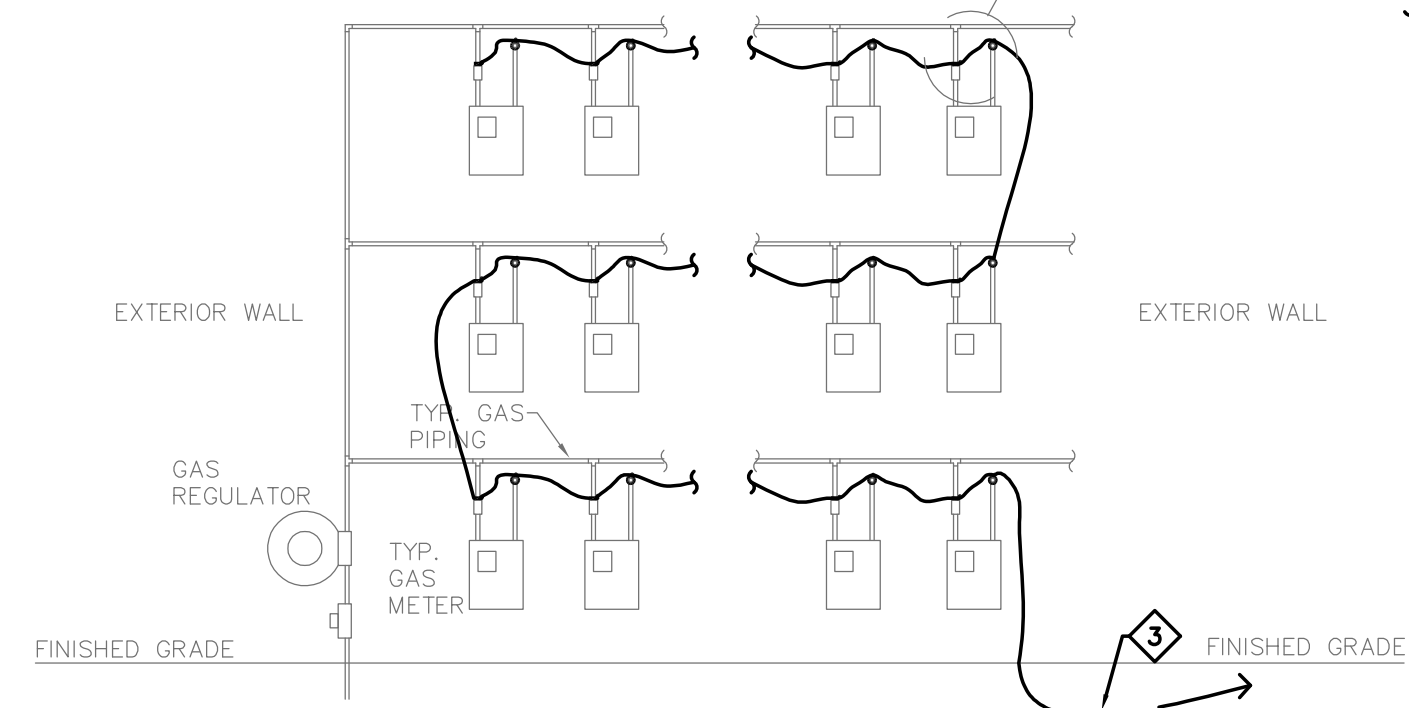
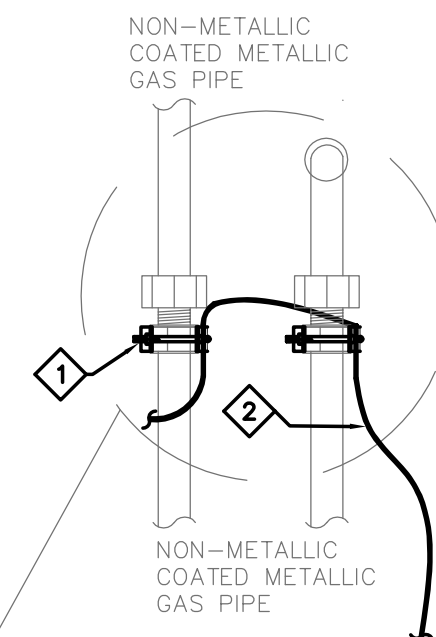


MULTI-METER GAS PIPING BONDING GENERAL NOTES

- A. COMPLETE BONDING INSTALLATION SHALL CONFORM TO NFPA-70, NEC-250 AND UL467.
- B. CLAMPS SHALL NOT BE INSTALLED ON NON-METALLIC COATED GAS PIPING.
- C. THE #6 BONDING CONDUCTOR SHALL BE ONE CONTINUOUS PIECE WITH NO SPLICES.

MULTI-METER GAS PIPING BONDING SPECIFIC NOTES

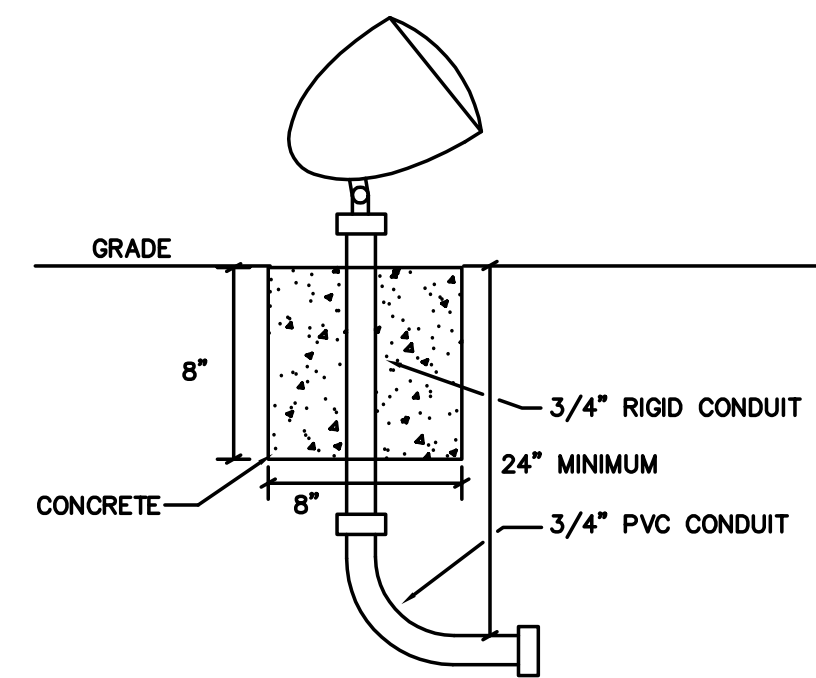
- 1. PROVIDE BONDING CLAMPS FOR GAS PIPE FITTING. INSTALL ON METALLIC NUT OF CONNECTOR AFTER PIPE CONNECTIONS HAVE BEEN MADE AND TESTED. CLAMP SHALL BE COMPATIBLE WITH METAL NUT TO PREVENT CORROSION AND SHALL ACCEPT A MINIMUM #6 COPPER BONDING CONDUCTOR. STORM COPPER COMPONENTS CO. #NAED-UPC-GWN-JRD OR EQUAL. TYPICAL.
- 2. PROVIDE MINIMUM #6 BARE COPPER BONDING CONDUCTOR.
- 3. ROUTE BONDING CONDUCTOR FROM MANIFOLD SIDE OF METER DIRECT BURIED TO BUILDING SERVICE GROUND ROD AND CLAMP. FIELD VERIFY EXACT ROUTING AND LOCATION OF SERVICE GROUND ROD(S).



3 MULTI-METER GAS PIPING BONDING DETAIL
NO SCALE

1 SITE ELECTRICAL PLAN

1" = 30'-0"



2 KNUCKLE MOUNT(TYPE-UF)
NO SCALE

GENERAL ELECTRICAL SITE NOTES

- A. CIRCUIT NUMBERS SHOWN ARE FOR REFERENCE ONLY. PROVIDE #8 CONDUCTORS MINIMUM. ADJUST FOR VOLT DROP BASED ON EXACT FIELD ROUTING.
- B. FOR EACH UNIT OBTAIN POWER FROM ASSOCIATED UNIT LOAD CENTER, UNLESS NOTED OTHERWISE.
- C. REFER TO SPECIFICATION FOR CONTROL OF EXTERIOR LIGHTING.
- D. OBTAIN POWER FOR SITE LIGHTING AND COMMON AREA RECEPTACLES AS INDICATED FROM OFFICE UNIT LOAD CENTER.

SPECIFIC ELECTRICAL SITE NOTES

- 1. UTILITY TRANSFORMER. PROVIDE CONCRETE PAD AND CONDUIT STUB OUTS. INSTALL PER LOCAL UTILITY REQUIREMENTS.
- 2. PROVIDE J-BOX DEDICATED FOR FUTURE RADON SYSTEM EXHAUST FAN. MOUNT J-BOX WITHIN ATTIC ADJACENT TO FUTURE FAN LOCATION. COORDINATE WITH MECHANICAL. PROVIDE 120 VOLT 20 AMP CIRCUIT FROM UNIT LOAD CENTER. COIL CONDUCTORS AND PROVIDE WIRE NUTS WITHIN BOX AND BLANK COVER PLATE. LABEL BREAKER IN PANEL AS "RADON FANS".

PROJECT INFO

Project No.
BLA201703
Drawn By:
WLF/SMY
Issue Date
8/17/17

SUBMITTALS / REVISIONS
_ BID SET 8/17/17

SCALE

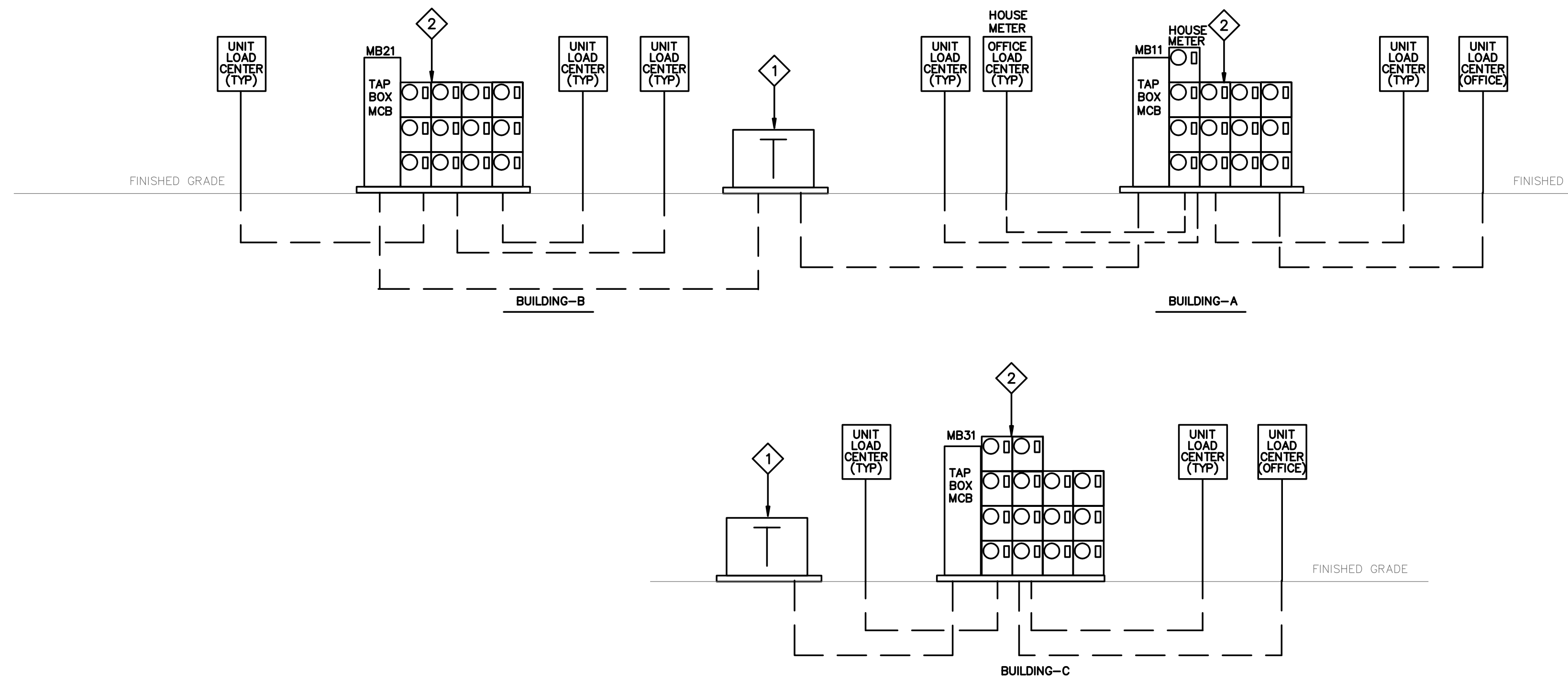
Fox Pointe Townhomes

Three Rivers Community Action,
Austin, MN

SITE ELECTRICAL PLAN

ELECTRICAL SYMBOL SCHEDULE

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
LIGHTING			
	LIGHTING FIXTURES (TYPICAL OF MANY, NOT ALL SYMBOLS ARE SHOWN).		OUTLET, TELEPHONE
	NOTE: SLASH MARK INDICATES RECESSED, SIDE BRACKET INDICATES WALL MOUNT, SOLID FILL INDICATES EMERGENCY OR NIGHT EGRESS, DOTTED FILL IN EXIT FIXTURE INDICATES DIRECTION.		OUTLET, VOICE/DATA
	EMERGENCY BATTERY PACK		OUTLET, TELEPHONE - FLOOR
	LIGHT FIXTURE TYPE		OUTLET, INTERCOM
	CIRCUIT NUMBER		OUTLET, MICROPHONE
	CEILING FAN		OUTLET, VOLUME CONTROL
SWITCHES			
	SWITCH, SINGLE POLE		OUTLET, TELEVISION
	SWITCH, DOUBLE POLE		OUTLET, SPEAKER - WALL
	SWITCH, THREE-WAY		OUTLET, SPEAKER - CEILING
	SWITCH, FOUR-WAY	FIRE ALARM	
	SWITCH, KEYPAD		F.A. STROBE
	SWITCH, MOMENTARY CONTACT		F.A. HORN STROBE
	SWITCH, DIMMER		F.A. PHOTOELECTRIC DETECTOR
	SWITCH, MOTOR CONTROL		F.A. HEAT DETECTOR
	SWITCH, TIMER		F.A. COMBINATION SMOKE/CO DETECTOR
	GANGED SWITCH, SPACE		F.A. CO DETECTOR
	OCCUPANCY SENSOR		F.A. DOOR HOLDER
	TIME CLOCK		F.A. SMOKE/FIRE DAMPER
	LIGHTING CONTACTOR		F.A. SMOKE DAMPER
POWER			
	RECEPTACLE, SINGLE		F.A. ANNUNCIATOR PANEL
	RECEPTACLE, DUPLEX	NOTING	
	RECEPTACLE, DOUBLE DUPLEX		DRAWING CHANGE
	RECEPTACLE, DUPLEX SPLIT WIRED		SPECIFIC NOTE
	RECEPTACLE, SPECIAL		M/E EQUIPMENT TAG
	RECEPTACLE, DUPLEX FLOOR		KITCHEN EQUIPMENT TAG
	RECEPTACLE, DUPLEX CEILING	GENERAL	
	RECEPTACLE, DUPLEX SWITCHED		JUNCTION BOX
	120/208V PANELBOARD	SYSTEMS	
	TERMINAL CABINET		TELEVISION CAMERA
	TRANSFORMER		PUSHBUTTON
	CONDUIT, CONCEALED		BELL
	CONDUIT, BELOW GRADE		CHIME
	CONDUIT, EXPOSED		BUZZER
	CONDUIT, UP	SECURITY	
	CONDUIT, DOWN		KEY PAD
	CONDUIT, STUBBED		CARD READER
	UNDERFLOOR DUCT		PROXIMITY READER
	PLUGSTRIP, TYPE AS SPEC'D		DOOR CONTACTS
	DISCONNECT		ELECTRIC LOCK
	MOTOR STARTER		ELECTRIC STRIKE
	COMBINATION MOTOR STARTER		MAGNETIC LOCK
	PUSHBUTTON		MONITOR STRIKE
	ENCLOSED CIRCUIT BREAKER		MOTION DETECTOR
	ELECTRIC HEAT	NOT ALL SYMBOLS APPEAR ON DRAWINGS.	
	CIRCUIT NUMBER		



1 POWER RISER DIAGRAM
N.T.S.

- POWER RISER DIAGRAM SPECIFIC NOTES**
- UTILITY TRANSFORMER WITH 120/240 VOLT, 1 PHASE, 3 WIRE SECONDARY. REFER TO SITE PLAN.
 - PROVIDE METER BANK AS SPECIFIED WITH A MAIN FUSED SWITCH.

UNIT LOAD CENTER			
SERVICE:	120/240V, 1PH, 3W	BUS:	125
A.I.C. RATING:	10000	SPACES:	24
FEEDER FROM:	125 AMP SER MBOX	MTG:	FLUSH
CCT	CB	WIRE	LOAD DESCRIPTION
1	20/1	#12	SMALL APPLIANCE
3	20/1	#12	SMALL APPLIANCE
5	20/1	#12	BATHROOM RECEPTACLE
7	30	#10	CU-X
9	2	-	-
11	15/1	#14	GENERAL LIGHTING
13	15/1	#14	GENERAL LIGHTING
15	15/1	#14	GENERAL LIGHTING
17	15/1	#14	GENERAL LIGHTING
19	20/1	#12	FURN-X
21	20/1	#12	WH-? & WS-?
23	20/1	#12	CAR CHARGING RECEPTACLE
2	50	#8	RANGE
4	30	2	-
6	30	#10	DRYER
8	2	-	-
10	20/1	#12	WASHER
12	20/1	#12	MICROWAVE
14	20/1	#12	DISHWASHER
16	20/1	#12	GENERAL LIGHTING
18	20/1	#12	GENERAL LIGHTING
20	15/1	#14	RADON
22	20/1	-	-
24	20/1	-	-

CONTRACTOR SHALL WIRE ALL INDIVIDUAL UNITS PER THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE. VERIFY THAT THE CONTRACTOR ROUGH-IN LAYOUT AND UNIT PANEL CIRCUIT BREAKER COUNT MATCH. PROVIDE CIRCUIT BREAKERS IN UNIT PANELS AS REQUIRED FOR GENERAL LIGHTING, APPLIANCE LOADS AND SPECIFIC APPLIANCES AND MECHANICAL EQUIPMENT.

PROVIDE ARC-FAULT PROTECTIVE DEVICES FOR ALL 125 VOLT, SINGLE PHASE BRANCH CIRCUITS IN ALL ROOMS, EXCEPT FOR KITCHENS, BATHROOMS AND UNFINISHED BASEMENTS. THIS INCLUDES CIRCUITS DEDICATED FOR SPECIFIC USES, SUCH AS AIR CONDITIONERS. SMALL APPLIANCE CIRCUITS SHALL BE ARC FAULT PROTECTED WHERE CIRCUITS EXTEND INTO DINING ROOMS.

DISTRIBUTION EQUIPMENT SCHEDULE								
PANEL NO.	VOLTAGE	MOUNTING	AIC	MAIN / RATING	# OF UNIT SERVICES	UNIT MAIN BREAKERS REQUIRED	FEEDER FROM	NOTES
MB11	120/208V 3PH, 4W	SURFACE	22K	600A SW 600A FU	13	(13) 125/2	(2) 1/2" C, 3#350 FROM UTILITY TRANSFORMER	2,3
MB21	120/208V 3PH, 4W	SURFACE	22K	600A SW 600A FU	12	(12) 125/2	(2) 1/2" C, 3#350 FROM UTILITY TRANSFORMER	1,3
MB31	120/208V 3PH, 4W	SURFACE	22K	800A SW 800A FU	14	(14) 125/2	(2) 3" C, 3#500 FROM UTILITY TRANSFORMER	1,3

- DISTRIBUTION SCHEDULE NOTES**
- PROVIDE A 125 AMP UTILITY METER SOCKET FOR EACH UNIT.
 - PROVIDE A 125 AMP UTILITY METER SOCKET FOR EACH UNIT AND (1) HOUSE (OFFICE) LOAD CENTER.
 - ALL EQUIPMENT SHALL BE SERVICE RATED.

UNIT LOAD CENTER OFFICE (LP11)			
SERVICE:	120/240V, 1PH, 3W	BUS:	125
A.I.C. RATING:	10000	SPACES:	30
FEEDER FROM:	125 SER MBOX	MTG:	SURFACE
CCT	CB	WIRE	LOAD DESCRIPTION
1	20/1	#12	SMALL APPLIANCE
3	20/1	#12	SMALL APPLIANCE
5	20/1	#12	BATHROOM RECEPTACLE
7	20	#10	CU-1
9	2	-	-
11	15/1	#14	GENERAL LIGHTING
13	15/1	#14	GENERAL LIGHTING
15	15/1	#14	SITE FLOOD LIGHTS
17	15/1	#14	SPRINKLER ALARM PANEL
19	20/2	-	WATER ROOM BLDG-B
21	-	-	-
23	30/2	-	WATER ROOM BLDG-B
25	-	-	-
27	-	-	-
29	15/1	#14	UNIT HEATER UH-1
2	20/1	-	SPARE
4	20/1	-	SPARE
6	20/1	-	SPARE
8	20/1	-	SPARE
10	20/1	-	SPARE
12	20/1	-	SPARE
14	20/1	-	SPARE
16	20/1	-	SPARE
18	20/2	-	WATER ROOM BLDG-C
20	-	-	-
22	30/2	-	WATER ROOM BLDG-C
24	-	-	-
26	15/1	#14	SPRINKLER ALARM PANEL
28	20/1	#12	FURN-1
30	20/1	#12	WH-? & WS-?

CONTRACTOR SHALL WIRE ALL INDIVIDUAL UNITS PER THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE. VERIFY THAT THE CONTRACTOR ROUGH-IN LAYOUT AND UNIT PANEL CIRCUIT BREAKER COUNT MATCH. PROVIDE CIRCUIT BREAKERS IN UNIT PANELS AS REQUIRED FOR GENERAL LIGHTING, APPLIANCE LOADS AND SPECIFIC APPLIANCES AND MECHANICAL EQUIPMENT.

PROVIDE ARC-FAULT PROTECTIVE DEVICES FOR ALL 125 VOLT, SINGLE PHASE BRANCH CIRCUITS IN ALL ROOMS, EXCEPT FOR KITCHENS, BATHROOMS AND UNFINISHED BASEMENTS. THIS INCLUDES CIRCUITS DEDICATED FOR SPECIFIC USES, SUCH AS AIR CONDITIONERS. SMALL APPLIANCE CIRCUITS SHALL BE ARC FAULT PROTECTED WHERE CIRCUITS EXTEND INTO DINING ROOMS.

UNIT LOAD CENTER FEEDER SCHEDULE (2.0% VD, CU)					
UNIT AMP LOAD	0-50 FEET	51-100 FEET	101-150 FEET	151-200 FEET	201-250 FEET
40	#8	#6	#4	#3	#2
60	#6	#4	#2	#1	#1/0
80	#4	#3	#1	#1/0	#2/0
100	#3	#2	#1/0	#2/0	#3/0
125	#1	#1	#2/0	#3/0	#4/0
150	#1/0	#1/0	#3/0	#4/0	#250
200	#3/0	#3/0	#4/0	#250	(2)#3/0

- NOTES:**
- SIZES SHOWN ARE MINIMUM REQUIRED FOR INDICATED DISTANCE RANGE.
 - SCHEDULE BASED ON COPPER SER CABLE AT 0.9 PF AND 208 VOLTS.
 - SER CABLE RATED AT 75°C SHALL NOT BE INSTALLED IN INSULATED WALLS, CEILING, FIXED OPEN WEB TRUSSES, 2 BY X FRAMING OR OTHER INSULATED AREAS. PROVIDE 60°C SER CABLE OR 75°C M/C CABLE WITHIN INSULATED AREAS, INCREASING CONDUCTOR SIZE AS REQUIRED FOR LOAD AND TO MAINTAIN MAXIMUM VOLTAGE DROP.
 - PROVIDE CONDUIT AND WIRE FOR FEEDERS LARGER THAN #300.
 - CONTRACTOR SHALL PROVIDE AN APPROPRIATELY SIZED GUTTER ADJACENT TO THE EQUIPMENT WHENEVER THE CONDUCTOR SIZE NECESSARY TO MAINTAIN THE REQUIRED VOLTAGE DROP IS TOO LARGE TO PROPERLY FORM AND TERMINATE IN THE EQUIPMENT. SPLICE PHASE AND NEUTRAL CONDUCTORS TO CORRECTLY SIZED PIGTAILS AND TERMINATE AS REQUIRED WITHIN THE EQUIPMENT.

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I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Engineer under the laws of the State of MINNESOTA.

08/17/17
16544
reg. no.

06/30/18
reg. exp. date

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ELECTRICAL RISER DIAGRAM
AND SCHEDULES

