

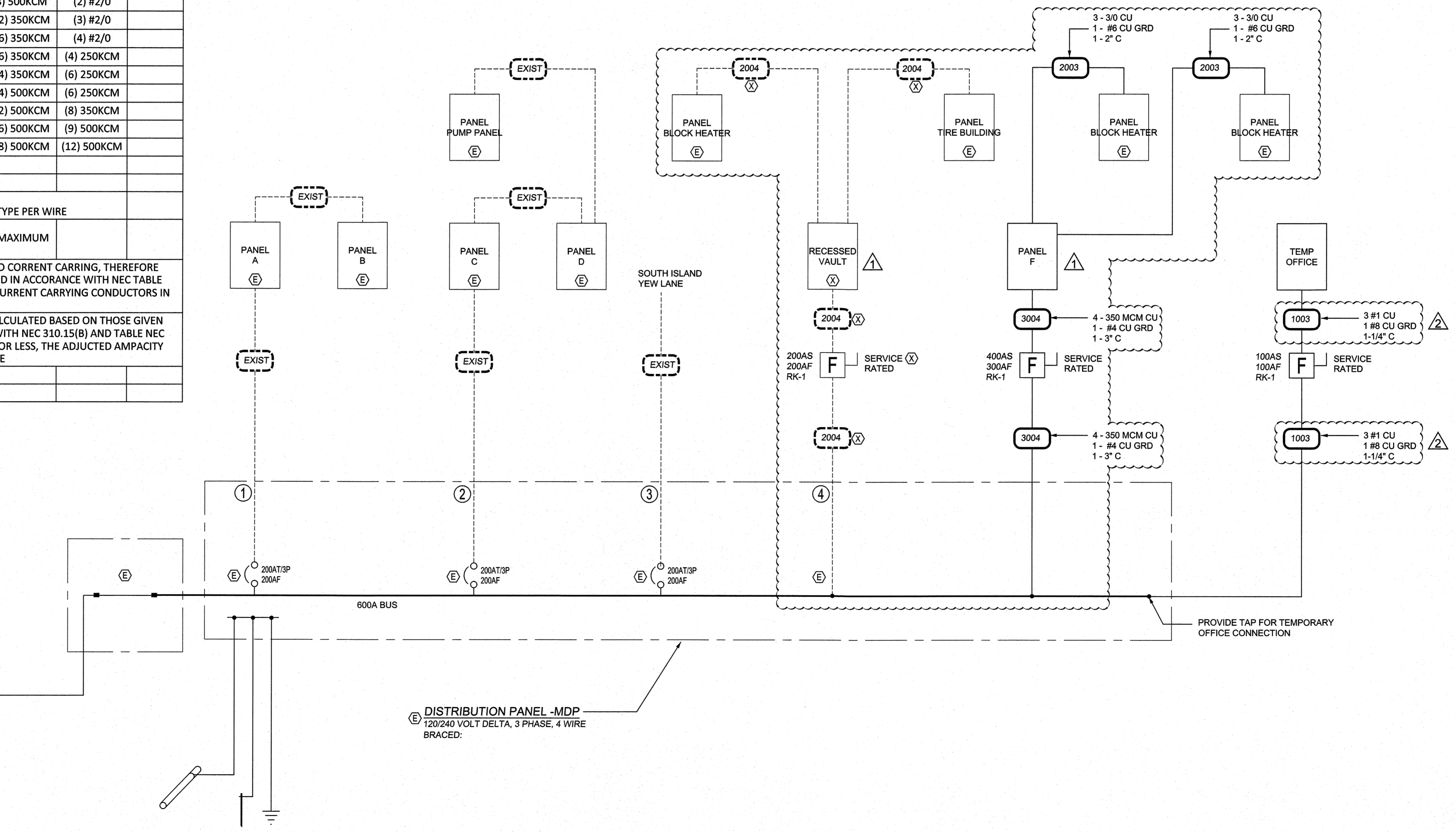
NOMINAL AMPACITY	FEEDER SCHEDULE				FEEDER SCHEDULE			
	COPPER 3 PHASE, 3 WIRE + GROUND				COPPER 3 PHASE, 4 WIRE + GROUND			
TAG	CONDUIT SIZE (MIN)	PHASE CONDUCTORS	GROUND CONDUCTOR	TAG	CONDUIT SIZE (MIN)	PHASE CONDUCTORS	GROUND CONDUCTOR	
20	203	1/2"	(3) #12	#12	204	1/2"	(4) #12	#12
30	303	1/2"	(3) #10	#10	304	3/4"	(4) #10	#10
40	403	3/4"	(3) #8	#10	404	3/4"	(4) #8	#10
50	503	3/4"	(3) #6	#10	504	1"	(4) #6	#10
60	603	1"	(3) #4	#10	604	1 1/4"	(4) #4	#10
70	703	1 1/4"	(3) #4	#8	704	1 1/4"	(4) #4	#8
80	803	1 1/4"	(3) #3	#8	804	1 1/4"	(4) #3	#8
90	903	1 1/4"	(3) #2	#8	904	1 1/4"	(4) #2	#8
100	1003	1 1/4"	(3) #1	#8	1004	1 1/2"	(4) #1	#8
110	1103	1 1/4"	(3) #1	#6	1104	1 1/2"	(4) #1	#6
125	1253	1 1/4"	(3) #1	#6	1254	2"	(4) #1/0	#4
150	1503	1 1/2"	(3) #1/0	#6	1504	2"	(4) #2/0	#4
175	1753	1 1/2"	(3) #2/0	#6	1754	2"	(4) #3/0	#4
200	2003	2"	(3) #3/0	#6	2004	2 1/2"	(4) #4/0	#4
225	2253	2"	(3) #4/0	#4	2254	2 1/2"	(4) 250KCM	#3
250	2503	2 1/2"	(3) 250KCM	#4	2504	3"	(4) 350KCM	#2
300	3003	2 1/2"	(3) 350KCM	#4	3004	3 1/2"	(4) 500KCM	#2
350	3503	3"	(3) 500KCM	#3	3504	(2) 2"	(8) #3/0	(2) #3
400	4003	(2) 2"	(6) #3/0	#3	4004	(2) 2 1/2"	(8) #4/0	(2) #2
450	4503	(2) 2"	(6) #4/0	(2) #3	4504	(2) 3"	(8) 250KCM	(2) #1
500	5003	(2) 2 1/2"	(6) 250KCM	(2) #2	5004	(3) 2 1/2"	(12) #3/0	(3) #1
600	6003	(2) 3"	(6) 350KCM	(2) #1	6004	(2) 3 1/2"	(8) 500KCM	(2) #2/0
800	8003	(3) 3"	(9) 350KCM	(3) #1/0	8004	(3) 3"	(12) 350KCM	(3) #2/0
1000	10003	(3) 3"	(9) 500KCM	(3) #2/0	10004	(4) 3"	(16) 350KCM	(4) #2/0
1200	12003	(6) 3"	(12) 350KCM	(4) #3/0	12004	(4) 3 1/2"	(16) 350KCM	(4) 250KCM
1600	16003	(5) 3"	(15) 500KCM	(5) #4/0	16004	(6) 3"	(24) 350KCM	(6) 250KCM
2000	20003	(6) 3"	(18) 500KCM	(6) 250KCM	20004	(6) 3 1/2"	(24) 500KCM	(6) 250KCM
2500	25003	(6) 4"	(18) 750KCM	(6) 350KCM	25004	(8) 4"	(32) 500KCM	(8) 350KCM
3000	30003	(7) 4"	(21) 750KCM	(7) 500KCM	30004	(9) 4"	(36) 500KCM	(9) 500KCM
4000	40003	(9) 4"	(27) 750KCM	(9) 500KCM	40004	(12) 4"	(48) 500KCM	(12) 500KCM

Notes:

1. REFER TO SPECIFICATIONS FOR INSULATION TYPE PER WIRE	1. REFER TO SPECIFICATIONS FOR INSULATION TYPE PER WIRE
2. MINIMUM CONDUIT SIZES IDENTIFIED MEET MAXIMUM 40% FIL FOR EMT, RMC AND PVC SCHEDULE 40.	2. MINIMUM CONDUIT SIZES IDENTIFIED MEET MAXIMUM 40% FIL FOR EMT, RMC AND PVC SCHEDULE 40.
3. FOR FEEDER RATINGS 100AMPS OR LESS, ACTUAL AMPACITY IS CALCULATED BY THOSE GIVEN IN NEC 310.15(B)(16), 60DEG C.	3. ALL NEUTRAL CONDUCTORS ARE CONSIDERED CORRENT CARRING, THEREFORE AMPACITY ADJUSTMENTS HAVE BEEN INCLUDED IN ACCORDANCE WITH NEC TABLE 310.15(B)(3)(a) TO ACCOMMODATE FOUR (4) CURRENT CARRYING CONDUCTORS IN A SINGLE RACEWAY.
4. FOR FEEDER RATINGS GREATER THAN 100AMPS, ACTUAL AMPACITY IS CALCULATED BY THOSE GIVEN IN NEC 310.15(B)(16)	4. ADJUSTED CONDUCTOR AMPACITIES ARE CALCULATED BASED ON THOSE GIVEN FOR 90DEG C CONDUCTORS IN ACCORDANCE WITH NEC 310.15(B) AND TABLE NEC 310.15(B)(16). FOR FEEDER RATINGS 100AMPS OR LESS, THE ADJUSTED AMPACITY SHALL NOT EXCEED THE 60DEG C RATING FOR FE

### GENERAL NOTES

- ELECTRICAL CONTRACTOR IS RESPONSIBLE TO REFERENCE CURRENT EDITION OF THE NATIONAL ELECTRICAL CODE FOR CONDUIT FILL FOR THE EXACT TYPE OF CONDUCTOR BEING INSTALLED AND SIZE THE CONDUIT AS REQUIRED BY CODE.
- ELECTRICAL CONTRACTOR IS RESPONSIBLE TO VERIFY VOLTAGE DROP FOR EXACT ROUTING AND LENGTH OF ALL CONDUCTORS.
- ELECTRICAL CONTRACTOR TO PROVIDE ALL DISCONNECTS AT MECHANICAL UNITS.
- PROVIDE DUCT DETECTORS IN ALL MECHANICAL UNITS AS REQUIRED BY CODE AND/OR THE FIRE MARSHAL.
- CONTRACTOR WILL BE RESPONSIBLE TO VERIFY DIMENSIONS OF ALL EQUIPMENT AND MAINTAIN ALL CODE REQUIRED CLEARANCES. EQUIPMENT BASED ON SIEMENS EQUIPMENT, PROVIDE SEISMIC SUPPORTS AS REQUIRED.
- ALL ELECTRICAL WORK WILL COMPLY WITH THE CURRENT NATIONAL ELECTRICAL CODE (NEC).
- SWITCHBOARDS, PANELBOARDS, CONTROL PANELS AND MOTOR CONTROL CENTERS AND HVAC UNITS WILL BE FIELD MARKED TO WARN QUALIFIED PERSONNEL OF THE POTENTIAL ARC FLASH HAZARDS AND THE APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT (PPE) PER CURRENT NEC ART 110-16 AND NFPA 70E-2000. THE MARKINGS SHALL BE LOCATED SO AS TO BE CLEARLY VISIBLE TO QUALIFIED PERSONS BEFORE EXAMINATION, ADJUSTMENT, SERVICING, OR MAINTENANCE OF THE EQUIPMENT.
- DRY TYPE TRANSFORMERS EQUAL TO OR GREATER THAN 15 KVA SHALL BE NEMA TP-1-2016 TO COMPLY WITH ENERGY CODE.
- DRY TYPE TRANSFORMERS SEPARATELY DERIVED SYSTEMS, SHALL TERMINATE TO BUILDING STEEL AND WATER, PER CURRENT NEC ART 250.30(A)(4) AND 250.104(A)(4)
- FUSES WILL BE PROVIDED WITH REJECTION TYPE FUSE HOLDERS.
- CONDUCTORS WILL BE TYPE THHN/THW.
- PER NEC 300.19 (A) - SUPPORTING CONDUCTORS IN VERTICAL RACEWAYS, CONDUCTORS IN VERTICAL RACEWAYS SHALL BE SUPPORTED IF THE VERTICAL RISE EXCEEDS THE VALUES IN TABLE 300.19(A), ON CABLE SUPPORT SHALL BE PROVIDED AT THE TOP OF THE VERTICAL RACEWAY OR AS CLOSE TO THE TOP AS PRACTICAL. INTERMEDIATE SUPPORTS SHALL BE PROVIDED AS NECESSARY TO LIMIT SUPPORTED CONDUCTOR LENGTHS TO NOT GREATER THAT THOSE VALUES SPECIFIED IN TABLE 300.19(A).
- PER NEC 408.5 - WHERE CONDUITS AND OTHER RACEWAYS ENTER A SWITCHBOARD, FLOOR-STANDING PANELBOARD, OR SIMILAR ENCLOSURE AT THE BOTTOM, SUFFICIENT SPACE SHALL BE PROVIDED TO PERMIT INSTALLATION OF CONDUCTORS IN THE ENCLOSURE. THE WIRING SPACE SHALL NOT BE LESS THAT SHOWN IN TABLE 408.5 WHERE THE CONDUIT OR RACEWAYS ENTER OR LEAVE THE ENCLOSURE BELOW THE BUSBARS, THEIR SUPPORTS OTHER OBSTRUCTIONS. THE CONDUIT OR RACEWAYS, INCLUDING THEIR FITTINGS SHALL NOT RISE MORE THAN 3" ABOVE THE BOTTOM OF THE ENCLOSURE.
- ELECTRICAL DEDICATED SPACES: NO PIPING, DUCTS, EQUIPMENT FOREIGN TO ELECTRICAL EQUIPMENT SHALL BE PERMITTED WITHIN THE DEDICATED SPACE ABOVE THE ELECTRICAL EQUIPMENT.



1 ELECTRICAL ONE LINE DIAGRAM - 120/240 VOLT DELTA, 3 PHASE, 4 WIRE  
SCALE: NONE

COPYRIGHT 2016  
STEELE ASSOCIATES ARCHITECTS, L.L.C.

REVIEWED FOR CODE COMPLIANCE  
BP-17-3412-CADD  
501 SE 2ND ST  
BLDG B

REGISTERED PROFESSIONAL ENGINEER  
18197  
LYNN FRANK ROGERS  
DEC 6, 1995  
OREGON  
EXPIRES 12/31/18

STEELE ASSOCIATES ARCHITECTS LLC  
686 NW YORK DRIVE #150  
541.382.9867

BEND, OR 97703  
info@steele-arch.com

BLS - TRANSPORTATION FACILITY 2017  
501 SE 2ND STREET BEND, OR

ONE LINE DIAGRAM & SCHEDULES  
SHOP BUILDING

JOB NO. 16116.01  
DATE 08/22/2017  
DRAWN BY JLD  
CHECKED BY JFR  
REVISIONS DATE  
CONFORMED SET 04/27/2017  
PR 007 07/14/2017  
PR 010 08/02/2017  
CITY COMMENTS 08/22/2017

SHEET NO.  
E6.13

SYSTEM DESIGN CONSULTANTS INC.  
333 SE SECOND AVE, SUITE 100  
PORTLAND, OREGON 97214  
503-249-0227 FAX 249-0240  
CONTACT: JEFFREY DAVIS

CONFORMED SET