

ALL PANELBOARDS, TRANSFORMERS, TRANSFER SWITCH KIT AND DISCONNECTS WILL BE SUPPLIED BY THE OWNER (O'REILLY). ELECTRICAL GEAR SHALL BE DIRECT ORDERED AND/OR RELEASED FROM THE LISTED ELECTRICAL EQUIPMENT DISTRIBUTOR. SEE 'ELECTRIC SERVICE RESPONSIBILITIES' FOR ADDITIONAL CLARIFICATION.

GRAYBAR ELECTRIC CO. INC.  
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GRAYBAR O'REILLY TEAM  
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MP PANELBOARD SCHEDULE												
MAINS: 400A MAIN LUGS ONLY						ACCESSORIES:						
TYPE: SQUARE D, NO		VOLTAGE: 208		PHASE: 3Ø, 4W		1. EQUIPMENT GROUND BAR 2. ISOLATED GROUND BAR 3. * 'SQ. D' #001PA - WITH LOCKABLE CLIPS 4. + MUST BE TYPE "HACR" BREAKER 5. FEED THRU LUGS						
MOUNTING: SURFACE		WIDTH: 20		SPACE(S): 42								
SCCR: 22K AIC		SPACE(S): 42										
CKT	CKT BRK	WIRE	LOAD DESCRIPTION	(KVA)	A(KVA)	B(KVA)	C(KVA)	(KVA)	LOAD DESCRIPTION	WIRE	CKT BRK	CKT
1	20A/1P	#12s	LIGHTING/EXHAUST FAN	0.51	6.94			6.43	RTU-1			2
3	20A/1P	#12s	LIGHTING	1.10			7.53	6.43	RTU-1	#4s	+70A/3P	2
5	20A/1P	#12s	LIGHTING	1.19			7.62	6.43	RTU-1			4
7	20A/1P	#12s	LIGHTING	1.24	7.67			6.43	RTU-2			8
9	20A/1P	#12s	LIGHTING	1.11			7.54	6.43	RTU-2	#4s	+70A/3P	10
11	20A/1P	#12s	LIGHTING	0.93			7.36	6.43	RTU-2			12
13	20A/1P	#12s	LIGHTING	0.64	5.15			4.51	RTU-3			14
15			SPACE	0			4.51	4.51	RTU-3	#8s	+50A/3P	16
17			SPACE	0			4.51	4.51	RTU-3			18
19			SPACE	0	4.51			4.51	RTU-4			20
21			SPACE	0			4.51	4.51	RTU-4	#8s	+50A/3P	22
23	20A/1P	#12s	BUILDING LIGHTING	0.36			4.87	4.51	RTU-4			24
25	20A/1P	#12s	SITE LIGHTING	0.30	0.30			0	SPACE			26
27	20A/1P	#12s	SITE LIGHTING	0.15		0.15		0	SPACE			28
29	20A/1P	#12s	SITE SIGN	1.30			1.30	0	SPACE			30
31	20A/1P	#12s	SITE SIGN	1.30	1.30			0	SPACE			32
33	*20A/1P	#12s	LED SIGN BUILDING	1.20			1.20	0	SPACE			34
35			SPACE	0			0.03	0	SPACE			36
37	20A/3P	#12s	GRIDPOINT EC-2000	0.03	0.03			0	SPACE			38
39			SPACE	0.03		0.03		0	SPACE			40
41	20A/1P	#12s	XFMR J-BOX	0.60			0.60	0	LCP	#12s	20A/1P	42
TOTAL PHASE A (KVA)		TOTAL PHASE B (KVA)		TOTAL PHASE C (KVA)		TOTAL CONNECTED LOAD (KVA)		TOTAL AMPS				
25.90		25.47		26.89		78.26		217.23				
LIGHTING 6.72		EXTERIOR LIGHTING 4.61		TOTAL LIGHTING 11.33		HVAC 65.64		RECEPTACLES 13.83		MISCELLANEOUS 14.40		TOTAL AMPS = 300.18

PLP PANELBOARD SCHEDULE												
MAINS: 400A MAIN LUGS ONLY						ACCESSORIES:						
TYPE: SQUARE D, NO		VOLTAGE: 208		PHASE: 3Ø, 4W		1. EQUIPMENT GROUND BAR 2. ISOLATED GROUND BAR 3. ** 'SQ. D' #001PAF CKT. #33 4. + MUST BE TYPE "HACR" BREAKER 5. * 'SQ. D' #001PA - WITH LOCKABLE CLIPS						
MOUNTING: SURFACE		WIDTH: 20		SPACE(S): 42								
SCCR: 22K AIC		SPACE(S): 42										
CKT	CKT BRK	WIRE	LOAD DESCRIPTION	(KVA)	A(KVA)	B(KVA)	C(KVA)	(KVA)	LOAD DESCRIPTION	WIRE	CKT BRK	CKT
1	20A/1P	#10s	LATHE	1.70	2.20			0.50	CHECK IN RECEPT. (I.G.)	#12s	20A/1P	2
3	20A/1P	#10s	CUTOFF SAW	1.73			1.91	0.18	BATTERY RACK RECEPT.	#10s	20A/1P	4
5	20A/1P	#12s	CRIMPER	1.77			1.95	0.18	BATTERY RACK RECEPT.	#10s	20A/1P	6
7	20A/1P	#12s	RECEPTACLES	0.54	0.90			0.36	BREAK AREA RECEPT.	#12s	20A/1P	8
9	20A/1P	#10s	STARTER/ALT. TESTER	1.68			1.68	0	SPACE			10
11	20A/1P	#10s	STARTER/ALT. TESTER	1.68			2.40	0.72	RTU RECEPTACLES	#12s	20A/1P	12
13	20A/1P	#10s	STARTER/ALT. TESTER	1.64	2.00			0.36	RECEPTACLES	#12s	20A/1P	14
15	20A/1P	#12s	RECEPTACLES	0.36			2.11	1.75	COKE MACHINE (ONLY)	#12s	**20A/1P	16
17	20A/1P	#12s	ISOLATED GRD. RECEPT.	0.36			1.08	0.72	ISOLATED GRD. RECEPT.	#12s	20A/1P	18
19	20A/1P	#12s	RECEPTACLES	0.78	0.90			0.72	ISOLATED GRD. RECEPT.	#12s	20A/1P	20
21	30A/1P	#10s	BATTERY BACKUP (I.G.)	3.00			3.36	0.36	ISOLATED GRD. RECEPT.	#12s	20A/1P	22
23	**20A/1P	#12s	WATER COOLER RECEPT.	0.90			1.62	0.72	ISOLATED GRD. RECEPT.	#12s	20A/1P	24
25	20A/1P	#12s	RECEPTACLES/IRRIGATION	1.00	1.36			0.36	ISOLATED GRD. RECEPT.	#12s	20A/1P	26
27			SPACE	0	0.00			0	SPACE			28
29	20A/1P	#12s	RECEPTACLES (OS)	1.08			1.08	0	SPACE			30
31			SPACE	0	0.00			0	SPACE			32
33	**20A/1P	#12s	TANK WATER HEATER	1.65			2.01	0.36	ISOLATED GRD. RECEPT.	#12s	20A/1P	34
35	20A/1P	#12s	ISOLATED GRD. RECEPT.	0.36			0.72	0.36	ISOLATED GRD. RECEPT.	#12s	20A/1P	36
37	*20A/1P	#12s	FIRE ALARM (F REQ'D)	0.30	0.80			0.50	PRINTER RECEPTACLE	#12s	20A/1P	38
39			SPACE	0	0.90			0.90	PHONE EQUIP./SECURITY	#12s	15A/1P	40
41			SPACE	0	0.90			0.90	RECEPTACLES	#12s	20A/1P	42
TOTAL PHASE A (KVA)		TOTAL PHASE B (KVA)		TOTAL PHASE C (KVA)		TOTAL CONNECTED LOAD (KVA)		TOTAL AMPS				
8.16		11.97		9.75		29.88		82.94				
WATER HEATER 1.65		TOTAL CONNECT AMPS = 300.18										

E TRANSFER SWITCH SCHEDULE				
POSITION	CIRCUIT BREAKER	LOAD DESCRIPTION	(KVA)	BREAKER
A	20A/1P	OFFICE COMPUTER	0.36	PLP-36
B	20A/1P	COUNTER RECEPTACLES	0.36	PLP-34
C	20A/1P	PRINTER	0.50	PLP-38
D	20A/1P	TELEPHONE EQUIPMENT/SECURITY	0.90	PLP-40
E	20A/1P	LIGHTING OFFICE/BATHROOMS (100% ON)	0.51	MP-1
F	20A/1P	LIGHTING SECURITY (100% ON)	0.64	MP-13
G	20A/1P	LIGHTING HARD PARTS (DIMMED TO 50% ON)	0.53	MP-3
H	20A/1P	LIGHTING HARD PARTS (DIMMED TO 50% ON)	0.53	MP-5
I	20A/1P	INSTALLER (ISOLATED GRD RECEPTACLE)	0.36	PLP-17
J	20A/1P	INSTALLER (RECEPTACLE)	0.18	PLP-19
GENERATOR (6,000 WATTS) RATED. MAX KVA=5.0 LOAD			4.95	TOTAL

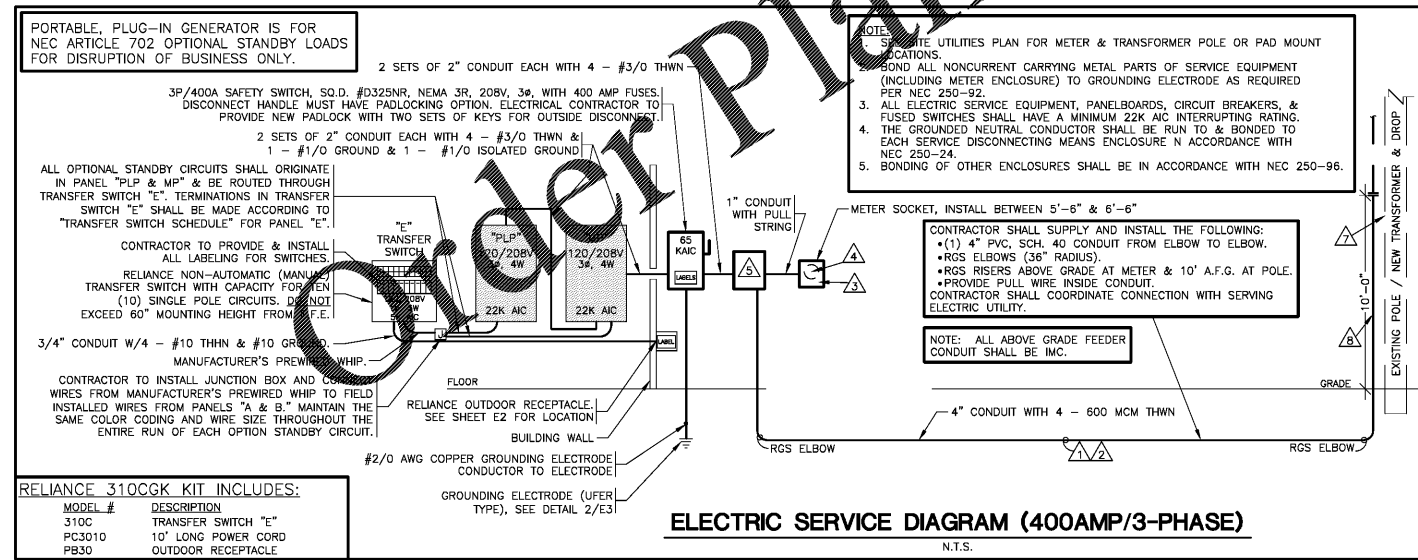
NOTE: ALL BRANCH CIRCUITS SHALL HAVE AN EQUIPMENT GROUNDING CONDUCTOR ROUTED WITH THE CIRCUIT CONDUCTORS. THIS MEANS ALL CONDUITS MUST HAVE A GREEN WIRE INSTALLED IN THEM AND SIZED IN ACCORDANCE WITH TABLE 250.122 OF THE N.E.C.

DOT-HATCH REPRESENTS CIRCUITS THAT ARE ASSOCIATED WITH OPTIONAL STANDBY GENERATOR CONTROL.

**WIRING & LABELING OF EXIT & EMERGENCY LIGHT CIRCUITS**

- SEE DETAIL 1/E1 FOR WIRING OF EXIT & EMERGENCY LIGHTS ON THESE CIRCUITS.
- ALL EXIT & EMERGENCY LIGHTING CIRCUITS SHALL BE LABELED BY THE CONTRACTOR ON THE "PANEL DIRECTORY". (SPEC: NEPA 70.408.4 & 700.12.)

ELECTRIC SERVICE RESPONSIBILITIES					
SEE SITE PLAN FOR UTILITY COMPANY CONTACT.					
ITEM NO.	DESCRIPTION (IF APPLICABLE)	FURNISHED BY		INSTALLED BY	
		UTILITY CO.	CONTRACTOR	UTILITY CO.	CONTRACTOR
▲	SERVICE LATERAL		X		X
▲	SERVICE LATERAL RACEWAY		X		X
▲	METER BASE	X			X
▲	METER	X		X	
▲	CT CABINET		X		X
▲	OH SERVICE RISER @ BUILDING		X		X
▲	TRANSFORMER POLE	X			X
▲	SERVICE RISER @ POLE		X		X
▲	TRANSFORMER PAD		X		X
▲	PAD MOUNT TRANSFORMER		X		X



EQUIPMENT LABELS CHART						
SEE ELECTRICAL SERVICE DIAGRAM.						
EQUIPMENT	LABELS (MIN)					
	SERVICE DISCONNECT	OPTIONAL STANDBY SOURCE	GENERATOR POWER INLET	SERIES RATING	AVAILABLE FAULT CURRENT	
DISCONNECT	X	X				
GENERATOR POWER INLET			X			
MP						
PLP						
E						
CT CABINET						

**GENERATOR POWER INLET LABEL**

PERMANENT LABEL SHALL BE 2 x 3 IN SIZE AND SHALL BE BLUE LETTERING ON A CONTRASTING BACKGROUND. LABEL TO BE PLACED 6 INCHES ABOVE GENERATOR RECEPTACLE.

WARNING:  
FOR CONNECTION OF A NONSEPARATELY DERIVED (FLOATING NEUTRAL) SYSTEM ONLY (MAX. 6,000 WATT GENERATOR)

EXAMPLE OF LABELING ABOVE.

**OPTIONAL STANDBY SOURCE LABEL**

PERMANENT LABEL SHALL BE 2 x 3 IN SIZE AND SHALL BE BLUE LETTERING ON A CONTRASTING BACKGROUND. LABEL TO BE PLACED ON DISCONNECT DOOR.

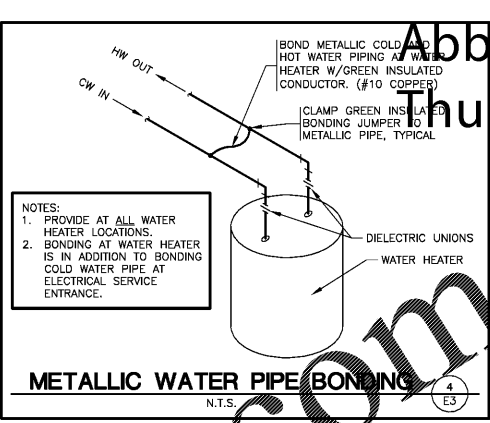
CAUTION  
TWO SOURCES OF SUPPLY

STANDBY POWER SOURCE: PORTABLE 6kw GENERATOR  
LOCATION: OVERHEAD DOOR.

EXAMPLE OF OPTIONAL STANDBY SOURCE LABELING ABOVE.

**SERVICE DISCONNECT LABEL**

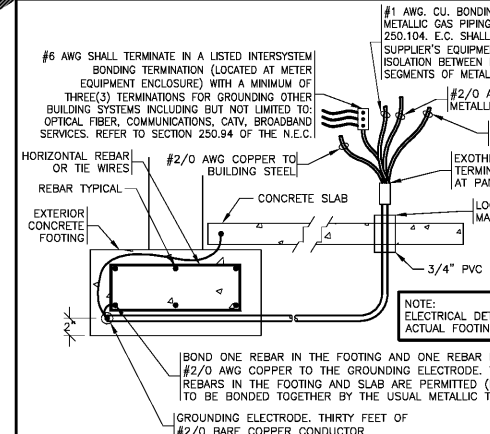
THE SERVICE DISCONNECTING MEANS SHALL BE PROPERLY MARKED "SERVICE DISCONNECT". REFER TO SPEC SECTION 26 00 20 FOR OTHER IDENTIFICATION REQUIREMENTS.



**BONDING REQUIREMENTS**  
N.T.S.

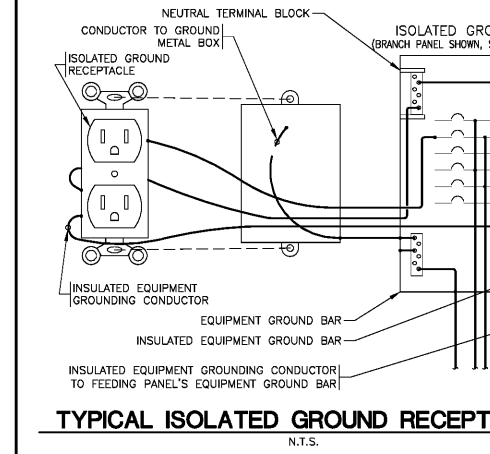
NOTE:  
1. BOND ALL NONCURRENT CARRYING METAL PARTS OF SERVICE EQUIPMENT (INCLUDING METER ENCLOSURE) TO GROUNDING ELECTRODE AS REQUIRED. PER NEC 250-92.  
2. THE GROUNDING NEUTRAL CONDUCTOR SHALL BE RUN TO AND BONDED TO EACH SERVICE DISCONNECTING MEANS ENCLOSURE IN ACCORDANCE WITH NEC 250-24.  
3. BONDING OF OTHER ENCLOSURES SHALL BE IN ACCORDANCE WITH NEC 250-96.

SERVICE EQUIPMENT BONDING & BONDING SHALL BE IN ACCORDANCE WITH:  
\*NEC 250-28 \*NEC 250-53 \*NEC 250-66 \*NEC 250-90 \*NEC 250-92 \*NEC 250-130



**GROUNDING ELECTRODE (UFER TYPE) & BONDING JUMPER(S) DETAIL**  
N.T.S.

NOTE:  
GROUNDING ELECTRODE TEST MEASURE AND RECORD GROUND RESISTANCE FROM SYSTEM NEUTRAL CONNECTION AT SERVICE ENTRANCE TO CONVENIENT GROUND REFERENCE POINT USING SUITABLE GROUND TESTING EQUIPMENT. MAXIMUM ACCEPTABLE RESISTANCE: 10 OHMS. WHEN RESISTANCE EXCEEDS 10 OHMS; DRIVE AND BOND (#6 COPPER MINIMUM) ANOTHER GROUND ROD, ONE GROUND ROD LENGTH AWAY (MINIMUM 6'-0") AND REPEAT TEST. CONTINUE THIS PROCESS UNTIL RESISTANCE IS BELOW 10 OHMS.



Digitally signed by Abby L Thurman  
DN: c=US, o=Abby L Thurman, ou=Abby L Thurman, cn=Abby L Thurman  
Date: 2023.04.10 10:23:33 -0500  
04/10/2020

ABBY L. THURMAN  
FL Lic #86329  
Firm Lic #27905

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**ELECTRICAL SCHEDULES**

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DATE: **04/01/2020**

REVISION:

PROJECT NUMBER: **OF7**

SHEET NUMBER

**E3**