



SCO #16-15889-02A

**RICHMOND  
COMMUNITY  
COLLEGE**

LINDSEY-PETRIS  
CAFETERIA / DINING  
ADDITION VOL.1

BID DOCUMENTS

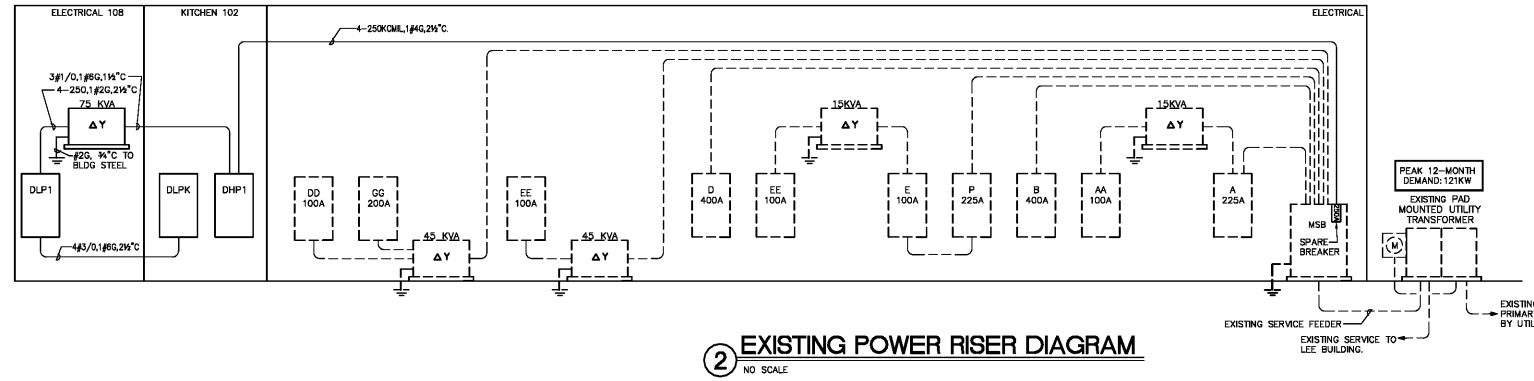
**POWER RISER DIAGRAM  
& PANEL SCHEDULES**

DATE 4-5-2019  
PROJECT NO 16063

REVISIONS

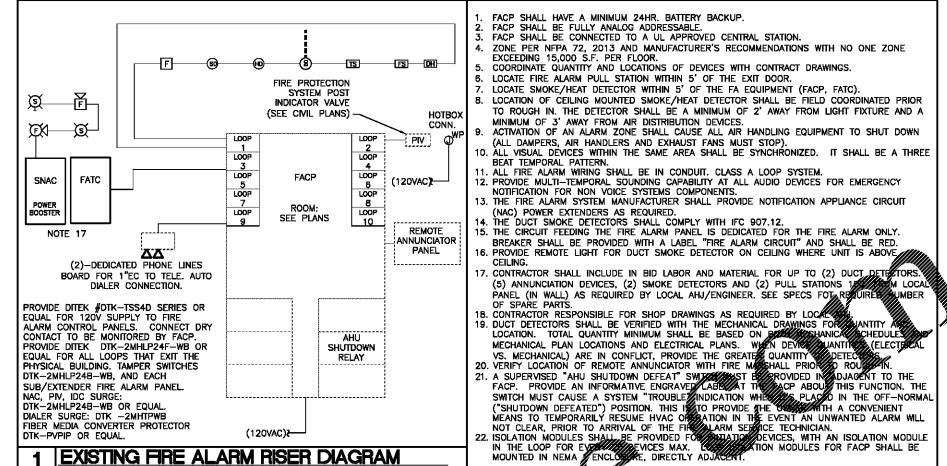
NO	DATE	DESCRIPTION

THIS DRAWING IS THE PROPERTY OF ADW ARCHITECTS, P.A. AND SHALL NOT BE REPRODUCED OR COPIED IN WHOLE OR IN PART, IT SHALL NOT BE USED ON ANY OTHER PROJECT OR GIVEN TO ANY OTHER COMPANY OR ORGANIZATION WITHOUT THE CONSENT OF ADW ARCHITECTS, P.A.



**2 EXISTING POWER RISER DIAGRAM**  
NO SCALE

- GENERAL NOTES:
- ALL DASHED ITEMS ARE EXISTING TO REMAIN, UNLESS NOTED OTHERWISE.



**1 EXISTING FIRE ALARM RISER DIAGRAM**  
NO SCALE

**CONDUCTOR LENGTH TABLE**

THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR MEETING ALL NEC VOLTAGE DROP REQUIREMENTS REGARDLESS OF WHAT THE PANEL SCHEDULE INDICATES. BRANCH CIRCUIT COPPER CONDUCTORS ARE TO BE SIZED TO ALLOW A MAXIMUM OF 3% VOLTAGE DROP FROM THE CIRCUIT BREAKER TO THE FIRST DEVICE ON THE BRANCH CIRCUIT AND ACHIEVE A MAXIMUM OF 5% VOLTAGE DROP ACROSS THE ENTIRE BRANCH CIRCUIT. SEE BELOW FOR THE PROJECTS COMMONLY USED BRANCH CIRCUIT TYPES.

DISTANCE	AMPS	VOLTAGE	BRANCH CIRCUIT
0 - 60FT	20	120V 1-PHASE	#12
60 - 100FT	20	120V 1-PHASE	#10
100 - 180FT	20	120V 1-PHASE	#8
180 - 260FT	20	120V 1-PHASE	#6
260 - 400FT	20	120V 1-PHASE	#4
400 - 700FT	20	120V 1-PHASE	#2
0 - 100FT	20	208V 1-PHASE	#12
100 - 180FT	20	208V 1-PHASE	#10
180 - 260FT	20	208V 1-PHASE	#8
260 - 440FT	20	208V 1-PHASE	#6
440 - 850FT	20	208V 1-PHASE	#4
850 - 831FT	20	208V 1-PHASE	#3
0 - 120FT	20	277V 1-PHASE	#12
120 - 220FT	20	277V 1-PHASE	#10
220 - 350FT	20	277V 1-PHASE	#8
350 - 550FT	20	277V 1-PHASE	#6
550 - 900FT	20	277V 1-PHASE	#4
0 - 200FT	20	480V 1-PHASE	#12
200 - 400FT	20	480V 1-PHASE	#10
400 - 700FT	20	480V 1-PHASE	#8
700 - 1000FT	20	480V 1-PHASE	#6
1000 - 1500FT	20	480V 1-PHASE	#4
1500 - 2000FT	20	480V 1-PHASE	#3
2000 - 2800FT	20	480V 1-PHASE	#2
2800 - 3400FT	20	480V 1-PHASE	#1
0 - 350FT	40	480V 3-PHASE	#6
350 - 580FT	40	480V 3-PHASE	#4
580 - 900FT	40	480V 3-PHASE	#3
0 - 150FT	20	480V 3-PHASE	#12
150 - 300FT	20	480V 3-PHASE	#10
300 - 500FT	20	480V 3-PHASE	#8

**FEDER SCHEDULE FOR COPPER CONDUCTORS TO SPECIFIC BREAKER SIZE**

BREAKER SIZE	THREE PHASE (COPPER) WIRE/CONDUIT SIZE
20 A	#12/1/2" @ 3/4" C
25 A	#10/1/2" @ 3/4" C
30 A	#10/1/2" @ 3/4" C
35 A	#10/1/2" @ 3/4" C
40 A	#10/1/2" @ 3/4" C
45 A	#10/1/2" @ 3/4" C
50 A	#10/1/2" @ 3/4" C
60 A	#10/1/2" @ 3/4" C
70 A	#10/1/2" @ 3/4" C
80 A	#10/1/2" @ 3/4" C
90 A	#10/1/2" @ 3/4" C
100 A	#10/1/2" @ 3/4" C

**FAN SCHEDULE**

SYMBOL	LOCATION	TYPE	ELECTRICAL DATA	DISCONNECT
E-1	ROOF	EXHAUST	1/4 120V-1φ	30/F15-1P-3R
KEF-1	ROOF	EXHAUST	3 480V-3φ	30/F15-3P-3R
KEF-2	ROOF	EXHAUST	1 480V-3φ	30/F15-3P-3R

- HVAC SCHEDULE NOTES:
- A NEUTRAL CONDUCTOR SHALL BE PROVIDED FOR ALL EQUIPMENT INCLUDING MECHANICAL.
  - PROVIDE CURRENTLY LISTED MECHANICAL EQUIPMENT CONFORMING WITH MECHANICAL SCHEDULE.
  - ALL 3-MECHANICAL EQUIPMENT SHALL BE 100KVA RATED. COORDINATE WITH MECHANICAL.

**ROOF MOUNTED KITCHEN HOOD MAKE UP AIR UNIT SCHEDULE (GAS HEAT)**

SYMBOL	POWER SUPPLY	DISCONNECT
MUA-1	4.8 15 480V-3φ	30/F15/3P-3R
MUA-2	2.5 15 480V-3φ	30/F15/3P-3R

**DUCTLESS SPLIT SYSTEMS**

SYMBOL	MCA	FUSE	VOLTAGE	DISCONNECT
A/C-1	*	208V-1φ	30/F20-2P-3R	QDU-1

- NOTES:
- INDOOR UNIT POWER IS FED FROM OUTDOOR UNIT. ELECTRICAL CONTRACTOR SHALL PROVIDE POWER WRING TO OUTDOOR UNIT AND EXTEND POWER FROM OUTDOOR UNIT TO INDOOR UNIT. COORDINATE FINAL LOCATIONS WITH ELECTRICAL CONTRACTOR.

**ROOFTOP UNIT SCHEDULE - (DX COOLING - WITH GAS HEAT)**

SYMBOL	NONVOL. NO.	COMPR. (HP)	COND. (T)	COND. (A)	COND. (B)	COND. (C)	COND. (D)	COND. (E)	COND. (F)	COND. (G)	COND. (H)	COND. (I)	COND. (J)	COND. (K)	COND. (L)	COND. (M)	COND. (N)	COND. (O)	COND. (P)	COND. (Q)	COND. (R)	COND. (S)	COND. (T)	COND. (U)	COND. (V)	COND. (W)	COND. (X)	COND. (Y)	COND. (Z)
RTU-LP22	4	1	17	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

**GAS-FIRED WATER HEATER SCHEDULE**

SYM	DESCRIPTION	HP	VOLTS	PH	HZ	DISCONNECT
WH1	GAS FIRED WATER HEATER	-	120	1	60	MANUAL MOTOR STARTER

**PUMP SCHEDULE**

SYM	DESCRIPTION	HP	VOLTS	PH	HZ	DISCONNECT
RP2L	HW RECIRC PUMP	1/2	120	1	60	MANUAL MOTOR STARTER
GP1	GRINDER PUMP	2	208	3	60	MANUAL MOTOR STARTER

**LOAD TABULATION**

LOADS BY KVA	EXISTING DEMAND	NEW CONNECTED	DIVERSITY FACTOR (%)	SINGLE PHASE	THREE PHASE	TOTAL KVA
LIGHTS	2.8	2.8	100	0.4	0.0	5.1
VENTILATION	6.1	45.0	100	6.1	45.0	51.1
MOTORS	0.4	6.0	100	0.4	6.0	6.4
KITCHEN	22.6	14.0	66	14.6	14.0	28.6
RECEPTACLES	11.5	10.8	93	11.5	10.8	22.3
WATER HEATER	0.5	0.5	100	0.5	0.0	0.5
MISC	8.2	8.2	100	8.2	0.0	8.2
EXISTING 1 YEAR PEAK	80	42	125	100.0	53.0	142.2
TOTAL				144.2	118.0	262.2

