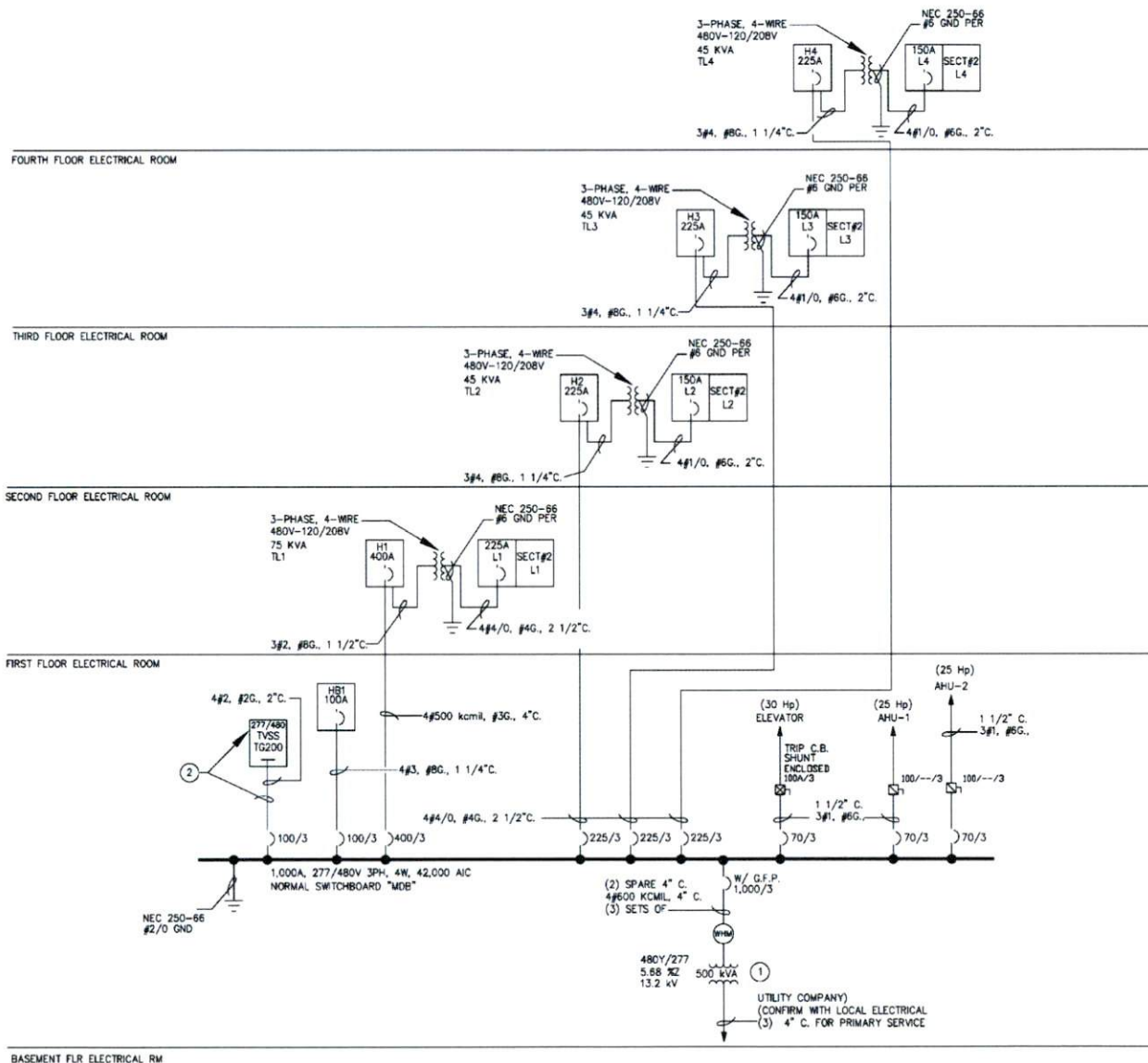




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GENERAL NOTES

1. CIRCUIT BREAKER WITH G.F.P. DESIGNATION INDICATES GROUND FAULT PROTECTION REQUIRED FOR THE CIRCUIT BREAKER.
2. ALL ELECTRICAL PANELBOARDS AND MAIN DISTRIBUTION BOARDS SHALL HAVE FULL COPPER BUSSING PROVIDED TO ALLOW FOR FUTURE CIRCUIT BREAKER INSTALLATION AS INDICATED IN THE ONE-LINE DIAGRAM.
3. CIRCUIT BREAKERS AND SPACES ARE ALL 3-POLE, U.N.O.

NOTES BY SYMBOL

- ① PAD MOUNT ELECTRICAL TRANSFORMER FURNISHED BY LOCAL ELECTRICAL UTILITY COMPANY. PRIMARY CONDUCTORS FURNISHED AND INSTALLED BY LOCAL ELECTRICAL UTILITY COMPANY IN CONTRACTOR FURNISHED AND INSTALLED CONDUIT.
CONTRACTOR FURNISHED AND INSTALLED SECONDARY CONDUIT AND CONDUCTORS FROM TRANSFORMER TO SWITCHBOARD MDB.
CONTRACTOR FURNISHED AND INSTALLED TRANSFORMER PAD PER LOCAL ELECTRICAL UTILITY COMPANY'S REQUIREMENTS.
CONTRACTOR FURNISHED AND INSTALLED PRIMARY CONDUITS PER LOCAL ELECTRICAL UTILITY COMPANY'S REQUIREMENTS.
- ② TRANSIENT VOLTAGE SURGE SUPPRESSION SYSTEM (TVSS), CURRENT TECHNOLOGY #TG250-277/480-3GY (OR EQUAL). CONTRACTOR TO PROVIDE WIRE, CONDUIT AND COMPLETE INSTALLATION OF TVSS SYSTEM.

CONTRACTOR SHALL INSTALL PER MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS.

ELECTRICAL ONE-LINE DIAGRAM
NO SCALE

PANELBOARD SCHEDULE									
PANEL LOCATION		Floors 2-4 Elec. Room		DESIGNATION		T2		Section #1	
MOUNTING/NEMA TYPE:		SURFACE/NEMA 1		VOLTAGE		120/208/3			
PANEL MANUFACTURER:		SQUARE D		AMPS		225			
PANEL TYPE:		BOLT-ON		MAINS SIZE & TYPE		150A MCB			
				INTERRUPTIN RATING (AICS)		22K			
				WIRE		4			
SERVES	BREAKER	CCT	A	B	C	CCT	BREAKER	SERVES	
Toilet/Core Recept.	15A 1P	1	•			2	15A 1P	Mens Washroom Recept.	
South Penmeter Recept	15A 1P	3	•			4	15A 1P	Drinking Fountain	
Telecom Room Recept.	15A 1P	5	•			6	15A 1P	Telecom Room Recept.	
Electrical Room Recept.	15A 1P	7	•			8	15A 1P	Roof Recept.	
North Penmeter Recept	15A 1P	9	•			10	15A 1P	Roof Recept.	
Roof Recept.	15A 1P	11	•			12			
		13	•			14			
		15	•			16			
		17	•			18			
		19	•			20			
		21	•			22			
		23	•			24			
		25	•			26			
		27	•			28			
		29	•			30			
		31	•			32			
		33	•			34			
WH-T	20A 1P	35	•			36			
		37	•			38			
		39	•			40			
		41	•			42			

PANELBOARD SCHEDULE									
PANEL LOCATION		1st Floor Elec. Room		DESIGNATION		T2		Section #2	
MOUNTING/NEMA TYPE:		SURFACE/NEMA 1		VOLTAGE		120/208/3			
PANEL MANUFACTURER:		SQUARE D		AMPS		225			
PANEL TYPE:		BOLT-ON		MAINS SIZE & TYPE		150A MLO			
				INTERRUPTIN RATING (AICS)		22K			
				WIRE		4			
SERVES	BREAKER	CCT	A	B	C	CCT	BREAKER	SERVES	
		43	•			44			
		45	•			46			
		47	•			48			
		49	•			50			
		51	•			52			
		53	•			54			
		55	•			56			
		57	•			58			
		59	•			60			
		61	•			62			
		63	•			64			
		65	•			66			
		67	•			68			
		69	•			70			
		71	•			72			
		73	•			74			
		75	•			76			
		77	•			78			
		79	•			80			
		81	•			82			
		83	•			84			

ELECTRICAL PANEL SCHEDULES
NO SCALE

MOTOR AND EQUIPMENT CONNECTION SCHEDULE

EQUIPMENT DESIGNATION	DESCRIPTION	DRAWING	MOTOR				FEEDER		PROTECTION	
			ROOM LOCATION	VOLTAGE	PHASE	AMPS (FLA)	HORSEPOWER	MOTOR SUPPLIED FROM		FEEDER TYPE AND SIZE
AHJ-1	AIR HANDLING UNIT	E3.0	MECHANICAL ROOM B02	480V	3	12.63	25	MDB	3 #1, #6G - 1-1/2" C	70
AHJ-2	AIR HANDLING UNIT	E3.0	MECHANICAL ROOM B07	480V	3	12.63	25	MDB	3 #1, #6G - 1-1/2" C	70
	ELEVATOR MOTOR	E3.0	ELEVATOR EQUIPMENT ROOM B08	480V	3		30	MDB	3 #1, #6G - 1-1/2" C	70
EF-1	EXHAUST FAN	E3.3	ROOF	480V	3			HT2	3 #12, #12G - 1/2" C	20
LH-1	UNIT HEATER	E3.1	SPRINKLER ROOM	480V	3			H1	3 #12, #12G - 1/2" C	20
FPB-1-1	FAN POWERED BOXES WITH REHEAT	E3.1	CAFE/DELI ROOM 114	480V	3			H1	3 #10, #12G - 1/2" C	20
FPB-1-2	FAN POWERED BOXES WITH REHEAT	E3.1	WAITING ROOM 110	480V	3			H1	3 #10, #12G - 1/2" C	20
FPB-1-3	FAN POWERED BOXES WITH REHEAT	E3.1	CASH ROOM 108	480V	3			H1	3 #10, #12G - 1/2" C	20
FPB-1-4	FAN POWERED BOXES WITH REHEAT	E3.1	WAITING AREA 102	480V	3			H1	3 #10, #12G - 1/2" C	20
FPB-1-5	FAN POWERED BOXES WITH REHEAT	E3.1	BUILDING LOBBY 101	480V	3			H1	3 #10, #12G - 1/2" C	20
FPB-1-6	FAN POWERED BOXES WITH REHEAT	E3.1	OFFICE 121	480V	3			H1	3 #10, #12G - 1/2" C	20
FPB-1-7	FAN POWERED BOXES WITH REHEAT	E3.1	OPEN OFFICE 118	480V	3			H1	3 #10, #12G - 1/2" C	20
FPB-1-8	FAN POWERED BOXES WITH REHEAT	E3.1	KITCHEN 115	480V	3			H1	3 #10, #12G - 1/2" C	20
WH-1	HOT WATER TANK	E3.1	JANITOR'S ROOM	208V	1			L1	2 #12, #12G - 1/2" C	20
WH-T	HOT WATER TANK	E3.2	JANITOR'S ROOM	208V	1			T2	2 #12, #12G - 1/2" C	20
FPB-T-1	FAN POWERED BOXES WITH REHEAT	E3.2	OPEN OFFICE	480V	3			HT2	3 #10, #12G - 1/2" C	20
FPB-T-2	FAN POWERED BOXES WITH REHEAT	E3.2	OPEN OFFICE	480V	3			HT3	3 #10, #12G - 1/2" C	20
FPB-T-3	FAN POWERED BOXES WITH REHEAT	E3.2	OPEN OFFICE	480V	3			HT4	3 #10, #12G - 1/2" C	20
FPB-T-4	FAN POWERED BOXES WITH REHEAT	E3.2	OPEN OFFICE	480V	3			HT5	3 #10, #12G - 1/2" C	20
FPB-T-5	FAN POWERED BOXES WITH REHEAT	E3.2	OPEN OFFICE	480V	3			HT6	3 #10, #12G - 1/2" C	20
FPB-T-6	FAN POWERED BOXES WITH REHEAT	E3.2	OPEN OFFICE	480V	3			HT7	3 #10, #12G - 1/2" C	20
FPB-T-7	FAN POWERED BOXES WITH REHEAT	E3.2	OPEN OFFICE	480V	3			HT8	3 #10, #12G - 1/2" C	20

MOTOR/EQUIPMENT CONNECTION SCHEDULE
NO SCALE

ACCUBID OFFICE BUILDING



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ACCUBID OFFICE BUILDING

WIRE POWER TERMS - BRANCH CIRCUITS AND MOTORS (Panel Schedule and Motor Schedule)

PNL HB1

Branch Circuits

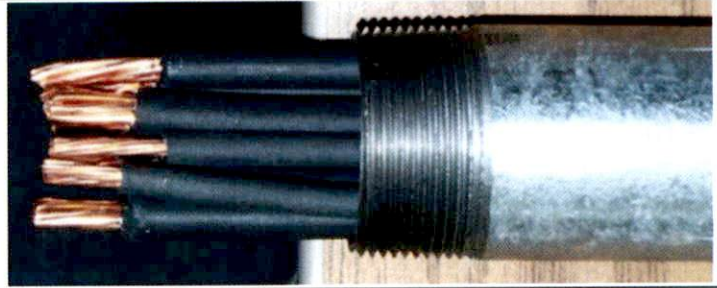
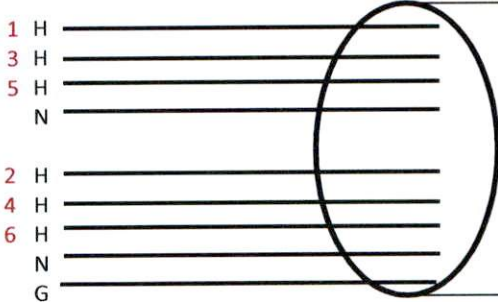
(8) 20A 1P

H
6 #12
2 #12

N
2 #10
1 #10

G
1 #12
1 #12

(10) #12
(3) #10



Maximum Number of Conductors in a 1/2" EMT Conduit = (9) #12
NEC Annex C, Table C.1

PNL H1

Branch Circuits

(8) 20A 1P

H
6 #12
2 #12

N
2 #10
1 #10

G
1 #12
1 #12

(10) #12
(3) #10

MOTOR and Equip

FPB 3#10, #12 G x 8

UH-1 3#12, #12 G x 1

(12) #12
(24) #10

Total
(22) #12
(27) #10

ACCUBID OFFICE BUILDING

WIRE POWER TERMS - BRANCH CIRCUITS AND MOTORS (Panel Schedule and Motor Schedule)

PNL L1

Branch Circuits

(45) 20A 1P

<u>H</u>	<u>N</u>	<u>G</u>
6#12	2#10	1#12 x7
3#12	1#10	1#12

(53) #12
(15) #10

Motor and Equip

70A 2P 22/24 } E3.1 2#4, #8G
50A 2P 26/28 } 2#8, #10G

(3) #12
(1) #10
(3) #8
(2) #4

WH-1 20A 2P 2#12, #12G

(56) #12
(16) #10
(3) #8
(2) #4

PNL HT (H2, H3, & H4)

Branch Circuits

(5) 20A 1P

<u>H</u>	<u>N</u>	<u>G</u>
5#12	2#10	1#12

(6) #12
(2) #10

MOTOR and Equip

FPB 3#10, #12G x7

(11) #12
(21) #10

EF-1 3#12, #12G x1

(17) #12
(23) #10

ACCUBID OFFICE BUILDING

WIRE POWER TERMS - BRANCH CIRCUITS AND MOTORS (Panel Schedule and Motor Schedule)

PNL LT

Branch Circuits

(11) 15A 1P

(13) #12
(4) #10

<u>H</u>	<u>N</u>	<u>G</u>
6#12	2#10	1#12
5#12	2#10	1#12

Motor and Equip

WH-T 20A 2P 2#12, #12 G

(3) #12

(16) #12
(4) #10

Round House Combinations

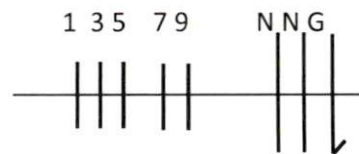
House	Hot	Hot	Hot	N	GND	Hot	Hot	Hot	N	GND
	1	3	5			2	4	6		
	7	9	11			8	10	12		
	13	15	17			14	16	18		
	19	21	23			20	22	24		
	25	27	29			26	28	30		
	31	33	35			32	34	36		
	37	39	41			38	40	42		
	43	45	47			44	46	48		
	49	51	53			50	52	54		
	55	57	59			56	58	60		
	61	63	65			62	64	66		
	67	69	71			68	70	72		
	73	75	77			74	76	78		
	79	81	83			80	82	84		
	85	87	89			86	88	90		
	91	93	95			92	94	96		
	97	99	101			98	100	102		
	103	105	107			104	106	108		
	109	111	113			110	112	114		
	115	117	119			116	118	120		
	121	123	125			122	124	126		

Examples:

Round House



Round House + CKCT 7 & 9 - ADD N



NEC Link Based on NEC Annex C, Table C.1: Maximum Number of Conductors or Fixture Wires in Electrical Metallic Tubing (EMT).

Maximum Number of Conductors in Electrical Metallic Tubing

Type Letters	Cond. Size AWG/kcmil	Trade Sizes in Inches									
		1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	3 1/2	4
RHH, RHW, RHW-2	14	4	7	11	20	27	46	80	120	157	201
	12	3	6	9	17	23	38	66	100	131	167
	10	2	5	8	13	18	30	53	81	105	135
	8	1	2	4	7	9	16	28	42	55	70
	6	1	1	3	5	8	13	22	34	44	56
	4	1	1	2	4	6	10	17	26	34	44
	3	1	1	1	4	5	9	15	23	30	38
	2	1	1	1	3	4	7	13	20	26	33
	1	0	1	1	1	3	5	9	13	17	22
	1/0	0	1	1	1	2	4	7	11	15	19
	2/0	0	1	1	1	2	4	6	10	13	17
	3/0	0	0	1	1	1	3	5	8	11	14
	4/0	0	0	1	1	1	3	5	7	9	12
	250	0	0	0	1	1	1	3	5	7	9
	300	0	0	0	1	1	1	3	5	6	8
	350	0	0	0	1	1	1	3	4	6	7
	400	0	0	0	1	1	1	2	4	5	7
500	0	0	0	0	1	1	2	3	4	6	
600	0	0	0	0	1	1	1	3	4	5	
700	0	0	0	0	0	1	1	2	3	4	
750	0	0	0	0	0	1	1	2	3	4	
TW	14	8	15	25	43	58	96	168	254	332	424
	12	6	11	19	33	45	74	129	195	255	326
	10	5	8	14	24	33	55	96	145	190	243
	8	2	5	8	13	18	30	53	81	105	135
RHH*, RHW*, RHW-2*, THHW, THW, THW-2	14	6	10	16	28	39	64	112	169	221	282
	12	4	8	13	23	31	51	90	136	177	227
RHH*, RHW*, RHW-2*, THHW, THW	10	3	6	10	18	24	40	70	106	138	177
	8	1	4	6	10	14	24	42	63	83	106
RHH*, RHW*, RHW-2*, TW, THW, THHW, THW-2	6	1	3	4	8	11	18	32	48	63	81
	4	1	1	3	6	8	13	24	36	47	60
	3	1	1	3	5	7	12	20	31	40	52
	2	1	1	2	4	6	10	17	26	34	44
	1	1	1	1	3	4	7	12	18	24	31
	1/0	0	1	1	2	3	6	10	16	20	26
	2/0	0	1	1	1	3	5	9	13	17	22
	3/0	0	1	1	1	2	4	7	11	15	19
	4/0	0	0	1	1	1	3	6	9	12	16
	250	0	0	1	1	1	3	5	7	10	13
	300	0	0	1	1	1	2	4	6	8	11
	350	0	0	0	1	1	1	4	6	7	10
	400	0	0	0	1	1	1	3	5	7	9
	500	0	0	0	1	1	1	3	4	6	7
	600	0	0	0	1	1	1	2	3	4	6
700	0	0	0	0	1	1	1	3	4	5	
750	0	0	0	0	1	1	1	3	4	5	
THHN, THWN, THWN-2	14	12	22	35	61	84	138	241	364	476	608
	12	9	16	26	45	61	101	176	266	347	443
	10	5	10	16	28	38	63	111	167	219	279
	8	3	6	9	16	22	36	64	96	126	161
	6	2	4	7	12	16	26	46	69	91	116
	4	1	2	4	7	10	16	28	43	56	71
	3	1	1	3	6	8	13	24	36	47	60
	2	1	1	3	5	7	11	20	30	40	51
1	1	1	1	4	5	8	15	22	29	37	

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