

1 AUTOMATIC TRANSFER SWITCH

( ) INDICATES LOCATION OF MCC OR PANEL BOARD

**NOTE 1**

POWER TO THE OFFICE/CONTROL BLDG. IS PROVIDED FROM TWO SOURCES: MCC-A IN THE BLOWER BLDG. AND FROM MCC-E1 IN THE MAIN CONTROL BUILDING

**PRELIMINARY**

CITY OF CANBY  
**POWER DISTRIBUTION SUMMARY  
 BLOCK DIAGRAM (existing)**  
 2017 WWTP POWER DISTRIBUTION DIAGRAM UPDATE  
 CLACKAMAS COUNTY, OREGON

DATE	APRIL 2016
E/N	NONE
D/B	REF
D/S	REF
CAD	

E1  
OF  
E11

CURRAN-McLEOD, INC.  
 CONSULTING ENGINEERS  
 6655 S.W. HAMPTON ST., SUITE 210  
 PORTLAND, OREGON 97223  
 PHONE (503) 684-3478

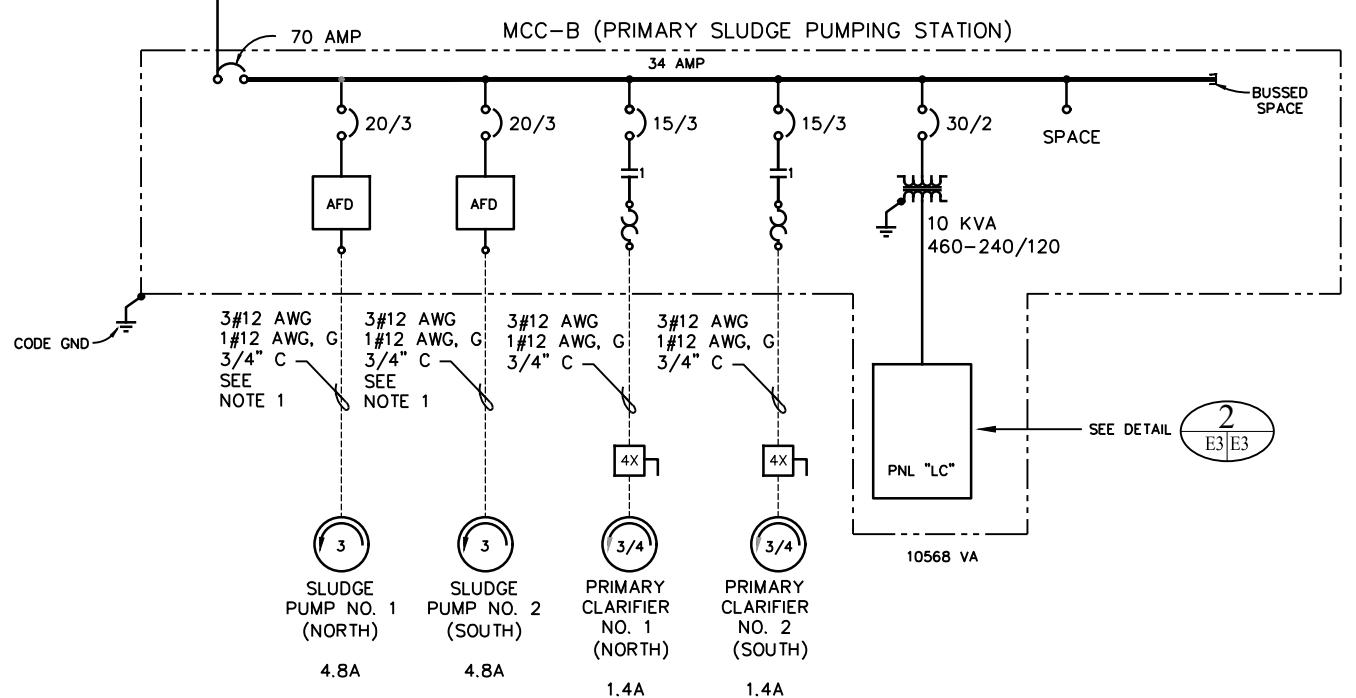
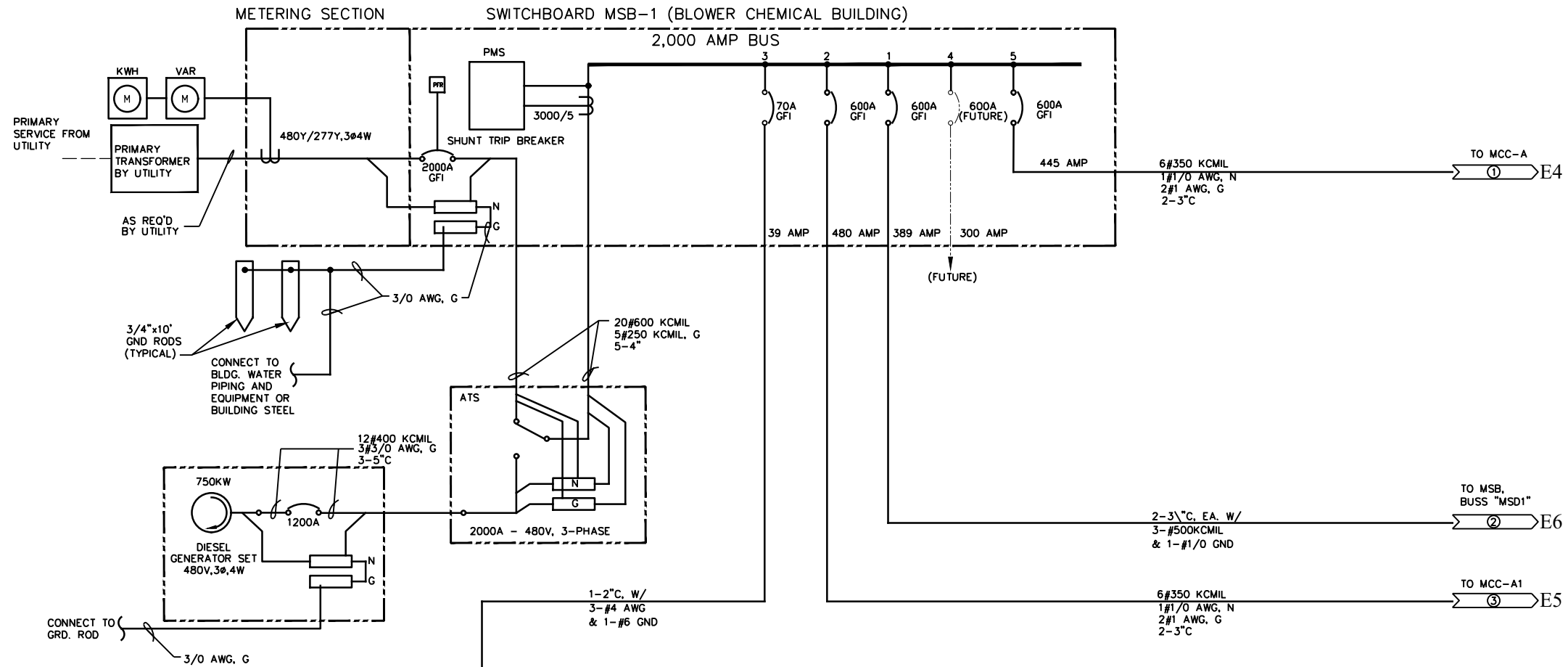
BAR IS ONE INCH ON ORIGINAL DRAWING. ADJUST SCALE AS SHOWN ACCORDINGLY.			
REV.	DESCRIPTION	REVISED BY	DATE

REVISIONS

MOTOR CONTROL CENTER DATA

MOTOR CONTROL CENTER: "MSB-1"
MANUFACTURER: EATON FREEDOM 2100
CATALOG NUMBER:
DIAGRAM:
460 VOLT, 3-PHASE, 3-WIRE, 60 HZ
AMP SUPPLY: 800 SECTION: 600
NO.:
NP
PLANT:

MOTOR CONTROL CENTER: MCC-B
MANUFACTURER: ALLEN-BRADLEY
DRAWING INDEX NO.:
STYLE NO.:
VOLTS MAXIMUM: 480, 3-PHASE 50/60 HERTZ
SHORT-CIRCUIT CURRENT RATING:
BUS AMP RATING: HORIZ-BUS 600, VERT. BUS 300, NEUT 600



PANEL SCHEDULE											
PANEL: LC		VOLTAGE 240/120		PHASE 1		WIRE 3W		MOUNTING: MCC-B		BUS: 50/2 MCB	
LOCATION: PRI SLUDGE VAULT											
CODE	DESCRIPTION	VA	A/P	NO	A	B	NO	A/P	VA	DESCRIPTION	CODE
-	SPARE	-	20/1	1	*	*	2	15/1	528	EXHAUST FAN	5
-	SPARE	-	20/1	3	*	*	4	20/1	1570	CLAR NO. 2 PLUG/LTS	2/1
1/2	CLAR NO. 1 PLUG/LTS	1570	20/1	5	*	*	6	20/1	-	SPARE	-
-	SPARE	-	20/1	7	*	*	8	20/1	300	INDOOR LIGHTS	1
2	RECEPT BLDG. EAST WALL	720	15/1	9	*	*	10	20/1	1200	MCC-B PLC/CONTROLS	4
-	SPARE	-	20/1	11	*	*	12	20/1	-	SPARE	-
5	SUMP PUMP/WEST RECPT	695	15/1	13	*	*	14	20/1	-	SPARE	-
3	UNIT HEATER	1500	15/2	15	*	*	16	15/1	528	SUPPLY FAN	5
3	* * *	1500	*	17	*	*	18	20/1	-	SPARE	-
<b>LOAD CODE</b>		<b>LINE A</b>	<b>LINE B</b>				<b>TOTAL</b>	<b>FACTOR</b>		<b>CODE LOAD</b>	
1. LIGHTS	300	-	-				300	0		375	
2. RECEPT	1570	2290	-				3860	0		3860	
3. HEATING	1500	1500	-				3000	1.25		3750	
4. EQUIP	-	1200	-				1200	0		1200	
5. MOTORS	528	1223	-				1751	(1)		2189	
6. MISC	-	-	-				-	-		-	
<b>TOTALS</b>		<b>3898</b>	<b>6213</b>				<b>10111</b>			<b>11374</b>	

47 AMP @ 240 VOLT 1-PHASE

NOTE: LARGEST MOTOR 1/4 HP  
1.25 PERCENT OF LARGEST MOTOR PLUS BALANCE

2 LIGHTING PANEL "LC" MCC-B  
SCALE: NONE

**PRELIMINARY**

1 MSB-1, AND MCC-B ONE LINE DIAGRAM  
SCALE: NONE

BAR IS ONE INCH ON ORIGINAL DRAWING.  
ADJUST SCALE AS SHOWN ACCORDINGLY.

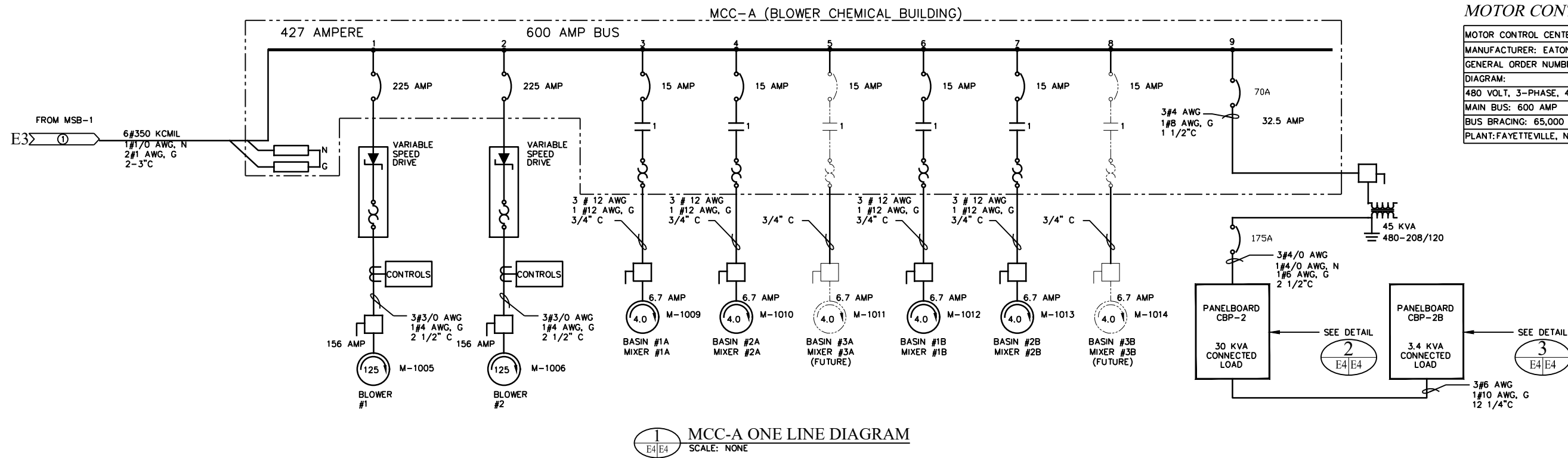
REV.	DESCRIPTION	REVISED BY	DATE

CURRAN-McLEOD, INC.  
CONSULTING ENGINEERS  
6655 S.W. HAMPTON ST., SUITE 210  
PORTLAND, OREGON 97223  
PHONE (503) 684-3478

CITY OF CANBY  
MSB-1 AND MCC-B  
ONE LINE DIAGRAMS  
2017 WWTP POWER DISTRIBUTION DIAGRAM UPDATE  
CLACKAMAS COUNTY, OREGON

DATE: APRIL 2016
D/N: NONE
D/S: REF
CAD: REF

E3 OF E11



**MOTOR CONTROL CENTER DATA**

MOTOR CONTROL CENTER: "MCC-A"
MANUFACTURER: EATON ADVANTAGE FREEDOM 2100
GENERAL ORDER NUMBER: HP085077-001
DIAGRAM:
480 VOLT, 3-PHASE, 4-WIRE, 60 HZ
MAIN BUS: 600 AMP
BUS BRACING: 65,000
PLANT: FAYETTEVILLE, NC

**1**  
E4|E4  
MCC-A ONE LINE DIAGRAM  
SCALE: NONE

**PANEL SCHEDULE**

CODE	DESCRIPTION	VA	A/P	NO	A	B	C	NO	A/P	VA	DESCRIPTION	CODE
-	SPARE	-	20/1	1	*			2	30/2	3078	OCU-2	6
2	RECEPT OFFICE 3	1080	20/1	3		*		4	*	3078	*	6
1	LIGHTS, COMP ROOM	480	20/1	5		*	*	6	60/2	5760	FCU-2	7
-	SPARE	-	20/1	7	*			8	*	5760	*	7
2	REC.WORK RM (5)	900	20/1	9	*	*	*	10	20/1	1080	RECEPT OFFICE 4	2
2	REC.WORK RM (4)	720	20/1	11	*	*	*	12	-	-	SPACE	-
-	SPARE	-	20/1	13	*			14	20/1	-	SPACE	-
1	LIGHTS, OFF. 3&4	480	20/1	15	*	*	*	16	20/1	-	SPACE	-
-	ATTIC LIGHT	60	20/1	17	*	*	*	18	20/1	-	SPACE	-
-	SPACE	-	-	19	*	*	*	20	50/3	1245	VEHICLE STORAGE	2
-	SPACE	-	-	21	*	*	*	22	*	1072	SPACE	2
-	SPACE	-	-	23	*	*	*	24	*	1100	SPACE	2
-	SPACE	-	-	25	*	*	*	26	-	-	SPACE	-
-	SPACE	-	-	27	*	*	*	28	-	-	SPACE	-
-	SPACE	-	-	29	*	*	*	30	-	-	SPACE	-

LOAD CODE:	PHASE A	PHASE B	PHASE C	TOTAL	FACTOR	CODE LOAD
1. LIGHTS =	-	480	540	960	1.25	1200
2. RECEPT =	1245	4132	1820	7197	**	7197
3. HEATING =	8838	0	5760	11520	1.25	1440
4. KITCHEN =	0	0	0	0	1.00	0
5. EQUIP. =	0	0	0	0	1.00	0
6. MOTORS =	0	0	0	6256	*	6868
7. MISC. =	0	0	0	0	1.00	0
<b>TOTALS</b>	<b>10083</b>	<b>7690</b>	<b>8060</b>	<b>25833</b>	<b>N/A</b>	<b>29665</b>

\* 125% OF THE LARGEST MOTOR + 100% OF THE BALANCE  
 \*\* FIRST 10KW + 50% OF THE BALANCE  
 PHASE AMPS= 82.3  
 CODE DEMAND= 76  
 LARGEST MOTOR= 2

**2**  
E4|E4  
LIGHTING PANEL CBP-2  
SCALE: NONE

**PANEL SCHEDULE**

CODE	DESCRIPTION	VA	A/P	NO	A	B	C	NO	A/P	VA	DESCRIPTION	CODE
1	BAY 2 & 3 LTS	695	20/1	1	*			2	20/1(o)	-	SPARE	-
1	BAY 1 LTS	522	20/1	3	*	*	*	4	20/1(o)	-	SPARE	-
2	BAY #3 RECEPT	550	20/1(o)	5	*	*	*	6	20/1	-	SPARE	-
2	BAY #2 RECEPT	550	20/1(o)	7	*	*	*	8	20/2	-	SPARE	-
2	BAY #1 RECEPT	550	20/1(o)	9	*	*	*	10	*	*	*	-
2	BAY #1 RECEPT	550	20/1(o)	11	*	*	*	12	-	-	SPACE	-
-	SPARE	-	20/1	13	*	*	*	14	-	-	SPACE	-
-	SPARE	-	20/1	15	*	*	*	16	-	-	SPACE	-
-	SPARE	-	20/1	17	*	*	*	18	-	-	SPACE	-

LOAD CODE	LINE A	LINE B	LINE C	TOTAL	FACTOR	CODE LOAD
1. LIGHTS	695	522	-	1217	1.0	1217
2. RECEPT	550	550	1100	2200	1.0	2200
3. HEATING	-	-	-	-	1.25	-
4. EQUIP	-	-	-	-	(i)	-
5. MOTORS	-	-	-	-	1.0	-
6. MISC	-	-	-	-	-	-
	1245	1072	1100	3417		3417

9.5 AMPS @ 208 VOLT 3-PHASE

(a) GROUND FAULT/ARC FLASH INTERRUPTER CIRCUIT BREAKER

**3**  
E4|E4  
LIGHTING PANEL CBP-2B  
SCALE: NONE

**PRELIMINARY**

BAR IS ONE INCH ON ORIGINAL DRAWING.  
ADJUST SCALE AS SHOWN ACCORDINGLY.

REV.	DESCRIPTION	REVISED BY	DATE

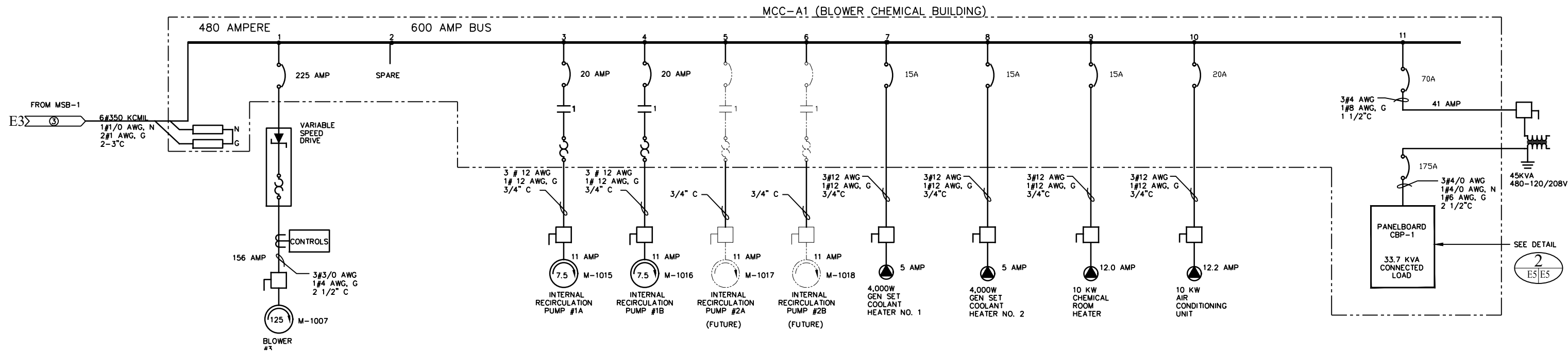
REVISIONS

CURRAN-McLEOD, INC.  
CONSULTING ENGINEERS  
6655 S.W. HAMPTON ST., SUITE 210  
PORTLAND, OREGON 97223  
PHONE (503) 684-3478

CITY OF CANBY  
MCC-A ONE LINE DIAGRAM AND  
PANELBOARD "CBP-2" (MAIN CNTRL BLDG.)  
2017 WWTP POWER DISTRIBUTION DIAGRAM UPDATE  
CLACKAMAS COUNTY, OREGON

DATE	APRIL 2016
E/N	NONE
D/S	REF
CAD	REF

E4 OF E11



**MCC-A1 ONE LINE DIAGRAM**  
SCALE: NONE

**MOTOR CONTROL CENTER DATA**

MOTOR CONTROL CENTER: "MCC-A"
MANUFACTURER: EATON ADVANTAGE FREEDOM 2100
GENERAL ORDER NUMBER: HPO85077-002
DIAGRAM:
480 VOLT, 3-PHASE, 4-WIRE, 60 HZ
MAIN BUS: 600 AMP
BUS BRACING: 65,000
PLANT: FAYETTEVILLE, NC

**PANEL SCHEDULE**

PANEL: CBP-1		VOLT: 208/120		PHASE: 3			WIRE: 4W		MOUNTING: MCC-A1			
LOCATION: BLOWER/CHEM. BLDG.							BUS: 225 AMP		MAIN: 175 AMP			
CODE	DESCRIPTION	VA	A/P	NO	A	B	C	NO	A/P	VA	DESCRIPTION	CODE
1	CONTROL RM LIGHTS	768	20/1	1	*			2	20/1	720	CONTROL RM RECEPT	2
3	CHEMICAL RM LIGHTS	472	20/1	3	*	*		4	20/1	900	CONTROL RM RECEPT	2
1	VFD ROOM LIGHTS	538	20/1	5	*	*	*	6	20/1(o)	360	CHEM RM RECEPT	2
1	BLOWER RM LIGHTS	708	20/1	7	*	*	*	8	20/1	---	SPARE	-
1	BUILDING EXTERIOR	550	20/1	9	*	*	*	10	20/1	---	SPARE	-
1	AERATION LIGHTS	450	20/1	11	*	*	*	12	20/1	180	BLDG. EXT. RECEPT	2
4	PN-1005	600	20/1	13	*	*	*	14	20/1(o)	540	BLDG. EXT. RECEPT	2
4	PN-1006	600	20/1	15	*	*	*	16	20/1(o)	720	AERATION RECEPT	2
4	PN-1007	600	20/1	17	*	*	*	18	20/1(o)	180	RFBP ENCL RECEPT	2
5	CHEM EXHAUST FAN	100	20/1	19	*	*	*	20	20/1	120	NORTH ACTUATOR #4	4
3	WATER HEATER	1500	20/2	21	*	*	*	22	40/2	5000	FURNACE, FC-2	3
3	WATER HEATER	1500	-	23	*	*	*	24	---	5000	FURNACE, FC-2	3
1	LIGHTING CONTACT	100	20/1	25	*	*	*	26	20/1	4800	PANEL SP-3	4
-	SPARE	---	20/1	27	*	*	*	28	20/1	---	SPARE	-
5	GENERATOR LOUVERS	720	20/1	29	*	*	*	30	20/1	100	CHEM EXHAUST FAN	5
5	GENERATOR LOUVERS	720	20/1	31	*	*	*	32	20/1	120	NORTH ACTUATOR #2	4
1	SPLITTER BOX LIGHT	150	20/1	33	*	*	*	34	20/1	120	NORTH ACTUATOR #3	4
4	BLOWOFF ACTUATOR	120	20/1	35	*	*	*	36	20/1	120	S ACTUATORS #3,#4	4
-	SPACE	---	-	37	*	*	*	38	20/1	120	SOUTH ACTUATOR #2	4
-	SPACE	---	-	39	*	*	*	40	---	---	SPACE	-
-	SPACE	---	-	41	*	*	*	42	---	---	SPACE	-
LOAD CODE		LINE A	LINE B	LINE C	TOTAL			FACTOR		CODE LOAD		
1. LIGHTS		1576	1172	988	3736			1.25		4130		
2. RECEPT		1260	1620	720	3600			0		3600		
3. HEATING		-	6500	6500	13000			1.25		16250		
4. EQUIP		6036	812	1236	8084			0		8084		
5. MOTORS		820	-	820	1640			(1)		1814		
6. MISC		-	-	-	-			0		-		
TOTALS		9692	10104	10264	30060					33990		

NOTE: LARGEST MOTOR 1/4 HP  
1.25 PERCENT OF LARGEST MOTOR PLUS BALANCE  
(o) GROUND FAULT INTERRUPTER CIRCUIT BREAKER

**2 LIGHTING PANEL "CBP-1," MCC-A1**  
SCALE: NONE

**PRELIMINARY**

BAR IS ONE INCH ON ORIGINAL DRAWING.  
ADJUST SCALE AS SHOWN ACCORDINGLY.

REV.	DESCRIPTION	REVISED BY	DATE

REVISIONS

CURRAN-McLEOD, INC.  
CONSULTING ENGINEERS

6655 S.W. HAMPTON ST., SUITE 210  
PORTLAND, OREGON 97223  
PHONE (503) 684-3478

CITY OF CANBY

**MCC-A1 ONE LINE DIAGRAM  
AND CBP-1**

2017 WWTP POWER DISTRIBUTION DIAGRAM UPDATE  
CLACKAMAS COUNTY, OREGON

DATE	APRIL 2016
D/N	NONE
D/B	REF
D/S	REF
CAD	

E5  
OF  
E11

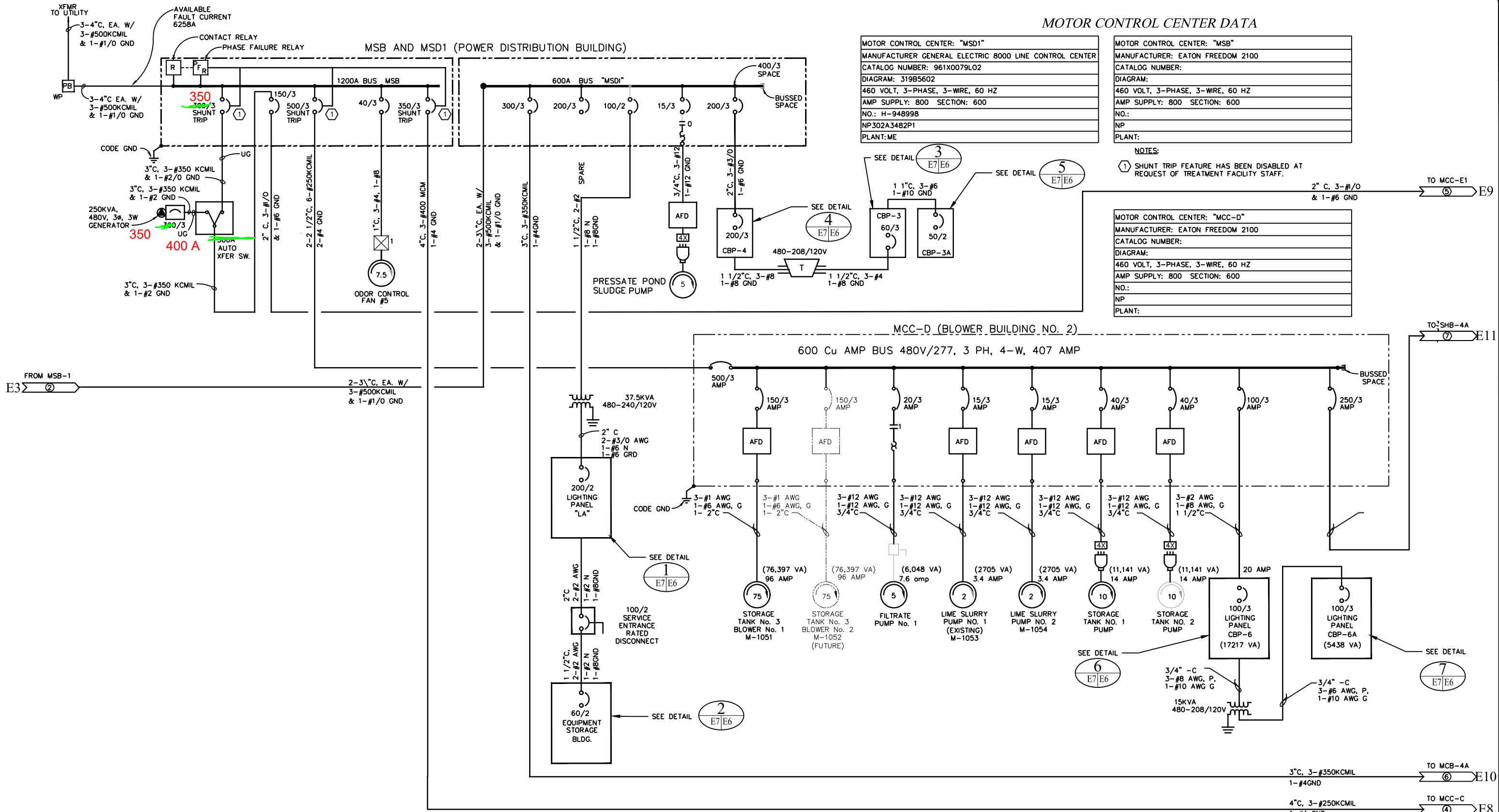
MOTOR CONTROL CENTER DATA

MOTOR CONTROL CENTER: "MSD1"
MANUFACTURER GENERAL ELECTRIC 8000 LINE CONTROL CENTER
CATALOG NUMBER: 961X0079L02
DIAGRAM: 319B5602
460 VOLT, 3-PHASE, 3-WIRE, 60 HZ
AMP SUPPLY: 800 SECTION: 600
NO.: H-948998
NP302A3482P1
PLANT: ME

MOTOR CONTROL CENTER: "MSB"
MANUFACTURER: EATON FREEDOM 2100
CATALOG NUMBER:
DIAGRAM:
460 VOLT, 3-PHASE, 3-WIRE, 60 HZ
AMP SUPPLY: 800 SECTION: 600
NO.:
NP
PLANT:

NOTES:  
 ① SHUNT TRIP FEATURE HAS BEEN DISABLED AT REQUEST OF TREATMENT FACILITY STAFF.

MOTOR CONTROL CENTER: "MCC-D"
MANUFACTURER: EATON FREEDOM 2100
CATALOG NUMBER:
DIAGRAM:
460 VOLT, 3-PHASE, 3-WIRE, 60 HZ
AMP SUPPLY: 800 SECTION: 600
NO.:
NP
PLANT:



1 MSB, MSD1 AND MCC-D ONE LINE DIAGRAMS  
 SCALE: NONE

**PRELIMINARY**

BAR IS ONE INCH ON ORIGINAL DRAWING.  
 ADJUST SCALE AS SHOWN ACCORDINGLY.

REV.	DESCRIPTION	REVISED BY	DATE

REVISIONS

CURRAN-McLEOD, INC.  
 CONSULTING ENGINEERS  
 6655 S.W. HAMPTON ST., SUITE 210  
 PORTLAND, OREGON 97223  
 PHONE (503) 684-3478

CITY OF CANBY  
**MSB, MSD1 AND MCC-D  
 ONE LINE DIAGRAMS**  
 2017 WWTP POWER DISTRIBUTION DIAGRAM UPDATE  
 CLACKAMAS COUNTY, OREGON

DATE APRIL 2016
E/N NONE
D/B REF
D/S REF
CAD

E6 OF E11

PANEL SCHEDULE													
PANEL: LA		VOLTAGE		PHASE		WIRE		MOUNTING: SURFACE					
LOCATION: POWER DIST. BLDG.		240/120		1		3W		BUS: 225		MAIN: 200			
CODE	DESCRIPTION	VA	A/P	NO	A	B	NO	A/P	VA	DESCRIPTION	CODE		
1	PWR DIST BLDG. LTS	60	20/1	1	*		2	20/1	332	STORAGE BLDG/POND	1		
2 (2)	PWR DIST BLDG/CHEM STRG	2160	20/1	3	*	*	4	20/1	1500	STORAGE HEATERS	3		
1/2/5	FLAMMABLE STORAGE BLDG	1986	20/1	5	*	*	6	20/1	1800	STORAGE TANK 1 RECEPT.	2		
1	SCRUBBER LIGHTS	166	20/1	7	*	*	8	20/1	1800	OUTLET (WEST WALL)	2		
-	SPARE	-	20/1	9	*	*	10	20/2	1250	GENERATOR BLOCK HEATER	3		
-	FEEDER TO EQUIPMENT	1727	100/2	11	*	*	12	*	1250	* * *	3		
-	STORAGE BLDG.	2872	*	13	*	*	14	-	-	SPACE	-		
-	SPACE	-	-	15	*	*	16	-	-	SPACE	-		
-	SPACE	-	-	17	*	*	18	-	-	SPACE	-		
LOAD CODE	LINE A	LINE B	TOTAL		FACTOR		CODE LOAD						
1. LIGHTS	447	166	613		0		613						
2. RECEPT	3786	5160	8946		0		8946						
3. HEATING	1250	2750	4000		0		5000						
4. EQUIP	1000	-	1000		0		1000						
5. MOTORS	1848	672	2520		(1)		3150						
6. MISC	-	1000	1000		0		1000						
TOTALS	8331	9748	18079				19079						

NOTE: (1) LARGEST MOTOR 1/4 HP  
1.25 PERCENT OF LARGEST MOTOR PLUS BALANCE  
(a) GROUND FAULT INTERRUPTER CIRCUIT BREAKER  
(2) HALF HEIGHT BREAKERS (3a - 360, 3b - 1800)  
FLAMMABLE STORAGE: 90 LTS, RECEPT 1200, MOTOR 696  
18079 VA @ 240 VAC = 75 AMPS

**1 LIGHTING PANEL "LA" POWER DIST. BLDG.**  
SCALE: NONE

PANEL SCHEDULE														
PANEL: CBP-3		VOLT		PHASE		WIRE		MOUNTING: SURFACE						
LOCATION: FILTER BLDG.		208/120		3		4W		BUS: 100 AMP		MAIN: 60 AMP				
CODE	DESCRIPTION	VA	A/P	NO	A	B	C	NO	A/P	VA	DESCRIPTION	CODE		
1	LIGHTS	812	20/1	1	*			2	20/1	1500	HEATER, UH-3	3		
1	LIGHTS	812	20/1	3	*	*		4	-	-	SPARE	-		
1	LIGHTS - LOWER	391	20/1	5	*	*	*	6	20/1(o)	295	LIGHTS - EXT.	1		
-	SPARE	-	20/1	7	*	*	*	8	20/1	-	SPARE	-		
-	SPARE	-	20/1	9	*	*	*	10	20/1(o)	-	SPARE	-		
2	RECEPT. MAIN FLOOR	900	20/1(o)	11	*	*	*	12	20/1(o)	360	RECEPT. PUMP ROOM	2		
-	SPARE	-	20/1	13	*	*	*	14	30/1	-	SPARE	-		
-	SPARE	-	20/1	15	*	*	*	16	-	-	SPACE	-		
5	EXHAUST FAN, EF-1	100	20/1	17	*	*	*	18	20/1	920	SUMP PUMP	5		
6	CBP-3A	-	50/2	19	*	*	*	20	-	-	SPACE	-		
6	* * *	-	*	21	*	*	*	22	-	-	SPACE	-		
-	SPACE	-	-	23	*	*	*	24	20/1	-	SPACE	-		
LOAD CODE	LINE A	LINE B	LINE C	TOTAL		FACTOR		CODE LOAD						
1. LIGHTS	812	1252	1125	3189		1.25		3470						
2. RECEPT	-	-	-	3120		0		3120						
3. HEATING	3000	-	-	3000		1.25		3750						
4. EQUIP	-	-	-	-		0		-						
5. MOTORS	2352	-	1020	3372		(1)		3960						
6. MISC	-	500	500	1000		0		1000						
TOTALS	6164	3252	4265	13681				15300						

NOTE: LARGEST MOTOR: 1/2 HP  
(1) 1.25 PERCENT OF LARGEST MOTOR PLUS BALANCE  
(a) GROUND FAULT INTERRUPTER CIRCUIT BREAKER

**3 PANELBOARD CBP-3, FILTER BUILDING**  
SCALE: NONE

PANEL SCHEDULE													
PANEL: EQUIP. STORAGE BLDG.		VOLTAGE		PHASE		WIRE		MOUNTING: SURFACE					
LOCATION: EQUIP. STORAGE BLDG.		240/120		1		3W		BUS: 60 AMP		MAIN: 60 AMP			
CODE	DESCRIPTION	VA	A/P	NO	A	B	NO	A/P	VA	DESCRIPTION	CODE		
4	SP-2 PANEL	1000	20/1	1	*		2	20/1	55	LIGHTS	1		
-	SPACE	-	-	3	*	*	4	20/1	-	SPARE	-		
-	SPACE	-	-	5	*	*	6	20/2	672	PROPANE PUMP	5		
-	SPACE	-	-	7	*	*	8	*	672	* * *	5		
-	SPACE	-	-	9	*	*	10	-	-	SPACE	-		
2	LEFT SIDE RECEPT	1200	20/1	11	*	*	12	20/1	1000	CONTROL CIRCUIT	6		
LOAD CODE	LINE A	LINE B	TOTAL		FACTOR		CODE LOAD						
1. LIGHTS	55	-	55		0		55						
2. RECEPT	-	1200	1200		0		1200						
3. HEATING	-	-	-		1.25		-						
4. EQUIP	1000	-	1000		0		1000						
5. MOTORS	672	672	1344		(1)		1680						
6. MISC	-	1000	1000		0		1000						
TOTALS	1727	2872	4599				4935						

NOTE: LARGEST MOTOR 1 HP  
1.25 PERCENT OF LARGEST MOTOR PLUS BALANCE

**2 LIGHTING PANEL EQUIPMENT STORAGE BLDG.**  
SCALE: NONE

PANEL SCHEDULE														
PANEL: CBP-4		VOLT		PHASE		WIRE		MOUNTING: SURFACE						
LOCATION: FILTER BLDG.		480/277		3		4W		BUS: 225 AMP		MAIN: 200				
CODE	DESCRIPTION	VA	A/P	NO	A	B	C	NO	A/P	VA	DESCRIPTION	CODE		
5	UV RECIRC PUMP	1854	15/3	3	*			2	100/3	4138	PN-1009	5		
5	* * *	1854	* * *	5	*	*	*	4	* * *	4138	* * *	5		
5	* * *	1854	* * *	5	*	*	*	5	* * *	4138	* * *	5		
5	* * *	1854	* * *	7	*	*	*	8	30/3	4988	XFMR FEED	-		
3	HEATER, UH-1	1500	20/2	9	*	*	*	10	* * *	3252	* * *	-		
3	* * *	1500	* * *	11	*	*	*	12	* * *	2966	* * *	-		
4	UV UNIT No. 1	12000	65/3	13	*	*	*	14	65/3	12000	UV UNIT No. 2	4		
4	* * *	12000	* * *	15	*	*	*	16	* * *	12000	* * *	4		
4	* * *	12000	* * *	17	*	*	*	18	* * *	12000	* * *	4		
LOAD CODE	LINE A	LINE B	LINE C	TOTAL		FACTOR		CODE LOAD						
1. LIGHTS	812	1,252	1,125	3,189		1.25		3,470						
2. RECEPT	-	1,500	1,620	3,120		0		3,120						
3. HEATING	3,000	1,500	1,500	6,000		1.25		7,500						
4. EQUIP	24,000	24,000	24,000	72,000		0		72,000						
5. MOTORS	8,344	5,992	7,012	21,348		(1)		22,971						
6. MISC	-	500	500	1,000		0		1,000						
TOTALS	36,156	34,744	35,757	106,657				110,061						

NOTE: LARGEST MOTOR: 5 HP  
(1) 1.25 PERCENT OF LARGEST MOTOR PLUS BALANCE  
106,657 @ 480 VAC = 128 AMPS

**4 PANELBOARD CBP-4, FILTER BUILDING**  
SCALE: NONE

PANEL SCHEDULE														
PANEL: CBP-3A		VOLT		PHASE		WIRE		MOUNTING: SURFACE						
LOCATION: UV BUILDING		208/120		1		4W		BUS: 100		MAIN: 50/2				
CODE	DESCRIPTION	VA	A/P	NO	A	B	C	NO	A/P	VA	DESCRIPTION	CODE		
-	SPARE	-	-	1	*			2	20/1	-	SPARE	-		
2	RECEPT.	1500	20/1(o)	3	*	*	*	4	20/1	500	PN-1042	6		
5	SUMP PUMP	1176	30/1	5	*	*	*	6	20/1	1500	HEATER	3		
1	EXHAUST FAN/LIGHTS	440	20/1(o)	7	*	*	*	8	20/1	-	SPARE	-		
LOAD CODE	LINE A	LINE C	TOTAL		FACTOR		CODE LOAD							
1. LIGHTS	-	440	440		1.25		550							
2. RECEPT	-	1500	1500		0		1500							
3. HEATING	1500	-	1500		1.25		1875							
4. EQUIP	-	-	-		0		-							
5. MOTORS	1176	-	1176		(1)		1470							
6. MISC	-	500	500		0		500							
TOTALS	2676	2440	5116				5895							

NOTE: LARGEST MOTOR: 1/2 HP  
(1) 1.25 PERCENT OF LARGEST MOTOR PLUS BALANCE  
(a) GROUND FAULT INTERRUPTER CIRCUIT BREAKER  
24 AMPS AT 208 1-PHASE

**5 LIGHTING PANEL CBP-3A, UV DISINFECTION BUILDING**  
SCALE: NONE

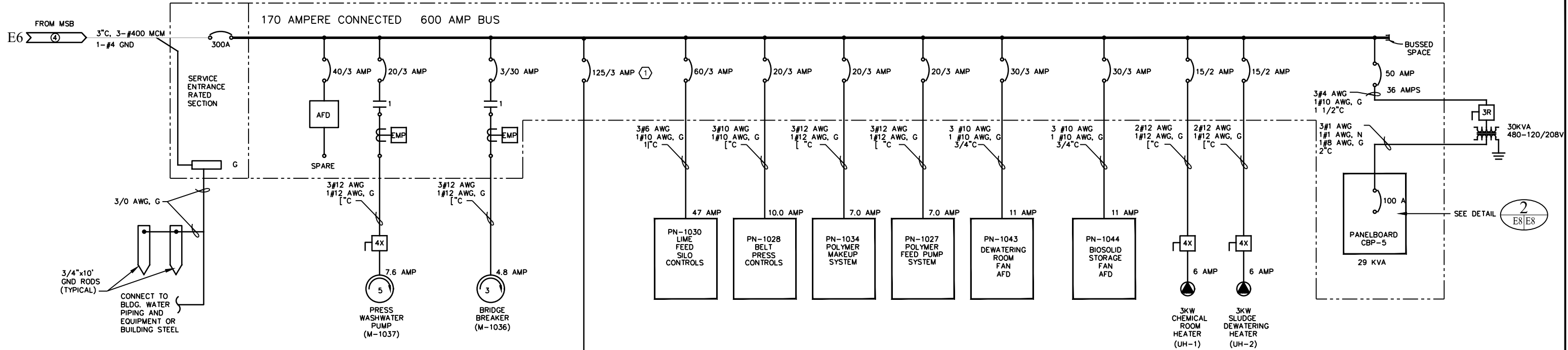
PANEL SCHEDULE														
PANEL: CBP-6		VOLTAGE		PHASE		WIRE		MOUNTING: SURFACE						
LOCATION: TANK NO. 3 PUMP STA		480		3		4W		BUS: 225 AMP		MAIN: 100 AMP				
CODE	DESCRIPTION	VA	A/P	NO	A	B	C	NO	A/P	VA	DESCRIPTION	CODE		
5	TRANSFER PUMP	2918	30/3	1	*			2	25/3	1261	TRANSFORMER	-		
5	* * *	2918	* * *	3	*	*	*	4	* * *	1280	* * *	-		
5	* * *	2918	* * *	5	*	*	*	6	* * *	1125	* * *	-		
-	SPACE	-	-	7	*	*	*	8	-	-	SPACE	-		
-	SPACE	-	-	9	*	*	*	10	-	-	SPACE	-		
-	SPACE	-	-	11	*	*	*	12	-	-	SPACE	-		
-	SPACE	-	-	13	*	*	*	14	-	-	SPACE	-		
-	SPACE	-	-	15	*	*	*	16	-	-	SPACE	-		
-	SPACE	-	-	17	*	*	*	18	-	-	SPACE	-		
LOAD CODE	LINE A	LINE B	LINE C	TOTAL		FACTOR		CODE LOAD						
1. LIGHTS	100	-	-	100		1.0		100						
2. RECEPT	-	2400	-	2400		1.0		2400						
3. HEATING	1125	-	1125	2250		1.25		2812						
4. EQUIP	36	-	-	36		1.0		36						
5. MOTORS	2918	3018	2918	8854		(1)		11042						
6. MISC	-	-	-	-		1.0		-						
TOTALS	4179	5418	4043	13640				16390						

LARGEST MOTOR: 7 1/2 HP (1) 1.25 PERCENT OF LARGEST MOTOR PLUS BALANCE

**6 LIGHTING PANEL CBP-6, SLUDGE PUMP STATION.**  
SCALE: NONE

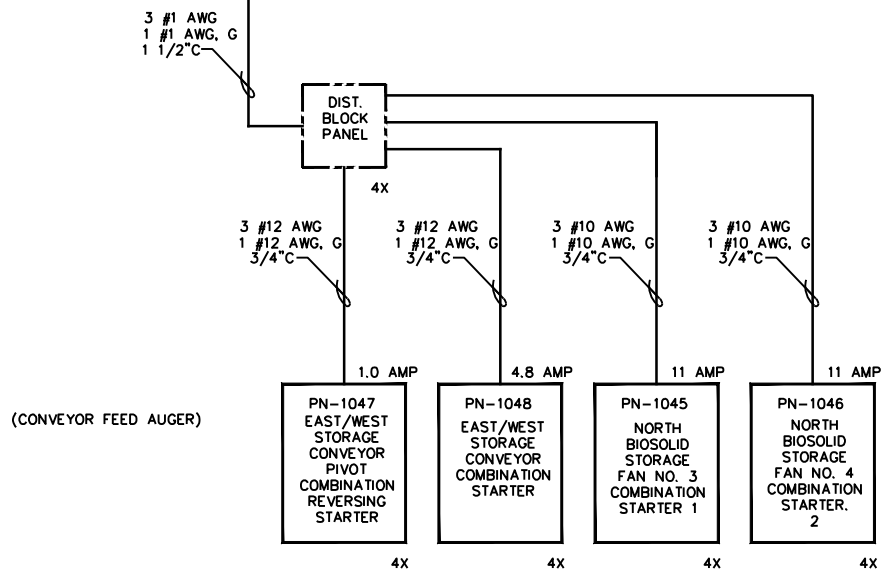
PANEL SCHEDULE														
PANEL: CBP-6A		VOLTAGE		PHASE		WIRE		MOUNTING: SURFACE						
LOCATION: TANK NO. 3 PUMP STA.		208Y/120		3		4W		BUS: 100 AMP		MAIN: 60 AMP				
CODE	DESCRIPTION	VA	A/P	NO	A	B	C	NO	A/P	VA	DESCRIPTION	CODE		
1	LIGHTS	100	20/1	1	*			2	15/1	36	LEVEL TRANSMITTER	4		
2	RECEPT	1200	20/1(o)	3	*	*	*	4	15/1	80	EXHAUST FAN	5		
3	WALL HEATER	1125	15/2	5	*	*	*	6	20/1	-	SPARE	-		
3	* * *	1125	* * *	7	*	*	*	8	-	-	SPACE	-		
-	TANK NO. 3 RECEPT	1200	20/1	9	*	*	*	10	-	-	SPACE	-		
-	SPARE	-	-	11	*	*	*	12	-	-	SPACE	-		
-	SPARE	-	-	13	*	*	*	14	-	-	SPACE	-		
-	SPARE	-												

MCC-C (SOLIDS DEWATERING BUILDING)



MOTOR CONTROL CENTER DATA

MOTOR CONTROL CENTER: "MCC-C"
MANUFACTURER: GE EVOLUTION SERIES E9000
CATALOG NUMBER: 0820X0499L01
DIAGRAM: 338B5144
460 VOLT, 3-PHASE, 4-WIRE, 60 HZ
AMP SUPPLY: 600 SECTION: 600
NO.: M-497427
NP: 302A3482P1
PLANT: ME
NP204B4142EXP42



1 MCC-C ONE LINE DIAGRAM  
SCALE: NONE

PANEL SCHEDULE													
PANEL: CBP-5		VOLTAGE 208/120		PHASE 3			WIRE 4W		MOUNTING: MCC "C"			BUS: 225 AMP	
LOCATION: DEWATERING BLDG.									MAIN: 60 AMP				
CODE	DESCRIPTION	VA	A/P	NO	A	B	C	NO	A/P	VA	DESCRIPTION	CODE	
1	CONTROL RM LIGHTS	380	20/1	1	*	*	*	2	20/1(o)	360	CHEM RM RECEPT.	2	
4	DEWATER RM LIGHTS	1624	20/1	3	*	*	*	4	20/1	90	FLOWMETER, FIT-1036	4	
1	EXTERIOR LIGHTS	580	20/1	5	*	*	*	6	20/1(o)	900	DEWATERING RM REC	2	
4	SP-4	1800	20/1	7	*	*	*	8	20/1(o)	540	CONTROL RM RECEPT	2	
5	CNTRL RM FAN, EF2	108	20/1	9	*	*	*	10	20/1(o)	360	BLDG. EXT. RECEPT	2	
3	WATER HTR/VIDEO	1500	20/1	11	*	*	*	12	20/1	-	STEAM CLEANER	4	
-	SPARE	-	20/1	13	*	*	*	14	20/1	-	STEAM CLEANER	4	
5	CHEM RM FAN, EF1	168	20/1	15	*	*	*	16	20/1	500	CNTRL RM HEATER	3	
5	EAST ROLLUP DOOR	920	20/2	17	*	*	*	18	20/2	920	WEST ROLLUP DOOR	5	
5	* * *	920	*	19	*	*	*	20	*	920	* * *	5	
1	SOUTH BAY LIGHTS	288	20/1	21	*	*	*	22	20/1	-	SPARE	-	
4	AUTOMATIC FILTER	960	20/1	23	*	*	*	24	20/1	-	SPARE	-	
1	SOUTH BAY LIGHTS	864	20/1	25	*	*	*	26	30/3	1319	CONVEYOR	5	
2	FAN CONV. OUTLET	1800	20/1(o)	27	*	*	*	28	*	1319	* * *	5	
1	LOADOUT EXT LIGHTS	84	20/1	29	*	*	*	30	*	1319	* * *	5	
LOAD CODE	LINE A	LINE B	LINE C	TOTAL	FACTOR		CODE LOAD						
1. LIGHTS	1244	1912	664	3820	1.0		3820						
2. RECEPT	900	2160	900	3960	1.0		3960						
3. HEATING	-	500	1500	2000	1.25		2500						
4. EQUIP	1800	90	960	2850	1.0		2850						
5. MOTORS	3159	1595	3159	7913	(1)		8902						
6. MISC	-	-	-	-	1.0		-						
	7103	6257	7183	20543			22032						

LARGEST MOTOR 3 HP  
1.25 PERCENT OF LARGEST MOTOR PLUS BALANCE  
(o) GROUND FAULT INTERRUPTER CIRCUIT BREAKER

2 LIGHTING PANEL SBP-5, MCC-C  
SCALE: NONE

**PRELIMINARY**

BAR IS ONE INCH ON ORIGINAL DRAWING.  
ADJUST SCALE AS SHOWN ACCORDINGLY.

REV.	DESCRIPTION	REVISED BY	DATE

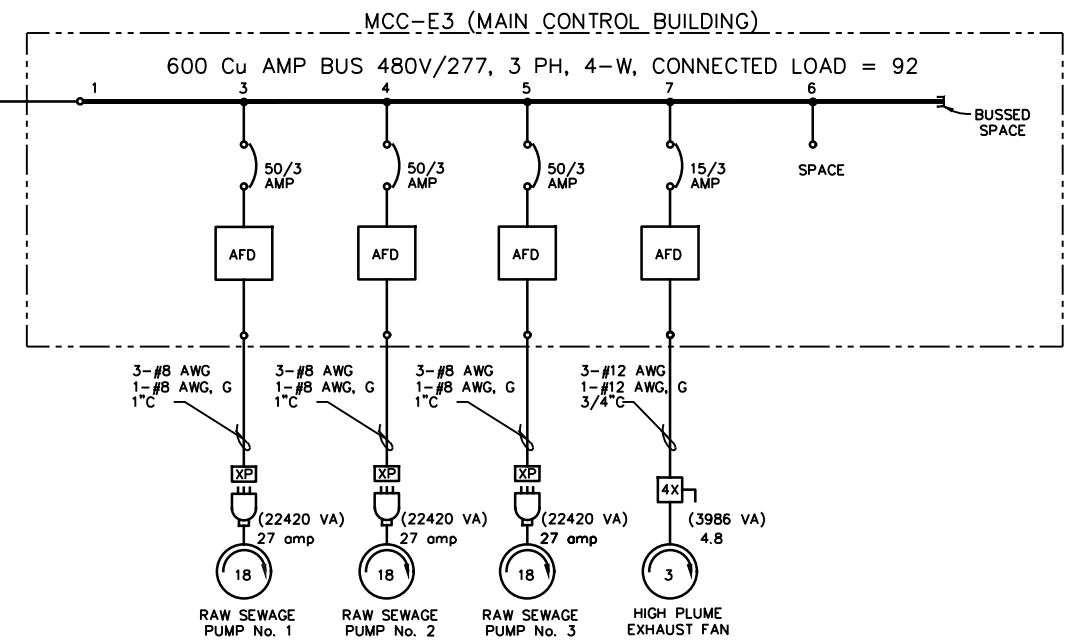
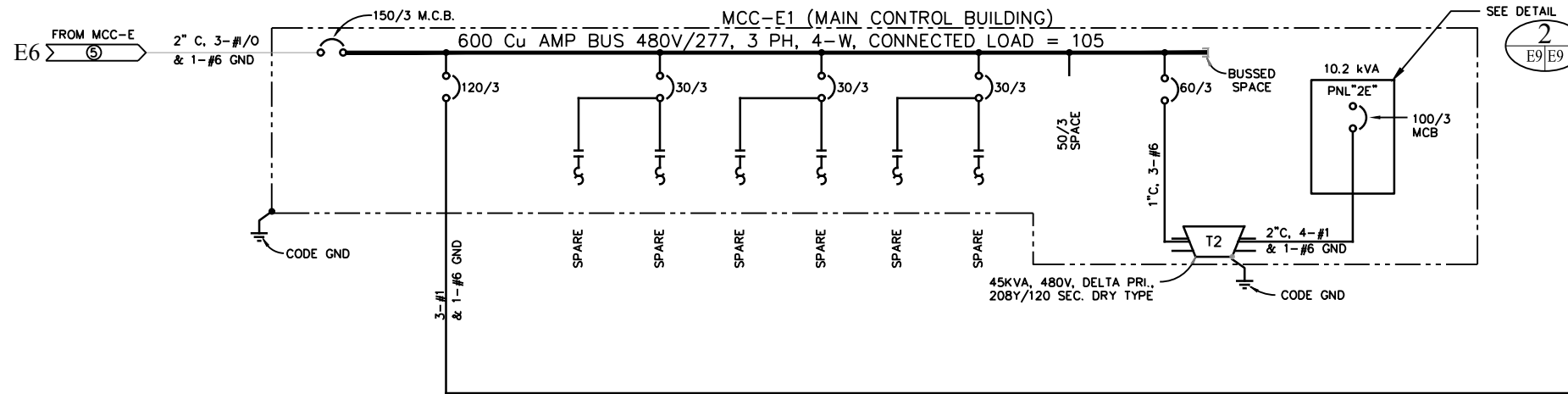
REVISIONS

CURRAN-McLEOD, INC.  
CONSULTING ENGINEERS  
6655 S.W. HAMPTON ST., SUITE 210  
PORTLAND, OREGON 97223  
PHONE (503) 684-3478

CITY OF CANBY  
MCC-C  
ONE LINE DIAGRAM  
2017 WWTP POWER DISTRIBUTION DIAGRAM UPDATE  
CLACKAMAS COUNTY, OREGON

DATE	APRIL 2016
D/N	NONE
D/B	REF
D/S	REF
CAD	

E8 OF E11



1 E9/EE9 MCC-E1 AND MCC-E3 ONE LINE DIAGRAM  
SCALE: NONE

MOTOR CONTROL CENTER DATA

MOTOR CONTROL CENTER: "MCC-E1"
MANUFACTURER: GE8000 LINE MOTOR CONTROL
CATALOG NUMBER: 961X0080L01
DIAGRAM: 319B5606
460 VOLT, 3-PHASE, 3-WIRE, 60 HZ
AMP SUPPLY: 600 SECTION: 300
NO.: H-948982
NP: 302A3482P1
PLANT: ME
NP302A3482P1

MOTOR CONTROL CENTER: "MCC-E3"
MANUFACTURER: EATON FREEDOM 2100
CATALOG NUMBER: SP00586693 IT.001-POC
460 VOLT, 3-PHASE, 4-WIRE, 60 HZ
BUS: HORIZ - 600 AMP, VERT - 600 AMP, NEUTRAL -300 AMP
SHORT CIRCUIT RATING: 65,000 AMPS RMS SYS.

PANEL SCHEDULE												
PANEL: 2E		VOLT		PHASE		WIRE		MOUNTING:		MCC-E1		
LOCATION: CONTROL BLDG.		208/120		3		4W		BUS: 100 AMP		BUS: 100 AMP MCB		
CODE	DESCRIPTION	VA	A/P	NO.	A	B	C	NO.	A/P	VA	DESCRIPTION	CODE
1	LIGHTS	1072	20/1	1	*			2	20/1	-	SPACE	-
1	LIGHTS	544	20/1	3	*			4	20/1	-	SPACE	-
1	LIGHTS	1046	20/1	5	*	*		6	20/1	540	RECEPTACLE (3)	2
1	PS LIGHTS	688	20/1	7	*	*		8	-	-	GFI MODULE	-
5	SPARE	-	20/1	9	*	*		10	20/1	180	INF SAMPLER/ PH METER	2
5	SAMPLE (EFF) UV HOIST	360	20/1	11	*	*		12	-	-	GFI MODULE	-
1	LIGHTS CLAR.	500	20/1	13	*	*		14	30/1	3000	TELE. CLOSET	5
1	YARD LIGHTS	1000	20/1	15	*	*		16	20/1	-	SPACE	-
1	YARD LIGHTS	500	20/1	17	*	*		18	20/1	-	PUMP CONTROL PANEL	4
-	SPARE	-	40/3	19	*	*		20	20/1	-	SPACE	-
-	* * *	-	*	21	*	*		22	20/1	1500	SP1 PANEL	-
-	* * *	-	*	23	*	*		24	-	-	SPACE	-
-	SPACE	-	-	25	*	*		26	-	-	SPACE	-
-	SPACE	-	-	27	*	*		28	-	-	SPACE	-
-	SPACE	-	-	29	*	*		30	-	-	SPACE	-
LOAD CODE:		PHASE A	PHASE B	PHASE C	TOTAL		FACTOR		CODE LOAD			
1. LIGHTS =		2260	1544	1546	5350		1.25		5737			
2. RECEPT. =		0	180	540	720		**		720			
3. HEATING =		0	0	0	0		1.25		0			
4. EQUIP. =		0	0	0	0		1.00		0			
5. MOTORS =		0	0	360	360		*		450			
6. MISC. =		3000	1500	0	4500		1.00		4500			
TOTALS		5260	3224	2446	10930				11407			

\* 125% OF THE LARGEST MOTOR + 100% OF THE BALANCE  
\*\* FIRST 10KW + 50% OF THE BALANCE

2 E9/EE9 LIGHTING PANEL "2E" MCC-E1  
SCALE: NONE

**PRELIMINARY**

BAR IS ONE INCH ON ORIGINAL DRAWING.  
ADJUST SCALE AS SHOWN ACCORDINGLY.

REV.	DESCRIPTION	REVISED BY	DATE

REVISIONS

CURRAN-McLEOD, INC.  
CONSULTING ENGINEERS

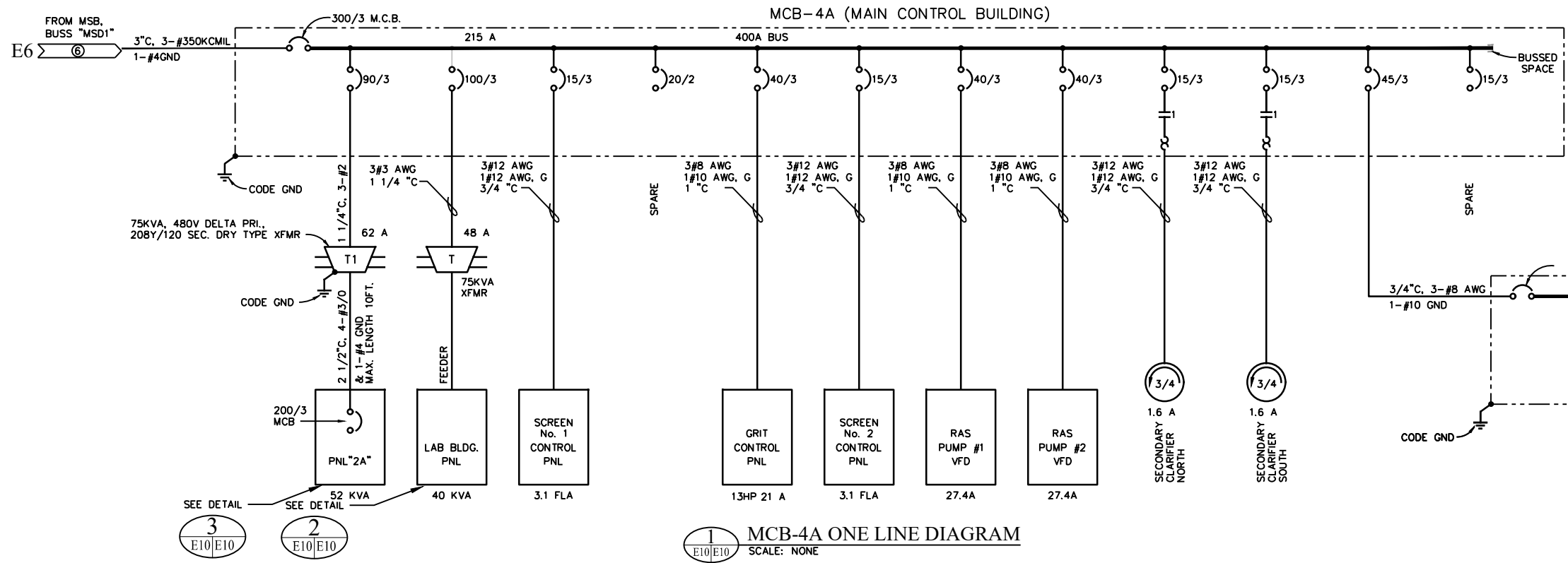
6655 S.W. HAMPTON ST., SUITE 210  
PORTLAND, OREGON 97223  
PHONE (503) 684-3478

CITY OF CANBY  
MCC-E1 AND MCC-E3  
ONE LINE DIAGRAMS  
2017 WWTP POWER DISTRIBUTION DIAGRAM UPDATE  
CLACKAMAS COUNTY, OREGON

DATE	APRIL 2016
E/N	NONE
D/B	REF
D/S	REF
CAD	

E9  
OF  
E11





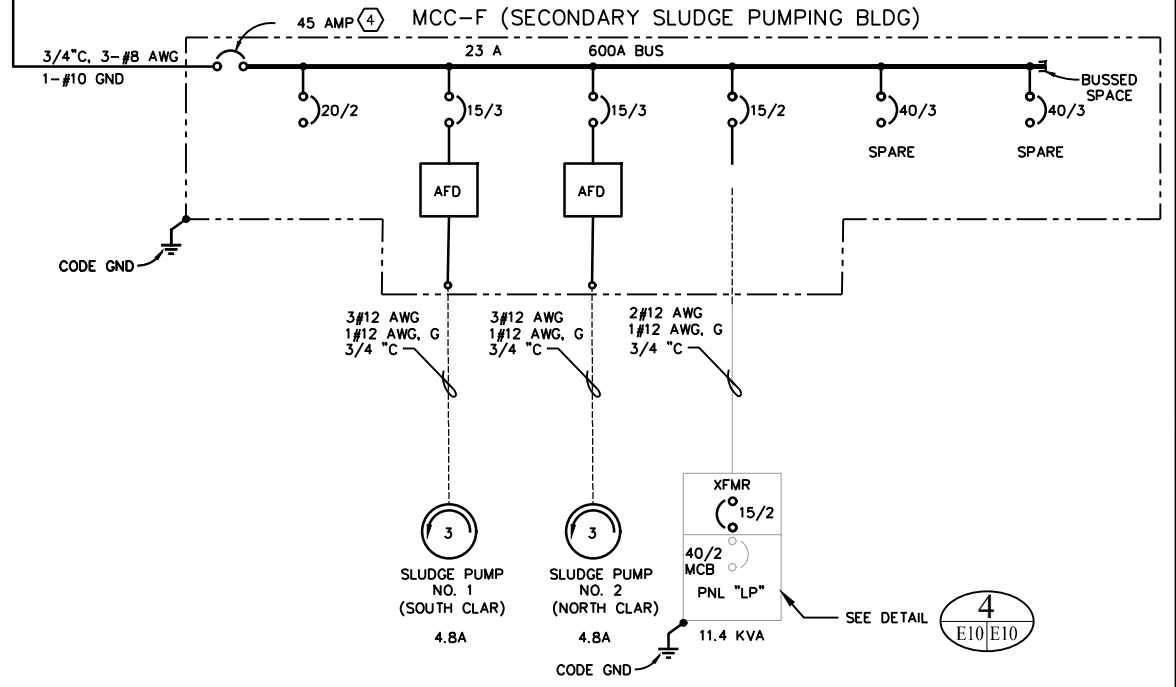
1 MCB-4A ONE LINE DIAGRAM  
SCALE: NONE

**MCB-4A MCC DATA**

MOTOR CONTROL CENTER:	"MCB-4A"
MANUFACTURER:	GE8000 LINE MOTOR CONTROL
CATALOG NUMBER:	961X008101
DIAGRAM:	319B5606
460 VOLT, 3-PHASE, 3-WIRE, 60 HZ	
AMP SUPPLY:	600 SECTION: 300
NO.:	H-948984
NP:	302A3482P1
PLANT:	ME
NP302A3482P1	

**MCC-F MCC DATA**

MOTOR CONTROL CENTER:	"MCC-F"
MANUFACTURER:	ALLEN-BRADLEY MOTOR CONTROL
CATALOG NUMBER:	X
DIAGRAM:	X
460 VOLT, 3-PHASE, 3-WIRE, 60 HZ	
AMP SUPPLY:	600 SECTION: 300
NO.:	XX
NP:	XXX1
PLANT:	ME
NPXXX	



5 MCC-F ONE LINE DIAGRAM  
SCALE: NONE

**PANEL SCHEDULE**

PANEL: LAB LAB BLDG		VOLTAGE 208Y/120		PHASE 3			WIRE 4W		MOUNTING: RECESSED BUS: 225 AMP MAIN: 200 AMP			
CODE	DESCRIPTION	VA	A/P	NO	A	B	C	NO	A/P	VA	DESCRIPTION	CODE
3	HEAT PUMP	1466	30/2	1	*			2	60/2	7051	FURNACE	3
3		1466	*	3	*			4	*	7051	*	3
3	WATER HEATER	1500	30/2	5	*			6	30/2	2700	RECEPT "R10"	2
3		1500	*	7	*			8	*		SPARE	-
-	SPARE	-	30/2	9	*			10	30/2	800	DRYING OVEN	3
-		-	-	11	*			12	*	800	*	3
2	PLUG STRIP "R1"	1260	20/2(o)	13	*			14	20/1(o)	1080	PLUG STRIP "R8"	2
2	PLUG STRIP "R2"	1440	*	15	*			16	*	720	PLUG STRIP "R9"	2
2	PLUG STRIP "R3"	320	20/1(o)	17	*			18	20/1	1800	PLUGS "R5"	5
2	PLUG STRIP "R4"	540	*	19	*			20	20/1	1620	PLUGS "R7"	2
1	LKRM/OUTSIDE LT	332	15/1	21	*			22	20/1	--	FURNAS	2
1	LIGHTS (1)	1260	15/1	23	*			24	20/1	1056	FUME HOOD FAN	5
4	PLUGS "R6"	1200	15/1	25	*			26	20/1	224	OFFICE/OUTDOOR LT	1
2	ISLAND PLUGS	1440	20/1	27	*			28	20/2	--	SPARE	-
4	DISHWASHER	1500	20/1	29	*			30	*	--	*	-
LOAD CODE		LINE A	LINE B	LINE C	TOTAL			FACTOR		CODE LOAD		
1. LIGHTS		224	332	1260	1816			1.0		1816		
2. RECEPT		5850	3600	3470	12920			1.0		12920		
3. HEATING		10017	9317	2300	21634			1.25		27043		
4. EQUIP		1200	--	1500	2700			1.0		2700		
5. MOTORS		--	--	1056	1056			(1)		1320		
6. MISC		--	--	--	--			1.0		--		
TOTALS		17291	13249	9586	40126					45855		

2 LIGHTING PANEL LABORATORY BLDG.  
SCALE: NONE

**PANEL SCHEDULE**

PANEL: 2A CONTROL BLDG.		VOLT 208/120		PHASE 3			WIRE 4W		MOUNTING: FLUSH BUS: 225 AMP MAIN: 200 AMP MCB			
CODE	DESCRIPTION	VA	A/P	NO.	A	B	C	NO.	A/P	VA	DESCRIPTION	CODE
1	LIGHTS-EXT.	612	20/1	1	*			2	20/1	540	RECEPTACLES (3)	2
	SPARE			3	*			4	20/1	720	RECEPTACLES (4)	2
	SPARE			5	*			6	20/1	540	RECEPTACLES (3)	2
	SPARE			7	*			8	20/1	540	RECEPTACLES (3)	2
	SPARE			9	*			10	20/1	540	RECEPTACLES (3)	2
	SPARE			11	*			12	20/1	1500	WASHER	2
	SPACE			13	*			14	20/1		IRRIGATION	6
5	EF-1	500	20/1	15	*			16	20/1		SPARE	
2	RECEPTACLE (1)	180	20/1	17	*			18	20/1		SPARE	
5	TROLLEY	500	20/1	19	*			20			SPACE	
5	HOIST	1130	30/1	21	*			22	30/2	2000	COOKTOP	7
5	EF-2	670	20/1	23	*			24	*	2000	*	7
3	WATER HEATER	2000	30/2	25	*			26	20/1	900	RECEPTACLES (5)	2
3		2000	*	27	*			28	20/1	900	RECEPTACLES (5)	2
3	DRYER	2500	40/2	29	*			30	20/1	540	RECEPTACLES (3)	2
3		2500	*	31	*			32	20/1	180	RECEPTACLE (1)	2
6	OCU-1	2300	40/2	33	*			34	20/1	180	RECEPTACLE (1)	2
6		2300	*	35	*			36	20/1	360	RECEPTACLES (2)	2
6	FCU-1	5330	60/3	37	*			38	20/1	500	MICROWAVE	2
6		5330	*	39	*			40	60/2	3600	SPARE	7
3		5000	*	41	*			42	*	3600	*	7
LOAD CODE:		PHASE A	PHASE B	PHASE C	TOTAL			FACTOR		CODE LOAD		
1. LIGHTS		612	0	0	612			1.25		765		
2. RECEPT.		2660	2340	3120	8,120			*		8,120		
3. HEATING		4500	2000	7500	14000			1.25		17500		
4. EQUIP.		0	0	0	0			1.00		0		
5. MOTORS		500	1630	670	2800			**		2925		
6. MISC.		5530	7630	2300	15460			1.00		15460		
7. KITCHEN		0	2000	2000	4000			1.00		4000		
TOTALS		13802	15600	15590	44992					48770		

\* 125% OF THE LARGEST MOTOR + 100% OF THE BALANCE  
 \*\* FIRST 10KW + 50% OF THE BALANCE  
 PHASE AMPS= 125  
 CODE DEMAND= 135  
 LARGEST MOTOR= 5330

3 LIGHTING PANEL "2A" OFFICE BLDG  
SCALE: NONE

**PANEL SCHEDULE**

PANEL: LP RAS PUMPING BLDG.		VOLTAGE 240/120		PHASE 1			WIRE 3W		MOUNTING: SURFACE BUS: 40 MCB MAIN: 40 MCB			
CODE	DESCRIPTION	VA	A/P	NO	A	B	C	NO	A/P	VA	DESCRIPTION	CODE
5/1	FAN/LIGHTS	334	20/1	1	*			2	30/2	1704	AC	3
4	INSTRUMENTS	100	20/1	1	*			4	*	1704	*	3
2	RECEPTACLES	360	20/1	3	*			6	20/2	3000	HEATER	3
5	PN-1033	1000	20/1	3	*			8	*	3000	*	3
-	SPACE	-	-	5	*							
-	SPACE	-	-	7	*							
LOAD CODE		LINE A	LINE B	TOTAL			FACTOR		CODE LOAD			
1. LIGHTS		262	-	262			0		262			
2. RECEPT		360	-	360			0		360			
3. HEATING/COOLING		4704	4704	9408			0		9408			
4. EQUIP		100	-	100			0		100			
5. MOTORS		1072	-	1072			(1)		1297			
6. MISC		-	-	-			0		-			
TOTALS		6498	4704	11202					11427			

NOTE: LARGEST MOTOR 4/10 HP  
 1.25 PERCENT OF LARGEST MOTOR PLUS BALANCE

4 LIGHTING PANEL "LP" RAS PUMPING BLDG  
SCALE: NONE

**PRELIMINARY**

BAR IS ONE INCH ON ORIGINAL DRAWING.  
 ADJUST SCALE AS SHOWN ACCORDINGLY.

REV.	DESCRIPTION	REVISED BY	DATE

REVISIONS

CURRAN-McLEOD, INC.  
 CONSULTING ENGINEERS  
 6655 S.W. HAMPTON ST., SUITE 210  
 PORTLAND, OREGON 97223  
 PHONE (503) 684-3478

CITY OF CANBY  
**MCB-4A & MCC-F ONE LINE DIAGRAM AND PANELBOARDS "2A," "LAB" AND "LP"**  
 2017 WWTP POWER DISTRIBUTION DIAGRAM UPDATE  
 CLACKAMAS COUNTY, OREGON

DATE	APRIL 2016
E/N	NONE
D/B	REF
D/S	REF
CAD	

E10 OF E11

J:\Canby\WWTP Updated Drawings\Power Distribution Drawings\One Line Diagrams.dwg, 9/27/2023 8:23:03 AM, DWG To PDF.pc3

