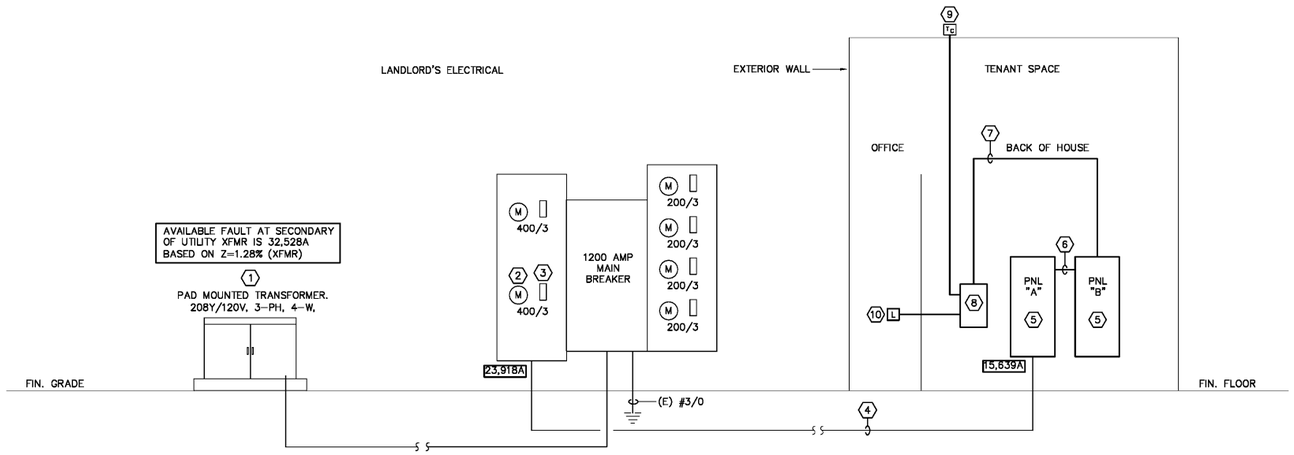

POWER RISER DIAGRAM

SCALE: N.T.S.

FIELD INVESTIGATE AND IDENTIFY FEEDER SIZE, PANEL SIZE AND UPSTREAM OVERCURRENT SIZE. RECORD AND SUBMIT TO ENGINEER IF FOUND DIFFERENT FROM SIZES SHOWN.

= FIGURE IN BOX INDICATES AVAILABLE FAULT/SHORT-CIRCUIT CURRENT (SYMMETRICAL RMS) AT THE LOCATION INDICATED. SEE SERIES RATING NOTE THIS SHEET

POWER RISER DIAGRAM NOTES

1. EXISTING LOCAL UTILITY POWER COMPANY PAD MOUNTED TRANSFORMER.
2. EXISTING METER SERVING TENANT SPACE SHALL REMAIN.
3. EXISTING 400A/3P CIRCUIT BREAKER SERVING TENANT SPACE SHALL REMAIN.
4. PROVIDE 4 #500 MCM CU, 1 #3 E.G. IN EXISTING 4" C.
5. SEE PANEL SCHEDULE THIS SHEET FOR DETAILS.
6. PROVIDE 4 #500 MCM CU, 1 #3 E.G. IN 3" C.
7. SEE PANEL SCHEDULE 'B' ON THIS SHEET.
8. LIGHTING CONTROL RELAY PANEL.
9. TIMECLOCK INTERMATIC #ET1725C OR EQUAL.
10. DIGITAL SWITCH(ES) AS REQUIRED.

LOAD SUMMARY

1. LIGHTING	13.2 KVA @ 1.25 D.F. =	6.8 KVA
2. RECEPTACLES	11.5 KVA, FIRST 10,000 @ 100%, REMAINING @ 50% =	11.5 KVA
3. A/C	15.3 KVA @ 1.00 D.F. =	15.3 KVA
4. KITCHEN	75.6 KVA @ 0.65 D.F. =	49.5 KVA
5. WATER HEATER	0.2 KVA @ 1.00 D.F. =	0.2 KVA
6. MISC. LOADS	1.6 KVA @ 1.00 D.F. =	1.6 KVA
	TOTAL DEMAND LOAD @ 208/120V, 3ø, 4W:	84.9 KVA 236 AMPS

PANEL A

MFR: CUTLER HAMMER TYPE: "PRL1A"

LOCATION: KITCHEN
VOLTAGE: 208Y/120V
TRIM: SURFACE
MAIN: 400A MLO
SYSTEM: 3ø, 4W
BUS RATING 400A
CONN. LOAD: 111.7 KVA
FEED: BOTTOM
GROUND BUS: YES

CKT	LOAD SERVED	COND	PHASE	NEUT	GND	BKR	DMD	L1	L2	L3	DMD	BKR	COND	PHASE	NEUT	GND	LOAD SERVED	CKT
1	RTU-1	3/4"	#8	–	#10	40/3	A	2544			A	40/3	3/4"	#8	–	#10	RTU-2	2
3			#8				A	2544	2544		A			#8				4
5			#8				A		2544	2544	A			#8				6
7	REC: RTU	1/2"	#12	#12	#12	20/1	R	360		828	R	20/1	1/2"	#12	#12	#12	VOU/PREP PRINTER	8 IG
IG 9	OFFICE PRINTER	1/2"	#12	#12	#12	20/1	R		984	828	R	20/1	1/2"	#12	#12	#12	VOU/PREP PRINTER	10 IG
IG 11	OFFICE COMPUTER	1/2"	#12	#12	#12	20/1	R			500	R	20/1	1/2"	#12	#12	#12	MARCH SYSTEM VIDEO SURVEILLANCE	12 IG
IG 13	MODEM/VOU CONTROLLER	1/2"	#12	#12	#12	20/1	R	500	1800	500	K	20/1	1/2"	#12	#12	#12	HOT HOLDING [246]	14
IG 15	PC SITE CONTROLLER	1/2"	#12	#12	#12	20/1	R	540		450	R	20/1	1/2"	#12	#12	#12	NETWORK HUB	16 IG
IG 17	VOU/PREP PRINTER	1/2"	#12	#12	#12	20/1	R			828	R	20/1	1/2"	#12	#12	#12	POS/RECEIPT PRINTER	18 IG
IG 19	POS/RECEIPT PRINTER	1/2"	#12	#12	#12	20/1	R	540		540	R	20/1	1/2"	#12	#12	#12	POS/500SK	20 IG
IG 21	DRIVE THRU TIMER/HEADSET	1/2"	#12	#12	#12	20/1	R		740		R	20/1	1/2"	#12	#12	#12	DT TIMER CONTROL	22
23	CONVEYOR TOASTER [244]	1/2"	#10	–	#10	30/2	K		900	2475	K	30/2	1/2"	#10	–	#10	ESPRESSO MACHINE [98]	24
25			#10				K	2475		2496	K			#10				26
27	TORNADO OVEN [215]	1/2"	#10	–	#10	30/2	K		2365		K	30/2	1/2"	#10	–	#10	TORNADO OVEN [215]	28
29			#10				K			2365	K			#10				30
IG 31	MUSIC/SECURITY SYSTEM	1/2"	#12	#12	#12	20/1	R	720		2396	K			#10				32
33	ASSEMBLY STATION REFRIGERATOR [247]	1/2"	#12	#12	#12	20/1	K	1320	1200	1200	K	20/1	1/2"	#12	#12	#12	COFFEE GRINDER [101QS]	34
IG 35	VOU/PREP PRINTER	1/2"	#12	#12	#12	20/1	R			828	K	20/1	1/2"	#12	#12	#12	GRAB-N-GO	36
37	ICE MACHINE [413]	1/2"	#12	–	#12	20/2	K	1061		720	K	20/1	1/2"	#12	#12	#12	DAIRY/SUGAR DISPENSER [101C & L]	38
39			#12				K		1081		R	20/1	1/2"	#12	#12	#12	DOUBLE HYDROVECTION OVEN [552B]	40
41	FREEZER	1/2"	#12	–	#12	15/2	K	938		600	K	20/1	1/2"	#12	#12	#12	D/T WINDOW	42
43			#12				K	780		780	K	20/1	1/2"	#12	#12	#12	WATER CHILLER [281]	44
45	COOLER	1/2"	#12	#12	#12	20/1	K	240	1718	520	K	20/1	1/2"	#12	#12	#12	NITROGEN GENERATOR [256]	46
47	HANDS-FREE FAUCETS	1/2"	#12	#12	#12	20/1	R		780	100	K	20/1	1/2"	#12	#12	#12	BACK BAR STORAGE [257]	48
49	DOUBLE HYDROVECTION OVEN [552B]	1/2"	#10	–	#10	30/3	K	2580		600	K	20/1	1/2"	#12	#12	#12	LTS/HTR - COOLER/FREEZER	50
51			#10				K	2580	2580		K	30/3	1/2"	#10	–	#10	DOUBLE HYDROVECTION OVEN [552B]	52
53			#10				K			2580	K			#10				54
55	SPACE ONLY	–	–	–	–	–	–				–	–	–	–	–	–	SPACE ONLY	56
57	SPACE ONLY	–	–	–	–	–	–				–	–	–	–	–	–	SPACE ONLY	58
59	SPACE ONLY	–	–	–	–	–	–				–	–	–	–	–	–	SPACE ONLY	60

INTERRUPT RATING: 22,000 AIC
PROVIDE SUBFEED LUGS

24673 26039 25927 FROM:

LOADS (IN VA)	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER
LIGHTING	5454	1.25	6818
RECEPTS TO 10 KVA	10000	1.0	10000
RECEPTS REMAINING	3035	0.5	1518
SPACE HEATING	0	0.0	0
AIR CONDITIONING	15264	1.0	15264

LOADS	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER
NON-SEASONAL MOTORS	1596	1.0	1596
LARGEST MOTOR	0	0.25	0
WATER HEATING	200	1.0	200
KITCHEN EQUIP.	76106	0.65	49469

REMAINING CONTINUOUS LOADS	0	1.25	0
REMAINING NON-CONTINUOUS LOADS	0	1.0	0
DEMAND LOADS	0	1.0	0
TOTAL CONNECTED LOAD	111.7 KVA		310.2 AMPS
MIN. FEEDER/PANEL CAP.	84.9 KVA		235.7 AMPS
OVERALL DEMAND FACTOR	0.76		

IG PROVIDE ISOLATED GROUND BUS IN PANELBOARD, CONNECT TO EQ IG CONDUCTOR TO MAIN BONDING POINT OF SERVICE.

PANEL B

MFR: CUTLER HAMMER TYPE: "PRL1A"

LOCATION: KITCHEN
VOLTAGE: 208Y/120V
TRIM: SURFACE
MAIN: 400A MLO
SYSTEM: 3ø, 4W
BUS RATING 400A
CONN. LOAD: 35
FEED: BOTTOM
GROUND BUS: YES

CKT	LOAD SERVED	COND	PHASE	NEUT	GND	BKR	DMD	L1	L2	L3	DMD	BKR	COND	PHASE	NEUT	GND	LOAD SERVED	CKT
* 1	LTG: FRONT LINE/BACK LINE	1/2"	#12	#12	#12	20/1	L	156			L	20/1	1/2"	#12	#12	#12	REC: SHOW WINDOW	2
* 3	LTG: EXTERIOR	1/2"	#12	#12	#12	20/1	L	400	175		K	20/1	1/2"	#12	#12	#12	DONUT DISPLAY	4
* 5	LTG: DINING AREA/TF-3	1/2"	#12	#12	#12	20/1	L		280		K	20/1	1/2"	#12	#12	#12	UNDERCOUNTER REFRIGERATOR [121F]	6
7	BOOSTER PUMP	1/2"	#12	#12	#12	20/1	M	600			L	20/1		#10	#10	#10	LTG: DIRECTIONAL SIGNAGE	8 *
9	DRIVE THRU TIMER	1/2"	#12	#12	#12	20/1	R		200		L			#10	#10	#10	DRIVE THRU SPEAKER POST	10
* 11	LTG: KITCHEN/RESTROOMS	1/2"	#12	#12	#12	20/1	L		300	389	L	20/1		#10	#10	#10	LTG: D/T MENU BOARDS/SPEAKER POST	12 *
13	BEVERAGE COOLER	1/2"	#12	#12	#12	20/1	K	1200		1032	K	20/1	1/2"	#12	#12	#12	BEVERAGE COOLER	14
15	HOT WATER BEVERAGE DISP. [108A]	1/2"	#10	#10	#10	30/2		1800			M	20/1	1/2"	#12	#12	#12	EF-1	16
17										2207	–	20/1	–	–	–	–	SPARE	18
19	REC: RESTROOM GFI	1/2"	#12		#12	20/1					L	20/1	1/2"	#12	#12	#12	LIGHTING CONTROL RELAY PANEL	20
21	DOUBLE HYDROVECTION OVEN [552B]	1/2"	#12	#12	#12	20/1					L	20/1	1/2"	#12	#12	#12	BUILDING SIGNAGE	22 *
23	TWIN COFFEE BREWER [124A]	3/4"	#8	#8	#10	40/2				3000	K	20/1	1/2"	#12	#12	#12	WATER SOFTENER	24
25			#8				K	3000		1440	L	20/1	1/2"	#12	#12	#12	MENU BOARD	26
27	TWIN COFFEE BREWER [124A]	3/4"	#8	#8	#10	40/2				3000	R	20/1	1/2"	#12	#12	#12	REC: DINING	28
29			#8				K			900	K	20/1	1/2"	#12	#12	#12	TAYLOR MAGNA BLENDER [116]	30
31	UNDERCOUNTER REFRIGERATOR [120F]	1/2"	#12	#12	#12	20/1	K	480		3000	K	25/2	1/2"	#10	#10	#10	ICED COFFEE BREWER [200A]	32
33	FILTRATION SYSTEM	1/2"	#12	#12	#12	20/1	K	2028	840	2028	K			#10				34
35	SNH	1/2"	#12	#12	#12	20/1	W			200	–	20/1	–	–	–	–	SPARE	36
37	SPARE	–	–	–	–	20/1	–	–			–	20/1	–	–	–	–	SPARE	38
39	SPACE ONLY	–	–	–	–	–	–				–	–	–	–	–	–	SPACE ONLY	40
41	SPACE ONLY	–	–	–	–	–	–				–	–	–	–	–	–	SPACE ONLY	42
43	SPACE ONLY	–	–	–	–	–	–				–	–	–	–	–	–	SPACE ONLY	44
45	SPACE ONLY	–	–	–	–	–	–				–	–	–	–	–	–	SPACE ONLY	46
47	SPACE ONLY	–	–	–	–	–	–				–	–	–	–	–	–	SPACE ONLY	48
49	SPACE ONLY	–	–	–	–	–	–				–	–	–	–	–	–	SPACE ONLY	50
51	SPACE ONLY	–	–	–	–	–	–				–	–	–	–	–	–	SPACE ONLY	52
53	SPACE ONLY	–	–	–	–	–	–				–	–	–	–	–	–	SPACE ONLY	54
55	SPACE ONLY	–	–	–	–	–	–				–	–	–	–	–	–	SPACE ONLY	56
57	SPACE ONLY	–	–	–	–	–	–				–	–	–	–	–	–	SPACE ONLY	58
59	SPACE ONLY	–	–	–	–	–	–				–	–	–	–	–	–	SPACE ONLY	60

INTERRUPT RATING: 22,000 AIC

11684 12132 11200 FROM: PANEL A

LOADS (IN VA)	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER
LIGHTING	5454	1.25	6818
RECEPTS TO 10 KVA	1280	1.0	1280
RECEPTS REMAINING	0	0.5	0
SPACE HEATING	0	0.0	0
AIR CONDITIONING	0	1.0	0

LOADS	CONNECTED	DEMAND FACTOR	MINIMUM FEEDER
NON-SEASONAL MOTORS	1596	1.0	1596
LARGEST MOTOR	0	0.25	0
WATER HEATING	200	1.0	200
KITCHEN EQUIP.	26486	0.65	17216

REMAINING CONTINUOUS LOADS	0	1.25	0
REMAINING NON-CONTINUOUS LOADS	0	1.0	0
DEMAND LOADS	0	1.0	0
TOTAL CONNECTED LOAD	35 KVA		97.3 AMPS
MIN. FEEDER/PANEL CAP.	27.1 KVA		75.3 AMPS
OVERALL DEMAND FACTOR	0.77		

* VIA LIGHTING CONTROL RELAY PANEL.

PANEL SCHEDULE GENERAL NOTES:

1. WHEN A GFCI CIRCUIT BREAKER IS UTILIZED WITHIN CIRCUITS THAT ARE GROUPED TOGETHER IN A SINGLE HOMERUN, A SEPARATE NEUTRAL CONDUCTOR SHALL BE RUN FOR EACH PHASE CONDUCTOR.
2. WHEN CIRCUITS ON PLANS SHOW GROUPED WITHIN A SINGLE HOMERUN, THE CIRCUIT BREAKERS THAT FEED THOSE CIRCUITS SHALL BE PROVIDED WITH ONE OF THE FOLLOWING PER NEC 210.4: A SEPARATE NEUTRAL FOR EACH CIRCUIT; A SINGLE HANDLE TIE TO SIMULTANEOUSLY DISCONNECT THE GROUPED CIRCUITS; OR A 2-POLE OR 3-POLE CIRCUIT BREAKER AS REQUIRED. THIS DOES NOT APPLY TO DEDICATED 2-POLE AND 3-POLE CIRCUITS.

SERIES RATING NOTE

ALL ELECTRICAL PANELS INDICATED ON THIS SHEET ARE DESIGNED AS SERIES RATED, PER SQUARE D SPECIFICATIONS. IF AN ALTERNATE MANUFACTURER IS SUBSTITUTED, IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO PROPERLY SERIES RATE ALL PANELS.

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REVISION

No.	DATE	DESCRIPTION

DWG DATE: 06-29-2018
DRAWN BY: AM
PROJECT No.: 18123

DWG TITLE:
RISER DIAGRAM & SCHEDULES

SHEET No.
E-5