUS 3 (52G2N RELAY LineSide)	GEN 2 AMPSENTRY	13.20	1.50	0.75	0.33	1.917	0.0830	Yes	SWG	152	29	36	0.97	(*N9) (*N16)	# 0051-Loa
12	15 KV BUS 3 (52G2P RELAY LineSide)	52G2_87H	13.20	1.50	0.75	0.33	0.35	0.0830	Yes	SWG	152	13	36	0.46	(*N16)	# 0053-Loa
13	78IN GC DISC	PD 78IN GATE CONTROLLER	0.48	1.35	1.35	1.19	0.0223	0.0000	Yes	PNL	25	3	18	0.07		# 0492
14	AC2 DISC	FU 0743	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
15	AC2F DISC	FU 0574	0.48	2.77	2.77	1.86	0.0083	0.0000	Yes	PNL	25	2	18	0.04	(*N3)	# 0073
16	ADM ACCU1 DISC	PD ADM-ACCU-1	0.48	4.63	4.63	3.40	0.0162	0.0000	Yes	PNL	25	5	18	0.17		# 0492
17	ADM ACU1 DISC	PD ADM-ACU-1	0.48	7.82	7.82	5.31	0.0162	0.0000	Yes	PNL	25	7	18	0.27		# 0492
18	ADM-CH-1 DISC	PD ADM-CH-1	0.48	8.64	8.64	5.79	0.0175	0.0000	Yes	PNL	25	8	18	0.32		# 0492
19	ADM-EF-1 DISC	MCP ADM-EF-1	0.48	2.30	2.30	1.87	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
20	ADM-EF-2 DISC	MCP ADM-EF-2	0.48	2.30	2.30	1.87	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
21	ADM-HVAC-1 DISC	PD ADM-HVAC-1	0.48	5.49	5.49	3.93	0.0162	0.0000	Yes	PNL	25	6	18	0.20		# 0492
22	ADM-HVAC-2 DISC	PD ADM-HVAC-2	0.48	2.70	2.70	2.14	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0492
23	ADM-P-1 DISC	MCP ADM-P-1	0.48	3.25	3.25	2.51	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0492
24	ADM-P-2 DISC	MCP ADM-P-2	0.48	2.70	2.70	2.14	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
25	ADM-P-3 DISC	MCP ADM-P-3	0.48	7.64	7.64	5.21	0.005	0.0000	Yes	PNL	25	4	18	0.08		# 0492
26	ADM-P-4 DISC	MCP ADM-P-4	0.48	7.12	7.12	4.91	0.005	0.0000	Yes	PNL	25	3	18	0.08		# 0492
27	ADM-SUP LCP	PD 0561	0.48	2.24	2.24	1.83	0.0192	0.0000	Yes	PNL	25	4	18	0.10		# 0185
28	ADP-E2 DISC	MCP ADP-E2	0.48	5.72	5.42	3.86	0.04	0.0000	Yes	PNL	25	11	18	0.50		# 0027
29	ADP-W1 DISC	MCP ADP-W1	0.48	5.72	5.72	4.07	0.005	0.0000	Yes	PNL	25	3	18	0.06		# 0028
30	AIR COMP 1 DISC	FU AIR COMP 1	0.48	2.81	2.81	1.89	0.0083	0.0000	Yes	PNL	25	2	18	0.05	(*N3)	# 0475
31	AIR COMP 1P DISC	FU 0687	0.48	3.27	3.27	2.52	0.0083	0.0000	Yes	PNL	25	3	18	0.06		# 0136
32	AIR WASH MV DISC	FU 0754	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
33	ALTERNATOR P	FU 0685	0.208	0.14	0.14	0.14	0.1782	0.0000	Yes	PNL	25	2	18	0.01	(*N11)	# 0027
34	AT-E1 FCV BF-64-25	FB AT-E1 FCV	0.48	1.47	1.47	1.27	0.0211	0.0000	Yes	PNL	25	3	18	0.08		# 0034
35	AT-E2 FCV BF-64-26	FB AT-E2 FCV	0.48	1.65	1.65	1.41	0.0195	0.0000	Yes	PNL	25	3	18	0.08		# 0035
36	AT-E3 Z1 FCV	FB AT-E3 Z2 FCV	0.48	0.87	0.87	0.70	0.5385	0.0000	Yes	PNL	25	16	18	0.99	(*N3)	# 0036

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
37	AT-E3 Z2 FCV	FB AT-E3 Z2 FCV	0.48	1.03	1.03	0.80	0.0429	0.0000	Yes	PNL	25	4	18	0.09	(*N3)	# 0037
38	AT-E3 Z3 FCV	FB AT-E3 Z2 FCV	0.48	1.16	1.16	0.88	0.033	0.0000	Yes	PNL	25	3	18	0.08	(*N3)	# 0038
39	AT-E4 Z1 FCV	FB AT-E4 Z2 FCV	0.48	0.87	0.87	0.70	0.5385	0.0000	Yes	PNL	25	16	18	0.99	(*N3)	# 0039
40	AT-E4 Z2 FCV	FB AT-E4 Z2 FCV	0.48	1.03	1.03	0.80	0.0429	0.0000	Yes	PNL	25	4	18	0.09	(*N3)	# 0040
41	AT-E4 Z3 FCV	FB AT-E4 Z2 FCV	0.48	1.16	1.16	0.88	0.033	0.0000	Yes	PNL	25	3	18	0.08	(*N3)	# 0041
42	ATS PEWP2 NRM	FU PEW PUMP 2	0.48	17.83	16.38	8.39	0.0332	0.0000	Yes	PNL	25	16	18	1.00	(*N3)	# 0043
43	ATS-ADM EMG	800/800 ATS-ADM-EMG	0.48	10.79	10.79	7.00	0.2	0.0000	Yes	PNL	25	40	18	4.4		# 0488
44	ATS-ADM LOAD	800/800 ATS-ADM-EMG	0.48	10.79	10.79	7.00	0.2	0.0000	Yes	PNL	25	40	18	4.4		# 0017
45	ATS-ADM NRM	800/800 ATS-ADM-NRM	0.48	10.65	10.65	6.92	0.2	0.0000	Yes	PNL	25	40	18	4.4		# 0046
46	ATS-CEB LOAD	FB ATS-CEB NRM	0.48	20.15	20.15	11.93	0.0175	0.0000	Yes	PNL	25	13	18	0.70		# 0047
47	ATS-CEB-EMG	FB ATS-CEB EMG	0.48	19.21	19.21	11.45	0.0175	0.0000	Yes	PNL	25	13	18	0.67		# 0048
48	ATS-CEB-NRM	FB ATS-CEB NRM	0.48	20.15	20.15	11.93	0.0175	0.0000	Yes	PNL	25	13	18	0.70		# 0049
49	ATS-EBB NORM	FB ATS-EBB NORM	0.48	8.42	8.42	5.66	0.04	0.0000	Yes	PNL	25	13	18	0.72		# 0040
50	ATS-EBB-EMG	FB ATS-EBB-EMG	0.48	9.28	9.28	6.15	0.04	0.0000	Yes	PNL	25	14	18	0.79		# 0040
51	ATS-EBB-LOAD	FB ATS-EBB NORM	0.48	8.42	8.42	5.66	0.04	0.0000	Yes	PNL	25	13	18	0.72		# 0040
52	ATS-LSE EMG	FB ATS-LSE-EMG	0.48	12.12	12.12	7.73	0.0532	0.0000	Yes	PNL	25	19	18	1.3		# 0043
53	ATS-LSE LOAD	FB ATS-LSE-NRM	0.48	12.03	12.03	7.68	0.0533	0.0000	Yes	PNL	25	19	18	1.3		# 0043
54	ATS-LSE NRM	FB ATS-LSE-NRM	0.48	12.03	12.03	7.68	0.0533	0.0000	Yes	PNL	25	19	18	1.3		# 0043
55	ATS-PP-UV-EMG	FB ATS-PP-UV-EMG	0.48	3.51	3.51	2.68	0.0188	0.0000	Yes	PNL	25	5	18	0.15		# 0064
56	ATS-PP-UV-LOAD	FU ATS-PP-UV-NRM	0.48	1.70	1.70	1.23	0.0464	0.0000	Yes	PNL	25	5	18	0.16	(*N3)	# 0065
57	ATS-PP-UV-NRM	FU ATS-PP-UV-NRM	0.48	1.70	1.70	1.23	0.0464	0.0000	Yes	PNL	25	5	18	0.16	(*N3)	# 0066
58	ATS-RLS EMG	FB ATS-RLS EMG	0.48	13.39	13.39	8.41	0.0162	0.0000	Yes	PNL	25	10	18	0.45		# 0043
59	ATS-RLS LOAD	FB ATS-RLS NRM	0.48	11.18	11.18	7.21	0.0162	0.0000	Yes	PNL	25	9	18	0.38		# 0043
60	ATS-RLS NRM	FB ATS-RLS NRM	0.48	11.18	11.18	7.21	0.0162	0.0000	Yes	PNL	25	9	18	0.38		# 0043
61	ATS-WBB NORM	FB ATS-WBB-NORM	0.48	28.11	28.11	15.85	0.05	0.0000	Yes	PNL	25	30	18	2.7		# 0049
62	ATS-WBB-EMG	FB ATS-WBB-EMG	0.48	30.40	30.40	16.95	0.05	0.0000	Yes	PNL	25	31	18	2.9		# 0050
63	ATS-WBB-LOAD	FB ATS-WBB-NORM	0.48	28.11	28.11	15.85	0.05	0.0000	Yes	PNL	25	30	18	2.7		# 0051
64	ATS-WPB-EMG	FB ATS-WPB-EMG	0.48	10.03	10.03	6.57	0.0162	0.0000	Yes	PNL	25	8	18	0.34		# 0052
65	ATS-WPB-LOAD	FB ATS-WPB-NORM	0.48	8.78	8.78	5.87	0.0162	0.0000	Yes	PNL	25	8	18	0.30		# 0053
66	ATS-WPB-NORM	FB ATS-WPB-NORM	0.48	8.78	8.78	5.87	0.0162	0.0000	Yes	PNL	25	8	18	0.30		# 0054
67	AT-W2 FCV JB	PD AT-W2 FCV	0.48	2.56	2.56	2.05	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0075
68	B-54-1 DISC	PD W1 FLOW VALVES	0.48	3.49	3.49	2.67	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0067
69	B-54-1 MTR VALVE.	PD W1 FLOW VALVES	0.48	3.44	3.44	2.64	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0069
70	B-54-2 DISC	PD W1 FLOW VALVES	0.48	3.49	3.49	2.67	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0069
71	B-54-2 MTR VALVE.	PD W1 FLOW VALVES	0.48	3.44	3.44	2.64	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0071
72	B-54-3 DISC	PD W1 FLOW VALVES	0.48	3.49	3.49	2.67	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0071
73	B-54-3 MTR VALVE.	PD W1 FLOW VALVES	0.48	3.44	3.44	2.64	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0073
74	BAR SCREEN 2 TERM	FU BAR SCREEN 2	0.48	4.40	4.40	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
75	BF - 64- 29	FB AT-E1 FCV	0.48	1.26	1.26	0.95	0.0286	0.0000	Yes	PNL	25	3	18	0.07	(*N3)	# 0075
76	BF- 64- 30	FB AT-E2 FCV	0.48	1.40	1.40	1.22	0.0218	0.0000	Yes	PNL	25	3	18	0.07		# 0076
77	BF-64-07	FB AT-E1 FCV	0.48	1.04	1.04	0.81	0.0394	0.0000	Yes	PNL	25	4	18	0.09	(*N3)	# 0077

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
78	BF-64-08	FB AT-E2 FCV	0.48	1.13	1.13	0.87	0.0343	0.0000	Yes	PNL	25	3	18	0.08	(*N3)	# 0078
79	BSCRN-3 STR	FU BAR SCREEN 3	0.48	4.36	4.36	3.23	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
80	BSNHST DISC	FU 0521	0.48	4.06	4.06	3.04	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0073
81	BSNINFLGT-1 DISC	FU BASIN INFL GATE 1	0.48	2.81	2.81	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
82	BSNINFLGT2 DISC	FU 0535	0.48	2.77	2.77	2.19	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
83	BSNINFLGT-3 DISC	FU BASIN INFL GATE 3	0.48	2.81	2.81	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
84	BSN-OUT-GT-1 DISC	FU BASIN OUT GATE 1	0.48	2.81	2.81	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
85	BSNOUTGT2 DISC	FU 0536	0.48	2.77	2.77	2.19	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
86	BSN-OUT-GT-3 DISC	FU BASIN OUT GATE 3	0.48	2.81	2.81	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
87	BT1-1M DISC	MCP BT1-1M	0.48	10.85	10.42	6.75	0.015	0.0000	Yes	PNL	25	8	18	0.34		# 0072
88	BT2-1M DISC	MCP BT2-1M	0.48	10.74	10.32	6.70	0.015	0.0000	Yes	PNL	25	8	18	0.34		# 0073
89	BTAB-1 DISC	MCP BTAB-1	0.48	1.44	1.44	1.25	0.015	0.0000	Yes	PNL	25	3	18	0.05		# 0074
90	BTAB-2 DISC	MCP BTAB-2	0.48	1.43	1.43	1.25	0.015	0.0000	Yes	PNL	25	3	18	0.05		# 0076
91	BTAB-3 DISC	MCP BTAB-3	0.48	1.33	1.33	1.17	0.015	0.0000	Yes	PNL	25	3	18	0.05		# 0075
92	BUS G1	MaxTripTime @2.0s	13.20	1.50	0.33	0.33	2	0.0000	Yes	SWG	152	27	36	0.89	(*N2) (*N9)	# 0019
93	BUS G2	MaxTripTime @2.0s	13.20	1.50	0.33	0.33	2	0.0000	Yes	SWG	152	27	36	0.89	(*N2) (*N9)	# 0020
94	BUS-0097	MCP AXMX-E1A	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0256
95	BUS-0099	MCP AXMX-E1B	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0078
96	BUS-0101	MCP AXMX-E1C	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0079
97	BUS-0103	MCP ANMX-E1A	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0080
98	BUS-0105	MCP ANMX-E1B	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0081
99	BUS-0107	MCP ANMX-E1C	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0082
100	BUS-0109	MCP ANMX-E1D	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0083
101	BUS-0111	MCP SWMX-E1	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0084
102	BUS-0113	MCP ANMX-E3A	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0085
103	BUS-0115	MCP ANMX-E3B	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0086
104	BUS-0117	MCP ANMX-E3C	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0087
105	BUS-0119	MCP ANMX-E3D	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0088
106	BUS-0121	MCP AXMX-E3A	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0089
107	BUS-0123	MCP AXMX-E3B	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0090
108	BUS-0125	MCP AXMX-E3C	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0091
109	BUS-0127	MCP SWMX-E3	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0092
110	BUS-0141	MCP AXMX-E2A	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0093
111	BUS-0143	MCP AXMX-E2B	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0094
112	BUS-0145	MCP AXMX-E2C	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0095
113	BUS-0147	MCP ANMX-E2A	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0096
114	BUS-0149	MCP ANMX-E2B	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0097
115	BUS-0151	MCP ANMX-E2C	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0098
116	BUS-0153	MCP ANMX-E2D	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0099
117	BUS-0155	MCP SWMX-E2	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0100
118	BUS-0157	MCP ANMX-E4A	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0101

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
119	BUS-0159	MCP ANMX-E4B	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0102
120	BUS-0161	MCP ANMX-E4C	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0103
121	BUS-0163	MCP ANMX-E4D	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0104
122	BUS-0165	MCP AXMX-E4A	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0105
123	BUS-0167	MCP AXMX-E4B	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0106
124	BUS-0169	MCP AXMX-E4C	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0107
125	BUS-0171	MCP SWMX-E4	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0108
126	BUS-0178	FB EWH-2	0.48	5.72	5.72	4.07	0.0161	0.0000	Yes	PNL	25	6	18	0.20		# 0126
127	BUS-0179	FB WASV E1 P-65-1	0.48	1.41	1.41	1.23	0.0217	0.0000	Yes	PNL	25	3	18	0.07		# 0109
128	BUS-0180	FB WASV E2 P-65-2	0.48	1.41	1.41	1.23	0.0217	0.0000	Yes	PNL	25	3	18	0.07		# 0110
129	BUS-0181	FB EWH-2	0.48	5.62	5.62	4.01	0.0161	0.0000	Yes	PNL	25	6	18	0.20		# 0111
130	BUS-0182	FB AT-E1 FCV	0.48	2.11	2.11	1.73	0.0167	0.0000	Yes	PNL	25	4	18	0.08		# 0130
131	BUS-0188	FB AT-E2 FCV	0.48	2.51	2.51	2.01	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0131
132	BUS-0272	PD P-53-07	0.48	10.86	10.86	7.04	0.0162	0.0000	Yes	PNL	25	9	18	0.37	(*N21b)	# 0113
133	BUS-0273	MCP AXMX-W1A	0.48	1.94	1.94	1.61	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
134	BUS-0274	MCP AXMX-W1B	0.48	1.52	1.52	1.31	0.005	0.0000	Yes	PNL	25	1	18	0.02		# 0492
135	BUS-0275	MCP AXMX-W1C	0.48	1.91	1.91	1.59	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
136	BUS-0276	MCP ANMX-W1A	0.48	1.64	1.64	1.40	0.005	0.0000	Yes	PNL	25	1	18	0.02		# 0492
137	BUS-0277	MCP ANMX-W1B	0.48	2.30	2.30	1.87	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
138	BUS-0278	MCP ANMX-W1C	0.48	2.07	2.07	1.71	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
139	BUS-0279	MCP ANMX-W1D	0.48	2.02	2.02	1.67	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
140	BUS-0281	MCP SWMX-W1	0.48	3.03	3.03	2.37	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
141	BUS-0287	PD F-54-5	0.48	11.72	11.72	7.51	0.0162	0.0000	Yes	PNL	25	9	18	0.39	(*N21b)	# 0122
142	BUS-0288	PD P-53-06	0.48	11.72	11.72	7.51	0.0162	0.0000	Yes	PNL	25	9	18	0.39	(*N21b)	# 0122
143	BUS-0289	MCP AXMX-W2A	0.48	3.51	3.51	2.68	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0492
144	BUS-0290	MCP AXMX-W2B	0.48	2.51	2.51	2.02	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
145	BUS-0291	MCP AXMX-W2C	0.48	2.03	2.03	1.68	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
146	BUS-0292	MCP ANMX-W2A	0.48	1.71	1.71	1.45	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
147	BUS-0293	MCP ANMX-W2B	0.48	2.07	2.07	1.71	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
148	BUS-0294	MCP ANMX-W2C	0.48	1.98	1.98	1.65	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
149	BUS-0295	MCP ANMX-W2D	0.48	1.56	1.56	1.34	0.005	0.0000	Yes	PNL	25	1	18	0.02		# 0492
150	BUS-0296	MCP SWMX-W2	0.48	3.16	3.16	2.45	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0492
151	BUS-0310	PD PAB-W1 VALVES	0.48	6.58	6.58	4.59	0.0162	0.0000	Yes	PNL	25	7	18	0.23		# 0147
152	BUS-0311	PD PAB-W1 VALVES	0.48	6.41	6.41	4.49	0.0162	0.0000	Yes	PNL	25	7	18	0.23		# 0152
153	BUS-0312	PD PAB-W1 VALVES	0.48	6.58	6.58	4.59	0.0162	0.0000	Yes	PNL	25	7	18	0.23		# 0148
154	BUS-0313	PD PAB-W1 VALVES	0.48	6.41	6.41	4.49	0.0162	0.0000	Yes	PNL	25	7	18	0.23		# 0154
155	BUS-0314	PD PAB-W3 VALVES	0.48	4.21	4.21	3.13	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0149
156	BUS-0315	PD PAB-W3 VALVES	0.48	4.14	4.14	3.09	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0156
157	BUS-0316	PD PAB-W3 VALVES	0.48	4.21	4.21	3.13	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0150
158	BUS-0317	PD PAB-W3 VALVES	0.48	4.14	4.14	3.09	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0158
159	BUS-0318	PD AT-W2 FCV	0.48	2.53	2.53	2.03	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0151

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
160	BUS-0319	PD AT-W2 FCV	0.48	2.51	2.51	2.01	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0160
161	BUS-0320	PD WAS VALVE W2	0.48	5.40	5.40	3.87	0.0162	0.0000	Yes	PNL	25	6	18	0.19		# 0152
162	BUS-0321	PD AT-W2 FCV	0.48	2.53	2.53	2.03	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0153
163	BUS-0322	PD AT-W2 FCV	0.48	2.51	2.51	2.01	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0163
164	BUS-0323	PD AT-W2 FCV	0.48	2.53	2.53	2.03	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0154
165	BUS-0324	PD AT-W2 FCV	0.48	2.51	2.51	2.01	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0165
166	BUS-0325	PD WEST AESG W2	0.48	2.32	2.32	1.88	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0155
167	BUS-0326	PD PAB-W2 VALVES	0.48	5.06	5.06	3.67	0.0162	0.0000	Yes	PNL	25	6	18	0.18		# 0156
168	BUS-0327	PD PAB-W2 VALVES	0.48	4.96	4.96	3.60	0.0162	0.0000	Yes	PNL	25	6	18	0.18		# 0168
169	BUS-0328	PD PAB-W2 VALVES	0.48	5.06	5.06	3.67	0.0162	0.0000	Yes	PNL	25	6	18	0.18		# 0157
170	BUS-0329	PD PAB-W2 VALVES	0.48	4.96	4.96	3.60	0.0162	0.0000	Yes	PNL	25	6	18	0.18		# 0170
171	BUS-0330	PD WA MAIN BOV	0.48	11.16	11.16	7.20	0.0162	0.0000	Yes	PNL	25	9	18	0.38		# 0158
172	BUS-0331	FB LSE-PPU-1	0.48	3.16	3.16	2.45	0.0162	0.0000	Yes	PNL	25	4	18	0.12		# 0159
173	BUS-0332	FB LSE-ACCU-1	0.48	8.42	8.42	5.66	0.0162	0.0000	Yes	PNL	25	8	18	0.29		# 0160
174	BUS-0333	FB LSE-ACU-1	0.48	4.69	4.69	3.43	0.0175	0.0000	Yes	PNL	25	6	18	0.18		# 0161
175	BUS-0337	FB CN-50-3 FCV	0.48	1.16	1.16	0.88	0.0331	0.0000	Yes	PNL	25	3	18	0.08	(*N3)	# 0164
176	BUS-0348	FB SLDG'S F-50-3,4	0.48	0.86	0.86	0.68	0.5865	0.0000	Yes	PNL	25	17	18	1.1	(*N3)	# 0167
177	BUS-0349	FB SLDG'S F-60-1,2,3	0.48	0.99	0.99	0.77	0.3136	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0168
178	BUS-0350	FB SLDG'S F-50-3,4	0.48	0.86	0.86	0.68	0.5865	0.0000	Yes	PNL	25	17	18	1.1	(*N3)	# 0169
179	BUS-0351	FB SLDG'S F-60-1,2,3	0.48	0.99	0.99	0.77	0.3136	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0170
180	BUS-0352	FB SLDG'S F-60-1,2,3	0.48	0.99	0.99	0.77	0.3136	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0171
181	BUS-0353	FB SLDG'S S-50-1,2,3,4,5	0.48	0.89	0.89	0.71	0.4938	0.0000	Yes	PNL	25	15	18	0.93	(*N3)	# 0172
182	BUS-0354	FB SLDG'S S-50-1,2,3,4,5	0.48	0.99	0.99	0.77	0.3136	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0173
183	BUS-0355	FB SLDG'S S-50-1,2,3,4,5	0.48	0.99	0.99	0.77	0.3136	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0174
184	BUS-0356	FB SLDG'S S-50-1,2,3,4,5	0.48	0.99	0.99	0.77	0.3136	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0175
185	BUS-0357	FB SLDG'S S-50-1,2,3,4,5	0.48	0.99	0.99	0.77	0.3136	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0176
186	BUS-0358	FB SLDG'S S-50-1,2,3,4,5	0.48	0.99	0.99	0.77	0.3136	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0177
187	BUS-0359	FB SLDG'S S-50-1,2,3,4,5	0.48	0.99	0.99	0.77	0.3136	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0178
188	BUS-0360	FB SLDG's S-60-1,2	0.48	0.99	0.99	0.77	0.3136	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0179
189	BUS-0361	FB SLDG's S-60-1,2	0.48	0.99	0.99	0.77	0.3136	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0180
190	BUS-0362	FB SLDG's S-60-1,2	0.48	0.86	0.86	0.68	0.5865	0.0000	Yes	PNL	25	17	18	1.1	(*N3)	# 0181
191	BUS-0363	FB EAST JC GATES	0.48	0.99	0.99	0.77	0.3136	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0182
192	BUS-0364	FB EAST JC GATES	0.48	0.99	0.99	0.77	0.3136	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0183
193	BUS-0392	FB AT-E3 Z2 FCV	0.48	1.48	1.48	1.28	0.021	0.0000	Yes	PNL	25	3	18	0.08		# 0185
194	BUS-0393	FB AT-E1 FCV	0.48	2.02	2.02	1.67	0.0171	0.0000	Yes	PNL	25	4	18	0.08		# 0186
195	BUS-0394	FB AT-E1 FCV	0.48	2.02	2.02	1.67	0.0171	0.0000	Yes	PNL	25	4	18	0.08		# 0187
196	BUS-0395	FB AT-E1 FCV	0.48	2.02	2.02	1.67	0.0171	0.0000	Yes	PNL	25	4	18	0.08		# 0188
197	BUS-0396	FB AT-E2 FCV	0.48	2.39	2.39	1.93	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0189
198	BUS-0397	FB AT-E2 FCV	0.48	2.39	2.39	1.93	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0190
199	BUS-0398	FB AT-E2 FCV	0.48	2.39	2.39	1.93	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0191
200	BUS-0399	FB AT-E3 Z2 FCV	0.48	1.48	1.48	1.28	0.021	0.0000	Yes	PNL	25	3	18	0.08		# 0192

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
201	BUS-0400	FB AT-E3 Z2 FCV	0.48	1.48	1.48	1.28	0.021	0.0000	Yes	PNL	25	3	18	0.08		# 0193
202	BUS-0401	FB AT-E4 Z2 FCV	0.48	1.48	1.48	1.28	0.021	0.0000	Yes	PNL	25	3	18	0.08		# 0194
203	BUS-0402	FB AT-E4 Z2 FCV	0.48	1.48	1.48	1.28	0.021	0.0000	Yes	PNL	25	3	18	0.08		# 0195
204	BUS-0403	FB AT-E4 Z2 FCV	0.48	1.48	1.48	1.28	0.021	0.0000	Yes	PNL	25	3	18	0.08		# 0196
205	BUS-0406	FB PAB-E2 DV & BOV1	0.48	1.87	1.87	1.57	0.018	0.0000	Yes	PNL	25	3	18	0.08		# 0206
206	BUS-0409	FB WASV E3	0.48	1.32	1.32	1.16	0.0226	0.0000	Yes	PNL	25	3	18	0.07		# 0198
207	BUS-0410	FB WASV E4	0.48	1.32	1.32	1.16	0.0226	0.0000	Yes	PNL	25	3	18	0.07		# 0199
208	BUS-0412	FB EBB-EDH-1	0.48	5.11	5.11	3.69	0.0162	0.0000	Yes	PNL	25	6	18	0.18		# 0200
209	BUS-0413	FB PAB-E1 DV & BOV	0.48	2.54	2.54	2.04	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0210
210	BUS-0414	FB PAB-E1 DV & BOV	0.48	2.21	2.21	1.80	0.0162	0.0000	Yes	PNL	25	4	18	0.08		# 0211
211	BUS-0415	FB EWH-2	0.48	5.67	5.67	4.04	0.0161	0.0000	Yes	PNL	25	6	18	0.20		# 0203
212	BUS-0436	PD SWPSO-SG	0.48	2.81	2.81	2.22	0.0162	0.0000	Yes	PNL	25	4	18	0.11		# 0201
213	BWP2 DISC	FU BACKWASH PUMP 2	0.48	13.57	12.90	8.09	0.0083	0.0000	Yes	PNL	25	7	18	0.23	(*N21b)	# 0568
214	BWWP1 DISC	FU 0668	0.48	12.65	11.97	7.59	0.0083	0.0000	Yes	PNL	25	6	18	0.22	(*N21b)	# 0136
215	BYPGT1 DISC	FU 0564	0.48	2.77	2.77	2.19	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
216	BYPGT2 DISC	FU 0554	0.48	2.77	2.77	2.19	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
217	C SUMP PUMP DISC	FU C SUMP PUMP	0.48	4.36	4.36	3.23	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
218	CC-1 DISC	FU CROSS COLL 1	0.48	2.81	2.81	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
219	CC2 DISC	FU 0528	0.48	2.77	2.77	2.19	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
220	CC-3 DISC	FU CROSS COLL 3	0.48	2.81	2.81	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
221	CE WET WELL GT DISC	FU 0745	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
222	CEB-ACCU-1 DISC	PD CEB-ACCU-1	0.48	4.99	4.99	3.62	0.0162	0.0000	Yes	PNL	25	6	18	0.18		# 0023
223	CEB-ACCU-1 TERM	PD CEB-ACCU-1	0.48	4.19	4.19	3.12	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0088
224	CEB-ACU-1 TERM	PD CEB-ACU-1	0.48	11.94	11.94	7.63	0.0162	0.0000	Yes	PNL	25	9	18	0.40		# 0023
225	CEB-EF-1 DISC	MCP CEB-EF-1	0.48	1.76	1.76	1.49	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0023
226	CEB-EF-2 DISC	MCP CEB-EF-2	0.48	1.90	1.90	1.59	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0023
227	CEB-FCP-1 DISC	MCP CEB-FCP-1	0.48	4.08	4.08	3.05	0.005	0.0000	Yes	PNL	25	2	18	0.05		# 0023
228	CEB-FCP-2 TERM	PD CEP-FCP-2	0.48	3.22	3.22	2.49	0.0162	0.0000	Yes	PNL	25	4	18	0.12		# 0023
229	CEB-P-1 DISC	MCP CEB-P-1	0.48	3.23	3.23	2.50	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0023
230	CEB-P-2 DISC	MCP CEB-P-2	0.48	3.22	3.22	2.49	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0023
231	CF2 AHU-1 DISC	MCP AHU-1	0.48	1.20	1.20	1.07	0.015	0.0000	Yes	PNL	25	2	18	0.04		# 0154
232	CF2 AHU-3 DISC	MCP AHU-3	0.48	2.00	2.00	1.66	0.015	0.0000	Yes	PNL	25	3	18	0.07		# 0155
233	CFG-1 BACK DR DISC	FU CFG-1	0.48	5.78	5.19	3.13	0.6022	0.0000	Yes	PNL	25	48	18	6.0	(*N3)	# 0159
234	CFG-1 BOWL DR DISC	FU CFG-1	0.48	17.27	15.08	9.13	0.0083	0.0000	Yes	PNL	25	8	18	0.29		# 0159
235	CFG-2 BACK DR DISC	MB CFG-2	0.48	7.05	6.37	4.39	0.018	0.0000	Yes	PNL	25	7	18	0.27		# 0159
236	CFG-2 BOWL DR DISC	FU CFG-2	0.48	17.32	15.15	7.79	0.0116	0.0000	Yes	PNL	25	8	18	0.34	(*N3)	# 0159
237	CFG-3 BACK DR DISC	FU CFG-3	0.48	5.87	5.29	3.18	0.4961	0.0000	Yes	PNL	25	43	18	5.0	(*N3)	# 0159
238	CFG-3 BOWL DR DISC	FU CFG-3	0.48	18.25	16.08	9.66	0.0083	0.0000	Yes	PNL	25	8	18	0.31		# 0159
239	CHABLWR DISC	FU CHANNEL AIR BLOWER	0.48	4.40	4.40	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
240	CN-50-3 FCV	FB CN-50-3 FCV	0.48	1.03	1.03	0.80	0.0399	0.0000	Yes	PNL	25	4	18	0.09	(*N3)	# 0111
241	CONT TK INT GT DISC	FU 0682	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
242	CP-70 EMG	FU CP70 EMG TERM	0.48	1.50	1.50	1.29		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0568
243	CP-70 NRM	FU 0756	0.48	2.88	2.88	2.26		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0568
244	CR-1 HSP 5 DISC	MCP HSP 5	0.48	3.35	3.35	2.58	0.015	0.0000	Yes	PNL	25	4	18	0.11		# 0165
245	CR-1 HSP 6 DISC	MCP HSP 6	0.48	3.18	3.18	2.47	0.015	0.0000	Yes	PNL	25	4	18	0.11		# 0166
246	D SP-2 DISC	FU D SUMP PUMP 2	0.48	4.40	4.40	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
247	DCH FNL EFF SP DISC	FU 0751	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
248	DOOR OP EE1	FU 0905	0.48	2.77	2.77	2.19	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0099
249	DOOR OP EE2	FU 0906	0.48	2.77	2.77	2.19	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0099
250	DOOR OP FF	FU 0919	0.48	2.73	2.73	2.16	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0099
251	DOOR OPERATOR STR	FU DOOR OPERATOR	0.48	4.40	4.40	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
252	DP-51	MB MCC-51A	0.48	23.38	23.38	13.54	0.0123	0.0000	Yes	PNL	25	11	18	0.57	(*N5)	# 0247
253	DP-51 (MB DP-51 LineSide)	MB MCC-51A	0.48	23.38	23.38	13.54	0.0123	0.0000	Yes	PNL	25	11	18	0.57	(*N5)	# 0248-Line
254	DP-52	MB DP-52	0.48	22.41	22.41	13.06	0.01	0.0000	Yes	PNL	25	10	18	0.44		# 0249
255	DP-52 (MB DP-52 LineSide)	MB MCC-52A	0.48	22.41	22.41	13.06	0.0125	0.0000	Yes	PNL	25	11	18	0.56	(*N5)	# 0250-Line
256	DP-54	MB DP-54	0.48	18.20	18.20	10.94	0.01	0.0000	Yes	PNL	25	9	18	0.37		# 0251
257	DP-54 (MB DP-54 LineSide)	MB MCC-54A	0.48	18.20	18.20	10.94	0.0135	0.0000	Yes	PNL	25	10	18	0.49	(*N5)	# 0252-Line
258	DP-55	MB DP-55	0.48	18.84	18.84	11.27	0.01	0.0000	Yes	PNL	25	9	18	0.38		# 0253
259	DP-55 (MB DP-55 LineSide)	FB ATS-55 NRM	0.48	18.84	18.84	11.27	0.0133	0.0000	Yes	PNL	25	11	18	0.50		# 0254-Line
260	DP-56	MB DP-56	0.48	11.95	11.95	7.64	0.0113	0.0000	Yes	PNL	25	7	18	0.28		# 0255
261	DP-56 (MB DP-56 LineSide)	FB DP-56	0.48	11.95	11.95	6.49	0.2	0.0000	Yes	PNL	25	37	18	3.9	(*N3)	# 0256-Line
262	DRILL PRESS	FB DRILL PRESS	0.48	4.49	4.49	3.31	0.0162	0.0000	Yes	PNL	25	5	18	0.16		# 0266
263	DROP (NGW) STR	FU DOOR OP (NGW)	0.48	4.36	4.36	3.23	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
264	DROP (SG) STR	FU DOOR OP (SG)	0.48	4.36	4.36	3.23	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
265	E CONT TK G1 DISC	FU 0747	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
266	E SUMP PUMP 1 DISC	FU E SUMP PUMP 1	0.48	2.81	2.81	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
267	EBB SUMP PUMP 2 DISC	MCP EBB SUMP PUMP 2	0.48	3.41	3.41	2.61	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0126
268	EBB SUMP PUMP 4 DISC	MCP EBB SUMP PUMP 4	0.48	0.99	0.99	0.77	0.04	0.0000	Yes	PNL	25	4	18	0.08	(*N3)	# 0127
269	EBB-A HOIST 1	PD EBB-A HOIST1	0.48	0.98	0.98	0.77	0.3288	0.0000	Yes	PNL	25	13	18	0.67	(*N3)	# 0118
270	EBB-A HOIST 1 DISC	PD EBB-A HOIST1	0.48	1.05	1.05	0.81	0.039	0.0000	Yes	PNL	25	4	18	0.09	(*N3)	# 0119
271	EBB-A HOIST 2	PD EBB-A HOIST2	0.48	0.98	0.98	0.77	0.3288	0.0000	Yes	PNL	25	13	18	0.67	(*N3)	# 0120
272	EBB-A HOIST 2 DISC	PD EBB-A HOIST2	0.48	1.05	1.05	0.81	0.039	0.0000	Yes	PNL	25	4	18	0.09	(*N3)	# 0121
273	EBB-EDH-1 LINE'	FB EBB-EDH-1	0.48	3.89	3.89	2.92	0.0162	0.0000	Yes	PNL	25	5	18	0.14		# 0277
274	EBB-EF-10 DISC	MCP EBB-EF-10	0.48	2.73	2.73	2.16	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0133
275	EBB-EF-5 DISC	MCP EBB-EF-5	0.48	3.96	3.96	2.97	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0134
276	EBB-EF-6 DISC	MCP EBB-EF-6	0.48	2.17	2.17	1.78	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0135
277	EBB-EF-7 DISC	MCP EBB-EF-7	0.48	1.44	1.44	1.25	0.005	0.0000	Yes	PNL	25	1	18	0.02		# 0136
278	EBB-EF-9 DISC	MCP EBB-EF-9	0.48	0.98	0.98	0.90	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0137
279	EBB-EUH-1 TERM	PD EBB-EUH-1	0.48	5.88	5.88	4.16	0.0162	0.0000	Yes	PNL	25	6	18	0.21		# 0118

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
280	EBB-HV-1 DISC	PD EBB-HV-1	0.48	3.29	3.29	2.53	0.0162	0.0000	Yes	PNL	25	4	18	0.12		# 0139
281	EBB-HV-1 STR	PD EBB-HV-1	0.48	2.51	2.51	2.02	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0108
282	EF1 DISC	FU 0646	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
283	EF2 DISC	FU 0646	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
284	EF3 DISC	FU EF-3,4,1	0.48	1.50	1.50	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
285	EF4 DISC	FU EF-3,4,1	0.48	1.48	1.48	1.28	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
286	ELEVATOR CP DISC	PD ELEVATOR CP	0.48	1.56	1.56	1.34	0.0171	0.0000	Yes	PNL	25	3	18	0.06		# 0492
287	ELEVATOR CP INPUT	FU ELEVATOR CP	0.48	1.47	1.47	1.28		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0492
288	EP THRV CONTROLLER	FU E. PLANT THR VALVE	0.48	4.40	4.40	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0133
289	EPBBV DISC	PD 0650	0.48	1.37	1.37	1.02	0.0339	0.0000	Yes	PNL	25	4	18	0.10	(*N3)	# 0136
290	EPBBV STARTER	PD 0650	0.48	1.30	1.30	0.97	0.157	0.0000	Yes	PNL	25	9	18	0.42	(*N3)	# 0136
291	EPB-EUH-1 DISC	PD EPB-EUH-1	0.48	3.85	3.85	2.90	0.0162	0.0000	Yes	PNL	25	5	18	0.14		# 0180
292	EPB-EUH-1 TERM	PD EPB-EUH-1	0.48	3.61	3.61	2.74	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0152
293	EPSEGE DISC	FU 0654	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
294	EPSEGW DISC	FU 0656	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
295	EQ INFL GATE 1 STR	FU EQ INFL GATE 1	0.48	2.81	2.81	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0115
296	EQ INFL GATE 10 STR	FU EQ INFL GATE 10	0.48	2.81	2.81	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0116
297	EQ INFL GATE 11 STR	FU EQ INFL GATE 11	0.48	2.81	2.81	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0117
298	EQ INFL GATE 12 STR	FU EQ INFL GATE 12	0.48	2.81	2.81	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0118
299	EQ INFL GATE 2 STR	FU EQ INFL GATE 2	0.48	2.81	2.81	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0119
300	EQ INFL GATE 3 STR	FU EQ INFL GATE 3	0.48	2.81	2.81	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0120
301	EQ INFL GATE 4 STR	FU EQ INFL GATE 4	0.48	2.81	2.81	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0121
302	EQ INFL GATE 9 STR	FU EQ INFL GATE 9	0.48	2.81	2.81	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0122
303	EQINGT5 DISC	FU 0565	0.48	2.77	2.77	2.19	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
304	EQINGT6 DISC	FU 0566	0.48	2.77	2.77	2.19	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
305	EQINGT7 DISC	FU 0577	0.48	2.77	2.77	2.19	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
306	EQINGT8 DISC	FU 0578	0.48	2.77	2.77	2.19	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
307	EQPRM HOIST DISC	FU 0576	0.48	5.86	5.86	4.15	0.0042	0.0000	Yes	PNL	25	3	18	0.05		# 0073
308	EQPT RCPT C	FU WELDER OUTLET C	0.48	6.14	6.14	4.32	0.0042	0.0000	Yes	PNL	25	3	18	0.06		# 0492
309	EQPT RCPT D	FU WELDER OUTLET D	0.48	6.23	6.23	4.38	0.0042	0.0000	Yes	PNL	25	3	18	0.06		# 0430
310	EQPT RCPT E	FU WELD RCPT E	0.48	12.23	12.23	7.79	0.0042	0.0000	Yes	PNL	25	4	18	0.11		# 0403
311	EQPT RCPT EBB-A	PD EBB-A WELD RCPT	0.48	8.15	8.15	5.50	0.0162	0.0000	Yes	PNL	25	7	18	0.28		# 0173
312	EQPT RCPT EBB-B	PD WELD RCPT EBB-B	0.48	7.49	7.49	5.12	0.0162	0.0000	Yes	PNL	25	7	18	0.26		# 0174
313	EQPT RCPT EE	FU 0908	0.48	4.05	4.05	3.03		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0430
314	EQPT RCPT EPB-B (Welder Receptacle)	PD EQRCPT-EPB-B	0.48	4.37	4.37	3.23	0.0162	0.0000	Yes	PNL	25	5	18	0.16		# 0406
315	EQPT RCPT F	FU 0559	0.48	2.77	2.77	2.19	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0407
316	EQPT RCPT M	FU 0663	0.48	2.33	2.33	1.89		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0136
317	EQPT RCPT RLS-B	PD WELD OUTLET RLS-B	0.48	4.38	4.38	3.24	0.0162	0.0000	Yes	PNL	25	5	18	0.16		# 0430
318	EQRETFCV DISC	FU 0553	0.48	2.77	2.77	2.19	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
319	EQ-RET-V-1 DISC	FU EQ RET VALVE 1	0.48	2.81	2.81	2.22	0.0083	0.0000	Yes	PNL	25	3	18	0.05		# 0475
320	EQ-RET-V-2 DISC	FU EQ RET VALVE 2	0.48	2.81	2.81	2.22	0.0083	0.0000	Yes	PNL	25	3	18	0.05		# 0475

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
321	EQRETV3 DISC	FU 0557	0.48	2.77	2.77	2.19	0.0083	0.0000	Yes	PNL	25	3	18	0.05		# 0073
322	ERU DISC	FU 0573	0.48	2.77	2.77	1.86	0.0241	0.0000	Yes	PNL	25	5	18	0.13	(*N3)	# 0073
323	ESESP6 DISC	FU 0660	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
324	EUH1 DISC	FU 0662	0.48	1.50	1.50	1.30		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0136
325	EUH-E1 TERM	PD-0538	0.48	5.86	5.86	4.16	0.0151	0.0000	Yes	PNL	25	6	18	0.19		# 0132
326	EUH-E2 TERM	PD-0539	0.48	3.83	3.83	2.89	0.0163	0.0000	Yes	PNL	25	5	18	0.14		# 0132
327	EWB-1 DISC	PD EWB-1	0.48	9.83	9.83	6.46	0.0162	0.0000	Yes	PNL	25	8	18	0.34		# 0492
328	EWB-2 DISC	PD EWB-2	0.48	17.62	17.62	10.64	0.0161	0.0000	Yes	PNL	25	11	18	0.57	(*N21b)	# 0568
329	EWB-2 TERMS	PD EWB-2	0.48	16.71	16.71	10.17	0.0161	0.0000	Yes	PNL	25	11	18	0.54	(*N21b)	# 0162
330	F-1-1 DISC	PD F-1-1	0.48	2.24	2.24	1.83	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0160
331	F-1-1 STARTER	PD F-1-1	0.48	1.91	1.91	1.59	0.0166	0.0000	Yes	PNL	25	3	18	0.08		# 0188
332	F-1-2 DISC	PD F-1-1	0.48	2.22	2.22	1.82	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0160
333	F-1-2 STARTER	PD F-1-1	0.48	1.81	1.81	1.52	0.0167	0.0000	Yes	PNL	25	3	18	0.07		# 0190
334	F-1-3 DISC	PD F-1-1	0.48	2.20	2.20	1.80	0.0162	0.0000	Yes	PNL	25	4	18	0.08		# 0160
335	F-1-3 STARTER	PD F-1-1	0.48	1.53	1.53	1.32	0.0172	0.0000	Yes	PNL	25	3	18	0.06		# 0192
336	F-1-4 DISC	PD F-1-1	0.48	2.19	2.19	1.79	0.0162	0.0000	Yes	PNL	25	4	18	0.08		# 0160
337	F-1-4 STARTER	PD F-1-1	0.48	1.47	1.47	1.08	0.021	0.0000	Yes	PNL	25	3	18	0.06	(*N3)	# 0194
338	F-1-5 DISC	PD F-1-5	0.48	1.84	1.84	1.54	0.0167	0.0000	Yes	PNL	25	3	18	0.07		# 0160
339	F-1-5 STARTER	PD F-1-5	0.48	1.30	1.30	0.97	0.0252	0.0000	Yes	PNL	25	3	18	0.07	(*N3)	# 0500
340	F-1-6 DISC	PD F-1-5	0.48	1.82	1.82	1.53	0.0167	0.0000	Yes	PNL	25	3	18	0.07		# 0160
341	F-1-6 STARTER	PD F-1-5	0.48	1.33	1.33	1.00	0.0242	0.0000	Yes	PNL	25	3	18	0.07	(*N3)	# 0500
342	F-1-7 DISC	PD F-1-5	0.48	1.81	1.81	1.52	0.0167	0.0000	Yes	PNL	25	3	18	0.07		# 0160
343	F-1-7 STARTER	PD F-1-5	0.48	1.52	1.52	1.31	0.0172	0.0000	Yes	PNL	25	3	18	0.06		# 0500
344	F-1-8 DISC	PD F-1-5	0.48	1.80	1.80	1.51	0.0167	0.0000	Yes	PNL	25	3	18	0.07		# 0160
345	F-1-8 STARTER	PD F-1-5	0.48	1.57	1.57	1.35	0.0171	0.0000	Yes	PNL	25	3	18	0.07		# 0500
346	F-2-1 DISC	PD F-2-6	0.48	5.59	5.59	3.99	0.0162	0.0000	Yes	PNL	25	6	18	0.20		# 0160
347	F-2-1 STARTER	PD F-2-6	0.48	4.17	4.17	3.11	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0204
348	F-2-12 DISC	PD F-2-6	0.48	5.51	5.51	3.94	0.0162	0.0000	Yes	PNL	25	6	18	0.20		# 0160
349	F-2-12 STARTER	PD F-2-6	0.48	4.11	4.11	3.07	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0206
350	F-2-13 DISC	PD F-2-13	0.48	1.57	1.57	1.35	0.0171	0.0000	Yes	PNL	25	3	18	0.07		# 0160
351	F-2-13 STARTER	PD F-2-13	0.48	1.04	1.04	0.81	0.0351	0.0000	Yes	PNL	25	3	18	0.08	(*N3)	# 0208
352	F-2-18 DISC	PD F-2-13	0.48	1.56	1.56	1.34	0.0171	0.0000	Yes	PNL	25	3	18	0.06		# 0160
353	F-2-18 STARTER	PD F-2-13	0.48	1.39	1.39	1.03	0.0228	0.0000	Yes	PNL	25	3	18	0.06	(*N3)	# 0210
354	F-2-19 DISC	PD F-2-13	0.48	1.56	1.56	1.34	0.0171	0.0000	Yes	PNL	25	3	18	0.06		# 0160
355	F-2-19 STARTER	PD F-2-13	0.48	1.38	1.38	1.03	0.023	0.0000	Yes	PNL	25	3	18	0.07	(*N3)	# 0212
356	F-2-24 DISC	PD F-2-13	0.48	1.55	1.55	1.33	0.0172	0.0000	Yes	PNL	25	3	18	0.06		# 0160
357	F-2-24 STARTER	PD F-2-13	0.48	1.01	1.01	0.79	0.0369	0.0000	Yes	PNL	25	3	18	0.08	(*N3)	# 0214
358	F-2-6 DISC	PD F-2-6	0.48	5.68	5.68	4.04	0.0162	0.0000	Yes	PNL	25	6	18	0.20		# 0160
359	F-2-6 STARTER	PD F-2-6	0.48	2.08	2.08	1.72	0.0163	0.0000	Yes	PNL	25	3	18	0.08		# 0217
360	F-2-7 DISC	PD F-2-6	0.48	5.43	5.43	3.89	0.0162	0.0000	Yes	PNL	25	6	18	0.19		# 0160
361	F-2-7 STARTER	PD F-2-6	0.48	2.12	2.12	1.74	0.0163	0.0000	Yes	PNL	25	4	18	0.08		# 0219

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
362	F-5-1 DISC	FU F-5-1	0.48	4.40	4.40	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
363	F-5-2 DISC	FU 5-5-2	0.48	4.40	4.40	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
364	F-54-1 DISC	PD F-54-4	0.48	1.81	1.81	1.52	0.0184	0.0000	Yes	PNL	25	3	18	0.08		# 0492
365	F-54-1 STR	PD F-54-4	0.48	1.76	1.76	1.48	0.0188	0.0000	Yes	PNL	25	3	18	0.08		# 0492
366	F-54-2 DISC	PD F-54-5	0.48	2.44	2.44	1.96	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0492
367	F-54-2 STR	PD F-54-5	0.48	2.35	2.35	1.90	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0492
368	F-54-4 DISC	PD F-54-4	0.48	4.57	4.57	3.36	0.0162	0.0000	Yes	PNL	25	5	18	0.17		# 0492
369	F-54-4 STR	PD F-54-4	0.48	4.13	4.13	3.08	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0492
370	F-54-5 DISC	PD F-54-5	0.48	10.56	10.56	6.87	0.0162	0.0000	Yes	PNL	25	9	18	0.36		# 0492
371	F-54-5 STR	PD F-54-5	0.48	8.93	8.93	5.95	0.0162	0.0000	Yes	PNL	25	8	18	0.31	(*N20b)	# 0492
372	F-60-5	FB EAST JC GATES	0.48	0.92	0.92	0.73	0.4267	0.0000	Yes	PNL	25	14	18	0.83	(*N3)	# 0365
373	F-60-6	FB EAST JC GATES	0.48	0.92	0.92	0.73	0.4267	0.0000	Yes	PNL	25	14	18	0.83	(*N3)	# 0366
374	F-6-1 DISC	FU F-6-1	0.48	4.36	4.36	3.23	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
375	F-6-2 DISC	FU F-6-2	0.48	4.36	4.36	3.23	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
376	F-6-4 DISC	FB GATE OPERATORS	0.48	4.40	4.40	3.25	0.0159	0.0000	Yes	PNL	25	5	18	0.16		# 0492
377	F-7-1 DISC	FB GATE OPERATORS	0.48	3.44	3.44	2.64	0.0166	0.0000	Yes	PNL	25	5	18	0.13		# 0492
378	F-8-6 DISC	FB GATE OPERATORS	0.48	2.82	2.82	2.23	0.0171	0.0000	Yes	PNL	25	4	18	0.11		# 0492
379	FASB1 DISC	PD 0672	0.48	13.30	12.62	7.94	0.015	0.0000	Yes	PNL	25	9	18	0.41	(*N21b)	# 0136
380	FASB-1 LCP	PD 0672	0.48	15.43	14.73	9.07	0.0145	0.0000	Yes	PNL	25	10	18	0.46		# 0206
381	FCB-1 DISC	PD 0724	0.48	8.46	8.46	5.69	0.0147	0.0000	Yes	PNL	25	7	18	0.26		# 0568
382	FCB-1-EF DISC	PD 0724	0.48	8.60	8.60	5.77	0.0146	0.0000	Yes	PNL	25	7	18	0.27		# 0568
383	FCBV-1 VFD	PD 0724	0.48	15.07	15.07	9.31	0.0137	0.0000	Yes	PNL	25	10	18	0.42	(*N21b)	# 0568
384	FDSP1 DISC	FU 0679	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
385	FDSP2 DISC	FU 0739	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
386	FDSP4 DISC	FU FLOOR DRN SP 4	0.48	1.50	1.50	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
387	FLDRNSP3 DISC	FU 0657	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
388	GDWU-1 DISC	FU GRIT DEWATER UNIT 1	0.48	4.40	4.40	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
389	GDWU-2 DISC	FU GRIT DEWATER UNIT 2	0.48	4.40	4.40	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
390	GP-3 DISC TERM	FU GP-3	0.48	4.36	4.36	3.23	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
391	GRIT BLOWER 2 DISC	FU GRIT BLOWER 2	0.48	4.40	4.40	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
392	GRTBLWR3 DISC	FU GRIT BLOWER 3	0.48	4.36	4.36	3.23	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
393	GSP1 DISC	FU GRIT SLURRY PUMP 1	0.48	4.40	4.40	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
394	GSP2 DISC	FU GRIT SLURRY PUMP 2	0.48	4.40	4.40	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
395	GSP4 DISC	FU GRIT SLURRY PUMP 4	0.48	4.40	4.40	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
396	HEAT REC UNIT DISC	FU HEAT RECOVERY UNIT	0.48	7.86	7.86	5.34	0.0042	0.0000	Yes	PNL	25	3	18	0.07		# 0492
397	HOIST D DISC	FU HOIST D	0.48	4.40	4.40	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
398	HOIST EPB-B DISC	PD HOIST EPB-B	0.48	4.11	4.11	3.07	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0180
399	HOIST EPB-B STARTER	PD HOIST EPB-B	0.48	3.61	3.61	2.74	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0177
400	HOIST P DISC	FU 0695	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
401	HOIST Q DISC	FU 0750	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
402	HORZ BAND SAW	FB HORZ BAND SAW	0.48	2.38	2.38	1.92	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0406

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
403	HPPEW2 DISC	FU 0546	0.48	10.26	9.55	6.24	0.0083	0.0000	Yes	PNL	25	6	18	0.18		# 0073
404	HP-PEW-P-1 DISC	FU HP PEW PUMP 1	0.48	10.90	10.19	6.60	0.0083	0.0000	Yes	PNL	25	6	18	0.19		# 0475
405	HT BOOST PMP DISC	FU 0753	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
406	HV-1 DISC	PD HV-1	0.48	3.23	3.23	2.50	0.0162	0.0000	Yes	PNL	25	4	18	0.12		# 0180
407	IFSAB-1 LCP	PD IFSAB-1	0.48	7.64	7.64	5.21	0.0162	0.0000	Yes	PNL	25	7	18	0.27	(*N21b)	# 0122
408	IPC LP-EFB	MB IPC LP-EFB	0.208	3.49	3.49	2.08	0.0167	0.0000	Yes	PNL	25	4	18	0.10		# 0193
409	IPC LP-EFB (MB IPC LP-EFB LineSide)	FB IPC LP-EFB	0.208	3.49	3.49	1.77	1.812	0.0000	Yes	PNL	25	62	18	9.0	(*N3)	# 0291-Line
410	IPC LP-WFB	MB IPC LP-WFB	0.208	1.79	1.79	1.10	1.928	0.0000	Yes	PNL	25	48	18	5.9	(*N3)	# 0193
411	IPC LP-WFB (MB IPC LP-WFB LineSide)	PD IPC LP-WFB	0.208	1.79	1.79	1.30	2	0.0000	Yes	PNL	25	54	18	7.3	(*N9)	# 0311-Line
412	IRON WORK	FU PP-MTB	0.48	4.73	4.73	3.46		0.0000	Yes	PNL	25	7	18	0.25	(*N4) (*N5)	# 0416
413	JC-1 DISC	FU JIB CRANES	0.48	4.40	4.40	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
414	JC-1 LCP TERM	FU JIB CRANES	0.48	3.44	3.44	2.64	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0230
415	JC-2 DISC	FU JIB CRANES	0.48	3.44	3.44	2.64	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0492
416	JC-3 LCP TERM	FU JIB CRANES	0.48	2.82	2.82	2.23	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0232
417	Junction box.	FB PAB-E2 DV & BOV1	0.48	2.11	2.11	1.74	0.0166	0.0000	Yes	PNL	25	4	18	0.08		# 0421
418	LBP-6 STARTER	FU SCREW PUMP 6	0.48	4.06	3.81	2.42	0.3061	0.0000	Yes	PNL	25	27	18	2.3	(*N3)	# 0184
419	LBP-7 STARTER	FU SCREW PUMP 7	0.48	4.14	3.89	2.47	0.239	0.0000	Yes	PNL	25	23	18	1.8	(*N3)	# 0275
420	LBP-8 STARTER	FU SCREW PUMP 8	0.48	4.14	3.89	2.47	0.239	0.0000	Yes	PNL	25	23	18	1.8	(*N3)	# 0277
421	LP-ADM-1	MB LP-ADM-1	0.208	5.36	5.36	2.81	0.0171	0.0000	Yes	PNL	25	5	18	0.14		# 0026
422	LP-ADM-1 (MB LP-ADM-1 LineSide)	PD XFMR-LP-ADM-1	0.208	5.36	5.36	2.81	0.32	0.0000	Yes	PNL	25	29	18	2.7		# 0005-Line
423	LP-ADM-1A	MB LP-ADM-1A	0.208	5.29	5.29	2.78	0.0172	0.0000	Yes	PNL	25	5	18	0.14		# 0026
424	LP-ADM-1A (MB LP-ADM-1A LineSide)	MB LP-ADM-1	0.208	5.29	5.29	2.78	0.0172	0.0000	Yes	PNL	25	5	18	0.14		# 0006-Line
425	LP-ADM-UPS	MB LP-ADM-UPS	0.208	0.04	0.04	0.04	2	0.0000	Yes	PNL	25	3	18	0.04	(*N9) (*N11)	# 0026
426	LP-ADM-UPS (MB LP-ADM-UPS LineSide)	MaxTripTime @2.0s	0.208	0.04	0.04	0.04	2	0.0000	Yes	PNL	25	3	18	0.04	(*N2) (*N9) (*N11)	# 0007-Line
427	LP-C	FU XFMR LP-C	0.208	1.86	1.86	1.33		0.0000	Yes	PNL	25	42	18	4.9	(*N4) (*N5) (*N9)	# 0242
428	LP-C (MB LP-C LineSide)	FU XFMR LP-C	0.208	1.86	1.86	1.33		0.0000	Yes	PNL	25	42	18	4.9	(*N4) (*N9)	# 0265-Line
429	LP-CEB-A	MB LP-CEB-A	0.208	3.32	3.32	2.01	2	0.0000	Yes	PNL	25	72	18	12	(*N9)	# 0030
430	LP-CEB-A (MB LP-CEB-A LineSide)	FB ATS-CEB NRM	0.208	3.32	3.32	2.01	2	0.0000	Yes	PNL	25	72	18	12	(*N9)	# 0008-Line
431	LP-CEB-B	MB LP-CEB-A	0.208	3.25	3.25	1.98	2	0.0000	Yes	PNL	25	71	18	11	(*N9)	# 0030
432	LP-D	FU XFMR LP-D PRI	0.208	1.81	1.81	1.31		0.0000	Yes	PNL	25	44	18	5.1	(*N4) (*N9)	# 0242
433	LP-E	FU XFMR-LP-E	0.208	4.10	4.10	2.33		0.0000	Yes	PNL	25	7	18	0.25	(*N4) (*N5)	# 0192
434	LP-E (#MB LP-E LineSide)	FU XFMR-LP-E	0.208	4.10	4.10	2.33		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0435-Line
435	LP-EBB-A	MB LP-EBB-A	0.208	3.18	3.18	1.94	2	0.0000	Yes	PNL	25	70	18	11	(*N9)	# 0193
436	LP-EBB-A (MB LP-EBB-A LineSide)	FB XFMR LP-EBB-A	0.208	3.18	3.18	1.94	2	0.0000	Yes	PNL	25	70	18	11	(*N9)	# 0009-Line
437	LP-EE	FU 0904	0.208	0.45	0.45	0.45	0.1748	0.0000	Yes	PNL	25	3	18	0.04	(*N11)	# 0194

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
438	LP-F	FU 0502	0.208	3.96	3.96	2.27		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0196
439	LP-FF	FU XFMR-LP-FF	0.208	0.49	0.49	0.49	0.1506	0.0000	Yes	PNL	25	3	18	0.04	(*N11)	# 0194
440	LP-LSE	PD-LP-LSE XFMR	0.208	1.86	1.86	1.34	2	0.0000	Yes	PNL	25	55	18	7.5	(*N9)	# 0193
441	LP-M	FU 0645	0.208	3.32	3.32	1.71		0.0000	Yes	PNL	25	12	18	0.65	(*N3) (*N4)	# 0257
442	LP-N	MB LP-N	0.208	3.46	3.46	1.76	2	0.0000	Yes	PNL	25	65	18	9.9	(*N3) (*N9)	# 0257
443	LP-N (MB LP-N LineSide)	FU 0699	0.208	3.46	3.46	2.06		0.0000	Yes	PNL	25	63	18	9.2	(*N4) (*N9)	# 0445-Line
444	LP-O	PD XFMR LP-O	0.208	2.52	2.52	1.65	1.979	0.0000	Yes	PNL	25	62	18	9.1		# 0199
445	LP-Q	FU 0734	0.208	3.31	3.31	2.00		0.0000	Yes	PNL	25	67	18	10	(*N4) (*N5) (*N9)	# 0257
446	LP-Q (MB LP-Q LineSide)	FU 0734	0.208	3.31	3.31	2.00		0.0000	Yes	PNL	25	67	18	10	(*N4) (*N9)	# 0448-Line
447	LP-RLS	MB-LP-RLS	0.208	1.76	1.76	1.09	1.968	0.0000	Yes	PNL	25	48	18	5.9	(*N3)	# 0073
448	LP-RLS (MB-LP-RLS LineSide)	FB ATS-RLS NRM	0.208	1.76	1.76	1.28	2	0.0000	Yes	PNL	25	54	18	7.2	(*N9)	# 0252-Line
449	LP-T	PD XFMR LP-T	0.208	2.56	2.56	1.67	1.953	0.0000	Yes	PNL	25	62	18	9.2		# 0200
450	LP-U	PD XFMR LP-U	0.208	2.54	2.54	1.66	1.963	0.0000	Yes	PNL	25	62	18	9.1		# 0201
451	LP-V	PD-0639	0.208	1.62	1.62	1.21	2	0.0000	Yes	PNL	25	51	18	6.7	(*N9)	# 0202
452	LP-V (PD-0639 LineSide)	MB MCC-EPB-A	0.208	1.62	1.62	1.21	2	0.0000	Yes	PNL	25	51	18	6.7	(*N5) (*N9)	# 0454-Line
453	LP-W	PD-0636	0.208	1.96	1.96	1.39	2	0.0000	Yes	PNL	25	56	18	7.7	(*N9)	# 0203
454	LP-W (PD-0636 LineSide)	MB MCC-EPB-B	0.208	1.96	1.96	1.39	2	0.0000	Yes	PNL	25	56	18	7.7	(*N5) (*N9)	# 0456-Line
455	LP-WBB-A	MB-WBB-A	0.208	3.54	3.54	2.10	2	0.0000	Yes	PNL	25	74	18	12	(*N9)	# 0193
456	LP-WBB-A (MB-WBB-A LineSide)	PD LP-WBB XFMR	0.208	3.54	3.54	2.10	2	0.0000	Yes	PNL	25	74	18	12	(*N9)	# 0258-Line
457	LP-WBB-B	MB-WBB-A	0.208	3.48	3.48	2.07	2	0.0000	Yes	PNL	25	74	18	12	(*N9)	# 0193
458	LP-WPB-A	MB LP-WPB-B	0.208	1.80	1.80	1.11	1.912	0.0000	Yes	PNL	25	47	18	5.9	(*N3) (*N21b)	# 0122
459	LP-WPB-A (MB LP-WPB-B LineSide)	FB ATS-WPB-NORM	0.208	1.80	1.80	1.30	2	0.0000	Yes	PNL	25	54	18	7.3	(*N9) (*N21b)	# 0010-Line
460	LP-WPB-B	MB LP-WPB-B	0.208	1.78	1.78	1.10	1.937	0.0000	Yes	PNL	25	48	18	5.9	(*N3) (*N21b)	# 0122
461	LSE-ACCU-1	FB LSE-ACCU-1	0.48	6.23	6.23	4.38	0.0162	0.0000	Yes	PNL	25	6	18	0.22		# 0116
462	LSE-ACU-1	FB LSE-ACU-1	0.48	3.96	3.96	2.97	0.0175	0.0000	Yes	PNL	25	5	18	0.16		# 0117
463	LSE-PPU-1	FB LSE-PPU-1	0.48	2.97	2.97	2.33	0.0162	0.0000	Yes	PNL	25	4	18	0.11		# 0115
464	MB-EF-1 DISC	FB MB-EF-1	0.48	3.28	3.28	2.53	0.0162	0.0000	Yes	PNL	25	4	18	0.12		# 0453
465	MCC-51A	MB MCC-51A	0.48	27.56	27.56	15.59	0.0117	0.0000	Yes	MCC	25	12	18	0.63		# 0368
466	MCC-51A (MB MCC-51A LineSide)	800/800 MCC-51A	0.48	27.56	27.56	15.59	0.066	0.0000	Yes	MCC	25	35	18	3.5		# 0369-Line
467	MCC-51B	MB MCC-51B	0.48	27.86	27.86	15.74	0.0116	0.0000	Yes	MCC	25	12	18	0.63		# 0368
468	MCC-51B (MB MCC-51B LineSide)	800/800 MCC-51B	0.48	27.86	27.86	15.74	0.066	0.0000	Yes	MCC	25	35	18	3.6		# 0367-Line
469	MCC-52A	MB MCC-52A	0.48	27.56	27.56	15.59	0.0117	0.0000	Yes	MCC	25	12	18	0.63		# 0368
470	MCC-52A (MB MCC-52A LineSide)	800/800 MCC-52A	0.48	27.56	27.56	15.59	0.066	0.0000	Yes	MCC	25	35	18	3.5		# 0371-Line
471	MCC-52B	MB MCC-52B	0.48	28.23	28.23	15.91	0.0116	0.0000	Yes	MCC	25	12	18	0.63		# 0368

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
472	MCC-52B (MB MCC-52B LineSide)	800/800 MCC-52B	0.48	28.23	28.23	15.91	0.066	0.0000	Yes	MCC	25	35	18	3.6		# 0373-Line
473	MCC-53 A	MB MCC-53A	0.48	27.56	27.56	15.59	0.0117	0.0000	Yes	MCC	25	12	18	0.63		# 0368
474	MCC-53 A (MB MCC-53A LineSide)	800/600 MCC-53A	0.48	27.56	27.56	15.59	0.066	0.0000	Yes	MCC	25	35	18	3.5		# 0375-Line
475	MCC-53B	MB MCC-53B	0.48	27.86	27.86	15.74	0.0116	0.0000	Yes	MCC	25	12	18	0.63		# 0368
476	MCC-53B (MB MCC-53B LineSide)	800/600 MCC-53B	0.48	27.86	27.86	15.74	0.066	0.0000	Yes	MCC	25	35	18	3.6		# 0377-Line
477	MCC-54 A	MB MCC-54A	0.48	26.88	26.88	15.26	0.0118	0.0000	Yes	MCC	25	12	18	0.62		# 0368
478	MCC-54 A (MB MCC-54A LineSide)	800/800 MCC-54A	0.48	26.88	26.88	15.26	0.066	0.0000	Yes	MCC	25	34	18	3.5		# 0379-Line
479	MCC-54B	MB MCC-54B	0.48	27.16	27.16	15.40	0.0117	0.0000	Yes	MCC	25	12	18	0.62		# 0368
480	MCC-54B (MB MCC-54B LineSide)	800/800 MCC-54B	0.48	27.16	27.16	15.40	0.066	0.0000	Yes	MCC	25	35	18	3.5		# 0381-Line
481	MCC-55 A	MB MCC-55A	0.48	27.56	27.56	15.59	0.0117	0.0000	Yes	MCC	25	12	18	0.63		# 0368
482	MCC-55 A (MB MCC-55A LineSide)	800/600 MCC-55A	0.48	27.56	27.56	15.59	0.066	0.0000	Yes	MCC	25	35	18	3.5		# 0383-Line
483	MCC-55B	MB MCC-55B	0.48	27.86	27.86	15.74	0.0116	0.0000	Yes	MCC	25	12	18	0.63		# 0368
484	MCC-55B (MB MCC-55B LineSide)	800/600 MCC-55B	0.48	27.86	27.86	15.74	0.066	0.0000	Yes	MCC	25	35	18	3.6		# 0385-Line
485	MCC-56 A	800/600 MCC-56A	0.48	13.29	12.83	6.86	0.066	0.0000	Yes	MCC	25	21	18	1.5	(*N3)	# 0368
486	MCC-56 A (MB MCC-56A LineSide)	800/600 MCC-56A	0.48	13.29	12.83	8.07	0.066	0.0000	Yes	MCC	25	23	18	1.8		# 0387-Line
487	MCC-56B	800/600 MCC-56B	0.48	13.15	12.70	6.80	0.066	0.0000	Yes	MCC	25	21	18	1.5	(*N3)	# 0368
488	MCC-56B (MB MCC-56B LineSide)	800/600 MCC-56B	0.48	13.15	12.70	8.00	0.066	0.0000	Yes	MCC	25	23	18	1.8		# 0389-Line
489	MCC-ADM-A	MB MCC-ADM-A	0.48	10.70	10.70	6.95	0.14	0.0000	Yes	MCC	25	32	18	3.1		# 0032
490	MCC-ADM-A (MB MCC-ADM-A LineSide)	800/800 ATS-ADM-EMG	0.48	10.70	10.70	6.95	0.2	0.0000	Yes	MCC	25	40	18	4.4		# 0012-Line
491	MCC-ADM-A (PD STORM WATER PUMP CP LineSide)	PD STORM WATER PUMP CP	0.48	10.70	10.70	6.95	0.05	0.0000	Yes	MCC	25	17	18	1.1		# 0013-Line
492	MCC-ADM-A (PD XFMR-LP-ADM-1 LineSide)	PD XFMR-LP-ADM-1	0.48	10.70	10.70	6.95	0.0501	0.0000	Yes	MCC	25	17	18	1.1		# 0011-Line
493	MCC-C	800/200 MCC-C	0.48	14.20	14.20	8.85	0.2	0.0000	Yes	MCC	25	45	18	5.4		# 0283
494	MCC-CEB-A	800/600 MCC-CEB-A	0.48	21.90	21.90	12.81	0.06	0.0000	Yes	MCC	25	29	18	2.6		# 0034
495	MCC-CEB-B	800/600 MCC-CEB-B	0.48	21.91	21.91	12.82	0.06	0.0000	Yes	MCC	25	29	18	2.6		# 0035
496	MCC-D	800/200 MCC-D	0.48	14.30	14.30	8.90	0.2	0.0000	Yes	MCC	25	46	18	5.5		# 0286
497	MCC-E	FU HP PEW PUMP 1	0.48	12.42	0.73	0.46	0.0833	0.0000	Yes	MCC	25	22	18	1.7		# 0215
498	MCC-EBB-A	800/600 MCC-EBB-A	0.48	9.54	9.18	6.06	0.14	0.0000	Yes	MCC	25	29	18	2.6		# 0218
499	MCC-EBB-B	800/600 MCC-EBB-B	0.48	8.64	8.29	5.56	0.14	0.0000	Yes	MCC	25	28	18	2.4		# 0220
500	MCC-EE	FU MCC-EE	0.48	11.89	11.89	7.60		0.0000	Yes	MCC	25	7	18	0.25	(*N4)	# 0222
501	MCC-EPB-A	MB MCC-EPB-A	0.48	5.76	5.76	4.09	0.0549	0.0000	Yes	MCC	25	13	18	0.69		# 0225
502	MCC-EPB-A (MB MCC-EPB-A LineSide)	800/200 MCC-EPB-A	0.48	5.76	5.76	4.09	0.14	0.0000	Yes	MCC	25	22	18	1.7		# 0256-Line
503	MCC-EPB-B	MB MCC-EPB-B	0.48	5.41	5.41	3.88	0.0557	0.0000	Yes	MCC	25	13	18	0.66		# 0225

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
504	MCC-EPB-B (MB MCC-EPB-B LineSide)	800/200 MCC-EPB-B	0.48	5.41	5.41	3.88	0.14	0.0000	Yes	MCC	25	22	18	1.6		# 0256-Line
505	MCC-F	800/400 MCC-F	0.48	11.58	9.71	6.23	0.06	0.0000	Yes	MCC	25	20	18	1.4		# 0229
506	MCC-FF	FU 0560	0.48	11.15	11.15	7.20		0.0000	Yes	MCC	25	7	18	0.25	(*N4)	# 0222
507	MCC-M	FB-MCC-M	0.48	18.45	14.50	8.70	0.32	0.0000	Yes	MCC	25	64	18	9.5		# 0322
508	MCC-N	FB-MCC-N	0.48	20.47	16.20	8.14	0.32	0.0000	Yes	MCC	25	59	18	8.3	(*N3)	# 0322
509	MCC-P	FB-MCC-P	0.48	19.46	17.00	10.11	0.05	0.0000	Yes	MCC	25	24	18	1.9		# 0322
510	MCC-Q	FB-MCC-Q	0.48	17.92	16.86	10.16	0.05	0.0000	Yes	MCC	25	23	18	1.8		# 0322
511	MCC-R	800/800 MCC-R	0.48	37.87	32.68	17.65	0.066	0.0000	Yes	MCC	25	42	18	4.7		# 0322
512	MCC-RLS-A	MB MCC-RLS-A	0.48	14.46	12.28	7.63	0.14	0.0000	Yes	MCC	25	37	18	3.9		# 0313
513	MCC-RLS-A (MB MCC-RLS-A LineSide)	800/600 MCC-RLS-A	0.48	14.46	12.28	7.63	0.2	0.0000	Yes	MCC	25	45	18	5.4		# 0314-Line
514	MCC-RLS-B	MB MCC-RLS-B	0.48	11.94	10.51	5.71	0.0958	0.0000	Yes	MCC	25	24	18	2.0	(*N3)	# 0273
515	MCC-RLS-B (MB MCC-RLS-B LineSide)	800/400 MCC-RLS-B	0.48	11.94	10.51	6.72	0.2	0.0000	Yes	MCC	25	41	18	4.6		# 0274-Line
516	MCC-S	800/800 MCC-S	0.48	38.35	34.72	18.72	0.066	0.0000	Yes	MCC	25	42	18	4.8		# 0322
517	MCC-WBB-A	1600/1440 MCC-WBB-A	0.48	33.10	28.42	15.65	0.2	0.0000	Yes	MCC	25	71	18	11		# 0233
518	MCC-WBB-B	1600/1440 MCC-WBB-B	0.48	29.92	27.60	15.42	0.2	0.0000	Yes	MCC	25	69	18	11		# 0235
519	MCC-WPB-A	MB MCC-WPB-A	0.48	12.42	12.42	7.89	0.051	0.0000	Yes	MCC	25	19	18	1.3		# 0209
520	MCC-WPB-A (MB MCC-WPB-A LineSide)	800/400 MCC-WPB-A	0.48	12.42	12.42	7.89	0.14	0.0000	Yes	MCC	25	35	18	3.5		# 0287-Loa
521	MCC-WPB-B	MB MCC-WPB-B	0.48	12.01	12.01	7.67	0.0514	0.0000	Yes	MCC	25	19	18	1.3		# 0237
522	MCC-WPB-B (MB MCC-WPB-B LineSide)	800/400 MCC-WPB-B	0.48	12.01	12.01	7.67	0.14	0.0000	Yes	MCC	25	34	18	3.4		# 0485-Loa
523	MCC-XA	800/800 MCC-XA	0.48	16.47	15.23	7.89	0.218	0.0000	Yes	MCC	25	45	18	5.5	(*N3)	# 0322
524	MCC-XB	800/800 MCC-XB	0.48	36.69	34.65	18.80	0.066	0.0000	Yes	MCC	25	41	18	4.6		# 0322
525	METAL LATHE	FU PP-MTB	0.48	4.85	4.85	3.54		0.0000	Yes	PNL	25	7	18	0.25	(*N4) (*N5)	# 0526
526	MILL MACH	FB MILL MACH	0.48	4.04	4.04	3.02	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0527
527	MOD VALVE 1 DISC	FU 0746	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
528	MOD VALVE 3 DISC	FU 0746	0.48	1.36	1.36	1.19	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
529	MOD VALVE 5 DISC	FU 0746	0.48	1.25	1.25	1.11	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
530	MOD VALVE 7 DISC	FU 0746	0.48	1.16	1.16	1.04	0.0083	0.0000	Yes	PNL	25	2	18	0.02		# 0568
531	MPPEWP1 DISC	FU MP PEW PUMP 1	0.48	10.18	9.76	5.43	0.0083	0.0000	Yes	PNL	25	5	18	0.15	(*N3)	# 0475
532	MPPEWP2 DISC	FU 0548	0.48	9.62	9.21	6.07	0.0083	0.0000	Yes	PNL	25	5	18	0.17		# 0073
533	MU HV2 DISC	FU 0749	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
534	MV10 DISC	FU 0659	0.48	1.48	1.48	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
535	MV11 DISC	FU 0659	0.48	1.47	1.47	1.27	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
536	MV12 DISC	FU 0659	0.48	1.46	1.46	1.26	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
537	MV2 DISC	FU 0711	0.48	1.50	1.50	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
538	MV4 DISC	FU 0711	0.48	1.48	1.48	1.28	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
539	MV6 DISC	FU 0711	0.48	1.47	1.47	1.27	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
540	MV8 DISC	FU 0711	0.48	1.45	1.45	1.26	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
541	MV9 DISC	FU 0659	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
542	N EQPT RCPT	FU 0715	0.48	2.33	2.33	1.89		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0568
543	OZNTD DISC	FU 0917	0.48	7.91	7.91	5.37		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0099
544	P-53-06 DISC	PD P-53-06	0.48	5.83	5.83	4.14	0.0162	0.0000	Yes	PNL	25	6	18	0.21		# 0492
545	P-53-06 STR	PD P-53-06	0.48	4.95	4.95	3.60	0.0162	0.0000	Yes	PNL	25	6	18	0.18		# 0492
546	P-53-07 DISC	PD P-53-07	0.48	3.50	3.50	2.67	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0492
547	P-53-07 STR	PD P-53-07	0.48	3.15	3.15	2.44	0.0162	0.0000	Yes	PNL	25	4	18	0.12		# 0492
548	P-53-20 DISC	PD P-53-07	0.48	5.92	5.92	4.19	0.0162	0.0000	Yes	PNL	25	6	18	0.21		# 0492
549	P-53-20 STR	PD P-53-07	0.48	5.01	5.01	3.64	0.0162	0.0000	Yes	PNL	25	6	18	0.18		# 0492
550	P-53-21 DISC	PD P-53-06	0.48	5.36	5.36	3.85	0.0162	0.0000	Yes	PNL	25	6	18	0.19		# 0492
551	P-53-21 STR	PD P-53-06	0.48	4.60	4.60	3.38	0.0162	0.0000	Yes	PNL	25	5	18	0.17		# 0492
552	PAB-E1 DV & BOV	FB PAB-E1 DV & BOV	0.48	2.21	2.21	1.80	0.0162	0.0000	Yes	PNL	25	4	18	0.08		# 0553
553	PAB-E1 LCP	FB PAB-E1 LCP	0.48	3.60	3.60	2.74	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0554
554	PAB-E1 STR IN	PD PAB-E1 RELAY	4.16	2.74	2.20	2.18	0.0167	0.0830	Yes	SWG	104	7	36	0.26		# 0250
555	PAB-E1 STR IN (FU PAB-E1 LineSide)	PD PAB-E1 RELAY	4.16	2.74	2.20	2.18	0.0167	0.0830	Yes	SWG	104	7	36	0.26		# 0014-Line
556	PAB-E2 DV & BOV1	FB PAB-E2 DV & BOV1	0.48	1.87	1.87	1.57	0.018	0.0000	Yes	PNL	25	3	18	0.08		# 0558
557	PAB-E2 LCP	FB PAB-E2 LCP	0.48	3.02	3.02	2.36	0.0162	0.0000	Yes	PNL	25	4	18	0.11		# 0559
558	PAB-E2 STR IN	PD PAB-E2 RELAY	4.16	2.18	1.64	1.64	0.0167	0.0830	Yes	SWG	104	6	36	0.21		# 0252
559	PAB-E2 STR IN (FU PAB-E2 LineSide)	PD PAB-E2 RELAY	4.16	2.18	1.64	1.64	0.0167	0.0830	Yes	SWG	104	6	36	0.21		# 0015-Line
560	PAB-E3 DV & BOV	FB PAB-E3 DV & BOV	0.48	1.65	1.65	1.40	0.0196	0.0000	Yes	PNL	25	3	18	0.08		# 0563
561	PAB-E3 LCP	FB PAB-E3 LCP	0.48	2.35	2.35	1.90	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0564
562	PAB-E3 STR IN	PD PAB-E3 RELAY	4.16	2.74	2.20	2.18	0.0167	0.0830	Yes	SWG	104	7	36	0.26		# 0254
563	PAB-E3 STR IN (FU PAB-E3 LineSide)	PD PAB-E3 RELAY	4.16	2.74	2.20	2.18	0.0167	0.0830	Yes	SWG	104	7	36	0.26		# 0016-Line
564	PAB-W1 VALVES JB	PD PAB-W1 VALVES	0.48	6.76	6.76	4.69	0.0162	0.0000	Yes	PNL	25	7	18	0.24		# 0106
565	PAB-W2 VALVES JB	PD PAB-W2 VALVES	0.48	5.17	5.17	3.73	0.0162	0.0000	Yes	PNL	25	6	18	0.19		# 0077
566	PAB-W3 VALVES JB	PD PAB-W3 VALVES	0.48	4.29	4.29	3.18	0.0162	0.0000	Yes	PNL	25	5	18	0.16		# 0107
567	PCDR W1 DISC	MCP PCDR-W1	0.48	1.35	1.35	1.19	0.005	0.0000	Yes	PNL	25	1	18	0.02		# 0492
568	PCDR-W2 DISC	MCP PCDR-W2	0.48	2.18	2.18	1.78	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
569	PC-E1 DISC	MCP PC-E1	0.48	0.60	0.60	0.60	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11)	# 0256
570	PC-E2 DISC	MCP PC-E2	0.48	0.75	0.75	0.72	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0180
571	PC-E3 DISC	MCP PC-E3	0.48	0.78	0.78	0.74	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0256
572	PC-E4 DISC	MCP PC-E4	0.48	0.54	0.54	0.54	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11)	# 0180
573	PC-WPB-EF-2 DISC	MCP WPB-EF-2	0.48	3.18	3.18	2.46	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0492
574	PC-WPB-P-2 DISC	MCP WPB-P-2	0.48	2.02	2.02	1.67	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
575	PDP UV 2A	FB-PDP-UV-2A	0.48	13.99	13.99	7.42	0.2	0.0000	Yes	MCC	25	38	18	4.1	(*N3)	# 0322
576	PDP UV 2B	FB-PDP-UV-2B	0.48	13.99	13.99	7.42	0.2	0.0000	Yes	MCC	25	38	18	4.1	(*N3)	# 0322
577	PDP-E1 DISC	MCP PDP-E1	0.48	4.29	4.29	3.18	0.005	0.0000	Yes	PNL	25	3	18	0.05		# 0256
578	PDP-W1 DISC	MCP PDP-W1	0.48	3.40	3.40	2.61	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0492
579	PEW STRAINER DISC	FU 0697	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
580	PEWP1 DISC	FB-MCC-P	0.48	14.60	12.42	6.55	0.05	0.0000	Yes	PNL	25	19	18	1.3	(*N3) (*N5) (*N21b)	# 0136

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
581	PEWP2 DISC	FU PEW PUMP 2	0.48	17.24	15.79	8.13	0.0372	0.0000	Yes	PNL	25	17	18	1.1	(*N3)	# 0568
582	PEWP3 ATS NRM	FU PEW PUMP 3	0.48	19.72	18.29	9.23	0.0235	0.0000	Yes	PNL	25	14	18	0.78	(*N3) (*N21b)	# 0576
583	PEWP3 DISC	FU PEW PUMP 3	0.48	16.52	15.10	7.82	0.0427	0.0000	Yes	PNL	25	18	18	1.2	(*N3) (*N21b)	# 0568
584	PMPRM HOIST DISC	FU 0575	0.48	4.06	4.06	3.04	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0073
585	PP-ADM-1	PD XFMR PP-ADM-1	0.48	2.64	2.64	1.79	0.7193	0.0000	Yes	PNL	25	36	18	3.7	(*N3) (*N5)	# 0036
586	PP-ADM-1 (MB PP-ADM-1 LineSide)	PD XFMR PP-ADM-1	0.48	2.64	2.64	1.79	0.7193	0.0000	Yes	PNL	25	36	18	3.7	(*N3)	# 0017-Line
587	PP-ADM-2	PD XFMR PP-ADM-1	0.48	2.15	2.15	1.50	1.027	0.0000	Yes	PNL	25	40	18	4.4	(*N3) (*N5)	# 0036
588	PP-EBB-A	FB ATS-EBB NORM	0.48	8.22	8.22	5.55	0.04	0.0000	Yes	PNL	25	13	18	0.70		# 0278
589	PP-EBB-B	FB PP-EBB-B	0.48	6.97	6.97	4.82	0.0166	0.0000	Yes	PNL	25	7	18	0.25		# 0278
590	PP-LSE	MB PP-LSE	0.48	11.59	11.59	7.44	0.0175	0.0000	Yes	PNL	25	10	18	0.42		# 0074
591	PP-LSE (MB PP-LSE LineSide)	FB ATS-LSE-NRM	0.48	11.59	11.59	7.44	0.0537	0.0000	Yes	PNL	25	19	18	1.3		# 0075-Line
592	PP-LSE CKT #19	FB SLDG'S F-50-3,4	0.48	1.00	1.00	0.78	0.0583	0.0000	Yes	PNL	25	5	18	0.12	(*N3)	# 0074
593	PP-MTB	FU PP-MTB	0.48	5.37	5.37	3.85		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0074
594	PP-MTB DISC SW	800/250 PP-MTB	0.48	5.60	5.60	4.00	0.14	0.0000	Yes	PNL	25	22	18	1.7		# 0435
595	PP-UV	FU ATS-PP-UV-NRM	0.48	1.67	1.67	1.21	0.0491	0.0000	Yes	PNL	25	5	18	0.17	(*N3)	# 0374
596	PP-WBB-A	FB ATS-WBB-NORM	0.48	26.83	26.83	15.23	0.0504	0.0000	Yes	PNL	25	29	18	2.6		# 0079
597	PP-WBB-B	PD PP-WBB-B	0.48	26.13	26.13	14.90	0.0175	0.0000	Yes	PNL	25	15	18	0.89		# 0074
598	PP-Z	FU PP-MTB	0.48	4.81	4.81	3.51		0.0000	Yes	PNL	25	7	18	0.25	(*N4) (*N5)	# 0074
599	PP-Z (MB-PP-Z LineSide)	FU PP-MTB	0.48	4.81	4.81	3.51		0.0000	Yes	PNL	25	7	18	0.25	(*N4) (*N5)	# 0601-Line
600	PSCP-E1 DISC	MCP PSLMP-E4	0.48	3.74	3.74	2.83	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0256
601	PSCP-E2 DISC	MCP PSCP-E2	0.48	3.61	3.61	2.74	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0180
602	PSCP-W1 DISC	MCP PSCP-W1	0.48	6.80	6.80	4.72	0.005	0.0000	Yes	PNL	25	3	18	0.07		# 0492
603	PSCP-W2 DISC	MCP PSCP-W2	0.48	4.44	4.44	3.28	0.005	0.0000	Yes	PNL	25	3	18	0.05		# 0492
604	PSLP-E2 VFD IN	PD PSLP-E2	0.48	3.39	3.39	2.60	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0445
605	PSLPG-W1 VFD IN	PD PSLPG-W1	0.48	2.62	2.62	2.09	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0492
606	PSLPG-W2 INPUT	PD PSLPG-W2	0.48	4.67	4.67	3.42	0.0162	0.0000	Yes	PNL	25	5	18	0.17		# 0492
607	PSLPM-E1 LCP	PD PSLPM-E1	0.48	3.61	3.61	2.74	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0450
608	PSLPM-E2 LCP	PD PSLPM-E2	0.48	3.39	3.39	2.60	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0451
609	PSLP-W1 VFD IN	PD PSLP-W1	0.48	6.95	6.95	4.80	0.0162	0.0000	Yes	PNL	25	7	18	0.24		# 0492
610	PSLP-W2 INPUT	PD PSLP-W2	0.48	8.10	8.10	5.48	0.0162	0.0000	Yes	PNL	25	7	18	0.28		# 0492
611	RASP-E1 VFD IN	PD RASP-E1	0.48	2.02	2.02	1.67	0.021	0.0000	Yes	PNL	25	4	18	0.10		# 0302
612	RASP-E2 VFD IN	PD RASP-E2	0.48	1.99	1.99	1.65	0.0191	0.0000	Yes	PNL	25	4	18	0.09		# 0461
613	RASP-E3 VFD IN	PD RASP-E3	0.48	2.02	2.02	1.67	0.021	0.0000	Yes	PNL	25	4	18	0.10		# 0302
614	RASP-E4 VFD IN	PD RASP-E4	0.48	1.99	1.99	1.65	0.0191	0.0000	Yes	PNL	25	4	18	0.09		# 0463
615	RASP-E5 VFD IN	PD RASP-E5	0.48	2.02	2.02	1.67	0.021	0.0000	Yes	PNL	25	4	18	0.10		# 0302
616	RASP-E6 VFD IN	PD RASP-E6	0.48	1.99	1.99	1.65	0.0191	0.0000	Yes	PNL	25	4	18	0.09		# 0465
617	RASP-E7 VFD IN	PD RASP-E7	0.48	2.02	2.02	1.67	0.021	0.0000	Yes	PNL	25	4	18	0.10		# 0302
618	RASP-E8 VFD IN	PD RASP-E8	0.48	1.99	1.99	1.65	0.0191	0.0000	Yes	PNL	25	4	18	0.09		# 0467
619	RASP-W1 VFD IN	PD RASP-W1	0.48	14.06	14.06	8.77	0.0162	0.0000	Yes	PNL	25	10	18	0.47	(*N21b)	# 0028

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
620	RASP-W2 VFD IN	PD RASP-W2	0.48	13.61	13.61	8.53	0.0162	0.0000	Yes	PNL	25	10	18	0.45	(*N21b)	# 0492
621	RASP-W3 VFD IN	PD RASP-W3	0.48	14.06	14.06	8.77	0.0162	0.0000	Yes	PNL	25	10	18	0.47	(*N21b)	# 0028
622	RASP-W4 VFD IN	PD RASP-W4	0.48	13.61	13.61	8.53	0.0162	0.0000	Yes	PNL	25	10	18	0.45	(*N21b)	# 0492
623	RBDP1 DISC	FU 0523	0.48	8.24	8.24	4.72	0.0083	0.0000	Yes	PNL	25	5	18	0.12	(*N3)	# 0073
624	RBDP-2 DISC	FU RB DRAIN PUMP 2	0.48	9.68	9.68	6.38	0.0042	0.0000	Yes	PNL	25	4	18	0.09		# 0475
625	RBDP3 DISC	FU 0542	0.48	8.24	8.24	4.72	0.0083	0.0000	Yes	PNL	25	5	18	0.12	(*N3)	# 0073
626	RBDP-4 DISC	FU RB DRAIN PUMP 4	0.48	9.68	9.68	6.38	0.0042	0.0000	Yes	PNL	25	4	18	0.09		# 0475
627	RECIRCV PAB-E1	FB RECIRCV PAB-E1	0.48	2.31	2.31	1.87	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0630
628	RECIRCV PAB-E2	FB RECIRCV PAB-E2	0.48	1.95	1.95	1.62	0.0176	0.0000	Yes	PNL	25	4	18	0.08		# 0631
629	RECIRCV PAB-E3	FB RECIRCV PAB-E3	0.48	1.53	1.53	1.32	0.0206	0.0000	Yes	PNL	25	3	18	0.08		# 0632
630	RETBSNRFCV STARTER	FU RET BSN RF CV	0.48	2.81	2.81	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
631	RF # 5 DISC	FU 0530	0.48	2.77	2.77	2.19	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
632	RF # 6 DISC	FU 0555	0.48	2.77	2.77	2.19	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
633	RF-1 DISC	MCP RF-1	0.48	3.23	3.23	2.50	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0180
634	RIVER VALVE DISC	FU 0689	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*N21b)	# 0136
635	RLS-ACCU-1	PD RLS-ACCU-1	0.48	2.84	2.84	2.24	0.0162	0.0000	Yes	PNL	25	4	18	0.11		# 0417
636	RLS-ACCU-1 DISC	PD RLS-ACCU-1	0.48	3.47	3.47	2.66	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0492
637	RLS-ACU-1	PD RLS-ACU-1	0.48	7.11	7.11	4.90	0.0162	0.0000	Yes	PNL	25	7	18	0.25		# 0417
638	RLS-EF-1 DISC	MCP RLS-EF-1	0.48	2.76	2.76	2.18	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0430
639	RLS-EF-2 DISC	MCP RLS-EF-2	0.48	4.86	4.86	3.54	0.005	0.0000	Yes	PNL	25	3	18	0.05		# 0430
640	RLS-PPU-1	PD RLS-PPU-1	0.48	7.35	7.35	5.04	0.0162	0.0000	Yes	PNL	25	7	18	0.26		# 0563
641	RLS-SF-1 DISC	MCP RLS-SF-1	0.48	1.80	1.80	1.51	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0430
642	ROOF FAN 10 DISC	FU 0722	0.48	2.92	2.92	2.29	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0568
643	ROOF FAN 11 DISC	FU 0693	0.48	2.89	2.89	2.27	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0136
644	ROOF FAN 12 DISC	FU 0731	0.48	2.92	2.92	2.29	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0568
645	RS-SAP-1 DISC	MCP RS-SAP-1	0.48	2.06	2.06	1.70	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
646	S-1-1 DISC	PD 48IN GATE S-1-1	0.48	1.68	1.68	1.43	0.0169	0.0000	Yes	PNL	25	3	18	0.07		# 0430
647	S-21-1 DISC	PD F-1-1	0.48	2.17	2.17	1.78	0.0162	0.0000	Yes	PNL	25	4	18	0.08		# 0160
648	S-21-1 STARTER	PD F-1-1	0.48	1.92	1.92	1.60	0.0166	0.0000	Yes	PNL	25	3	18	0.08		# 0498
649	S-21-2 DISC	PD F-1-1	0.48	2.15	2.15	1.76	0.0163	0.0000	Yes	PNL	25	4	18	0.08		# 0160
650	S-21-2 STARTER	PD F-1-1	0.48	1.71	1.71	1.45	0.0169	0.0000	Yes	PNL	25	3	18	0.07		# 0500
651	S-21-3 DISC	PD F-1-5	0.48	1.78	1.78	1.50	0.0168	0.0000	Yes	PNL	25	3	18	0.07		# 0160
652	S-21-3 STARTER	PD F-1-5	0.48	1.47	1.47	1.08	0.021	0.0000	Yes	PNL	25	3	18	0.06	(*N3)	# 0500
653	S-21-4 DISC	PD F-1-5	0.48	1.77	1.77	1.49	0.0168	0.0000	Yes	PNL	25	3	18	0.07		# 0160
654	S-21-4 STARTER	PD F-1-5	0.48	1.60	1.60	1.37	0.0171	0.0000	Yes	PNL	25	3	18	0.07		# 0500
655	S-54-2 DISC	PD F-54-5	0.48	2.44	2.44	1.96	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0657
656	S-54-2 STR	PD F-54-5	0.48	2.35	2.35	1.90	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0658
657	SC-1 DISC	FU SC-1	0.48	4.36	4.36	3.23	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
658	SC-2 DISC	FU SCREEN COMP SC-2	0.48	4.40	4.40	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
659	SC-3 DISC	FU SCREEN COMP SC-3	0.48	4.40	4.40	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
660	SCDR-W1 DISC	MCP SCDR-W1	0.48	0.63	0.63	0.63	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11)	# 0028

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
661	SCDR-W2 DISC	MCP SCDR-W2	0.48	0.63	0.63	0.63	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11)	# 0492
662	SC-E1 DISC	MCP SEC-CLAR-E1	0.48	0.58	0.58	0.58	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11)	# 0511
663	SC-E2 DISC	MCP CLARIFIER SC-E2	0.48	0.58	0.58	0.58	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11)	# 0512
664	SC-E3 DISC	MCP SEC-CLAR-E3	0.48	0.33	0.33	0.33	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11)	# 0513
665	SC-E4 DISC	MCP CLARIFIER SC-E4	0.48	0.33	0.33	0.33	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11)	# 0514
666	SCREW CONV 3 STR	FU SCREW CONV 3	0.48	4.40	4.40	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
667	SCRCNCV DISC	FU SCREENINGS CONV	0.48	4.40	4.40	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
668	SCTY GATE STARTER	FU SECURITY GATE	0.48	4.79	4.79	3.50	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0475
669	SE ISO VALVE DISC	FU 0688	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*N21b)	# 0136
670	SECURITY GATE DISC	FU SECURITY GATE	0.48	5.71	5.71	4.07	0.0042	0.0000	Yes	PNL	25	3	18	0.05		# 0475
671	SEG1 DISC	FU 0664	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
672	SEP1 VFD IN	FU SEC EFF PUMP 1	0.48	15.59	15.59	9.58		0.0000	Yes	PNL	25	10	18	0.46	(*N4) (*N21b)	# 0664
673	SEP2 VFD IN	FU SEC EFF PUMP 2	0.48	17.36	16.29	9.86		0.0000	Yes	PNL	25	10	18	0.44	(*N4) (*N21b)	# 0568
674	SEP3 VFD IN	FU SEC EFF PUMP #3	0.48	16.57	15.52	9.45		0.0000	Yes	PNL	25	10	18	0.46	(*N4) (*N21b)	# 0136
675	SEP4 VFD IN	FU SEC EFF PUMP #4	0.48	15.08	14.04	7.37	0.0151	0.0000	Yes	PNL	25	9	18	0.39	(*N3) (*N21b)	# 0668
676	SEP5 VFD IN	FU SEC EFF PUMP 5	0.48	13.94	12.89	6.84	0.0202	0.0000	Yes	PNL	25	10	18	0.49	(*N3) (*N21b)	# 0669
677	SEP6 VFD IN	FU SEC EFF PUMP 6	0.48	17.36	16.29	9.86	0.0083	0.0000	Yes	PNL	25	8	18	0.29	(*N21b)	# 0591
678	SEPPMP DISC TERM	FU SEPTIC PUMP	0.48	7.86	7.86	5.34	0.0042	0.0000	Yes	PNL	25	3	18	0.07		# 0492
679	SF1 DISC	FU EF-3,4,1	0.48	1.47	1.47	1.27	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
680	SF1FF DISC	FU 0920	0.48	3.96	3.96	2.97	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0099
681	SF2EE DISC	FU 0909	0.48	1.54	1.54	1.33	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0099
682	SF3FF DISC	FU 0922	0.48	3.96	3.96	2.97	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0099
683	SF4EE DISC	FU 0911	0.48	4.05	4.05	3.03	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0099
684	SLC 4 DISC	MCP SLC -4	0.48	3.50	3.50	2.67	0.015	0.0000	Yes	PNL	25	4	18	0.12		# 0602
685	SLC 5 DISC	MCP SLC -5	0.48	3.28	3.28	2.53	0.015	0.0000	Yes	PNL	25	4	18	0.11		# 0603
686	SLC 6 DISC	FB SLC -6	0.48	2.43	2.43	1.96	0.0195	0.0000	Yes	PNL	25	4	18	0.11		# 0604
687	SLC 7 DISC	FB SLC -7	0.48	2.26	2.26	1.84	0.0201	0.0000	Yes	PNL	25	4	18	0.11		# 0605
688	SLC-1 DISC	FU SLUDGE COLL 1	0.48	2.81	2.81	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
689	SLC2 DISC	FU 0527	0.48	2.77	2.77	2.19	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
690	SLC-3 DISC	FU SLUDGE COLL 3	0.48	2.81	2.81	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
691	SLDG F-50-1	FB SLDG'S S-50-1,2,3,4,5	0.48	0.88	0.88	0.70	0.5179	0.0000	Yes	PNL	25	16	18	0.97	(*N3)	# 0681
692	SLDG F-50-2	FB SLDG'S S-50-1,2,3,4,5	0.48	0.88	0.88	0.70	0.5179	0.0000	Yes	PNL	25	16	18	0.97	(*N3)	# 0682
693	SLDG F-50-3	FB SLDG'S F-50-3,4	0.48	0.77	0.77	0.62	0.7476	0.0000	Yes	PNL	25	18	18	1.2	(*N3)	# 0118
694	SLDG F-50-4	FB SLDG'S F-50-3,4	0.48	0.77	0.77	0.62	0.7476	0.0000	Yes	PNL	25	18	18	1.2	(*N3)	# 0118
695	SLDG F-60-1	FB SLDG'S F-60-1,2,3	0.48	0.92	0.92	0.73	0.4267	0.0000	Yes	PNL	25	14	18	0.83	(*N3)	# 0685
696	SLDG F-60-2	FB SLDG'S F-60-1,2,3	0.48	0.92	0.92	0.73	0.4267	0.0000	Yes	PNL	25	14	18	0.83	(*N3)	# 0686
697	SLDG F-60-3	FB SLDG'S F-60-1,2,3	0.48	0.92	0.92	0.73	0.4267	0.0000	Yes	PNL	25	14	18	0.83	(*N3)	# 0687
698	SLDG F-60-4	FB SLDG's S-60-1,2	0.48	0.76	0.76	0.62	0.7594	0.0000	Yes	PNL	25	18	18	1.2	(*N3)	# 0688
699	SLDG S-50-1	FB SLDG'S S-50-1,2,3,4,5	0.48	0.80	0.80	0.65	0.717	0.0000	Yes	PNL	25	18	18	1.2	(*N3)	# 0689
700	SLDG S-50-2	FB SLDG'S S-50-1,2,3,4,5	0.48	0.88	0.88	0.70	0.5179	0.0000	Yes	PNL	25	16	18	0.97	(*N3)	# 0690
701	SLDG S-50-3	FB SLDG'S S-50-1,2,3,4,5	0.48	0.88	0.88	0.70	0.5179	0.0000	Yes	PNL	25	16	18	0.97	(*N3)	# 0691

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
702	SLDG S-50-4	FB SLDG'S S-50-1,2,3,4,5	0.48	0.88	0.88	0.70	0.5179	0.0000	Yes	PNL	25	16	18	0.97	(*N3)	# 0692
703	SLDG S-50-5	FB SLDG'S S-50-1,2,3,4,5	0.48	0.88	0.88	0.70	0.5179	0.0000	Yes	PNL	25	16	18	0.97	(*N3)	# 0693
704	SLDG S-60-1	FB SLDG's S-60-1,2	0.48	0.86	0.86	0.69	0.5776	0.0000	Yes	PNL	25	17	18	1.1	(*N3)	# 0694
705	SLDG S-60-2	FB SLDG's S-60-1,2	0.48	0.86	0.86	0.69	0.5776	0.0000	Yes	PNL	25	17	18	1.1	(*N3)	# 0695
706	SLG-3 DISC	FU SLUICE GATE 3	0.48	4.36	4.36	3.23	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
707	SLG-4 DISC	FU SLUICE GATE 4	0.48	4.36	4.36	3.23	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
708	SLGT1 DISC	FU 0562	0.48	6.79	6.79	4.71	0.0042	0.0000	Yes	PNL	25	3	18	0.06		# 0073
709	SLGT2 DISC	FU 0563	0.48	2.77	2.77	2.19	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
710	SLGT-5 DISC	FU SLUICE GATE 5	0.48	4.40	4.40	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
711	SLP1 DISC	FU SLUDGE PUMP 1	0.48	2.81	2.81	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
712	SLP2 DISC	FU SLUDGE PUMP 2	0.48	2.81	2.81	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
713	SLP3 DISC	FU 0551	0.48	2.77	2.77	2.19	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
714	SLUDGE CND LCP	PD PSLPM-E3	0.48	3.30	3.30	2.54	0.0162	0.0000	Yes	PNL	25	4	18	0.12		# 0349
715	SMP2 DISC	FU 0525	0.48	2.77	2.77	2.19	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
716	SP NGB DISC	FU SUMP PUMP NGB	0.48	4.36	4.36	3.23	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
717	SSC-1 DISC	FU SSC-1	0.48	4.36	4.36	3.23	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
718	SSC-2 DISC	FU SSC-2	0.48	4.40	4.40	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
719	SSCP-E1 DISC	MCP SEC SCUM PMP-E1	0.48	1.36	1.36	1.19	0.04	0.0000	Yes	PNL	25	5	18	0.13		# 0554
720	SSCP-E1TERM	MCP SEC SCUM PMP-E1	0.48	1.29	1.29	1.14	0.04	0.0000	Yes	PNL	25	5	18	0.13		# 0558
721	SSCP-W1 DISC	MCP SSCP-W1	0.48	7.13	7.13	4.91	0.005	0.0000	Yes	PNL	25	3	18	0.08		# 0028
722	SSCP-W2 DISC	MCP SSCP-W2	0.48	7.02	7.02	4.85	0.005	0.0000	Yes	PNL	25	3	18	0.08		# 0492
723	STWP 1 DISC	MCP STWP -1	0.48	5.59	5.59	3.99	0.015	0.0000	Yes	PNL	25	6	18	0.18		# 0629
724	STWP 2 DISC	MCP STWP -2	0.48	5.07	5.07	3.67	0.015	0.0000	Yes	PNL	25	5	18	0.17		# 0630
725	SUB 1 BUS A	SUB 1 MAIN A	0.48	15.97	13.83	8.05	0.5	0.0000	Yes	SWG	32	91	24	8.6		# 0487
726	SUB 1 BUS A (SUB 1 MAIN A LineSide)	52F11P RELAY	0.48	15.97	13.83	8.05	1.917	0.0830	Yes	SWG	32	231	24	33	(*N9)	# 0486-Line
727	SUB 1 BUS B	SUB 1 MAIN B	0.48	15.26	13.85	8.13	0.5	0.0000	Yes	SWG	32	91	24	8.5		# 0487
728	SUB 1 BUS B (SUB 1 MAIN B LineSide)	52F21P RELAY	0.48	15.26	13.85	8.13	1.917	0.0830	Yes	SWG	32	231	24	33	(*N9)	# 0488-Line
729	SUB 1 PRIMARY SWITCH A	52F11P RELAY	13.20	3.56	3.50	3.46	0.0167	0.0830	Yes	SWG	152	12	36	0.40		# 0047
730	SUB 1 PRIMARY SWITCH B	52F21P RELAY	13.20	3.72	3.68	3.63	0.0167	0.0830	Yes	SWG	152	12	36	0.42		# 0047
731	SUB 2 BUS A	SUB 2 MAIN A	0.48	12.64	10.04	5.17	2	0.0000	Yes	SWG	32	170	24	21	(*N3) (*N9)	# 0364
732	SUB 2 BUS A (SUB 2 MAIN A LineSide)	52F12P RELAY	0.48	12.64	10.04	6.08	1.917	0.0830	Yes	SWG	32	191	24	25	(*N9)	# 0629-Loa
733	SUB 2 BUS B	SUB 2 MAIN B	0.48	11.89	10.02	5.21	2	0.0000	Yes	SWG	32	169	24	21	(*N3) (*N9)	# 0364
734	SUB 2 BUS B (SUB 2 MAIN B LineSide)	52F22P RELAY	0.48	11.89	10.02	6.13	1.917	0.0830	Yes	SWG	32	191	24	25	(*N9)	# 0633-Loa
735	SUB 2 PRIMARY SWITCH A	52F12P RELAY	13.20	3.66	3.59	3.54	0.0167	0.0830	Yes	SWG	152	12	36	0.41		# 0047
736	SUB 2 PRIMARY SWITCH B	52F22P RELAY	13.20	3.82	3.76	3.71	0.0167	0.0830	Yes	SWG	152	13	36	0.43		# 0047
737	SUB 3 BUS A	SUB 3 MAIN A	0.48	35.28	30.63	15.63	0.5	0.0000	Yes	SWG	32	146	24	17		# 0367
738	SUB 3 BUS A (SUB 3 MAIN A LineSide)	52F13P RELAY	0.48	35.28	30.63	15.63	1.917	0.0830	Yes	SWG	32	368	24	67	(*N9)	# 0018-Line
739	SUB 3 BUS B	SUB 3 MAIN B	0.48	32.32	30.00	15.53	0.5	0.0000	Yes	SWG	32	143	24	17		# 0368

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
740	SUB 3 BUS B (SUB 3 MAIN B LineSide)	52F23P RELAY	0.48	32.32	30.00	15.53	1.917	0.0830	Yes	SWG	32	363	24	65	(*N9)	# 0019-Line
741	SUB 3 PRIMARY SWITCH A	52F13P RELAY	13.20	4.10	3.95	3.90	0.0167	0.0830	Yes	SWG	152	14	36	0.46		# 0047
742	SUB 3 PRIMARY SWITCH B	52F23P RELAY	13.20	3.87	3.79	3.73	0.0167	0.0830	Yes	SWG	152	13	36	0.43		# 0047
743	SUB 4 BUS A	SUB 4 MAIN A	0.48	19.05	14.06	7.95	0.32	0.0000	Yes	SWG	32	71	24	5.9		# 0501
744	SUB 4 BUS A (SUB 4 MAIN A LineSide)	52F14P RELAY	0.48	19.05	14.06	7.95	1.917	0.0830	Yes	SWG	32	234	24	34	(*N9)	# 0502-Line
745	SUB 4 BUS B	SUB 4 MAIN B	0.48	20.68	13.96	7.79	0.32	0.0000	Yes	SWG	32	72	24	6.0		# 0503
746	SUB 4 BUS B (SUB 4 MAIN B LineSide)	52F24P RELAY	0.48	20.68	13.96	7.79	1.917	0.0830	Yes	SWG	32	235	24	34	(*N9)	# 0502-Line
747	SUB 4 PRIMARY SWITCH A	52F14P RELAY	13.20	3.82	3.69	3.64	0.0167	0.0830	Yes	SWG	152	13	36	0.43		# 0047
748	SUB 4 PRIMARY SWITCH B	52F24P RELAY	13.20	3.88	3.70	3.65	0.0167	0.0830	Yes	SWG	152	13	36	0.44		# 0047
749	SUB 5 BUS A	SUB 5 MAIN A	0.48	39.33	30.17	15.11	0.3	0.0000	Yes	SWG	32	107	24	11		# 0506
750	SUB 5 BUS A (SUB 5 MAIN A LineSide)	SUB 5 XFMR A PRI FUSE	0.48	39.33	30.17	15.11	2	0.0000	Yes	SWG	32	368	24	67	(*N9)	# 0656-Line
751	SUB 5 BUS B	SUB 5 MAIN B	0.48	40.00	29.34	14.66	0.3	0.0000	Yes	SWG	32	106	24	11		# 0506
752	SUB 5 BUS B (SUB 5 MAIN B LineSide)	SUB 5 XFMR B PRI FUSE	0.48	40.00	29.34	14.66	2	0.0000	Yes	SWG	32	364	24	66	(*N9)	# 0659-Line
753	SUB 5 PRIMARY SWITCH A	52F15P RELAY	13.20	4.13	3.86	3.80	0.0167	0.0830	Yes	SWG	152	14	36	0.47		# 0047
754	SUB 5 PRIMARY SWITCH B	52F25P RELAY	13.20	3.89	3.58	3.53	0.0167	0.0830	Yes	SWG	152	13	36	0.44		# 0047
755	SUB 6 BUS A	SUB 6 MAIN A	0.48	9.98	9.61	6.06	0.32	0.0000	Yes	SWG	32	49	24	3.4		# 0371
756	SUB 6 BUS A (SUB 6 MAIN A LineSide)	PD SUB 6 XFMR A RELAY	0.48	9.98	9.61	6.06	1.917	0.0830	Yes	SWG	32	162	24	20	(*N9)	# 0020-Line
757	SUB 6 BUS B	SUB 6 MAIN B	0.48	8.99	8.65	5.55	0.32	0.0000	Yes	SWG	32	48	24	3.3		# 0372
758	SUB 6 BUS B (SUB 6 MAIN B LineSide)	PD SUB 6 XFMR B RELAY	0.48	8.99	8.65	5.55	1.917	0.0830	Yes	SWG	32	160	24	20	(*N9)	# 0021-Line
759	SUB 7 BUS A	SUB 7 MAIN A	0.48	25.41	25.41	13.69	0.5	0.0000	Yes	SWG	32	128	24	14		# 0046
760	SUB 7 BUS A (SUB 7 MAIN A LineSide)	52F17P RELAY	0.48	25.41	25.41	13.69	1.917	0.0830	Yes	SWG	32	328	24	56	(*N9)	# 0022-Line
761	SUB 7 BUS B	SUB 7 MAIN B	0.48	24.82	24.82	13.43	0.5	0.0000	Yes	SWG	32	127	24	14		# 0046
762	SUB 7 BUS B (SUB 7 MAIN B LineSide)	52F27P RELAY	0.48	24.82	24.82	13.43	1.917	0.0830	Yes	SWG	32	323	24	55	(*N9)	# 0023-Line
763	SUB 7 XFMR A PRI	52F17P RELAY	13.20	4.14	4.14	4.08	0.0167	0.0830	Yes	SWG	152	14	36	0.47		# 0047
764	SUB 7 XFMR B PRI	52F27P RELAY	13.20	3.89	3.89	3.84	0.0167	0.0830	Yes	SWG	152	13	36	0.44		# 0048
765	SUB 8 BUS A	SUB 8 MAIN A RELAY	4.16	2.75	1.63	1.38	1.917	0.0830	Yes	SWG	104	83	36	2.7	(*N3) (*N9)	# 0378
766	SUB 8 BUS A (SUB 8 MAIN A RELAY LineSide)	52F18P RELAY	4.16	2.75	1.63	1.62	1.917	0.0833	Yes	SWG	104	99	36	3.2	(*N5) (*N9)	# 0026-Line
767	SUB 8 BUS B	SUB 8 MAIN B RELAY	4.16	2.19	1.61	1.37	1.917	0.0830	Yes	SWG	104	81	36	2.6	(*N3) (*N9)	# 0379
768	SUB 8 BUS B (SUB 8 MAIN B RELAY LineSide)	52F28P RELAY	4.16	2.19	1.61	1.61	1.917	0.0833	Yes	SWG	104	96	36	3.1	(*N5) (*N9)	# 0028-Line
769	SUB 8 PRIMARY SWITCH A	52F18P RELAY	13.20	4.12	3.90	3.84	0.0167	0.0833	Yes	SWG	152	14	36	0.46		# 0047
770	SUB 8 PRIMARY SWITCH B	52F28P RELAY	13.20	3.88	3.74	3.69	0.0167	0.0833	Yes	SWG	152	13	36	0.44		# 0047
771	SUB SP-1 DISC	FU SUB SUMP PUMP 1	0.48	4.36	4.36	3.23	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
772	SUB SP-2 DISC	FU SUB SUMP PUMP 2	0.48	4.40	4.40	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
773	SWP LCP	PD STORM WATER PUMP CP	0.48	8.01	8.01	5.43	0.05	0.0000	Yes	PNL	25	15	18	0.86		# 0049
774	SWPSO VALVE DISC S - 91 - 4	PD SWPSO-SG	0.48	2.63	2.63	2.10	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0492
775	SWPSO-SG DISC S - 91 - 1	PD SWPSO-SG	0.48	2.63	2.63	2.10	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0492
776	TABLET FDR DISC	PD-0537	0.48	3.83	3.83	2.89	0.0171	0.0000	Yes	PNL	25	5	18	0.15		# 0475
777	TEMP ADM1 DISC	PD 0582	0.48	5.54	5.54	3.96	0.0162	0.0000	Yes	PNL	25	6	18	0.20		# 0073
778	TEMP ADM2 DISC	PD 0583	0.48	5.54	5.54	3.96	0.0162	0.0000	Yes	PNL	25	6	18	0.20		# 0073
779	TEMP PUMPS	FU 0683	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0547
780	TER FIL EFF SP DISC	FU 0691	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
781	TFB-MPC	MB TFB-MPC	0.208	1.50	1.50	1.15	0.0167	0.0000	Yes	PNL	25	3	18	0.05		# 0257
782	TFB-MPC (MB TFB-MPC LineSide)	FU 0730	0.208	1.50	1.50	0.98	0.0868	0.0000	Yes	PNL	25	7	18	0.23	(*N3)	# 0784-Line
783	TGS DISC	PD 0581	0.48	3.63	3.63	2.76	0.017	0.0000	Yes	PNL	25	5	18	0.14		# 0073
784	UDSP1 DISC	FU 0681	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
785	UDSP2 DISC	FU 0741	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
786	UH EE DISC	FU 0907	0.48	2.77	2.77	2.19		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0099
787	UH FF	FU 0918	0.48	2.73	2.73	2.16		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0392
788	UPS-ADM-1 INPUT	PD-UPS-ADM-1	0.208	4.98	4.98	2.67	0.0167	0.0000	Yes	PNL	25	5	18	0.13		# 0492
789	UPS-ADM-1 OUTPUT	MaxTripTime @2.0s	0.208	0.04	0.04	0.04	2	0.0000	Yes	PNL	25	3	18	0.04	(*N2) (*N9) (*N11)	# 0492
790	UV 2A	MaxTripTime @2.0s	0.48	5.28	2.08	1.71	2	0.0000	Yes	PNL	25	70	18	11	(*N2) (*N9)	# 0781
791	UV 2B	MaxTripTime @2.0s	0.48	5.28	2.08	1.71	2	0.0000	Yes	PNL	25	70	18	11	(*N2) (*N9)	# 0782
792	UV-1A	800/200 UV-1A	0.48	2.81	2.81	2.22	0.2	0.0000	Yes	PNL	25	19	18	1.3	(*N5)	# 0056
793	UV-1A PD LINE SIDE	800/200 UV-1A	0.48	2.83	2.83	2.23	0.2	0.0000	Yes	PNL	25	19	18	1.3		# 0056
794	UV-1B	800/200 UV-1B	0.48	3.28	3.28	2.53	0.2	0.0000	Yes	PNL	25	21	18	1.5	(*N5)	# 0056
795	UV-1B PD LINE SIDE	800/200 UV-1B	0.48	3.30	3.30	2.54	0.2	0.0000	Yes	PNL	25	21	18	1.5		# 0056
796	VFD CFG-1 INPUT	800/600 VFD CFG-1	0.48	27.52	25.21	14.26	0.066	0.0000	Yes	PNL	25	35	18	3.5	(*N21b)	# 0785
797	VFD CFG-2 INPUT	800/600 VFD CFG-2	0.48	27.79	25.49	14.40	0.066	0.0000	Yes	PNL	25	35	18	3.6		# 0786
798	VFD CFG-3 INPUT	800/600 VFD CFG-3	0.48	30.44	28.14	15.69	0.066	0.0000	Yes	PNL	25	37	18	3.9		# 0787
799	W CONT GT2 DISC	FU 0748	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
800	W1 FLOW VALVES JB	PD W1 FLOW VALVES	0.48	3.54	3.54	2.70	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0108
801	WA MAIN BOV	PD WA MAIN BOV	0.48	3.74	3.74	2.83	0.0162	0.0000	Yes	PNL	25	5	18	0.14		# 0805
802	WAS VALVE W1	PD WAS VALVE W1	0.48	3.26	3.26	2.51	0.0162	0.0000	Yes	PNL	25	4	18	0.12		# 0806
803	WAS VALVE W1 DISC	PD WAS VALVE W1	0.48	5.20	5.20	3.75	0.0162	0.0000	Yes	PNL	25	6	18	0.19		# 0792
804	WAS VALVE W2	PD WAS VALVE W2	0.48	2.73	2.73	2.17	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0074
805	WASP-E1 VFD IN	PD WASP-E1	0.48	1.48	1.48	1.09	0.0207	0.0000	Yes	PNL	25	3	18	0.06	(*N3)	# 0302
806	WASP-E2 VFD IN	PD WASP-E2	0.48	1.46	1.46	1.08	0.0211	0.0000	Yes	PNL	25	3	18	0.06	(*N3)	# 0627
807	WASP-W1 VFD IN	PD WASP-W1	0.48	7.13	7.13	4.91	0.0162	0.0000	Yes	PNL	25	7	18	0.25		# 0028
808	WASP-W2 VFD IN	PD WASP-W2	0.48	7.02	7.02	4.85	0.0162	0.0000	Yes	PNL	25	7	18	0.25		# 0492
809	WASV E1	FB WASV E1 P-65-1	0.48	1.26	1.26	0.95	0.0285	0.0000	Yes	PNL	25	3	18	0.07	(*N3)	# 0813
810	WASV E2	FB WASV E2 P-65-2	0.48	1.26	1.26	0.95	0.0285	0.0000	Yes	PNL	25	3	18	0.07	(*N3)	# 0814
811	WASV E3	FB WASV E3	0.48	1.19	1.19	0.91	0.0315	0.0000	Yes	PNL	25	3	18	0.08	(*N3)	# 0815
812	WASV E4	FB WASV E4	0.48	1.19	1.19	0.91	0.0315	0.0000	Yes	PNL	25	3	18	0.08	(*N3)	# 0816

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
813	WBB-EF-1 DISC	MCP WBB-EF-1	0.48	7.13	7.13	4.91	0.005	0.0000	Yes	PNL	25	3	18	0.08		# 0028
814	WBB-EF-2 DISC	MCP WBB-EF-2	0.48	7.71	7.71	5.25	0.005	0.0000	Yes	PNL	25	4	18	0.08		# 0492
815	WBB-EF-3 DISC	MCP WBB-EF-3	0.48	3.72	3.72	2.82	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0028
816	WBB-EF-4 DISC	MCP WBB-EF-4	0.48	2.86	2.86	2.25	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
817	WBB-EF-5 DISC	MCP WBB-EF-5	0.48	2.00	2.00	1.66	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
818	WBB-EF-6 DISC	MCP WBB-EF-6	0.48	1.51	1.51	1.30	0.005	0.0000	Yes	PNL	25	1	18	0.02		# 0492
819	WBB-EF-7 DISC	MCP WBB-EF-7	0.48	2.51	2.51	2.01	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0028
820	WBB-H1 DISC	PD WBB-H1	0.48	9.56	9.56	6.31	0.0162	0.0000	Yes	PNL	25	8	18	0.33	(*N20b)	# 0492
821	WBB-H2 DISC	PD WBB-H2	0.48	6.48	6.48	4.52	0.0162	0.0000	Yes	PNL	25	7	18	0.23		# 0028
822	WBB-HV-1 DISC	MCP WBB-HV-1	0.48	4.39	4.39	3.25	0.005	0.0000	Yes	PNL	25	3	18	0.05		# 0028
823	WBB-HV-2 DISC	PD WBB-HV-2	0.48	12.50	12.50	7.94	0.0162	0.0000	Yes	PNL	25	10	18	0.42		# 0492
824	WBB-P-1 DISC	MCP WBB-P-1	0.48	2.16	2.16	1.77	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0028
825	WBB-P-2 DISC	MCP WBB-P-2	0.48	2.14	2.14	1.76	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
826	WEST AESG W1	PD WEST AESG W1	0.48	2.74	2.74	2.17	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0830
827	WEST AESG W2	PD WEST AESG W2	0.48	1.63	1.63	1.39	0.0197	0.0000	Yes	PNL	25	3	18	0.08		# 0076
828	WEST AESGW1 DISC	PD WEST AESG W1	0.48	2.91	2.91	2.28	0.0162	0.0000	Yes	PNL	25	4	18	0.11		# 0817
829	WFB-EUH-TERM's	PD WFB-EUH-1	0.208	1.66	1.66	1.23	0.0167	0.0000	Yes	PNL	25	3	18	0.06		# 0107
830	WHM DISC	FU 0665	0.48	2.33	2.33	1.89		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0136
831	Wireway	FB AT-E3 Z2 FCV	0.48	1.53	1.53	1.32	0.0206	0.0000	Yes	PNL	25	3	18	0.08		# 0835
832	Wireway.	FB AT-E4 Z2 FCV	0.48	1.53	1.53	1.32	0.0206	0.0000	Yes	PNL	25	3	18	0.08		# 0836
833	WPB-EF-1 DISC	MCP WPB-EF-1	0.48	2.27	2.27	1.85	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
834	WPB-H1 DISC	PD WPB-H1	0.48	5.59	5.59	3.99	0.0162	0.0000	Yes	PNL	25	6	18	0.20		# 0492
835	WPB-H1 HOIST	PD WPB-H1	0.48	4.60	4.60	3.38	0.0162	0.0000	Yes	PNL	25	5	18	0.17		# 0492
836	WPB-HV-1 DISC	PD WPB-HV-1	0.48	2.73	2.73	2.17	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0492
837	WPB-P-1 DISC	MCP WPB-P-1	0.48	1.80	1.80	1.52	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
838	WPE-SAP-2 DISC	MCP WPE-SAP-2	0.48	2.05	2.05	1.69	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
839	WPSE GATE E DISC	FU WPSE GATE E MTR	0.48	1.50	1.50	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
840	WPSE GATE W DISC	FU 0716	0.48	1.50	1.50	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
841	WPSE SMPL PMP DISC	FU 0712	0.48	1.50	1.50	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
842	WSE-SAP-3 DISC	MCP WSE-SAP-3	0.48	3.72	3.72	2.82	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0028
843	WTR-CRC-PMP-1 DISC	MCP WATER CIRC PUMP 1	0.48	9.28	9.28	6.15	0.005	0.0000	Yes	PNL	25	4	18	0.10		# 0492
844	WTR-CRC-PMP-2 DISC	MCP WATER CIRC PUMP 2	0.48	9.28	9.28	6.15	0.005	0.0000	Yes	PNL	25	4	18	0.10		# 0492
845	WW BYP GATE E DISC	FU 0733	0.48	1.50	1.50	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
846	WWRDP2 DISC	FU WWRD PUMP 2	0.48	3.31	3.31	2.55	0.0083	0.0000	Yes	PNL	25	3	18	0.06		# 0568
847	WWRDP3 DISC	FB-MCC-P	0.48	3.27	2.85	2.20	0.32	0.0000	Yes	PNL	25	27	18	2.3	(*N5)	# 0136
848	WWWRESDP1 DISC	FU 0652	0.48	3.29	3.29	2.54	0.0083	0.0000	Yes	PNL	25	3	18	0.06		# 0136
849	Level 0: Nonmelting, Flammable Materials with Weight >= 4.5 oz/sq yd	0.0 - 1.2 cal/cm*2												#Level 0 = 696	(*N11) - Out of IEEE 1584 Range, Lee Equation Used. Applicable for Open Air only. Existing Equipment type is not Open Air!	

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm ²)	PPE Level / Notes (*N)	Label #
850	Level 1: Arc-rated FR Shirt & Pants	1.2 - 4.0 cal/cm ²												#Level 1 = 72	(*N2) < 80% Cleared Fault Threshold	
851	Level 2: Arc-rated FR Shirt & Pants	4.0 - 8.0 cal/cm ²												#Level 2 = 34	(*N3) - Arcing Current Low Tolerances Used	
852	Level 3: Arc-rated FR Shirt & Pants & Arc Flash Suit	8.0 - 25.0 cal/cm ²												#Level 3 = 34	(*N4) - Equipment Specific Equations Used	
853	Level 4: Arc-rated FR Shirt & Pants & Arc Flash Suit	25.0 - 40.0 cal/cm ²												#Level 4 = 6	(*N5) - Miscoordinated, Upstream Device Tripped	
854	Level Dangerous!: No FR Category Found	40.0 - 999.0 cal/cm ²												#Danger = 6	(*N9) - Max Arcing Duration Reached	
855														#Equip Eval Failed = 0	(*N16) - Trip Time Recalculated	
856	For additional information refer to NFPA 70 E, Standard for Electrical Safety in the Workplace.													#Bus Equip Eval Failed = 29	(*N20b) - Equipment Evaluation Marginal for Bus	
857															(*N21b) - Equipment Evaluation Failed, OVERDUTIED BUS EQUIPMENT FOUND - Inappropriate to provide arc-flash hazard results.	
858															IEEE 1584 - Preferred Method (NFPA 70E 2015 Annex D.4) Bus + Line Side Report (Include Line Side + Load Side Contributions), - 80% Cleared Fault Threshold, include Ind. Motors >= 50.0hp for 5.0 Cycles), mis-coordination checked	

6.6.8 AF Results - Entire Plant on Generators

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
1	15 KV BUS 1	52GT1P RELAY	13.20	3.19	2.29	0.67	1.917	0.0830	No	SWG	152	68	36	2.2	(*N9) (*N16)	# 0001
2	15 KV BUS 1 (52GT1P RELAY LineSide)	52G2_87R	13.20	3.19	0.75	0.33	0.35	0.0830	No	SWG	152	24	36	0.81	(*N16)	# 0013-Loa
3	15 KV BUS 1 LineSide	FU DTE North	13.20	6.36	6.36	5.29	0.2114	0.0830	Yes	SWG	152	58	36	1.9	(*N3)	# 0011
4	15 KV BUS 2	52GT2P RELAY	13.20	3.19	2.40	0.67	1.917	0.0830	No	SWG	152	68	36	2.2	(*N9) (*N16)	# 0002
5	15 KV BUS 2 (52GT2P RELAY LineSide)	52G2_87R	13.20	3.19	0.75	0.33	0.35	0.0830	No	SWG	152	24	36	0.81	(*N16)	# 0005-Line
6	15 KV BUS 2 LineSide	FU DTE South	13.20	6.15	6.15	5.11	0.2258	0.0830	Yes	SWG	152	59	36	1.9	(*N3)	# 0002
7	15 KV BUS 3	52G2P RELAY	13.20	3.19	0.75	0.33	0.35	0.0830	No	SWG	152	24	36	0.81	(*N16)	# 0003
8	78IN GC DISC	PD 78IN GATE CONTROLLER	0.48	1.30	1.30	1.15	0.0228	0.0000	Yes	PNL	25	3	18	0.07		# 0492
9	AC2 DISC	FU 0743	0.48	1.44	1.44	1.25	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
10	AC2F DISC	FU 0574	0.48	2.69	2.69	1.82	0.0083	0.0000	Yes	PNL	25	2	18	0.04	(*N3)	# 0073
11	ADM ACCU1 DISC	PD ADM-ACCU-1	0.48	4.45	4.45	3.28	0.0162	0.0000	Yes	PNL	25	5	18	0.16		# 0492
12	ADM ACU1 DISC	PD ADM-ACU-1	0.48	7.46	7.46	5.10	0.0162	0.0000	Yes	PNL	25	7	18	0.26		# 0492
13	ADM-CH-1 DISC	PD ADM-CH-1	0.48	8.21	8.21	5.54	0.0175	0.0000	Yes	PNL	25	8	18	0.31		# 0492
14	ADM-EF-1 DISC	MCP ADM-EF-1	0.48	2.22	2.22	1.81	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
15	ADM-EF-2 DISC	MCP ADM-EF-2	0.48	2.22	2.22	1.81	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
16	ADM-HVAC-1 DISC	PD ADM-HVAC-1	0.48	5.27	5.27	3.80	0.0162	0.0000	Yes	PNL	25	6	18	0.19		# 0492
17	ADM-HVAC-2 DISC	PD ADM-HVAC-2	0.48	2.60	2.60	2.07	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0492
18	ADM-P-1 DISC	MCP ADM-P-1	0.48	3.13	3.13	2.43	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0492
19	ADM-P-2 DISC	MCP ADM-P-2	0.48	2.60	2.60	2.07	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
20	ADM-P-3 DISC	MCP ADM-P-3	0.48	7.29	7.29	5.01	0.005	0.0000	Yes	PNL	25	3	18	0.08		# 0492
21	ADM-P-4 DISC	MCP ADM-P-4	0.48	6.81	6.81	4.72	0.005	0.0000	Yes	PNL	25	3	18	0.07		# 0492
22	ADM-SUP LCP	PD 0561	0.48	2.17	2.17	1.78	0.0195	0.0000	Yes	PNL	25	4	18	0.10		# 0185
23	ADP-E2 DISC	MCP ADP-E2	0.48	5.50	5.21	3.73	0.04	0.0000	Yes	PNL	25	10	18	0.48		# 0027
24	ADP-W1 DISC	MCP ADP-W1	0.48	5.51	5.51	3.94	0.005	0.0000	Yes	PNL	25	3	18	0.06		# 0028
25	AIR COMP 1 DISC	FU AIR COMP 1	0.48	2.71	2.71	1.83	0.0083	0.0000	Yes	PNL	25	2	18	0.04	(*N3)	# 0475
26	AIR COMP 1P DISC	FU 0687	0.48	3.17	3.17	2.46	0.0083	0.0000	Yes	PNL	25	3	18	0.06		# 0136
27	AIR WASH MV DISC	FU 0754	0.48	1.44	1.44	1.25	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
28	ALTERNATOR P	FU 0685	0.208	0.14	0.14	0.14	0.1908	0.0000	Yes	PNL	25	2	18	0.01	(*N11)	# 0027
29	AT-E1 FCV BF-64-25	FB AT-E1 FCV	0.48	1.42	1.42	1.24	0.0215	0.0000	Yes	PNL	25	3	18	0.07		# 0029
30	AT-E2 FCV BF-64-26	FB AT-E2 FCV	0.48	1.60	1.60	1.37	0.0199	0.0000	Yes	PNL	25	3	18	0.08		# 0030
31	AT-E3 Z1 FCV	FB AT-E3 Z2 FCV	0.48	0.85	0.85	0.67	0.6603	0.0000	Yes	PNL	25	18	18	1.2	(*N3) (*N16)	# 0038
32	AT-E3 Z2 FCV	FB AT-E3 Z2 FCV	0.48	0.99	0.99	0.76	0.3368	0.0000	Yes	PNL	25	13	18	0.70	(*N3) (*N16)	# 0039
33	AT-E3 Z3 FCV	FB AT-E3 Z2 FCV	0.48	1.12	1.12	0.86	0.0347	0.0000	Yes	PNL	25	4	18	0.08	(*N3)	# 0040
34	AT-E4 Z1 FCV	FB AT-E4 Z2 FCV	0.48	0.85	0.85	0.67	0.6603	0.0000	Yes	PNL	25	18	18	1.2	(*N3) (*N16)	# 0041
35	AT-E4 Z2 FCV	FB AT-E4 Z2 FCV	0.48	0.99	0.99	0.76	0.3368	0.0000	Yes	PNL	25	13	18	0.70	(*N3) (*N16)	# 0042
36	AT-E4 Z3 FCV	FB AT-E4 Z2 FCV	0.48	1.12	1.12	0.86	0.0347	0.0000	Yes	PNL	25	4	18	0.08	(*N3)	# 0043
37	ATS PEWP2 NRM	FU PEW PUMP 2	0.48	16.82	15.42	7.97	0.04	0.0000	Yes	PNL	25	17	18	1.1	(*N3)	# 0043
38	ATS-ADM EMG	800/800 ATS-ADM-EMG	0.48	10.17	10.17	4.17	2	0.0000	Yes	PNL	25	119	18	26	(*N3) (*N9) (*N16)	# 0488
39	ATS-ADM LOAD	800/800 ATS-ADM-EMG	0.48	10.17	10.17	4.17	2	0.0000	Yes	PNL	25	119	18	26	(*N3) (*N9) (*N16)	# 0017
40	ATS-ADM NRM	800/800 ATS-ADM-NRM	0.48	10.16	10.16	4.17	2	0.0000	Yes	PNL	25	119	18	26	(*N3) (*N9) (*N16)	# 0046

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
41	ATS-CEB LOAD	FB ATS-CEB NRM	0.48	18.93	18.93	11.31	0.0175	0.0000	Yes	PNL	25	13	18	0.66		# 0047
42	ATS-CEB-EMG	FB ATS-CEB EMG	0.48	17.85	17.85	10.76	0.0175	0.0000	Yes	PNL	25	12	18	0.63		# 0048
43	ATS-CEB-NRM	FB ATS-CEB NRM	0.48	18.93	18.93	11.31	0.0175	0.0000	Yes	PNL	25	13	18	0.66		# 0049
44	ATS-EBB NORM	FB ATS-EBB NORM	0.48	8.10	8.10	5.48	0.04	0.0000	Yes	PNL	25	13	18	0.69		# 0040
45	ATS-EBB-EMG	FB ATS-EBB-EMG	0.48	8.88	8.88	5.92	0.04	0.0000	Yes	PNL	25	14	18	0.75		# 0040
46	ATS-EBB-LOAD	FB ATS-EBB NORM	0.48	8.10	8.10	5.48	0.04	0.0000	Yes	PNL	25	13	18	0.69		# 0040
47	ATS-LSE EMG	FB ATS-LSE-EMG	0.48	11.48	11.48	7.38	0.0538	0.0000	Yes	PNL	25	19	18	1.3		# 0043
48	ATS-LSE LOAD	FB ATS-LSE-NRM	0.48	11.49	11.49	7.38	0.0538	0.0000	Yes	PNL	25	19	18	1.3		# 0043
49	ATS-LSE NRM	FB ATS-LSE-NRM	0.48	11.49	11.49	7.38	0.0538	0.0000	Yes	PNL	25	19	18	1.3		# 0043
50	ATS-PP-UV-EMG	FB ATS-PP-UV-EMG	0.48	3.40	3.40	2.61	0.0189	0.0000	Yes	PNL	25	5	18	0.15		# 0064
51	ATS-PP-UV-LOAD	FU ATS-PP-UV-NRM	0.48	1.65	1.65	1.19	0.0508	0.0000	Yes	PNL	25	5	18	0.17	(*N3)	# 0065
52	ATS-PP-UV-NRM	FU ATS-PP-UV-NRM	0.48	1.65	1.65	1.19	0.0508	0.0000	Yes	PNL	25	5	18	0.17	(*N3)	# 0066
53	ATS-RLS EMG	FB ATS-RLS EMG	0.48	12.66	12.66	8.02	0.0162	0.0000	Yes	PNL	25	10	18	0.42		# 0043
54	ATS-RLS LOAD	FB ATS-RLS NRM	0.48	10.70	10.70	6.95	0.0162	0.0000	Yes	PNL	25	9	18	0.36		# 0043
55	ATS-RLS NRM	FB ATS-RLS NRM	0.48	10.70	10.70	6.95	0.0162	0.0000	Yes	PNL	25	9	18	0.36		# 0043
56	ATS-WBB NORM	FB ATS-WBB-NORM	0.48	26.14	26.14	14.90	0.0507	0.0000	Yes	PNL	25	29	18	2.6		# 0049
57	ATS-WBB-EMG	FB ATS-WBB-EMG	0.48	27.82	27.82	15.71	0.05	0.0000	Yes	PNL	25	30	18	2.7		# 0050
58	ATS-WBB-LOAD	FB ATS-WBB-NORM	0.48	26.14	26.14	14.90	0.0507	0.0000	Yes	PNL	25	29	18	2.6		# 0051
59	ATS-WPB-EMG	FB ATS-WPB-EMG	0.48	9.55	9.55	6.30	0.0162	0.0000	Yes	PNL	25	8	18	0.33		# 0052
60	ATS-WPB-LOAD	FB ATS-WPB-NORM	0.48	8.44	8.44	5.67	0.0162	0.0000	Yes	PNL	25	8	18	0.29		# 0053
61	ATS-WPB-NORM	FB ATS-WPB-NORM	0.48	8.44	8.44	5.67	0.0162	0.0000	Yes	PNL	25	8	18	0.29		# 0054
62	AT-W2 FCV JB	PD AT-W2 FCV	0.48	2.48	2.48	2.00	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0075
63	B-54-1 DISC	PD W1 FLOW VALVES	0.48	3.38	3.38	2.60	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0067
64	B-54-1 MTR VALVE.	PD W1 FLOW VALVES	0.48	3.34	3.34	2.57	0.0162	0.0000	Yes	PNL	25	5	18	0.12		# 0064
65	B-54-2 DISC	PD W1 FLOW VALVES	0.48	3.38	3.38	2.60	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0069
66	B-54-2 MTR VALVE.	PD W1 FLOW VALVES	0.48	3.34	3.34	2.57	0.0162	0.0000	Yes	PNL	25	5	18	0.12		# 0066
67	B-54-3 DISC	PD W1 FLOW VALVES	0.48	3.38	3.38	2.60	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0071
68	B-54-3 MTR VALVE.	PD W1 FLOW VALVES	0.48	3.34	3.34	2.57	0.0162	0.0000	Yes	PNL	25	5	18	0.12		# 0068
69	BAR SCREEN 2 TERM	FU BAR SCREEN 2	0.48	4.27	4.27	3.17	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
70	BF - 64- 29	FB AT-E1 FCV	0.48	1.22	1.22	0.93	0.0301	0.0000	Yes	PNL	25	3	18	0.08	(*N3)	# 0092
71	BF- 64- 30	FB AT-E2 FCV	0.48	1.36	1.36	1.19	0.0222	0.0000	Yes	PNL	25	3	18	0.07		# 0071
72	BF-64-07	FB AT-E1 FCV	0.48	1.01	1.01	0.79	0.0534	0.0000	Yes	PNL	25	4	18	0.11	(*N3)	# 0094
73	BF-64-08	FB AT-E2 FCV	0.48	1.10	1.10	0.84	0.036	0.0000	Yes	PNL	25	4	18	0.08	(*N3)	# 0095
74	BSCRN-3 STR	FU BAR SCREEN 3	0.48	4.20	4.20	3.13	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
75	BSNHST DISC	FU 0521	0.48	3.93	3.93	2.95	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0073
76	BSNINFLGT-1 DISC	FU BASIN INFL GATE 1	0.48	2.71	2.71	2.15	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
77	BSNINFLGT2 DISC	FU 0535	0.48	2.69	2.69	2.14	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
78	BSNINFLGT-3 DISC	FU BASIN INFL GATE 3	0.48	2.71	2.71	2.15	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
79	BSN-OUT-GT-1 DISC	FU BASIN OUT GATE 1	0.48	2.71	2.71	2.15	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
80	BSNOUTGT2 DISC	FU 0536	0.48	2.69	2.69	2.14	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
81	BSN-OUT-GT-3 DISC	FU BASIN OUT GATE 3	0.48	2.71	2.71	2.15	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
82	BT1-1M DISC	MCP BT1-1M	0.48	10.34	9.93	6.48	0.015	0.0000	Yes	PNL	25	8	18	0.33		# 0072
83	BT2-1M DISC	MCP BT2-1M	0.48	10.34	9.92	6.47	0.015	0.0000	Yes	PNL	25	8	18	0.33		# 0073
84	BTAB-1 DISC	MCP BTAB-1	0.48	1.39	1.39	1.21	0.015	0.0000	Yes	PNL	25	3	18	0.05		# 0074
85	BTAB-2 DISC	MCP BTAB-2	0.48	1.39	1.39	1.22	0.015	0.0000	Yes	PNL	25	3	18	0.05		# 0076
86	BTAB-3 DISC	MCP BTAB-3	0.48	1.28	1.28	1.14	0.015	0.0000	Yes	PNL	25	3	18	0.05		# 0075
87	BUS G1	52G1_87R	13.20	3.18	2.43	0.33	0.13	0.0830	No	SWG	152	18	36	0.62	(*N2) (*N16)	# 0019
88	BUS G1 (GEN 1 AMPSENTRY LineSide)	GEN 1 AMPSENTRY	13.20	3.18	0.75	0.33	1.917	0.0830	No	SWG	152	45	36	1.5	(*N9) (*N16)	# 0200-Line
89	BUS G2	52G2_87R	13.20	3.18	2.43	0.33	0.13	0.0830	No	SWG	152	18	36	0.62	(*N2) (*N16)	# 0020
90	BUS G2 (GEN 2 AMPSENTRY LineSide)	GEN 2 AMPSENTRY	13.20	3.18	0.75	0.33	1.917	0.0830	No	SWG	152	45	36	1.5	(*N9) (*N16)	# 0202-Line
91	BUS-0097	MCP AXMX-E1A	0.48	1.04	1.04	0.95	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0256
92	BUS-0099	MCP AXMX-E1B	0.48	1.04	1.04	0.95	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0078
93	BUS-0101	MCP AXMX-E1C	0.48	1.04	1.04	0.95	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0079
94	BUS-0103	MCP ANMX-E1A	0.48	1.04	1.04	0.95	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0080
95	BUS-0105	MCP ANMX-E1B	0.48	1.04	1.04	0.95	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0081
96	BUS-0107	MCP ANMX-E1C	0.48	1.04	1.04	0.95	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0082
97	BUS-0109	MCP ANMX-E1D	0.48	1.04	1.04	0.95	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0083
98	BUS-0111	MCP SWMX-E1	0.48	1.04	1.04	0.95	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0084
99	BUS-0113	MCP ANMX-E3A	0.48	1.04	1.04	0.95	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0085
100	BUS-0115	MCP ANMX-E3B	0.48	1.04	1.04	0.95	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0086
101	BUS-0117	MCP ANMX-E3C	0.48	1.04	1.04	0.95	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0087
102	BUS-0119	MCP ANMX-E3D	0.48	1.04	1.04	0.95	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0088
103	BUS-0121	MCP AXMX-E3A	0.48	1.04	1.04	0.95	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0089
104	BUS-0123	MCP AXMX-E3B	0.48	1.04	1.04	0.95	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0090
105	BUS-0125	MCP AXMX-E3C	0.48	1.04	1.04	0.95	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0091
106	BUS-0127	MCP SWMX-E3	0.48	1.04	1.04	0.95	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0092
107	BUS-0141	MCP AXMX-E2A	0.48	0.81	0.81	0.77	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0093
108	BUS-0143	MCP AXMX-E2B	0.48	0.81	0.81	0.77	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0094
109	BUS-0145	MCP AXMX-E2C	0.48	0.81	0.81	0.77	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0095
110	BUS-0147	MCP ANMX-E2A	0.48	0.81	0.81	0.77	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0096
111	BUS-0149	MCP ANMX-E2B	0.48	0.81	0.81	0.77	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0097
112	BUS-0151	MCP ANMX-E2C	0.48	0.81	0.81	0.77	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0098
113	BUS-0153	MCP ANMX-E2D	0.48	0.81	0.81	0.77	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0099
114	BUS-0155	MCP SWMX-E2	0.48	0.81	0.81	0.77	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0100
115	BUS-0157	MCP ANMX-E4A	0.48	0.81	0.81	0.77	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0101
116	BUS-0159	MCP ANMX-E4B	0.48	0.81	0.81	0.77	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0102
117	BUS-0161	MCP ANMX-E4C	0.48	0.81	0.81	0.77	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0103
118	BUS-0163	MCP ANMX-E4D	0.48	0.81	0.81	0.77	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0104
119	BUS-0165	MCP AXMX-E4A	0.48	0.81	0.81	0.77	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0105
120	BUS-0167	MCP AXMX-E4B	0.48	0.81	0.81	0.77	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0106
121	BUS-0169	MCP AXMX-E4C	0.48	0.81	0.81	0.77	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0107

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
122	BUS-0171	MCP SWMX-E4	0.48	0.81	0.81	0.77	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0108
123	BUS-0178	FB EWH-2	0.48	5.52	5.52	3.95	0.0161	0.0000	Yes	PNL	25	6	18	0.20		# 0123
124	BUS-0179	FB WASV E1 P-65-1	0.48	1.37	1.37	1.20	0.0221	0.0000	Yes	PNL	25	3	18	0.07		# 0109
125	BUS-0180	FB WASV E2 P-65-2	0.48	1.37	1.37	1.20	0.0221	0.0000	Yes	PNL	25	3	18	0.07		# 0110
126	BUS-0181	FB EWH-2	0.48	5.43	5.43	3.89	0.0161	0.0000	Yes	PNL	25	6	18	0.19		# 0111
127	BUS-0182	FB AT-E1 FCV	0.48	2.04	2.04	1.69	0.017	0.0000	Yes	PNL	25	4	18	0.08		# 0127
128	BUS-0188	FB AT-E2 FCV	0.48	2.43	2.43	1.96	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0128
129	BUS-0272	PD P-53-07	0.48	10.32	10.32	6.74	0.0162	0.0000	Yes	PNL	25	9	18	0.35	(*N21b)	# 0113
130	BUS-0273	MCP AXMX-W1A	0.48	1.87	1.87	1.56	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
131	BUS-0274	MCP AXMX-W1B	0.48	1.46	1.46	1.27	0.005	0.0000	Yes	PNL	25	1	18	0.02		# 0492
132	BUS-0275	MCP AXMX-W1C	0.48	1.84	1.84	1.54	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
133	BUS-0276	MCP ANMX-W1A	0.48	1.58	1.58	1.36	0.005	0.0000	Yes	PNL	25	1	18	0.02		# 0492
134	BUS-0277	MCP ANMX-W1B	0.48	2.22	2.22	1.81	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
135	BUS-0278	MCP ANMX-W1C	0.48	1.99	1.99	1.65	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
136	BUS-0279	MCP ANMX-W1D	0.48	1.94	1.94	1.62	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
137	BUS-0281	MCP SWMX-W1	0.48	2.92	2.92	2.29	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
138	BUS-0287	PD F-54-5	0.48	11.20	11.20	7.22	0.0162	0.0000	Yes	PNL	25	9	18	0.38	(*N21b)	# 0122
139	BUS-0288	PD P-53-06	0.48	11.20	11.20	7.22	0.0162	0.0000	Yes	PNL	25	9	18	0.38	(*N21b)	# 0122
140	BUS-0289	MCP AXMX-W2A	0.48	3.41	3.41	2.61	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0492
141	BUS-0290	MCP AXMX-W2B	0.48	2.44	2.44	1.96	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
142	BUS-0291	MCP AXMX-W2C	0.48	1.97	1.97	1.64	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
143	BUS-0292	MCP ANMX-W2A	0.48	1.66	1.66	1.41	0.005	0.0000	Yes	PNL	25	1	18	0.02		# 0492
144	BUS-0293	MCP ANMX-W2B	0.48	2.01	2.01	1.66	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
145	BUS-0294	MCP ANMX-W2C	0.48	1.92	1.92	1.60	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
146	BUS-0295	MCP ANMX-W2D	0.48	1.52	1.52	1.31	0.005	0.0000	Yes	PNL	25	1	18	0.02		# 0492
147	BUS-0296	MCP SWMX-W2	0.48	3.06	3.06	2.39	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0492
148	BUS-0310	PD PAB-W1 VALVES	0.48	6.37	6.37	4.46	0.0162	0.0000	Yes	PNL	25	7	18	0.22		# 0147
149	BUS-0311	PD PAB-W1 VALVES	0.48	6.21	6.21	4.37	0.0162	0.0000	Yes	PNL	25	6	18	0.22		# 0149
150	BUS-0312	PD PAB-W1 VALVES	0.48	6.37	6.37	4.46	0.0162	0.0000	Yes	PNL	25	7	18	0.22		# 0148
151	BUS-0313	PD PAB-W1 VALVES	0.48	6.21	6.21	4.37	0.0162	0.0000	Yes	PNL	25	6	18	0.22		# 0151
152	BUS-0314	PD PAB-W3 VALVES	0.48	4.09	4.09	3.05	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0149
153	BUS-0315	PD PAB-W3 VALVES	0.48	4.02	4.02	3.01	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0153
154	BUS-0316	PD PAB-W3 VALVES	0.48	4.09	4.09	3.05	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0150
155	BUS-0317	PD PAB-W3 VALVES	0.48	4.02	4.02	3.01	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0155
156	BUS-0318	PD AT-W2 FCV	0.48	2.46	2.46	1.98	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0151
157	BUS-0319	PD AT-W2 FCV	0.48	2.43	2.43	1.96	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0157
158	BUS-0320	PD WAS VALVE W2	0.48	5.23	5.23	3.77	0.0162	0.0000	Yes	PNL	25	6	18	0.19		# 0152
159	BUS-0321	PD AT-W2 FCV	0.48	2.46	2.46	1.98	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0153
160	BUS-0322	PD AT-W2 FCV	0.48	2.43	2.43	1.96	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0160
161	BUS-0323	PD AT-W2 FCV	0.48	2.46	2.46	1.98	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0154
162	BUS-0324	PD AT-W2 FCV	0.48	2.43	2.43	1.96	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0162

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
163	BUS-0325	PD WEST AESG W2	0.48	2.25	2.25	1.83	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0155
164	BUS-0326	PD PAB-W2 VALVES	0.48	4.91	4.91	3.57	0.0162	0.0000	Yes	PNL	25	6	18	0.18		# 0156
165	BUS-0327	PD PAB-W2 VALVES	0.48	4.81	4.81	3.51	0.0162	0.0000	Yes	PNL	25	6	18	0.17		# 0165
166	BUS-0328	PD PAB-W2 VALVES	0.48	4.91	4.91	3.57	0.0162	0.0000	Yes	PNL	25	6	18	0.18		# 0157
167	BUS-0329	PD PAB-W2 VALVES	0.48	4.81	4.81	3.51	0.0162	0.0000	Yes	PNL	25	6	18	0.17		# 0167
168	BUS-0330	PD WA MAIN BOV	0.48	10.77	10.77	6.99	0.0162	0.0000	Yes	PNL	25	9	18	0.36		# 0158
169	BUS-0331	FB LSE-PPU-1	0.48	3.06	3.06	2.39	0.0162	0.0000	Yes	PNL	25	4	18	0.11		# 0159
170	BUS-0332	FB LSE-ACCU-1	0.48	8.11	8.11	5.48	0.0162	0.0000	Yes	PNL	25	7	18	0.28		# 0160
171	BUS-0333	FB LSE-ACU-1	0.48	4.54	4.54	3.34	0.0175	0.0000	Yes	PNL	25	6	18	0.18		# 0161
172	BUS-0337	FB CN-50-3 FCV	0.48	1.12	1.12	0.86	0.0348	0.0000	Yes	PNL	25	4	18	0.08	(*N3)	# 0164
173	BUS-0348	FB SLDG'S F-50-3,4	0.48	0.83	0.83	0.66	0.6971	0.0000	Yes	PNL	25	18	18	1.2	(*N3) (*N16)	# 0167
174	BUS-0349	FB SLDG'S F-60-1,2,3	0.48	0.96	0.96	0.75	0.3761	0.0000	Yes	PNL	25	14	18	0.76	(*N3) (*N16)	# 0168
175	BUS-0350	FB SLDG'S F-50-3,4	0.48	0.83	0.83	0.66	0.6971	0.0000	Yes	PNL	25	18	18	1.2	(*N3) (*N16)	# 0169
176	BUS-0351	FB SLDG'S F-60-1,2,3	0.48	0.96	0.96	0.75	0.3761	0.0000	Yes	PNL	25	14	18	0.76	(*N3) (*N16)	# 0170
177	BUS-0352	FB SLDG'S F-60-1,2,3	0.48	0.96	0.96	0.75	0.3761	0.0000	Yes	PNL	25	14	18	0.76	(*N3) (*N16)	# 0171
178	BUS-0353	FB SLDG'S S-50-1,2,3,4,5	0.48	0.87	0.87	0.68	0.5882	0.0000	Yes	PNL	25	17	18	1.1	(*N3) (*N16)	# 0172
179	BUS-0354	FB SLDG'S S-50-1,2,3,4,5	0.48	0.96	0.96	0.75	0.3761	0.0000	Yes	PNL	25	14	18	0.76	(*N3) (*N16)	# 0173
180	BUS-0355	FB SLDG'S S-50-1,2,3,4,5	0.48	0.96	0.96	0.75	0.3761	0.0000	Yes	PNL	25	14	18	0.76	(*N3) (*N16)	# 0174
181	BUS-0356	FB SLDG'S S-50-1,2,3,4,5	0.48	0.96	0.96	0.75	0.3761	0.0000	Yes	PNL	25	14	18	0.76	(*N3) (*N16)	# 0175
182	BUS-0357	FB SLDG'S S-50-1,2,3,4,5	0.48	0.96	0.96	0.75	0.3761	0.0000	Yes	PNL	25	14	18	0.76	(*N3) (*N16)	# 0176
183	BUS-0358	FB SLDG'S S-50-1,2,3,4,5	0.48	0.96	0.96	0.75	0.3761	0.0000	Yes	PNL	25	14	18	0.76	(*N3) (*N16)	# 0177
184	BUS-0359	FB SLDG'S S-50-1,2,3,4,5	0.48	0.96	0.96	0.75	0.3761	0.0000	Yes	PNL	25	14	18	0.76	(*N3) (*N16)	# 0178
185	BUS-0360	FB SLDG's S-60-1,2	0.48	0.96	0.96	0.75	0.3761	0.0000	Yes	PNL	25	14	18	0.76	(*N3) (*N16)	# 0179
186	BUS-0361	FB SLDG's S-60-1,2	0.48	0.96	0.96	0.75	0.3761	0.0000	Yes	PNL	25	14	18	0.76	(*N3) (*N16)	# 0180
187	BUS-0362	FB SLDG's S-60-1,2	0.48	0.83	0.83	0.66	0.6971	0.0000	Yes	PNL	25	18	18	1.2	(*N3) (*N16)	# 0181
188	BUS-0363	FB EAST JC GATES	0.48	0.96	0.96	0.75	0.3761	0.0000	Yes	PNL	25	14	18	0.76	(*N3) (*N16)	# 0182
189	BUS-0364	FB EAST JC GATES	0.48	0.96	0.96	0.75	0.3761	0.0000	Yes	PNL	25	14	18	0.76	(*N3) (*N16)	# 0183
190	BUS-0392	FB AT-E3 Z2 FCV	0.48	1.43	1.43	1.25	0.0214	0.0000	Yes	PNL	25	3	18	0.08		# 0185
191	BUS-0393	FB AT-E1 FCV	0.48	1.96	1.96	1.63	0.0175	0.0000	Yes	PNL	25	4	18	0.08		# 0186
192	BUS-0394	FB AT-E1 FCV	0.48	1.96	1.96	1.63	0.0175	0.0000	Yes	PNL	25	4	18	0.08		# 0187
193	BUS-0395	FB AT-E1 FCV	0.48	1.96	1.96	1.63	0.0175	0.0000	Yes	PNL	25	4	18	0.08		# 0188
194	BUS-0396	FB AT-E2 FCV	0.48	2.31	2.31	1.88	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0189
195	BUS-0397	FB AT-E2 FCV	0.48	2.31	2.31	1.88	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0190
196	BUS-0398	FB AT-E2 FCV	0.48	2.31	2.31	1.88	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0191
197	BUS-0399	FB AT-E3 Z2 FCV	0.48	1.43	1.43	1.25	0.0214	0.0000	Yes	PNL	25	3	18	0.08		# 0192
198	BUS-0400	FB AT-E3 Z2 FCV	0.48	1.43	1.43	1.25	0.0214	0.0000	Yes	PNL	25	3	18	0.08		# 0193
199	BUS-0401	FB AT-E4 Z2 FCV	0.48	1.43	1.43	1.25	0.0214	0.0000	Yes	PNL	25	3	18	0.08		# 0194
200	BUS-0402	FB AT-E4 Z2 FCV	0.48	1.43	1.43	1.25	0.0214	0.0000	Yes	PNL	25	3	18	0.08		# 0195
201	BUS-0403	FB AT-E4 Z2 FCV	0.48	1.43	1.43	1.25	0.0214	0.0000	Yes	PNL	25	3	18	0.08		# 0196
202	BUS-0406	FB PAB-E2 DV & BOV1	0.48	1.82	1.82	1.53	0.0184	0.0000	Yes	PNL	25	3	18	0.08		# 0203
203	BUS-0409	FB WASV E3	0.48	1.28	1.28	0.96	0.028	0.0000	Yes	PNL	25	3	18	0.07	(*N3)	# 0198

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
204	BUS-0410	FB WASV E4	0.48	1.28	1.28	0.96	0.028	0.0000	Yes	PNL	25	3	18	0.07	(*N3)	# 0199
205	BUS-0412	FB EBB-EDH-1	0.48	4.94	4.94	3.59	0.0162	0.0000	Yes	PNL	25	6	18	0.18		# 0200
206	BUS-0413	FB PAB-E1 DV & BOV	0.48	2.46	2.46	1.98	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0207
207	BUS-0414	FB PAB-E1 DV & BOV	0.48	2.14	2.14	1.76	0.0165	0.0000	Yes	PNL	25	4	18	0.08		# 0208
208	BUS-0415	FB EWH-2	0.48	5.47	5.47	3.92	0.0161	0.0000	Yes	PNL	25	6	18	0.19		# 0203
209	BUS-0436	PD SWPSO-SG	0.48	2.70	2.70	2.15	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0201
210	BWP2 DISC	FU BACKWASH PUMP 2	0.48	13.05	12.39	7.82	0.0083	0.0000	Yes	PNL	25	6	18	0.22	(*N21b)	# 0568
211	BWWP1 DISC	FU 0668	0.48	12.05	11.39	7.27	0.0083	0.0000	Yes	PNL	25	6	18	0.21	(*N21b)	# 0136
212	BYPGT1 DISC	FU 0564	0.48	2.69	2.69	2.14	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
213	BYPGT2 DISC	FU 0554	0.48	2.69	2.69	2.14	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
214	C SUMP PUMP DISC	FU C SUMP PUMP	0.48	4.20	4.20	3.13	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
215	CC-1 DISC	FU CROSS COLL 1	0.48	2.71	2.71	2.15	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
216	CC2 DISC	FU 0528	0.48	2.69	2.69	2.14	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
217	CC-3 DISC	FU CROSS COLL 3	0.48	2.71	2.71	2.15	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
218	CE WET WELL GT DISC	FU 0745	0.48	1.44	1.44	1.25	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
219	CEB-ACCU-1 DISC	PD CEB-ACCU-1	0.48	4.81	4.81	3.51	0.0162	0.0000	Yes	PNL	25	6	18	0.17		# 0023
220	CEB-ACCU-1 TERM	PD CEB-ACCU-1	0.48	4.04	4.04	3.02	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0088
221	CEB-ACU-1 TERM	PD CEB-ACU-1	0.48	11.39	11.39	7.33	0.0162	0.0000	Yes	PNL	25	9	18	0.38		# 0023
222	CEB-EF-1 DISC	MCP CEB-EF-1	0.48	1.70	1.70	1.44	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0023
223	CEB-EF-2 DISC	MCP CEB-EF-2	0.48	1.85	1.85	1.55	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0023
224	CEB-FCP-1 DISC	MCP CEB-FCP-1	0.48	3.94	3.94	2.96	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0023
225	CEB-FCP-2 TERM	PD CEP-FCP-2	0.48	3.13	3.13	2.43	0.0162	0.0000	Yes	PNL	25	4	18	0.12		# 0023
226	CEB-P-1 DISC	MCP CEB-P-1	0.48	3.12	3.12	2.42	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0023
227	CEB-P-2 DISC	MCP CEB-P-2	0.48	3.13	3.13	2.43	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0023
228	CF2 AHU-1 DISC	MCP AHU-1	0.48	1.15	1.15	1.04	0.015	0.0000	Yes	PNL	25	2	18	0.04		# 0154
229	CF2 AHU-3 DISC	MCP AHU-3	0.48	1.93	1.93	1.61	0.015	0.0000	Yes	PNL	25	3	18	0.07		# 0155
230	CFG-1 BACK DR DISC	FU CFG-1	0.48	5.57	4.98	2.90	1.169	0.0000	Yes	PNL	25	67	18	10	(*N3) (*N16)	# 0159
231	CFG-1 BOWL DR DISC	FU CFG-1	0.48	16.33	14.21	8.67	0.0083	0.0000	Yes	PNL	25	7	18	0.28		# 0159
232	CFG-2 BACK DR DISC	MB CFG-2	0.48	6.83	6.15	3.62	0.023	0.0000	Yes	PNL	25	8	18	0.29	(*N3)	# 0159
233	CFG-2 BOWL DR DISC	MB CFG-2	0.48	16.56	14.45	7.48	0.0128	0.0000	Yes	PNL	25	9	18	0.36	(*N3)	# 0159
234	CFG-3 BACK DR DISC	FU CFG-3	0.48	5.69	5.11	2.94	1.091	0.0000	Yes	PNL	25	65	18	9.9	(*N3) (*N16)	# 0159
235	CFG-3 BOWL DR DISC	FU CFG-3	0.48	17.43	15.32	9.26	0.0083	0.0000	Yes	PNL	25	8	18	0.29		# 0159
236	CHABLWR DISC	FU CHANNEL AIR BLOWER	0.48	4.27	4.27	3.17	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
237	CN-50-3 FCV	FB CN-50-3 FCV	0.48	1.00	1.00	0.78	0.0592	0.0000	Yes	PNL	25	5	18	0.12	(*N3)	# 0111
238	CONT TK INT GT DISC	FU 0682	0.48	1.44	1.44	1.26	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
239	CP-70 EMG	FU CP70 EMG TERM	0.48	1.45	1.45	1.26		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0568
240	CP-70 NRM	FU 0756	0.48	2.78	2.78	2.19		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0568
241	CR-1 HSP 5 DISC	MCP HSP 5	0.48	3.23	3.23	2.50	0.015	0.0000	Yes	PNL	25	4	18	0.11		# 0165
242	CR-1 HSP 6 DISC	MCP HSP 6	0.48	3.09	3.09	2.40	0.015	0.0000	Yes	PNL	25	4	18	0.11		# 0166
243	D SP-2 DISC	FU D SUMP PUMP 2	0.48	4.27	4.27	3.17	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
244	DCH FNL EFF SP DISC	FU 0751	0.48	1.44	1.44	1.25	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
245	DOOR OP EE1	FU 0905	0.48	2.67	2.67	2.13	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0099
246	DOOR OP EE2	FU 0906	0.48	2.67	2.67	2.13	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0099
247	DOOR OP FF	FU 0919	0.48	2.65	2.65	2.11	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0099
248	DOOR OPERATOR STR	FU DOOR OPERATOR	0.48	4.27	4.27	3.17	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
249	DP-51	MB MCC-51A	0.48	21.82	21.82	12.77	0.0126	0.0000	Yes	PNL	25	11	18	0.55	(*N5)	# 0247
250	DP-51 (MB DP-51 LineSide)	MB MCC-51A	0.48	21.82	21.82	12.77	0.0126	0.0000	Yes	PNL	25	11	18	0.55	(*N5)	# 0248-Line
251	DP-52	MB DP-52	0.48	20.94	20.94	12.33	0.01	0.0000	Yes	PNL	25	9	18	0.42		# 0249
252	DP-52 (MB DP-52 LineSide)	MB MCC-52A	0.48	20.94	20.94	12.33	0.0128	0.0000	Yes	PNL	25	11	18	0.53	(*N5)	# 0250-Line
253	DP-54	MB DP-54	0.48	17.12	17.12	10.38	0.0101	0.0000	Yes	PNL	25	8	18	0.35		# 0251
254	DP-54 (MB DP-54 LineSide)	MB MCC-54A	0.48	17.12	17.12	10.38	0.0138	0.0000	Yes	PNL	25	10	18	0.48	(*N5)	# 0252-Line
255	DP-55	MB DP-55	0.48	17.71	17.71	10.69	0.01	0.0000	Yes	PNL	25	9	18	0.36		# 0253
256	DP-55 (MB DP-55 LineSide)	FB ATS-55 NRM	0.48	17.71	17.71	10.69	0.0136	0.0000	Yes	PNL	25	10	18	0.49		# 0254-Line
257	DP-56	MB DP-56	0.48	11.47	11.47	7.37	0.0114	0.0000	Yes	PNL	25	7	18	0.27		# 0255
258	DP-56 (MB DP-56 LineSide)	FB DP-56	0.48	11.47	11.47	4.18	0.2	0.0000	Yes	PNL	25	34	18	3.4	(*N3) (*N16)	# 0256-Line
259	DRILL PRESS	FB DRILL PRESS	0.48	4.33	4.33	3.21	0.0162	0.0000	Yes	PNL	25	5	18	0.16		# 0263
260	DROP (NGW) STR	FU DOOR OP (NGW)	0.48	4.20	4.20	3.13	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
261	DROP (SG) STR	FU DOOR OP (SG)	0.48	4.20	4.20	3.13	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
262	E CONT TK G1 DISC	FU 0747	0.48	1.44	1.44	1.25	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
263	E SUMP PUMP 1 DISC	FU E SUMP PUMP 1	0.48	2.71	2.71	2.15	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
264	EBB SUMP PUMP 2 DISC	MCP EBB SUMP PUMP 2	0.48	3.28	3.28	2.53	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0126
265	EBB SUMP PUMP 4 DISC	MCP EBB SUMP PUMP 4	0.48	0.96	0.96	0.75	0.04	0.0000	Yes	PNL	25	3	18	0.08	(*N3)	# 0127
266	EBB-A HOIST 1	PD EBB-A HOIST1	0.48	0.94	0.94	0.73	0.4246	0.0000	Yes	PNL	25	14	18	0.83	(*N3) (*N16)	# 0118
267	EBB-A HOIST 1 DISC	PD EBB-A HOIST1	0.48	1.01	1.01	0.78	0.0543	0.0000	Yes	PNL	25	4	18	0.12	(*N3)	# 0119
268	EBB-A HOIST 2	PD EBB-A HOIST2	0.48	0.94	0.94	0.73	0.4246	0.0000	Yes	PNL	25	14	18	0.83	(*N3) (*N16)	# 0120
269	EBB-A HOIST 2 DISC	PD EBB-A HOIST2	0.48	1.01	1.01	0.78	0.0543	0.0000	Yes	PNL	25	4	18	0.12	(*N3)	# 0121
270	EBB-EDH-1 LINE'	FB EBB-EDH-1	0.48	3.76	3.76	2.85	0.0162	0.0000	Yes	PNL	25	5	18	0.14		# 0274
271	EBB-EF-10 DISC	MCP EBB-EF-10	0.48	2.63	2.63	2.10	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0133
272	EBB-EF-5 DISC	MCP EBB-EF-5	0.48	3.83	3.83	2.89	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0134
273	EBB-EF-6 DISC	MCP EBB-EF-6	0.48	2.09	2.09	1.72	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0135
274	EBB-EF-7 DISC	MCP EBB-EF-7	0.48	1.40	1.40	1.22	0.005	0.0000	Yes	PNL	25	1	18	0.02		# 0136
275	EBB-EF-9 DISC	MCP EBB-EF-9	0.48	0.95	0.95	0.88	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0137
276	EBB-EUH-1 TERM	PD EBB-EUH-1	0.48	5.68	5.68	4.05	0.0162	0.0000	Yes	PNL	25	6	18	0.20		# 0118
277	EBB-HV-1 DISC	PD EBB-HV-1	0.48	3.17	3.17	2.45	0.0162	0.0000	Yes	PNL	25	4	18	0.12		# 0139
278	EBB-HV-1 STR	PD EBB-HV-1	0.48	2.42	2.42	1.95	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0108
279	EF1 DISC	FU 0646	0.48	1.44	1.44	1.26	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
280	EF2 DISC	FU 0646	0.48	1.44	1.44	1.26	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
281	EF3 DISC	FU EF-3,4,1	0.48	1.45	1.45	1.26	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
282	EF4 DISC	FU EF-3,4,1	0.48	1.44	1.44	1.25	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
283	ELEVATOR CP DISC	PD ELEVATOR CP	0.48	1.51	1.51	1.30	0.0172	0.0000	Yes	PNL	25	3	18	0.06		# 0492
284	ELEVATOR CP INPUT	FU ELEVATOR CP	0.48	1.42	1.42	1.24		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0492
285	EP THRV CONTROLLER	FU E. PLANT THR VALVE	0.48	4.27	4.27	3.17	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0133
286	EPBBV DISC	PD 0650	0.48	1.32	1.32	0.99	0.1486	0.0000	Yes	PNL	25	9	18	0.40	(*N3)	# 0136
287	EPBBV STARTER	PD 0650	0.48	1.25	1.25	0.93	0.1949	0.0000	Yes	PNL	25	11	18	0.50	(*N3) (*N16)	# 0136
288	EPB-EUH-1 DISC	PD EPB-EUH-1	0.48	3.72	3.72	2.82	0.0162	0.0000	Yes	PNL	25	5	18	0.14		# 0180
289	EPB-EUH-1 TERM	PD EPB-EUH-1	0.48	3.49	3.49	2.67	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0152
290	EPSEGE DISC	FU 0654	0.48	1.44	1.44	1.26	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
291	EPSEGW DISC	FU 0656	0.48	1.44	1.44	1.26	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
292	EQ INFL GATE 1 STR	FU EQ INFL GATE 1	0.48	2.71	2.71	2.15	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0115
293	EQ INFL GATE 10 STR	FU EQ INFL GATE 10	0.48	2.71	2.71	2.15	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0116
294	EQ INFL GATE 11 STR	FU EQ INFL GATE 11	0.48	2.71	2.71	2.15	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0117
295	EQ INFL GATE 12 STR	FU EQ INFL GATE 12	0.48	2.71	2.71	2.15	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0118
296	EQ INFL GATE 2 STR	FU EQ INFL GATE 2	0.48	2.71	2.71	2.15	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0119
297	EQ INFL GATE 3 STR	FU EQ INFL GATE 3	0.48	2.71	2.71	2.15	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0120
298	EQ INFL GATE 4 STR	FU EQ INFL GATE 4	0.48	2.71	2.71	2.15	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0121
299	EQ INFL GATE 9 STR	FU EQ INFL GATE 9	0.48	2.71	2.71	2.15	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0122
300	EQINGT5 DISC	FU 0565	0.48	2.69	2.69	2.14	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
301	EQINGT6 DISC	FU 0566	0.48	2.69	2.69	2.14	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
302	EQINGT7 DISC	FU 0577	0.48	2.69	2.69	2.14	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
303	EQINGT8 DISC	FU 0578	0.48	2.69	2.69	2.14	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
304	EQPRM HOIST DISC	FU 0576	0.48	5.67	5.67	4.04	0.0042	0.0000	Yes	PNL	25	3	18	0.05		# 0073
305	EQPT RCPT C	FU WELDER OUTLET C	0.48	5.90	5.90	4.18	0.0042	0.0000	Yes	PNL	25	3	18	0.05		# 0492
306	EQPT RCPT D	FU WELDER OUTLET D	0.48	6.02	6.02	4.25	0.0042	0.0000	Yes	PNL	25	3	18	0.05		# 0430
307	EQPT RCPT E	FU WELD RCPT E	0.48	11.59	11.59	7.44	0.0042	0.0000	Yes	PNL	25	4	18	0.10		# 0403
308	EQPT RCPT EBB-A	PD EBB-A WELD RCPT	0.48	7.81	7.81	5.31	0.0162	0.0000	Yes	PNL	25	7	18	0.27		# 0173
309	EQPT RCPT EBB-B	PD WELD RCPT EBB-B	0.48	7.22	7.22	4.97	0.0162	0.0000	Yes	PNL	25	7	18	0.25		# 0174
310	EQPT RCPT EE	FU 0908	0.48	3.90	3.90	2.94		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0430
311	EQPT RCPT EPB-B (Welder Receptacle)	PD EQRCPT-EPB-B	0.48	4.23	4.23	3.14	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0406
312	EQPT RCPT F	FU 0559	0.48	2.69	2.69	2.14	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0407
313	EQPT RCPT M	FU 0663	0.48	2.24	2.24	1.83		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0136
314	EQPT RCPT RLS-B	PD WELD OUTLET RLS-B	0.48	4.24	4.24	3.15	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0430
315	EQRETFV DISC	FU 0553	0.48	2.69	2.69	2.14	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
316	EQ-RET-V-1 DISC	FU EQ RET VALVE 1	0.48	2.71	2.71	2.15	0.0083	0.0000	Yes	PNL	25	3	18	0.05		# 0475
317	EQ-RET-V-2 DISC	FU EQ RET VALVE 2	0.48	2.71	2.71	2.15	0.0083	0.0000	Yes	PNL	25	3	18	0.05		# 0475
318	EQRETV3 DISC	FU 0557	0.48	2.69	2.69	2.14	0.0083	0.0000	Yes	PNL	25	3	18	0.05		# 0073
319	ERU DISC	FU 0573	0.48	2.69	2.69	1.82	0.0268	0.0000	Yes	PNL	25	5	18	0.14	(*N3)	# 0073
320	ESESP6 DISC	FU 0660	0.48	1.44	1.44	1.26	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
321	EUH1 DISC	FU 0662	0.48	1.44	1.44	1.26		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0136
322	EUH-E1 TERM	PD-0538	0.48	5.64	5.64	4.02	0.0152	0.0000	Yes	PNL	25	6	18	0.19		# 0132
323	EUH-E2 TERM	PD-0539	0.48	3.69	3.69	2.80	0.0164	0.0000	Yes	PNL	25	5	18	0.14		# 0132

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
324	EWB-1 DISC	PD EWB-1	0.48	9.30	9.30	6.16	0.0162	0.0000	Yes	PNL	25	8	18	0.32		# 0492
325	EWB-2 DISC	PD EWB-2	0.48	16.71	16.71	10.17	0.0161	0.0000	Yes	PNL	25	11	18	0.54	(*N21b)	# 0568
326	EWB-2 TERMS	PD EWB-2	0.48	15.87	15.87	9.73	0.0161	0.0000	Yes	PNL	25	11	18	0.52	(*N21b)	# 0162
327	F-1-1 DISC	PD F-1-1	0.48	2.17	2.17	1.78	0.0162	0.0000	Yes	PNL	25	4	18	0.08		# 0160
328	F-1-1 STARTER	PD F-1-1	0.48	1.85	1.85	1.55	0.0167	0.0000	Yes	PNL	25	3	18	0.07		# 0188
329	F-1-2 DISC	PD F-1-1	0.48	2.16	2.16	1.77	0.0163	0.0000	Yes	PNL	25	4	18	0.08		# 0160
330	F-1-2 STARTER	PD F-1-1	0.48	1.75	1.75	1.48	0.0168	0.0000	Yes	PNL	25	3	18	0.07		# 0190
331	F-1-3 DISC	PD F-1-1	0.48	2.14	2.14	1.75	0.0163	0.0000	Yes	PNL	25	4	18	0.08		# 0160
332	F-1-3 STARTER	PD F-1-1	0.48	1.49	1.49	1.09	0.0206	0.0000	Yes	PNL	25	3	18	0.06	(*N3)	# 0192
333	F-1-4 DISC	PD F-1-1	0.48	2.12	2.12	1.74	0.0163	0.0000	Yes	PNL	25	4	18	0.08		# 0160
334	F-1-4 STARTER	PD F-1-1	0.48	1.42	1.42	1.05	0.022	0.0000	Yes	PNL	25	3	18	0.06	(*N3)	# 0194
335	F-1-5 DISC	PD F-1-5	0.48	1.78	1.78	1.50	0.0168	0.0000	Yes	PNL	25	3	18	0.07		# 0160
336	F-1-5 STARTER	PD F-1-5	0.48	1.26	1.26	0.95	0.0264	0.0000	Yes	PNL	25	3	18	0.07	(*N3)	# 0500
337	F-1-6 DISC	PD F-1-5	0.48	1.77	1.77	1.49	0.0168	0.0000	Yes	PNL	25	3	18	0.07		# 0160
338	F-1-6 STARTER	PD F-1-5	0.48	1.29	1.29	0.97	0.0254	0.0000	Yes	PNL	25	3	18	0.07	(*N3)	# 0500
339	F-1-7 DISC	PD F-1-5	0.48	1.75	1.75	1.48	0.0168	0.0000	Yes	PNL	25	3	18	0.07		# 0160
340	F-1-7 STARTER	PD F-1-5	0.48	1.48	1.48	1.09	0.0208	0.0000	Yes	PNL	25	3	18	0.06	(*N3)	# 0500
341	F-1-8 DISC	PD F-1-5	0.48	1.74	1.74	1.47	0.0168	0.0000	Yes	PNL	25	3	18	0.07		# 0160
342	F-1-8 STARTER	PD F-1-5	0.48	1.52	1.52	1.31	0.0172	0.0000	Yes	PNL	25	3	18	0.06		# 0500
343	F-2-1 DISC	PD F-2-6	0.48	5.37	5.37	3.86	0.0162	0.0000	Yes	PNL	25	6	18	0.19		# 0160
344	F-2-1 STARTER	PD F-2-6	0.48	4.01	4.01	3.01	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0204
345	F-2-12 DISC	PD F-2-6	0.48	5.29	5.29	3.81	0.0162	0.0000	Yes	PNL	25	6	18	0.19		# 0160
346	F-2-12 STARTER	PD F-2-6	0.48	3.96	3.96	2.97	0.0162	0.0000	Yes	PNL	25	5	18	0.14		# 0206
347	F-2-13 DISC	PD F-2-13	0.48	1.52	1.52	1.31	0.0172	0.0000	Yes	PNL	25	3	18	0.06		# 0160
348	F-2-13 STARTER	PD F-2-13	0.48	1.00	1.00	0.78	0.0371	0.0000	Yes	PNL	25	3	18	0.08	(*N3)	# 0208
349	F-2-18 DISC	PD F-2-13	0.48	1.51	1.51	1.30	0.0172	0.0000	Yes	PNL	25	3	18	0.06		# 0160
350	F-2-18 STARTER	PD F-2-13	0.48	1.34	1.34	1.00	0.0241	0.0000	Yes	PNL	25	3	18	0.07	(*N3)	# 0210
351	F-2-19 DISC	PD F-2-13	0.48	1.50	1.50	1.30	0.0172	0.0000	Yes	PNL	25	3	18	0.06		# 0160
352	F-2-19 STARTER	PD F-2-13	0.48	1.33	1.33	1.00	0.0243	0.0000	Yes	PNL	25	3	18	0.07	(*N3)	# 0212
353	F-2-24 DISC	PD F-2-13	0.48	1.49	1.49	1.29	0.0173	0.0000	Yes	PNL	25	3	18	0.06		# 0160
354	F-2-24 STARTER	PD F-2-13	0.48	0.97	0.97	0.76	0.039	0.0000	Yes	PNL	25	3	18	0.08	(*N3)	# 0214
355	F-2-6 DISC	PD F-2-6	0.48	5.45	5.45	3.90	0.0162	0.0000	Yes	PNL	25	6	18	0.19		# 0160
356	F-2-6 STARTER	PD F-2-6	0.48	2.01	2.01	1.66	0.0164	0.0000	Yes	PNL	25	3	18	0.08		# 0217
357	F-2-7 DISC	PD F-2-6	0.48	5.22	5.22	3.76	0.0162	0.0000	Yes	PNL	25	6	18	0.19		# 0160
358	F-2-7 STARTER	PD F-2-6	0.48	2.04	2.04	1.69	0.0164	0.0000	Yes	PNL	25	3	18	0.08		# 0219
359	F-5-1 DISC	FU F-5-1	0.48	4.27	4.27	3.17	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
360	F-5-2 DISC	FU F-5-2	0.48	4.27	4.27	3.17	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
361	F-54-1 DISC	PD F-54-4	0.48	1.74	1.74	1.47	0.0189	0.0000	Yes	PNL	25	3	18	0.08		# 0492
362	F-54-1 STR	PD F-54-4	0.48	1.69	1.69	1.44	0.0192	0.0000	Yes	PNL	25	3	18	0.08		# 0492
363	F-54-2 DISC	PD F-54-5	0.48	2.37	2.37	1.91	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0492
364	F-54-2 STR	PD F-54-5	0.48	2.28	2.28	1.85	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0492

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
365	F-54-4 DISC	PD F-54-4	0.48	4.40	4.40	3.25	0.0162	0.0000	Yes	PNL	25	5	18	0.16		# 0492
366	F-54-4 STR	PD F-54-4	0.48	3.98	3.98	2.98	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0492
367	F-54-5 DISC	PD F-54-5	0.48	10.11	10.11	6.62	0.0162	0.0000	Yes	PNL	25	8	18	0.34		# 0492
368	F-54-5 STR	PD F-54-5	0.48	8.58	8.58	5.76	0.0162	0.0000	Yes	PNL	25	8	18	0.30	(*N20b)	# 0492
369	F-60-5	FB EAST JC GATES	0.48	0.89	0.89	0.70	0.5093	0.0000	Yes	PNL	25	16	18	0.96	(*N3) (*N16)	# 0365
370	F-60-6	FB EAST JC GATES	0.48	0.89	0.89	0.70	0.5093	0.0000	Yes	PNL	25	16	18	0.96	(*N3) (*N16)	# 0366
371	F-6-1 DISC	FU F-6-1	0.48	4.20	4.20	3.13	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
372	F-6-2 DISC	FU F-6-2	0.48	4.20	4.20	3.13	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
373	F-6-4 DISC	FB GATE OPERATORS	0.48	4.27	4.27	3.17	0.016	0.0000	Yes	PNL	25	5	18	0.15		# 0492
374	F-7-1 DISC	FB GATE OPERATORS	0.48	3.34	3.34	2.57	0.0166	0.0000	Yes	PNL	25	5	18	0.13		# 0492
375	F-8-6 DISC	FB GATE OPERATORS	0.48	2.74	2.74	2.17	0.0172	0.0000	Yes	PNL	25	4	18	0.11		# 0492
376	FASB1 DISC	PD 0672	0.48	12.66	12.00	7.61	0.0152	0.0000	Yes	PNL	25	9	18	0.40	(*N21b)	# 0136
377	FASB-1 LCP	PD 0672	0.48	14.63	13.95	8.66	0.0147	0.0000	Yes	PNL	25	10	18	0.44		# 0206
378	FCB-1 DISC	PD 0724	0.48	8.19	8.19	5.53	0.0147	0.0000	Yes	PNL	25	7	18	0.26		# 0568
379	FCB-1-EF DISC	PD 0724	0.48	8.33	8.33	5.61	0.0147	0.0000	Yes	PNL	25	7	18	0.26		# 0568
380	FCBV-1 VFD	PD 0724	0.48	14.47	14.47	8.99	0.0138	0.0000	Yes	PNL	25	9	18	0.41	(*N21b)	# 0568
381	FDSP1 DISC	FU 0679	0.48	1.44	1.44	1.26	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
382	FDSP2 DISC	FU 0739	0.48	1.44	1.44	1.25	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
383	FDSP4 DISC	FU FLOOR DRN SP 4	0.48	1.45	1.45	1.26	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
384	FLDRNSP3 DISC	FU 0657	0.48	1.44	1.44	1.26	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
385	GDWU-1 DISC	FU GRIT DEWATER UNIT 1	0.48	4.27	4.27	3.17	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
386	GDWU-2 DISC	FU GRIT DEWATER UNIT 2	0.48	4.27	4.27	3.17	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
387	GP-3 DISC TERM	FU GP-3	0.48	4.20	4.20	3.13	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
388	GRIT BLOWER 2 DISC	FU GRIT BLOWER 2	0.48	4.27	4.27	3.17	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
389	GRTBLWR3 DISC	FU GRIT BLOWER 3	0.48	4.20	4.20	3.13	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
390	GSP1 DISC	FU GRIT SLURRY PUMP 1	0.48	4.27	4.27	3.17	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
391	GSP2 DISC	FU GRIT SLURRY PUMP 2	0.48	4.27	4.27	3.17	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
392	GSP4 DISC	FU GRIT SLURRY PUMP 4	0.48	4.27	4.27	3.17	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
393	HEAT REC UNIT DISC	FU HEAT RECOVERY UNIT	0.48	7.58	7.58	5.18	0.0042	0.0000	Yes	PNL	25	3	18	0.07		# 0492
394	HOIST D DISC	FU HOIST D	0.48	4.27	4.27	3.17	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
395	HOIST EPB-B DISC	PD HOIST EPB-B	0.48	3.98	3.98	2.98	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0180
396	HOIST EPB-B STARTER	PD HOIST EPB-B	0.48	3.49	3.49	2.67	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0177
397	HOIST P DISC	FU 0695	0.48	1.44	1.44	1.26	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
398	HOIST Q DISC	FU 0750	0.48	1.44	1.44	1.25	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
399	HORZ BAND SAW	FB HORZ BAND SAW	0.48	2.30	2.30	1.87	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0403
400	HPPEW2 DISC	FU 0546	0.48	9.84	9.14	6.01	0.0083	0.0000	Yes	PNL	25	6	18	0.17		# 0073
401	HP-PEW-P-1 DISC	FU HP PEW PUMP 1	0.48	10.37	9.67	6.31	0.0083	0.0000	Yes	PNL	25	6	18	0.18		# 0475
402	HT BOOST PMP DISC	FU 0753	0.48	1.44	1.44	1.25	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
403	HV-1 DISC	PD HV-1	0.48	3.13	3.13	2.43	0.0162	0.0000	Yes	PNL	25	4	18	0.12		# 0180
404	IFSAB-1 LCP	PD IFSAB-1	0.48	7.32	7.32	5.02	0.0162	0.0000	Yes	PNL	25	7	18	0.26	(*N21b)	# 0122
405	IPC LP-EFB	MB IPC LP-EFB	0.208	3.39	3.39	2.03	0.0167	0.0000	Yes	PNL	25	4	18	0.10		# 0193

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
406	IPC LP-EFB (MB IPC LP-EFB LineSide)	FB IPC LP-EFB	0.208	3.39	3.39	1.63	2	0.0000	Yes	PNL	25	63	18	9.4	(*N3) (*N9) (*N16)	# 0291-Line
407	IPC LP-WFB	MB IPC LP-WFB	0.208	1.73	1.73	1.07	2	0.0000	Yes	PNL	25	48	18	5.9	(*N3) (*N9) (*N16)	# 0193
408	IPC LP-WFB (MB IPC LP-WFB LineSide)	PD IPC LP-WFB	0.208	1.73	1.73	1.25	2	0.0000	Yes	PNL	25	53	18	7.0	(*N9) (*N16)	# 0311-Line
409	IRON WORK	FB IRON WORK	0.48	4.56	4.56	3.35	0.0162	0.0000	Yes	PNL	25	5	18	0.17		# 0413
410	JC-1 DISC	FU JIB CRANES	0.48	4.27	4.27	3.17	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
411	JC-1 LCP TERM	FU JIB CRANES	0.48	3.34	3.34	2.57	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0230
412	JC-2 DISC	FU JIB CRANES	0.48	3.34	3.34	2.57	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0492
413	JC-3 LCP TERM	FU JIB CRANES	0.48	2.74	2.74	2.17	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0232
414	Junction box.	FB PAB-E2 DV & BOV1	0.48	2.05	2.05	1.69	0.017	0.0000	Yes	PNL	25	4	18	0.08		# 0418
415	LBP-6 STARTER	FU SCREW PUMP 6	0.48	3.93	3.68	2.24	0.4625	0.0000	Yes	PNL	25	33	18	3.2	(*N3) (*N16)	# 0184
416	LBP-7 STARTER	FU SCREW PUMP 7	0.48	3.98	3.75	2.24	0.4656	0.0000	Yes	PNL	25	33	18	3.2	(*N3) (*N16)	# 0275
417	LBP-8 STARTER	FU SCREW PUMP 8	0.48	3.98	3.75	2.24	0.4656	0.0000	Yes	PNL	25	33	18	3.2	(*N3) (*N16)	# 0277
418	LP-ADM-1	MB LP-ADM-1	0.208	5.14	5.14	2.73	0.0172	0.0000	Yes	PNL	25	5	18	0.14		# 0026
419	LP-ADM-1 (MB LP-ADM-1 LineSide)	PD XFMR-LP-ADM-1	0.208	5.14	5.14	2.18	2	0.0000	Yes	PNL	25	76	18	13	(*N3) (*N9) (*N16)	# 0005-Line
420	LP-ADM-1A	MB LP-ADM-1A	0.208	5.07	5.07	2.70	0.0172	0.0000	Yes	PNL	25	5	18	0.14		# 0026
421	LP-ADM-1A (MB LP-ADM-1A LineSide)	MB LP-ADM-1	0.208	5.07	5.07	2.70	0.0172	0.0000	Yes	PNL	25	5	18	0.14		# 0006-Line
422	LP-ADM-UPS	MB LP-ADM-UPS	0.208	0.04	0.04	0.04	2	0.0000	Yes	PNL	25	3	18	0.04	(*N9) (*N11)	# 0026
423	LP-ADM-UPS (MB LP-ADM-UPS LineSide)	MaxTripTime @2.0s	0.208	0.04	0.04	0.04	2	0.0000	Yes	PNL	25	3	18	0.04	(*N2) (*N9) (*N11)	# 0007-Line
424	LP-C	FU XFMR LP-C	0.208	1.79	1.79	1.30		0.0000	Yes	PNL	25	44	18	5.2	(*N4) (*N5) (*N9)	# 0242
425	LP-C (MB LP-C LineSide)	FU XFMR LP-C	0.208	1.79	1.79	1.30		0.0000	Yes	PNL	25	44	18	5.2	(*N4) (*N9)	# 0265-Line
426	LP-CEB-A	MB LP-CEB-A	0.208	3.22	3.22	1.91	2	0.0000	Yes	PNL	25	70	18	11	(*N9) (*N16)	# 0030
427	LP-CEB-A (MB LP-CEB-A LineSide)	FB ATS-CEB NRM	0.208	3.22	3.22	1.91	2	0.0000	Yes	PNL	25	70	18	11	(*N9) (*N16)	# 0008-Line
428	LP-CEB-B	MB LP-CEB-A	0.208	3.15	3.15	1.88	2	0.0000	Yes	PNL	25	69	18	11	(*N9) (*N16)	# 0030
429	LP-D	FU XFMR LP-D PRI	0.208	1.75	1.75	1.28		0.0000	Yes	PNL	25	45	18	5.4	(*N4) (*N9)	# 0242
430	LP-E	FU XFMR-LP-E	0.208	3.94	3.94	1.92		0.0000	Yes	PNL	25	13	18	0.70	(*N3) (*N4) (*N5)	# 0192
431	LP-E (#MB LP-E LineSide)	FU XFMR-LP-E	0.208	3.94	3.94	1.92		0.0000	Yes	PNL	25	13	18	0.70	(*N3) (*N4)	# 0432-Line
432	LP-EBB-A	MB LP-EBB-A	0.208	3.08	3.08	1.82	2	0.0000	Yes	PNL	25	68	18	11	(*N9) (*N16)	# 0193
433	LP-EBB-A (MB LP-EBB-A LineSide)	FB XFMR LP-EBB-A	0.208	3.08	3.08	1.82	2	0.0000	Yes	PNL	25	68	18	11	(*N9) (*N16)	# 0009-Line
434	LP-EE	FU 0904	0.208	0.44	0.44	0.37	0.5461	0.0000	Yes	PNL	25	6	18	0.12	(*N3) (*N11) (*N16)	# 0194
435	LP-F	FU 0502	0.208	3.83	3.83	1.88		0.0000	Yes	PNL	25	13	18	0.69	(*N3) (*N4)	# 0196
436	LP-FF	FU XFMR-LP-FF	0.208	0.47	0.47	0.47	0.161	0.0000	Yes	PNL	25	3	18	0.04	(*N11)	# 0194
437	LP-LSE	PD-LP-LSE XFMR	0.208	1.81	1.81	1.29	2	0.0000	Yes	PNL	25	54	18	7.2	(*N9) (*N16)	# 0193
438	LP-M	FU 0645	0.208	3.20	3.20	1.66		0.0000	Yes	PNL	25	12	18	0.66	(*N3) (*N4)	# 0257
439	LP-N	FU 0699	0.208	3.35	3.35	2.02		0.0000	Yes	PNL	25	66	18	10	(*N4) (*N5) (*N9)	# 0257

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
440	LP-N (MB LP-N LineSide)	FU 0699	0.208	3.35	3.35	2.02		0.0000	Yes	PNL	25	66	18	10	(*N4) (*N9)	# 0442-Line
441	LP-O	PD XFMR LP-O	0.208	2.43	2.43	1.53	2	0.0000	Yes	PNL	25	60	18	8.7	(*N9) (*N16)	# 0199
442	LP-Q	FU 0734	0.208	3.18	3.18	1.95		0.0000	Yes	PNL	25	71	18	11	(*N4) (*N5) (*N9)	# 0257
443	LP-Q (MB LP-Q LineSide)	FU 0734	0.208	3.18	3.18	1.95		0.0000	Yes	PNL	25	71	18	11	(*N4) (*N9)	# 0445-Line
444	LP-RLS	MB-LP-RLS	0.208	1.70	1.70	1.04	2	0.0000	Yes	PNL	25	47	18	5.8	(*N3) (*N9) (*N16)	# 0073
445	LP-RLS (MB-LP-RLS LineSide)	FB ATS-RLS NRM	0.208	1.70	1.70	1.22	2	0.0000	Yes	PNL	25	52	18	6.9	(*N9) (*N16)	# 0252-Line
446	LP-T	PD XFMR LP-T	0.208	2.48	2.48	1.56	2	0.0000	Yes	PNL	25	61	18	8.9	(*N9) (*N16)	# 0200
447	LP-U	PD XFMR LP-U	0.208	2.45	2.45	1.53	2	0.0000	Yes	PNL	25	61	18	8.8	(*N9) (*N16)	# 0201
448	LP-V	PD-0638	0.208	1.56	1.56	1.14	2	0.0000	Yes	PNL	25	50	18	6.4	(*N9) (*N16)	# 0202
449	LP-V (PD-0638 LineSide)	MB MCC-EPB-A	0.208	1.56	1.56	1.14	2	0.0000	Yes	PNL	25	50	18	6.4	(*N5) (*N9) (*N16)	# 0451-Line
450	LP-W	PD-0636	0.208	1.90	1.90	1.31	2	0.0000	Yes	PNL	25	55	18	7.4	(*N9) (*N16)	# 0203
451	LP-W (PD-0636 LineSide)	MB MCC-EPB-B	0.208	1.90	1.90	1.31	2	0.0000	Yes	PNL	25	55	18	7.4	(*N5) (*N9) (*N16)	# 0453-Line
452	LP-WBB-A	MB-WBB-A	0.208	3.43	3.43	1.99	2	0.0000	Yes	PNL	25	72	18	12	(*N9) (*N16)	# 0193
453	LP-WBB-A (MB-WBB-A LineSide)	PD LP-WBB XFMR	0.208	3.43	3.43	1.99	2	0.0000	Yes	PNL	25	72	18	12	(*N9) (*N16)	# 0258-Line
454	LP-WBB-B	MB-WBB-A	0.208	3.37	3.37	1.96	2	0.0000	Yes	PNL	25	71	18	11	(*N9) (*N16)	# 0193
455	LP-WPB-A	MB LP-WPB-B	0.208	1.74	1.74	1.07	2	0.0000	Yes	PNL	25	48	18	5.9	(*N3) (*N9) (*N16) (*N21b)	# 0122
456	LP-WPB-A (MB LP-WPB-B LineSide)	FB ATS-WPB-NORM	0.208	1.74	1.74	1.26	2	0.0000	Yes	PNL	25	53	18	7.1	(*N9) (*N16) (*N21b)	# 0010-Line
457	LP-WPB-B	MB LP-WPB-B	0.208	1.72	1.72	1.06	2	0.0000	Yes	PNL	25	48	18	5.9	(*N3) (*N9) (*N16) (*N21b)	# 0122
458	LSE-ACCU-1	FB LSE-ACCU-1	0.48	6.03	6.03	4.25	0.0162	0.0000	Yes	PNL	25	6	18	0.21		# 0116
459	LSE-ACU-1	FB LSE-ACU-1	0.48	3.84	3.84	2.89	0.0175	0.0000	Yes	PNL	25	5	18	0.15		# 0117
460	LSE-PPU-1	FB LSE-PPU-1	0.48	2.88	2.88	2.27	0.0162	0.0000	Yes	PNL	25	4	18	0.11		# 0115
461	MB-EF-1 DISC	FB MB-EF-1	0.48	3.17	3.17	2.46	0.0162	0.0000	Yes	PNL	25	4	18	0.12		# 0453
462	MCC-51A	MB MCC-51A	0.48	25.55	25.55	14.61	0.012	0.0000	Yes	MCC	25	12	18	0.60		# 0368
463	MCC-51A (MB MCC-51A LineSide)	800/800 MCC-51A	0.48	25.55	25.55	14.61	0.066	0.0000	Yes	MCC	25	33	18	3.3		# 0369-Line
464	MCC-51B	MB MCC-51B	0.48	26.25	26.25	14.95	0.0119	0.0000	Yes	MCC	25	12	18	0.61		# 0368
465	MCC-51B (MB MCC-51B LineSide)	800/800 MCC-51B	0.48	26.25	26.25	14.95	0.066	0.0000	Yes	MCC	25	34	18	3.4		# 0367-Line
466	MCC-52A	MB MCC-52A	0.48	25.55	25.55	14.61	0.012	0.0000	Yes	MCC	25	12	18	0.60		# 0368
467	MCC-52A (MB MCC-52A LineSide)	800/800 MCC-52A	0.48	25.55	25.55	14.61	0.066	0.0000	Yes	MCC	25	33	18	3.3		# 0371-Line
468	MCC-52B	MB MCC-52B	0.48	26.58	26.58	15.12	0.0118	0.0000	Yes	MCC	25	12	18	0.61		# 0368
469	MCC-52B (MB MCC-52B LineSide)	800/800 MCC-52B	0.48	26.58	26.58	15.12	0.066	0.0000	Yes	MCC	25	34	18	3.4		# 0373-Line
470	MCC-53 A	MB MCC-53A	0.48	25.55	25.55	14.61	0.012	0.0000	Yes	MCC	25	12	18	0.60		# 0368

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
471	MCC-53 A (MB MCC-53A LineSide)	800/600 MCC-53A	0.48	25.55	25.55	14.61	0.066	0.0000	Yes	MCC	25	33	18	3.3		# 0375-Line
472	MCC-53B	MB MCC-53B	0.48	26.25	26.25	14.95	0.0119	0.0000	Yes	MCC	25	12	18	0.61		# 0368
473	MCC-53B (MB MCC-53B LineSide)	800/600 MCC-53B	0.48	26.25	26.25	14.95	0.066	0.0000	Yes	MCC	25	34	18	3.4		# 0377-Line
474	MCC-54 A	MB MCC-54A	0.48	24.95	24.95	14.32	0.0121	0.0000	Yes	MCC	25	12	18	0.59		# 0368
475	MCC-54 A (MB MCC-54A LineSide)	800/800 MCC-54A	0.48	24.95	24.95	14.32	0.066	0.0000	Yes	MCC	25	33	18	3.2		# 0379-Line
476	MCC-54B	MB MCC-54B	0.48	25.61	25.61	14.64	0.012	0.0000	Yes	MCC	25	12	18	0.60		# 0368
477	MCC-54B (MB MCC-54B LineSide)	800/800 MCC-54B	0.48	25.61	25.61	14.64	0.066	0.0000	Yes	MCC	25	33	18	3.3		# 0381-Line
478	MCC-55 A	MB MCC-55A	0.48	25.55	25.55	14.61	0.012	0.0000	Yes	MCC	25	12	18	0.60		# 0368
479	MCC-55 A (MB MCC-55A LineSide)	800/600 MCC-55A	0.48	25.55	25.55	14.61	0.066	0.0000	Yes	MCC	25	33	18	3.3		# 0383-Line
480	MCC-55B	MB MCC-55B	0.48	26.25	26.25	14.95	0.0119	0.0000	Yes	MCC	25	12	18	0.61		# 0368
481	MCC-55B (MB MCC-55B LineSide)	800/600 MCC-55B	0.48	26.25	26.25	14.95	0.066	0.0000	Yes	MCC	25	34	18	3.4		# 0385-Line
482	MCC-56 A	MB MCC-56A	0.48	12.60	12.15	4.42	0.2	0.0000	Yes	MCC	25	36	18	3.7	(*N3) (*N16)	# 0368
483	MCC-56 A (MB MCC-56A LineSide)	800/600 MCC-56A	0.48	12.60	12.15	4.42	0.218	0.0000	Yes	MCC	25	37	18	4.0	(*N3) (*N16)	# 0387-Line
484	MCC-56B	MB MCC-56B	0.48	12.61	12.16	4.39	0.2	0.0000	Yes	MCC	25	36	18	3.7	(*N3) (*N16)	# 0368
485	MCC-56B (MB MCC-56B LineSide)	800/600 MCC-56B	0.48	12.61	12.16	4.39	0.218	0.0000	Yes	MCC	25	37	18	3.9	(*N3) (*N16)	# 0389-Line
486	MCC-ADM-A	MB MCC-ADM-A	0.48	10.08	10.08	6.60	0.14	0.0000	Yes	MCC	25	31	18	2.8		# 0032
487	MCC-ADM-A (MB MCC-ADM-A LineSide)	800/800 ATS-ADM-EMG	0.48	10.08	10.08	4.15	2	0.0000	Yes	MCC	25	118	18	26	(*N3) (*N9) (*N16)	# 0012-Line
488	MCC-ADM-A (PD STORM WATER PUMP CP LineSide)	PD STORM WATER PUMP CP	0.48	10.08	10.08	6.60	0.05	0.0000	Yes	MCC	25	17	18	1.1		# 0013-Line
489	MCC-ADM-A (PD XFMR-LP-ADM-1 LineSide)	PD XFMR-LP-ADM-1	0.48	10.08	10.08	6.60	0.0507	0.0000	Yes	MCC	25	17	18	1.1		# 0011-Line
490	MCC-C	800/200 MCC-C	0.48	13.37	13.37	5.32	0.2	0.0000	Yes	MCC	25	41	18	4.6	(*N16)	# 0283
491	MCC-CEB-A	800/600 MCC-CEB-A	0.48	20.13	20.13	11.92	0.06	0.0000	Yes	MCC	25	28	18	2.4		# 0034
492	MCC-CEB-B	800/600 MCC-CEB-B	0.48	20.48	20.48	12.10	0.06	0.0000	Yes	MCC	25	28	18	2.4		# 0035
493	MCC-D	800/200 MCC-D	0.48	13.59	13.59	5.48	0.2	0.0000	Yes	MCC	25	42	18	4.8	(*N16)	# 0286
494	MCC-E	FU HP PEW PUMP 1	0.48	11.77	0.70	0.45	0.0833	0.0000	Yes	MCC	25	22	18	1.6		# 0215
495	MCC-EBB-A	800/600 MCC-EBB-A	0.48	9.12	8.77	5.83	0.14	0.0000	Yes	MCC	25	28	18	2.4		# 0218
496	MCC-EBB-B	800/600 MCC-EBB-B	0.48	8.31	7.98	5.37	0.14	0.0000	Yes	MCC	25	27	18	2.3		# 0220
497	MCC-EE	FU MCC-EE	0.48	11.27	11.27	7.26		0.0000	Yes	MCC	25	7	18	0.25	(*N4)	# 0222
498	MCC-EPB-A	MB MCC-EPB-A	0.48	5.53	5.53	3.95	0.0554	0.0000	Yes	MCC	25	13	18	0.67		# 0225
499	MCC-EPB-A (MB MCC-EPB-A LineSide)	800/200 MCC-EPB-A	0.48	5.53	5.53	3.95	0.14	0.0000	Yes	MCC	25	21	18	1.6		# 0256-Line
500	MCC-EPB-B	MB MCC-EPB-B	0.48	5.23	5.23	3.77	0.0561	0.0000	Yes	MCC	25	12	18	0.65		# 0225
501	MCC-EPB-B (MB MCC-EPB-B LineSide)	800/200 MCC-EPB-B	0.48	5.23	5.23	3.77	0.14	0.0000	Yes	MCC	25	21	18	1.5		# 0256-Line
502	MCC-F	800/400 MCC-F	0.48	11.08	9.26	5.98	0.06	0.0000	Yes	MCC	25	20	18	1.4		# 0229

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
503	MCC-FF	FU 0560	0.48	10.68	10.68	6.94		0.0000	Yes	MCC	25	7	18	0.25	(*N4)	# 0222
504	MCC-M	FB-MCC-M	0.48	17.38	13.57	5.55	0.32	0.0000	Yes	MCC	25	55	18	7.5	(*N16)	# 0322
505	MCC-N	FB-MCC-N	0.48	19.51	15.37	4.80	0.32	0.0000	Yes	MCC	25	51	18	6.7	(*N3) (*N16)	# 0322
506	MCC-P	FB-MCC-P	0.48	18.58	16.19	9.70	0.05	0.0000	Yes	MCC	25	24	18	1.9		# 0322
507	MCC-Q	FB-MCC-Q	0.48	16.90	15.88	9.65	0.05	0.0000	Yes	MCC	25	22	18	1.7		# 0322
508	MCC-R	800/800 MCC-R	0.48	34.55	29.53	16.16	0.066	0.0000	Yes	MCC	25	40	18	4.4		# 0322
509	MCC-RLS-A	MB MCC-RLS-A	0.48	13.62	11.52	7.22	0.14	0.0000	Yes	MCC	25	35	18	3.5		# 0313
510	MCC-RLS-A (MB MCC-RLS-A LineSide)	800/600 MCC-RLS-A	0.48	13.62	11.52	5.27	0.2	0.0000	Yes	MCC	25	41	18	4.6	(*N16)	# 0314-Line
511	MCC-RLS-B	MB MCC-RLS-B	0.48	11.41	10.01	5.48	0.14	0.0000	Yes	MCC	25	29	18	2.6	(*N3)	# 0273
512	MCC-RLS-B (MB MCC-RLS-B LineSide)	800/400 MCC-RLS-B	0.48	11.41	10.01	4.86	0.2	0.0000	Yes	MCC	25	38	18	4.1	(*N16)	# 0274-Line
513	MCC-S	800/800 MCC-S	0.48	35.70	32.18	17.53	0.066	0.0000	Yes	MCC	25	40	18	4.5		# 0322
514	MCC-WBB-A	1600/1440 MCC-WBB-A	0.48	30.13	25.60	7.80	0.2	0.0000	Yes	MCC	25	61	18	8.9	(*N16)	# 0233
515	MCC-WBB-B	1600/1440 MCC-WBB-B	0.48	27.74	25.48	7.76	0.2	0.0000	Yes	MCC	25	60	18	8.6	(*N16)	# 0235
516	MCC-WPB-A	MB MCC-WPB-A	0.48	11.75	11.75	7.52	0.0516	0.0000	Yes	MCC	25	19	18	1.3		# 0209
517	MCC-WPB-A (MB MCC-WPB-A LineSide)	800/400 MCC-WPB-A	0.48	11.75	11.75	7.52	0.14	0.0000	Yes	MCC	25	33	18	3.2		# 0287-Loa
518	MCC-WPB-B	MB MCC-WPB-B	0.48	11.46	11.46	7.37	0.0519	0.0000	Yes	MCC	25	18	18	1.2		# 0237
519	MCC-WPB-B (MB MCC-WPB-B LineSide)	800/400 MCC-WPB-B	0.48	11.46	11.46	7.37	0.14	0.0000	Yes	MCC	25	33	18	3.2		# 0485-Loa
520	MCC-XA	800/800 MCC-XA	0.48	15.57	14.37	4.82	2	0.0000	Yes	MCC	25	132	18	32	(*N3) (*N9) (*N16)	# 0322
521	MCC-XB	800/800 MCC-XB	0.48	34.24	32.26	17.68	0.066	0.0000	Yes	MCC	25	39	18	4.3		# 0322
522	METAL LATHE	FU PP-MTB	0.48	4.68	4.68	3.43		0.0000	Yes	PNL	25	7	18	0.25	(*N4) (*N5)	# 0523
523	MILL MACH	FB MILL MACH	0.48	3.90	3.90	2.94	0.0162	0.0000	Yes	PNL	25	5	18	0.14		# 0524
524	MOD VALVE 1 DISC	FU 0746	0.48	1.44	1.44	1.25	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
525	MOD VALVE 3 DISC	FU 0746	0.48	1.31	1.31	1.16	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
526	MOD VALVE 5 DISC	FU 0746	0.48	1.20	1.20	1.07	0.0083	0.0000	Yes	PNL	25	2	18	0.02		# 0568
527	MOD VALVE 7 DISC	FU 0746	0.48	1.11	1.11	1.01	0.0083	0.0000	Yes	PNL	25	2	18	0.02		# 0568
528	MPPEWP1 DISC	FU MP PEW PUMP 1	0.48	9.70	9.30	6.12	0.0083	0.0000	Yes	PNL	25	5	18	0.17		# 0475
529	MPPEWP2 DISC	FU 0548	0.48	9.24	8.84	5.86	0.0083	0.0000	Yes	PNL	25	5	18	0.16		# 0073
530	MU HV2 DISC	FU 0749	0.48	1.44	1.44	1.25	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
531	MV10 DISC	FU 0659	0.48	1.43	1.43	1.25	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
532	MV11 DISC	FU 0659	0.48	1.42	1.42	1.24	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
533	MV12 DISC	FU 0659	0.48	1.40	1.40	1.23	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
534	MV2 DISC	FU 0711	0.48	1.45	1.45	1.26	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
535	MV4 DISC	FU 0711	0.48	1.44	1.44	1.25	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
536	MV6 DISC	FU 0711	0.48	1.42	1.42	1.24	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
537	MV8 DISC	FU 0711	0.48	1.41	1.41	1.23	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
538	MV9 DISC	FU 0659	0.48	1.44	1.44	1.26	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
539	N EQPT RCPT	FU 0715	0.48	2.26	2.26	1.84		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0568
540	OZNTR DISC	FU 0917	0.48	7.62	7.62	5.20		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0099

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
541	P-53-06 DISC	PD P-53-06	0.48	5.64	5.64	4.02	0.0162	0.0000	Yes	PNL	25	6	18	0.20		# 0492
542	P-53-06 STR	PD P-53-06	0.48	4.79	4.79	3.50	0.0162	0.0000	Yes	PNL	25	6	18	0.17		# 0492
543	P-53-07 DISC.	PD P-53-07	0.48	3.37	3.37	2.59	0.0162	0.0000	Yes	PNL	25	5	18	0.12		# 0492
544	P-53-07 STR	PD P-53-07	0.48	3.03	3.03	2.37	0.0162	0.0000	Yes	PNL	25	4	18	0.11		# 0492
545	P-53-20 DISC	PD P-53-07	0.48	5.69	5.69	4.05	0.0162	0.0000	Yes	PNL	25	6	18	0.20		# 0492
546	P-53-20 STR	PD P-53-07	0.48	4.83	4.83	3.52	0.0162	0.0000	Yes	PNL	25	6	18	0.17		# 0492
547	P-53-21 DISC	PD P-53-06	0.48	5.19	5.19	3.74	0.0162	0.0000	Yes	PNL	25	6	18	0.19		# 0492
548	P-53-21 STR	PD P-53-06	0.48	4.45	4.45	3.29	0.0162	0.0000	Yes	PNL	25	5	18	0.16		# 0492
549	PAB-E1 DV & BOV	FB PAB-E1 DV & BOV	0.48	2.14	2.14	1.76	0.0165	0.0000	Yes	PNL	25	4	18	0.08		# 0550
550	PAB-E1 LCP	FB PAB-E1 LCP	0.48	3.48	3.48	2.66	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0551
551	PAB-E1 STR IN	PD PAB-E1 RELAY	4.16	2.59	2.07	2.05	0.0167	0.0830	Yes	SWG	104	7	36	0.24		# 0250
552	PAB-E1 STR IN (FU PAB-E1 LineSide)	PD PAB-E1 RELAY	4.16	2.59	2.07	2.05	0.0167	0.0830	Yes	SWG	104	7	36	0.24		# 0014-Line
553	PAB-E2 DV & BOV1	FB PAB-E2 DV & BOV1	0.48	1.82	1.82	1.53	0.0184	0.0000	Yes	PNL	25	3	18	0.08		# 0555
554	PAB-E2 LCP	FB PAB-E2 LCP	0.48	2.93	2.93	2.30	0.0162	0.0000	Yes	PNL	25	4	18	0.11		# 0556
555	PAB-E2 STR IN	PD PAB-E2 RELAY	4.16	2.08	1.55	1.55	0.0167	0.0830	Yes	SWG	104	6	36	0.19		# 0252
556	PAB-E2 STR IN (FU PAB-E2 LineSide)	PD PAB-E2 RELAY	4.16	2.08	1.55	1.55	0.0167	0.0830	Yes	SWG	104	6	36	0.19		# 0015-Line
557	PAB-E3 DV & BOV	FB PAB-E3 DV & BOV	0.48	1.60	1.60	1.37	0.02	0.0000	Yes	PNL	25	3	18	0.08		# 0560
558	PAB-E3 LCP	FB PAB-E3 LCP	0.48	2.28	2.28	1.85	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0561
559	PAB-E3 STR IN	PD PAB-E3 RELAY	4.16	2.59	2.07	2.05	0.0167	0.0830	Yes	SWG	104	7	36	0.24		# 0254
560	PAB-E3 STR IN (FU PAB-E3 LineSide)	PD PAB-E3 RELAY	4.16	2.59	2.07	2.05	0.0167	0.0830	Yes	SWG	104	7	36	0.24		# 0016-Line
561	PAB-W1 VALVES JB	PD PAB-W1 VALVES	0.48	6.55	6.55	4.57	0.0162	0.0000	Yes	PNL	25	7	18	0.23		# 0106
562	PAB-W2 VALVES JB	PD PAB-W2 VALVES	0.48	5.01	5.01	3.63	0.0162	0.0000	Yes	PNL	25	6	18	0.18		# 0077
563	PAB-W3 VALVES JB	PD PAB-W3 VALVES	0.48	4.16	4.16	3.10	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0107
564	PCDR W1 DISC	MCP PCDR-W1	0.48	1.30	1.30	1.15	0.005	0.0000	Yes	PNL	25	1	18	0.02		# 0492
565	PCDR-W2 DISC	MCP PCDR-W2	0.48	2.11	2.11	1.74	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
566	PC-E1 DISC	MCP PC-E1	0.48	0.58	0.58	0.58	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11)	# 0256
567	PC-E2 DISC	MCP PC-E2	0.48	0.73	0.73	0.70	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0180
568	PC-E3 DISC	MCP PC-E3	0.48	0.75	0.75	0.72	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0256
569	PC-E4 DISC	MCP PC-E4	0.48	0.52	0.52	0.52	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11)	# 0180
570	PC-WPB-EF-2 DISC	MCP WPB-EF-2	0.48	3.08	3.08	2.40	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0492
571	PC-WPB-P-2 DISC	MCP WPB-P-2	0.48	1.96	1.96	1.63	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
572	PDP UV 2A	FB-PDP-UV-2A	0.48	13.44	13.44	4.21	0.2	0.0000	Yes	MCC	25	36	18	3.7	(*N3) (*N16)	# 0322
573	PDP UV 2B	FB-PDP-UV-2B	0.48	13.44	13.44	4.21	0.2	0.0000	Yes	MCC	25	36	18	3.7	(*N3) (*N16)	# 0322
574	PDP-E1 DISC	MCP PDP-E1	0.48	4.13	4.13	3.08	0.005	0.0000	Yes	PNL	25	2	18	0.05		# 0256
575	PDP-W1 DISC	MCP PDP-W1	0.48	3.28	3.28	2.53	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0492
576	PEW STRAINER DISC	FU 0697	0.48	1.44	1.44	1.26	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
577	PEWP1 DISC	FB-MCC-P	0.48	14.02	11.89	6.31	0.05	0.0000	Yes	PNL	25	18	18	1.2	(*N3) (*N5) (*N21b)	# 0136
578	PEWP2 DISC	FU PEW PUMP 2	0.48	16.29	14.89	7.73	0.0446	0.0000	Yes	PNL	25	18	18	1.2	(*N3)	# 0568
579	PEWP3 ATS NRM	FU PEW PUMP 3	0.48	18.82	17.43	8.86	0.0273	0.0000	Yes	PNL	25	15	18	0.86	(*N3) (*N21b)	# 0576

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
580	PEWP3 DISC	FU PEW PUMP 3	0.48	15.83	14.45	7.53	0.049	0.0000	Yes	PNL	25	19	18	1.3	(*N3) (*N21b)	# 0568
581	PMPRM HOIST DISC	FU 0575	0.48	3.93	3.93	2.95	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0073
582	PP-ADM-1	PD XFMR PP-ADM-1	0.48	2.53	2.53	1.58	0.9202	0.0000	Yes	PNL	25	39	18	4.2	(*N3) (*N5) (*N16)	# 0036
583	PP-ADM-1 (MB PP-ADM-1 LineSide)	PD XFMR PP-ADM-1	0.48	2.53	2.53	1.58	0.9202	0.0000	Yes	PNL	25	39	18	4.2	(*N3) (*N16)	# 0017-Line
584	PP-ADM-2	PD XFMR PP-ADM-1	0.48	2.06	2.06	1.35	1.255	0.0000	Yes	PNL	25	42	18	4.8	(*N3) (*N5) (*N16)	# 0036
585	PP-EBB-A	FB ATS-EBB NORM	0.48	7.91	7.91	5.37	0.04	0.0000	Yes	PNL	25	13	18	0.68		# 0278
586	PP-EBB-B	FB PP-EBB-B	0.48	6.73	6.73	4.67	0.0167	0.0000	Yes	PNL	25	7	18	0.24		# 0278
587	PP-LSE	MB PP-LSE	0.48	11.08	11.08	7.16	0.0175	0.0000	Yes	PNL	25	9	18	0.40		# 0074
588	PP-LSE (MB PP-LSE LineSide)	FB ATS-LSE-NRM	0.48	11.08	11.08	7.16	0.0543	0.0000	Yes	PNL	25	19	18	1.3		# 0075-Line
589	PP-LSE CKT #19	FB SLDG'S F-50-3,4	0.48	0.97	0.97	0.75	0.3569	0.0000	Yes	PNL	25	13	18	0.73	(*N3) (*N16)	# 0074
590	PP-MTB	FU PP-MTB	0.48	5.17	5.17	3.73		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0074
591	PP-MTB DISC SW	800/250 PP-MTB	0.48	5.39	5.39	3.87	0.14	0.0000	Yes	PNL	25	22	18	1.6		# 0435
592	PP-UV	FU ATS-PP-UV-NRM	0.48	1.62	1.62	1.17	0.0537	0.0000	Yes	PNL	25	6	18	0.18	(*N3)	# 0374
593	PP-WBB-A	FB ATS-WBB-NORM	0.48	25.00	25.00	14.35	0.0512	0.0000	Yes	PNL	25	28	18	2.5		# 0079
594	PP-WBB-B	PD PP-WBB-B	0.48	24.45	24.45	14.07	0.0175	0.0000	Yes	PNL	25	15	18	0.84		# 0074
595	PP-Z	FU PP-MTB	0.48	4.63	4.63	3.40		0.0000	Yes	PNL	25	7	18	0.25	(*N4) (*N5)	# 0074
596	PP-Z (MB-PP-Z LineSide)	FU PP-MTB	0.48	4.63	4.63	3.40		0.0000	Yes	PNL	25	7	18	0.25	(*N4) (*N5)	# 0598-Line
597	PSCP-E1 DISC	MCP PSLMP-E4	0.48	3.60	3.60	2.74	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0256
598	PSCP-E2 DISC	MCP PSCP-E2	0.48	3.49	3.49	2.67	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0180
599	PSCP-W1 DISC	MCP PSCP-W1	0.48	6.53	6.53	4.56	0.005	0.0000	Yes	PNL	25	3	18	0.07		# 0492
600	PSCP-W2 DISC	MCP PSCP-W2	0.48	4.30	4.30	3.19	0.005	0.0000	Yes	PNL	25	3	18	0.05		# 0492
601	PSLP-E2 VFD IN	PD PSLP-E2	0.48	3.28	3.28	2.53	0.0162	0.0000	Yes	PNL	25	4	18	0.12		# 0445
602	PSLPG-W1 VFD IN	PD PSLPG-W1	0.48	2.52	2.52	2.02	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0492
603	PSLPG-W2 INPUT	PD PSLPG-W2	0.48	4.52	4.52	3.33	0.0162	0.0000	Yes	PNL	25	5	18	0.16		# 0492
604	PSLPM-E1 LCP	PD PSLPM-E1	0.48	3.49	3.49	2.67	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0450
605	PSLPM-E2 LCP	PD PSLPM-E2	0.48	3.28	3.28	2.53	0.0162	0.0000	Yes	PNL	25	4	18	0.12		# 0451
606	PSLP-W1 VFD IN	PD PSLP-W1	0.48	6.66	6.66	4.64	0.0162	0.0000	Yes	PNL	25	7	18	0.23		# 0492
607	PSLP-W2 INPUT	PD PSLP-W2	0.48	7.80	7.80	5.30	0.0162	0.0000	Yes	PNL	25	7	18	0.27		# 0492
608	RASP-E1 VFD IN	PD RASP-E1	0.48	1.95	1.95	1.62	0.0212	0.0000	Yes	PNL	25	4	18	0.10		# 0302
609	RASP-E2 VFD IN	PD RASP-E2	0.48	1.93	1.93	1.61	0.0192	0.0000	Yes	PNL	25	4	18	0.09		# 0461
610	RASP-E3 VFD IN	PD RASP-E3	0.48	1.95	1.95	1.62	0.0212	0.0000	Yes	PNL	25	4	18	0.10		# 0302
611	RASP-E4 VFD IN	PD RASP-E4	0.48	1.93	1.93	1.61	0.0192	0.0000	Yes	PNL	25	4	18	0.09		# 0463
612	RASP-E5 VFD IN	PD RASP-E5	0.48	1.95	1.95	1.62	0.0212	0.0000	Yes	PNL	25	4	18	0.10		# 0302
613	RASP-E6 VFD IN	PD RASP-E6	0.48	1.93	1.93	1.61	0.0192	0.0000	Yes	PNL	25	4	18	0.09		# 0465
614	RASP-E7 VFD IN	PD RASP-E7	0.48	1.95	1.95	1.62	0.0212	0.0000	Yes	PNL	25	4	18	0.10		# 0302
615	RASP-E8 VFD IN	PD RASP-E8	0.48	1.93	1.93	1.61	0.0192	0.0000	Yes	PNL	25	4	18	0.09		# 0467
616	RASP-W1 VFD IN	PD RASP-W1	0.48	13.47	13.47	8.46	0.0162	0.0000	Yes	PNL	25	10	18	0.45	(*N21b)	# 0028
617	RASP-W2 VFD IN	PD RASP-W2	0.48	13.10	13.10	8.26	0.0162	0.0000	Yes	PNL	25	10	18	0.44	(*N21b)	# 0492
618	RASP-W3 VFD IN	PD RASP-W3	0.48	13.47	13.47	8.46	0.0162	0.0000	Yes	PNL	25	10	18	0.45	(*N21b)	# 0028

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
619	RASP-W4 VFD IN	PD RASP-W4	0.48	13.10	13.10	8.26	0.0162	0.0000	Yes	PNL	25	10	18	0.44	(*N21b)	# 0492
620	RBDP1 DISC	FU 0523	0.48	7.93	7.93	4.57	0.0083	0.0000	Yes	PNL	25	4	18	0.12	(*N3)	# 0073
621	RBDP-2 DISC	FU RB DRAIN PUMP 2	0.48	9.24	9.24	6.13	0.0042	0.0000	Yes	PNL	25	4	18	0.08		# 0475
622	RBDP3 DISC	FU 0542	0.48	7.93	7.93	4.57	0.0083	0.0000	Yes	PNL	25	4	18	0.12	(*N3)	# 0073
623	RBDP-4 DISC	FU RB DRAIN PUMP 4	0.48	9.24	9.24	6.13	0.0042	0.0000	Yes	PNL	25	4	18	0.08		# 0475
624	RECIRCV PAB-E1	FB RECIRCV PAB-E1	0.48	2.24	2.24	1.83	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0627
625	RECIRCV PAB-E2	FB RECIRCV PAB-E2	0.48	1.89	1.89	1.58	0.0179	0.0000	Yes	PNL	25	3	18	0.08		# 0628
626	RECIRCV PAB-E3	FB RECIRCV PAB-E3	0.48	1.48	1.48	1.28	0.021	0.0000	Yes	PNL	25	3	18	0.08		# 0629
627	RETBSNRFCV STARTER	FU RET BSN RF CV	0.48	2.71	2.71	2.15	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
628	RF # 5 DISC	FU 0530	0.48	2.69	2.69	2.14	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
629	RF # 6 DISC	FU 0555	0.48	2.69	2.69	2.14	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
630	RF-1 DISC	MCP RF-1	0.48	3.13	3.13	2.43	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0180
631	RIVER VALVE DISC	FU 0689	0.48	1.44	1.44	1.26	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*N21b)	# 0136
632	RLS-ACCU-1	PD RLS-ACCU-1	0.48	2.74	2.74	2.17	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0417
633	RLS-ACCU-1 DISC	PD RLS-ACCU-1	0.48	3.35	3.35	2.57	0.0162	0.0000	Yes	PNL	25	5	18	0.12		# 0492
634	RLS-ACU-1	PD RLS-ACU-1	0.48	6.83	6.83	4.74	0.0162	0.0000	Yes	PNL	25	7	18	0.24		# 0417
635	RLS-EF-1 DISC	MCP RLS-EF-1	0.48	2.67	2.67	2.13	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0430
636	RLS-EF-2 DISC	MCP RLS-EF-2	0.48	4.70	4.70	3.44	0.005	0.0000	Yes	PNL	25	3	18	0.05		# 0430
637	RLS-PPU-1	PD RLS-PPU-1	0.48	7.10	7.10	4.89	0.0162	0.0000	Yes	PNL	25	7	18	0.25		# 0563
638	RLS-SF-1 DISC	MCP RLS-SF-1	0.48	1.74	1.74	1.48	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0430
639	ROOF FAN 10 DISC	FU 0722	0.48	2.84	2.84	2.23	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0568
640	ROOF FAN 11 DISC	FU 0693	0.48	2.80	2.80	2.21	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0136
641	ROOF FAN 12 DISC	FU 0731	0.48	2.84	2.84	2.23	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0568
642	RS-SAP-1 DISC	MCP RS-SAP-1	0.48	1.99	1.99	1.65	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
643	S-1-1 DISC	PD 48IN GATE S-1-1	0.48	1.63	1.63	1.39	0.017	0.0000	Yes	PNL	25	3	18	0.07		# 0430
644	S-21-1 DISC	PD F-1-1	0.48	2.10	2.10	1.73	0.0163	0.0000	Yes	PNL	25	3	18	0.08		# 0160
645	S-21-1 STARTER	PD F-1-1	0.48	1.86	1.86	1.56	0.0166	0.0000	Yes	PNL	25	3	18	0.07		# 0498
646	S-21-2 DISC	PD F-1-1	0.48	2.08	2.08	1.72	0.0163	0.0000	Yes	PNL	25	3	18	0.08		# 0160
647	S-21-2 STARTER	PD F-1-1	0.48	1.66	1.66	1.41	0.017	0.0000	Yes	PNL	25	3	18	0.07		# 0500
648	S-21-3 DISC	PD F-1-5	0.48	1.73	1.73	1.46	0.0168	0.0000	Yes	PNL	25	3	18	0.07		# 0160
649	S-21-3 STARTER	PD F-1-5	0.48	1.42	1.42	1.05	0.022	0.0000	Yes	PNL	25	3	18	0.06	(*N3)	# 0500
650	S-21-4 DISC	PD F-1-5	0.48	1.72	1.72	1.46	0.0169	0.0000	Yes	PNL	25	3	18	0.07		# 0160
651	S-21-4 STARTER	PD F-1-5	0.48	1.55	1.55	1.34	0.0171	0.0000	Yes	PNL	25	3	18	0.06		# 0500
652	S-54-2 DISC	PD F-54-5	0.48	2.37	2.37	1.91	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0654
653	S-54-2 STR	PD F-54-5	0.48	2.28	2.28	1.85	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0655
654	SC-1 DISC	FU SC-1	0.48	4.20	4.20	3.13	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
655	SC-2 DISC	FU SCREEN COMP SC-2	0.48	4.27	4.27	3.17	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
656	SC-3 DISC	FU SCREEN COMP SC-3	0.48	4.27	4.27	3.17	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
657	SCDR-W1 DISC	MCP SCDR-W1	0.48	0.61	0.61	0.61	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11)	# 0028
658	SCDR-W2 DISC	MCP SCDR-W2	0.48	0.61	0.61	0.61	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11)	# 0492
659	SC-E1 DISC	MCP SEC-CLAR-E1	0.48	0.56	0.56	0.56	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11)	# 0511

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
660	SC-E2 DISC	MCP CLARIFIER SC-E2	0.48	0.56	0.56	0.56	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11)	# 0512
661	SC-E3 DISC	MCP SEC-CLAR-E3	0.48	0.32	0.32	0.32	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11)	# 0513
662	SC-E4 DISC	MCP CLARIFIER SC-E4	0.48	0.32	0.32	0.32	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11)	# 0514
663	SCREW CONV 3 STR	FU SCREW CONV 3	0.48	4.27	4.27	3.17	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
664	SCRNCNV DISC	FU SCREENINGS CONV	0.48	4.27	4.27	3.17	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
665	SCTY GATE STARTER	FU SECURITY GATE	0.48	4.60	4.60	3.38	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0475
666	SE ISO VALVE DISC	FU 0688	0.48	1.44	1.44	1.26	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*N21b)	# 0136
667	SECURITY GATE DISC	FU SECURITY GATE	0.48	5.49	5.49	3.93	0.0042	0.0000	Yes	PNL	25	3	18	0.05		# 0475
668	SEG1 DISC	FU 0664	0.48	1.44	1.44	1.26	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
669	SEP1 VFD IN	FU SEC EFF PUMP 1	0.48	14.76	14.76	9.14		0.0000	Yes	PNL	25	10	18	0.49	(*N4) (*N21b)	# 0664
670	SEP2 VFD IN	FU SEC EFF PUMP 2	0.48	16.60	15.57	9.48		0.0000	Yes	PNL	25	10	18	0.46	(*N4) (*N21b)	# 0568
671	SEP3 VFD IN	FU SEC EFF PUMP #3	0.48	15.88	14.85	9.10		0.0000	Yes	PNL	25	10	18	0.48	(*N4) (*N21b)	# 0136
672	SEP4 VFD IN	FU SEC EFF PUMP #4	0.48	14.30	13.30	7.03	0.0182	0.0000	Yes	PNL	25	10	18	0.45	(*N3) (*N21b)	# 0668
673	SEP5 VFD IN	FU SEC EFF PUMP 5	0.48	13.24	12.22	6.54	0.0242	0.0000	Yes	PNL	25	11	18	0.55	(*N3) (*N21b)	# 0669
674	SEP6 VFD IN	FU SEC EFF PUMP 6	0.48	16.60	15.57	8.06	0.0107	0.0000	Yes	PNL	25	8	18	0.30	(*N3) (*N21b)	# 0591
675	SEPPMP DISC TERM	FU SEPTIC PUMP	0.48	7.58	7.58	5.18	0.0042	0.0000	Yes	PNL	25	3	18	0.07		# 0492
676	SF1 DISC	FU EF-3,4,1	0.48	1.42	1.42	1.24	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
677	SF1FF DISC	FU 0920	0.48	3.84	3.84	2.90	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0099
678	SF2EE DISC	FU 0909	0.48	1.48	1.48	1.28	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0099
679	SF3FF DISC	FU 0922	0.48	3.84	3.84	2.90	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0099
680	SF4EE DISC	FU 0911	0.48	3.90	3.90	2.94	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0099
681	SLC 4 DISC	MCP SLC -4	0.48	3.37	3.37	2.59	0.015	0.0000	Yes	PNL	25	4	18	0.12		# 0602
682	SLC 5 DISC	MCP SLC -5	0.48	3.18	3.18	2.46	0.015	0.0000	Yes	PNL	25	4	18	0.11		# 0603
683	SLC 6 DISC	FB SLC -6	0.48	2.34	2.34	1.90	0.0198	0.0000	Yes	PNL	25	4	18	0.11		# 0604
684	SLC 7 DISC	FB SLC -7	0.48	2.19	2.19	1.79	0.0205	0.0000	Yes	PNL	25	4	18	0.11		# 0605
685	SLC-1 DISC	FU SLUDGE COLL 1	0.48	2.71	2.71	2.15	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
686	SLC2 DISC	FU 0527	0.48	2.69	2.69	2.14	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
687	SLC-3 DISC	FU SLUDGE COLL 3	0.48	2.71	2.71	2.15	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
688	SLDG F-50-1	FB SLDG'S S-50-1,2,3,4,5	0.48	0.86	0.86	0.68	0.6165	0.0000	Yes	PNL	25	17	18	1.1	(*N3) (*N16)	# 0681
689	SLDG F-50-2	FB SLDG'S S-50-1,2,3,4,5	0.48	0.86	0.86	0.68	0.6165	0.0000	Yes	PNL	25	17	18	1.1	(*N3) (*N16)	# 0682
690	SLDG F-50-3	FB SLDG'S F-50-3,4	0.48	0.75	0.75	0.60	0.7767	0.0000	Yes	PNL	25	18	18	1.2	(*N3) (*N16)	# 0118
691	SLDG F-50-4	FB SLDG'S F-50-3,4	0.48	0.75	0.75	0.60	0.7767	0.0000	Yes	PNL	25	18	18	1.2	(*N3) (*N16)	# 0118
692	SLDG F-60-1	FB SLDG'S F-60-1,2,3	0.48	0.89	0.89	0.70	0.5093	0.0000	Yes	PNL	25	16	18	0.96	(*N3) (*N16)	# 0685
693	SLDG F-60-2	FB SLDG'S F-60-1,2,3	0.48	0.89	0.89	0.70	0.5093	0.0000	Yes	PNL	25	16	18	0.96	(*N3) (*N16)	# 0686
694	SLDG F-60-3	FB SLDG'S F-60-1,2,3	0.48	0.89	0.89	0.70	0.5093	0.0000	Yes	PNL	25	16	18	0.96	(*N3) (*N16)	# 0687
695	SLDG F-60-4	FB SLDG's S-60-1,2	0.48	0.73	0.73	0.60	0.7888	0.0000	Yes	PNL	25	18	18	1.2	(*N3) (*N16)	# 0688
696	SLDG S-50-1	FB SLDG'S S-50-1,2,3,4,5	0.48	0.78	0.78	0.63	0.7453	0.0000	Yes	PNL	25	18	18	1.2	(*N3) (*N16)	# 0689
697	SLDG S-50-2	FB SLDG'S S-50-1,2,3,4,5	0.48	0.86	0.86	0.68	0.6165	0.0000	Yes	PNL	25	17	18	1.1	(*N3) (*N16)	# 0690
698	SLDG S-50-3	FB SLDG'S S-50-1,2,3,4,5	0.48	0.86	0.86	0.68	0.6165	0.0000	Yes	PNL	25	17	18	1.1	(*N3) (*N16)	# 0691
699	SLDG S-50-4	FB SLDG'S S-50-1,2,3,4,5	0.48	0.86	0.86	0.68	0.6165	0.0000	Yes	PNL	25	17	18	1.1	(*N3) (*N16)	# 0692
700	SLDG S-50-5	FB SLDG'S S-50-1,2,3,4,5	0.48	0.86	0.86	0.68	0.6165	0.0000	Yes	PNL	25	17	18	1.1	(*N3) (*N16)	# 0693

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
701	SLDG S-60-1	FB SLDG's S-60-1,2	0.48	0.83	0.83	0.66	0.6866	0.0000	Yes	PNL	25	18	18	1.2	(*N3) (*N16)	# 0694
702	SLDG S-60-2	FB SLDG's S-60-1,2	0.48	0.83	0.83	0.66	0.6866	0.0000	Yes	PNL	25	18	18	1.2	(*N3) (*N16)	# 0695
703	SLG-3 DISC	FU SLUICE GATE 3	0.48	4.20	4.20	3.13	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
704	SLG-4 DISC	FU SLUICE GATE 4	0.48	4.20	4.20	3.13	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
705	SLGT1 DISC	FU 0562	0.48	6.56	6.56	4.58	0.0042	0.0000	Yes	PNL	25	3	18	0.06		# 0073
706	SLGT2 DISC	FU 0563	0.48	2.69	2.69	2.14	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
707	SLGT-5 DISC	FU SLUICE GATE 5	0.48	4.27	4.27	3.17	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
708	SLP1 DISC	FU SLUDGE PUMP 1	0.48	2.71	2.71	2.15	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
709	SLP2 DISC	FU SLUDGE PUMP 2	0.48	2.71	2.71	2.15	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
710	SLP3 DISC	FU 0551	0.48	2.69	2.69	2.14	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
711	SLUDGE CND LCP	PD PSLPM-E3	0.48	3.17	3.17	2.46	0.0162	0.0000	Yes	PNL	25	4	18	0.12		# 0349
712	SMP2 DISC	FU 0525	0.48	2.69	2.69	2.14	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
713	SP NGB DISC	FU SUMP PUMP NGB	0.48	4.20	4.20	3.13	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
714	SSC-1 DISC	FU SSC-1	0.48	4.20	4.20	3.13	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
715	SSC-2 DISC	FU SSC-2	0.48	4.27	4.27	3.17	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
716	SSCP-E1 DISC	MCP SEC SCUM PMP-E1	0.48	1.31	1.31	1.16	0.04	0.0000	Yes	PNL	25	5	18	0.13		# 0554
717	SSCP-E1TERM	MCP SEC SCUM PMP-E1	0.48	1.24	1.24	1.10	0.04	0.0000	Yes	PNL	25	4	18	0.12		# 0558
718	SSCP-W1 DISC	MCP SSCP-W1	0.48	6.87	6.87	4.76	0.005	0.0000	Yes	PNL	25	3	18	0.07		# 0028
719	SSCP-W2 DISC	MCP SSCP-W2	0.48	6.80	6.80	4.72	0.005	0.0000	Yes	PNL	25	3	18	0.07		# 0492
720	STWP 1 DISC	MCP STWP -1	0.48	5.39	5.39	3.87	0.015	0.0000	Yes	PNL	25	6	18	0.18		# 0629
721	STWP 2 DISC	MCP STWP -2	0.48	4.91	4.91	3.57	0.015	0.0000	Yes	PNL	25	5	18	0.16		# 0630
722	SUB 1 BUS A	SUB 1 MAIN A	0.48	14.99	12.92	4.60	2	0.0000	Yes	SWG	32	157	24	19	(*N3) (*N9) (*N16)	# 0487
723	SUB 1 BUS A (SUB 1 MAIN A LineSide)	52F11P RELAY	0.48	14.99	12.92	5.41	1.917	0.0830	Yes	SWG	32	176	24	23	(*N9) (*N16)	# 0486-Line
724	SUB 1 BUS B	SUB 1 MAIN B	0.48	14.47	13.11	4.63	2	0.0000	Yes	SWG	32	157	24	19	(*N3) (*N9) (*N16)	# 0487
725	SUB 1 BUS B (SUB 1 MAIN B LineSide)	52F21P RELAY	0.48	14.47	13.11	5.44	1.917	0.0830	Yes	SWG	32	177	24	23	(*N9) (*N16)	# 0488-Line
726	SUB 1 PRIMARY SWITCH A	52F11P RELAY	13.20	2.89	2.82	2.80	0.0167	0.0830	No	SWG	152	11	36	0.39		# 0047
727	SUB 1 PRIMARY SWITCH B	52F21P RELAY	13.20	3.08	3.03	3.00	0.0167	0.0830	No	SWG	152	12	36	0.42		# 0047
728	SUB 2 BUS A	SUB 2 MAIN A	0.48	11.97	9.46	4.54	2	0.0000	Yes	SWG	32	155	24	19	(*N9) (*N16)	# 0364
729	SUB 2 BUS A (SUB 2 MAIN A LineSide)	52F12P RELAY	0.48	11.97	9.46	4.54	1.917	0.0830	Yes	SWG	32	155	24	19	(*N9) (*N16)	# 0629-Loa
730	SUB 2 BUS B	SUB 2 MAIN B	0.48	11.36	9.55	4.56	2	0.0000	Yes	SWG	32	155	24	19	(*N9) (*N16)	# 0364
731	SUB 2 BUS B (SUB 2 MAIN B LineSide)	52F22P RELAY	0.48	11.36	9.55	4.56	1.917	0.0830	Yes	SWG	32	155	24	19	(*N9) (*N16)	# 0633-Loa
732	SUB 2 PRIMARY SWITCH A	52F12P RELAY	13.20	2.94	2.87	2.84	0.0167	0.0830	No	SWG	152	12	36	0.40		# 0047
733	SUB 2 PRIMARY SWITCH B	52F22P RELAY	13.20	3.13	3.08	3.05	0.0167	0.0830	No	SWG	152	12	36	0.43		# 0047
734	SUB 3 BUS A	SUB 3 MAIN A	0.48	31.91	27.42	7.65	2	0.0000	Yes	SWG	32	233	24	34	(*N9) (*N16)	# 0367
735	SUB 3 BUS A (SUB 3 MAIN A LineSide)	52F13P RELAY	0.48	31.91	27.42	7.65	1.917	0.0830	Yes	SWG	32	233	24	34	(*N9) (*N16)	# 0018-Line
736	SUB 3 BUS B	SUB 3 MAIN B	0.48	29.82	27.56	7.65	2	0.0000	Yes	SWG	32	232	24	34	(*N9) (*N16)	# 0368
737	SUB 3 BUS B (SUB 3 MAIN B LineSide)	52F23P RELAY	0.48	29.82	27.56	7.65	1.917	0.0830	Yes	SWG	32	232	24	34	(*N9) (*N16)	# 0019-Line

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
738	SUB 3 PRIMARY SWITCH A	52F13P RELAY	13.20	3.16	3.01	2.98	0.0167	0.0830	No	SWG	152	13	36	0.43		# 0047
739	SUB 3 PRIMARY SWITCH B	52F23P RELAY	13.20	3.16	3.08	3.05	0.0167	0.0830	No	SWG	152	13	36	0.43		# 0047
740	SUB 4 BUS A	SUB 4 MAIN A	0.48	17.92	13.11	5.46	0.32	0.0000	Yes	SWG	32	61	24	4.7	(*N16)	# 0501
741	SUB 4 BUS A (SUB 4 MAIN A LineSide)	52F14P RELAY	0.48	17.92	13.11	5.46	1.917	0.0830	Yes	SWG	32	179	24	23	(*N9) (*N16)	# 0502-Line
742	SUB 4 BUS B	SUB 4 MAIN B	0.48	19.71	13.19	5.48	0.32	0.0000	Yes	SWG	32	62	24	4.8	(*N16)	# 0503
743	SUB 4 BUS B (SUB 4 MAIN B LineSide)	52F24P RELAY	0.48	19.71	13.19	5.48	1.917	0.0830	Yes	SWG	32	180	24	23	(*N9) (*N16)	# 0502-Line
744	SUB 4 PRIMARY SWITCH A	52F14P RELAY	13.20	3.03	2.89	2.87	0.0167	0.0830	No	SWG	152	12	36	0.41		# 0047
745	SUB 4 PRIMARY SWITCH B	52F24P RELAY	13.20	3.17	3.00	2.97	0.0167	0.0830	No	SWG	152	13	36	0.43		# 0047
746	SUB 5 BUS A	SUB 5 MAIN A	0.48	35.74	26.90	7.64	2	0.0000	Yes	SWG	32	234	24	34	(*N9) (*N16)	# 0506
747	SUB 5 BUS A (SUB 5 MAIN A LineSide)	SUB 5 XFMR A PRI FUSE	0.48	35.74	26.90	7.64	2	0.0000	Yes	SWG	32	234	24	34	(*N9) (*N16)	# 0656-Line
748	SUB 5 BUS B	SUB 5 MAIN B	0.48	37.14	26.79	7.64	2	0.0000	Yes	SWG	32	235	24	34	(*N9) (*N16)	# 0506
749	SUB 5 BUS B (SUB 5 MAIN B LineSide)	SUB 5 XFMR B PRI FUSE	0.48	37.14	26.79	7.64	2	0.0000	Yes	SWG	32	235	24	34	(*N9) (*N16)	# 0659-Line
750	SUB 5 PRIMARY SWITCH A	52F15P RELAY	13.20	3.18	2.91	2.88	0.0167	0.0830	No	SWG	152	13	36	0.43		# 0047
751	SUB 5 PRIMARY SWITCH B	52F25P RELAY	13.20	3.18	2.88	2.85	0.0167	0.0830	No	SWG	152	13	36	0.43		# 0047
752	SUB 6 BUS A	SUB 6 MAIN A	0.48	9.53	9.19	3.82	2	0.0000	Yes	SWG	32	136	24	15	(*N9) (*N16)	# 0371
753	SUB 6 BUS A (SUB 6 MAIN A LineSide)	PD SUB 6 XFMR A RELAY	0.48	9.53	9.19	3.82	1.917	0.0830	Yes	SWG	32	136	24	15	(*N9) (*N16)	# 0020-Line
754	SUB 6 BUS B	SUB 6 MAIN B	0.48	8.65	8.32	3.82	2	0.0000	Yes	SWG	32	136	24	15	(*N9) (*N16)	# 0372
755	SUB 6 BUS B (SUB 6 MAIN B LineSide)	PD SUB 6 XFMR B RELAY	0.48	8.65	8.32	3.82	1.917	0.0830	Yes	SWG	32	136	24	15	(*N9) (*N16)	# 0021-Line
756	SUB 7 BUS A	SUB 7 MAIN A	0.48	23.15	23.15	7.12	2	0.0000	Yes	SWG	32	218	24	31	(*N9) (*N16)	# 0046
757	SUB 7 BUS A (SUB 7 MAIN A LineSide)	52F17P RELAY	0.48	23.15	23.15	7.12	1.917	0.0830	Yes	SWG	32	218	24	31	(*N9) (*N16)	# 0022-Line
758	SUB 7 BUS B	SUB 7 MAIN B	0.48	23.06	23.06	7.10	2	0.0000	Yes	SWG	32	218	24	31	(*N9) (*N16)	# 0046
759	SUB 7 BUS B (SUB 7 MAIN B LineSide)	52F27P RELAY	0.48	23.06	23.06	7.10	1.917	0.0830	Yes	SWG	32	218	24	31	(*N9) (*N16)	# 0023-Line
760	SUB 7 XFMR A PRI	52F17P RELAY	13.20	3.18	3.18	3.15	0.0167	0.0830	No	SWG	152	13	36	0.43		# 0047
761	SUB 7 XFMR B PRI	52F27P RELAY	13.20	3.18	3.18	3.15	0.0167	0.0830	No	SWG	152	13	36	0.43		# 0048
762	SUB 8 BUS A	52F18P RELAY	4.16	2.60	1.52	0.83	1.917	0.0833	Yes	SWG	104	51	36	1.7	(*N3) (*N5) (*N9) (*N16)	# 0378
763	SUB 8 BUS A (SUB 8 MAIN A RELAY LineSide)	52F18P RELAY	4.16	2.60	1.52	0.98	1.917	0.0833	Yes	SWG	104	61	36	2.0	(*N5) (*N9) (*N16)	# 0026-Line
764	SUB 8 BUS B	52F28P RELAY	4.16	2.08	1.52	0.83	1.917	0.0833	Yes	SWG	104	50	36	1.6	(*N3) (*N5) (*N9) (*N16)	# 0379
765	SUB 8 BUS B (SUB 8 MAIN B RELAY LineSide)	52F28P RELAY	4.16	2.08	1.52	0.98	1.917	0.0833	Yes	SWG	104	60	36	2.0	(*N5) (*N9) (*N16)	# 0028-Line
766	SUB 8 PRIMARY SWITCH A	52F18P RELAY	13.20	3.17	2.95	2.92	0.0167	0.0833	No	SWG	152	13	36	0.43		# 0047
767	SUB 8 PRIMARY SWITCH B	52F28P RELAY	13.20	3.17	3.03	3.00	0.0167	0.0833	No	SWG	152	13	36	0.43		# 0047
768	SUB SP-1 DISC	FU SUB SUMP PUMP 1	0.48	4.20	4.20	3.13	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
769	SUB SP-2 DISC	FU SUB SUMP PUMP 2	0.48	4.27	4.27	3.17	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
770	SWP LCP	PD STORM WATER PUMP CP	0.48	7.62	7.62	5.20	0.05	0.0000	Yes	PNL	25	14	18	0.82		# 0049

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
771	SWPSO VALVE DISC S - 91 - 4	PD SWPSO-SG	0.48	2.53	2.53	2.03	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0492
772	SWPSO-SG DISC S - 91 - 1	PD SWPSO-SG	0.48	2.53	2.53	2.03	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0492
773	TABLET FDR DISC	PD-0537	0.48	3.69	3.69	2.80	0.0172	0.0000	Yes	PNL	25	5	18	0.14		# 0475
774	TEMP ADM1 DISC	PD 0582	0.48	5.35	5.35	3.85	0.0163	0.0000	Yes	PNL	25	6	18	0.19		# 0073
775	TEMP ADM2 DISC	PD 0583	0.48	5.35	5.35	3.85	0.0163	0.0000	Yes	PNL	25	6	18	0.19		# 0073
776	TEMP PUMPS	FU 0683	0.48	1.44	1.44	1.26	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0547
777	TER FIL EFF SP DISC	FU 0691	0.48	1.44	1.44	1.26	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
778	TFB-MPC	MB TFB-MPC	0.208	1.45	1.45	1.12	0.0167	0.0000	Yes	PNL	25	3	18	0.05		# 0257
779	TFB-MPC (MB TFB-MPC LineSide)	FU 0730	0.208	1.45	1.45	0.95	0.0926	0.0000	Yes	PNL	25	7	18	0.24	(*N3)	# 0781-Line
780	TGS DISC	PD 0581	0.48	3.52	3.52	2.68	0.0171	0.0000	Yes	PNL	25	5	18	0.14		# 0073
781	UDSP1 DISC	FU 0681	0.48	1.44	1.44	1.26	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
782	UDSP2 DISC	FU 0741	0.48	1.44	1.44	1.25	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
783	UH EE DISC	FU 0907	0.48	2.67	2.67	2.13		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0099
784	UH FF	FU 0918	0.48	2.65	2.65	2.11		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0392
785	UPS-ADM-1 INPUT	PD-UPS-ADM-1	0.208	4.78	4.78	2.59	0.0167	0.0000	Yes	PNL	25	5	18	0.13		# 0492
786	UPS-ADM-1 OUTPUT	MaxTripTime @2.0s	0.208	0.04	0.04	0.04	2	0.0000	Yes	PNL	25	3	18	0.04	(*N2) (*N9) (*N11)	# 0492
787	UV 2A	FB-PDP-UV-2A	0.48	2.95	2.95	1.70	0.3338	0.0000	Yes	PNL	25	23	18	1.7	(*N3) (*N16)	# 0781
788	UV 2B	FB-PDP-UV-2B	0.48	2.95	2.95	1.70	0.3338	0.0000	Yes	PNL	25	23	18	1.7	(*N3) (*N16)	# 0782
789	UV-1A	800/200 UV-1A	0.48	2.69	2.69	1.66	0.2706	0.0000	Yes	PNL	25	19	18	1.4	(*N3) (*N5) (*N16)	# 0056
790	UV-1A PD LINE SIDE	800/200 UV-1A	0.48	2.71	2.71	1.67	0.2681	0.0000	Yes	PNL	25	19	18	1.4	(*N3) (*N16)	# 0056
791	UV-1B	800/200 UV-1B	0.48	3.16	3.16	2.21	0.2	0.0000	Yes	PNL	25	20	18	1.4	(*N5) (*N16)	# 0056
792	UV-1B PD LINE SIDE	800/200 UV-1B	0.48	3.19	3.19	2.22	0.2	0.0000	Yes	PNL	25	20	18	1.4	(*N16)	# 0056
793	VFD CFG-1 INPUT	800/600 VFD CFG-1	0.48	25.57	23.34	13.35	0.066	0.0000	Yes	PNL	25	33	18	3.3	(*N21b)	# 0785
794	VFD CFG-2 INPUT	800/600 VFD CFG-2	0.48	26.23	24.00	13.67	0.066	0.0000	Yes	PNL	25	34	18	3.4		# 0786
795	VFD CFG-3 INPUT	800/600 VFD CFG-3	0.48	28.64	26.40	14.85	0.066	0.0000	Yes	PNL	25	36	18	3.7		# 0787
796	W CONT GT2 DISC	FU 0748	0.48	1.44	1.44	1.25	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
797	W1 FLOW VALVES JB	PD W1 FLOW VALVES	0.48	3.43	3.43	2.63	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0108
798	WA MAIN BOV	PD WA MAIN BOV	0.48	3.63	3.63	2.76	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0802
799	WAS VALVE W1	PD WAS VALVE W1	0.48	3.16	3.16	2.45	0.0162	0.0000	Yes	PNL	25	4	18	0.12		# 0803
800	WAS VALVE W1 DISC	PD WAS VALVE W1	0.48	5.04	5.04	3.65	0.0162	0.0000	Yes	PNL	25	6	18	0.18		# 0792
801	WAS VALVE W2	PD WAS VALVE W2	0.48	2.65	2.65	2.11	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0074
802	WASP-E1 VFD IN	PD WASP-E1	0.48	1.43	1.43	1.06	0.0218	0.0000	Yes	PNL	25	3	18	0.06	(*N3)	# 0302
803	WASP-E2 VFD IN	PD WASP-E2	0.48	1.42	1.42	1.05	0.0221	0.0000	Yes	PNL	25	3	18	0.06	(*N3)	# 0627
804	WASP-W1 VFD IN	PD WASP-W1	0.48	6.87	6.87	4.76	0.0162	0.0000	Yes	PNL	25	7	18	0.24		# 0028
805	WASP-W2 VFD IN	PD WASP-W2	0.48	6.80	6.80	4.72	0.0162	0.0000	Yes	PNL	25	7	18	0.24		# 0492
806	WASV E1	FB WASV E1 P-65-1	0.48	1.23	1.23	0.93	0.03	0.0000	Yes	PNL	25	3	18	0.08	(*N3)	# 0841
807	WASV E2	FB WASV E2 P-65-2	0.48	1.23	1.23	0.93	0.03	0.0000	Yes	PNL	25	3	18	0.08	(*N3)	# 0842
808	WASV E3	FB WASV E3	0.48	1.16	1.16	0.88	0.0331	0.0000	Yes	PNL	25	3	18	0.08	(*N3)	# 0843
809	WASV E4	FB WASV E4	0.48	1.16	1.16	0.88	0.0331	0.0000	Yes	PNL	25	3	18	0.08	(*N3)	# 0844
810	WBB-EF-1 DISC	MCP WBB-EF-1	0.48	6.87	6.87	4.76	0.005	0.0000	Yes	PNL	25	3	18	0.07		# 0028

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
811	WBB-EF-2 DISC	MCP WBB-EF-2	0.48	7.47	7.47	5.11	0.005	0.0000	Yes	PNL	25	3	18	0.08		# 0492
812	WBB-EF-3 DISC	MCP WBB-EF-3	0.48	3.59	3.59	2.73	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0028
813	WBB-EF-4 DISC	MCP WBB-EF-4	0.48	2.77	2.77	2.19	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
814	WBB-EF-5 DISC	MCP WBB-EF-5	0.48	1.94	1.94	1.62	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
815	WBB-EF-6 DISC	MCP WBB-EF-6	0.48	1.46	1.46	1.27	0.005	0.0000	Yes	PNL	25	1	18	0.02		# 0492
816	WBB-EF-7 DISC	MCP WBB-EF-7	0.48	2.42	2.42	1.95	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0028
817	WBB-H1 DISC	PD WBB-H1	0.48	9.24	9.24	6.13	0.0162	0.0000	Yes	PNL	25	8	18	0.32	(*N20b)	# 0492
818	WBB-H2 DISC	PD WBB-H2	0.48	6.24	6.24	4.39	0.0162	0.0000	Yes	PNL	25	6	18	0.22		# 0028
819	WBB-HV-1 DISC	MCP WBB-HV-1	0.48	4.24	4.24	3.15	0.005	0.0000	Yes	PNL	25	3	18	0.05		# 0028
820	WBB-HV-2 DISC	PD WBB-HV-2	0.48	12.04	12.04	7.69	0.0162	0.0000	Yes	PNL	25	9	18	0.40		# 0492
821	WBB-P-1 DISC	MCP WBB-P-1	0.48	2.08	2.08	1.72	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0028
822	WBB-P-2 DISC	MCP WBB-P-2	0.48	2.08	2.08	1.71	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
823	WEST AESG W1	PD WEST AESG W1	0.48	2.66	2.66	2.12	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0827
824	WEST AESG W2	PD WEST AESG W2	0.48	1.58	1.58	1.36	0.0201	0.0000	Yes	PNL	25	3	18	0.08		# 0076
825	WEST AESGW1 DISC	PD WEST AESG W1	0.48	2.82	2.82	2.22	0.0162	0.0000	Yes	PNL	25	4	18	0.11		# 0817
826	WFB-EUH-TERM's	PD WFB-EUH-1	0.208	1.61	1.61	1.20	0.0167	0.0000	Yes	PNL	25	3	18	0.06		# 0107
827	WHM DISC	FU 0665	0.48	2.24	2.24	1.83		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0136
828	Wireway	FB AT-E3 Z2 FCV	0.48	1.48	1.48	1.28	0.021	0.0000	Yes	PNL	25	3	18	0.08		# 0832
829	Wireway.	FB AT-E4 Z2 FCV	0.48	1.48	1.48	1.28	0.021	0.0000	Yes	PNL	25	3	18	0.08		# 0833
830	WPB-EF-1 DISC	MCP WPB-EF-1	0.48	2.19	2.19	1.79	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
831	WPB-H1 DISC	PD WPB-H1	0.48	5.40	5.40	3.88	0.0162	0.0000	Yes	PNL	25	6	18	0.19		# 0492
832	WPB-H1 HOIST	PD WPB-H1	0.48	4.45	4.45	3.29	0.0162	0.0000	Yes	PNL	25	5	18	0.16		# 0492
833	WPB-HV-1 DISC	PD WPB-HV-1	0.48	2.65	2.65	2.11	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0492
834	WPB-P-1 DISC	MCP WPB-P-1	0.48	1.74	1.74	1.47	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
835	WPE-SAP-2 DISC	MCP WPE-SAP-2	0.48	1.99	1.99	1.65	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
836	WPSE GATE E DISC	FU WPSE GATE E MTR	0.48	1.45	1.45	1.26	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
837	WPSE GATE W DISC	FU 0716	0.48	1.45	1.45	1.26	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
838	WPSE SMPL PMP DISC	FU 0712	0.48	1.45	1.45	1.26	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
839	WSE-SAP-3 DISC	MCP WSE-SAP-3	0.48	3.59	3.59	2.73	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0028
840	WTR-CRC-PMP-1 DISC	MCP WATER CIRC PUMP 1	0.48	8.89	8.89	5.93	0.005	0.0000	Yes	PNL	25	4	18	0.09		# 0492
841	WTR-CRC-PMP-2 DISC	MCP WATER CIRC PUMP 2	0.48	8.89	8.89	5.93	0.005	0.0000	Yes	PNL	25	4	18	0.09		# 0492
842	WW BYP GATE E DISC	FU 0733	0.48	1.45	1.45	1.26	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
843	WWRDP2 DISC	FU WWRD PUMP 2	0.48	3.21	3.21	2.49	0.0083	0.0000	Yes	PNL	25	3	18	0.06		# 0568
844	WWRDP3 DISC	FB-MCC-P	0.48	3.17	2.76	2.14	0.32	0.0000	Yes	PNL	25	26	18	2.2	(*N5) (*N16)	# 0136
845	WWWRESDP1 DISC	FU 0652	0.48	3.17	3.17	2.46	0.0083	0.0000	Yes	PNL	25	3	18	0.06		# 0136
846	Level 0: Nonmelting, Flammable Materials with Weight >= 4.5 oz/sq yd	0.0 - 1.2 cal/cm*2												#Level 0 = 686	(*N11) - Out of IEEE 1584 Range, Lee Equation Used. Applicable for Open Air only. Existing Equipment type is not Open Air!	

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm ²)	PPE Level / Notes (*N)	Label #
847	Level 1: Arc-rated FR Shirt & Pants	1.2 - 4.0 cal/cm ²												#Level 1 = 78	(*N2) < 80% Cleared Fault Threshold	
848	Level 2: Arc-rated FR Shirt & Pants	4.0 - 8.0 cal/cm ²												#Level 2 = 29	(*N3) - Arcing Current Low Tolerances Used	
849	Level 3: Arc-rated FR Shirt & Pants & Arc Flash Suit	8.0 - 25.0 cal/cm ²												#Level 3 = 35	(*N4) - Equipment Specific Equations Used	
850	Level 4: Arc-rated FR Shirt & Pants & Arc Flash Suit	25.0 - 40.0 cal/cm ²												#Level 4 = 17	(*N5) - Miscoordinated, Upstream Device Tripped	
851	Level Dangerous!: No FR Category Found	40.0 - 999.0 cal/cm ²												#Danger = 0	(*N9) - Max Arcing Duration Reached	
852														#Equip Eval Failed = 0	(*N16) - Trip Time Recalculated	
853	For additional information refer to NFPA 70 E, Standard for Electrical Safety in the Workplace.													#Bus Equip Eval Failed = 29	(*N20b) - Equipment Evaluation Marginal for Bus	
854															(*N21b) - Equipment Evaluation Failed, OVERDUTIED BUS EQUIPMENT FOUND - Inappropriate to provide arc-flash hazard results.	
855															IEEE 1584 - Preferred Method (NFPA 70E 2015 Annex D.4) Bus + Line Side Report (Include Line Side + Load Side Contributions), - 80% Cleared Fault Threshold, include Ind. Motors >= 50.0hp for 5.0 Cycles), mis-coordination checked	

6.6.9 AF Results - ARMS “ON” at 480V Feeder Breakers

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
1	15 KV BUS 1	52M1P RELAY	13.20	15.72	6.36	6.13	0.0959	0.0830	Yes	SWG	152	92	36	3.0		# 0001
2	15 KV BUS 1 (52M1P RELAY LineSide)	FU DTE North	13.20	15.72	6.36	6.13	0.1633	0.0830	Yes	SWG	152	105	36	3.4		# 0014-Loa
3	15 KV BUS 1 LineSide	FU DTE North	13.20	15.72	6.36	6.13	0.1633	0.0830	Yes	SWG	152	105	36	3.4		# 0011
4	15 KV BUS 2	52M2P RELAY	13.20	15.72	6.15	5.92	0.1029	0.0830	Yes	SWG	152	86	36	2.8		# 0002
5	15 KV BUS 2 (52IBP RELAY LineSide)	52IBP RELAY	13.20	15.72	6.92	6.66	0.0503	0.0830	Yes	SWG	152	74	36	2.4		# 0002-Line
6	15 KV BUS 2 LineSide	FU DTE South	13.20	15.72	6.15	5.92	0.1736	0.0830	Yes	SWG	152	103	36	3.3		# 0002
7	15 KV BUS 3	52GT1P RELAY	13.20	15.72	14.22	13.69	0.0042	0.0830	Yes	SWG	152	53	36	1.7		# 0003
8	78IN GC DISC	PD 78IN GATE CONTROLLER	0.48	1.35	1.35	1.18	0.0223	0.0000	Yes	PNL	25	3	18	0.07		# 0492
9	AC2 DISC	FU 0743	0.48	1.48	1.48	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
10	AC2F DISC	FU 0574	0.48	2.79	2.79	1.87	0.0083	0.0000	Yes	PNL	25	2	18	0.05	(*N3)	# 0073
11	ADM ACCU1 DISC	PD ADM-ACCU-1	0.48	4.69	4.69	3.43	0.0162	0.0000	Yes	PNL	25	5	18	0.17		# 0492
12	ADM ACU1 DISC	PD ADM-ACU-1	0.48	8.12	8.12	5.49	0.0162	0.0000	Yes	PNL	25	7	18	0.28		# 0492
13	ADM-CH-1 DISC	PD ADM-CH-1	0.48	9.06	9.06	6.03	0.0175	0.0000	Yes	PNL	25	8	18	0.34	(*N20b)	# 0492
14	ADM-EF-1 DISC	MCP ADM-EF-1	0.48	2.30	2.30	1.87	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
15	ADM-EF-2 DISC	MCP ADM-EF-2	0.48	2.30	2.30	1.87	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
16	ADM-HVAC-1 DISC	PD ADM-HVAC-1	0.48	5.60	5.60	4.00	0.0162	0.0000	Yes	PNL	25	6	18	0.20		# 0492
17	ADM-HVAC-2 DISC	PD ADM-HVAC-2	0.48	2.70	2.70	2.14	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0492
18	ADM-P-1 DISC	MCP ADM-P-1	0.48	3.26	3.26	2.52	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0492
19	ADM-P-2 DISC	MCP ADM-P-2	0.48	2.70	2.70	2.14	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
20	ADM-P-3 DISC	MCP ADM-P-3	0.48	7.92	7.92	5.37	0.005	0.0000	Yes	PNL	25	4	18	0.08		# 0492
21	ADM-P-4 DISC	MCP ADM-P-4	0.48	7.35	7.35	5.04	0.005	0.0000	Yes	PNL	25	3	18	0.08		# 0492
22	ADM-SUP LCP	PD 0561	0.48	2.25	2.25	1.83	0.0192	0.0000	Yes	PNL	25	4	18	0.10		# 0185
23	ADP-E1 DISC	MCP ADP-E1	0.48	1.66	1.51	1.29	0.055	0.0000	Yes	PNL	25	6	18	0.22		# 0031
24	ADP-E2 DISC	MCP ADP-E2	0.48	5.74	5.45	3.87	0.04	0.0000	Yes	PNL	25	11	18	0.50		# 0027
25	ADP-W1 DISC	MCP ADP-W1	0.48	5.75	5.75	4.09	0.005	0.0000	Yes	PNL	25	3	18	0.06		# 0028
26	AIR COMP 1 DISC	FU AIR COMP 1	0.48	2.81	2.81	1.88	0.0083	0.0000	Yes	PNL	25	2	18	0.05	(*N3)	# 0475
27	AIR COMP 1P DISC	FU 0687	0.48	3.27	3.27	2.15	0.0083	0.0000	Yes	PNL	25	3	18	0.05	(*N3)	# 0136
28	AIR WASH MV DISC	FU 0754	0.48	1.48	1.48	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
29	ALTERNATOR P	FU 0685	0.208	0.14	0.14	0.14	0.1782	0.0000	Yes	PNL	25	2	18	0.01	(*N11)	# 0029
30	AT-E1 FCV BF-64-25	FB AT-E1 FCV	0.48	1.47	1.47	1.27	0.0211	0.0000	Yes	PNL	25	3	18	0.08		# 0161
31	AT-E2 FCV BF-64-26	FB AT-E2 FCV	0.48	1.66	1.66	1.41	0.0195	0.0000	Yes	PNL	25	3	18	0.08		# 0161
32	AT-E3 Z1 FCV	FB AT-E3 Z2 FCV	0.48	0.87	0.87	0.70	0.5365	0.0000	Yes	PNL	25	16	18	0.99	(*N3)	# 0161
33	AT-E3 Z2 FCV	FB AT-E3 Z2 FCV	0.48	1.03	1.03	0.80	0.0422	0.0000	Yes	PNL	25	4	18	0.09	(*N3)	# 0161
34	AT-E3 Z3 FCV	FB AT-E3 Z2 FCV	0.48	1.16	1.16	0.88	0.033	0.0000	Yes	PNL	25	3	18	0.08	(*N3)	# 0161
35	AT-E4 Z1 FCV	FB AT-E4 Z2 FCV	0.48	0.87	0.87	0.70	0.5365	0.0000	Yes	PNL	25	16	18	0.99	(*N3)	# 0161
36	AT-E4 Z2 FCV	FB AT-E4 Z2 FCV	0.48	1.03	1.03	0.80	0.0422	0.0000	Yes	PNL	25	4	18	0.09	(*N3)	# 0161
37	AT-E4 Z3 FCV	FB AT-E4 Z2 FCV	0.48	1.16	1.16	0.88	0.033	0.0000	Yes	PNL	25	3	18	0.08	(*N3)	# 0161
38	ATS PEWP2 NRM	FU PEW PUMP 2	0.48	19.92	18.49	9.32	0.0227	0.0000	Yes	PNL	25	14	18	0.76	(*N3)	# 0043
39	ATS PP-UV-EMG	FB ATS-PP-UV-EMG	0.48	3.55	3.55	2.71	0.0188	0.0000	Yes	PNL	25	5	18	0.15		# 0045
40	ATS PP-UV-LOAD	FU ATS-PP-UV-NRM	0.48	1.70	1.70	1.23	0.0464	0.0000	Yes	PNL	25	5	18	0.16	(*N3)	# 0046

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
41	ATS PP-UV-NRM	FU ATS-PP-UV-NRM	0.48	1.70	1.70	1.23	0.0464	0.0000	Yes	PNL	25	5	18	0.16	(*N3)	# 0047
42	ATS-51 EMG	MB MCC-51B	0.48	39.33	39.33	21.12	0.0102	0.0000	Yes	PNL	25	14	18	0.76	(*N5) (*N21b)	# 0047
43	ATS-51 LOAD	MB MCC-51A	0.48	38.15	38.15	20.58	0.0103	0.0000	Yes	PNL	25	14	18	0.75	(*N5) (*N21b)	# 0047
44	ATS-51 NRM	MB MCC-51A	0.48	38.15	38.15	20.58	0.0103	0.0000	Yes	PNL	25	14	18	0.75	(*N5) (*N21b)	# 0047
45	ATS-52 EMG	MB MCC-52B	0.48	38.35	38.35	20.67	0.0103	0.0000	Yes	PNL	25	14	18	0.75	(*N5) (*N21b)	# 0047
46	ATS-52 LOAD	MB MCC-52A	0.48	37.00	37.00	20.05	0.0105	0.0000	Yes	PNL	25	13	18	0.74	(*N5) (*N21b)	# 0047
47	ATS-52 NRM	MB MCC-52A	0.48	37.00	37.00	20.05	0.0105	0.0000	Yes	PNL	25	13	18	0.74	(*N5) (*N21b)	# 0047
48	ATS-54 EMG	MB MCC-54B	0.48	32.43	32.43	17.91	0.011	0.0000	Yes	PNL	25	13	18	0.69	(*N5) (*N21b)	# 0054
49	ATS-54 LOAD	MB MCC-54A	0.48	29.67	29.67	16.61	0.0114	0.0000	Yes	PNL	25	12	18	0.65	(*N5) (*N21b)	# 0054
50	ATS-54 NRM	MB MCC-54A	0.48	29.67	29.67	16.61	0.0114	0.0000	Yes	PNL	25	12	18	0.65	(*N5) (*N21b)	# 0054
51	ATS-55 EMG	FB ATS-55 EMG	0.48	33.47	33.47	18.40	0.0109	0.0000	Yes	PNL	25	13	18	0.70	(*N21b)	# 0055
52	ATS-55 LOAD	FB ATS-55 NRM	0.48	29.67	29.67	16.61	0.0114	0.0000	Yes	PNL	25	12	18	0.65	(*N21b)	# 0056
53	ATS-55 NRM	FB ATS-55 NRM	0.48	29.67	29.67	16.61	0.0114	0.0000	Yes	PNL	25	12	18	0.65	(*N21b)	# 0057
54	ATS-ADM EMG	800/800 ATS-ADM-EMG	0.48	11.52	11.52	7.37	0.2	0.0000	Yes	PNL	25	42	18	4.8	(*N16)	# 0488
55	ATS-ADM LOAD	800/800 ATS-ADM-EMG	0.48	11.52	11.52	7.37	0.2	0.0000	Yes	PNL	25	42	18	4.8	(*N16)	# 0017
56	ATS-ADM NRM	800/800 ATS-ADM-NRM	0.48	11.50	11.50	7.36	0.2	0.0000	Yes	PNL	25	42	18	4.8	(*N16)	# 0046
57	ATS-CEB LOAD	FB ATS-CEB NRM	0.48	23.39	23.39	13.55	0.0175	0.0000	Yes	PNL	25	14	18	0.81		# 0047
58	ATS-CEB-EMG	FB ATS-CEB EMG	0.48	21.73	21.73	12.72	0.0175	0.0000	Yes	PNL	25	14	18	0.75		# 0048
59	ATS-CEB-NRM	FB ATS-CEB NRM	0.48	23.39	23.39	13.55	0.0175	0.0000	Yes	PNL	25	14	18	0.81		# 0049
60	ATS-EBB NORM	FB ATS-EBB NORM	0.48	8.71	8.71	5.83	0.04	0.0000	Yes	PNL	25	13	18	0.74		# 0040
61	ATS-EBB-EMG	FB ATS-EBB-EMG	0.48	9.43	9.43	6.23	0.04	0.0000	Yes	PNL	25	14	18	0.80		# 0040
62	ATS-EBB-LOAD	FB ATS-EBB NORM	0.48	8.71	8.71	5.83	0.04	0.0000	Yes	PNL	25	13	18	0.74		# 0040
63	ATS-LSE EMG	FB ATS-LSE-EMG	0.48	12.79	12.79	8.09	0.0526	0.0000	Yes	PNL	25	20	18	1.4		# 0043
64	ATS-LSE LOAD	FB ATS-LSE-NRM	0.48	12.92	12.92	8.16	0.0525	0.0000	Yes	PNL	25	20	18	1.4		# 0043
65	ATS-LSE NRM	FB ATS-LSE-NRM	0.48	12.92	12.92	8.16	0.0525	0.0000	Yes	PNL	25	20	18	1.4		# 0043
66	ATS-RLS EMG	FB ATS-RLS EMG	0.48	14.20	14.20	8.85	0.0162	0.0000	Yes	PNL	25	10	18	0.47		# 0043
67	ATS-RLS LOAD	FB ATS-RLS NRM	0.48	11.90	11.90	7.61	0.0162	0.0000	Yes	PNL	25	9	18	0.40		# 0043
68	ATS-RLS NRM	FB ATS-RLS NRM	0.48	11.90	11.90	7.61	0.0162	0.0000	Yes	PNL	25	9	18	0.40		# 0043
69	ATS-WBB NORM	FB ATS-WBB-NORM	0.48	34.03	34.03	18.67	0.05	0.0000	Yes	PNL	25	33	18	3.3		# 0049
70	ATS-WBB-EMG	FB ATS-WBB-EMG	0.48	35.76	35.76	19.48	0.05	0.0000	Yes	PNL	25	34	18	3.4		# 0050
71	ATS-WBB-LOAD	FB ATS-WBB-NORM	0.48	34.03	34.03	18.67	0.05	0.0000	Yes	PNL	25	33	18	3.3		# 0051
72	ATS-WPB-EMG	FB ATS-WPB-EMG	0.48	10.46	10.46	6.81	0.0162	0.0000	Yes	PNL	25	9	18	0.36		# 0052
73	ATS-WPB-LOAD	FB ATS-WPB-NORM	0.48	9.21	9.21	6.11	0.0162	0.0000	Yes	PNL	25	8	18	0.32		# 0053
74	ATS-WPB-NORM	FB ATS-WPB-NORM	0.48	9.21	9.21	6.11	0.0162	0.0000	Yes	PNL	25	8	18	0.32		# 0054
75	AT-W2 FCV JB	PD AT-W2 FCV	0.48	2.57	2.57	2.06	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0161
76	B-54-1 DISC	PD W1 FLOW VALVES	0.48	3.51	3.51	2.68	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0067
77	B-54-1 MTR VALVE.	PD W1 FLOW VALVES	0.48	3.46	3.46	2.65	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0161
78	B-54-2 DISC	PD W1 FLOW VALVES	0.48	3.51	3.51	2.68	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0069
79	B-54-2 MTR VALVE.	PD W1 FLOW VALVES	0.48	3.46	3.46	2.65	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0161
80	B-54-3 DISC	PD W1 FLOW VALVES	0.48	3.51	3.51	2.68	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0071
81	B-54-3 MTR VALVE.	PD W1 FLOW VALVES	0.48	3.46	3.46	2.65	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0161

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
82	BAR SCREEN 2 TERM	FU BAR SCREEN 2	0.48	4.46	4.46	3.29	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
83	BF - 64- 29	FB AT-E1 FCV	0.48	1.26	1.26	0.95	0.0286	0.0000	Yes	PNL	25	3	18	0.07	(*N3)	# 0161
84	BF- 64- 30	FB AT-E2 FCV	0.48	1.40	1.40	1.22	0.0218	0.0000	Yes	PNL	25	3	18	0.07		# 0161
85	BF-64-07	FB AT-E1 FCV	0.48	1.04	1.04	0.81	0.0393	0.0000	Yes	PNL	25	4	18	0.09	(*N3)	# 0161
86	BF-64-08	FB AT-E2 FCV	0.48	1.13	1.13	0.87	0.0342	0.0000	Yes	PNL	25	3	18	0.08	(*N3)	# 0161
87	BSCRN-3 STR	FU BAR SCREEN 3	0.48	4.38	4.38	3.24	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
88	BSNHST DISC	FU 0521	0.48	4.10	4.10	3.06	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0073
89	BSNINFLGT-1 DISC	FU BASIN INFL GATE 1	0.48	2.81	2.81	2.21	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
90	BSNINFLGT2 DISC	FU 0535	0.48	2.79	2.79	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
91	BSNINFLGT-3 DISC	FU BASIN INFL GATE 3	0.48	2.81	2.81	2.21	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
92	BSN-OUT-GT-1 DISC	FU BASIN OUT GATE 1	0.48	2.81	2.81	2.21	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
93	BSNOUTGT2 DISC	FU 0536	0.48	2.79	2.79	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
94	BSN-OUT-GT-3 DISC	FU BASIN OUT GATE 3	0.48	2.81	2.81	2.21	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
95	BT1-1M DISC	MCP BT1-1M	0.48	12.36	11.96	7.60	0.015	0.0000	Yes	PNL	25	9	18	0.38	(*N21b)	# 0072
96	BT2-1M DISC	MCP BT2-1M	0.48	12.23	11.82	7.53	0.015	0.0000	Yes	PNL	25	9	18	0.38	(*N21b)	# 0073
97	BTAB-1 DISC	MCP BTAB-1	0.48	1.44	1.44	1.25	0.015	0.0000	Yes	PNL	25	3	18	0.05		# 0074
98	BTAB-2 DISC	MCP BTAB-2	0.48	1.44	1.44	1.25	0.015	0.0000	Yes	PNL	25	3	18	0.05		# 0076
99	BTAB-3 DISC	MCP BTAB-3	0.48	1.33	1.33	1.17	0.015	0.0000	Yes	PNL	25	3	18	0.05		# 0075
100	BUS G1	52GT1P RELAY	13.20	15.61	14.86	14.32	0.0042	0.0830	Yes	SWG	152	53	36	1.7	(*N5)	# 0019
101	BUS G1 (GEN 1 AMPSENTRY LineSide)	52GT1P RELAY	13.20	15.61	14.86	14.32	0.0042	0.0830	Yes	SWG	152	53	36	1.7	(*N5)	# 0200-Line
102	BUS G2	52GT1P RELAY	13.20	15.63	14.89	14.34	0.0042	0.0830	Yes	SWG	152	53	36	1.7	(*N5)	# 0020
103	BUS G2 (GEN 2 AMPSENTRY LineSide)	52GT1P RELAY	13.20	15.63	14.89	14.34	0.0042	0.0830	Yes	SWG	152	53	36	1.7	(*N5)	# 0202-Line
104	BUS-0097	MCP AXMX-E1A	0.48	1.07	1.07	0.97	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0256
105	BUS-0099	MCP AXMX-E1B	0.48	1.07	1.07	0.97	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0256
106	BUS-0101	MCP AXMX-E1C	0.48	1.07	1.07	0.97	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0256
107	BUS-0103	MCP ANMX-E1A	0.48	1.07	1.07	0.97	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0256
108	BUS-0105	MCP ANMX-E1B	0.48	1.07	1.07	0.97	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0256
109	BUS-0107	MCP ANMX-E1C	0.48	1.07	1.07	0.97	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0256
110	BUS-0109	MCP ANMX-E1D	0.48	1.07	1.07	0.97	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0256
111	BUS-0111	MCP SWMX-E1	0.48	1.07	1.07	0.97	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0256
112	BUS-0113	MCP ANMX-E3A	0.48	1.07	1.07	0.97	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0256
113	BUS-0115	MCP ANMX-E3B	0.48	1.07	1.07	0.97	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0256
114	BUS-0117	MCP ANMX-E3C	0.48	1.07	1.07	0.97	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0256
115	BUS-0119	MCP ANMX-E3D	0.48	1.07	1.07	0.97	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0256
116	BUS-0121	MCP AXMX-E3A	0.48	1.07	1.07	0.97	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0256
117	BUS-0123	MCP AXMX-E3B	0.48	1.07	1.07	0.97	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0256
118	BUS-0125	MCP AXMX-E3C	0.48	1.07	1.07	0.97	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0256
119	BUS-0127	MCP SWMX-E3	0.48	1.07	1.07	0.97	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0256
120	BUS-0141	MCP AXMX-E2A	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0093
121	BUS-0143	MCP AXMX-E2B	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0094

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
122	BUS-0145	MCP AXMX-E2C	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0095
123	BUS-0147	MCP ANMX-E2A	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0096
124	BUS-0149	MCP ANMX-E2B	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0097
125	BUS-0151	MCP ANMX-E2C	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0098
126	BUS-0153	MCP ANMX-E2D	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0099
127	BUS-0155	MCP SWMX-E2	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0100
128	BUS-0157	MCP ANMX-E4A	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0101
129	BUS-0159	MCP ANMX-E4B	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0102
130	BUS-0161	MCP ANMX-E4C	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0103
131	BUS-0163	MCP ANMX-E4D	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0104
132	BUS-0165	MCP AXMX-E4A	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0105
133	BUS-0167	MCP AXMX-E4B	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0106
134	BUS-0169	MCP AXMX-E4C	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0107
135	BUS-0171	MCP SWMX-E4	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0108
136	BUS-0178	FB EWH-2	0.48	5.84	5.84	4.14	0.0161	0.0000	Yes	PNL	25	6	18	0.21		# 0161
137	BUS-0179	FB WASV E1 P-65-1	0.48	1.41	1.41	1.23	0.0216	0.0000	Yes	PNL	25	3	18	0.07		# 0109
138	BUS-0180	FB WASV E2 P-65-2	0.48	1.41	1.41	1.23	0.0216	0.0000	Yes	PNL	25	3	18	0.07		# 0110
139	BUS-0181	FB EWH-2	0.48	5.74	5.74	4.08	0.0161	0.0000	Yes	PNL	25	6	18	0.20		# 0111
140	BUS-0182	FB AT-E1 FCV	0.48	2.11	2.11	1.74	0.0166	0.0000	Yes	PNL	25	4	18	0.08		# 0161
141	BUS-0188	FB AT-E2 FCV	0.48	2.52	2.52	2.02	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0161
142	BUS-0272	PD P-53-07	0.48	11.38	11.38	7.33	0.0162	0.0000	Yes	PNL	25	9	18	0.38	(*N21b)	# 0113
143	BUS-0273	MCP AXMX-W1A	0.48	1.93	1.93	1.61	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
144	BUS-0274	MCP AXMX-W1B	0.48	1.51	1.51	1.31	0.005	0.0000	Yes	PNL	25	1	18	0.02		# 0492
145	BUS-0275	MCP AXMX-W1C	0.48	1.90	1.90	1.59	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
146	BUS-0276	MCP ANMX-W1A	0.48	1.63	1.63	1.40	0.005	0.0000	Yes	PNL	25	1	18	0.02		# 0492
147	BUS-0277	MCP ANMX-W1B	0.48	2.30	2.30	1.87	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
148	BUS-0278	MCP ANMX-W1C	0.48	2.06	2.06	1.70	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
149	BUS-0279	MCP ANMX-W1D	0.48	2.01	2.01	1.67	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
150	BUS-0281	MCP SWMX-W1	0.48	3.03	3.03	2.37	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
151	BUS-0289	MCP AXMX-W2A	0.48	3.55	3.55	2.71	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0492
152	BUS-0290	MCP AXMX-W2B	0.48	2.53	2.53	2.03	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
153	BUS-0291	MCP AXMX-W2C	0.48	2.04	2.04	1.69	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
154	BUS-0292	MCP ANMX-W2A	0.48	1.71	1.71	1.45	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
155	BUS-0293	MCP ANMX-W2B	0.48	2.08	2.08	1.71	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
156	BUS-0294	MCP ANMX-W2C	0.48	1.99	1.99	1.65	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
157	BUS-0295	MCP ANMX-W2D	0.48	1.57	1.57	1.35	0.005	0.0000	Yes	PNL	25	1	18	0.02		# 0492
158	BUS-0296	MCP SWMX-W2	0.48	3.19	3.19	2.47	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0492
159	BUS-0310	PD PAB-W1 VALVES	0.48	6.70	6.70	4.66	0.0162	0.0000	Yes	PNL	25	7	18	0.24		# 0147
160	BUS-0311	PD PAB-W1 VALVES	0.48	6.52	6.52	4.55	0.0162	0.0000	Yes	PNL	25	7	18	0.23		# 0161
161	BUS-0312	PD PAB-W1 VALVES	0.48	6.70	6.70	4.66	0.0162	0.0000	Yes	PNL	25	7	18	0.24		# 0148
162	BUS-0313	PD PAB-W1 VALVES	0.48	6.52	6.52	4.55	0.0162	0.0000	Yes	PNL	25	7	18	0.23		# 0161

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
163	BUS-0314	PD PAB-W3 VALVES	0.48	4.25	4.25	3.16	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0149
164	BUS-0315	PD PAB-W3 VALVES	0.48	4.18	4.18	3.11	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0161
165	BUS-0316	PD PAB-W3 VALVES	0.48	4.25	4.25	3.16	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0150
166	BUS-0317	PD PAB-W3 VALVES	0.48	4.18	4.18	3.11	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0161
167	BUS-0318	PD AT-W2 FCV	0.48	2.55	2.55	2.04	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0151
168	BUS-0319	PD AT-W2 FCV	0.48	2.52	2.52	2.02	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0161
169	BUS-0320	PD WAS VALVE W2	0.48	5.47	5.47	3.92	0.0162	0.0000	Yes	PNL	25	6	18	0.20		# 0152
170	BUS-0321	PD AT-W2 FCV	0.48	2.55	2.55	2.04	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0153
171	BUS-0322	PD AT-W2 FCV	0.48	2.52	2.52	2.02	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0161
172	BUS-0323	PD AT-W2 FCV	0.48	2.55	2.55	2.04	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0154
173	BUS-0324	PD AT-W2 FCV	0.48	2.52	2.52	2.02	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0161
174	BUS-0325	PD WEST AESG W2	0.48	2.33	2.33	1.89	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0155
175	BUS-0326	PD PAB-W2 VALVES	0.48	5.12	5.12	3.70	0.0162	0.0000	Yes	PNL	25	6	18	0.18		# 0156
176	BUS-0327	PD PAB-W2 VALVES	0.48	5.02	5.02	3.64	0.0162	0.0000	Yes	PNL	25	6	18	0.18		# 0161
177	BUS-0328	PD PAB-W2 VALVES	0.48	5.12	5.12	3.70	0.0162	0.0000	Yes	PNL	25	6	18	0.18		# 0157
178	BUS-0329	PD PAB-W2 VALVES	0.48	5.02	5.02	3.64	0.0162	0.0000	Yes	PNL	25	6	18	0.18		# 0161
179	BUS-0330	PD WA MAIN BOV	0.48	11.62	11.62	7.45	0.0162	0.0000	Yes	PNL	25	9	18	0.39	(*N21b)	# 0158
180	BUS-0331	FB LSE-PPU-1	0.48	3.19	3.19	2.47	0.0162	0.0000	Yes	PNL	25	4	18	0.12		# 0159
181	BUS-0332	FB LSE-ACCU-1	0.48	8.76	8.76	5.86	0.0162	0.0000	Yes	PNL	25	8	18	0.30		# 0160
182	BUS-0333	FB LSE-ACU-1	0.48	4.76	4.76	3.48	0.0175	0.0000	Yes	PNL	25	6	18	0.19		# 0161
183	BUS-0337	FB CN-50-3 FCV	0.48	1.16	1.16	0.88	0.033	0.0000	Yes	PNL	25	3	18	0.08	(*N3)	# 0164
184	BUS-0348	FB SLDG'S F-50-3,4	0.48	0.86	0.86	0.68	0.5833	0.0000	Yes	PNL	25	17	18	1.1	(*N3)	# 0167
185	BUS-0349	FB SLDG'S F-60-1,2,3	0.48	0.99	0.99	0.77	0.3115	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0168
186	BUS-0350	FB SLDG'S F-50-3,4	0.48	0.86	0.86	0.68	0.5833	0.0000	Yes	PNL	25	17	18	1.1	(*N3)	# 0169
187	BUS-0351	FB SLDG'S F-60-1,2,3	0.48	0.99	0.99	0.77	0.3115	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0170
188	BUS-0352	FB SLDG'S F-60-1,2,3	0.48	0.99	0.99	0.77	0.3115	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0171
189	BUS-0353	FB SLDG'S S-50-1,2,3,4,5	0.48	0.89	0.89	0.71	0.4909	0.0000	Yes	PNL	25	15	18	0.93	(*N3)	# 0172
190	BUS-0354	FB SLDG'S S-50-1,2,3,4,5	0.48	0.99	0.99	0.77	0.3115	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0173
191	BUS-0355	FB SLDG'S S-50-1,2,3,4,5	0.48	0.99	0.99	0.77	0.3115	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0174
192	BUS-0356	FB SLDG'S S-50-1,2,3,4,5	0.48	0.99	0.99	0.77	0.3115	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0175
193	BUS-0357	FB SLDG'S S-50-1,2,3,4,5	0.48	0.99	0.99	0.77	0.3115	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0176
194	BUS-0358	FB SLDG'S S-50-1,2,3,4,5	0.48	0.99	0.99	0.77	0.3115	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0177
195	BUS-0359	FB SLDG'S S-50-1,2,3,4,5	0.48	0.99	0.99	0.77	0.3115	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0178
196	BUS-0360	FB SLDG's S-60-1,2	0.48	0.99	0.99	0.77	0.3115	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0179
197	BUS-0361	FB SLDG's S-60-1,2	0.48	0.99	0.99	0.77	0.3115	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0180
198	BUS-0362	FB SLDG's S-60-1,2	0.48	0.86	0.86	0.68	0.5833	0.0000	Yes	PNL	25	17	18	1.1	(*N3)	# 0181
199	BUS-0363	FB EAST JC GATES	0.48	0.99	0.99	0.77	0.3115	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0182
200	BUS-0364	FB EAST JC GATES	0.48	0.99	0.99	0.77	0.3115	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0183
201	BUS-0392	FB AT-E3 Z2 FCV	0.48	1.48	1.48	1.28	0.021	0.0000	Yes	PNL	25	3	18	0.08		# 0185
202	BUS-0393	FB AT-E1 FCV	0.48	2.03	2.03	1.68	0.0171	0.0000	Yes	PNL	25	4	18	0.08		# 0186
203	BUS-0394	FB AT-E1 FCV	0.48	2.03	2.03	1.68	0.0171	0.0000	Yes	PNL	25	4	18	0.08		# 0187

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
204	BUS-0395	FB AT-E1 FCV	0.48	2.03	2.03	1.68	0.0171	0.0000	Yes	PNL	25	4	18	0.08		# 0188
205	BUS-0396	FB AT-E2 FCV	0.48	2.40	2.40	1.94	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0189
206	BUS-0397	FB AT-E2 FCV	0.48	2.40	2.40	1.94	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0190
207	BUS-0398	FB AT-E2 FCV	0.48	2.40	2.40	1.94	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0191
208	BUS-0399	FB AT-E3 Z2 FCV	0.48	1.48	1.48	1.28	0.021	0.0000	Yes	PNL	25	3	18	0.08		# 0192
209	BUS-0400	FB AT-E3 Z2 FCV	0.48	1.48	1.48	1.28	0.021	0.0000	Yes	PNL	25	3	18	0.08		# 0193
210	BUS-0401	FB AT-E4 Z2 FCV	0.48	1.48	1.48	1.28	0.021	0.0000	Yes	PNL	25	3	18	0.08		# 0194
211	BUS-0402	FB AT-E4 Z2 FCV	0.48	1.48	1.48	1.28	0.021	0.0000	Yes	PNL	25	3	18	0.08		# 0195
212	BUS-0403	FB AT-E4 Z2 FCV	0.48	1.48	1.48	1.28	0.021	0.0000	Yes	PNL	25	3	18	0.08		# 0196
213	BUS-0406	FB PAB-E2 DV & BOV1	0.48	1.88	1.88	1.57	0.018	0.0000	Yes	PNL	25	3	18	0.08		# 0161
214	BUS-0409	FB WASV E3	0.48	1.32	1.32	1.16	0.0226	0.0000	Yes	PNL	25	3	18	0.07		# 0198
215	BUS-0410	FB WASV E4	0.48	1.32	1.32	1.16	0.0226	0.0000	Yes	PNL	25	3	18	0.07		# 0199
216	BUS-0412	FB EBB-EDH-1	0.48	5.18	5.18	3.74	0.0162	0.0000	Yes	PNL	25	6	18	0.19		# 0200
217	BUS-0413	FB PAB-E1 DV & BOV	0.48	2.55	2.55	2.04	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0161
218	BUS-0414	FB PAB-E1 DV & BOV	0.48	2.21	2.21	1.81	0.0162	0.0000	Yes	PNL	25	4	18	0.08		# 0161
219	BUS-0415	FB EWH-2	0.48	5.79	5.79	4.11	0.0161	0.0000	Yes	PNL	25	6	18	0.20		# 0203
220	BUS-0436	PD SWPSO-SG	0.48	2.82	2.82	2.22	0.0162	0.0000	Yes	PNL	25	4	18	0.11		# 0201
221	BWP2 DISC	FU BACKWASH PUMP 2	0.48	17.42	16.71	10.11	0.0042	0.0000	Yes	PNL	25	5	18	0.15	(*N21b)	# 0568
222	BWWP1 DISC	FU 0668	0.48	16.55	15.86	9.66	0.0042	0.0000	Yes	PNL	25	5	18	0.14	(*N21b)	# 0136
223	BYPGT1 DISC	FU 0564	0.48	2.79	2.79	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
224	BYPGT2 DISC	FU 0554	0.48	2.79	2.79	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
225	C SUMP PUMP DISC	FU C SUMP PUMP	0.48	4.38	4.38	3.24	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
226	CC-1 DISC	FU CROSS COLL 1	0.48	2.81	2.81	2.21	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
227	CC2 DISC	FU 0528	0.48	2.79	2.79	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
228	CC-3 DISC	FU CROSS COLL 3	0.48	2.81	2.81	2.21	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
229	CE WET WELL GT DISC	FU 0745	0.48	1.48	1.48	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
230	CEB-ACCU-1 DISC	PD CEB-ACCU-1	0.48	5.04	5.04	3.65	0.0162	0.0000	Yes	PNL	25	6	18	0.18		# 0023
231	CEB-ACCU-1 TERM	PD CEB-ACCU-1	0.48	4.21	4.21	3.13	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0088
232	CEB-ACU-1 TERM	PD CEB-ACU-1	0.48	12.60	12.60	7.99	0.0162	0.0000	Yes	PNL	25	10	18	0.42	(*N21b)	# 0023
233	CEB-EF-1 DISC	MCP CEB-EF-1	0.48	1.76	1.76	1.48	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0023
234	CEB-EF-2 DISC	MCP CEB-EF-2	0.48	1.91	1.91	1.60	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0023
235	CEB-FCP-1 DISC	MCP CEB-FCP-1	0.48	4.10	4.10	3.06	0.005	0.0000	Yes	PNL	25	2	18	0.05		# 0023
236	CEB-FCP-2 TERM	PD CEP-FCP-2	0.48	3.25	3.25	2.51	0.0162	0.0000	Yes	PNL	25	4	18	0.12		# 0023
237	CEB-P-1 DISC	MCP CEB-P-1	0.48	3.24	3.24	2.50	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0023
238	CEB-P-2 DISC	MCP CEB-P-2	0.48	3.25	3.25	2.51	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0023
239	CF2 AHU-1 DISC	MCP AHU-1	0.48	1.19	1.19	1.07	0.015	0.0000	Yes	PNL	25	2	18	0.04		# 0154
240	CF2 AHU-3 DISC	MCP AHU-3	0.48	2.01	2.01	1.67	0.015	0.0000	Yes	PNL	25	3	18	0.07		# 0155
241	CFG-1 BACK DR DISC	MB CFG-1	0.48	5.93	5.50	3.31	0.0302	0.0000	Yes	PNL	25	8	18	0.33	(*N3)	# 0159
242	CFG-1 BOWL DR DISC	FU CFG-1	0.48	21.50	19.42	11.39	0.0083	0.0000	Yes	PNL	25	9	18	0.36	(*N21b)	# 0159
243	CFG-2 BACK DR DISC	MB CFG-2	0.48	7.34	6.84	4.69	0.0172	0.0000	Yes	PNL	25	7	18	0.27		# 0159
244	CFG-2 BOWL DR DISC	FU CFG-2	0.48	21.50	19.42	11.39	0.0083	0.0000	Yes	PNL	25	9	18	0.36	(*N21b)	# 0159

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
245	CFG-3 BACK DR DISC	MB CFG-3	0.48	6.05	5.62	3.37	0.0286	0.0000	Yes	PNL	25	8	18	0.32	(*N3)	# 0159
246	CFG-3 BOWL DR DISC	FU CFG-3	0.48	23.07	21.00	12.19	0.0083	0.0000	Yes	PNL	25	9	18	0.38	(*N21b)	# 0159
247	CHABLWR DISC	FU CHANNEL AIR BLOWER	0.48	4.46	4.46	3.29	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
248	CN-50-3 FCV	FB CN-50-3 FCV	0.48	1.03	1.03	0.80	0.0398	0.0000	Yes	PNL	25	4	18	0.09	(*N3)	# 0161
249	CONT TK INT GT DISC	FU 0682	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
250	CP-70 EMG	FU CP70 EMG TERM	0.48	1.50	1.50	1.30		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0568
251	CP-70 NRM	FU 0756	0.48	2.88	2.88	2.26		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0568
252	CR-1 HSP 5 DISC	MCP HSP 5	0.48	3.38	3.38	2.60	0.015	0.0000	Yes	PNL	25	4	18	0.12		# 0165
253	CR-1 HSP 6 DISC	MCP HSP 6	0.48	3.23	3.23	2.50	0.015	0.0000	Yes	PNL	25	4	18	0.11		# 0166
254	D SP-2 DISC	FU D SUMP PUMP 2	0.48	4.46	4.46	3.29	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
255	DCH FNL EFF SP DISC	FU 0751	0.48	1.48	1.48	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
256	DOOR OP EE1	FU 0905	0.48	2.77	2.77	2.19	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0099
257	DOOR OP EE2	FU 0906	0.48	2.77	2.77	2.19	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0099
258	DOOR OP FF	FU 0919	0.48	2.74	2.74	2.17	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0099
259	DOOR OPERATOR STR	FU DOOR OPERATOR	0.48	4.46	4.46	3.29	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
260	DP-51	MB MCC-51A	0.48	34.50	34.50	18.89	0.0108	0.0000	Yes	PNL	25	13	18	0.71	(*N5) (*N21b)	# 0267
261	DP-51 (MB DP-51 LineSide)	MB MCC-51A	0.48	34.50	34.50	18.89	0.0108	0.0000	Yes	PNL	25	13	18	0.71	(*N5) (*N21b)	# 0248-Line
262	DP-52	MB DP-52	0.48	32.43	32.43	17.91	0.01	0.0000	Yes	PNL	25	12	18	0.62	(*N21b)	# 0269
263	DP-52 (MB DP-52 LineSide)	MB MCC-52A	0.48	32.43	32.43	17.91	0.011	0.0000	Yes	PNL	25	13	18	0.69	(*N5) (*N21b)	# 0250-Line
264	DP-54	MB DP-54	0.48	24.18	24.18	13.94	0.01	0.0000	Yes	PNL	25	10	18	0.48	(*N21b)	# 0271
265	DP-54 (MB DP-54 LineSide)	MB MCC-54A	0.48	24.18	24.18	13.94	0.0122	0.0000	Yes	PNL	25	12	18	0.58	(*N5) (*N21b)	# 0252-Line
266	DP-55	MB DP-55	0.48	25.35	25.35	14.52	0.01	0.0000	Yes	PNL	25	11	18	0.50		# 0273
267	DP-55 (MB DP-55 LineSide)	FB ATS-55 NRM	0.48	25.35	25.35	14.52	0.012	0.0000	Yes	PNL	25	12	18	0.60		# 0254-Line
268	DP-56	MB DP-56	0.48	14.03	14.03	8.76	0.0107	0.0000	Yes	PNL	25	8	18	0.31	(*N21b)	# 0275
269	DP-56 (MB DP-56 LineSide)	FB DP-56	0.48	14.03	14.03	7.01	0.2	0.0000	Yes	PNL	25	41	18	4.7	(*N3) (*N16) (*N21b)	# 0256-Line
270	DRILL PRESS	FB DRILL PRESS	0.48	4.61	4.61	3.38	0.0162	0.0000	Yes	PNL	25	5	18	0.17		# 0161
271	DROP (NGW) STR	FU DOOR OP (NGW)	0.48	4.38	4.38	3.24	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
272	DROP (SG) STR	FU DOOR OP (SG)	0.48	4.38	4.38	3.24	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
273	E CONT TK G1 DISC	FU 0747	0.48	1.48	1.48	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
274	E SUMP PUMP 1 DISC	FU E SUMP PUMP 1	0.48	2.81	2.81	2.21	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
275	EBB SUMP PUMP 2 DISC	MCP EBB SUMP PUMP 2	0.48	3.40	3.40	2.61	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0126
276	EBB SUMP PUMP 4 DISC	MCP EBB SUMP PUMP 4	0.48	0.99	0.99	0.77	0.04	0.0000	Yes	PNL	25	4	18	0.08	(*N3)	# 0127
277	EBB-A HOIST 1	PD EBB-A HOIST1	0.48	0.97	0.97	0.76	0.3377	0.0000	Yes	PNL	25	13	18	0.69	(*N3)	# 0118
278	EBB-A HOIST 1 DISC	PD EBB-A HOIST1	0.48	1.04	1.04	0.81	0.0394	0.0000	Yes	PNL	25	4	18	0.09	(*N3)	# 0119
279	EBB-A HOIST 2	PD EBB-A HOIST2	0.48	0.97	0.97	0.76	0.3377	0.0000	Yes	PNL	25	13	18	0.69	(*N3)	# 0120
280	EBB-A HOIST 2 DISC	PD EBB-A HOIST2	0.48	1.04	1.04	0.81	0.0394	0.0000	Yes	PNL	25	4	18	0.09	(*N3)	# 0121
281	EBB-EDH-1 LINE'	FB EBB-EDH-1	0.48	3.92	3.92	2.95	0.0162	0.0000	Yes	PNL	25	5	18	0.14		# 0161
282	EBB-EF-10 DISC	MCP EBB-EF-10	0.48	2.72	2.72	2.16	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0133

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
283	EBB-EF-5 DISC	MCP EBB-EF-5	0.48	3.99	3.99	2.99	0.005	0.0000	Yes	PNL	25	2	18	0.05		# 0134
284	EBB-EF-6 DISC	MCP EBB-EF-6	0.48	2.16	2.16	1.77	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0135
285	EBB-EF-7 DISC	MCP EBB-EF-7	0.48	1.44	1.44	1.25	0.005	0.0000	Yes	PNL	25	1	18	0.02		# 0136
286	EBB-EF-9 DISC	MCP EBB-EF-9	0.48	0.98	0.98	0.90	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0137
287	EBB-EUH-1 TERM	PD EBB-EUH-1	0.48	5.98	5.98	4.23	0.0162	0.0000	Yes	PNL	25	6	18	0.21		# 0118
288	EBB-HV-1 DISC	PD EBB-HV-1	0.48	3.28	3.28	2.53	0.0162	0.0000	Yes	PNL	25	4	18	0.12		# 0139
289	EBB-HV-1 STR	PD EBB-HV-1	0.48	2.50	2.50	2.01	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0108
290	EF1 DISC	FU 0646	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
291	EF2 DISC	FU 0646	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
292	EF3 DISC	FU EF-3,4,1	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
293	EF4 DISC	FU EF-3,4,1	0.48	1.48	1.48	1.28	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
294	ELEVATOR CP DISC	PD ELEVATOR CP	0.48	1.56	1.56	1.34	0.0171	0.0000	Yes	PNL	25	3	18	0.06		# 0492
295	ELEVATOR CP INPUT	FU ELEVATOR CP	0.48	1.47	1.47	1.27		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0492
296	EP THRV CONTROLLER	FU E. PLANT THR VALVE	0.48	4.46	4.46	3.29	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0133
297	EPBBV DISC	PD 0650	0.48	1.36	1.36	1.01	0.0341	0.0000	Yes	PNL	25	4	18	0.10	(*N3)	# 0136
298	EPBBV STARTER	PD 0650	0.48	1.29	1.29	0.97	0.1594	0.0000	Yes	PNL	25	10	18	0.42	(*N3)	# 0136
299	EPB-EUH-1 DISC	PD EPB-EUH-1	0.48	3.89	3.89	2.93	0.0162	0.0000	Yes	PNL	25	5	18	0.14		# 0180
300	EPB-EUH-1 TERM	PD EPB-EUH-1	0.48	3.64	3.64	2.77	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0152
301	EPSEGE DISC	FU 0654	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
302	EPSEGW DISC	FU 0656	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
303	EQ INFL GATE 1 STR	FU EQ INFL GATE 1	0.48	2.81	2.81	2.21	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
304	EQ INFL GATE 10 STR	FU EQ INFL GATE 10	0.48	2.81	2.81	2.21	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
305	EQ INFL GATE 11 STR	FU EQ INFL GATE 11	0.48	2.81	2.81	2.21	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
306	EQ INFL GATE 12 STR	FU EQ INFL GATE 12	0.48	2.81	2.81	2.21	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
307	EQ INFL GATE 2 STR	FU EQ INFL GATE 2	0.48	2.81	2.81	2.21	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
308	EQ INFL GATE 3 STR	FU EQ INFL GATE 3	0.48	2.81	2.81	2.21	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
309	EQ INFL GATE 4 STR	FU EQ INFL GATE 4	0.48	2.81	2.81	2.21	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
310	EQ INFL GATE 9 STR	FU EQ INFL GATE 9	0.48	2.81	2.81	2.21	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
311	EQINGT5 DISC	FU 0565	0.48	2.79	2.79	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
312	EQINGT6 DISC	FU 0566	0.48	2.79	2.79	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
313	EQINGT7 DISC	FU 0577	0.48	2.79	2.79	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
314	EQINGT8 DISC	FU 0578	0.48	2.79	2.79	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
315	EQPRM HOIST DISC	FU 0576	0.48	5.97	5.97	4.22	0.0042	0.0000	Yes	PNL	25	3	18	0.05		# 0073
316	EQPT RCPT C	FU WELDER OUTLET C	0.48	6.22	6.22	4.37	0.0042	0.0000	Yes	PNL	25	3	18	0.06		# 0492
317	EQPT RCPT D	FU WELDER OUTLET D	0.48	6.37	6.37	4.46	0.0042	0.0000	Yes	PNL	25	3	18	0.06		# 0430
318	EQPT RCPT E	FU WELD RCPT E	0.48	12.80	12.80	8.09	0.0042	0.0000	Yes	PNL	25	4	18	0.11	(*N21b)	# 0403
319	EQPT RCPT EBB-A	PD EBB-A WELD RCPT	0.48	8.24	8.24	5.56	0.0162	0.0000	Yes	PNL	25	8	18	0.29	(*N20b)	# 0173
320	EQPT RCPT EBB-B	PD WELD RCPT EBB-B	0.48	7.70	7.70	5.24	0.0162	0.0000	Yes	PNL	25	7	18	0.27		# 0174
321	EQPT RCPT EE	FU 0908	0.48	4.06	4.06	3.04		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0430
322	EQPT RCPT EPB-B	PD EQRCPT-EPB-B	0.48	4.43	4.43	3.27	0.0162	0.0000	Yes	PNL	25	5	18	0.16		# 0177
323	EQPT RCPT F	FU 0559	0.48	2.79	2.79	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0407

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
324	EQPT RCPT M	FU 0663	0.48	2.32	2.32	1.88		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0136
325	EQPT RCPT RLS-B	PD WELD OUTLET RLS-B	0.48	4.43	4.43	3.27	0.0162	0.0000	Yes	PNL	25	5	18	0.16		# 0430
326	EQRETFCV DISC	FU 0553	0.48	2.79	2.79	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
327	EQ-RET-V-1 DISC	FU EQ RET VALVE 1	0.48	2.81	2.81	2.21	0.0083	0.0000	Yes	PNL	25	3	18	0.05		# 0475
328	EQ-RET-V-2 DISC	FU EQ RET VALVE 2	0.48	2.81	2.81	2.21	0.0083	0.0000	Yes	PNL	25	3	18	0.05		# 0475
329	EQRETV3 DISC	FU 0557	0.48	2.79	2.79	2.20	0.0083	0.0000	Yes	PNL	25	3	18	0.05		# 0073
330	ERU DISC	FU 0573	0.48	2.79	2.79	1.87	0.0237	0.0000	Yes	PNL	25	5	18	0.13	(*N3)	# 0073
331	ESESP6 DISC	FU 0660	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
332	EUH1 DISC	FU 0662	0.48	1.49	1.49	1.29		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0136
333	EUH-E1 TERM	PD-0538	0.48	5.92	5.92	4.19	0.0151	0.0000	Yes	PNL	25	6	18	0.20		# 0132
334	EUH-E2 TERM	PD-0539	0.48	3.83	3.83	2.89	0.0162	0.0000	Yes	PNL	25	5	18	0.14		# 0132
335	EWH-1 DISC	PD EWH-1	0.48	10.41	10.41	6.79	0.0162	0.0000	Yes	PNL	25	9	18	0.35	(*N21b)	# 0492
336	EWH-2 DISC	PD EWH-2	0.48	19.65	19.65	11.68	0.0161	0.0000	Yes	PNL	25	12	18	0.63	(*N21b)	# 0568
337	EWH-2 TERMS	PD EWH-2	0.48	18.50	18.50	11.09	0.0161	0.0000	Yes	PNL	25	12	18	0.60	(*N21b)	# 0162
338	F-1-1 DISC	PD F-1-1	0.48	2.25	2.25	1.84	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0160
339	F-1-1 STARTER	PD F-1-1	0.48	1.91	1.91	1.60	0.0166	0.0000	Yes	PNL	25	3	18	0.08		# 0188
340	F-1-2 DISC	PD F-1-1	0.48	2.23	2.23	1.82	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0160
341	F-1-2 STARTER	PD F-1-1	0.48	1.82	1.82	1.53	0.0167	0.0000	Yes	PNL	25	3	18	0.07		# 0190
342	F-1-3 DISC	PD F-1-1	0.48	2.21	2.21	1.81	0.0162	0.0000	Yes	PNL	25	4	18	0.08		# 0160
343	F-1-3 STARTER	PD F-1-1	0.48	1.54	1.54	1.32	0.0172	0.0000	Yes	PNL	25	3	18	0.06		# 0350
344	F-1-4 DISC	PD F-1-1	0.48	2.19	2.19	1.80	0.0162	0.0000	Yes	PNL	25	4	18	0.08		# 0160
345	F-1-4 STARTER	PD F-1-1	0.48	1.47	1.47	1.08	0.0209	0.0000	Yes	PNL	25	3	18	0.06	(*N3)	# 0194
346	F-1-5 DISC	PD F-1-5	0.48	1.84	1.84	1.55	0.0167	0.0000	Yes	PNL	25	3	18	0.07		# 0160
347	F-1-5 STARTER	PD F-1-5	0.48	1.30	1.30	0.98	0.0252	0.0000	Yes	PNL	25	3	18	0.07	(*N3)	# 0500
348	F-1-6 DISC	PD F-1-5	0.48	1.83	1.83	1.54	0.0167	0.0000	Yes	PNL	25	3	18	0.07		# 0160
349	F-1-6 STARTER	PD F-1-5	0.48	1.34	1.34	1.00	0.0242	0.0000	Yes	PNL	25	3	18	0.07	(*N3)	# 0500
350	F-1-7 DISC	PD F-1-5	0.48	1.82	1.82	1.53	0.0167	0.0000	Yes	PNL	25	3	18	0.07		# 0160
351	F-1-7 STARTER	PD F-1-5	0.48	1.53	1.53	1.32	0.0172	0.0000	Yes	PNL	25	3	18	0.06		# 0500
352	F-1-8 DISC	PD F-1-5	0.48	1.80	1.80	1.52	0.0167	0.0000	Yes	PNL	25	3	18	0.07		# 0160
353	F-1-8 STARTER	PD F-1-5	0.48	1.57	1.57	1.35	0.0171	0.0000	Yes	PNL	25	3	18	0.07		# 0500
354	F-2-1 DISC	PD F-2-6	0.48	5.62	5.62	4.01	0.0162	0.0000	Yes	PNL	25	6	18	0.20		# 0160
355	F-2-1 STARTER	PD F-2-6	0.48	4.17	4.17	3.11	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0204
356	F-2-12 DISC	PD F-2-6	0.48	5.54	5.54	3.96	0.0162	0.0000	Yes	PNL	25	6	18	0.20		# 0160
357	F-2-12 STARTER	PD F-2-6	0.48	4.12	4.12	3.07	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0206
358	F-2-13 DISC	PD F-2-13	0.48	1.57	1.57	1.35	0.0171	0.0000	Yes	PNL	25	3	18	0.07		# 0160
359	F-2-13 STARTER	PD F-2-13	0.48	1.04	1.04	0.80	0.0354	0.0000	Yes	PNL	25	3	18	0.08	(*N3)	# 0208
360	F-2-18 DISC	PD F-2-13	0.48	1.56	1.56	1.34	0.0171	0.0000	Yes	PNL	25	3	18	0.06		# 0160
361	F-2-18 STARTER	PD F-2-13	0.48	1.38	1.38	1.03	0.023	0.0000	Yes	PNL	25	3	18	0.07	(*N3)	# 0210
362	F-2-19 DISC	PD F-2-13	0.48	1.55	1.55	1.33	0.0172	0.0000	Yes	PNL	25	3	18	0.06		# 0160
363	F-2-19 STARTER	PD F-2-13	0.48	1.37	1.37	1.02	0.0232	0.0000	Yes	PNL	25	3	18	0.07	(*N3)	# 0212
364	F-2-24 DISC	PD F-2-13	0.48	1.54	1.54	1.32	0.0172	0.0000	Yes	PNL	25	3	18	0.06		# 0160

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
365	F-2-24 STARTER	PD F-2-13	0.48	1.00	1.00	0.78	0.0372	0.0000	Yes	PNL	25	3	18	0.08	(*N3)	# 0214
366	F-2-6 DISC	PD F-2-6	0.48	5.71	5.71	4.06	0.0162	0.0000	Yes	PNL	25	6	18	0.20		# 0160
367	F-2-6 STARTER	PD F-2-6	0.48	2.08	2.08	1.71	0.0164	0.0000	Yes	PNL	25	3	18	0.08		# 0217
368	F-2-7 DISC	PD F-2-6	0.48	5.46	5.46	3.91	0.0162	0.0000	Yes	PNL	25	6	18	0.19		# 0160
369	F-2-7 STARTER	PD F-2-6	0.48	2.11	2.11	1.74	0.0163	0.0000	Yes	PNL	25	4	18	0.08		# 0219
370	F-5-1 DISC	FU F-5-1	0.48	4.46	4.46	3.29	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
371	F-5-2 DISC	FU 5-5-2	0.48	4.46	4.46	3.29	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
372	F-54-1 DISC	PD F-54-4	0.48	1.80	1.80	1.52	0.0185	0.0000	Yes	PNL	25	3	18	0.08		# 0492
373	F-54-1 STR	PD F-54-4	0.48	1.75	1.75	1.48	0.0188	0.0000	Yes	PNL	25	3	18	0.08		# 0492
374	F-54-2 DISC	PD F-54-5	0.48	2.45	2.45	1.98	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0492
375	F-54-2 STR	PD F-54-5	0.48	2.36	2.36	1.91	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0492
376	F-54-4 DISC	PD F-54-4	0.48	4.61	4.61	3.38	0.0162	0.0000	Yes	PNL	25	5	18	0.17		# 0492
377	F-54-4 STR	PD F-54-4	0.48	4.15	4.15	3.09	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0492
378	F-54-5 DISC	PD F-54-5	0.48	11.22	11.22	7.24	0.0162	0.0000	Yes	PNL	25	9	18	0.38	(*N21b)	# 0492
379	F-54-5 STR	PD F-54-5	0.48	9.35	9.35	6.19	0.0162	0.0000	Yes	PNL	25	8	18	0.32	(*N20b)	# 0492
380	F-60-5	FB EAST JC GATES	0.48	0.92	0.92	0.73	0.4241	0.0000	Yes	PNL	25	14	18	0.83	(*N3)	# 0161
381	F-60-6	FB EAST JC GATES	0.48	0.92	0.92	0.73	0.4241	0.0000	Yes	PNL	25	14	18	0.83	(*N3)	# 0161
382	F-6-1 DISC	FU F-6-1	0.48	4.38	4.38	3.24	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
383	F-6-2 DISC	FU F-6-2	0.48	4.38	4.38	3.24	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
384	F-6-4 DISC	FB GATE OPERATORS	0.48	4.46	4.46	3.29	0.0158	0.0000	Yes	PNL	25	5	18	0.16		# 0492
385	F-7-1 DISC	FB GATE OPERATORS	0.48	3.47	3.47	2.66	0.0165	0.0000	Yes	PNL	25	5	18	0.13		# 0492
386	F-8-6 DISC	FB GATE OPERATORS	0.48	2.84	2.84	2.24	0.0171	0.0000	Yes	PNL	25	4	18	0.11		# 0492
387	FASB1 DISC	PD 0672	0.48	14.32	13.65	8.50	0.0147	0.0000	Yes	PNL	25	10	18	0.43	(*N21b)	# 0136
388	FASB-1 LCP	PD 0672	0.48	16.91	16.22	9.85	0.0143	0.0000	Yes	PNL	25	10	18	0.49	(*N20b)	# 0206
389	FCB-1 DISC	PD 0724	0.48	8.56	8.56	5.74	0.0146	0.0000	Yes	PNL	25	7	18	0.27		# 0568
390	FCB-1-EF DISC	PD 0724	0.48	8.69	8.69	5.82	0.0146	0.0000	Yes	PNL	25	7	18	0.27		# 0568
391	FCBV-1 VFD	PD 0724	0.48	15.49	15.49	9.53	0.0137	0.0000	Yes	PNL	25	10	18	0.43	(*N21b)	# 0568
392	FDSP1 DISC	FU 0679	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
393	FDSP2 DISC	FU 0739	0.48	1.48	1.48	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
394	FDSP4 DISC	FU FLOOR DRN SP 4	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
395	FLRDRNSP3 DISC	FU 0657	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
396	GDWU-1 DISC	FU GRIT DEWATER UNIT 1	0.48	4.46	4.46	3.29	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
397	GDWU-2 DISC	FU GRIT DEWATER UNIT 2	0.48	4.46	4.46	3.29	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
398	GP-3 DISC TERM	FU GP-3	0.48	4.38	4.38	3.24	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
399	GRIT BLOWER 2 DISC	FU GRIT BLOWER 2	0.48	4.46	4.46	3.29	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
400	GRTBLWR3 DISC	FU GRIT BLOWER 3	0.48	4.38	4.38	3.24	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
401	GSP1 DISC	FU GRIT SLURRY PUMP 1	0.48	4.46	4.46	3.29	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
402	GSP2 DISC	FU GRIT SLURRY PUMP 2	0.48	4.46	4.46	3.29	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
403	GSP4 DISC	FU GRIT SLURRY PUMP 4	0.48	4.46	4.46	3.29	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
404	HEAT REC UNIT DISC	FU HEAT RECOVERY UNIT	0.48	8.12	8.12	5.49	0.0042	0.0000	Yes	PNL	25	3	18	0.07		# 0492
405	HOIST D DISC	FU HOIST D	0.48	4.46	4.46	3.29	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
406	HOIST EPB-B DISC	PD HOIST EPB-B	0.48	4.16	4.16	3.10	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0180
407	HOIST EPB-B STARTER	PD HOIST EPB-B	0.48	3.64	3.64	2.77	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0177
408	HOIST P DISC	FU 0695	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
409	HOIST Q DISC	FU 0750	0.48	1.48	1.48	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
410	HORZ BAND SAW	FB HORZ BAND SAW	0.48	2.40	2.40	1.94	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0161
411	HPPEW2 DISC	FU 0546	0.48	10.80	10.09	6.54	0.0083	0.0000	Yes	PNL	25	6	18	0.19	(*N21b)	# 0073
412	HP-PEW-P-1 DISC	FU HP PEW PUMP 1	0.48	11.33	10.62	6.84	0.0083	0.0000	Yes	PNL	25	6	18	0.20	(*N21b)	# 0475
413	HT BOOST PMP DISC	FU 0753	0.48	1.48	1.48	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
414	HV-1 DISC	PD HV-1	0.48	3.26	3.26	2.52	0.0162	0.0000	Yes	PNL	25	4	18	0.12		# 0180
415	IFSAB-1 LCP	PD IFSAB-1	0.48	7.83	7.83	5.32	0.0162	0.0000	Yes	PNL	25	7	18	0.27		# 0122
416	IPC LP-EFB	MB IPC LP-EFB	0.208	3.51	3.51	2.09	0.0167	0.0000	Yes	PNL	25	4	18	0.10		# 0193
417	IPC LP-EFB (MB IPC LP-EFB LineSide)	FB IPC LP-EFB	0.208	3.51	3.51	1.77	1.804	0.0000	Yes	PNL	25	62	18	9.1	(*N3)	# 0291-Line
418	IPC LP-WFB	MB IPC LP-WFB	0.208	1.79	1.79	1.10	1.921	0.0000	Yes	PNL	25	48	18	5.9	(*N3)	# 0193
419	IPC LP-WFB (MB IPC LP-WFB LineSide)	PD IPC LP-WFB	0.208	1.79	1.79	1.30	2	0.0000	Yes	PNL	25	54	18	7.3	(*N9)	# 0311-Line
420	IRON WORK	FU PP-MTB	0.48	4.87	4.87	3.55		0.0000	Yes	PNL	25	7	18	0.25	(*N4) (*N5)	# 0161
421	JC-1 DISC	FU JIB CRANES	0.48	4.46	4.46	3.29	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
422	JC-1 LCP TERM	FU JIB CRANES	0.48	3.47	3.47	2.66	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0230
423	JC-2 DISC	FU JIB CRANES	0.48	3.47	3.47	2.66	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0492
424	JC-3 LCP TERM	FU JIB CRANES	0.48	2.84	2.84	2.24	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0232
425	Junction box.	FB PAB-E2 DV & BOV1	0.48	2.12	2.12	1.74	0.0166	0.0000	Yes	PNL	25	4	18	0.08		# 0161
426	LBP-6 STARTER	FU SCREW PUMP 6	0.48	4.10	3.86	2.45	0.2431	0.0000	Yes	PNL	25	23	18	1.8	(*N3) (*N16)	# 0184
427	LBP-7 STARTER	FU SCREW PUMP 7	0.48	4.15	3.92	2.48	0.1983	0.0000	Yes	PNL	25	21	18	1.5	(*N3) (*N16)	# 0184
428	LBP-8 STARTER	FU SCREW PUMP 8	0.48	4.15	3.92	2.48	0.1983	0.0000	Yes	PNL	25	21	18	1.5	(*N3) (*N16)	# 0184
429	LP-ADM-1	MB LP-ADM-1	0.208	5.40	5.40	2.82	0.0171	0.0000	Yes	PNL	25	5	18	0.14		# 0026
430	LP-ADM-1 (MB LP-ADM-1 LineSide)	PD XFMR-LP-ADM-1	0.208	5.40	5.40	2.82	0.32	0.0000	Yes	PNL	25	30	18	2.7	(*N16)	# 0005-Line
431	LP-ADM-1A	MB LP-ADM-1A	0.208	5.33	5.33	2.80	0.0171	0.0000	Yes	PNL	25	5	18	0.14		# 0026
432	LP-ADM-1A (MB LP-ADM-1A LineSide)	MB LP-ADM-1	0.208	5.33	5.33	2.80	0.0171	0.0000	Yes	PNL	25	5	18	0.14		# 0006-Line
433	LP-ADM-UPS	MB LP-ADM-UPS	0.208	0.04	0.04	0.04	2	0.0000	Yes	PNL	25	3	18	0.04	(*N9) (*N11)	# 0026
434	LP-ADM-UPS (MB LP-ADM-UPS LineSide)	MaxTripTime @2.0s	0.208	0.04	0.04	0.04	2	0.0000	Yes	PNL	25	3	18	0.04	(*N2) (*N9) (*N11)	# 0007-Line
435	LP-C	FU XFMR LP-C	0.208	1.85	1.85	1.33		0.0000	Yes	PNL	25	43	18	4.9	(*N4) (*N5) (*N9)	# 0242
436	LP-C (MB LP-C LineSide)	FU XFMR LP-C	0.208	1.85	1.85	1.33		0.0000	Yes	PNL	25	43	18	4.9	(*N4) (*N9)	# 0265-Line
437	LP-CEB-A	MB LP-CEB-A	0.208	3.35	3.35	2.02	2	0.0000	Yes	PNL	25	73	18	12	(*N9)	# 0030
438	LP-CEB-A (MB LP-CEB-A LineSide)	FB ATS-CEB NRM	0.208	3.35	3.35	2.02	2	0.0000	Yes	PNL	25	73	18	12	(*N9)	# 0008-Line
439	LP-CEB-B	MB LP-CEB-A	0.208	3.28	3.28	1.99	2	0.0000	Yes	PNL	25	72	18	12	(*N9)	# 0030
440	LP-D	FU XFMR LP-D PRI	0.208	1.81	1.81	1.31		0.0000	Yes	PNL	25	44	18	5.1	(*N4) (*N9)	# 0242
441	LP-E	FU XFMR-LP-E	0.208	4.10	4.10	2.33		0.0000	Yes	PNL	25	7	18	0.25	(*N4) (*N5)	# 0192

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
442	LP-E (#MB LP-E LineSide)	FU XFMR-LP-E	0.208	4.10	4.10	2.33		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0443-Line
443	LP-EBB-A	MB LP-EBB-A	0.208	3.19	3.19	1.95	2	0.0000	Yes	PNL	25	70	18	11	(*N9)	# 0193
444	LP-EBB-A (MB LP-EBB-A LineSide)	FB XFMR LP-EBB-A	0.208	3.19	3.19	1.95	2	0.0000	Yes	PNL	25	70	18	11	(*N9)	# 0009-Line
445	LP-EE	FU 0904	0.208	0.45	0.45	0.45	0.1772	0.0000	Yes	PNL	25	3	18	0.04	(*N11)	# 0194
446	LP-F	FU 0502	0.208	3.99	3.99	2.28		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0196
447	LP-FF	FU XFMR-LP-FF	0.208	0.49	0.49	0.49	0.1503	0.0000	Yes	PNL	25	3	18	0.04	(*N11)	# 0194
448	LP-LSE	PD-LP-LSE XFMR	0.208	1.87	1.87	1.34	2	0.0000	Yes	PNL	25	55	18	7.5	(*N9)	# 0161
449	LP-M	FU 0645	0.208	3.32	3.32	1.71		0.0000	Yes	PNL	25	12	18	0.65	(*N3) (*N4)	# 0257
450	LP-N	MB LP-N	0.208	3.47	3.47	1.76	2	0.0000	Yes	PNL	25	66	18	10.0	(*N3) (*N9)	# 0257
451	LP-N (MB LP-N LineSide)	FU 0699	0.208	3.47	3.47	2.07		0.0000	Yes	PNL	25	62	18	9.2	(*N4) (*N9)	# 0453-Line
452	LP-O	PD XFMR LP-O	0.208	2.51	2.51	1.65	1.988	0.0000	Yes	PNL	25	62	18	9.2		# 0199
453	LP-Q	FU 0734	0.208	3.31	3.31	2.00		0.0000	Yes	PNL	25	68	18	10	(*N4) (*N5) (*N9)	# 0257
454	LP-Q (MB LP-Q LineSide)	FU 0734	0.208	3.31	3.31	2.00		0.0000	Yes	PNL	25	68	18	10	(*N4) (*N9)	# 0456-Line
455	LP-RLS	MB-LP-RLS	0.208	1.77	1.77	1.09	1.958	0.0000	Yes	PNL	25	48	18	5.9	(*N3)	# 0073
456	LP-RLS (MB-LP-RLS LineSide)	FB ATS-RLS NRM	0.208	1.77	1.77	1.29	2	0.0000	Yes	PNL	25	54	18	7.2	(*N9)	# 0252-Line
457	LP-T	PD XFMR LP-T	0.208	2.57	2.57	1.67	1.946	0.0000	Yes	PNL	25	62	18	9.2		# 0200
458	LP-U	PD XFMR LP-U	0.208	2.53	2.53	1.66	1.971	0.0000	Yes	PNL	25	62	18	9.2		# 0199
459	LP-V	PD-0637	0.208	1.61	1.61	1.20	2	0.0000	Yes	PNL	25	51	18	6.6	(*N9)	# 0202
460	LP-V (PD-0637 LineSide)	MB MCC-EPB-A	0.208	1.61	1.61	1.20	2	0.0000	Yes	PNL	25	51	18	6.6	(*N5) (*N9)	# 0462-Line
461	LP-W	PD-0636	0.208	1.97	1.97	1.39	2	0.0000	Yes	PNL	25	56	18	7.8	(*N9)	# 0203
462	LP-W (PD-0636 LineSide)	MB MCC-EPB-B	0.208	1.97	1.97	1.39	2	0.0000	Yes	PNL	25	56	18	7.8	(*N5) (*N9)	# 0464-Line
463	LP-WBB-A	MB-WBB-A	0.208	3.57	3.57	2.11	2	0.0000	Yes	PNL	25	75	18	12	(*N9)	# 0193
464	LP-WBB-A (MB-WBB-A LineSide)	PD LP-WBB XFMR	0.208	3.57	3.57	2.11	2	0.0000	Yes	PNL	25	75	18	12	(*N9)	# 0258-Line
465	LP-WBB-B	MB-WBB-A	0.208	3.50	3.50	2.08	2	0.0000	Yes	PNL	25	74	18	12	(*N9)	# 0193
466	LP-WPB-A	MB LP-WPB-B	0.208	1.80	1.80	1.11	1.905	0.0000	Yes	PNL	25	47	18	5.9	(*N3)	# 0122
467	LP-WPB-A (MB LP-WPB-B LineSide)	FB ATS-WPB-NORM	0.208	1.80	1.80	1.31	2	0.0000	Yes	PNL	25	54	18	7.3	(*N9)	# 0010-Line
468	LP-WPB-B	MB LP-WPB-B	0.208	1.78	1.78	1.10	1.93	0.0000	Yes	PNL	25	48	18	5.9	(*N3)	# 0122
469	LSE-ACCU-1	FB LSE-ACCU-1	0.48	6.39	6.39	4.47	0.0162	0.0000	Yes	PNL	25	7	18	0.23		# 0161
470	LSE-ACU-1	FB LSE-ACU-1	0.48	4.01	4.01	3.00	0.0175	0.0000	Yes	PNL	25	5	18	0.16		# 0161
471	LSE-PPU-1	FB LSE-PPU-1	0.48	2.99	2.99	2.34	0.0162	0.0000	Yes	PNL	25	4	18	0.11		# 0161
472	MB-EF-1 DISC	FB MB-EF-1	0.48	3.33	3.33	2.56	0.0162	0.0000	Yes	PNL	25	5	18	0.12		# 0453
473	MCC-51A	MB MCC-51A	0.48	44.87	44.87	23.64	0.01	0.0000	Yes	MCC	25	15	18	0.84		# 0368
474	MCC-51A (MB MCC-51A LineSide)	800/800 MCC-51A	0.48	44.87	44.87	23.64	0.066	0.0000	Yes	MCC	25	46	18	5.6	(*N20a)	# 0369-Line
475	MCC-51B	MB MCC-51B	0.48	44.87	44.87	23.64	0.01	0.0000	Yes	MCC	25	15	18	0.84		# 0368

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
476	MCC-51B (MB MCC-51B LineSide)	800/800 MCC-51B	0.48	44.87	44.87	23.64	0.066	0.0000	Yes	MCC	25	46	18	5.6	(*N20a)	# 0367-Line
477	MCC-52A	MB MCC-52A	0.48	44.87	44.87	23.64	0.01	0.0000	Yes	MCC	25	15	18	0.84		# 0368
478	MCC-52A (MB MCC-52A LineSide)	800/800 MCC-52A	0.48	44.87	44.87	23.64	0.066	0.0000	Yes	MCC	25	46	18	5.6	(*N20a)	# 0371-Line
479	MCC-52B	MB MCC-52B	0.48	45.84	45.84	24.08	0.01	0.0000	Yes	MCC	25	15	18	0.86		# 0368
480	MCC-52B (MB MCC-52B LineSide)	800/800 MCC-52B	0.48	45.84	45.84	24.08	0.066	0.0000	Yes	MCC	25	46	18	5.7	(*N20a)	# 0373-Line
481	MCC-53 A	MB MCC-53A	0.48	44.87	44.87	23.64	0.01	0.0000	Yes	MCC	25	15	18	0.84		# 0368
482	MCC-53 A (MB MCC-53A LineSide)	800/600 MCC-53A	0.48	44.87	44.87	23.64	0.066	0.0000	Yes	MCC	25	46	18	5.6	(*N20a)	# 0375-Line
483	MCC-53B	MB MCC-53B	0.48	44.87	44.87	23.64	0.01	0.0000	Yes	MCC	25	15	18	0.84		# 0368
484	MCC-53B (MB MCC-53B LineSide)	800/600 MCC-53B	0.48	44.87	44.87	23.64	0.066	0.0000	Yes	MCC	25	46	18	5.6	(*N21a)	# 0377-Line
485	MCC-54 A	MB MCC-54A	0.48	43.05	43.05	22.82	0.01	0.0000	Yes	MCC	25	14	18	0.81		# 0368
486	MCC-54 A (MB MCC-54A LineSide)	800/800 MCC-54A	0.48	43.05	43.05	22.82	0.066	0.0000	Yes	MCC	25	45	18	5.3	(*N20a)	# 0379-Line
487	MCC-54B	MB MCC-54B	0.48	43.05	43.05	22.82	0.01	0.0000	Yes	MCC	25	14	18	0.81		# 0368
488	MCC-54B (MB MCC-54B LineSide)	800/800 MCC-54B	0.48	43.05	43.05	22.82	0.066	0.0000	Yes	MCC	25	45	18	5.3	(*N20a)	# 0381-Line
489	MCC-55 A	MB MCC-55A	0.48	44.87	44.87	23.64	0.01	0.0000	Yes	MCC	25	15	18	0.84		# 0368
490	MCC-55 A (MB MCC-55A LineSide)	800/600 MCC-55A	0.48	44.87	44.87	23.64	0.066	0.0000	Yes	MCC	25	46	18	5.6	(*N20a)	# 0383-Line
491	MCC-55B	MB MCC-55B	0.48	44.87	44.87	23.64	0.01	0.0000	Yes	MCC	25	15	18	0.84		# 0368
492	MCC-55B (MB MCC-55B LineSide)	800/600 MCC-55B	0.48	44.87	44.87	23.64	0.066	0.0000	Yes	MCC	25	46	18	5.6	(*N20a)	# 0385-Line
493	MCC-56 A	MB MCC-56A	0.48	15.96	15.51	9.50	0.0146	0.0000	Yes	MCC	25	10	18	0.47		# 0368
494	MCC-56 A (MB MCC-56A LineSide)	800/600 MCC-56A	0.48	15.96	15.51	9.50	0.066	0.0000	Yes	MCC	25	26	18	2.1	(*N20a)	# 0387-Line
495	MCC-56B	MB MCC-56B	0.48	15.73	15.28	9.38	0.0148	0.0000	Yes	MCC	25	10	18	0.47		# 0368
496	MCC-56B (MB MCC-56B LineSide)	800/600 MCC-56B	0.48	15.73	15.28	9.38	0.066	0.0000	Yes	MCC	25	25	18	2.1	(*N20a)	# 0389-Line
497	MCC-ADM-A	MB MCC-ADM-A	0.48	11.41	11.41	7.34	0.14	0.0000	Yes	MCC	25	34	18	3.3		# 0032
498	MCC-ADM-A (MB MCC-ADM-A LineSide)	800/800 ATS-ADM-EMG	0.48	11.41	11.41	7.31	0.2	0.0000	Yes	MCC	25	42	18	4.7	(*N16)	# 0012-Line
499	MCC-ADM-A (PD XFMR-LP-ADM-1 LineSide)	PD XFMR-LP-ADM-1	0.48	11.41	11.41	7.34	0.05	0.0000	Yes	MCC	25	18	18	1.2		# 0011-Line
500	MCC-C	800/200 MCC-C	0.48	15.17	15.17	8.43	0.2	0.0000	Yes	MCC	25	47	18	5.8	(*N16)	# 0283
501	MCC-CEB-A	800/600 MCC-CEB-A	0.48	25.33	25.33	14.50	0.06	0.0000	Yes	MCC	25	31	18	3.0		# 0034
502	MCC-CEB-B	800/600 MCC-CEB-B	0.48	25.87	25.87	14.77	0.06	0.0000	Yes	MCC	25	32	18	3.0		# 0035
503	MCC-D	800/200 MCC-D	0.48	15.61	15.61	8.89	0.2	0.0000	Yes	MCC	25	48	18	6.1	(*N16)	# 0286
504	MCC-E	800/400 MCC-E	0.48	13.01	10.42	6.58	0.06	0.0000	Yes	MCC	25	22	18	1.6		# 0215
505	MCC-EBB-A	800/600 MCC-EBB-A	0.48	9.69	9.34	6.15	0.14	0.0000	Yes	MCC	25	29	18	2.6		# 0218
506	MCC-EBB-B	800/600 MCC-EBB-B	0.48	8.94	8.59	5.73	0.14	0.0000	Yes	MCC	25	28	18	2.5		# 0220
507	MCC-EE	FU MCC-EE	0.48	12.42	12.42	7.89		0.0000	Yes	MCC	25	7	18	0.25	(*N4)	# 0222

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
508	MCC-EPB-A	MB MCC-EPB-A	0.48	5.79	5.79	4.11	0.0549	0.0000	Yes	MCC	25	13	18	0.70		# 0225
509	MCC-EPB-A (MB MCC-EPB-A LineSide)	800/200 MCC-EPB-A	0.48	5.79	5.79	4.11	0.14	0.0000	Yes	MCC	25	22	18	1.7		# 0256-Line
510	MCC-EPB-B	MB MCC-EPB-B	0.48	5.52	5.52	3.95	0.0554	0.0000	Yes	MCC	25	13	18	0.67		# 0225
511	MCC-EPB-B (MB MCC-EPB-B LineSide)	800/200 MCC-EPB-B	0.48	5.52	5.52	3.95	0.14	0.0000	Yes	MCC	25	22	18	1.6		# 0256-Line
512	MCC-F	800/400 MCC-F	0.48	12.30	10.43	6.64	0.06	0.0000	Yes	MCC	25	21	18	1.5		# 0229
513	MCC-FF	FU 0560	0.48	11.81	11.81	7.56		0.0000	Yes	MCC	25	7	18	0.25	(*N4)	# 0222
514	MCC-M	FB-MCC-M	0.48	20.71	15.74	7.73	0.32	0.0000	Yes	MCC	25	61	18	8.8	(*N3) (*N16)	# 0322
515	MCC-M.	FB-MCC-M	0.48	20.71	15.74	7.73	0.32	0.0000	Yes	MCC	25	61	18	8.8	(*N3) (*N16)	# 0530
516	MCC-N	FB-MCC-N	0.48	21.35	17.61	8.00	0.32	0.0000	Yes	MCC	25	62	18	9.1	(*N3) (*N16)	# 0322
517	MCC-N.	FB-MCC-N	0.48	21.35	17.61	8.00	0.32	0.0000	Yes	MCC	25	62	18	9.1	(*N3) (*N16)	# 0532
518	MCC-P	FB-MCC-P	0.48	20.23	17.92	10.60	0.05	0.0000	Yes	MCC	25	25	18	2.0		# 0322
519	MCC-Q	FB-MCC-Q	0.48	19.97	18.92	11.22	0.05	0.0000	Yes	MCC	25	25	18	2.0		# 0322
520	MCC-R	800/800 MCC-R	0.48	80.73	75.59	36.56	0.066	0.0000	Yes	MCC	25	64	18	9.6	(*N21a) (*N21b)	# 0322
521	MCC-RLS-A	MB MCC-RLS-A	0.48	15.43	13.27	8.17	0.14	0.0000	Yes	MCC	25	38	18	4.2		# 0313
522	MCC-RLS-A (MB MCC-RLS-A LineSide)	800/600 MCC-RLS-A	0.48	15.43	13.27	8.17	0.2	0.0000	Yes	MCC	25	47	18	5.8	(*N16)	# 0314-Line
523	MCC-RLS-B	MB MCC-RLS-B	0.48	12.78	11.35	6.10	0.0864	0.0000	Yes	MCC	25	24	18	1.9	(*N3)	# 0273
524	MCC-RLS-B (MB MCC-RLS-B LineSide)	800/400 MCC-RLS-B	0.48	12.78	11.35	7.18	0.2	0.0000	Yes	MCC	25	43	18	4.9	(*N16)	# 0274-Line
525	MCC-S	800/800 MCC-S	0.48	80.43	76.82	37.17	0.066	0.0000	Yes	MCC	25	64	18	9.5	(*N20a) (*N21b)	# 0322
526	MCC-WBB-A	1600/1440 MCC-WBB-A	0.48	39.58	34.93	18.74	0.2	0.0000	Yes	MCC	25	80	18	14	(*N16)	# 0233
527	MCC-WBB-B	1600/1440 MCC-WBB-B	0.48	36.74	34.41	18.60	0.2	0.0000	Yes	MCC	25	79	18	13	(*N16)	# 0235
528	MCC-WPB-A	MB MCC-WPB-A	0.48	13.18	13.18	8.30	0.0504	0.0000	Yes	MCC	25	20	18	1.4		# 0209
529	MCC-WPB-A (MB MCC-WPB-A LineSide)	800/400 MCC-WPB-A	0.48	13.18	13.18	8.30	0.14	0.0000	Yes	MCC	25	36	18	3.7		# 0287-Loa
530	MCC-WPB-B	MB MCC-WPB-B	0.48	12.95	12.95	8.18	0.0506	0.0000	Yes	MCC	25	19	18	1.4		# 0237
531	MCC-WPB-B (MB MCC-WPB-B LineSide)	800/400 MCC-WPB-B	0.48	12.95	12.95	8.18	0.14	0.0000	Yes	MCC	25	36	18	3.7		# 0485-Loa
532	MCC-XA	800/800 MCC-XA	0.48	20.59	19.38	11.44	0.066	0.0000	Yes	MCC	25	30	18	2.7	(*N21a)	# 0322
533	MCC-XB	800/800 MCC-XB	0.48	72.94	70.93	34.82	0.066	0.0000	Yes	MCC	25	60	18	8.7	(*N20a) (*N21b)	# 0322
534	METAL LATHE	FU PP-MTB	0.48	5.01	5.01	3.63		0.0000	Yes	PNL	25	7	18	0.25	(*N4) (*N5)	# 0161
535	MILL MACH	FB MILL MACH	0.48	4.13	4.13	3.08	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0161
536	MOD VALVE 1 DISC	FU 0746	0.48	1.48	1.48	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
537	MOD VALVE 3 DISC	FU 0746	0.48	1.35	1.35	1.19	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
538	MOD VALVE 5 DISC	FU 0746	0.48	1.24	1.24	1.10	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
539	MOD VALVE 7 DISC	FU 0746	0.48	1.15	1.15	1.03	0.0083	0.0000	Yes	PNL	25	2	18	0.02		# 0568
540	MPPEWP1 DISC	FU MP PEW PUMP 1	0.48	10.53	10.12	5.60	0.0083	0.0000	Yes	PNL	25	5	18	0.15	(*N3) (*N21b)	# 0475
541	MPPEWP2 DISC	FU 0548	0.48	10.07	9.66	5.38	0.0083	0.0000	Yes	PNL	25	5	18	0.15	(*N3) (*N21b)	# 0073
542	MU HV2 DISC	FU 0749	0.48	1.48	1.48	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
543	MV10 DISC	FU 0659	0.48	1.48	1.48	1.28	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
544	MV11 DISC	FU 0659	0.48	1.46	1.46	1.27	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
545	MV12 DISC	FU 0659	0.48	1.45	1.45	1.26	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
546	MV2 DISC	FU 0711	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
547	MV4 DISC	FU 0711	0.48	1.48	1.48	1.28	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
548	MV6 DISC	FU 0711	0.48	1.47	1.47	1.27	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
549	MV8 DISC	FU 0711	0.48	1.45	1.45	1.26	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
550	MV9 DISC	FU 0659	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
551	N EQPT RCPT	FU 0715	0.48	2.33	2.33	1.89		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0568
552	OZNTR DISC	FU 0917	0.48	8.18	8.18	5.52		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0099
553	P-53-06 DISC	PD P-53-06	0.48	5.97	5.97	4.22	0.0162	0.0000	Yes	PNL	25	6	18	0.21		# 0492
554	P-53-06 STR	PD P-53-06	0.48	5.04	5.04	3.65	0.0162	0.0000	Yes	PNL	25	6	18	0.18		# 0492
555	P-53-07 DISC.	PD P-53-07	0.48	3.51	3.51	2.68	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0492
556	P-53-07 STR	PD P-53-07	0.48	3.15	3.15	2.45	0.0162	0.0000	Yes	PNL	25	4	18	0.12		# 0492
557	P-53-20 DISC	PD P-53-07	0.48	6.00	6.00	4.24	0.0162	0.0000	Yes	PNL	25	6	18	0.21		# 0492
558	P-53-20 STR	PD P-53-07	0.48	5.06	5.06	3.67	0.0162	0.0000	Yes	PNL	25	6	18	0.18		# 0492
559	P-53-21 DISC	PD P-53-06	0.48	5.47	5.47	3.92	0.0162	0.0000	Yes	PNL	25	6	18	0.20		# 0492
560	P-53-21 STR	PD P-53-06	0.48	4.67	4.67	3.42	0.0162	0.0000	Yes	PNL	25	5	18	0.17		# 0492
561	PAB-E1 DV & BOV	FB PAB-E1 DV & BOV	0.48	2.21	2.21	1.81	0.0162	0.0000	Yes	PNL	25	4	18	0.08		# 0161
562	PAB-E1 LCP	FB PAB-E1 LCP	0.48	3.63	3.63	2.76	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0161
563	PAB-E1 STR IN	PD PAB-E1 RELAY	4.16	2.90	2.36	2.34	0.0167	0.0830	Yes	SWG	104	8	36	0.27		# 0250
564	PAB-E1 STR IN (FU PAB-E1 LineSide)	PD PAB-E1 RELAY	4.16	2.90	2.36	2.34	0.0167	0.0830	Yes	SWG	104	8	36	0.27		# 0014-Line
565	PAB-E2 DV & BOV1	FB PAB-E2 DV & BOV1	0.48	1.88	1.88	1.57	0.018	0.0000	Yes	PNL	25	3	18	0.08		# 0161
566	PAB-E2 LCP	FB PAB-E2 LCP	0.48	3.04	3.04	2.37	0.0162	0.0000	Yes	PNL	25	4	18	0.11		# 0161
567	PAB-E2 STR IN	PD PAB-E2 RELAY	4.16	2.36	1.83	1.82	0.0167	0.0830	Yes	SWG	104	7	36	0.23		# 0252
568	PAB-E2 STR IN (FU PAB-E2 LineSide)	PD PAB-E2 RELAY	4.16	2.36	1.83	1.82	0.0167	0.0830	Yes	SWG	104	7	36	0.23		# 0015-Line
569	PAB-E3 DV & BOV	FB PAB-E3 DV & BOV	0.48	1.65	1.65	1.41	0.0195	0.0000	Yes	PNL	25	3	18	0.08		# 0161
570	PAB-E3 LCP	FB PAB-E3 LCP	0.48	2.36	2.36	1.91	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0161
571	PAB-E3 STR IN	PD PAB-E3 RELAY	4.16	2.90	2.36	2.34	0.0167	0.0830	Yes	SWG	104	8	36	0.27		# 0254
572	PAB-E3 STR IN (FU PAB-E3 LineSide)	PD PAB-E3 RELAY	4.16	2.90	2.36	2.34	0.0167	0.0830	Yes	SWG	104	8	36	0.27		# 0016-Line
573	PAB-W1 VALVES JB	PD PAB-W1 VALVES	0.48	6.89	6.89	4.77	0.0162	0.0000	Yes	PNL	25	7	18	0.24		# 0106
574	PAB-W2 VALVES JB	PD PAB-W2 VALVES	0.48	5.23	5.23	3.77	0.0162	0.0000	Yes	PNL	25	6	18	0.19		# 0161
575	PAB-W3 VALVES JB	PD PAB-W3 VALVES	0.48	4.33	4.33	3.21	0.0162	0.0000	Yes	PNL	25	5	18	0.16		# 0106
576	PCDR W1 DISC	MCP PCDR-W1	0.48	1.34	1.34	1.18	0.005	0.0000	Yes	PNL	25	1	18	0.02		# 0492
577	PCDR-W2 DISC	MCP PCDR-W2	0.48	2.19	2.19	1.79	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
578	PC-E1 DISC	MCP PC-E1	0.48	0.59	0.59	0.59	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11)	# 0256
579	PC-E2 DISC	MCP PC-E2	0.48	0.75	0.75	0.72	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0180
580	PC-E3 DISC	MCP PC-E3	0.48	0.78	0.78	0.74	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0256
581	PC-E4 DISC	MCP PC-E4	0.48	0.54	0.54	0.54	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11)	# 0180
582	PC-WPB-EF-2 DISC	MCP WPB-EF-2	0.48	3.20	3.20	2.48	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0492
583	PC-WPB-P-2 DISC	MCP WPB-P-2	0.48	2.03	2.03	1.68	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
584	PDP UV 2A	FB-PDP-UV-2A	0.48	14.37	14.37	6.25	0.2	0.0000	Yes	MCC	25	40	18	4.4	(*N3) (*N16)	# 0322
585	PDP UV 2B	FB-PDP-UV-2B	0.48	14.37	14.37	6.25	0.2	0.0000	Yes	MCC	25	40	18	4.4	(*N3) (*N16)	# 0322
586	PDP-E1 DISC	MCP PDP-E1	0.48	4.30	4.30	3.19	0.005	0.0000	Yes	PNL	25	3	18	0.05		# 0256
587	PDP-W1 DISC	MCP PDP-W1	0.48	3.41	3.41	2.62	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0492
588	PEW STRAINER DISC	FU 0697	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
589	PEWP1 DISC	FU PEW PUMP #1	0.48	17.22	15.79	8.13	0.0103	0.0000	Yes	PNL	25	8	18	0.30	(*N3) (*N21b)	# 0136
590	PEWP2 DISC	FU PEW PUMP 2	0.48	16.58	15.18	7.86	0.042	0.0000	Yes	PNL	25	18	18	1.2	(*N3) (*N21b)	# 0568
591	PEWP3 ATS NRM	FU PEW PUMP 3	0.48	20.48	19.59	9.84	0.0187	0.0000	Yes	PNL	25	12	18	0.64	(*N3) (*N21b)	# 0576
592	PEWP3 DISC	FU PEW PUMP 3	0.48	16.84	15.96	8.24	0.0354	0.0000	Yes	PNL	25	16	18	1.0	(*N3) (*N21b)	# 0568
593	PMPRM HOIST DISC	FU 0575	0.48	4.10	4.10	3.06	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0073
594	PP-ADM-1	PD XFMR PP-ADM-1	0.48	2.67	2.67	1.80	0.7084	0.0000	Yes	PNL	25	36	18	3.7	(*N3) (*N5) (*N16)	# 0036
595	PP-ADM-1 (MB PP-ADM-1 LineSide)	PD XFMR PP-ADM-1	0.48	2.67	2.67	1.80	0.7084	0.0000	Yes	PNL	25	36	18	3.7	(*N3) (*N16)	# 0017-Line
596	PP-ADM-2	PD XFMR PP-ADM-1	0.48	2.16	2.16	1.51	1.016	0.0000	Yes	PNL	25	40	18	4.4	(*N3) (*N5)	# 0036
597	PP-EBB-A	FB ATS-EBB NORM	0.48	8.49	8.49	5.70	0.04	0.0000	Yes	PNL	25	13	18	0.72		# 0278
598	PP-EBB-B	FB PP-EBB-B	0.48	7.15	7.15	4.92	0.0165	0.0000	Yes	PNL	25	7	18	0.25		# 0278
599	PP-LSE	MB PP-LSE	0.48	12.40	12.40	7.88	0.0175	0.0000	Yes	PNL	25	10	18	0.45		# 0074
600	PP-LSE (MB PP-LSE LineSide)	FB ATS-LSE-NRM	0.48	12.40	12.40	7.88	0.0529	0.0000	Yes	PNL	25	19	18	1.4		# 0075-Line
601	PP-LSE CKT #14	FB SLDG'S S-50-1,2,3,4,5	0.48	1.00	1.00	0.78	0.0571	0.0000	Yes	PNL	25	4	18	0.12	(*N3)	# 0618
602	PP-LSE CKT #19	FB SLDG'S F-50-3,4	0.48	1.00	1.00	0.78	0.0571	0.0000	Yes	PNL	25	4	18	0.12	(*N3)	# 0074
603	PP-LSE CKT #2	FB SLDG'S F-60-1,2,3	0.48	1.00	1.00	0.78	0.0571	0.0000	Yes	PNL	25	4	18	0.12	(*N3)	# 0620
604	PP-LSE CKT #26	FB EAST JC GATES	0.48	1.00	1.00	0.78	0.0571	0.0000	Yes	PNL	25	4	18	0.12	(*N3)	# 0621
605	PP-LSE CKT #8	FB SLDG's S-60-1,2	0.48	1.00	1.00	0.78	0.0571	0.0000	Yes	PNL	25	4	18	0.12	(*N3)	# 0622
606	PP-MTB	FU PP-MTB	0.48	5.56	5.56	3.97		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0074
607	PP-MTB DISC SW	800/250 PP-MTB	0.48	5.82	5.82	3.51	0.14	0.0000	Yes	PNL	25	21	18	1.5	(*N3)	# 0435
608	PP-UV	FU ATS-PP-UV-NRM	0.48	1.67	1.67	1.21	0.0491	0.0000	Yes	PNL	25	5	18	0.17	(*N3)	# 0374
609	PP-WBB-A	FB ATS-WBB-NORM	0.48	32.16	32.16	17.79	0.05	0.0000	Yes	PNL	25	32	18	3.1		# 0079
610	PP-WBB-B	PD PP-WBB-B	0.48	31.03	31.03	17.25	0.0175	0.0000	Yes	PNL	25	17	18	1.0		# 0074
611	PP-Z	FU PP-MTB	0.48	4.96	4.96	3.60		0.0000	Yes	PNL	25	7	18	0.25	(*N4) (*N5)	# 0074
612	PP-Z (MB-PP-Z LineSide)	FU PP-MTB	0.48	4.96	4.96	3.60		0.0000	Yes	PNL	25	7	18	0.25	(*N4) (*N5)	# 0614-Line
613	PSCP-E1 DISC	MCP PSLMP-E4	0.48	3.74	3.74	2.83	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0256
614	PSCP-E2 DISC	MCP PSCP-E2	0.48	3.64	3.64	2.77	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0180
615	PSCP-W1 DISC	MCP PSCP-W1	0.48	6.93	6.93	4.80	0.005	0.0000	Yes	PNL	25	3	18	0.08		# 0492
616	PSCP-W2 DISC	MCP PSCP-W2	0.48	4.51	4.51	3.32	0.005	0.0000	Yes	PNL	25	3	18	0.05		# 0492
617	PSLP-E1 VFD IN	PD PSLP-E1	0.48	3.74	3.74	2.83	0.0162	0.0000	Yes	PNL	25	5	18	0.14		# 0617
618	PSLP-E2 VFD IN	PD PSLP-E2	0.48	3.42	3.42	2.62	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0177
619	PSLP-E3 VFD IN	PD PSLP-E3	0.48	3.29	3.29	2.54	0.0162	0.0000	Yes	PNL	25	4	18	0.12		# 0619
620	PSLPG-W1 VFD IN	PD PSLPG-W1	0.48	2.62	2.62	2.09	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0492
621	PSLPG-W2 INPUT	PD PSLPG-W2	0.48	4.74	4.74	3.47	0.0162	0.0000	Yes	PNL	25	6	18	0.17		# 0492
622	PSLPM-E1 LCP	PD PSLPM-E1	0.48	3.64	3.64	2.77	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0177

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
623	PSLPM-E2 LCP	PD PSLPM-E2	0.48	3.42	3.42	2.62	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0177
624	PSLP-W1 VFD IN	PD PSLP-W1	0.48	7.10	7.10	4.89	0.0162	0.0000	Yes	PNL	25	7	18	0.25		# 0492
625	PSLP-W2 INPUT	PD PSLP-W2	0.48	8.43	8.43	5.67	0.0162	0.0000	Yes	PNL	25	8	18	0.29		# 0492
626	RASP-E1 VFD IN	PD RASP-E1	0.48	2.01	2.01	1.67	0.021	0.0000	Yes	PNL	25	4	18	0.10		# 0302
627	RASP-E2 VFD IN	PD RASP-E2	0.48	1.99	1.99	1.65	0.0191	0.0000	Yes	PNL	25	4	18	0.09		# 0461
628	RASP-E3 VFD IN	PD RASP-E3	0.48	2.01	2.01	1.67	0.021	0.0000	Yes	PNL	25	4	18	0.10		# 0302
629	RASP-E4 VFD IN	PD RASP-E4	0.48	1.99	1.99	1.65	0.0191	0.0000	Yes	PNL	25	4	18	0.09		# 0463
630	RASP-E5 VFD IN	PD RASP-E5	0.48	2.01	2.01	1.67	0.021	0.0000	Yes	PNL	25	4	18	0.10		# 0302
631	RASP-E6 VFD IN	PD RASP-E6	0.48	1.99	1.99	1.65	0.0191	0.0000	Yes	PNL	25	4	18	0.09		# 0465
632	RASP-E7 VFD IN	PD RASP-E7	0.48	2.01	2.01	1.67	0.021	0.0000	Yes	PNL	25	4	18	0.10		# 0302
633	RASP-E8 VFD IN	PD RASP-E8	0.48	1.99	1.99	1.65	0.0191	0.0000	Yes	PNL	25	4	18	0.09		# 0467
634	RASP-W1 VFD IN	PD RASP-W1	0.48	14.66	14.66	9.09	0.0162	0.0000	Yes	PNL	25	10	18	0.49	(*N21b)	# 0028
635	RASP-W2 VFD IN	PD RASP-W2	0.48	14.37	14.37	8.94	0.0162	0.0000	Yes	PNL	25	10	18	0.48	(*N21b)	# 0492
636	RASP-W3 VFD IN	PD RASP-W3	0.48	14.66	14.66	9.09	0.0162	0.0000	Yes	PNL	25	10	18	0.49	(*N21b)	# 0028
637	RASP-W4 VFD IN	PD RASP-W4	0.48	14.37	14.37	8.94	0.0162	0.0000	Yes	PNL	25	10	18	0.48	(*N21b)	# 0492
638	RBDP1 DISC	FU 0523	0.48	8.54	8.54	5.73	0.0042	0.0000	Yes	PNL	25	3	18	0.08		# 0073
639	RBDP-2 DISC	FU RB DRAIN PUMP 2	0.48	10.00	10.00	6.55	0.0042	0.0000	Yes	PNL	25	4	18	0.09	(*N21b)	# 0475
640	RBDP3 DISC	FU 0542	0.48	8.54	8.54	5.73	0.0042	0.0000	Yes	PNL	25	3	18	0.08		# 0073
641	RBDP-4 DISC	FU RB DRAIN PUMP 4	0.48	10.00	10.00	6.55	0.0042	0.0000	Yes	PNL	25	4	18	0.09	(*N21b)	# 0475
642	RECIRCV PAB-E1	FB RECIRCV PAB-E1	0.48	2.32	2.32	1.88	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0161
643	RECIRCV PAB-E2	FB RECIRCV PAB-E2	0.48	1.95	1.95	1.63	0.0175	0.0000	Yes	PNL	25	4	18	0.08		# 0161
644	RECIRCV PAB-E3	FB RECIRCV PAB-E3	0.48	1.53	1.53	1.32	0.0206	0.0000	Yes	PNL	25	3	18	0.08		# 0161
645	RETBSNRFCV STARTER	FU RET BSN RF CV	0.48	2.81	2.81	2.21	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
646	RF # 5 DISC	FU 0530	0.48	2.79	2.79	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
647	RF # 6 DISC	FU 0555	0.48	2.79	2.79	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
648	RF-1 DISC	MCP RF-1	0.48	3.26	3.26	2.52	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0180
649	RIVER VALVE DISC	FU 0689	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
650	RLS-ACCU-1	PD RLS-ACCU-1	0.48	2.84	2.84	2.24	0.0162	0.0000	Yes	PNL	25	4	18	0.11		# 0417
651	RLS-ACCU-1 DISC	PD RLS-ACCU-1	0.48	3.48	3.48	2.66	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0492
652	RLS-ACU-1	PD RLS-ACU-1	0.48	7.24	7.24	4.97	0.0162	0.0000	Yes	PNL	25	7	18	0.25		# 0417
653	RLS-EF-1 DISC	MCP RLS-EF-1	0.48	2.77	2.77	2.19	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0430
654	RLS-EF-2 DISC	MCP RLS-EF-2	0.48	4.93	4.93	3.58	0.005	0.0000	Yes	PNL	25	3	18	0.05		# 0430
655	RLS-PPU-1	PD RLS-PPU-1	0.48	7.57	7.57	5.17	0.0162	0.0000	Yes	PNL	25	7	18	0.26		# 0563
656	RLS-SF-1 DISC	MCP RLS-SF-1	0.48	1.80	1.80	1.52	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0430
657	ROOF FAN 10 DISC	FU 0722	0.48	2.93	2.93	2.30	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0568
658	ROOF FAN 11 DISC	FU 0693	0.48	2.89	2.89	2.27	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0136
659	ROOF FAN 12 DISC	FU 0731	0.48	2.93	2.93	2.30	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0568
660	RS-SAP-1 DISC	MCP RS-SAP-1	0.48	2.06	2.06	1.70	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
661	S-1-1 DISC	PD 48IN GATE S-1-1	0.48	1.68	1.68	1.43	0.0169	0.0000	Yes	PNL	25	3	18	0.07		# 0430
662	S-21-1 DISC	PD F-1-1	0.48	2.18	2.18	1.78	0.0162	0.0000	Yes	PNL	25	4	18	0.08		# 0160
663	S-21-1 STARTER	PD F-1-1	0.48	1.93	1.93	1.61	0.0166	0.0000	Yes	PNL	25	3	18	0.08		# 0498

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
664	S-21-2 DISC	PD F-1-1	0.48	2.16	2.16	1.77	0.0163	0.0000	Yes	PNL	25	4	18	0.08		# 0160
665	S-21-2 STARTER	PD F-1-1	0.48	1.72	1.72	1.45	0.0169	0.0000	Yes	PNL	25	3	18	0.07		# 0500
666	S-21-3 DISC	PD F-1-5	0.48	1.79	1.79	1.51	0.0168	0.0000	Yes	PNL	25	3	18	0.07		# 0160
667	S-21-3 STARTER	PD F-1-5	0.48	1.47	1.47	1.08	0.0209	0.0000	Yes	PNL	25	3	18	0.06	(*N3)	# 0500
668	S-21-4 DISC	PD F-1-5	0.48	1.78	1.78	1.50	0.0168	0.0000	Yes	PNL	25	3	18	0.07		# 0160
669	S-21-4 STARTER	PD F-1-5	0.48	1.60	1.60	1.37	0.0171	0.0000	Yes	PNL	25	3	18	0.07		# 0500
670	S-54-2 DISC	PD F-54-5	0.48	2.45	2.45	1.98	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0689
671	S-54-2 STR	PD F-54-5	0.48	2.36	2.36	1.91	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0690
672	SC-1 DISC	FU SC-1	0.48	4.38	4.38	3.24	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
673	SC-2 DISC	FU SCREEN COMP SC-2	0.48	4.46	4.46	3.29	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
674	SC-3 DISC	FU SCREEN COMP SC-3	0.48	4.46	4.46	3.29	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
675	SCDR-W1 DISC	MCP SCDR-W1	0.48	0.63	0.63	0.63	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11)	# 0028
676	SCDR-W2 DISC	MCP SCDR-W2	0.48	0.63	0.63	0.63	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11)	# 0492
677	SC-E1 DISC	MCP SEC-CLAR-E1	0.48	0.58	0.58	0.58	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11)	# 0511
678	SC-E2 DISC	MCP CLARIFIER SC-E2	0.48	0.58	0.58	0.58	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11)	# 0512
679	SC-E3 DISC	MCP SEC-CLAR-E3	0.48	0.33	0.33	0.33	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11)	# 0513
680	SC-E4 DISC	MCP CLARIFIER SC-E4	0.48	0.33	0.33	0.33	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11)	# 0514
681	SCP-6	FU SCREW PUMP 6	0.48	12.30	11.58	7.37	0.0083	0.0000	Yes	PNL	25	6	18	0.21	(*N21b)	# 0681
682	SCP-7	FU SCREW PUMP 7	0.48	13.01	12.29	7.76	0.0083	0.0000	Yes	PNL	25	6	18	0.22		# 0682
683	SCP-8	FU SCREW PUMP 8	0.48	13.01	12.29	7.76	0.0083	0.0000	Yes	PNL	25	6	18	0.22	(*N21b)	# 0683
684	SCREW CONV 3 STR	FU SCREW CONV 3	0.48	4.46	4.46	3.29	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
685	SCRNCNV DISC	FU SCREENINGS CONV	0.48	4.46	4.46	3.29	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
686	SCTY GATE STARTER	FU SECURITY GATE	0.48	4.82	4.82	3.52	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0475
687	SE ISO VALVE DISC	FU 0688	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
688	SECURITY GATE DISC	FU SECURITY GATE	0.48	5.79	5.79	4.11	0.0042	0.0000	Yes	PNL	25	3	18	0.05		# 0475
689	SEG1 DISC	FU 0664	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
690	SEP1 VFD IN	FU SEC EFF PUMP 1	0.48	17.48	16.42	9.93		0.0000	Yes	PNL	25	7	18	0.25	(*N4) (*N21b)	# 0664
691	SEP2 VFD IN	FU SEC EFF PUMP 2	0.48	17.96	16.90	10.18		0.0000	Yes	PNL	25	10	18	0.42	(*N4) (*N21b)	# 0568
692	SEP3 VFD IN	FU SEC EFF PUMP #3	0.48	17.05	16.17	9.81		0.0000	Yes	PNL	25	10	18	0.44	(*N4) (*N21b)	# 0136
693	SEP4 VFD IN	FU SEC EFF PUMP #4	0.48	16.43	15.40	7.98	0.0111	0.0000	Yes	PNL	25	8	18	0.31	(*N3) (*N21b)	# 0668
694	SEP5 VFD IN	FU SEC EFF PUMP 5	0.48	17.48	16.42	8.44	0.0083	0.0000	Yes	PNL	25	7	18	0.25	(*N3) (*N21b)	# 0669
695	SEP6 VFD IN	FU SEC EFF PUMP 6	0.48	17.96	16.90	10.18	0.0083	0.0000	Yes	PNL	25	8	18	0.30	(*N21b)	# 0591
696	SEPPMP DISC TERM	FU SEPTIC PUMP	0.48	8.12	8.12	5.49	0.0042	0.0000	Yes	PNL	25	3	18	0.07		# 0492
697	SF1 DISC	FU EF-3,4,1	0.48	1.47	1.47	1.27	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
698	SF1FF DISC	FU 0920	0.48	4.00	4.00	3.00	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0099
699	SF2EE DISC	FU 0909	0.48	1.53	1.53	1.32	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0099
700	SF3FF DISC	FU 0922	0.48	4.00	4.00	3.00	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0099
701	SF4EE DISC	FU 0911	0.48	4.06	4.06	3.04	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0099
702	SLC 4 DISC	MCP SLC -4	0.48	3.54	3.54	2.70	0.015	0.0000	Yes	PNL	25	4	18	0.12		# 0602
703	SLC 5 DISC	MCP SLC -5	0.48	3.33	3.33	2.57	0.015	0.0000	Yes	PNL	25	4	18	0.11		# 0603
704	SLC 6 DISC	FB SLC -6	0.48	2.44	2.44	1.96	0.0195	0.0000	Yes	PNL	25	4	18	0.11		# 0604

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
705	SLC 7 DISC	FB SLC -7	0.48	2.28	2.28	1.86	0.02	0.0000	Yes	PNL	25	4	18	0.11		# 0605
706	SLC-1 DISC	FU SLUDGE COLL 1	0.48	2.81	2.81	2.21	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
707	SLC2 DISC	FU 0527	0.48	2.79	2.79	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
708	SLC-3 DISC	FU SLUDGE COLL 3	0.48	2.81	2.81	2.21	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
709	SLDG F-50-1	FB SLDG'S S-50-1,2,3,4,5	0.48	0.88	0.88	0.70	0.5149	0.0000	Yes	PNL	25	16	18	0.96	(*N3)	# 0161
710	SLDG F-50-2	FB SLDG'S S-50-1,2,3,4,5	0.48	0.88	0.88	0.70	0.5149	0.0000	Yes	PNL	25	16	18	0.96	(*N3)	# 0161
711	SLDG F-50-3	FB SLDG'S F-50-3,4	0.48	0.77	0.77	0.62	0.7468	0.0000	Yes	PNL	25	18	18	1.2	(*N3)	# 0161
712	SLDG F-50-4	FB SLDG'S F-50-3,4	0.48	0.77	0.77	0.62	0.7468	0.0000	Yes	PNL	25	18	18	1.2	(*N3)	# 0161
713	SLDG F-60-1	FB SLDG'S F-60-1,2,3	0.48	0.92	0.92	0.73	0.4241	0.0000	Yes	PNL	25	14	18	0.83	(*N3)	# 0161
714	SLDG F-60-2	FB SLDG'S F-60-1,2,3	0.48	0.92	0.92	0.73	0.4241	0.0000	Yes	PNL	25	14	18	0.83	(*N3)	# 0161
715	SLDG F-60-3	FB SLDG'S F-60-1,2,3	0.48	0.92	0.92	0.73	0.4241	0.0000	Yes	PNL	25	14	18	0.83	(*N3)	# 0161
716	SLDG F-60-4	FB SLDG's S-60-1,2	0.48	0.76	0.76	0.62	0.7586	0.0000	Yes	PNL	25	18	18	1.2	(*N3)	# 0161
717	SLDG S-50-1	FB SLDG'S S-50-1,2,3,4,5	0.48	0.80	0.80	0.65	0.7162	0.0000	Yes	PNL	25	18	18	1.2	(*N3)	# 0161
718	SLDG S-50-2	FB SLDG'S S-50-1,2,3,4,5	0.48	0.88	0.88	0.70	0.5149	0.0000	Yes	PNL	25	16	18	0.96	(*N3)	# 0161
719	SLDG S-50-3	FB SLDG'S S-50-1,2,3,4,5	0.48	0.88	0.88	0.70	0.5149	0.0000	Yes	PNL	25	16	18	0.96	(*N3)	# 0161
720	SLDG S-50-4	FB SLDG'S S-50-1,2,3,4,5	0.48	0.88	0.88	0.70	0.5149	0.0000	Yes	PNL	25	16	18	0.96	(*N3)	# 0161
721	SLDG S-50-5	FB SLDG'S S-50-1,2,3,4,5	0.48	0.88	0.88	0.70	0.5149	0.0000	Yes	PNL	25	16	18	0.96	(*N3)	# 0161
722	SLDG S-60-1	FB SLDG's S-60-1,2	0.48	0.86	0.86	0.69	0.5744	0.0000	Yes	PNL	25	17	18	1.1	(*N3)	# 0161
723	SLDG S-60-2	FB SLDG's S-60-1,2	0.48	0.86	0.86	0.69	0.5744	0.0000	Yes	PNL	25	17	18	1.1	(*N3)	# 0161
724	SLG-3 DISC	FU SLUICE GATE 3	0.48	4.38	4.38	3.24	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
725	SLG-4 DISC	FU SLUICE GATE 4	0.48	4.38	4.38	3.24	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
726	SLGT1 DISC	FU 0562	0.48	6.96	6.96	4.81	0.0042	0.0000	Yes	PNL	25	3	18	0.06		# 0073
727	SLGT2 DISC	FU 0563	0.48	2.79	2.79	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
728	SLGT-5 DISC	FU SLUICE GATE 5	0.48	4.46	4.46	3.29	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
729	SLP1 DISC	FU SLUDGE PUMP 1	0.48	2.81	2.81	2.21	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
730	SLP2 DISC	FU SLUDGE PUMP 2	0.48	2.81	2.81	2.21	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
731	SLP3 DISC	FU 0551	0.48	2.79	2.79	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
732	SLUDGE CND LCP	PD PSLPM-E3	0.48	3.29	3.29	2.54	0.0162	0.0000	Yes	PNL	25	4	18	0.12		# 0349
733	SMP2 DISC	FU 0525	0.48	2.79	2.79	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
734	SP NGB DISC	FU SUMP PUMP NGB	0.48	4.38	4.38	3.24	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
735	SSC-1 DISC	FU SSC-1	0.48	4.38	4.38	3.24	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
736	SSC-2 DISC	FU SSC-2	0.48	4.46	4.46	3.29	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
737	SSCP-E1 DISC	MCP SEC SCUM PMP-E1	0.48	1.35	1.35	1.19	0.04	0.0000	Yes	PNL	25	5	18	0.13		# 0554
738	SSCP-W1 DISC	MCP SSCP-W1	0.48	7.20	7.20	4.95	0.005	0.0000	Yes	PNL	25	3	18	0.08		# 0028
739	SSCP-W2 DISC	MCP SSCP-W2	0.48	7.15	7.15	4.92	0.005	0.0000	Yes	PNL	25	3	18	0.08		# 0492
740	STWP 1 DISC	MCP STWP -1	0.48	5.75	5.75	4.09	0.015	0.0000	Yes	PNL	25	6	18	0.19		# 0629
741	STWP 2 DISC	MCP STWP -2	0.48	5.22	5.22	3.76	0.015	0.0000	Yes	PNL	25	6	18	0.17		# 0630
742	SUB 1 BUS A	SUB 1 MAIN A	0.48	17.24	15.11	8.69	0.5	0.0000	Yes	SWG	32	97	24	9.4	(*N16)	# 0487
743	SUB 1 BUS A (SUB 1 MAIN A LineSide)	52F11P RELAY	0.48	17.24	15.11	8.69	1.917	0.0830	Yes	SWG	32	247	24	37	(*N9) (*N16)	# 0486-Line
744	SUB 1 BUS B	SUB 1 MAIN B	0.48	16.76	15.36	8.87	0.5	0.0000	Yes	SWG	32	98	24	9.5	(*N16)	# 0487

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
745	SUB 1 BUS B (SUB 1 MAIN B LineSide)	52F21P RELAY	0.48	16.76	15.36	8.87	1.917	0.0830	Yes	SWG	32	249	24	38	(*N9) (*N16)	# 0488-Line
746	SUB 1 PRIMARY SWITCH A	52F11P RELAY	13.20	8.75	8.70	8.46	0.0167	0.0830	Yes	SWG	152	32	36	1.1		# 0047
747	SUB 1 PRIMARY SWITCH B	52F21P RELAY	13.20	12.54	12.50	12.08	0.0167	0.0830	Yes	SWG	152	47	36	1.5		# 0047
748	SUB 2 BUS A	SUB 2 MAIN A	0.48	13.26	10.68	6.41	0.32	0.0000	Yes	SWG	32	60	24	4.6	(*N16)	# 0364
749	SUB 2 BUS A (SUB 2 MAIN A LineSide)	52F12P RELAY	0.48	13.26	10.68	6.41	1.917	0.0830	Yes	SWG	32	201	24	27	(*N9) (*N16)	# 0629-Loa
750	SUB 2 BUS B	SUB 2 MAIN B	0.48	12.66	10.79	6.53	0.32	0.0000	Yes	SWG	32	59	24	4.5	(*N16)	# 0364
751	SUB 2 BUS B (SUB 2 MAIN B LineSide)	52F22P RELAY	0.48	12.66	10.79	6.53	1.917	0.0830	Yes	SWG	32	201	24	27	(*N9) (*N16)	# 0633-Loa
752	SUB 2 PRIMARY SWITCH A	52F12P RELAY	13.20	9.60	9.53	9.26	0.0167	0.0830	Yes	SWG	152	35	36	1.2		# 0047
753	SUB 2 PRIMARY SWITCH B	52F22P RELAY	13.20	14.17	14.12	13.62	0.0167	0.0830	Yes	SWG	152	54	36	1.8		# 0047
754	SUB 3 BUS A	SUB 3 MAIN A	0.48	42.95	38.33	18.92	0.5	0.0000	Yes	SWG	32	171	24	22	(*N16)	# 0367
755	SUB 3 BUS A (SUB 3 MAIN A LineSide)	52F13P RELAY	0.48	42.95	38.33	18.92	1.917	0.0830	Yes	SWG	32	434	24	85	(*N9) (*N16)	# 0018-Line
756	SUB 3 BUS B	SUB 3 MAIN B	0.48	40.54	38.22	18.97	0.5	0.0000	Yes	SWG	32	170	24	21	(*N16)	# 0368
757	SUB 3 BUS B (SUB 3 MAIN B LineSide)	52F23P RELAY	0.48	40.54	38.22	18.97	1.917	0.0830	Yes	SWG	32	432	24	84	(*N9) (*N16)	# 0019-Line
758	SUB 3 PRIMARY SWITCH A	52F13P RELAY	13.20	15.05	14.90	14.36	0.0167	0.0830	Yes	SWG	152	57	36	1.9		# 0047
759	SUB 3 PRIMARY SWITCH B	52F23P RELAY	13.20	15.04	14.96	14.42	0.0167	0.0830	Yes	SWG	152	57	36	1.9		# 0047
760	SUB 4 BUS A	SUB 4 MAIN A	0.48	21.42	15.43	8.55	0.32	0.0000	Yes	SWG	32	76	24	6.6	(*N16)	# 0501
761	SUB 4 BUS A (SUB 4 MAIN A LineSide)	52F14P RELAY	0.48	21.42	15.43	8.55	1.917	0.0830	Yes	SWG	32	252	24	38	(*N9) (*N16)	# 0502-Line
762	SUB 4 BUS B	SUB 4 MAIN B	0.48	21.61	15.57	8.62	0.32	0.0000	Yes	SWG	32	77	24	6.6	(*N16)	# 0503
763	SUB 4 BUS B (SUB 4 MAIN B LineSide)	52F24P RELAY	0.48	21.61	15.57	8.62	1.917	0.0830	Yes	SWG	32	253	24	38	(*N9) (*N16)	# 0502-Line
764	SUB 4 PRIMARY SWITCH A	52F14P RELAY	13.20	11.20	11.06	10.71	0.0167	0.0830	Yes	SWG	152	42	36	1.4		# 0047
765	SUB 4 PRIMARY SWITCH B	52F24P RELAY	13.20	15.19	15.03	14.48	0.0167	0.0830	Yes	SWG	152	58	36	1.9		# 0047
766	SUB 5 BUS A	SUB 5 TIE	0.48	89.27	45.41	15.50	0.3	0.0000	Yes	SWG	32	180	24	23	(*N16) (*N20a) (*N21a) (*N21b)	# 0506
767	SUB 5 BUS A (SUB 5 TIE LineSide)	SUB 5 TIE	0.48	89.27	43.86	17.37	0.3	0.0000	Yes	SWG	32	180	24	23	(*N16) (*N20a) (*N21b)	# 0743-Line
768	SUB 5 BUS B	SUB 5 TIE	0.48	89.27	43.86	15.50	0.3	0.0000	Yes	SWG	32	180	24	23	(*N16) (*N20a) (*N21b)	# 0506
769	SUB 5 PRIMARY SWITCH A	52F15P RELAY	13.20	15.45	15.15	14.60	0.0167	0.0830	Yes	SWG	152	59	36	1.9		# 0047
770	SUB 5 PRIMARY SWITCH B	52F25P RELAY	13.20	15.45	15.15	14.60	0.0167	0.0830	Yes	SWG	152	59	36	1.9		# 0047
771	SUB 6 BUS A	SUB 6 MAIN A	0.48	10.15	9.79	5.17	0.32	0.0000	Yes	SWG	32	50	24	3.5	(*N16)	# 0371
772	SUB 6 BUS A (SUB 6 MAIN A LineSide)	PD SUB 6 XFMR A RELAY	0.48	10.15	9.79	5.17	1.917	0.0830	Yes	SWG	32	167	24	21	(*N9) (*N16)	# 0020-Line
773	SUB 6 BUS B	SUB 6 MAIN B	0.48	9.32	8.98	5.17	0.32	0.0000	Yes	SWG	32	49	24	3.4	(*N16)	# 0372
774	SUB 6 BUS B (SUB 6 MAIN B LineSide)	PD SUB 6 XFMR B RELAY	0.48	9.32	8.98	5.17	1.917	0.0830	Yes	SWG	32	167	24	21	(*N9) (*N16)	# 0021-Line
775	SUB 7 BUS A	SUB 7 MAIN A	0.48	30.17	30.17	15.62	0.5	0.0000	Yes	SWG	32	146	24	17	(*N16)	# 0046
776	SUB 7 BUS A (SUB 7 MAIN A LineSide)	52F17P RELAY	0.48	30.17	30.17	15.62	1.917	0.0830	Yes	SWG	32	374	24	68	(*N9) (*N16)	# 0022-Line

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
777	SUB 7 BUS B	SUB 7 MAIN B	0.48	30.03	30.03	15.56	0.5	0.0000	Yes	SWG	32	146	24	17	(*N16)	# 0046
778	SUB 7 BUS B (SUB 7 MAIN B LineSide)	52F27P RELAY	0.48	30.03	30.03	15.56	1.917	0.0830	Yes	SWG	32	373	24	68	(*N9) (*N16)	# 0023-Line
779	SUB 7 XFMR A PRI	52F17P RELAY	13.20	15.53	15.53	14.96	0.0167	0.0830	Yes	SWG	152	59	36	1.9		# 0048
780	SUB 7 XFMR B PRI	52F27P RELAY	13.20	15.53	15.53	14.96	0.0167	0.0830	Yes	SWG	152	59	36	1.9		# 0048
781	SUB 8 BUS A	SUB 8 MAIN A RELAY	4.16	2.91	1.80	1.51	1.647	0.0830	Yes	SWG	104	81	36	2.6	(*N3) (*N16)	# 0378
782	SUB 8 BUS A (SUB 8 MAIN A RELAY LineSide)	52F18P RELAY	4.16	2.91	1.80	1.78	1.73	0.0833	Yes	SWG	104	102	36	3.3	(*N5) (*N16)	# 0026-Line
783	SUB 8 BUS B	SUB 8 MAIN B RELAY	4.16	2.37	1.80	1.52	1.647	0.0830	Yes	SWG	104	80	36	2.6	(*N3) (*N16)	# 0379
784	SUB 8 BUS B (SUB 8 MAIN B RELAY LineSide)	52F28P RELAY	4.16	2.37	1.80	1.78	1.73	0.0833	Yes	SWG	104	101	36	3.2	(*N5) (*N16)	# 0028-Line
785	SUB 8 PRIMARY SWITCH A	52F18P RELAY	13.20	15.21	14.99	14.45	0.0167	0.0833	Yes	SWG	152	58	36	1.9		# 0047
786	SUB 8 PRIMARY SWITCH B	52F28P RELAY	13.20	15.21	15.07	14.52	0.0167	0.0833	Yes	SWG	152	58	36	1.9		# 0047
787	SUB SP-1 DISC	FU SUB SUMP PUMP 1	0.48	4.38	4.38	3.24	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
788	SUB SP-2 DISC	FU SUB SUMP PUMP 2	0.48	4.46	4.46	3.29	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
789	SUMP PUMP 1 DISC	MCP SUMP PUMP 1	0.48	2.29	2.29	1.86	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0816
790	SUMP PUMP 3 DISC	MCP SUMP PUMP 3	0.48	0.92	0.92	0.73	0.0215	0.0000	Yes	PNL	25	2	18	0.04	(*N3)	# 0816
791	SWP LCP	PD STORM WATER PUMP CP	0.48	8.36	8.36	5.63	0.05	0.0000	Yes	PNL	25	15	18	0.89	(*N20b)	# 0049
792	SWPSO VALVE DISC S - 91 - 4	PD SWPSO-SG	0.48	2.64	2.64	2.10	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0492
793	SWPSO-SG DISC S - 91 - 1	PD SWPSO-SG	0.48	2.64	2.64	2.10	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0492
794	TABLET FDR DISC	PD-0537	0.48	3.83	3.83	2.89	0.0171	0.0000	Yes	PNL	25	5	18	0.15		# 0475
795	TEMP ADM1 DISC	PD 0582	0.48	5.66	5.66	4.03	0.0161	0.0000	Yes	PNL	25	6	18	0.20		# 0073
796	TEMP ADM2 DISC	PD 0583	0.48	5.66	5.66	4.03	0.0161	0.0000	Yes	PNL	25	6	18	0.20		# 0073
797	TEMP PUMPS	FU 0683	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
798	TER FIL EFF SP DISC	FU 0691	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
799	TFB-MPC	MB TFB-MPC	0.208	1.50	1.50	1.15	0.0167	0.0000	Yes	PNL	25	3	18	0.05		# 0257
800	TFB-MPC (MB TFB-MPC LineSide)	FU 0730	0.208	1.50	1.50	1.15		0.0000	Yes	PNL	25	50	18	6.3	(*N4)	# 0802-Line
801	TGS DISC	PD 0581	0.48	3.67	3.67	2.78	0.0169	0.0000	Yes	PNL	25	5	18	0.14		# 0073
802	UDSP1 DISC	FU 0681	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
803	UDSP2 DISC	FU 0741	0.48	1.48	1.48	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
804	UH EE	FU 0907	0.48	2.50	2.50	2.01		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0430
805	UH EE DISC	FU 0907	0.48	2.77	2.77	2.19		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0099
806	UH FF	FU 0918	0.48	2.74	2.74	2.17		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0392
807	UPS-ADM-1 INPUT	PD-UPS-ADM-1	0.208	5.02	5.02	2.68	0.0167	0.0000	Yes	PNL	25	5	18	0.13		# 0492
808	UPS-ADM-1 OUTPUT	MaxTripTime @2.0s	0.208	0.04	0.04	0.04	2	0.0000	Yes	PNL	25	3	18	0.04	(*N2) (*N9) (*N11)	# 0492
809	UV 2A	FB-PDP-UV-2A	0.48	3.06	3.06	1.94	0.2554	0.0000	Yes	PNL	25	20	18	1.5	(*N3) (*N16)	# 0161
810	UV 2B	FB-PDP-UV-2B	0.48	3.06	3.06	1.94	0.2554	0.0000	Yes	PNL	25	20	18	1.5	(*N3) (*N16)	# 0161
811	UV-1A	800/200 UV-1A	0.48	2.84	2.84	2.24	0.2	0.0000	Yes	PNL	25	19	18	1.3	(*N5) (*N16)	# 0056
812	UV-1A PD LINE SIDE	800/200 UV-1A	0.48	2.86	2.86	2.25	0.2	0.0000	Yes	PNL	25	19	18	1.3	(*N16)	# 0056
813	UV-1B	800/200 UV-1B	0.48	3.35	3.35	2.57	0.2	0.0000	Yes	PNL	25	21	18	1.5	(*N5) (*N16)	# 0056
814	UV-1B PD LINE SIDE	800/200 UV-1B	0.48	3.38	3.38	2.59	0.2	0.0000	Yes	PNL	25	21	18	1.5	(*N16)	# 0056

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
815	VFD CFG-1 INPUT	800/600 VFD CFG-1	0.48	43.14	40.88	21.66	0.066	0.0000	Yes	PNL	25	45	18	5.4	(*N20a) (*N21b)	# 0785
816	VFD CFG-2 INPUT	800/600 VFD CFG-2	0.48	43.14	40.88	21.66	0.066	0.0000	Yes	PNL	25	45	18	5.4	(*N20a) (*N21b)	# 0786
817	VFD CFG-3 INPUT	800/600 VFD CFG-3	0.48	50.62	48.34	25.03	0.066	0.0000	Yes	PNL	25	49	18	6.2	(*N20a) (*N21b)	# 0787
818	W CONT GT2 DISC	FU 0748	0.48	1.48	1.48	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
819	W1 FLOW VALVES JB	PD W1 FLOW VALVES	0.48	3.57	3.57	2.72	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0106
820	WA MAIN BOV	PD WA MAIN BOV	0.48	3.77	3.77	2.85	0.0162	0.0000	Yes	PNL	25	5	18	0.14		# 0161
821	WAS VALVE W1	PD WAS VALVE W1	0.48	3.28	3.28	2.53	0.0162	0.0000	Yes	PNL	25	4	18	0.12		# 0161
822	WAS VALVE W1 DISC	PD WAS VALVE W1	0.48	5.26	5.26	3.79	0.0162	0.0000	Yes	PNL	25	6	18	0.19		# 0792
823	WAS VALVE W2	PD WAS VALVE W2	0.48	2.75	2.75	2.17	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0161
824	WASP-E1 VFD IN	PD WASP-E1	0.48	1.48	1.48	1.09	0.0208	0.0000	Yes	PNL	25	3	18	0.06	(*N3)	# 0302
825	WASP-E2 VFD IN	PD WASP-E2	0.48	1.47	1.47	1.08	0.021	0.0000	Yes	PNL	25	3	18	0.06	(*N3)	# 0627
826	WASP-W1 VFD IN	PD WASP-W1	0.48	7.20	7.20	4.95	0.0162	0.0000	Yes	PNL	25	7	18	0.25		# 0028
827	WASP-W2 VFD IN	PD WASP-W2	0.48	7.15	7.15	4.92	0.0162	0.0000	Yes	PNL	25	7	18	0.25		# 0492
828	WASV E1	FB WASV E1 P-65-1	0.48	1.27	1.27	0.95	0.0285	0.0000	Yes	PNL	25	3	18	0.07	(*N3)	# 0161
829	WASV E2	FB WASV E2 P-65-2	0.48	1.27	1.27	0.95	0.0285	0.0000	Yes	PNL	25	3	18	0.07	(*N3)	# 0161
830	WASV E3	FB WASV E3	0.48	1.19	1.19	0.91	0.0314	0.0000	Yes	PNL	25	3	18	0.08	(*N3)	# 0161
831	WASV E4	FB WASV E4	0.48	1.19	1.19	0.91	0.0314	0.0000	Yes	PNL	25	3	18	0.08	(*N3)	# 0161
832	WBB-EF-1 DISC	MCP WBB-EF-1	0.48	7.20	7.20	4.95	0.005	0.0000	Yes	PNL	25	3	18	0.08		# 0028
833	WBB-EF-2 DISC	MCP WBB-EF-2	0.48	7.87	7.87	5.34	0.005	0.0000	Yes	PNL	25	4	18	0.08		# 0492
834	WBB-EF-3 DISC	MCP WBB-EF-3	0.48	3.72	3.72	2.82	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0028
835	WBB-EF-4 DISC	MCP WBB-EF-4	0.48	2.87	2.87	2.26	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
836	WBB-EF-5 DISC	MCP WBB-EF-5	0.48	2.01	2.01	1.66	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
837	WBB-EF-6 DISC	MCP WBB-EF-6	0.48	1.51	1.51	1.30	0.005	0.0000	Yes	PNL	25	1	18	0.02		# 0492
838	WBB-EF-7 DISC	MCP WBB-EF-7	0.48	2.50	2.50	2.01	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0028
839	WBB-H1	PD WBB-H1	0.48	7.05	7.05	4.86	0.0162	0.0000	Yes	PNL	25	7	18	0.25		# 0865
840	WBB-H1 DISC	PD WBB-H1	0.48	9.85	9.85	6.47	0.0162	0.0000	Yes	PNL	25	8	18	0.34	(*N20b)	# 0492
841	WBB-H2	PD WBB-H2	0.48	5.15	5.15	3.72	0.0162	0.0000	Yes	PNL	25	6	18	0.18		# 0866
842	WBB-H2 DISC	PD WBB-H2	0.48	6.53	6.53	4.56	0.0162	0.0000	Yes	PNL	25	7	18	0.23		# 0028
843	WBB-HV-1 DISC	MCP WBB-HV-1	0.48	4.41	4.41	3.26	0.005	0.0000	Yes	PNL	25	3	18	0.05		# 0028
844	WBB-HV-2	PD WBB-HV-2	0.48	10.72	10.72	6.96	0.0162	0.0000	Yes	PNL	25	9	18	0.36	(*N21b)	# 0870
845	WBB-HV-2 DISC	PD WBB-HV-2	0.48	13.14	13.14	8.28	0.0162	0.0000	Yes	PNL	25	10	18	0.44		# 0492
846	WBB-P-1 DISC	MCP WBB-P-1	0.48	2.15	2.15	1.76	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0028
847	WBB-P-2 DISC	MCP WBB-P-2	0.48	2.15	2.15	1.76	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
848	WEST AESG W1	PD WEST AESG W1	0.48	2.76	2.76	2.18	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0161
849	WEST AESG W2	PD WEST AESG W2	0.48	1.63	1.63	1.40	0.0197	0.0000	Yes	PNL	25	3	18	0.08		# 0161
850	WEST AESGW1 DISC	PD WEST AESG W1	0.48	2.92	2.92	2.29	0.0162	0.0000	Yes	PNL	25	4	18	0.11		# 0817
851	WFB-EUH-TERM's	PD WFB-EUH-1	0.208	1.66	1.66	1.23	0.0167	0.0000	Yes	PNL	25	3	18	0.06		# 0162
852	WHM DISC	FU 0665	0.48	2.32	2.32	1.88		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0136
853	Wireway	FB AT-E3 Z2 FCV	0.48	1.53	1.53	1.32	0.0206	0.0000	Yes	PNL	25	3	18	0.08		# 0161
854	Wireway.	FB AT-E4 Z2 FCV	0.48	1.53	1.53	1.32	0.0206	0.0000	Yes	PNL	25	3	18	0.08		# 0161
855	WPB-EF-1 DISC	MCP WPB-EF-1	0.48	2.27	2.27	1.85	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm ²)	PPE Level / Notes (*N)	Label #
856	WPB-H1 DISC	PD WPB-H1	0.48	5.71	5.71	4.06	0.0162	0.0000	Yes	PNL	25	6	18	0.20		# 0492
857	WPB-H1 HOIST	PD WPB-H1	0.48	4.67	4.67	3.42	0.0162	0.0000	Yes	PNL	25	5	18	0.17		# 0492
858	WPB-HV-1 DISC	PD WPB-HV-1	0.48	2.75	2.75	2.18	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0492
859	WPB-P-1 DISC	MCP WPB-P-1	0.48	1.79	1.79	1.51	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
860	WPE-SAP-2 DISC	MCP WPE-SAP-2	0.48	2.06	2.06	1.70	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
861	WPSE GATE E DISC	FU WPSE GATE E MTR	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
862	WPSE GATE W DISC	FU 0716	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
863	WPSE SMPL PMP DISC	FU 0712	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
864	WSE-SAP-3 DISC	MCP WSE-SAP-3	0.48	3.72	3.72	2.82	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0028
865	WTR-CRC-PMP-1 DISC	MCP WATER CIRC PUMP 1	0.48	9.56	9.56	6.31	0.005	0.0000	Yes	PNL	25	4	18	0.10	(*N20b)	# 0492
866	WTR-CRC-PMP-2 DISC	MCP WATER CIRC PUMP 2	0.48	9.56	9.56	6.31	0.005	0.0000	Yes	PNL	25	4	18	0.10	(*N20b)	# 0492
867	WW BYP GATE E DISC	FU 0733	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
868	WWRDP2 DISC	FU WWRD PUMP 2	0.48	3.32	3.32	2.56	0.0083	0.0000	Yes	PNL	25	3	18	0.06		# 0568
869	WWRDP3 DISC	FB-MCC-P	0.48	3.27	2.90	2.24	0.32	0.0000	Yes	PNL	25	27	18	2.3	(*N5)	# 0136
870	WWWRESDP1 DISC	FU 0652	0.48	3.30	3.30	2.54	0.0083	0.0000	Yes	PNL	25	3	18	0.06		# 0136
871	Level 0: Nonmelting, Flammable Materials with Weight >= 4.5 oz/sq yd	0.0 - 1.2 cal/cm ²												#Level 0 = 704	(*N11) - Out of IEEE 1584 Range, Lee Equation Used. Applicable for Open Air only. Existing Equipment type is not Open Air!	
872	Level 1: Arc-rated FR Shirt & Pants	1.2 - 4.0 cal/cm ²												#Level 1 = 74	(*N2) < 80% Cleared Fault Threshold	
873	Level 2: Arc-rated FR Shirt & Pants	4.0 - 8.0 cal/cm ²												#Level 2 = 46	(*N3) - Arcing Current Low Tolerances Used	
874	Level 3: Arc-rated FR Shirt & Pants & Arc Flash Suit	8.0 - 25.0 cal/cm ²												#Level 3 = 36	(*N4) - Equipment Specific Equations Used	
875	Level 4: Arc-rated FR Shirt & Pants & Arc Flash Suit	25.0 - 40.0 cal/cm ²												#Level 4 = 6	(*N5) - Miscoordinated, Upstream Device Tripped	
876	Level Dangerous!: No FR Category Found	40.0 - 999.0 cal/cm ²												#Danger = 4	(*N9) - Max Arcing Duration Reached	
877														#Equip Eval Failed = 4	(*N16) - Trip Time Recalculated	
878	For additional information refer to NFPA 70 E, Standard for Electrical Safety in the Workplace.													#Bus Equip Eval Failed = 69	(*N20a) - Equipment Evaluation Marginal for Protective Device	
879															(*N20b) - Equipment Evaluation Marginal for Bus	

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
880															(*N21a) - Equipment Evaluation Failed, OVERDUTIED PROTECTIVE DEVICE EQUIPMENT FOUND - Inappropriate to provide arc-flash hazard results.	
881															(*N21b) - Equipment Evaluation Failed, OVERDUTIED BUS EQUIPMENT FOUND - Inappropriate to provide arc-flash hazard results.	
882															IEEE 1584 - Preferred Method (NFPA 70E 2015 Annex D.4) Bus + Line Side Report (Include Line Side + Load Side Contributions), - 80% Cleared Fault Threshold, include Ind. Motors >= 50.0hp for 5.0 Cycles), mis-coordination checked	

6.6.10 AF Results - ARMS “ON” at 13.2kV Feeder Breakers

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
1	15 KV BUS 1	52M1P RELAY	13.20	7.28	6.36	6.21	0.0935	0.0830	Yes	SWG	152	44	36	1.5		# 0001
2	15 KV BUS 1 (52M1P RELAY LineSide)	FU DTE North	13.20	7.28	6.36	5.28	0.2123	0.0830	Yes	SWG	152	61	36	2.0	(*N3)	# 0014-Loa
3	15 KV BUS 1 LineSide	FU DTE North	13.20	7.29	6.36	5.28	0.2123	0.0830	Yes	SWG	152	61	36	2.0	(*N3)	# 0011
4	15 KV BUS 2	52M2P RELAY	13.20	6.95	6.15	5.10	0.1386	0.0830	Yes	SWG	152	44	36	1.4	(*N3)	# 0002
5	15 KV BUS 2 (52M2P RELAY LineSide)	FU DTE South	13.20	6.95	6.15	5.10	0.2267	0.0830	Yes	SWG	152	61	36	2.0	(*N3)	# 0035-Loa
6	15 KV BUS 2 LineSide	FU DTE South	13.20	6.95	6.15	5.10	0.2267	0.0830	Yes	SWG	152	61	36	2.0	(*N3)	# 0002
7	15 KV BUS 3	52G2P RELAY	13.20	1.50	0.75	0.33	0.35	0.0830	Yes	SWG	152	13	36	0.46	(*N16)	# 0003
8	15 KV BUS 3 (52G2_51V LineSide)	52G2_87H	13.20	1.50	0.75	0.33	0.35	0.0830	Yes	SWG	152	13	36	0.46	(*N16)	# 0049-Loa
9	15 KV BUS 3 (52G2_87H LineSide)	52G2_87R	13.20	1.50	0.75	0.33	0.35	0.0830	Yes	SWG	152	13	36	0.46	(*N16)	# 0050-Loa
10	15 KV BUS 3 (52G2_87R LineSide)	52G2N RELAY	13.20	1.50	0.75	0.33	0.35	0.0830	Yes	SWG	152	13	36	0.46	(*N16)	# 0052-Loa
11	15 KV BUS 3 (52G2N RELAY LineSide)	GEN 2 AMPSENTRY	13.20	1.50	0.75	0.33	1.917	0.0830	Yes	SWG	152	29	36	0.97	(*N9) (*N16)	# 0051-Loa
12	15 KV BUS 3 (52G2P RELAY LineSide)	52G2_87H	13.20	1.50	0.75	0.33	0.35	0.0830	Yes	SWG	152	13	36	0.46	(*N16)	# 0053-Loa
13	78IN GC DISC	PD 78IN GATE CONTROLLER	0.48	1.36	1.36	1.19	0.0222	0.0000	Yes	PNL	25	3	18	0.07		# 0492
14	AC2 DISC	FU 0743	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
15	AC2F DISC	FU 0574	0.48	2.78	2.78	1.87	0.0083	0.0000	Yes	PNL	25	2	18	0.05	(*N3)	# 0073
16	ADM ACCU1 DISC	PD ADM-ACCU-1	0.48	4.68	4.68	3.43	0.0162	0.0000	Yes	PNL	25	5	18	0.17		# 0492
17	ADM ACU1 DISC	PD ADM-ACU-1	0.48	8.02	8.02	5.43	0.0162	0.0000	Yes	PNL	25	7	18	0.28		# 0492
18	ADM-CH-1 DISC	PD ADM-CH-1	0.48	8.91	8.91	5.94	0.0175	0.0000	Yes	PNL	25	8	18	0.33	(*N20b)	# 0492
19	ADM-EF-1 DISC	MCP ADM-EF-1	0.48	2.31	2.31	1.88	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
20	ADM-EF-2 DISC	MCP ADM-EF-2	0.48	2.31	2.31	1.88	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
21	ADM-HVAC-1 DISC	PD ADM-HVAC-1	0.48	5.57	5.57	3.98	0.0162	0.0000	Yes	PNL	25	6	18	0.20		# 0492
22	ADM-HVAC-2 DISC	PD ADM-HVAC-2	0.48	2.71	2.71	2.15	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0492
23	ADM-P-1 DISC	MCP ADM-P-1	0.48	3.27	3.27	2.52	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0492
24	ADM-P-2 DISC	MCP ADM-P-2	0.48	2.71	2.71	2.15	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
25	ADM-P-3 DISC	MCP ADM-P-3	0.48	7.83	7.83	5.32	0.005	0.0000	Yes	PNL	25	4	18	0.08		# 0492
26	ADM-P-4 DISC	MCP ADM-P-4	0.48	7.28	7.28	5.00	0.005	0.0000	Yes	PNL	25	3	18	0.08		# 0492
27	ADM-SUP LCP	PD 0561	0.48	2.24	2.24	1.83	0.0192	0.0000	Yes	PNL	25	4	18	0.10		# 0185
28	ADP-E1 DISC	MCP ADP-E1	0.48	1.66	1.51	1.29	0.055	0.0000	Yes	PNL	25	7	18	0.25		# 0031
29	ADP-E2 DISC	MCP ADP-E2	0.48	5.76	5.46	3.88	0.04	0.0000	Yes	PNL	25	11	18	0.55		# 0027
30	ADP-W1 DISC	MCP ADP-W1	0.48	5.76	5.76	4.09	0.005	0.0000	Yes	PNL	25	3	18	0.06		# 0028
31	AIR COMP 1 DISC	FU AIR COMP 1	0.48	2.82	2.82	1.89	0.0083	0.0000	Yes	PNL	25	2	18	0.05	(*N3)	# 0475
32	AIR COMP 1P DISC	FU 0687	0.48	3.28	3.28	2.15	0.0083	0.0000	Yes	PNL	25	3	18	0.05	(*N3)	# 0136
33	AIR WASH MV DISC	FU 0754	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
34	ALTERNATOR P	FU 0685	0.208	0.14	0.14	0.14	0.1781	0.0000	Yes	PNL	25	2	18	0.01	(*N11)	# 0034
35	AT-E1 FCV BF-64-25	FB AT-E1 FCV	0.48	1.47	1.47	1.27	0.0211	0.0000	Yes	PNL	25	3	18	0.08		# 0034
36	AT-E2 FCV BF-64-26	FB AT-E2 FCV	0.48	1.66	1.66	1.41	0.0195	0.0000	Yes	PNL	25	3	18	0.08		# 0035

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
37	AT-E3 Z1 FCV	FB AT-E3 Z2 FCV	0.48	0.87	0.87	0.70	0.537	0.0000	Yes	PNL	25	16	18	0.99	(*N3)	# 0036
38	AT-E3 Z2 FCV	FB AT-E3 Z2 FCV	0.48	1.03	1.03	0.80	0.0424	0.0000	Yes	PNL	25	4	18	0.09	(*N3)	# 0037
39	AT-E3 Z3 FCV	FB AT-E3 Z2 FCV	0.48	1.16	1.16	0.88	0.033	0.0000	Yes	PNL	25	3	18	0.08	(*N3)	# 0038
40	AT-E4 Z1 FCV	FB AT-E4 Z2 FCV	0.48	0.87	0.87	0.70	0.537	0.0000	Yes	PNL	25	16	18	0.99	(*N3)	# 0039
41	AT-E4 Z2 FCV	FB AT-E4 Z2 FCV	0.48	1.03	1.03	0.80	0.0424	0.0000	Yes	PNL	25	4	18	0.09	(*N3)	# 0040
42	AT-E4 Z3 FCV	FB AT-E4 Z2 FCV	0.48	1.16	1.16	0.88	0.033	0.0000	Yes	PNL	25	3	18	0.08	(*N3)	# 0041
43	ATS PEWP2 NRM	FU PEW PUMP 2	0.48	18.53	17.08	8.70	0.0291	0.0000	Yes	PNL	25	17	18	1.1		# 0043
44	ATS-ADM EMG	800/800 ATS-ADM-EMG	0.48	11.25	11.25	7.25	0.2	0.0000	Yes	PNL	25	41	18	4.7		# 0488
45	ATS-ADM LOAD	800/800 ATS-ADM-EMG	0.48	11.25	11.25	7.25	0.2	0.0000	Yes	PNL	25	41	18	4.7		# 0017
46	ATS-ADM NRM	800/800 ATS-ADM-NRM	0.48	11.13	11.13	7.19	0.2	0.0000	Yes	PNL	25	41	18	4.6		# 0046
47	ATS-CEB LOAD	FB ATS-CEB NRM	0.48	21.92	21.92	12.82	0.0175	0.0000	Yes	PNL	25	14	18	0.76		# 0047
48	ATS-CEB-EMG	FB ATS-CEB EMG	0.48	20.67	20.67	12.19	0.0175	0.0000	Yes	PNL	25	13	18	0.72		# 0048
49	ATS-CEB-NRM	FB ATS-CEB NRM	0.48	21.92	21.92	12.82	0.0175	0.0000	Yes	PNL	25	14	18	0.76		# 0049
50	ATS-EBB NORM	FB ATS-EBB NORM	0.48	8.59	8.59	5.76	0.04	0.0000	Yes	PNL	25	13	18	0.73		# 0040
51	ATS-EBB-EMG	FB ATS-EBB-EMG	0.48	9.40	9.40	6.22	0.04	0.0000	Yes	PNL	25	14	18	0.79		# 0040
52	ATS-EBB-LOAD	FB ATS-EBB NORM	0.48	8.59	8.59	5.76	0.04	0.0000	Yes	PNL	25	13	18	0.73		# 0040
53	ATS-LSE EMG	FB ATS-LSE-EMG	0.48	12.55	12.55	7.96	0.0528	0.0000	Yes	PNL	25	20	18	1.4		# 0043
54	ATS-LSE LOAD	FB ATS-LSE-NRM	0.48	12.54	12.54	7.95	0.0528	0.0000	Yes	PNL	25	20	18	1.4		# 0043
55	ATS-LSE NRM	FB ATS-LSE-NRM	0.48	12.54	12.54	7.95	0.0528	0.0000	Yes	PNL	25	20	18	1.4		# 0043
56	ATS-PP-UV-EMG	FB ATS-PP-UV-EMG	0.48	3.53	3.53	2.70	0.0188	0.0000	Yes	PNL	25	5	18	0.15	(*N21b)	# 0064
57	ATS-PP-UV-LOAD	FU ATS-PP-UV-NRM	0.48	1.70	1.70	1.23	0.0463	0.0000	Yes	PNL	25	5	18	0.16	(*N3) (*N21b)	# 0065
58	ATS-PP-UV-NRM	FU ATS-PP-UV-NRM	0.48	1.70	1.70	1.23	0.0463	0.0000	Yes	PNL	25	5	18	0.16	(*N3) (*N21b)	# 0066
59	ATS-RLS EMG	FB ATS-RLS EMG	0.48	13.90	13.90	8.69	0.0162	0.0000	Yes	PNL	25	10	18	0.46		# 0043
60	ATS-RLS LOAD	FB ATS-RLS NRM	0.48	11.59	11.59	7.44	0.0162	0.0000	Yes	PNL	25	9	18	0.39		# 0043
61	ATS-RLS NRM	FB ATS-RLS NRM	0.48	11.59	11.59	7.44	0.0162	0.0000	Yes	PNL	25	9	18	0.39		# 0043
62	ATS-WBB NORM	FB ATS-WBB-NORM	0.48	31.28	31.28	17.37	0.05	0.0000	Yes	PNL	25	32	18	3.0		# 0049
63	ATS-WBB-EMG	FB ATS-WBB-EMG	0.48	33.44	33.44	18.39	0.05	0.0000	Yes	PNL	25	33	18	3.2		# 0050
64	ATS-WBB-LOAD	FB ATS-WBB-NORM	0.48	31.28	31.28	17.37	0.05	0.0000	Yes	PNL	25	32	18	3.0		# 0051
65	ATS-WPB-EMG	FB ATS-WPB-EMG	0.48	10.31	10.31	6.73	0.0162	0.0000	Yes	PNL	25	9	18	0.35		# 0052
66	ATS-WPB-LOAD	FB ATS-WPB-NORM	0.48	9.03	9.03	6.01	0.0162	0.0000	Yes	PNL	25	8	18	0.31		# 0053
67	ATS-WPB-NORM	FB ATS-WPB-NORM	0.48	9.03	9.03	6.01	0.0162	0.0000	Yes	PNL	25	8	18	0.31		# 0054
68	AT-W2 FCV JB	PD AT-W2 FCV	0.48	2.57	2.57	2.05	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0075
69	B-54-1 DISC	PD W1 FLOW VALVES	0.48	3.50	3.50	2.68	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0067
70	B-54-1 MTR VALVE.	PD W1 FLOW VALVES	0.48	3.45	3.45	2.64	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0069
71	B-54-2 DISC	PD W1 FLOW VALVES	0.48	3.50	3.50	2.68	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0069
72	B-54-2 MTR VALVE.	PD W1 FLOW VALVES	0.48	3.45	3.45	2.64	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0071
73	B-54-3 DISC	PD W1 FLOW VALVES	0.48	3.50	3.50	2.68	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0071
74	B-54-3 MTR VALVE.	PD W1 FLOW VALVES	0.48	3.45	3.45	2.64	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0073
75	BAR SCREEN 2 TERM	FU BAR SCREEN 2	0.48	4.44	4.44	3.28	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
76	BF - 64- 29	FB AT-E1 FCV	0.48	1.26	1.26	0.95	0.0286	0.0000	Yes	PNL	25	3	18	0.07	(*N3)	# 0075
77	BF - 64- 30	FB AT-E2 FCV	0.48	1.40	1.40	1.22	0.0218	0.0000	Yes	PNL	25	3	18	0.07		# 0076

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
78	BF-64-07	FB AT-E1 FCV	0.48	1.04	1.04	0.81	0.0393	0.0000	Yes	PNL	25	4	18	0.09	(*N3)	# 0077
79	BF-64-08	FB AT-E2 FCV	0.48	1.13	1.13	0.87	0.0342	0.0000	Yes	PNL	25	3	18	0.08	(*N3)	# 0078
80	BSCRN-3 STR	FU BAR SCREEN 3	0.48	4.39	4.39	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
81	BSNHST DISC	FU 0521	0.48	4.08	4.08	3.05	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0073
82	BSNINFLGT-1 DISC	FU BASIN INFL GATE 1	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
83	BSNINFLGT2 DISC	FU 0535	0.48	2.78	2.78	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
84	BSNINFLGT-3 DISC	FU BASIN INFL GATE 3	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
85	BSN-OUT-GT-1 DISC	FU BASIN OUT GATE 1	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
86	BSNOUTGT2 DISC	FU 0536	0.48	2.78	2.78	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
87	BSN-OUT-GT-3 DISC	FU BASIN OUT GATE 3	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
88	BT1-1M DISC	MCP BT1-1M	0.48	11.11	10.68	6.90	0.015	0.0000	Yes	PNL	25	10	18	0.43	(*N21b)	# 0072
89	BT2-1M DISC	MCP BT2-1M	0.48	11.00	10.58	6.84	0.015	0.0000	Yes	PNL	25	10	18	0.43	(*N21b)	# 0073
90	BTAB-1 DISC	MCP BTAB-1	0.48	1.44	1.44	1.25	0.015	0.0000	Yes	PNL	25	3	18	0.05		# 0074
91	BTAB-2 DISC	MCP BTAB-2	0.48	1.43	1.43	1.25	0.015	0.0000	Yes	PNL	25	3	18	0.05		# 0076
92	BTAB-3 DISC	MCP BTAB-3	0.48	1.33	1.33	1.17	0.015	0.0000	Yes	PNL	25	3	18	0.05		# 0075
93	BUS G1	52G2_87R	13.20	1.50	0.75	0.28	0.35	0.0830	Yes	SWG	152	27	36	0.89	(*N2) (*N9)	# 0019
94	BUS G2	52G1_87R	13.20	1.50	0.75	0.28	0.35	0.0830	Yes	SWG	152	27	36	0.89	(*N2) (*N9)	# 0020
95	BUS-0097	MCP AXMX-E1A	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0256
96	BUS-0099	MCP AXMX-E1B	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0078
97	BUS-0101	MCP AXMX-E1C	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0079
98	BUS-0103	MCP ANMX-E1A	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0080
99	BUS-0105	MCP ANMX-E1B	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0081
100	BUS-0107	MCP ANMX-E1C	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0082
101	BUS-0109	MCP ANMX-E1D	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0083
102	BUS-0111	MCP SWMX-E1	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0084
103	BUS-0113	MCP ANMX-E3A	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0085
104	BUS-0115	MCP ANMX-E3B	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0086
105	BUS-0117	MCP ANMX-E3C	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0087
106	BUS-0119	MCP ANMX-E3D	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0088
107	BUS-0121	MCP AXMX-E3A	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0089
108	BUS-0123	MCP AXMX-E3B	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0090
109	BUS-0125	MCP AXMX-E3C	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0091
110	BUS-0127	MCP SWMX-E3	0.48	1.08	1.08	0.98	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0092
111	BUS-0141	MCP AXMX-E2A	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0093
112	BUS-0143	MCP AXMX-E2B	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0094
113	BUS-0145	MCP AXMX-E2C	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0095
114	BUS-0147	MCP ANMX-E2A	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0096
115	BUS-0149	MCP ANMX-E2B	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0097
116	BUS-0151	MCP ANMX-E2C	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0098
117	BUS-0153	MCP ANMX-E2D	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0099
118	BUS-0155	MCP SWMX-E2	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0100

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
119	BUS-0157	MCP ANMX-E4A	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0101
120	BUS-0159	MCP ANMX-E4B	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0102
121	BUS-0161	MCP ANMX-E4C	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0103
122	BUS-0163	MCP ANMX-E4D	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0104
123	BUS-0165	MCP AXMX-E4A	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0105
124	BUS-0167	MCP AXMX-E4B	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0106
125	BUS-0169	MCP AXMX-E4C	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0107
126	BUS-0171	MCP SWMX-E4	0.48	0.84	0.84	0.79	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0108
127	BUS-0178	FB EWH-2	0.48	5.79	5.79	4.11	0.0161	0.0000	Yes	PNL	25	6	18	0.20		# 0126
128	BUS-0179	FB WASV E1 P-65-1	0.48	1.41	1.41	1.23	0.0216	0.0000	Yes	PNL	25	3	18	0.07		# 0109
129	BUS-0180	FB WASV E2 P-65-2	0.48	1.41	1.41	1.23	0.0216	0.0000	Yes	PNL	25	3	18	0.07		# 0110
130	BUS-0181	FB EWH-2	0.48	5.69	5.69	4.05	0.0161	0.0000	Yes	PNL	25	6	18	0.20		# 0111
131	BUS-0182	FB AT-E1 FCV	0.48	2.11	2.11	1.74	0.0167	0.0000	Yes	PNL	25	4	18	0.08		# 0130
132	BUS-0188	FB AT-E2 FCV	0.48	2.51	2.51	2.02	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0131
133	BUS-0272	PD P-53-07	0.48	11.20	11.20	7.22	0.0162	0.0000	Yes	PNL	25	9	18	0.38	(*N21b)	# 0113
134	BUS-0273	MCP AXMX-W1A	0.48	1.94	1.94	1.62	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
135	BUS-0274	MCP AXMX-W1B	0.48	1.52	1.52	1.31	0.005	0.0000	Yes	PNL	25	1	18	0.02		# 0492
136	BUS-0275	MCP AXMX-W1C	0.48	1.91	1.91	1.60	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
137	BUS-0276	MCP ANMX-W1A	0.48	1.64	1.64	1.40	0.005	0.0000	Yes	PNL	25	1	18	0.02		# 0492
138	BUS-0277	MCP ANMX-W1B	0.48	2.31	2.31	1.87	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
139	BUS-0278	MCP ANMX-W1C	0.48	2.07	2.07	1.71	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
140	BUS-0279	MCP ANMX-W1D	0.48	2.02	2.02	1.67	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
141	BUS-0281	MCP SWMX-W1	0.48	3.05	3.05	2.37	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0492
142	BUS-0289	MCP AXMX-W2A	0.48	3.54	3.54	2.70	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0492
143	BUS-0290	MCP AXMX-W2B	0.48	2.52	2.52	2.02	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
144	BUS-0291	MCP AXMX-W2C	0.48	2.04	2.04	1.69	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
145	BUS-0292	MCP ANMX-W2A	0.48	1.71	1.71	1.45	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
146	BUS-0293	MCP ANMX-W2B	0.48	2.07	2.07	1.71	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
147	BUS-0294	MCP ANMX-W2C	0.48	1.99	1.99	1.65	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
148	BUS-0295	MCP ANMX-W2D	0.48	1.57	1.57	1.35	0.005	0.0000	Yes	PNL	25	1	18	0.02		# 0492
149	BUS-0296	MCP SWMX-W2	0.48	3.17	3.17	2.46	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0492
150	BUS-0310	PD PAB-W1 VALVES	0.48	6.65	6.65	4.63	0.0162	0.0000	Yes	PNL	25	7	18	0.23		# 0147
151	BUS-0311	PD PAB-W1 VALVES	0.48	6.48	6.48	4.52	0.0162	0.0000	Yes	PNL	25	7	18	0.23		# 0152
152	BUS-0312	PD PAB-W1 VALVES	0.48	6.65	6.65	4.63	0.0162	0.0000	Yes	PNL	25	7	18	0.23		# 0148
153	BUS-0313	PD PAB-W1 VALVES	0.48	6.48	6.48	4.52	0.0162	0.0000	Yes	PNL	25	7	18	0.23		# 0154
154	BUS-0314	PD PAB-W3 VALVES	0.48	4.24	4.24	3.15	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0149
155	BUS-0315	PD PAB-W3 VALVES	0.48	4.16	4.16	3.10	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0156
156	BUS-0316	PD PAB-W3 VALVES	0.48	4.24	4.24	3.15	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0150
157	BUS-0317	PD PAB-W3 VALVES	0.48	4.16	4.16	3.10	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0158
158	BUS-0318	PD AT-W2 FCV	0.48	2.54	2.54	2.03	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0151
159	BUS-0319	PD AT-W2 FCV	0.48	2.51	2.51	2.02	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0160

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
160	BUS-0320	PD WAS VALVE W2	0.48	5.44	5.44	3.90	0.0162	0.0000	Yes	PNL	25	6	18	0.19		# 0152
161	BUS-0321	PD AT-W2 FCV	0.48	2.54	2.54	2.03	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0153
162	BUS-0322	PD AT-W2 FCV	0.48	2.51	2.51	2.02	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0163
163	BUS-0323	PD AT-W2 FCV	0.48	2.54	2.54	2.03	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0154
164	BUS-0324	PD AT-W2 FCV	0.48	2.51	2.51	2.02	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0165
165	BUS-0325	PD WEST AESG W2	0.48	2.32	2.32	1.88	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0155
166	BUS-0326	PD PAB-W2 VALVES	0.48	5.10	5.10	3.69	0.0162	0.0000	Yes	PNL	25	6	18	0.18		# 0156
167	BUS-0327	PD PAB-W2 VALVES	0.48	5.00	5.00	3.62	0.0162	0.0000	Yes	PNL	25	6	18	0.18		# 0168
168	BUS-0328	PD PAB-W2 VALVES	0.48	5.10	5.10	3.69	0.0162	0.0000	Yes	PNL	25	6	18	0.18		# 0157
169	BUS-0329	PD PAB-W2 VALVES	0.48	5.00	5.00	3.62	0.0162	0.0000	Yes	PNL	25	6	18	0.18		# 0170
170	BUS-0330	PD WA MAIN BOV	0.48	11.43	11.43	7.35	0.0162	0.0000	Yes	PNL	25	9	18	0.39	(*N21b)	# 0158
171	BUS-0331	FB LSE-PPU-1	0.48	3.18	3.18	2.46	0.0162	0.0000	Yes	PNL	25	4	18	0.12		# 0159
172	BUS-0332	FB LSE-ACCU-1	0.48	8.61	8.61	5.77	0.0162	0.0000	Yes	PNL	25	8	18	0.30		# 0160
173	BUS-0333	FB LSE-ACU-1	0.48	4.73	4.73	3.46	0.0175	0.0000	Yes	PNL	25	6	18	0.18		# 0161
174	BUS-0337	FB CN-50-3 FCV	0.48	1.16	1.16	0.88	0.033	0.0000	Yes	PNL	25	3	18	0.08	(*N3)	# 0164
175	BUS-0348	FB SLDG'S F-50-3,4	0.48	0.86	0.86	0.68	0.5843	0.0000	Yes	PNL	25	17	18	1.1	(*N3)	# 0167
176	BUS-0349	FB SLDG'S F-60-1,2,3	0.48	0.99	0.99	0.77	0.3122	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0168
177	BUS-0350	FB SLDG'S F-50-3,4	0.48	0.86	0.86	0.68	0.5843	0.0000	Yes	PNL	25	17	18	1.1	(*N3)	# 0169
178	BUS-0351	FB SLDG'S F-60-1,2,3	0.48	0.99	0.99	0.77	0.3122	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0170
179	BUS-0352	FB SLDG'S F-60-1,2,3	0.48	0.99	0.99	0.77	0.3122	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0171
180	BUS-0353	FB SLDG'S S-50-1,2,3,4,5	0.48	0.89	0.89	0.71	0.4918	0.0000	Yes	PNL	25	15	18	0.93	(*N3)	# 0172
181	BUS-0354	FB SLDG'S S-50-1,2,3,4,5	0.48	0.99	0.99	0.77	0.3122	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0173
182	BUS-0355	FB SLDG'S S-50-1,2,3,4,5	0.48	0.99	0.99	0.77	0.3122	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0174
183	BUS-0356	FB SLDG'S S-50-1,2,3,4,5	0.48	0.99	0.99	0.77	0.3122	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0175
184	BUS-0357	FB SLDG'S S-50-1,2,3,4,5	0.48	0.99	0.99	0.77	0.3122	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0176
185	BUS-0358	FB SLDG'S S-50-1,2,3,4,5	0.48	0.99	0.99	0.77	0.3122	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0177
186	BUS-0359	FB SLDG'S S-50-1,2,3,4,5	0.48	0.99	0.99	0.77	0.3122	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0178
187	BUS-0360	FB SLDG's S-60-1,2	0.48	0.99	0.99	0.77	0.3122	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0179
188	BUS-0361	FB SLDG's S-60-1,2	0.48	0.99	0.99	0.77	0.3122	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0180
189	BUS-0362	FB SLDG's S-60-1,2	0.48	0.86	0.86	0.68	0.5843	0.0000	Yes	PNL	25	17	18	1.1	(*N3)	# 0181
190	BUS-0363	FB EAST JC GATES	0.48	0.99	0.99	0.77	0.3122	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0182
191	BUS-0364	FB EAST JC GATES	0.48	0.99	0.99	0.77	0.3122	0.0000	Yes	PNL	25	12	18	0.65	(*N3)	# 0183
192	BUS-0392	FB AT-E3 Z2 FCV	0.48	1.48	1.48	1.28	0.021	0.0000	Yes	PNL	25	3	18	0.08		# 0185
193	BUS-0393	FB AT-E1 FCV	0.48	2.02	2.02	1.68	0.0171	0.0000	Yes	PNL	25	4	18	0.08		# 0186
194	BUS-0394	FB AT-E1 FCV	0.48	2.02	2.02	1.68	0.0171	0.0000	Yes	PNL	25	4	18	0.08		# 0187
195	BUS-0395	FB AT-E1 FCV	0.48	2.02	2.02	1.68	0.0171	0.0000	Yes	PNL	25	4	18	0.08		# 0188
196	BUS-0396	FB AT-E2 FCV	0.48	2.39	2.39	1.93	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0189
197	BUS-0397	FB AT-E2 FCV	0.48	2.39	2.39	1.93	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0190
198	BUS-0398	FB AT-E2 FCV	0.48	2.39	2.39	1.93	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0191
199	BUS-0399	FB AT-E3 Z2 FCV	0.48	1.48	1.48	1.28	0.021	0.0000	Yes	PNL	25	3	18	0.08		# 0192
200	BUS-0400	FB AT-E3 Z2 FCV	0.48	1.48	1.48	1.28	0.021	0.0000	Yes	PNL	25	3	18	0.08		# 0193

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
201	BUS-0401	FB AT-E4 Z2 FCV	0.48	1.48	1.48	1.28	0.021	0.0000	Yes	PNL	25	3	18	0.08		# 0194
202	BUS-0402	FB AT-E4 Z2 FCV	0.48	1.48	1.48	1.28	0.021	0.0000	Yes	PNL	25	3	18	0.08		# 0195
203	BUS-0403	FB AT-E4 Z2 FCV	0.48	1.48	1.48	1.28	0.021	0.0000	Yes	PNL	25	3	18	0.08		# 0196
204	BUS-0406	FB PAB-E2 DV & BOV1	0.48	1.88	1.88	1.57	0.018	0.0000	Yes	PNL	25	3	18	0.08		# 0206
205	BUS-0409	FB WASV E3	0.48	1.32	1.32	1.16	0.0226	0.0000	Yes	PNL	25	3	18	0.07		# 0198
206	BUS-0410	FB WASV E4	0.48	1.32	1.32	1.16	0.0226	0.0000	Yes	PNL	25	3	18	0.07		# 0199
207	BUS-0412	FB EBB-EDH-1	0.48	5.15	5.15	3.72	0.0162	0.0000	Yes	PNL	25	6	18	0.18		# 0200
208	BUS-0413	FB PAB-E1 DV & BOV	0.48	2.55	2.55	2.04	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0210
209	BUS-0414	FB PAB-E1 DV & BOV	0.48	2.21	2.21	1.81	0.0162	0.0000	Yes	PNL	25	4	18	0.08		# 0211
210	BUS-0415	FB EWH-2	0.48	5.74	5.74	4.08	0.0161	0.0000	Yes	PNL	25	6	18	0.20		# 0203
211	BUS-0436	PD SWPSO-SG	0.48	2.82	2.82	2.23	0.0162	0.0000	Yes	PNL	25	4	18	0.11		# 0201
212	BWP2 DISC	FU BACKWASH PUMP 2	0.48	13.91	13.24	7.03	0.0083	0.0000	Yes	PNL	25	8	18	0.34	(*N21b)	# 0568
213	BWWP1 DISC	FU 0668	0.48	12.97	12.29	6.60	0.0083	0.0000	Yes	PNL	25	8	18	0.33	(*N21b)	# 0136
214	BYPGT1 DISC	FU 0564	0.48	2.78	2.78	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
215	BYPGT2 DISC	FU 0554	0.48	2.78	2.78	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
216	C SUMP PUMP DISC	FU C SUMP PUMP	0.48	4.39	4.39	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
217	CC-1 DISC	FU CROSS COLL 1	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
218	CC2 DISC	FU 0528	0.48	2.78	2.78	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
219	CC-3 DISC	FU CROSS COLL 3	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
220	CE WET WELL GT DISC	FU 0745	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
221	CEB-ACCU-1 DISC	PD CEB-ACCU-1	0.48	5.04	5.04	3.65	0.0162	0.0000	Yes	PNL	25	6	18	0.18		# 0023
222	CEB-ACCU-1 TERM	PD CEB-ACCU-1	0.48	4.22	4.22	3.14	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0088
223	CEB-ACU-1 TERM	PD CEB-ACU-1	0.48	12.35	12.35	7.86	0.0162	0.0000	Yes	PNL	25	9	18	0.41	(*N21b)	# 0023
224	CEB-EF-1 DISC	MCP CEB-EF-1	0.48	1.76	1.76	1.49	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0023
225	CEB-EF-2 DISC	MCP CEB-EF-2	0.48	1.91	1.91	1.59	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0023
226	CEB-FCP-1 DISC	MCP CEB-FCP-1	0.48	4.11	4.11	3.07	0.005	0.0000	Yes	PNL	25	2	18	0.05		# 0023
227	CEB-FCP-2 TERM	PD CEP-FCP-2	0.48	3.24	3.24	2.50	0.0162	0.0000	Yes	PNL	25	4	18	0.12		# 0023
228	CEB-P-1 DISC	MCP CEB-P-1	0.48	3.25	3.25	2.51	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0023
229	CEB-P-2 DISC	MCP CEB-P-2	0.48	3.24	3.24	2.50	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0023
230	CF2 AHU-1 DISC	MCP AHU-1	0.48	1.20	1.20	1.07	0.015	0.0000	Yes	PNL	25	2	18	0.04		# 0154
231	CF2 AHU-3 DISC	MCP AHU-3	0.48	2.01	2.01	1.66	0.015	0.0000	Yes	PNL	25	3	18	0.07		# 0155
232	CFG-1 BACK DR DISC	FU CFG-1	0.48	5.82	5.25	3.17	0.5256	0.0000	Yes	PNL	25	45	18	5.4	(*N3)	# 0159
233	CFG-1 BOWL DR DISC	FU CFG-1	0.48	17.93	15.75	9.49	0.0083	0.0000	Yes	PNL	25	13	18	0.70	(*N21b)	# 0159
234	CFG-2 BACK DR DISC	MB CFG-2	0.48	7.11	6.46	4.45	0.0178	0.0000	Yes	PNL	25	9	18	0.40		# 0159
235	CFG-2 BOWL DR DISC	FU CFG-2	0.48	17.99	15.83	8.10	0.0105	0.0000	Yes	PNL	25	13	18	0.70	(*N21b)	# 0159
236	CFG-3 BACK DR DISC	FU CFG-3	0.48	5.91	5.35	3.22	0.434	0.0000	Yes	PNL	25	40	18	4.5	(*N3)	# 0159
237	CFG-3 BOWL DR DISC	FU CFG-3	0.48	19.01	16.85	10.06	0.0083	0.0000	Yes	PNL	25	13	18	0.71	(*N21b)	# 0159
238	CHABLWR DISC	FU CHANNEL AIR BLOWER	0.48	4.44	4.44	3.28	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
239	CN-50-3 FCV	FB CN-50-3 FCV	0.48	1.03	1.03	0.80	0.0398	0.0000	Yes	PNL	25	4	18	0.09	(*N3)	# 0111
240	CONT TK INT GT DISC	FU 0682	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
241	CP-70 EMG	FU CP70 EMG TERM	0.48	1.50	1.50	1.30		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0568

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
242	CP-70 NRM	FU 0756	0.48	2.89	2.89	2.27		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0568
243	CR-1 HSP 5 DISC	MCP HSP 5	0.48	3.36	3.36	2.58	0.015	0.0000	Yes	PNL	25	4	18	0.12		# 0165
244	CR-1 HSP 6 DISC	MCP HSP 6	0.48	3.19	3.19	2.47	0.015	0.0000	Yes	PNL	25	4	18	0.11		# 0166
245	D SP-2 DISC	FU D SUMP PUMP 2	0.48	4.44	4.44	3.28	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
246	DCH FNL EFF SP DISC	FU 0751	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
247	DOOR OP EE1	FU 0905	0.48	2.78	2.78	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0099
248	DOOR OP EE2	FU 0906	0.48	2.78	2.78	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0099
249	DOOR OP FF	FU 0919	0.48	2.74	2.74	2.17	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0099
250	DOOR OPERATOR STR	FU DOOR OPERATOR	0.48	4.44	4.44	3.28	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
251	DP-51	MB MCC-51A	0.48	24.84	24.84	14.27	0.0121	0.0000	Yes	PNL	25	12	18	0.59	(*N5)	# 0247
252	DP-51 (MB DP-51 LineSide)	MB MCC-51A	0.48	24.84	24.84	14.27	0.0121	0.0000	Yes	PNL	25	12	18	0.59	(*N5)	# 0248-Line
253	DP-52	MB DP-52	0.48	23.75	23.75	13.73	0.01	0.0000	Yes	PNL	25	10	18	0.47		# 0249
254	DP-52 (MB DP-52 LineSide)	MB MCC-52A	0.48	23.75	23.75	13.73	0.0123	0.0000	Yes	PNL	25	12	18	0.57	(*N5)	# 0250-Line
255	DP-54	MB DP-54	0.48	19.07	19.07	11.38	0.01	0.0000	Yes	PNL	25	9	18	0.38		# 0251
256	DP-54 (MB DP-54 LineSide)	MB MCC-54A	0.48	19.07	19.07	11.38	0.0133	0.0000	Yes	PNL	25	11	18	0.51	(*N5)	# 0252-Line
257	DP-55	MB DP-55	0.48	19.78	19.78	11.74	0.01	0.0000	Yes	PNL	25	9	18	0.39		# 0253
258	DP-55 (MB DP-55 LineSide)	FB ATS-55 NRM	0.48	19.78	19.78	11.74	0.0131	0.0000	Yes	PNL	25	11	18	0.52		# 0254-Line
259	DP-56	MB DP-56	0.48	12.30	12.30	7.83	0.0112	0.0000	Yes	PNL	25	7	18	0.28		# 0255
260	DP-56 (MB DP-56 LineSide)	FB DP-56	0.48	12.30	12.30	6.65	0.2	0.0000	Yes	PNL	25	38	18	4.0	(*N3)	# 0256-Line
261	DRILL PRESS	FB DRILL PRESS	0.48	4.56	4.56	3.35	0.0162	0.0000	Yes	PNL	25	5	18	0.16		# 0266
262	DROP (NGW) STR	FU DOOR OP (NGW)	0.48	4.39	4.39	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
263	DROP (SG) STR	FU DOOR OP (SG)	0.48	4.39	4.39	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
264	E CONT TK G1 DISC	FU 0747	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
265	E SUMP PUMP 1 DISC	FU E SUMP PUMP 1	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
266	EBB SUMP PUMP 2 DISC	MCP EBB SUMP PUMP 2	0.48	3.42	3.42	2.62	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0126
267	EBB SUMP PUMP 4 DISC	MCP EBB SUMP PUMP 4	0.48	0.99	0.99	0.77	0.04	0.0000	Yes	PNL	25	4	18	0.08	(*N3)	# 0127
268	EBB-A HOIST 1	PD EBB-A HOIST1	0.48	0.98	0.98	0.77	0.3282	0.0000	Yes	PNL	25	13	18	0.67	(*N3)	# 0118
269	EBB-A HOIST 1 DISC	PD EBB-A HOIST1	0.48	1.05	1.05	0.81	0.039	0.0000	Yes	PNL	25	4	18	0.09	(*N3)	# 0119
270	EBB-A HOIST 2	PD EBB-A HOIST2	0.48	0.98	0.98	0.77	0.3282	0.0000	Yes	PNL	25	13	18	0.67	(*N3)	# 0120
271	EBB-A HOIST 2 DISC	PD EBB-A HOIST2	0.48	1.05	1.05	0.81	0.039	0.0000	Yes	PNL	25	4	18	0.09	(*N3)	# 0121
272	EBB-EDH-1 LINE'	FB EBB-EDH-1	0.48	3.91	3.91	2.94	0.0162	0.0000	Yes	PNL	25	5	18	0.14		# 0277
273	EBB-EF-10 DISC	MCP EBB-EF-10	0.48	2.73	2.73	2.17	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0133
274	EBB-EF-5 DISC	MCP EBB-EF-5	0.48	3.98	3.98	2.98	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0134
275	EBB-EF-6 DISC	MCP EBB-EF-6	0.48	2.17	2.17	1.78	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0135
276	EBB-EF-7 DISC	MCP EBB-EF-7	0.48	1.44	1.44	1.25	0.005	0.0000	Yes	PNL	25	1	18	0.02		# 0136
277	EBB-EF-9 DISC	MCP EBB-EF-9	0.48	0.98	0.98	0.90	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0137
278	EBB-EUH-1 TERM	PD EBB-EUH-1	0.48	5.94	5.94	4.20	0.0162	0.0000	Yes	PNL	25	6	18	0.21		# 0118
279	EBB-HV-1 DISC	PD EBB-HV-1	0.48	3.29	3.29	2.54	0.0162	0.0000	Yes	PNL	25	4	18	0.12		# 0139

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
280	EBB-HV-1 STR	PD EBB-HV-1	0.48	2.52	2.52	2.02	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0108
281	EF1 DISC	FU 0646	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
282	EF2 DISC	FU 0646	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
283	EF3 DISC	FU EF-3,4,1	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
284	EF4 DISC	FU EF-3,4,1	0.48	1.48	1.48	1.28	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
285	ELEVATOR CP DISC	PD ELEVATOR CP	0.48	1.57	1.57	1.35	0.0171	0.0000	Yes	PNL	25	3	18	0.07		# 0492
286	ELEVATOR CP INPUT	FU ELEVATOR CP	0.48	1.47	1.47	1.28		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0492
287	EP THRV CONTROLLER	FU E. PLANT THR VALVE	0.48	4.44	4.44	3.28	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0133
288	EPBBV DISC	PD 0650	0.48	1.37	1.37	1.02	0.0338	0.0000	Yes	PNL	25	4	18	0.10	(*N3)	# 0136
289	EPBBV STARTER	PD 0650	0.48	1.30	1.30	0.97	0.1566	0.0000	Yes	PNL	25	9	18	0.42	(*N3)	# 0136
290	EPB-EUH-1 DISC	PD EPB-EUH-1	0.48	3.87	3.87	2.92	0.0162	0.0000	Yes	PNL	25	5	18	0.14		# 0180
291	EPB-EUH-1 TERM	PD EPB-EUH-1	0.48	3.63	3.63	2.76	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0152
292	EPSEGE DISC	FU 0654	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
293	EPSEGW DISC	FU 0656	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
294	EQ INFL GATE 1 STR	FU EQ INFL GATE 1	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
295	EQ INFL GATE 10 STR	FU EQ INFL GATE 10	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
296	EQ INFL GATE 11 STR	FU EQ INFL GATE 11	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
297	EQ INFL GATE 12 STR	FU EQ INFL GATE 12	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
298	EQ INFL GATE 2 STR	FU EQ INFL GATE 2	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
299	EQ INFL GATE 3 STR	FU EQ INFL GATE 3	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
300	EQ INFL GATE 4 STR	FU EQ INFL GATE 4	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
301	EQ INFL GATE 9 STR	FU EQ INFL GATE 9	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
302	EQINGT5 DISC	FU 0565	0.48	2.78	2.78	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
303	EQINGT6 DISC	FU 0566	0.48	2.78	2.78	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
304	EQINGT7 DISC	FU 0577	0.48	2.78	2.78	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
305	EQINGT8 DISC	FU 0578	0.48	2.78	2.78	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
306	EQPRM HOIST DISC	FU 0576	0.48	5.93	5.93	4.19	0.0042	0.0000	Yes	PNL	25	3	18	0.05		# 0073
307	EQPT RCPT C	FU WELDER OUTLET C	0.48	6.21	6.21	4.36	0.0042	0.0000	Yes	PNL	25	3	18	0.06		# 0492
308	EQPT RCPT D	FU WELDER OUTLET D	0.48	6.31	6.31	4.43	0.0042	0.0000	Yes	PNL	25	3	18	0.06		# 0430
309	EQPT RCPT E	FU WELD RCPT E	0.48	12.60	12.60	7.99	0.0042	0.0000	Yes	PNL	25	4	18	0.11	(*N21b)	# 0403
310	EQPT RCPT EBB-A	PD EBB-A WELD RCPT	0.48	8.23	8.23	5.56	0.0162	0.0000	Yes	PNL	25	8	18	0.28		# 0173
311	EQPT RCPT EBB-B	PD WELD RCPT EBB-B	0.48	7.61	7.61	5.19	0.0162	0.0000	Yes	PNL	25	7	18	0.26		# 0174
312	EQPT RCPT EE	FU 0908	0.48	4.08	4.08	3.05		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0430
313	EQPT RCPT EPB-B (Welder Receptacle)	PD EQRCPT-EPB-B	0.48	4.41	4.41	3.26	0.0162	0.0000	Yes	PNL	25	5	18	0.16		# 0406
314	EQPT RCPT F	FU 0559	0.48	2.78	2.78	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0407
315	EQPT RCPT M	FU 0663	0.48	2.33	2.33	1.89		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0136
316	EQPT RCPT RLS-B	PD WELD OUTLET RLS-B	0.48	4.41	4.41	3.26	0.0162	0.0000	Yes	PNL	25	5	18	0.16		# 0430
317	EQRETFCV DISC	FU 0553	0.48	2.78	2.78	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
318	EQ-RET-V-1 DISC	FU EQ RET VALVE 1	0.48	2.82	2.82	2.22	0.0083	0.0000	Yes	PNL	25	3	18	0.05		# 0475
319	EQ-RET-V-2 DISC	FU EQ RET VALVE 2	0.48	2.82	2.82	2.22	0.0083	0.0000	Yes	PNL	25	3	18	0.05		# 0475
320	EQRETV3 DISC	FU 0557	0.48	2.78	2.78	2.20	0.0083	0.0000	Yes	PNL	25	3	18	0.05		# 0073

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
321	ERU DISC	FU 0573	0.48	2.78	2.78	1.87	0.0239	0.0000	Yes	PNL	25	5	18	0.13	(*N3)	# 0073
322	ESESP6 DISC	FU 0660	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
323	EUH1 DISC	FU 0662	0.48	1.50	1.50	1.30		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0136
324	EUH-E1 TERM	PD-0538	0.48	5.92	5.92	4.19	0.0151	0.0000	Yes	PNL	25	6	18	0.20		# 0132
325	EUH-E2 TERM	PD-0539	0.48	3.84	3.84	2.90	0.0162	0.0000	Yes	PNL	25	5	18	0.14		# 0132
326	EWB-1 DISC	PD EWB-1	0.48	10.20	10.20	6.67	0.0162	0.0000	Yes	PNL	25	8	18	0.35	(*N21b)	# 0492
327	EWB-2 DISC	PD EWB-2	0.48	18.75	18.75	11.22	0.0161	0.0000	Yes	PNL	25	12	18	0.61	(*N21b)	# 0568
328	EWB-2 TERMS	PD EWB-2	0.48	17.71	17.71	10.68	0.0161	0.0000	Yes	PNL	25	12	18	0.57	(*N21b)	# 0162
329	F-1-1 DISC	PD F-1-1	0.48	2.25	2.25	1.83	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0160
330	F-1-1 STARTER	PD F-1-1	0.48	1.91	1.91	1.59	0.0166	0.0000	Yes	PNL	25	3	18	0.08		# 0188
331	F-1-2 DISC	PD F-1-1	0.48	2.23	2.23	1.82	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0160
332	F-1-2 STARTER	PD F-1-1	0.48	1.81	1.81	1.53	0.0167	0.0000	Yes	PNL	25	3	18	0.07		# 0190
333	F-1-3 DISC	PD F-1-1	0.48	2.21	2.21	1.81	0.0162	0.0000	Yes	PNL	25	4	18	0.08		# 0160
334	F-1-3 STARTER	PD F-1-1	0.48	1.53	1.53	1.32	0.0172	0.0000	Yes	PNL	25	3	18	0.06		# 0192
335	F-1-4 DISC	PD F-1-1	0.48	2.19	2.19	1.79	0.0162	0.0000	Yes	PNL	25	4	18	0.08		# 0160
336	F-1-4 STARTER	PD F-1-1	0.48	1.47	1.47	1.08	0.0209	0.0000	Yes	PNL	25	3	18	0.06	(*N3)	# 0194
337	F-1-5 DISC	PD F-1-5	0.48	1.84	1.84	1.54	0.0167	0.0000	Yes	PNL	25	3	18	0.07		# 0160
338	F-1-5 STARTER	PD F-1-5	0.48	1.30	1.30	0.98	0.0252	0.0000	Yes	PNL	25	3	18	0.07	(*N3)	# 0500
339	F-1-6 DISC	PD F-1-5	0.48	1.83	1.83	1.53	0.0167	0.0000	Yes	PNL	25	3	18	0.07		# 0160
340	F-1-6 STARTER	PD F-1-5	0.48	1.33	1.33	1.00	0.0242	0.0000	Yes	PNL	25	3	18	0.07	(*N3)	# 0500
341	F-1-7 DISC	PD F-1-5	0.48	1.81	1.81	1.53	0.0167	0.0000	Yes	PNL	25	3	18	0.07		# 0160
342	F-1-7 STARTER	PD F-1-5	0.48	1.52	1.52	1.32	0.0172	0.0000	Yes	PNL	25	3	18	0.06		# 0500
343	F-1-8 DISC	PD F-1-5	0.48	1.80	1.80	1.52	0.0167	0.0000	Yes	PNL	25	3	18	0.07		# 0160
344	F-1-8 STARTER	PD F-1-5	0.48	1.57	1.57	1.35	0.0171	0.0000	Yes	PNL	25	3	18	0.07		# 0500
345	F-2-1 DISC	PD F-2-6	0.48	5.63	5.63	4.02	0.0162	0.0000	Yes	PNL	25	6	18	0.20		# 0160
346	F-2-1 STARTER	PD F-2-6	0.48	4.19	4.19	3.12	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0204
347	F-2-12 DISC	PD F-2-6	0.48	5.55	5.55	3.97	0.0162	0.0000	Yes	PNL	25	6	18	0.20		# 0160
348	F-2-12 STARTER	PD F-2-6	0.48	4.13	4.13	3.08	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0206
349	F-2-13 DISC	PD F-2-13	0.48	1.58	1.58	1.35	0.0171	0.0000	Yes	PNL	25	3	18	0.07		# 0160
350	F-2-13 STARTER	PD F-2-13	0.48	1.04	1.04	0.81	0.035	0.0000	Yes	PNL	25	3	18	0.08	(*N3)	# 0208
351	F-2-18 DISC	PD F-2-13	0.48	1.57	1.57	1.35	0.0171	0.0000	Yes	PNL	25	3	18	0.07		# 0160
352	F-2-18 STARTER	PD F-2-13	0.48	1.39	1.39	1.03	0.0228	0.0000	Yes	PNL	25	3	18	0.06	(*N3)	# 0210
353	F-2-19 DISC	PD F-2-13	0.48	1.56	1.56	1.34	0.0171	0.0000	Yes	PNL	25	3	18	0.06		# 0160
354	F-2-19 STARTER	PD F-2-13	0.48	1.38	1.38	1.03	0.0229	0.0000	Yes	PNL	25	3	18	0.07	(*N3)	# 0212
355	F-2-24 DISC	PD F-2-13	0.48	1.55	1.55	1.33	0.0172	0.0000	Yes	PNL	25	3	18	0.06		# 0160
356	F-2-24 STARTER	PD F-2-13	0.48	1.01	1.01	0.79	0.0368	0.0000	Yes	PNL	25	3	18	0.08	(*N3)	# 0214
357	F-2-6 DISC	PD F-2-6	0.48	5.72	5.72	4.07	0.0162	0.0000	Yes	PNL	25	6	18	0.20		# 0160
358	F-2-6 STARTER	PD F-2-6	0.48	2.09	2.09	1.72	0.0163	0.0000	Yes	PNL	25	3	18	0.08		# 0217
359	F-2-7 DISC	PD F-2-6	0.48	5.47	5.47	3.91	0.0162	0.0000	Yes	PNL	25	6	18	0.20		# 0160
360	F-2-7 STARTER	PD F-2-6	0.48	2.12	2.12	1.74	0.0163	0.0000	Yes	PNL	25	4	18	0.08		# 0219
361	F-5-1 DISC	FU F-5-1	0.48	4.44	4.44	3.28	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
362	F-5-2 DISC	FU 5-5-2	0.48	4.44	4.44	3.28	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
363	F-54-1 DISC	PD F-54-4	0.48	1.81	1.81	1.52	0.0184	0.0000	Yes	PNL	25	3	18	0.08		# 0492
364	F-54-1 STR	PD F-54-4	0.48	1.76	1.76	1.49	0.0187	0.0000	Yes	PNL	25	3	18	0.08		# 0492
365	F-54-2 DISC	PD F-54-5	0.48	2.45	2.45	1.97	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0492
366	F-54-2 STR	PD F-54-5	0.48	2.35	2.35	1.91	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0492
367	F-54-4 DISC	PD F-54-4	0.48	4.61	4.61	3.38	0.0162	0.0000	Yes	PNL	25	5	18	0.17		# 0492
368	F-54-4 STR	PD F-54-4	0.48	4.16	4.16	3.10	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0492
369	F-54-5 DISC	PD F-54-5	0.48	10.94	10.94	7.08	0.0162	0.0000	Yes	PNL	25	9	18	0.37	(*N21b)	# 0492
370	F-54-5 STR	PD F-54-5	0.48	9.17	9.17	6.09	0.0162	0.0000	Yes	PNL	25	8	18	0.31	(*N20b)	# 0492
371	F-60-5	FB EAST JC GATES	0.48	0.92	0.92	0.73	0.4249	0.0000	Yes	PNL	25	14	18	0.83	(*N3)	# 0365
372	F-60-6	FB EAST JC GATES	0.48	0.92	0.92	0.73	0.4249	0.0000	Yes	PNL	25	14	18	0.83	(*N3)	# 0366
373	F-6-1 DISC	FU F-6-1	0.48	4.39	4.39	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
374	F-6-2 DISC	FU F-6-2	0.48	4.39	4.39	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
375	F-6-4 DISC	FB GATE OPERATORS	0.48	4.44	4.44	3.28	0.0158	0.0000	Yes	PNL	25	5	18	0.16		# 0492
376	F-7-1 DISC	FB GATE OPERATORS	0.48	3.46	3.46	2.65	0.0165	0.0000	Yes	PNL	25	5	18	0.13		# 0492
377	F-8-6 DISC	FB GATE OPERATORS	0.48	2.83	2.83	2.23	0.0171	0.0000	Yes	PNL	25	4	18	0.11		# 0492
378	FASB1 DISC	PD 0672	0.48	13.65	12.98	8.13	0.0149	0.0000	Yes	PNL	25	11	18	0.55	(*N21b)	# 0136
379	FASB-1 LCP	PD 0672	0.48	15.93	15.23	9.33	0.0144	0.0000	Yes	PNL	25	12	18	0.60		# 0206
380	FCB-1 DISC	PD 0724	0.48	8.56	8.56	5.74	0.0146	0.0000	Yes	PNL	25	7	18	0.27		# 0568
381	FCB-1-EF DISC	PD 0724	0.48	8.70	8.70	5.82	0.0146	0.0000	Yes	PNL	25	7	18	0.27		# 0568
382	FCBV-1 VFD	PD 0724	0.48	15.50	15.50	9.53	0.0137	0.0000	Yes	PNL	25	10	18	0.43	(*N21b)	# 0568
383	FDSP1 DISC	FU 0679	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
384	FDSP2 DISC	FU 0739	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
385	FDSP4 DISC	FU FLOOR DRN SP 4	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
386	FLRDRNSP3 DISC	FU 0657	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
387	GDWU-1 DISC	FU GRIT DEWATER UNIT 1	0.48	4.44	4.44	3.28	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
388	GDWU-2 DISC	FU GRIT DEWATER UNIT 2	0.48	4.44	4.44	3.28	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
389	GP-3 DISC TERM	FU GP-3	0.48	4.39	4.39	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
390	GRIT BLOWER 2 DISC	FU GRIT BLOWER 2	0.48	4.44	4.44	3.28	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
391	GRTBLWR3 DISC	FU GRIT BLOWER 3	0.48	4.39	4.39	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
392	GSP1 DISC	FU GRIT SLURRY PUMP 1	0.48	4.44	4.44	3.28	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
393	GSP2 DISC	FU GRIT SLURRY PUMP 2	0.48	4.44	4.44	3.28	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
394	GSP4 DISC	FU GRIT SLURRY PUMP 4	0.48	4.44	4.44	3.28	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
395	HEAT REC UNIT DISC	FU HEAT RECOVERY UNIT	0.48	8.01	8.01	5.43	0.0042	0.0000	Yes	PNL	25	3	18	0.07		# 0492
396	HOIST D DISC	FU HOIST D	0.48	4.44	4.44	3.28	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
397	HOIST EPB-B DISC	PD HOIST EPB-B	0.48	4.14	4.14	3.09	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0180
398	HOIST EPB-B STARTER	PD HOIST EPB-B	0.48	3.63	3.63	2.76	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0177
399	HOIST P DISC	FU 0695	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
400	HOIST Q DISC	FU 0750	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
401	HORZ BAND SAW	FB HORZ BAND SAW	0.48	2.39	2.39	1.93	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0406
402	HPPEW2 DISC	FU 0546	0.48	10.57	9.85	6.41	0.0083	0.0000	Yes	PNL	25	8	18	0.33	(*N21b)	# 0073

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
403	HP-PEW-P-1 DISC	FU HP PEW PUMP 1	0.48	11.19	10.48	6.76	0.0083	0.0000	Yes	PNL	25	8	18	0.34	(*N21b)	# 0475
404	HT BOOST PMP DISC	FU 0753	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
405	HV-1 DISC	PD HV-1	0.48	3.25	3.25	2.51	0.0162	0.0000	Yes	PNL	25	4	18	0.12		# 0180
406	IFSAB-1 LCP	PD IFSAB-1	0.48	7.78	7.78	5.29	0.0162	0.0000	Yes	PNL	25	7	18	0.27		# 0122
407	IPC LP-EFB	MB IPC LP-EFB	0.208	3.50	3.50	2.08	0.0167	0.0000	Yes	PNL	25	4	18	0.10		# 0193
408	IPC LP-EFB (MB IPC LP-EFB LineSide)	FB IPC LP-EFB	0.208	3.50	3.50	1.77	1.807	0.0000	Yes	PNL	25	62	18	9.0	(*N3)	# 0291-Line
409	IPC LP-WFB	MB IPC LP-WFB	0.208	1.79	1.79	1.10	1.923	0.0000	Yes	PNL	25	48	18	5.9	(*N3)	# 0193
410	IPC LP-WFB (MB IPC LP-WFB LineSide)	PD IPC LP-WFB	0.208	1.79	1.79	1.30	2	0.0000	Yes	PNL	25	54	18	7.3	(*N9)	# 0311-Line
411	IRON WORK	FU PP-MTB	0.48	4.81	4.81	3.51		0.0000	Yes	PNL	25	7	18	0.25	(*N4) (*N5)	# 0416
412	JC-1 DISC	FU JIB CRANES	0.48	4.44	4.44	3.28	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
413	JC-1 LCP TERM	FU JIB CRANES	0.48	3.46	3.46	2.65	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0230
414	JC-2 DISC	FU JIB CRANES	0.48	3.46	3.46	2.65	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0492
415	JC-3 LCP TERM	FU JIB CRANES	0.48	2.83	2.83	2.23	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0232
416	Junction box.	FB PAB-E2 DV & BOV1	0.48	2.12	2.12	1.74	0.0166	0.0000	Yes	PNL	25	4	18	0.08		# 0421
417	LBP-6 STARTER	FU SCREW PUMP 6	0.48	4.08	3.84	2.44	0.2867	0.0000	Yes	PNL	25	26	18	2.1	(*N3)	# 0184
418	LBP-7 STARTER	FU SCREW PUMP 7	0.48	4.16	3.92	2.48	0.218	0.0000	Yes	PNL	25	22	18	1.7	(*N3)	# 0275
419	LBP-8 STARTER	FU SCREW PUMP 8	0.48	4.16	3.92	2.48	0.218	0.0000	Yes	PNL	25	22	18	1.7	(*N3)	# 0277
420	LP-ADM-1	MB LP-ADM-1	0.208	5.41	5.41	2.82	0.0171	0.0000	Yes	PNL	25	5	18	0.14		# 0026
421	LP-ADM-1 (MB LP-ADM-1 LineSide)	PD XFMR-LP-ADM-1	0.208	5.41	5.41	2.82	0.32	0.0000	Yes	PNL	25	30	18	2.7		# 0005-Line
422	LP-ADM-1A	MB LP-ADM-1A	0.208	5.33	5.33	2.80	0.0171	0.0000	Yes	PNL	25	5	18	0.14		# 0026
423	LP-ADM-1A (MB LP-ADM-1A LineSide)	MB LP-ADM-1	0.208	5.33	5.33	2.80	0.0171	0.0000	Yes	PNL	25	5	18	0.14		# 0006-Line
424	LP-ADM-UPS	MB LP-ADM-UPS	0.208	0.04	0.04	0.04	2	0.0000	Yes	PNL	25	3	18	0.04	(*N9) (*N11)	# 0026
425	LP-ADM-UPS (MB LP-ADM-UPS LineSide)	MaxTripTime @2.0s	0.208	0.04	0.04	0.04	2	0.0000	Yes	PNL	25	3	18	0.04	(*N2) (*N9) (*N11)	# 0007-Line
426	LP-C	FU XFMR LP-C	0.208	1.86	1.86	1.33		0.0000	Yes	PNL	25	42	18	4.9	(*N4) (*N5) (*N9)	# 0242
427	LP-C (MB LP-C LineSide)	FU XFMR LP-C	0.208	1.86	1.86	1.33		0.0000	Yes	PNL	25	42	18	4.9	(*N4) (*N9)	# 0265-Line
428	LP-CEB-A	MB LP-CEB-A	0.208	3.34	3.34	2.01	2	0.0000	Yes	PNL	25	72	18	12	(*N9)	# 0030
429	LP-CEB-A (MB LP-CEB-A LineSide)	FB ATS-CEB NRM	0.208	3.34	3.34	2.01	2	0.0000	Yes	PNL	25	72	18	12	(*N9)	# 0008-Line
430	LP-CEB-B	MB LP-CEB-A	0.208	3.27	3.27	1.98	2	0.0000	Yes	PNL	25	72	18	12	(*N9)	# 0030
431	LP-D	FU XFMR LP-D PRI	0.208	1.81	1.81	1.31		0.0000	Yes	PNL	25	44	18	5.1	(*N4) (*N9)	# 0242
432	LP-E	FU XFMR-LP-E	0.208	4.12	4.12	2.33		0.0000	Yes	PNL	25	7	18	0.25	(*N4) (*N5)	# 0192
433	LP-E (#MB LP-E LineSide)	FU XFMR-LP-E	0.208	4.12	4.12	2.33		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0434-Line
434	LP-EBB-A	MB LP-EBB-A	0.208	3.18	3.18	1.95	2	0.0000	Yes	PNL	25	70	18	11	(*N9)	# 0193
435	LP-EBB-A (MB LP-EBB-A LineSide)	FB XFMR LP-EBB-A	0.208	3.18	3.18	1.95	2	0.0000	Yes	PNL	25	70	18	11	(*N9)	# 0009-Line
436	LP-EE	FU 0904	0.208	0.45	0.45	0.45	0.1747	0.0000	Yes	PNL	25	3	18	0.04	(*N11)	# 0194
437	LP-F	FU 0502	0.208	3.98	3.98	2.28		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0196

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
438	LP-FF	FU XFMR-LP-FF	0.208	0.49	0.49	0.49	0.1504	0.0000	Yes	PNL	25	3	18	0.04	(*N11)	# 0194
439	LP-LSE	PD-LP-LSE XFMR	0.208	1.87	1.87	1.34	2	0.0000	Yes	PNL	25	55	18	7.5	(*N9)	# 0193
440	LP-M	FU 0645	0.208	3.33	3.33	1.71		0.0000	Yes	PNL	25	12	18	0.65	(*N3) (*N4)	# 0257
441	LP-N	MB LP-N	0.208	3.47	3.47	1.76	2	0.0000	Yes	PNL	25	65	18	9.9	(*N3) (*N9)	# 0257
442	LP-N (MB LP-N LineSide)	FU 0699	0.208	3.47	3.47	2.07		0.0000	Yes	PNL	25	62	18	9.2	(*N4) (*N9)	# 0444-Line
443	LP-O	PD XFMR LP-O	0.208	2.52	2.52	1.65	1.977	0.0000	Yes	PNL	25	62	18	9.2		# 0199
444	LP-Q	FU 0734	0.208	3.31	3.31	2.00		0.0000	Yes	PNL	25	67	18	10	(*N4) (*N5) (*N9)	# 0257
445	LP-Q (MB LP-Q LineSide)	FU 0734	0.208	3.31	3.31	2.00		0.0000	Yes	PNL	25	67	18	10	(*N4) (*N9)	# 0447-Line
446	LP-RLS	MB-LP-RLS	0.208	1.76	1.76	1.09	1.961	0.0000	Yes	PNL	25	48	18	5.9	(*N3)	# 0073
447	LP-RLS (MB-LP-RLS LineSide)	FB ATS-RLS NRM	0.208	1.76	1.76	1.29	2	0.0000	Yes	PNL	25	54	18	7.2	(*N9)	# 0252-Line
448	LP-T	PD XFMR LP-T	0.208	2.56	2.56	1.67	1.949	0.0000	Yes	PNL	25	62	18	9.2		# 0200
449	LP-U	PD XFMR LP-U	0.208	2.55	2.55	1.66	1.961	0.0000	Yes	PNL	25	62	18	9.1		# 0201
450	LP-V	PD-0641	0.208	1.62	1.62	1.21	2	0.0000	Yes	PNL	25	51	18	6.7	(*N9)	# 0202
451	LP-V (PD-0641 LineSide)	MB MCC-EPB-A	0.208	1.62	1.62	1.21	2	0.0000	Yes	PNL	25	51	18	6.7	(*N5) (*N9)	# 0453-Line
452	LP-W	PD-0636	0.208	1.97	1.97	1.39	2	0.0000	Yes	PNL	25	56	18	7.8	(*N9)	# 0203
453	LP-W (PD-0636 LineSide)	MB MCC-EPB-B	0.208	1.97	1.97	1.39	2	0.0000	Yes	PNL	25	56	18	7.8	(*N5) (*N9)	# 0455-Line
454	LP-WBB-A	MB-WBB-A	0.208	3.56	3.56	2.11	2	0.0000	Yes	PNL	25	74	18	12	(*N9)	# 0193
455	LP-WBB-A (MB-WBB-A LineSide)	PD LP-WBB XFMR	0.208	3.56	3.56	2.11	2	0.0000	Yes	PNL	25	74	18	12	(*N9)	# 0258-Line
456	LP-WBB-B	MB-WBB-A	0.208	3.49	3.49	2.08	2	0.0000	Yes	PNL	25	74	18	12	(*N9)	# 0193
457	LP-WPB-A	MB LP-WPB-B	0.208	1.80	1.80	1.11	1.907	0.0000	Yes	PNL	25	47	18	5.9	(*N3)	# 0122
458	LP-WPB-A (MB LP-WPB-B LineSide)	FB ATS-WPB-NORM	0.208	1.80	1.80	1.30	2	0.0000	Yes	PNL	25	54	18	7.3	(*N9)	# 0010-Line
459	LP-WPB-B	MB LP-WPB-B	0.208	1.78	1.78	1.10	1.933	0.0000	Yes	PNL	25	48	18	5.9	(*N3)	# 0122
460	LSE-ACCU-1	FB LSE-ACCU-1	0.48	6.32	6.32	4.43	0.0162	0.0000	Yes	PNL	25	6	18	0.22		# 0116
461	LSE-ACU-1	FB LSE-ACU-1	0.48	3.99	3.99	2.99	0.0175	0.0000	Yes	PNL	25	5	18	0.16		# 0117
462	LSE-PPU-1	FB LSE-PPU-1	0.48	2.99	2.99	2.33	0.0162	0.0000	Yes	PNL	25	4	18	0.11		# 0115
463	MB-EF-1 DISC	FB MB-EF-1	0.48	3.31	3.31	2.55	0.0162	0.0000	Yes	PNL	25	4	18	0.12		# 0453
464	MCC-51A	MB MCC-51A	0.48	29.64	29.64	16.59	0.0114	0.0000	Yes	MCC	25	12	18	0.65		# 0368
465	MCC-51A (MB MCC-51A LineSide)	800/800 MCC-51A	0.48	29.64	29.64	16.59	0.066	0.0000	Yes	MCC	25	36	18	3.8		# 0369-Line
466	MCC-51B	MB MCC-51B	0.48	30.01	30.01	16.77	0.0113	0.0000	Yes	MCC	25	12	18	0.66		# 0368
467	MCC-51B (MB MCC-51B LineSide)	800/800 MCC-51B	0.48	30.01	30.01	16.77	0.066	0.0000	Yes	MCC	25	37	18	3.8		# 0367-Line
468	MCC-52A	MB MCC-52A	0.48	29.64	29.64	16.59	0.0114	0.0000	Yes	MCC	25	12	18	0.65		# 0368
469	MCC-52A (MB MCC-52A LineSide)	800/800 MCC-52A	0.48	29.64	29.64	16.59	0.066	0.0000	Yes	MCC	25	36	18	3.8		# 0371-Line
470	MCC-52B	MB MCC-52B	0.48	30.44	30.44	16.97	0.0113	0.0000	Yes	MCC	25	13	18	0.66		# 0368

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
471	MCC-52B (MB MCC-52B LineSide)	800/800 MCC-52B	0.48	30.44	30.44	16.97	0.066	0.0000	Yes	MCC	25	37	18	3.9		# 0373-Line
472	MCC-53 A	MB MCC-53A	0.48	29.64	29.64	16.59	0.0114	0.0000	Yes	MCC	25	12	18	0.65		# 0368
473	MCC-53 A (MB MCC-53A LineSide)	800/600 MCC-53A	0.48	29.64	29.64	16.59	0.066	0.0000	Yes	MCC	25	36	18	3.8		# 0375-Line
474	MCC-53B	MB MCC-53B	0.48	30.01	30.01	16.77	0.0113	0.0000	Yes	MCC	25	12	18	0.66		# 0368
475	MCC-53B (MB MCC-53B LineSide)	800/600 MCC-53B	0.48	30.01	30.01	16.77	0.066	0.0000	Yes	MCC	25	37	18	3.8		# 0377-Line
476	MCC-54 A	MB MCC-54A	0.48	28.85	28.85	16.21	0.0115	0.0000	Yes	MCC	25	12	18	0.64		# 0368
477	MCC-54 A (MB MCC-54A LineSide)	800/800 MCC-54A	0.48	28.85	28.85	16.21	0.066	0.0000	Yes	MCC	25	36	18	3.7		# 0379-Line
478	MCC-54B	MB MCC-54B	0.48	29.20	29.20	16.38	0.0114	0.0000	Yes	MCC	25	12	18	0.65		# 0368
479	MCC-54B (MB MCC-54B LineSide)	800/800 MCC-54B	0.48	29.20	29.20	16.38	0.066	0.0000	Yes	MCC	25	36	18	3.7		# 0381-Line
480	MCC-55 A	MB MCC-55A	0.48	29.64	29.64	16.59	0.0114	0.0000	Yes	MCC	25	12	18	0.65		# 0368
481	MCC-55 A (MB MCC-55A LineSide)	800/600 MCC-55A	0.48	29.64	29.64	16.59	0.066	0.0000	Yes	MCC	25	36	18	3.8		# 0383-Line
482	MCC-55B	MB MCC-55B	0.48	30.01	30.01	16.77	0.0113	0.0000	Yes	MCC	25	12	18	0.66		# 0368
483	MCC-55B (MB MCC-55B LineSide)	800/600 MCC-55B	0.48	30.01	30.01	16.77	0.066	0.0000	Yes	MCC	25	37	18	3.8		# 0385-Line
484	MCC-56 A	800/600 MCC-56A	0.48	13.72	13.26	7.06	0.066	0.0000	Yes	MCC	25	21	18	1.6	(*N3)	# 0368
485	MCC-56 A (MB MCC-56A LineSide)	800/600 MCC-56A	0.48	13.72	13.26	8.30	0.066	0.0000	Yes	MCC	25	24	18	1.9		# 0387-Line
486	MCC-56B	800/600 MCC-56B	0.48	13.58	13.12	6.99	0.066	0.0000	Yes	MCC	25	21	18	1.6	(*N3)	# 0368
487	MCC-56B (MB MCC-56B LineSide)	800/600 MCC-56B	0.48	13.58	13.12	8.23	0.066	0.0000	Yes	MCC	25	24	18	1.9		# 0389-Line
488	MCC-ADM-A	MB MCC-ADM-A	0.48	11.14	11.14	7.19	0.14	0.0000	Yes	MCC	25	33	18	3.2		# 0032
489	MCC-ADM-A (MB MCC-ADM-A LineSide)	800/800 ATS-ADM-EMG	0.48	11.14	11.14	7.19	0.2	0.0000	Yes	MCC	25	41	18	4.6		# 0012-Line
490	MCC-ADM-A (PD STORM WATER PUMP CP LineSide)	PD STORM WATER PUMP CP	0.48	11.14	11.14	7.19	0.05	0.0000	Yes	MCC	25	18	18	1.2		# 0013-Line
491	MCC-ADM-A (PD XFMR-LP-ADM-1 LineSide)	PD XFMR-LP-ADM-1	0.48	11.14	11.14	7.19	0.05	0.0000	Yes	MCC	25	18	18	1.2		# 0011-Line
492	MCC-C	52F11P RELAY	0.48	14.81	12.91	8.00	0.0167	0.0830	Yes	MCC	25	31	18	3.0	(*N5)	# 0283
493	MCC-CEB-A	800/600 MCC-CEB-A	0.48	23.87	23.87	13.79	0.06	0.0000	Yes	MCC	25	30	18	2.8		# 0034
494	MCC-CEB-B	800/600 MCC-CEB-B	0.48	24.06	24.06	13.88	0.06	0.0000	Yes	MCC	25	31	18	2.8		# 0035
495	MCC-D	52F21P RELAY	0.48	15.04	13.72	8.48	0.0167	0.0830	Yes	MCC	25	32	18	3.0	(*N5)	# 0286
496	MCC-E	800/400 MCC-E	0.48	12.81	10.20	6.45	0.06	0.0000	Yes	MCC	25	23	18	1.7		# 0215
497	MCC-EBB-A	PD SUB 6 XFMR A RELAY	0.48	9.67	9.31	6.13	0.0167	0.0830	Yes	MCC	25	24	18	2.0	(*N5)	# 0218
498	MCC-EBB-B	PD SUB 6 XFMR B RELAY	0.48	8.81	8.47	5.66	0.0167	0.0830	Yes	MCC	25	23	18	1.8	(*N5)	# 0220
499	MCC-EE	FU MCC-EE	0.48	12.24	12.24	7.79		0.0000	Yes	MCC	25	7	18	0.25	(*N4)	# 0222
500	MCC-EPB-A	MB MCC-EPB-A	0.48	5.80	5.80	4.12	0.0548	0.0000	Yes	MCC	25	13	18	0.70		# 0225
501	MCC-EPB-A (MB MCC-EPB-A LineSide)	800/200 MCC-EPB-A	0.48	5.80	5.80	4.12	0.14	0.0000	Yes	MCC	25	22	18	1.7		# 0256-Line
502	MCC-EPB-B	MB MCC-EPB-B	0.48	5.48	5.48	3.92	0.0555	0.0000	Yes	MCC	25	13	18	0.67		# 0225

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
503	MCC-EPB-B (MB MCC-EPB-B LineSide)	800/200 MCC-EPB-B	0.48	5.48	5.48	3.92	0.14	0.0000	Yes	MCC	25	22	18	1.6		# 0256-Line
504	MCC-F	800/400 MCC-F	0.48	11.99	10.12	6.46	0.06	0.0000	Yes	MCC	25	21	18	1.6		# 0229
505	MCC-FF	FU 0560	0.48	11.53	11.53	7.41		0.0000	Yes	MCC	25	7	18	0.25	(*N4)	# 0222
506	MCC-M	52F14P RELAY	0.48	19.21	14.25	7.22	0.0167	0.0830	Yes	MCC	25	32	18	3.1	(*N3) (*N5)	# 0322
507	MCC-M.	52F14P RELAY	0.48	19.21	14.25	7.22	0.0167	0.0830	Yes	MCC	25	32	18	3.1	(*N3) (*N5)	# 0509
508	MCC-N	52F24P RELAY	0.48	21.35	14.66	7.31	0.0167	0.0830	Yes	MCC	25	34	18	3.4	(*N3) (*N5)	# 0322
509	MCC-N.	52F24P RELAY	0.48	21.35	14.66	7.31	0.0167	0.0830	Yes	MCC	25	34	18	3.4	(*N3) (*N5)	# 0511
510	MCC-P	FB-MCC-P	0.48	20.24	17.78	10.52	0.05	0.0000	Yes	MCC	25	26	18	2.2		# 0322
511	MCC-Q	FB-MCC-Q	0.48	18.64	17.59	10.53	0.05	0.0000	Yes	MCC	25	24	18	2.0		# 0322
512	MCC-R	800/800 MCC-R	0.48	41.85	36.65	19.51	0.066	0.0000	Yes	MCC	25	45	18	5.4		# 0322
513	MCC-RLS-A	52F11P RELAY	0.48	15.07	12.90	7.97	0.0167	0.0830	Yes	MCC	25	31	18	3.0	(*N5)	# 0313
514	MCC-RLS-A (MB MCC-RLS-A LineSide)	52F11P RELAY	0.48	15.07	12.90	7.97	0.0167	0.0830	Yes	MCC	25	31	18	3.0	(*N5)	# 0314-Line
515	MCC-RLS-B	MB MCC-RLS-B	0.48	12.42	10.99	5.93	0.0902	0.0000	Yes	MCC	25	24	18	1.9	(*N3)	# 0273
516	MCC-RLS-B (MB MCC-RLS-B LineSide)	800/400 MCC-RLS-B	0.48	12.42	10.99	6.98	0.2	0.0000	Yes	MCC	25	42	18	4.8		# 0274-Line
517	MCC-S	800/800 MCC-S	0.48	42.53	38.90	20.66	0.066	0.0000	Yes	MCC	25	45	18	5.4		# 0322
518	MCC-WBB-A	52F13P RELAY	0.48	36.75	32.06	17.39	0.0167	0.0830	Yes	MCC	25	52	18	6.8	(*N5)	# 0233
519	MCC-WBB-B	52F23P RELAY	0.48	33.55	31.23	17.16	0.0167	0.0830	Yes	MCC	25	50	18	6.3	(*N5)	# 0235
520	MCC-WPB-A	MB MCC-WPB-A	0.48	12.90	12.90	8.15	0.0506	0.0000	Yes	MCC	25	19	18	1.3		# 0209
521	MCC-WPB-A (MB MCC-WPB-A LineSide)	800/400 MCC-WPB-A	0.48	12.90	12.90	8.15	0.14	0.0000	Yes	MCC	25	36	18	3.7		# 0287-Loa
522	MCC-WPB-B	MB MCC-WPB-B	0.48	12.54	12.54	7.96	0.0509	0.0000	Yes	MCC	25	19	18	1.3		# 0237
523	MCC-WPB-B (MB MCC-WPB-B LineSide)	800/400 MCC-WPB-B	0.48	12.54	12.54	7.96	0.14	0.0000	Yes	MCC	25	35	18	3.6		# 0485-Loa
524	MCC-XA	800/800 MCC-XA	0.48	17.11	15.87	8.18	0.218	0.0000	Yes	MCC	25	47	18	5.8	(*N3)	# 0322
525	MCC-XB	800/800 MCC-XB	0.48	40.49	38.45	20.56	0.066	0.0000	Yes	MCC	25	44	18	5.1		# 0322
526	METAL LATHE	FU PP-MTB	0.48	4.94	4.94	3.59		0.0000	Yes	PNL	25	7	18	0.25	(*N4) (*N5)	# 0522
527	MILL MACH	FB MILL MACH	0.48	4.10	4.10	3.06	0.0162	0.0000	Yes	PNL	25	5	18	0.15		# 0523
528	MOD VALVE 1 DISC	FU 0746	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
529	MOD VALVE 3 DISC	FU 0746	0.48	1.36	1.36	1.19	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
530	MOD VALVE 5 DISC	FU 0746	0.48	1.25	1.25	1.11	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
531	MOD VALVE 7 DISC	FU 0746	0.48	1.16	1.16	1.04	0.0083	0.0000	Yes	PNL	25	2	18	0.02		# 0568
532	MPPEWP1 DISC	FU MP PEW PUMP 1	0.48	10.42	10.01	5.54	0.0083	0.0000	Yes	PNL	25	7	18	0.24	(*N21b)	# 0475
533	MPPEWP2 DISC	FU 0548	0.48	9.88	9.47	6.22	0.0083	0.0000	Yes	PNL	25	7	18	0.26	(*N21b)	# 0073
534	MU HV2 DISC	FU 0749	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
535	MV10 DISC	FU 0659	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
536	MV11 DISC	FU 0659	0.48	1.47	1.47	1.28	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
537	MV12 DISC	FU 0659	0.48	1.46	1.46	1.27	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
538	MV2 DISC	FU 0711	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
539	MV4 DISC	FU 0711	0.48	1.48	1.48	1.28	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
540	MV6 DISC	FU 0711	0.48	1.47	1.47	1.27	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
541	MV8 DISC	FU 0711	0.48	1.46	1.46	1.26	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
542	MV9 DISC	FU 0659	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
543	N EQPT RCPT	FU 0715	0.48	2.33	2.33	1.89		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0568
544	OZNTR DISC	FU 0917	0.48	8.07	8.07	5.46		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0099
545	P-53-06 DISC	PD P-53-06	0.48	5.91	5.91	4.19	0.0162	0.0000	Yes	PNL	25	6	18	0.21		# 0492
546	P-53-06 STR	PD P-53-06	0.48	5.01	5.01	3.63	0.0162	0.0000	Yes	PNL	25	6	18	0.18		# 0492
547	P-53-07 DISC.	PD P-53-07	0.48	3.52	3.52	2.69	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0492
548	P-53-07 STR	PD P-53-07	0.48	3.16	3.16	2.45	0.0162	0.0000	Yes	PNL	25	4	18	0.12		# 0492
549	P-53-20 DISC	PD P-53-07	0.48	5.99	5.99	4.23	0.0162	0.0000	Yes	PNL	25	6	18	0.21		# 0492
550	P-53-20 STR	PD P-53-07	0.48	5.06	5.06	3.67	0.0162	0.0000	Yes	PNL	25	6	18	0.18		# 0492
551	P-53-21 DISC	PD P-53-06	0.48	5.42	5.42	3.89	0.0162	0.0000	Yes	PNL	25	6	18	0.19		# 0492
552	P-53-21 STR	PD P-53-06	0.48	4.64	4.64	3.41	0.0162	0.0000	Yes	PNL	25	5	18	0.17		# 0492
553	PAB-E1 DV & BOV	FB PAB-E1 DV & BOV	0.48	2.21	2.21	1.81	0.0162	0.0000	Yes	PNL	25	4	18	0.08		# 0549
554	PAB-E1 LCP	FB PAB-E1 LCP	0.48	3.61	3.61	2.75	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0550
555	PAB-E1 STR IN	PD PAB-E1 RELAY	4.16	2.84	2.30	2.28	0.0167	0.0830	Yes	SWG	104	8	36	0.27		# 0250
556	PAB-E1 STR IN (FU PAB-E1 LineSide)	PD PAB-E1 RELAY	4.16	2.84	2.30	2.28	0.0167	0.0830	Yes	SWG	104	8	36	0.27		# 0014-Line
557	PAB-E2 DV & BOV1	FB PAB-E2 DV & BOV1	0.48	1.88	1.88	1.57	0.018	0.0000	Yes	PNL	25	3	18	0.08		# 0554
558	PAB-E2 LCP	FB PAB-E2 LCP	0.48	3.03	3.03	2.37	0.0162	0.0000	Yes	PNL	25	4	18	0.11		# 0555
559	PAB-E2 STR IN	PD PAB-E2 RELAY	4.16	2.28	1.75	1.74	0.0167	0.0830	Yes	SWG	104	6	36	0.22		# 0252
560	PAB-E2 STR IN (FU PAB-E2 LineSide)	PD PAB-E2 RELAY	4.16	2.28	1.75	1.74	0.0167	0.0830	Yes	SWG	104	6	36	0.22		# 0015-Line
561	PAB-E3 DV & BOV	FB PAB-E3 DV & BOV	0.48	1.65	1.65	1.41	0.0196	0.0000	Yes	PNL	25	3	18	0.08		# 0559
562	PAB-E3 LCP	FB PAB-E3 LCP	0.48	2.35	2.35	1.91	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0560
563	PAB-E3 STR IN	PD PAB-E3 RELAY	4.16	2.84	2.30	2.28	0.0167	0.0830	Yes	SWG	104	8	36	0.27		# 0254
564	PAB-E3 STR IN (FU PAB-E3 LineSide)	PD PAB-E3 RELAY	4.16	2.84	2.30	2.28	0.0167	0.0830	Yes	SWG	104	8	36	0.27		# 0016-Line
565	PAB-W1 VALVES JB	PD PAB-W1 VALVES	0.48	6.83	6.83	4.74	0.0162	0.0000	Yes	PNL	25	7	18	0.24		# 0106
566	PAB-W2 VALVES JB	PD PAB-W2 VALVES	0.48	5.21	5.21	3.76	0.0162	0.0000	Yes	PNL	25	6	18	0.19		# 0077
567	PAB-W3 VALVES JB	PD PAB-W3 VALVES	0.48	4.31	4.31	3.20	0.0162	0.0000	Yes	PNL	25	5	18	0.16		# 0107
568	PCDR W1 DISC	MCP PCDR-W1	0.48	1.35	1.35	1.19	0.005	0.0000	Yes	PNL	25	1	18	0.02		# 0492
569	PCDR-W2 DISC	MCP PCDR-W2	0.48	2.19	2.19	1.79	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
570	PC-E1 DISC	MCP PC-E1	0.48	0.60	0.60	0.60	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11)	# 0256
571	PC-E2 DISC	MCP PC-E2	0.48	0.75	0.75	0.72	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0180
572	PC-E3 DISC	MCP PC-E3	0.48	0.78	0.78	0.74	0.005	0.0000	Yes	PNL	25	1	18	0.01		# 0256
573	PC-E4 DISC	MCP PC-E4	0.48	0.54	0.54	0.54	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11)	# 0180
574	PC-WPB-EF-2 DISC	MCP WPB-EF-2	0.48	3.19	3.19	2.47	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0492
575	PC-WPB-P-2 DISC	MCP WPB-P-2	0.48	2.03	2.03	1.68	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
576	PDP UV 2A	FB-PDP-UV-2A	0.48	14.36	14.36	7.59	0.2	0.0000	Yes	MCC	25	39	18	4.3	(*N3)	# 0322
577	PDP UV 2B	FB-PDP-UV-2B	0.48	14.36	14.36	7.59	0.2	0.0000	Yes	MCC	25	39	18	4.3	(*N3)	# 0322
578	PDP-E1 DISC	MCP PDP-E1	0.48	4.31	4.31	3.20	0.005	0.0000	Yes	PNL	25	3	18	0.05		# 0256
579	PDP-W1 DISC	MCP PDP-W1	0.48	3.42	3.42	2.62	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0492

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
580	PEW STRAINER DISC	FU 0697	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
581	PEWP1 DISC	FU PEW PUMP #1	0.48	15.00	13.59	7.14	0.0171	0.0000	Yes	PNL	25	13	18	0.68	(*N21b)	# 0136
582	PEWP2 DISC	FU PEW PUMP 2	0.48	17.89	16.45	8.42	0.0327	0.0000	Yes	PNL	25	18	18	1.2	(*N21b)	# 0568
583	PEWP3 ATS NRM	FU PEW PUMP 3	0.48	20.53	19.10	9.59	0.0205	0.0000	Yes	PNL	25	15	18	0.92	(*N21b)	# 0576
584	PEWP3 DISC	FU PEW PUMP 3	0.48	17.05	15.64	8.06	0.0383	0.0000	Yes	PNL	25	19	18	1.3	(*N21b)	# 0568
585	PMPRM HOIST DISC	FU 0575	0.48	4.08	4.08	3.05	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0073
586	PP-ADM-1	PD XFMR PP-ADM-1	0.48	2.67	2.67	1.81	0.7071	0.0000	Yes	PNL	25	36	18	3.7	(*N3) (*N5)	# 0036
587	PP-ADM-1 (MB PP-ADM-1 LineSide)	PD XFMR PP-ADM-1	0.48	2.67	2.67	1.81	0.7071	0.0000	Yes	PNL	25	36	18	3.7	(*N3)	# 0017-Line
588	PP-ADM-2	PD XFMR PP-ADM-1	0.48	2.16	2.16	1.51	1.014	0.0000	Yes	PNL	25	40	18	4.3	(*N3) (*N5)	# 0036
589	PP-EBB-A	FB ATS-EBB NORM	0.48	8.37	8.37	5.63	0.04	0.0000	Yes	PNL	25	13	18	0.71		# 0278
590	PP-EBB-B	FB PP-EBB-B	0.48	7.07	7.07	4.88	0.0166	0.0000	Yes	PNL	25	7	18	0.25		# 0278
591	PP-LSE	MB PP-LSE	0.48	12.05	12.05	7.69	0.0175	0.0000	Yes	PNL	25	10	18	0.44		# 0074
592	PP-LSE (MB PP-LSE LineSide)	FB ATS-LSE-NRM	0.48	12.05	12.05	7.69	0.0533	0.0000	Yes	PNL	25	19	18	1.3		# 0075-Line
593	PP-LSE CKT #14	FB SLDG'S S-50-1,2,3,4,5	0.48	1.00	1.00	0.78	0.0575	0.0000	Yes	PNL	25	4	18	0.12	(*N3)	# 0618
594	PP-LSE CKT #19	FB SLDG'S F-50-3,4	0.48	1.00	1.00	0.78	0.0575	0.0000	Yes	PNL	25	4	18	0.12	(*N3)	# 0074
595	PP-LSE CKT #2	FB SLDG'S F-60-1,2,3	0.48	1.00	1.00	0.78	0.0575	0.0000	Yes	PNL	25	4	18	0.12	(*N3)	# 0620
596	PP-LSE CKT #26	FB EAST JC GATES	0.48	1.00	1.00	0.78	0.0575	0.0000	Yes	PNL	25	4	18	0.12	(*N3)	# 0621
597	PP-LSE CKT #8	FB SLDG's S-60-1,2	0.48	1.00	1.00	0.78	0.0575	0.0000	Yes	PNL	25	4	18	0.12	(*N3)	# 0622
598	PP-MTB	FU PP-MTB	0.48	5.48	5.48	3.92		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0074
599	PP-MTB DISC SW	800/250 PP-MTB	0.48	5.72	5.72	4.07	0.14	0.0000	Yes	PNL	25	23	18	1.8		# 0435
600	PP-UV	FU ATS-PP-UV-NRM	0.48	1.67	1.67	1.21	0.049	0.0000	Yes	PNL	25	5	18	0.17	(*N3)	# 0374
601	PP-WBB-A	FB ATS-WBB-NORM	0.48	29.70	29.70	16.62	0.05	0.0000	Yes	PNL	25	31	18	2.9		# 0079
602	PP-WBB-B	PD PP-WBB-B	0.48	28.79	28.79	16.18	0.0175	0.0000	Yes	PNL	25	16	18	0.98		# 0074
603	PP-Z	FU PP-MTB	0.48	4.89	4.89	3.56		0.0000	Yes	PNL	25	7	18	0.25	(*N4) (*N5)	# 0074
604	PP-Z (MB-PP-Z LineSide)	FU PP-MTB	0.48	4.89	4.89	3.56		0.0000	Yes	PNL	25	7	18	0.25	(*N4) (*N5)	# 0606-Line
605	PSCP-E1 DISC	MCP PSLMP-E4	0.48	3.75	3.75	2.84	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0256
606	PSCP-E2 DISC	MCP PSCP-E2	0.48	3.63	3.63	2.76	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0180
607	PSCP-W1 DISC	MCP PSCP-W1	0.48	6.90	6.90	4.78	0.005	0.0000	Yes	PNL	25	3	18	0.07		# 0492
608	PSCP-W2 DISC	MCP PSCP-W2	0.48	4.48	4.48	3.30	0.005	0.0000	Yes	PNL	25	3	18	0.05		# 0492
609	PSLP-E2 VFD IN	PD PSLP-E2	0.48	3.41	3.41	2.61	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0445
610	PSLPG-W1 VFD IN	PD PSLPG-W1	0.48	2.63	2.63	2.09	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0492
611	PSLPG-W2 INPUT	PD PSLPG-W2	0.48	4.71	4.71	3.45	0.0162	0.0000	Yes	PNL	25	5	18	0.17		# 0492
612	PSLPM-E1 LCP	PD PSLPM-E1	0.48	3.63	3.63	2.76	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0450
613	PSLPM-E2 LCP	PD PSLPM-E2	0.48	3.41	3.41	2.61	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0451
614	PSLP-W1 VFD IN	PD PSLP-W1	0.48	7.06	7.06	4.87	0.0162	0.0000	Yes	PNL	25	7	18	0.25		# 0492
615	PSLP-W2 INPUT	PD PSLP-W2	0.48	8.29	8.29	5.59	0.0162	0.0000	Yes	PNL	25	8	18	0.29		# 0492
616	RASP-E1 VFD IN	PD RASP-E1	0.48	2.03	2.03	1.68	0.021	0.0000	Yes	PNL	25	4	18	0.10		# 0302
617	RASP-E2 VFD IN	PD RASP-E2	0.48	1.99	1.99	1.65	0.0191	0.0000	Yes	PNL	25	4	18	0.09		# 0461
618	RASP-E3 VFD IN	PD RASP-E3	0.48	2.03	2.03	1.68	0.021	0.0000	Yes	PNL	25	4	18	0.10		# 0302

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
619	RASP-E4 VFD IN	PD RASP-E4	0.48	1.99	1.99	1.65	0.0191	0.0000	Yes	PNL	25	4	18	0.09		# 0463
620	RASP-E5 VFD IN	PD RASP-E5	0.48	2.03	2.03	1.68	0.021	0.0000	Yes	PNL	25	4	18	0.10		# 0302
621	RASP-E6 VFD IN	PD RASP-E6	0.48	1.99	1.99	1.65	0.0191	0.0000	Yes	PNL	25	4	18	0.09		# 0465
622	RASP-E7 VFD IN	PD RASP-E7	0.48	2.03	2.03	1.68	0.021	0.0000	Yes	PNL	25	4	18	0.10		# 0302
623	RASP-E8 VFD IN	PD RASP-E8	0.48	1.99	1.99	1.65	0.0191	0.0000	Yes	PNL	25	4	18	0.09		# 0467
624	RASP-W1 VFD IN	PD RASP-W1	0.48	14.45	14.45	8.98	0.0162	0.0000	Yes	PNL	25	10	18	0.48	(*N21b)	# 0028
625	RASP-W2 VFD IN	PD RASP-W2	0.48	14.05	14.05	8.77	0.0162	0.0000	Yes	PNL	25	10	18	0.47	(*N21b)	# 0492
626	RASP-W3 VFD IN	PD RASP-W3	0.48	14.45	14.45	8.98	0.0162	0.0000	Yes	PNL	25	10	18	0.48	(*N21b)	# 0028
627	RASP-W4 VFD IN	PD RASP-W4	0.48	14.05	14.05	8.77	0.0162	0.0000	Yes	PNL	25	10	18	0.47	(*N21b)	# 0492
628	RBDP1 DISC	FU 0523	0.48	8.41	8.41	4.81	0.0083	0.0000	Yes	PNL	25	5	18	0.13	(*N3)	# 0073
629	RBDP-2 DISC	FU RB DRAIN PUMP 2	0.48	9.90	9.90	6.50	0.0042	0.0000	Yes	PNL	25	4	18	0.09	(*N21b)	# 0475
630	RBDP3 DISC	FU 0542	0.48	8.41	8.41	4.81	0.0083	0.0000	Yes	PNL	25	5	18	0.13	(*N3)	# 0073
631	RBDP-4 DISC	FU RB DRAIN PUMP 4	0.48	9.90	9.90	6.50	0.0042	0.0000	Yes	PNL	25	4	18	0.09	(*N21b)	# 0475
632	RECIRCV PAB-E1	FB RECIRCV PAB-E1	0.48	2.31	2.31	1.88	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0626
633	RECIRCV PAB-E2	FB RECIRCV PAB-E2	0.48	1.95	1.95	1.62	0.0175	0.0000	Yes	PNL	25	4	18	0.08		# 0627
634	RECIRCV PAB-E3	FB RECIRCV PAB-E3	0.48	1.53	1.53	1.32	0.0206	0.0000	Yes	PNL	25	3	18	0.08		# 0628
635	RETBSNRFV STARTER	FU RET BSN RF CV	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
636	RF # 5 DISC	FU 0530	0.48	2.78	2.78	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
637	RF # 6 DISC	FU 0555	0.48	2.78	2.78	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
638	RF-1 DISC	MCP RF-1	0.48	3.25	3.25	2.51	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0180
639	RIVER VALVE DISC	FU 0689	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*N21b)	# 0136
640	RLS-ACCU-1	PD RLS-ACCU-1	0.48	2.85	2.85	2.25	0.0162	0.0000	Yes	PNL	25	4	18	0.11		# 0417
641	RLS-ACCU-1 DISC	PD RLS-ACCU-1	0.48	3.49	3.49	2.67	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0492
642	RLS-ACU-1	PD RLS-ACU-1	0.48	7.21	7.21	4.96	0.0162	0.0000	Yes	PNL	25	7	18	0.25		# 0417
643	RLS-EF-1 DISC	MCP RLS-EF-1	0.48	2.77	2.77	2.19	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0430
644	RLS-EF-2 DISC	MCP RLS-EF-2	0.48	4.90	4.90	3.56	0.005	0.0000	Yes	PNL	25	3	18	0.05		# 0430
645	RLS-PPU-1	PD RLS-PPU-1	0.48	7.48	7.48	5.12	0.0162	0.0000	Yes	PNL	25	7	18	0.26		# 0563
646	RLS-SF-1 DISC	MCP RLS-SF-1	0.48	1.80	1.80	1.52	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0430
647	ROOF FAN 10 DISC	FU 0722	0.48	2.93	2.93	2.30	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0568
648	ROOF FAN 11 DISC	FU 0693	0.48	2.90	2.90	2.27	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0136
649	ROOF FAN 12 DISC	FU 0731	0.48	2.93	2.93	2.30	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0568
650	RS-SAP-1 DISC	MCP RS-SAP-1	0.48	2.07	2.07	1.71	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
651	S-1-1 DISC	PD 48IN GATE S-1-1	0.48	1.68	1.68	1.43	0.0169	0.0000	Yes	PNL	25	3	18	0.07		# 0430
652	S-21-1 DISC	PD F-1-1	0.48	2.17	2.17	1.78	0.0162	0.0000	Yes	PNL	25	4	18	0.08		# 0160
653	S-21-1 STARTER	PD F-1-1	0.48	1.92	1.92	1.60	0.0166	0.0000	Yes	PNL	25	3	18	0.08		# 0498
654	S-21-2 DISC	PD F-1-1	0.48	2.15	2.15	1.77	0.0163	0.0000	Yes	PNL	25	4	18	0.08		# 0160
655	S-21-2 STARTER	PD F-1-1	0.48	1.71	1.71	1.45	0.0169	0.0000	Yes	PNL	25	3	18	0.07		# 0500
656	S-21-3 DISC	PD F-1-5	0.48	1.79	1.79	1.51	0.0168	0.0000	Yes	PNL	25	3	18	0.07		# 0160
657	S-21-3 STARTER	PD F-1-5	0.48	1.47	1.47	1.08	0.0209	0.0000	Yes	PNL	25	3	18	0.06	(*N3)	# 0500
658	S-21-4 DISC	PD F-1-5	0.48	1.77	1.77	1.50	0.0168	0.0000	Yes	PNL	25	3	18	0.07		# 0160
659	S-21-4 STARTER	PD F-1-5	0.48	1.60	1.60	1.37	0.0171	0.0000	Yes	PNL	25	3	18	0.07		# 0500

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
660	S-54-2 DISC	PD F-54-5	0.48	2.45	2.45	1.97	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0662
661	S-54-2 STR	PD F-54-5	0.48	2.35	2.35	1.91	0.0162	0.0000	Yes	PNL	25	4	18	0.09		# 0663
662	SC-1 DISC	FU SC-1	0.48	4.39	4.39	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
663	SC-2 DISC	FU SCREEN COMP SC-2	0.48	4.44	4.44	3.28	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
664	SC-3 DISC	FU SCREEN COMP SC-3	0.48	4.44	4.44	3.28	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
665	SCDR-W1 DISC	MCP SCDR-W1	0.48	0.63	0.63	0.63	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11)	# 0028
666	SCDR-W2 DISC	MCP SCDR-W2	0.48	0.63	0.63	0.63	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11)	# 0492
667	SC-E1 DISC	MCP SEC-CLAR-E1	0.48	0.58	0.58	0.58	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11)	# 0511
668	SC-E2 DISC	MCP CLARIFIER SC-E2	0.48	0.58	0.58	0.58	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11)	# 0512
669	SC-E3 DISC	MCP SEC-CLAR-E3	0.48	0.33	0.33	0.33	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11)	# 0513
670	SC-E4 DISC	MCP CLARIFIER SC-E4	0.48	0.33	0.33	0.33	0.005	0.0000	Yes	PNL	25	1	18	0.00	(*N11)	# 0514
671	SCREW CONV 3 STR	FU SCREW CONV 3	0.48	4.44	4.44	3.28	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
672	SCRNCNV DISC	FU SCREENINGS CONV	0.48	4.44	4.44	3.28	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
673	SCTY GATE STARTER	FU SECURITY GATE	0.48	4.83	4.83	3.52	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0475
674	SE ISO VALVE DISC	FU 0688	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03	(*N21b)	# 0136
675	SECURITY GATE DISC	FU SECURITY GATE	0.48	5.78	5.78	4.10	0.0042	0.0000	Yes	PNL	25	3	18	0.05		# 0475
676	SEG1 DISC	FU 0664	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
677	SEP1 VFD IN	FU SEC EFF PUMP 1	0.48	16.13	16.13	9.86		0.0000	Yes	PNL	25	7	18	0.25	(*N4) (*N21b)	# 0664
678	SEP2 VFD IN	FU SEC EFF PUMP 2	0.48	17.97	16.90	10.18	0.0083	0.0000	Yes	PNL	25	12	18	0.62	(*N21b)	# 0568
679	SEP3 VFD IN	FU SEC EFF PUMP #3	0.48	17.12	16.06	9.74	0.0083	0.0000	Yes	PNL	25	12	18	0.65	(*N21b)	# 0136
680	SEP4 VFD IN	FU SEC EFF PUMP #4	0.48	15.57	14.53	7.59	0.0135	0.0000	Yes	PNL	25	11	18	0.55	(*N21b)	# 0668
681	SEP5 VFD IN	FU SEC EFF PUMP 5	0.48	14.35	13.29	8.27	0.0083	0.0000	Yes	PNL	25	10	18	0.45	(*N21b)	# 0669
682	SEP6 VFD IN	FU SEC EFF PUMP 6	0.48	17.97	16.90	10.18	0.0083	0.0000	Yes	PNL	25	11	18	0.50	(*N21b)	# 0591
683	SEPPMP DISC TERM	FU SEPTIC PUMP	0.48	8.01	8.01	5.43	0.0042	0.0000	Yes	PNL	25	3	18	0.07		# 0492
684	SF1 DISC	FU EF-3,4,1	0.48	1.47	1.47	1.27	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
685	SF1FF DISC	FU 0920	0.48	3.99	3.99	2.99	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0099
686	SF2EE DISC	FU 0909	0.48	1.54	1.54	1.33	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0099
687	SF3FF DISC	FU 0922	0.48	3.99	3.99	2.99	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0099
688	SF4EE DISC	FU 0911	0.48	4.08	4.08	3.05	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0099
689	SLC 4 DISC	MCP SLC -4	0.48	3.51	3.51	2.68	0.015	0.0000	Yes	PNL	25	4	18	0.12		# 0602
690	SLC 5 DISC	MCP SLC -5	0.48	3.29	3.29	2.54	0.015	0.0000	Yes	PNL	25	4	18	0.11		# 0603
691	SLC 6 DISC	FB SLC -6	0.48	2.43	2.43	1.96	0.0195	0.0000	Yes	PNL	25	4	18	0.11		# 0604
692	SLC 7 DISC	FB SLC -7	0.48	2.26	2.26	1.84	0.0201	0.0000	Yes	PNL	25	4	18	0.11		# 0605
693	SLC-1 DISC	FU SLUDGE COLL 1	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
694	SLC2 DISC	FU 0527	0.48	2.78	2.78	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
695	SLC-3 DISC	FU SLUDGE COLL 3	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
696	SLDG F-50-1	FB SLDG'S S-50-1,2,3,4,5	0.48	0.88	0.88	0.70	0.5158	0.0000	Yes	PNL	25	16	18	0.97	(*N3)	# 0681
697	SLDG F-50-2	FB SLDG'S S-50-1,2,3,4,5	0.48	0.88	0.88	0.70	0.5158	0.0000	Yes	PNL	25	16	18	0.97	(*N3)	# 0682
698	SLDG F-50-3	FB SLDG'S F-50-3,4	0.48	0.77	0.77	0.62	0.7471	0.0000	Yes	PNL	25	18	18	1.2	(*N3)	# 0118
699	SLDG F-50-4	FB SLDG'S F-50-3,4	0.48	0.77	0.77	0.62	0.7471	0.0000	Yes	PNL	25	18	18	1.2	(*N3)	# 0118
700	SLDG F-60-1	FB SLDG'S F-60-1,2,3	0.48	0.92	0.92	0.73	0.4249	0.0000	Yes	PNL	25	14	18	0.83	(*N3)	# 0685

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
701	SLDG F-60-2	FB SLDG'S F-60-1,2,3	0.48	0.92	0.92	0.73	0.4249	0.0000	Yes	PNL	25	14	18	0.83	(*N3)	# 0686
702	SLDG F-60-3	FB SLDG'S F-60-1,2,3	0.48	0.92	0.92	0.73	0.4249	0.0000	Yes	PNL	25	14	18	0.83	(*N3)	# 0687
703	SLDG F-60-4	FB SLDG's S-60-1,2	0.48	0.76	0.76	0.62	0.7588	0.0000	Yes	PNL	25	18	18	1.2	(*N3)	# 0688
704	SLDG S-50-1	FB SLDG'S S-50-1,2,3,4,5	0.48	0.80	0.80	0.65	0.7165	0.0000	Yes	PNL	25	18	18	1.2	(*N3)	# 0689
705	SLDG S-50-2	FB SLDG'S S-50-1,2,3,4,5	0.48	0.88	0.88	0.70	0.5158	0.0000	Yes	PNL	25	16	18	0.97	(*N3)	# 0690
706	SLDG S-50-3	FB SLDG'S S-50-1,2,3,4,5	0.48	0.88	0.88	0.70	0.5158	0.0000	Yes	PNL	25	16	18	0.97	(*N3)	# 0691
707	SLDG S-50-4	FB SLDG'S S-50-1,2,3,4,5	0.48	0.88	0.88	0.70	0.5158	0.0000	Yes	PNL	25	16	18	0.97	(*N3)	# 0692
708	SLDG S-50-5	FB SLDG'S S-50-1,2,3,4,5	0.48	0.88	0.88	0.70	0.5158	0.0000	Yes	PNL	25	16	18	0.97	(*N3)	# 0693
709	SLDG S-60-1	FB SLDG's S-60-1,2	0.48	0.86	0.86	0.69	0.5754	0.0000	Yes	PNL	25	17	18	1.1	(*N3)	# 0694
710	SLDG S-60-2	FB SLDG's S-60-1,2	0.48	0.86	0.86	0.69	0.5754	0.0000	Yes	PNL	25	17	18	1.1	(*N3)	# 0695
711	SLG-3 DISC	FU SLUICE GATE 3	0.48	4.39	4.39	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
712	SLG-4 DISC	FU SLUICE GATE 4	0.48	4.39	4.39	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
713	SLGT1 DISC	FU 0562	0.48	6.89	6.89	4.77	0.0042	0.0000	Yes	PNL	25	3	18	0.06		# 0073
714	SLGT2 DISC	FU 0563	0.48	2.78	2.78	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
715	SLGT-5 DISC	FU SLUICE GATE 5	0.48	4.44	4.44	3.28	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
716	SLP1 DISC	FU SLUDGE PUMP 1	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
717	SLP2 DISC	FU SLUDGE PUMP 2	0.48	2.82	2.82	2.22	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0475
718	SLP3 DISC	FU 0551	0.48	2.78	2.78	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
719	SLUDGE CND LCP	PD PSLPM-E3	0.48	3.31	3.31	2.55	0.0162	0.0000	Yes	PNL	25	4	18	0.12		# 0349
720	SMP2 DISC	FU 0525	0.48	2.78	2.78	2.20	0.0042	0.0000	Yes	PNL	25	2	18	0.03		# 0073
721	SP NGB DISC	FU SUMP PUMP NGB	0.48	4.39	4.39	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
722	SSC-1 DISC	FU SSC-1	0.48	4.39	4.39	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
723	SSC-2 DISC	FU SSC-2	0.48	4.44	4.44	3.28	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
724	SSCP-E1 DISC	MCP SEC SCUM PMP-E1	0.48	1.36	1.36	1.19	0.04	0.0000	Yes	PNL	25	5	18	0.13		# 0554
725	SSCP-E1TERM	MCP SEC SCUM PMP-E1	0.48	1.29	1.29	1.14	0.04	0.0000	Yes	PNL	25	5	18	0.13		# 0558
726	SSCP-W1 DISC	MCP SSCP-W1	0.48	7.20	7.20	4.95	0.005	0.0000	Yes	PNL	25	3	18	0.08		# 0028
727	SSCP-W2 DISC	MCP SSCP-W2	0.48	7.09	7.09	4.89	0.005	0.0000	Yes	PNL	25	3	18	0.08		# 0492
728	STWP 1 DISC	MCP STWP -1	0.48	5.63	5.63	4.02	0.015	0.0000	Yes	PNL	25	6	18	0.19		# 0629
729	STWP 2 DISC	MCP STWP -2	0.48	5.10	5.10	3.69	0.015	0.0000	Yes	PNL	25	5	18	0.17		# 0630
730	SUB 1 BUS A	52F11P RELAY	0.48	16.76	14.61	8.44	0.0167	0.0830	Yes	SWG	32	34	24	2.0	(*N5)	# 0487
731	SUB 1 BUS A (SUB 1 MAIN A LineSide)	52F11P RELAY	0.48	16.76	14.61	8.44	0.0167	0.0830	Yes	SWG	32	34	24	2.0		# 0486-Line
732	SUB 1 BUS B	52F21P RELAY	0.48	16.10	14.69	8.54	0.0167	0.0830	Yes	SWG	32	33	24	1.9	(*N5)	# 0487
733	SUB 1 BUS B (SUB 1 MAIN B LineSide)	52F21P RELAY	0.48	16.10	14.69	8.54	0.0167	0.0830	Yes	SWG	32	33	24	1.9		# 0488-Line
734	SUB 1 PRIMARY SWITCH A	52F11P RELAY	13.20	5.49	5.43	5.32	0.0167	0.0830	Yes	SWG	152	19	36	0.64		# 0047
735	SUB 1 PRIMARY SWITCH B	52F21P RELAY	13.20	6.34	6.30	6.16	0.0167	0.0830	Yes	SWG	152	22	36	0.75		# 0047
736	SUB 2 BUS A	52F12P RELAY	0.48	13.05	10.45	6.29	0.0167	0.0830	Yes	SWG	32	29	24	1.6	(*N5)	# 0364
737	SUB 2 BUS A (SUB 2 MAIN A LineSide)	52F12P RELAY	0.48	13.05	10.45	6.29	0.0167	0.0830	Yes	SWG	32	29	24	1.6		# 0629-Loa
738	SUB 2 BUS B	52F22P RELAY	0.48	12.33	10.46	6.36	0.0167	0.0830	Yes	SWG	32	28	24	1.5	(*N5)	# 0364

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
739	SUB 2 BUS B (SUB 2 MAIN B LineSide)	52F22P RELAY	0.48	12.33	10.46	6.36	0.0167	0.0830	Yes	SWG	32	28	24	1.5		# 0633-Loa
740	SUB 2 PRIMARY SWITCH A	52F12P RELAY	13.20	5.76	5.69	5.58	0.0167	0.0830	Yes	SWG	152	20	36	0.68		# 0047
741	SUB 2 PRIMARY SWITCH B	52F22P RELAY	13.20	6.66	6.61	6.46	0.0167	0.0830	Yes	SWG	152	23	36	0.79		# 0047
742	SUB 3 BUS A	52F13P RELAY	0.48	39.55	34.90	17.47	0.0167	0.0830	Yes	SWG	32	57	24	4.3	(*N5)	# 0367
743	SUB 3 BUS A (SUB 3 MAIN A LineSide)	52F13P RELAY	0.48	39.55	34.90	17.47	0.0167	0.0830	Yes	SWG	32	57	24	4.3		# 0018-Line
744	SUB 3 BUS B	52F23P RELAY	0.48	36.65	34.34	17.40	0.0167	0.0830	Yes	SWG	32	55	24	4.1	(*N5)	# 0368
745	SUB 3 BUS B (SUB 3 MAIN B LineSide)	52F23P RELAY	0.48	36.65	34.34	17.40	0.0167	0.0830	Yes	SWG	32	55	24	4.1		# 0019-Line
746	SUB 3 PRIMARY SWITCH A	52F13P RELAY	13.20	7.14	6.99	6.82	0.0167	0.0830	Yes	SWG	152	25	36	0.85		# 0047
747	SUB 3 PRIMARY SWITCH B	52F23P RELAY	13.20	6.82	6.74	6.58	0.0167	0.0830	Yes	SWG	152	24	36	0.81		# 0047
748	SUB 4 BUS A	52F14P RELAY	0.48	19.88	14.90	8.36	0.0167	0.0830	Yes	SWG	32	37	24	2.3	(*N5)	# 0501
749	SUB 4 BUS A (SUB 4 MAIN A LineSide)	52F14P RELAY	0.48	19.88	14.90	8.36	0.0167	0.0830	Yes	SWG	32	37	24	2.3		# 0502-Line
750	SUB 4 BUS B	52F24P RELAY	0.48	21.59	14.87	8.23	0.0167	0.0830	Yes	SWG	32	39	24	2.4	(*N5)	# 0503
751	SUB 4 BUS B (SUB 4 MAIN B LineSide)	52F24P RELAY	0.48	21.59	14.87	8.23	0.0167	0.0830	Yes	SWG	32	39	24	2.4		# 0502-Line
752	SUB 4 PRIMARY SWITCH A	52F14P RELAY	13.20	6.23	6.10	5.96	0.0167	0.0830	Yes	SWG	152	22	36	0.73		# 0047
753	SUB 4 PRIMARY SWITCH B	52F24P RELAY	13.20	6.85	6.68	6.53	0.0167	0.0830	Yes	SWG	152	24	36	0.81		# 0047
754	SUB 5 BUS A	52F15P RELAY	0.48	43.69	34.52	16.99	0.0167	0.0830	Yes	SWG	32	60	24	4.6	(*N5)	# 0506
755	SUB 5 BUS A (SUB 5 MAIN A LineSide)	52F15P RELAY	0.48	43.69	34.52	16.99	0.0167	0.0830	Yes	SWG	32	60	24	4.6	(*N5)	# 0656-Line
756	SUB 5 BUS B	52F25P RELAY	0.48	44.62	33.95	16.65	0.0167	0.0830	Yes	SWG	32	61	24	4.7	(*N5)	# 0506
757	SUB 5 BUS B (SUB 5 MAIN B LineSide)	52F25P RELAY	0.48	44.62	33.95	16.65	0.0167	0.0830	Yes	SWG	32	61	24	4.7	(*N5)	# 0659-Line
758	SUB 5 PRIMARY SWITCH A	52F15P RELAY	13.20	7.23	6.96	6.79	0.0167	0.0830	Yes	SWG	152	26	36	0.86		# 0047
759	SUB 5 PRIMARY SWITCH B	52F25P RELAY	13.20	6.90	6.59	6.44	0.0167	0.0830	Yes	SWG	152	24	36	0.82		# 0047
760	SUB 6 BUS A	PD SUB 6 XFMR A RELAY	0.48	10.12	9.76	6.13	0.0167	0.0830	Yes	SWG	32	25	24	1.2	(*N5)	# 0371
761	SUB 6 BUS A (SUB 6 MAIN A LineSide)	PD SUB 6 XFMR A RELAY	0.48	10.12	9.76	6.13	0.0167	0.0830	Yes	SWG	32	25	24	1.2		# 0020-Line
762	SUB 6 BUS B	PD SUB 6 XFMR B RELAY	0.48	9.18	8.84	5.65	0.0167	0.0830	Yes	SWG	32	23	24	1.2	(*N5)	# 0372
763	SUB 6 BUS B (SUB 6 MAIN B LineSide)	PD SUB 6 XFMR B RELAY	0.48	9.18	8.84	5.65	0.0167	0.0830	Yes	SWG	32	23	24	1.2		# 0021-Line
764	SUB 7 BUS A	52F17P RELAY	0.48	28.11	28.11	14.89	0.0167	0.0830	Yes	SWG	32	47	24	3.2	(*N5)	# 0046
765	SUB 7 BUS A (SUB 7 MAIN A LineSide)	52F17P RELAY	0.48	28.11	28.11	14.89	0.0167	0.0830	Yes	SWG	32	47	24	3.2		# 0022-Line
766	SUB 7 BUS B	52F27P RELAY	0.48	27.61	27.61	14.67	0.0167	0.0830	Yes	SWG	32	47	24	3.2	(*N5)	# 0046
767	SUB 7 BUS B (SUB 7 MAIN B LineSide)	52F27P RELAY	0.48	27.61	27.61	14.67	0.0167	0.0830	Yes	SWG	32	47	24	3.2		# 0023-Line
768	SUB 7 XFMR A PRI	52F17P RELAY	13.20	7.24	7.24	7.07	0.0167	0.0830	Yes	SWG	152	26	36	0.86		# 0047
769	SUB 7 XFMR B PRI	52F27P RELAY	13.20	6.91	6.91	6.75	0.0167	0.0830	Yes	SWG	152	24	36	0.82		# 0048
770	SUB 8 BUS A	52F18P RELAY	4.16	2.86	1.73	1.72	0.0167	0.0833	Yes	SWG	104	8	36	0.27	(*N5)	# 0378
771	SUB 8 BUS A (SUB 8 MAIN A RELAY LineSide)	52F18P RELAY	4.16	2.86	1.73	1.72	0.0167	0.0833	Yes	SWG	104	8	36	0.27	(*N5)	# 0026-Line

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
772	SUB 8 BUS B	52F28P RELAY	4.16	2.29	1.72	1.71	0.0167	0.0833	Yes	SWG	104	6	36	0.22	(*N5)	# 0379
773	SUB 8 BUS B (SUB 8 MAIN B RELAY LineSide)	52F28P RELAY	4.16	2.29	1.72	1.71	0.0167	0.0833	Yes	SWG	104	6	36	0.22	(*N5)	# 0028-Line
774	SUB 8 PRIMARY SWITCH A	52F18P RELAY	13.20	7.17	6.95	6.79	0.0167	0.0833	Yes	SWG	152	25	36	0.85		# 0047
775	SUB 8 PRIMARY SWITCH B	52F28P RELAY	13.20	6.85	6.71	6.56	0.0167	0.0833	Yes	SWG	152	24	36	0.81		# 0047
776	SUB SP-1 DISC	FU SUB SUMP PUMP 1	0.48	4.39	4.39	3.25	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
777	SUB SP-2 DISC	FU SUB SUMP PUMP 2	0.48	4.44	4.44	3.28	0.0042	0.0000	Yes	PNL	25	2	18	0.04		# 0492
778	SUMP PUMP 1 DISC	MCP SUMP PUMP 1	0.48	2.29	2.29	1.86	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0780
779	SUMP PUMP 3 DISC	MCP SUMP PUMP 3	0.48	0.92	0.92	0.73	0.0216	0.0000	Yes	PNL	25	2	18	0.04	(*N3)	# 0816
780	SWP LCP	PD STORM WATER PUMP CP	0.48	8.24	8.24	5.56	0.05	0.0000	Yes	PNL	25	15	18	0.88	(*N20b)	# 0049
781	SWPSO VALVE DISC S - 91 - 4	PD SWPSO-SG	0.48	2.64	2.64	2.10	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0492
782	SWPSO-SG DISC S - 91 - 1	PD SWPSO-SG	0.48	2.64	2.64	2.10	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0492
783	TABLET FDR DISC	PD-0537	0.48	3.84	3.84	2.90	0.017	0.0000	Yes	PNL	25	5	18	0.15		# 0475
784	TEMP ADM1 DISC	PD 0582	0.48	5.61	5.61	4.00	0.0161	0.0000	Yes	PNL	25	6	18	0.20		# 0073
785	TEMP ADM2 DISC	PD 0583	0.48	5.61	5.61	4.00	0.0161	0.0000	Yes	PNL	25	6	18	0.20		# 0073
786	TEMP PUMPS	FU 0683	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
787	TER FIL EFF SP DISC	FU 0691	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
788	TFB-MPC	MB TFB-MPC	0.208	1.50	1.50	1.15	0.0167	0.0000	Yes	PNL	25	3	18	0.05		# 0257
789	TFB-MPC (MB TFB-MPC LineSide)	FU 0730	0.208	1.50	1.50	1.15		0.0000	Yes	PNL	25	50	18	6.3	(*N4)	# 0791-Line
790	TGS DISC	PD 0581	0.48	3.65	3.65	2.77	0.017	0.0000	Yes	PNL	25	5	18	0.14		# 0073
791	UDSP1 DISC	FU 0681	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0136
792	UDSP2 DISC	FU 0741	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
793	UH EE	FU 0907	0.48	2.51	2.51	2.02		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0430
794	UH EE DISC	FU 0907	0.48	2.78	2.78	2.20		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0099
795	UH FF	FU 0918	0.48	2.74	2.74	2.17		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0392
796	UPS-ADM-1 INPUT	PD-UPS-ADM-1	0.208	5.02	5.02	2.68	0.0167	0.0000	Yes	PNL	25	5	18	0.13		# 0492
797	UPS-ADM-1 OUTPUT	MaxTripTime @2.0s	0.208	0.04	0.04	0.04	2	0.0000	Yes	PNL	25	3	18	0.04	(*N2) (*N9) (*N11)	# 0492
798	UV 2A	FB-PDP-UV-2A	0.48	5.31	3.06	1.87	0.2735	0.0000	Yes	PNL	25	70	18	11	(*N2) (*N9)	# 0781
799	UV 2B	FB-PDP-UV-2B	0.48	5.31	3.06	1.87	0.2735	0.0000	Yes	PNL	25	70	18	11	(*N2) (*N9)	# 0782
800	UV-1A	800/200 UV-1A	0.48	2.84	2.84	2.24	0.2	0.0000	Yes	PNL	25	19	18	1.3	(*N5)	# 0056
801	UV-1A PD LINE SIDE	800/200 UV-1A	0.48	2.86	2.86	2.25	0.2	0.0000	Yes	PNL	25	19	18	1.3		# 0056
802	UV-1B	800/200 UV-1B	0.48	3.32	3.32	2.56	0.2	0.0000	Yes	PNL	25	21	18	1.5	(*N5)	# 0056
803	UV-1B PD LINE SIDE	800/200 UV-1B	0.48	3.35	3.35	2.57	0.2	0.0000	Yes	PNL	25	21	18	1.5		# 0056
804	VFD CFG-1 INPUT	800/600 VFD CFG-1	0.48	29.45	27.15	15.21	0.066	0.0000	Yes	PNL	25	37	18	3.9	(*N21b)	# 0785
805	VFD CFG-2 INPUT	800/600 VFD CFG-2	0.48	29.80	27.50	15.38	0.066	0.0000	Yes	PNL	25	37	18	3.9	(*N21b)	# 0786
806	VFD CFG-3 INPUT	800/600 VFD CFG-3	0.48	32.92	30.62	16.88	0.066	0.0000	Yes	PNL	25	39	18	4.3	(*N21b)	# 0787
807	W CONT GT2 DISC	FU 0748	0.48	1.49	1.49	1.29	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
808	W1 FLOW VALVES JB	PD W1 FLOW VALVES	0.48	3.56	3.56	2.71	0.0162	0.0000	Yes	PNL	25	5	18	0.13		# 0108
809	WA MAIN BOV	PD WA MAIN BOV	0.48	3.76	3.76	2.84	0.0162	0.0000	Yes	PNL	25	5	18	0.14		# 0801
810	WAS VALVE W1	PD WAS VALVE W1	0.48	3.27	3.27	2.52	0.0162	0.0000	Yes	PNL	25	4	18	0.12		# 0802
811	WAS VALVE W1 DISC	PD WAS VALVE W1	0.48	5.23	5.23	3.77	0.0162	0.0000	Yes	PNL	25	6	18	0.19		# 0792

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
812	WAS VALVE W2	PD WAS VALVE W2	0.48	2.74	2.74	2.17	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0074
813	WASP-E1 VFD IN	PD WASP-E1	0.48	1.48	1.48	1.09	0.0206	0.0000	Yes	PNL	25	3	18	0.06	(*N3)	# 0302
814	WASP-E2 VFD IN	PD WASP-E2	0.48	1.46	1.46	1.08	0.0211	0.0000	Yes	PNL	25	3	18	0.06	(*N3)	# 0627
815	WASP-W1 VFD IN	PD WASP-W1	0.48	7.20	7.20	4.95	0.0162	0.0000	Yes	PNL	25	7	18	0.25		# 0028
816	WASP-W2 VFD IN	PD WASP-W2	0.48	7.09	7.09	4.89	0.0162	0.0000	Yes	PNL	25	7	18	0.25		# 0492
817	WASV E1	FB WASV E1 P-65-1	0.48	1.27	1.27	0.95	0.0285	0.0000	Yes	PNL	25	3	18	0.07	(*N3)	# 0809
818	WASV E2	FB WASV E2 P-65-2	0.48	1.27	1.27	0.95	0.0285	0.0000	Yes	PNL	25	3	18	0.07	(*N3)	# 0810
819	WASV E3	FB WASV E3	0.48	1.19	1.19	0.91	0.0314	0.0000	Yes	PNL	25	3	18	0.08	(*N3)	# 0811
820	WASV E4	FB WASV E4	0.48	1.19	1.19	0.91	0.0314	0.0000	Yes	PNL	25	3	18	0.08	(*N3)	# 0812
821	WBB-EF-1 DISC	MCP WBB-EF-1	0.48	7.20	7.20	4.95	0.005	0.0000	Yes	PNL	25	3	18	0.08		# 0028
822	WBB-EF-2 DISC	MCP WBB-EF-2	0.48	7.80	7.80	5.31	0.005	0.0000	Yes	PNL	25	4	18	0.08		# 0492
823	WBB-EF-3 DISC	MCP WBB-EF-3	0.48	3.73	3.73	2.83	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0028
824	WBB-EF-4 DISC	MCP WBB-EF-4	0.48	2.87	2.87	2.26	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
825	WBB-EF-5 DISC	MCP WBB-EF-5	0.48	2.00	2.00	1.66	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
826	WBB-EF-6 DISC	MCP WBB-EF-6	0.48	1.51	1.51	1.30	0.005	0.0000	Yes	PNL	25	1	18	0.02		# 0492
827	WBB-EF-7 DISC	MCP WBB-EF-7	0.48	2.51	2.51	2.02	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0028
828	WBB-H1	PD WBB-H1	0.48	6.99	6.99	4.83	0.0162	0.0000	Yes	PNL	25	7	18	0.24		# 0830
829	WBB-H1 DISC	PD WBB-H1	0.48	9.73	9.73	6.41	0.0162	0.0000	Yes	PNL	25	8	18	0.33	(*N20b)	# 0492
830	WBB-H2	PD WBB-H2	0.48	5.16	5.16	3.73	0.0162	0.0000	Yes	PNL	25	6	18	0.19		# 0866
831	WBB-H2 DISC	PD WBB-H2	0.48	6.53	6.53	4.56	0.0162	0.0000	Yes	PNL	25	7	18	0.23		# 0028
832	WBB-HV-1 DISC	MCP WBB-HV-1	0.48	4.42	4.42	3.26	0.005	0.0000	Yes	PNL	25	3	18	0.05		# 0028
833	WBB-HV-2	PD WBB-HV-2	0.48	10.56	10.56	6.87	0.0162	0.0000	Yes	PNL	25	9	18	0.36	(*N21b)	# 0835
834	WBB-HV-2 DISC	PD WBB-HV-2	0.48	12.87	12.87	8.14	0.0162	0.0000	Yes	PNL	25	10	18	0.43		# 0492
835	WBB-P-1 DISC	MCP WBB-P-1	0.48	2.16	2.16	1.77	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0028
836	WBB-P-2 DISC	MCP WBB-P-2	0.48	2.14	2.14	1.76	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
837	WEST AESG W1	PD WEST AESG W1	0.48	2.75	2.75	2.18	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0826
838	WEST AESG W2	PD WEST AESG W2	0.48	1.63	1.63	1.39	0.0197	0.0000	Yes	PNL	25	3	18	0.08		# 0076
839	WEST AESGW1 DISC	PD WEST AESG W1	0.48	2.92	2.92	2.29	0.0162	0.0000	Yes	PNL	25	4	18	0.11		# 0817
840	WFB-EUH-TERM's	PD WFB-EUH-1	0.208	1.66	1.66	1.23	0.0167	0.0000	Yes	PNL	25	3	18	0.06		# 0107
841	WHM DISC	FU 0665	0.48	2.33	2.33	1.89		0.0000	Yes	PNL	25	7	18	0.25	(*N4)	# 0136
842	Wireway	FB AT-E3 Z2 FCV	0.48	1.53	1.53	1.32	0.0206	0.0000	Yes	PNL	25	3	18	0.08		# 0831
843	Wireway.	FB AT-E4 Z2 FCV	0.48	1.53	1.53	1.32	0.0206	0.0000	Yes	PNL	25	3	18	0.08		# 0832
844	WPB-EF-1 DISC	MCP WPB-EF-1	0.48	2.28	2.28	1.86	0.005	0.0000	Yes	PNL	25	2	18	0.03		# 0492
845	WPB-H1 DISC	PD WPB-H1	0.48	5.66	5.66	4.03	0.0162	0.0000	Yes	PNL	25	6	18	0.20		# 0492
846	WPB-H1 HOIST	PD WPB-H1	0.48	4.64	4.64	3.41	0.0162	0.0000	Yes	PNL	25	5	18	0.17		# 0492
847	WPB-HV-1 DISC	PD WPB-HV-1	0.48	2.74	2.74	2.17	0.0162	0.0000	Yes	PNL	25	4	18	0.10		# 0492
848	WPB-P-1 DISC	MCP WPB-P-1	0.48	1.80	1.80	1.52	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
849	WPE-SAP-2 DISC	MCP WPE-SAP-2	0.48	2.05	2.05	1.70	0.005	0.0000	Yes	PNL	25	2	18	0.02		# 0492
850	WPSE GATE E DISC	FU WPSE GATE E MTR	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
851	WPSE GATE W DISC	FU 0716	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
852	WPSE SMPL PMP DISC	FU 0712	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm ²)	PPE Level / Notes (*N)	Label #
853	WSE-SAP-3 DISC	MCP WSE-SAP-3	0.48	3.73	3.73	2.83	0.005	0.0000	Yes	PNL	25	2	18	0.04		# 0028
854	WTR-CRC-PMP-1 DISC	MCP WATER CIRC PUMP 1	0.48	9.47	9.47	6.26	0.005	0.0000	Yes	PNL	25	4	18	0.10	(*N20b)	# 0492
855	WTR-CRC-PMP-2 DISC	MCP WATER CIRC PUMP 2	0.48	9.47	9.47	6.26	0.005	0.0000	Yes	PNL	25	4	18	0.10	(*N20b)	# 0492
856	WW BYP GATE E DISC	FU 0733	0.48	1.50	1.50	1.30	0.0083	0.0000	Yes	PNL	25	2	18	0.03		# 0568
857	WWRDP2 DISC	FU WWRD PUMP 2	0.48	3.32	3.32	2.56	0.0083	0.0000	Yes	PNL	25	3	18	0.06		# 0568
858	WWRDP3 DISC	FB-MCC-P	0.48	3.28	2.88	2.22	0.32	0.0000	Yes	PNL	25	27	18	2.3	(*N5)	# 0136
859	WWWRESDP1 DISC	FU 0652	0.48	3.30	3.30	2.54	0.0083	0.0000	Yes	PNL	25	3	18	0.06		# 0136
860	Level 0: Nonmelting, Flammable Materials with Weight >= 4.5 oz/sq yd	0.0 - 1.2 cal/cm ²												#Level 0 = 710	(*N11) - Out of IEEE 1584 Range, Lee Equation Used. Applicable for Open Air only. Existing Equipment type is not Open Air!	
861	Level 1: Arc-rated FR Shirt & Pants	1.2 - 4.0 cal/cm ²												#Level 1 = 89	(*N2) < 99% Cleared Fault Threshold	
862	Level 2: Arc-rated FR Shirt & Pants	4.0 - 8.0 cal/cm ²												#Level 2 = 42	(*N3) - Arcing Current Low Tolerances Used	
863	Level 3: Arc-rated FR Shirt & Pants & Arc Flash Suit	8.0 - 25.0 cal/cm ²												#Level 3 = 18	(*N4) - Equipment Specific Equations Used	
864	Level 4: Arc-rated FR Shirt & Pants & Arc Flash Suit	25.0 - 40.0 cal/cm ²												#Level 4 = 0	(*N5) - Miscoordinated, Upstream Device Tripped	
865	Level Dangerous!: No FR Category Found	40.0 - 999.0 cal/cm ²												#Danger = 0	(*N9) - Max Arcing Duration Reached	
866														#Equip Eval Failed = 0	(*N16) - Trip Time Recalculated	
867	For additional information refer to NFPA 70 E, Standard for Electrical Safety in the Workplace.													#Bus Equip Eval Failed = 46	(*N20b) - Equipment Evaluation Marginal for Bus	
868															(*N21b) - Equipment Evaluation Failed, OVERDUTIED BUS EQUIPMENT FOUND - Inappropriate to provide arc-flash hazard results.	

	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/Tol (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (in)	Working Distance (in)	Incident Energy (cal/cm2)	PPE Level / Notes (*N)	Label #
869															IEEE 1584 - Preferred Method (NFPA 70E 2015 Annex D.4) Bus + Line Side Report (Include Line Side + Load Side Contributions), - 99% Cleared Fault Threshold, include Ind. Motors >= 50.0hp for 5.0 Cycles), mis-coordination checked	