



SCO #16-15889-02A

**RICHMOND
COMMUNITY
COLLEGE**

LEE BUILDING
STUDENT SERVICES &
CAREER CENTER
VOL.2

BID DOCUMENTS

ELECTRICAL PANEL
SCHEDULES

DATE 4-5-2019
PROJECT NO 16063

REVISIONS

NO	DATE	DESCRIPTION

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SHEET NUMBER
7 OF 16
E007
OPTIMA # 17.0017

EXISTING SWBD: MSB EXTG MFGR

VOLTAGE: 277 / 480 3 PHASE 4 WIRE
MOUNTING: FLOOR 1200 AMP MAIN CIRCUIT BREAKER
EXTG TYPE AIC

MAIN CB NOTES:

CKT / ID	LOAD SERVED	BREAKER FRAME (INCHES)	TRIP (INCHES)	CT NO	A	B	C	CT NO	FRAME (INCHES)	TRIP (INCHES)	WIRE	LOAD SERVED	LOAD KVA
1	PANEL 'C'	600	600	3	EXISTING TO REMAIN	EXISTING TO REMAIN	EXISTING TO REMAIN	EXISTING TO REMAIN	EXISTING TO REMAIN	EXISTING TO REMAIN	EXISTING TO REMAIN	EXISTING TO REMAIN	189.2
2	PANEL 'D'	1000	1000	3	EXISTING TO REMAIN	EXISTING TO REMAIN	EXISTING TO REMAIN	EXISTING TO REMAIN	EXISTING TO REMAIN	EXISTING TO REMAIN	EXISTING TO REMAIN	EXISTING TO REMAIN	0.0

EXISTING 12 MONTH KW PEAK LOAD 158.0

TOTAL (CONNECTED) 327

TOTAL (DEMAND) 292

LOAD	KVA	TOTAL LOAD PER PHASE	NOTES
LIGHTS	14.3	CONNECTED	1. SWITCHBOARD AND BREAKERS ARE EXISTING TO REMAIN UNLESS OTHERWISE NOTED.
HEATING	0.0	A= 108.3 KVA 389.6 A	2. LOADS ARE NOT SHOWN FOR THIS BREAKER. THIS LOAD IS EXISTING AND INCLUDED IN THE 12 MONTH EXISTING LOAD.
COOLING	0.0	B= 107.7 KVA 389.6 A	
VENTILATION	35.9	C= 111.5 KVA 402.4 A	
MOTORS	21.3	DEMAND	
KITCHEN	0.0	A= 96.1 KVA 346.6 A	
RECEPTACLES	79.2	B= 99.4 KVA 347.9 A	
WATER HEATER	18.1	C= 100.1 KVA 351.5 A	
MSC	0.5	DEMAND @ 125%	
SPARE	158.0	A= 120.1 KVA 433.3 A	
TOTAL (CONNECTED)	327	B= 120.5 KVA 434.9 A	
TOTAL (DEMAND)	292	C= 125.2 KVA 451.7 A	

EXISTING PANEL: C EXTG MFGR

VOLTAGE: 277 / 480 3 PHASE 4 WIRE
MOUNTING: SURFACE 600 AMP MAIN CIRCUIT BREAKER
EXTG TYPE AIC

LOAD KVA	LOAD SERVED	WIRE	TRIP	NOTES	CKT NO	A	B	C	CKT NO	FRAME (INCHES)	TRIP (INCHES)	WIRE	LOAD SERVED	LOAD KVA
0.00	SPARE				100	2				2	100		SPARE	0.00
0.00	SPARE												SPARE	0.00
0.00	PANEL 'A'	EXTG	EXTG	100	4	3				4	40	EXTG	EXTG PANEL 'M'	0.00
0.00	SPARE				70	2				2	100		SPARE	0.00
156.29	PANEL 'LP1'				250	2				2	250		EXTG PANEL 'E'	0.00
0.00	SPARE												SPARE	0.00

189.2

156.3

156.3

LOAD	KVA	TOTAL LOAD PER PHASE	NOTES
LIGHTS	14.3	CONNECTED	1. PANEL AND BREAKERS ARE EXISTING TO REMAIN UNLESS OTHERWISE NOTED.
HEATING	0.0	A= 55.3 KVA 199.5 A	2. BREAKER TO BE MADE SQUARE DURING DEMO
COOLING	0.0	B= 55.1 KVA 198.8 A	3. PROVIDE BREAKER FOR FEEDER SIZES
VENTILATION	35.9	C= 58.8 KVA 212.5 A	4. LOADS ARE NOT SHOWN FOR THIS BREAKER. THIS LOAD IS EXISTING AND INCLUDED IN THE 12 MONTH EXISTING LOAD.
MOTORS	21.3	DEMAND	
KITCHEN	0.0	A= 43.4 KVA 156.6 A	
RECEPTACLES	79.2	B= 43.9 KVA 157.9 A	
WATER HEATER	18.1	C= 47.5 KVA 171.5 A	
MSC	0.5	DEMAND @ 125%	
SPARE	0.0	A= 54.2 KVA 195.8 A	
TOTAL (CONNECTED)	162.2	B= 54.7 KVA 197.4 A	
TOTAL (DEMAND)	134.9	C= 59.3 KVA 214.1 A	

NEW PANEL: LP1 SQD MFGR

VOLTAGE: 277 / 480 3 PHASE 4 WIRE
MOUNTING: SURFACE 250 AMP MAIN CIRCUIT BREAKER
NF TYPE 35,000 AIC

LOAD KVA	LOAD SERVED	WIRE	TRIP	NOTES	CKT NO	A	B	C	CKT NO	FRAME (INCHES)	TRIP (INCHES)	WIRE	LOAD SERVED	LOAD KVA	
37.62	PANEL 'RP1'	SR	175		1				2	20	12		20	12	LIGHTS
42.28	112.5 KVA TRANSFORMER	SR	38		3				4	20	12		20	12	LIGHTS
3.92					5				6	20	12		20	12	LIGHTS
3.19	RTU-227		12		7				8	20	12		20	12	LIGHTS
3.19			12		9				10	20	12		20	12	LIGHTS
5.13			12		11				12	20	12		20	12	LIGHTS
5.13	RTU-226		12		13				14	20	12		20	12	LIGHTS
5.13			12		15				16	20	12		20	12	LIGHTS
5.13			12		17				18	20	12		20	12	LIGHTS
2.80	RTU-L25		12		19				20	20	20		20	20	SPARE
2.80			12		21				22	20	20		20	20	SPARE
2.80			12		23				24	20	20		20	20	SPARE
0.63	RTU-L26 - POWER EXHAUST		12		25				26	20	20		20	20	SPARE
0.63			12		27				28	20	20		20	20	SPARE
0.00	SPARE		20		29				30	20	20		20	20	SPARE
0.00	SPARE		20		31				32	20	20		20	20	SPARE
0.00	SPARE		20		33				34	20	20		20	20	SPARE
0.00	SPARE		20		35				36	20	20		20	20	SPARE
0.00	SPARE		20		37				38	20	20		20	20	SPARE
0.00	SPARE		20		39				40	20	20		20	20	SPARE
0.00	SPARE		20		41				42	20	20		20	20	SPARE

156.3

LOAD	KVA	TOTAL LOAD PER PHASE	NOTES
LIGHTS	14.3	CONNECTED	1. BREAKER FRAME SHALL BE AS REQD PER PANEL AIC RATING
HEATING	0.0	A= 55.3 KVA 199.5 A	2. SHALL BE FULLY RATED - SERIES RATINGS NOT ALLOWED
COOLING	0.0	B= 55.1 KVA 198.8 A	3. ALL BUSSES, INCL GND AND NEUTRAL, SHALL BE COPPER
VENTILATION	35.9	C= 58.8 KVA 212.5 A	4. ALL INCOMING PANEL & BRKR LOGS SHALL MATCH FEEDERS
MOTORS	21.3	DEMAND	5. PROVIDE HINGED DOOR-IN DOOR WITH OUTER DOOR LOCK
KITCHEN	0.0	A= 43.4 KVA 156.6 A	6. PROVIDE METAL DIRECTORY FRAME
RECEPTACLES	79.2	B= 43.9 KVA 157.9 A	7. PROVIDE CLASS A GFI (GSA-RESPONSAL) BRKR (250 MA) X
WATER HEATER	18.1	C= 47.5 KVA 171.5 A	8. PROVIDE BREAKER WITH HANDLE LOCK-ON DEVICE
MSC	0.5	DEMAND @ 125%	
SPARE	0.0	A= 54.2 KVA 195.8 A	
TOTAL (CONNECTED)	156.3	B= 54.7 KVA 197.4 A	
TOTAL (DEMAND)	134.9	C= 59.3 KVA 214.1 A	

NEW PANEL: RP1 SQD MFGR

VOLTAGE: 120 / 208 3 PHASE 4 WIRE
MOUNTING: SURFACE 400 AMP MAIN CIRCUIT BREAKER
NF TYPE 22,000 AIC

LOAD KVA	LOAD SERVED	WIRE	TRIP	NOTES	CKT NO	A	B	C	CKT NO	FRAME (INCHES)	TRIP (INCHES)	WIRE	LOAD SERVED	LOAD KVA
1.25	HP-2		12		1				2	20	12		HP-1	1.25
1.25	HP-4		12		3				4	20	12		HP-3	1.25
1.25			12		5				6	20	12		HP-5	1.25
1.25	IDU-3		12		7				8	20	12		IDU-2	0.20
1.25			12		9				10	20	12		IDU-4	0.20
0.20	IDU-1		12		11				12	20	12		IDU-4	0.20
0.20			12		13				14	20	12		IDU-4	0.20
1.60	IDU-2		12		15				16	20	12		IDU-1	1.60
1.60			12		17				18	20	12		IDU-1	1.60
4.15	WH-3		4		19				20	60	4		WH-2	4.15
4.15			4		21				22	60	4		WH-2	4.15
1.50	WH-1		12		23				24	60	4		WH-2	4.15
1.50	CONDENSATE PUMP		12		25				26	60	4		WH-2	4.15
0.00	SPARE		20		27				28	125	SR		PANEL 'RP2'	12.24
0.00	SPARE		20		29				30	125	SR		PANEL 'RP3'	10.26
0.00	SPARE		20		31				32	125	SR		PANEL 'RP4'	3.43
0.00	SPARE		20		33				34	125	SR		PANEL 'RP4'	3.43
0.00	SPARE		20		35				36	125	SR		PANEL 'RP4'	3.43
0.00	SPARE		20		37				38	125	SR		PANEL 'RP4'	3.43
0.00	SPARE		20		39				40	125	SR		PANEL 'RP4'	3.43
0.00	SPARE		20		41				42	125	SR		PANEL 'RP4'	3.43

87.1

LOAD	KVA	TOTAL LOAD PER PHASE	NOTES
LIGHTS	0.1	CONNECTED	1. BREAKER FRAME SHALL BE AS REQD PER PANEL AIC RATING
HEATING	0.0	A= 37.8 KVA 314.9 A	2. SHALL BE FULLY RATED - SERIES RATINGS NOT ALLOWED
COOLING	0.0	B= 38.1 KVA 324.4 A	3. ALL BUSSES, INCL GND AND NEUTRAL, SHALL BE COPPER
VENTILATION	0.0	C= 42.3 KVA 352.1 A	4. ALL INCOMING PANEL & BRKR LOGS SHALL MATCH FEEDERS
MOTORS	21.3	DEMAND	5. PROVIDE HINGED DOOR-IN DOOR WITH OUTER DOOR LOCK
KITCHEN	0.0	A= 25.9 KVA 215.9 A	6. PROVIDE METAL DIRECTORY FRAME
RECEPTACLES	79.2	B= 27.8 KVA 231.1 A	7. PROVIDE CLASS A GFI (GSA-RESPONSAL) BRKR (250 MA) X
WATER HEATER	18.1	C= 30.9 KVA 257.4 A	8. PROVIDE BREAKER WITH HANDLE LOCK-ON DEVICE
MSC	0.5	DEMAND @ 125%	9. SR - SEE POWER RIBER FOR FEEDER SIZES
SPARE	0.0	A= 32.4 KVA 288.9 A	
TOTAL (CONNECTED)	119.2	B= 34.1 KVA 288.9 A	
TOTAL (DEMAND)	94.6	C= 38.6 KVA 321.8 A	

NEW PANEL: RP2 SQD MFGR

VOLTAGE: 120 / 208 3 PHASE 4 WIRE
MOUNTING: SURFACE 125 AMP MAIN CIRCUIT BREAKER
NF TYPE 22,000 AIC

LOAD KVA	LOAD SERVED	WIRE	TRIP	NOTES	CKT NO	A	B	C	CKT NO	FRAME (INCHES)	TRIP (INCHES)	WIRE	LOAD SERVED	LOAD KVA
0.90	REC - 165A 165 SER		12		1				2	20	12		REC - 158	0.90
0.90	REC - 157		12		3				4	20	12		REC - 159	0.90
0.90	REC - 162		12		5				6	20	12		REC - 163	0.90
0.90	REC - 161 163		12		7				8	20	12		REC - 155	0.90
0.90	REC - 153		12		9				10	20	12		REC - 157	0.90
0.90	REC - 152		12		11				12	20	12		REC - 159	0.90
0.90	REC - 160		12		13				14	20	12		REC - 165	0.90
0.90	REC - 160		12		15				16	20	12		REC - 165	0.90
0.90	REC - 160		12		17				18	20	12		REC - 160	0.90
0.90	REC - 102		12		19				20	20	12		REC - 102	0.90
0.90	REC - 102		12		21				22	20	12		REC - 102	0.90
0.90	REC - 102		12		23				24	20	12		REC - 102	0.90
0.90	REC - 114		12		25				26	20	12		REC - 114	0.90
0.90	REC - 116		12		27				28	20	12		REC - 116	0.90
0.90	REC - 116		12		29				30	20	12		REC - 116	0.90
0.90	REC - 116		12		31				32	20	12		REC - 116	0.90
0.90	REC - 116		12		33				34	20	12		REC - 116	0.90
0.90	REC - 116		12		35				36	20	12		REC - 116	0.90
0.90	REC - 116		12		37				38	20	12		REC - 116	0.90
0.90	REC - 116		12		39				40	20	12		REC - 116	0.90