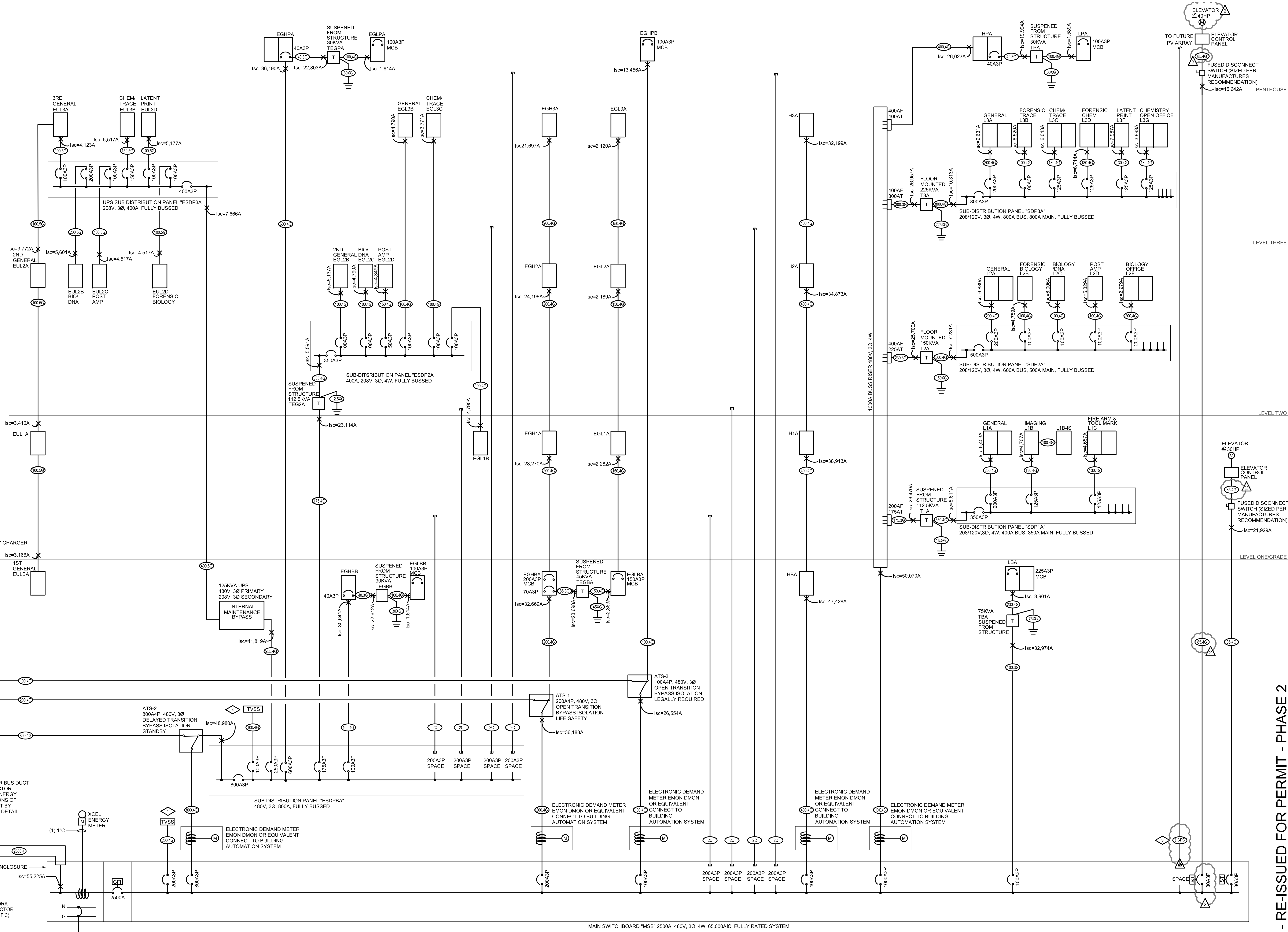
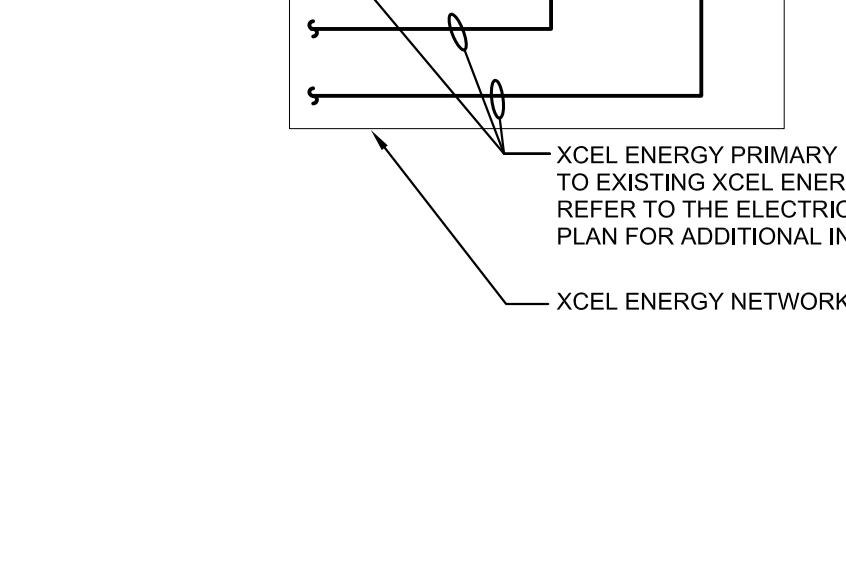
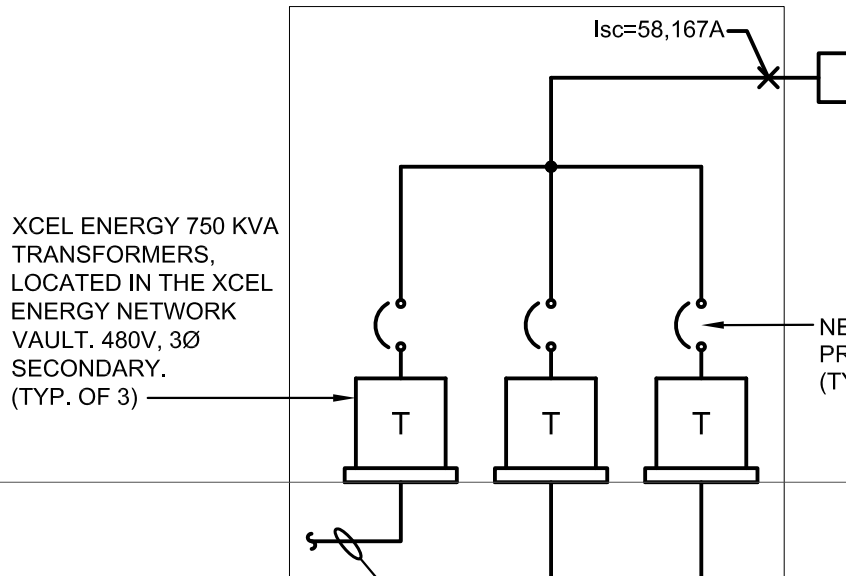
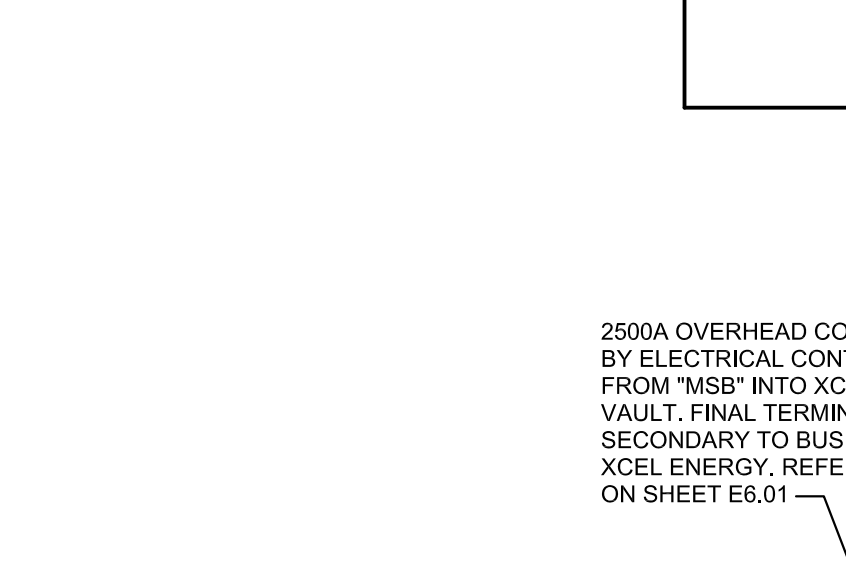
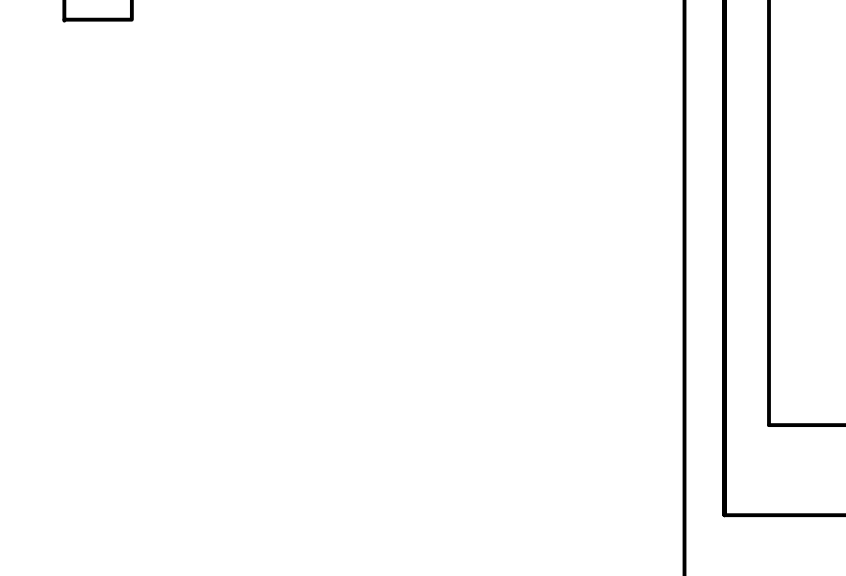
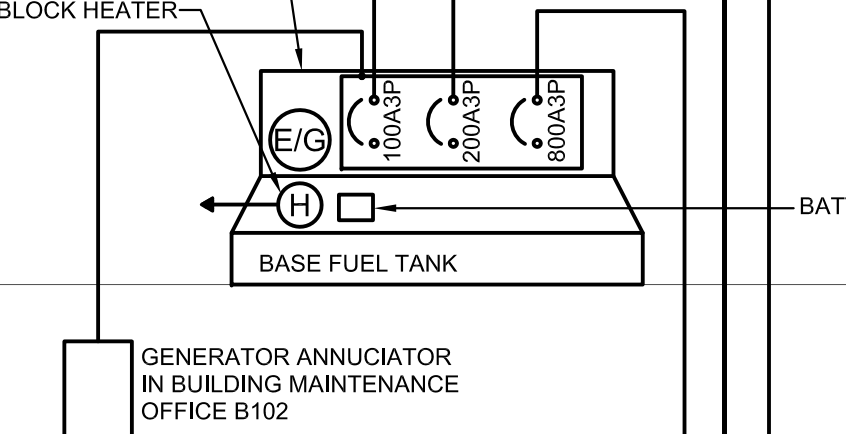


KEY	CONDUCTORS	WIRE TYPE	MINIMUM CONDUIT SIZE
40.3G	(3 #8 & 1 #10 GND)	CU	3/4"
85.3G	(3 #4 & 1 #8 GND)	CU	1-1/4"
85.4G	(4 #4 & 1 #8 GND)	CU	1-1/4"
100.3G	(3 #2 & 1 #8 GND)	CU	1-1/4"
175.3G	(3 #4/0 & 1 #4 GND)	AL	2"
230.3G	(3-300 KCMIL & 1 #2 GND)	AL	2-1/2"
300.3G	(3-500 KCMIL & 1 #2 GND)	AL	3"
100.4G	(4 #2 & 1 #8 GND)	CU	1-1/4"
100.5G	(5 #2 & 1 #8 GND)	CU	1-1/2"
130.4G	(4 #1 & 1 #6 GND)	CU	1-1/2"
150.4G	(4 #1/0 & 1 #6 GND)	CU	2"
150.5G	(5 #1/0 & 1 #6 GND)	CU	2"
200.4G	(4-250 KCMIL & 1 #4 GND)	AL	2-1/2"
200.5G	(5-250 KCMIL & 1 #4 GND)	AL	2-1/2"
230.4G	(4-300 KCMIL & 1 #2 GND)	AL	2-1/2"
255.4G	(4-350 KCMIL & 1 #2 GND)	AL	3"
380.4G	(24-250 KCMIL & 1 #1 GND)	AL	2-1/2"
400.4G	(24-250 KCMIL & 1 #1 GND)	AL	2-1/2"
400.5G	(25-250 KCMIL & 1 #1 GND)	AL	2-1/2"
500.4G	(24-350 KCMIL & 1 #1 GND)	AL	3"
600.4G	(24-500 KCMIL & 1 #2/0 GND)	AL	3"
800.4G	(34-400 KCMIL & 1 #3/0 GND)	AL	3"
1000.4G	(44-350 KCMIL & 1 #4/0 GND)	AL	3"
2500.4	(104-350 KCMIL)	AL	3"
30G	(1 #8 GND)	CU	1/2"
45G	(1 #6 GND)	CU	1/2"
75G	(1 #2 GND)	CU	1/2"
112.5G	(1 #1/0 GND)	CU	3/4"
150G	(1 #1/0 GND)	CU	3/4"
225G	(1 #2/0 GND)	CU	3/4"
150B	(1 #6 GND)	CU	1/2"
2500B	(1 #3/0 GND)	CU	3/4"
2C			2"
(2)4C			(2) 4"

MECH SEE MECHANICAL EQUIPMENT SCHEDULE

- NOTES:
- ALL CONDUCTORS #1/0 AND SMALLER ARE COPPER WITH 75 DEG C TERMINATIONS UP TO #1 AWG, AND 75 DEG TERMINATIONS FOR LARGER CONDUCTORS. ALL CONDUCTORS #2/0 AND LARGER ARE ALUMINUM WITH 75 DEG C TERMINATIONS.
  - CONDUIT SIZES ARE BASED ON THWN / THHN WIRE SIZE.
  - CONDUIT MATERIAL IS BASED ON EMT, UNLESS NOTED OTHERWISE.

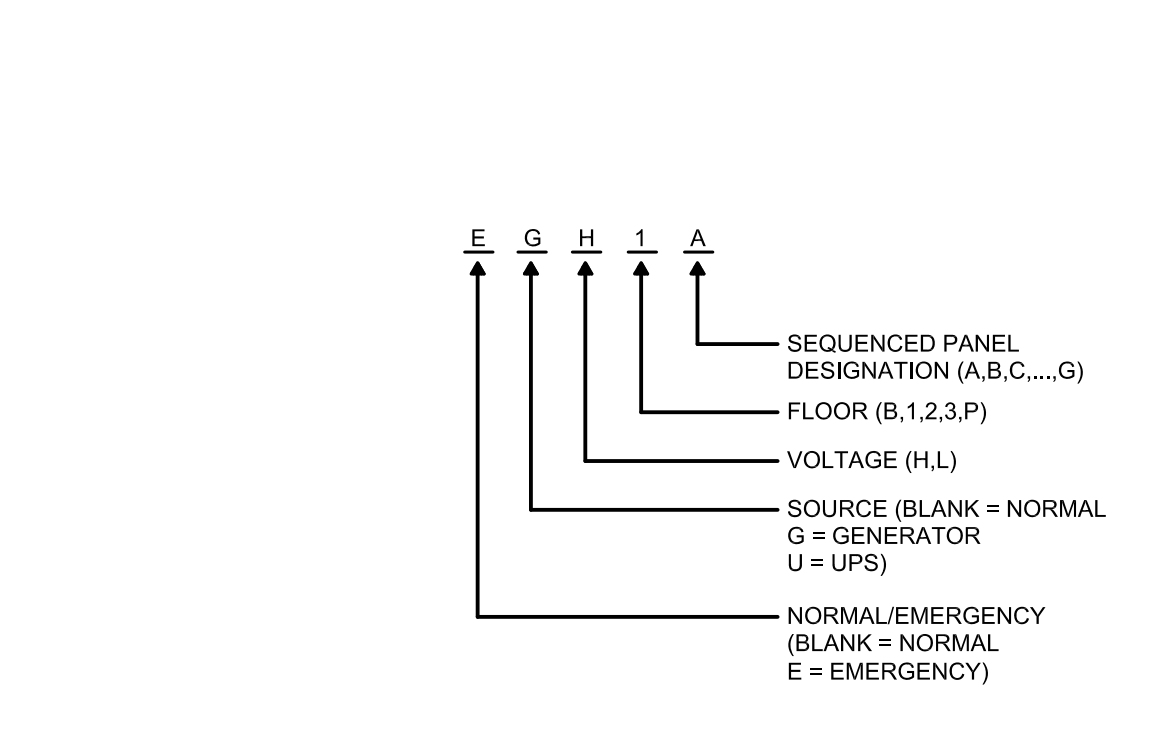


**RECORD DRAWING**

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**1 Denver Crime Lab Electrical One-line Diagram**  
SCALE: None

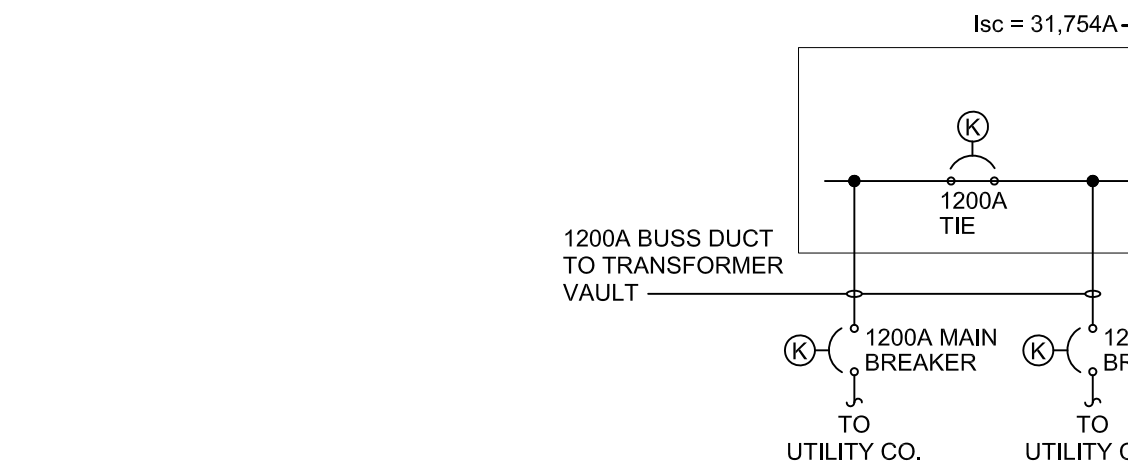
NOTE: THE FAULT CURRENT VALUES ARE BASED ON THE AVAILABLE FAULT CURRENT AT THE TRANSFORMER VAULT. THIS VALUE EXCEEDS THE AVAILABLE FAULT AT THE GENERATOR, AND WOULD BE CONSIDERED THE WORST CASE SCENARIO. THE VALUE UTILIZED AT THE TRANSFORMERS WAS PROVIDED BY XCEL ENERGY.



**2 Panel Naming Convention**  
SCALE: None

**PADF LOAD NOTE:**

THE POLICE ARRANGEMENT AND DETENTION FACILITY (PADF) IS NO LONGER BEING OCCUPIED. THE EXISTING DEPARTMENTS HAVE BEEN RELOCATED FROM THIS BUILDING TO THE NEW COURT HOUSE AND DETENTION FACILITY THAT OPENED WITHIN THE PAST YEAR. THE EXISTING LOAD WITHIN THE BUILDING HAS BEEN REDUCED TO ESSENTIAL LOADS FROM OPERATIONS ONLY SUCH AS MINIMAL HVAC AND LIGHTING LOADS. A 30DAY METERING TEST FOR THIS FACILITY WOULD NOT PROVIDE ADEQUATE INFORMATION TO DETERMINE THE EXISTING CONDITIONS.



**3 Partial PADF One-line Diagram**  
SCALE: None

**KEYED NOTES**

- ◇ PROVIDE AND INSTALL EXTERNALLY MOUNTED TVSS UNIT. INSTALL UNIT DIRECTLY ABOVE "MSB" SECTION TO ALLOW FOR SHORTEST CABLING DISTANCE. INTERNALLY MOUNTED UNITS WILL NOT BE APPROVED. PROVIDE A 320KA PER PHASE (160KA PER MODE) UNIT.
- ◇ PROVIDE AND INSTALL EXTERNALLY MOUNTED GROUND BUS. REFER TO GROUND BUS RISER SHEET E4.02 FOR LOCATION OF FUTURE EQUIPMENT.
- ◇ PROVIDE AND INSTALL (2) 4C FROM MAIN ELECTRICAL ROOM TO THE ROOF FOR FUTURE PV ARRAY. REFER TO SHEET E2.01 FOR LOCATION OF FUTURE EQUIPMENT.
- ◇ PROVIDE AND INSTALL EXTERNALLY MOUNTED TVSS UNIT. INSTALL UNIT DIRECTLY ABOVE "ESDP3A". TO ALLOW FOR SHORTEST CABLING DISTANCE. INTERNALLY MOUNTED UNITS WILL NOT BE APPROVED. PROVIDE A 200KA PER PHASE (100KA PER MODE) UNIT.
- ◇ PROVIDE AND INSTALL NEW 100A FUSED DISCONNECT FOR CONNECTION INTO THE EXISTING PADF BUS RISER. INSTALL DISCONNECT IN THE AVAILABLE SPACE ON LEVEL 1.
- ◇ PROVIDE AND INSTALL TVSS UNIT FOR THE LIGHTNING PROTECTION SYSTEM. CONFIRM EXACT REQUIREMENTS WITH LIGHTNING PROTECTION SYSTEMS.

100% CONSTRUCTION DOCUMENTS - RE-ISSUED FOR PERMIT - PHASE 2

**DENVER POLICE CRIME LAB**  
14TH AVE AND CHEROKEE  
DENVER, CO



REVISIONS

2	02-11-11	Bullfin #3
	09-04-12	RECORD DRAWING

PROJECT NO 06039.00  
DATE SEPTEMBER 04 2012  
DRAWN BY ADC  
CHECKED BY KATKBM/SCS

SHEET CONTENTS  
ELECTRICAL ONE-LINE DIAGRAM

SCALE: NOT TO SCALE

SHEET  
**E4.01**

PANEL "LBA"
VOLTS: 208/120V,3PH,4W
MAINS: 225A M.L.O.
A.I.C.: 10KA
DESCRIPTION T KVA BKR CKT# BKR KVA T DESCRIPTION
SECTION ONE
CORRIDOR RECP R 1.80 20A1P 1 + 2 30A 2.25 H ELECTRIC DRYER
BSMNT MECH/STG REC R 1.80 20A1P 3 + 4 20A1P 2.25 H

PANEL "L1C" (FIREARM & TOOLMARK LAB)
VOLTS: 208/120V,3PH,4W
MAINS: 125A M.L.O.
A.I.C.: 10KA
DESCRIPTION T KVA BKR CKT# BKR KVA T DESCRIPTION
SECTION ONE
LEICA MICROSCOPE R 1.08 20A1P 1 + 2 20A1P 1.08 R FIREARM FURN
LEICA MICROSCOPE R 1.08 20A1P 3 + 4 20A1P 1.08 R FIREARM FURN

PANEL "L2B" (BIOLOGY MAIN LAB)
VOLTS: 208/120V,3PH,4W
MAINS: 100A M.L.O.
A.I.C.: 10KA
DESCRIPTION T KVA BKR CKT# BKR KVA T DESCRIPTION
SECTION ONE
BIO RACEWAY R 1.62 20A1P 1 + 2 20A1P 0.90 R GENERAL RECEP
BIO RACEWAY R 1.62 20A1P 3 + 4 20A1P 0.90 R GENERAL RECEP

PANEL "L2F"
VOLTS: 208/120V,3PH,4W
MAINS: 200A M.L.O.
A.I.C.: 10KA
DESCRIPTION T KVA BKR CKT# BKR KVA T DESCRIPTION
SECTION ONE
MULTIPURPOSE FBOX R 0.72 20A1P 1 + 2 20A1P 0.72 R MULTIPURPOSE FBOX
MULTIPURPOSE FBOX R 0.72 20A1P 3 + 4 20A1P 0.72 R MULTIPURPOSE FBOX

PANEL "L1A"
VOLTS: 208/120V,3PH,4W
MAINS: 200A M.L.O.
A.I.C.: 10KA
DESCRIPTION T KVA BKR CKT# BKR KVA T DESCRIPTION
SECTION ONE
COMMONS 103A REC R 1.80 20A1P 1 + 2 20A1P 0.18 R ELEVATOR EOP RM
SEC/RECEPTION REC R 1.08 20A1P 3 + 4 20A1P 1.08 R GENERAL RECEP

PANEL "L2A"
VOLTS: 208/120V,3PH,4W
MAINS: 200A M.L.O.
A.I.C.: 10KA
DESCRIPTION T KVA BKR CKT# BKR KVA T DESCRIPTION
SECTION ONE
GENERAL RECEP R 1.80 20A1P 1 + 2 20A1P 0.90 R CONFRM ROOM RECEP
RESTROOM ELEC RM R 0.90 20A1P 3 + 4 20A1P 1.36 C PROJECTOR/SCREEN

PANEL "L2C" (BIOLOGY MAIN DNA LAB)
VOLTS: 208/120V,3PH,4W
MAINS: 100A M.L.O.
A.I.C.: 10KA
DESCRIPTION T KVA BKR CKT# BKR KVA T DESCRIPTION
SECTION ONE
MICROSCOPE STN C 0.77 20A1P 1 + 2 20A1P 0.54 R EXTRACTION RECEP
MICROSCOPE STN C 0.77 20A1P 3 + 4 20A1P 0.54 R EXTRACTION RECEP

PANEL "HBA"
VOLTS: 480/277V,3PH,4W
MAINS: 400A M.L.O.
A.I.C.: 50KA
DESCRIPTION T KVA BKR CKT# BKR KVA T DESCRIPTION
SECTION ONE
LTG BASEMENT EAST L 2.08 20A1P 1 + 2 15A 2.11 W XEF-1
LTG BASEMENT WEST L 1.26 20A1P 3 + 4 20A1P 2.11 W

PANEL "L2D" (POST AMP LAB)
VOLTS: 208/120V,3PH,4W
MAINS: 100A M.L.O.
A.I.C.: 10KA
DESCRIPTION T KVA BKR CKT# BKR KVA T DESCRIPTION
SECTION ONE
POST AMP HOOD M 1.18 20A1P 1 + 2 20A1P 1.11 C POST AMP RTASK
WATER PURIFICATION R 0.18 20A1P 3 + 4 20A1P 0.72 R POST AMP RECEP

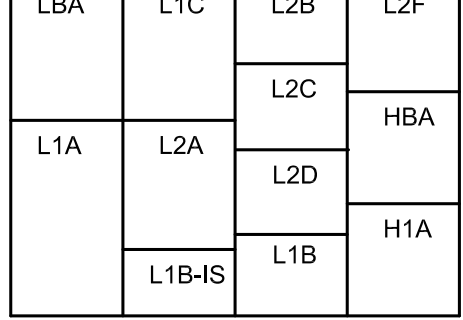
PANEL "H1A"
VOLTS: 480/277V,3PH,4W
MAINS: 400A M.L.O.
A.I.C.: 42KA
DESCRIPTION T KVA BKR CKT# BKR KVA T DESCRIPTION
SECTION ONE
LTG HALL & LOBBY L 3.18 20A1P 1 + 2 20A 3.05 M VDF-REF-1
LTG 5 LABS L 3.53 20A1P 3 + 4 20A 3.05 M

PANEL "L1B" (IMAGING STUDIO)
VOLTS: 208/120V,3PH,4W
MAINS: 125A M.L.O.
A.I.C.: 10KA
DESCRIPTION T KVA BKR CKT# BKR KVA T DESCRIPTION
SECTION ONE
IMAGING STUDIO 115 R 0.54 20A1P 1 + 2 100A 0.61 P LTB-IS
IMAGING STUDIO 115 R 0.54 20A1P 3 + 4 20A1P 0.62 P

PANEL "L1B-IS"
VOLTS: 208/120V,3PH,4W
MAINS: 100A M.L.O.
A.I.C.: 10KA
DESCRIPTION T KVA BKR CKT# BKR KVA T DESCRIPTION
SECTION ONE
50A2P RECEPTACLE O 3.75 50A 1 + 2 50A 4.50 O 60A2P RECEPTACLE
O 3.75 50A 3 + 4 50A 4.50 O

RECORD DRAWING

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100% CONSTRUCTION DOCUMENTS - RE-ISSUED FOR PERMIT - PHASE 2

REVISIONS
1 2010-10-20 ADDENDUM #1
2 02-11-11 BLDG #3
3 07-30-11 ASI #22
4 09-02-11 ASI #33

PROJECT NO 06039.00
DATE SEPTEMBER 04 2012
DRAWN BY ADM
CHECKED BY KATKIM/SCS

PANEL "L3A"
VOLTS: 208/120V, 3PH, 4W
MOUNTING: 125A M.L.O.
DESCRIPTION: WIRELESS ACCESS, GENERAL RECEPTION, CONF RM PROJECTOR, etc.

PANEL "L3C" (CHEM TRACE LAB)
VOLTS: 208/120V, 3PH, 4W
MOUNTING: 125A M.L.O.
DESCRIPTION: CHEM TRC RACEWAY, CHEM TRC HOOD, CHEM TRC CLG PNL, etc.

PANEL "L3G" (CHEMISTRY OFFICE)
VOLTS: 208/120V, 3PH, 4W
MOUNTING: 125A M.L.O.
DESCRIPTION: WIRELESS ACCESS, OPEN OFFICE REC, TECH LEAD OFFICE, etc.

PANEL "H3A"
VOLTS: 480/277V, 3PH, 4W
MOUNTING: 400A M.L.O.
DESCRIPTION: LTG HALL CONF RM, LTG N-CENTER LABS, LTG SW LABS, etc.

PANEL "L3B" (FORENSIC TRACE LAB)
VOLTS: 208/120V, 3PH, 4W
MOUNTING: 100A M.L.O.
DESCRIPTION: FOR TRACE OVEN, FOR TRACE HOOD, FOR TRACE RACEWAY, etc.

PANEL "L3D" (FORENSIC CHEM LAB)
VOLTS: 208/120V, 3PH, 4W
MOUNTING: 125A M.L.O.
DESCRIPTION: FOR CHEM MICROSCOP, FOR CHEM CLG PNL, FOR CHEM REC WAP, etc.

PANEL "LPA"
VOLTS: 208/120V, 3PH, 4W
MOUNTING: 100A MAIN BREAKER
DESCRIPTION: MAINTENANCE RECEPTION, FOR CHEM CLG PNL, etc.

PANEL "HPA"
VOLTS: 480/277V, 3PH, 4W
MOUNTING: 400A M.L.O.
DESCRIPTION: SAF-2A, RAFA-2A, ERWP-2, AC-1, etc.

PANEL "L3F" (LATENT PRINT LAB)
VOLTS: 208/120V, 3PH, 4W
MOUNTING: 125A M.L.O.
DESCRIPTION: LATENT PRINT HOOD, LP LIGHT TABLE, ALSRUFIS REC, etc.

PANEL "L3E" (LATENT CHEM LAB)
VOLTS: 208/120V, 3PH, 4W
MOUNTING: 125A M.L.O.
DESCRIPTION: WATER POLISHER, XRF EQUIPMENT, TASK LIGHTS, etc.

PANEL "H2A"
VOLTS: 480/277V, 3PH, 4W
MOUNTING: 400A M.L.O.
DESCRIPTION: LTG HALL CONF RM, LTG SW LABS, LTG NW LABS, etc.

100% CONSTRUCTION DOCUMENTS - RE-ISSUED FOR PERMIT - PHASE 2
DURRANT
Scanlon Szynskie
REVISIONS
RECORD DRAWING
PROJECT NO: 06039.00
DATE: SEPTEMBER 04 2012
DRAWN BY: ADC
CHECKED BY: KATJBM/SCS
SHEET: E5.03
SCALE: NOT TO SCALE





