

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														
MANS 225A MAIN LUGS ONLY			VOLTAGE: 208			ACCESSORIES								
TYPE: SQUARE D, NQDD			PHASE: 3 Ph, 4W			1. EQUIPMENT GROUND BAR								
MOUNTING SURFACE			WIDTH: 20 INCHES			2. ISOLATED GROUND BAR								
SCCR: 22K AIC			SPACE(S): 42			3. "SQ. D" #001PA WITH LOCKABLE CLIPS								
						4. SUB FEED LUGS								
CKT	CKT BRK	WIRE	LOAD DESCRIPTION	(KVA)	A(KVA)	B(KVA)	C(KVA)	(KVA)	LOAD DESCRIPTION	WIRE	CKT BRK	CKT		
1	20A1P	#12s	LIGHTING/EX.FAN	0.50	0.50				SPACE			2		
3	20A1P	#12s	LIGHTING	0.97		0.97			SPACE			4		
5	20A1P	#10s	LIGHTING	1.25			1.25		SPACE			6		
7	20A1P	#12s	LIGHTING	0.94	0.94				SPACE			8		
9	20A1P	#12s	LIGHTING	0.72		0.72			SPACE			10		
11	20A1P	#12s	LIGHTING	0.84			0.84		SPACE			12		
13	20A1P	#12s	LIGHTING	0.47	0.47				SPACE			14		
15	20A1P	#12s	DAYLIGHTING	0.62		0.62			SPACE			16		
17			SPACE						SPACE			18		
19	20A1P	#12s	HOT BOX	0.60	0.60				SPACE			20		
21			SPACE				0.00		SPACE			22		
23	20A1P	#12s	BUILDING LIGHTING	0.29			0.29		SPACE			24		
25	20A1P	#12s	SITE LIGHTING	0.31	0.31				SPACE			26		
27	20A1P	#12s	SITE LIGHTING	0.16		0.16			SPACE			28		
29	20A1P	#10s	SITE SIGN	1.30			1.30		SPACE			30		
31	20A1P	#10s	SITE SIGN	1.30	1.30				SPACE			32		
33	**20A1P	#12s	LED SIGN BLDG	1.20		1.20			SPACE			34		
35			SPACE	0.03			0.03		SPACE			36		
37	20AGP	#12s	GRIDPOINT 1204	0.03	0.03				SPACE			38		
39			SPACE	0.03			0.03		SPACE			40		
41	20A1P	#12s	XFMR J-BOX	0.60			1.20	0.60	LCP	#12s	20A1P	42		
TOTAL PHASE A (KVA)			TOTAL PHASE B (KVA)			TOTAL PHASE C (KVA)			TOTAL CONNECTED (KVA)			TOTAL AMPS		
4.15			3.70			4.91			12.76			35		

PLP PANELBOARD SCHEDULE														
MANS 225A MAIN LUGS ONLY			VOLTAGE: 208			ACCESSORIES								
TYPE: SQUARE D, NQDD			PHASE: 3 Ph, 4W			1. EQUIPMENT GROUND BAR								
MOUNTING SURFACE			WIDTH: 20 INCHES			2. ISOLATED GROUND BAR								
SCCR: 22K AIC			SPACE(S): 42			3. "SQ. D" #001PAF CT. #33								
						4. "SQ. D" #001PAF CT. #33								
CKT	CKT BRK	WIRE	LOAD DESCRIPTION	(KVA)	A(KVA)	B(KVA)	C(KVA)	(KVA)	LOAD DESCRIPTION	WIRE	CKT BRK	CKT		
1	20A1P	#10s	LATHE	1.70	2.20			0.50	CHECK IN RCPT	#12s	20A1P	2		
3	20A1P	#10s	CUTOFF SAW	1.73		1.91		0.18	BATTERY RACK RCPT	#10s	20A1P	4		
5	20A1P	#12s	CRIMPER	1.77			1.95	0.18	BATTERY RACK RCPT	#10s	20A1P	6		
7	20A1P	#12s	RECEPTACLES	0.54	0.50			0.36	BREAK AREA RCPTS	#12s	20A1P	8		
9	20A1P	#12s	STARTER/ALT TESTER	1.88			1.68		SPARE			10		
11	20A1P	#12s	STARTER/ALT TESTER	1.88			2.22	0.54	RTU RECEPTACLES	#12s	20A1P	12		
13	20A1P	#12s	STARTER/ALT TESTER	1.84	2.00			0.36	RECEPTACLES	#12s	20A1P	14		
15	20A1P	#12s	RECEPTACLES	0.36		2.11		1.75	COKE MACHINE	#12s	**20A1P	16		
17	**20A1P	#12s	ISO GRND RCPTS	0.72			1.08	0.36	ISO GRND RCPTS	#12s	20A1P	18		
19	20A1P	#12s	RECEPTACLES	0.36	0.72			0.36	ISO GRND RCPTS	#12s	20A1P	20		
21	30A1P	#10s	BATTERY BACKUP IG	3.00		3.36		0.36	ISO GRND RCPTS	#12s	20A1P	22		
23	**20A1P	#12s	WATER COOLER	0.90		1.26	0.36	0.36	ISO GRND RCPTS	#12s	20A1P	24		
25	20A1P	#12s	RECEPTACLES	1.00	1.36			0.36	ISO GRND RCPTS	#12s	20A1P	26		
27	20A1P	#12s	SECURITY	0.50		0.86		0.36	ISO GRND RCPTS	#12s	20A1P	28		
29			SPACE				0.36	0.36	ISO GRND RCPTS	#12s	20A1P	30		
31			SPACE				0.36	0.36	ISO GRND RCPTS	#12s	20A1P	32		
33	**20A1P	#12s	TANK WATER HTR	1.85		2.01		0.36	ISO GRND RCPTS	#12s	20A1P	34		
35	20A1P	#12s	ISO GRND RCPTS	0.36		0.72	0.36	0.36	ISO GRND RCPTS	#12s	20A1P	36		
37			SPACE		0.50			0.50	PRINTER RCPT	#12s	20A1P	38		
39			SPACE			0.72		0.72	PHONE EQUIP RCPTS	#12s	15A1P	40		
41			SPACE			0.90	0.90	0.90	RECEPTACLES	#12s	20A1P	42		
TOTAL PHASE A (KVA)			TOTAL PHASE B (KVA)			TOTAL PHASE C (KVA)			TOTAL CONNECTED (KVA)			TOTAL AMPS		
8.04			12.65			8.49			29.18			81		

PANELBOARD SCHEDULE - MDP				
AMPS: 600A MAIN BREAKER		INCLUDE:		
VOLTAGE: 120/208, 3 PHASE 4 WIRE		NEMA 3R COVER		
TYPE: SQUARE D HCM		EQUIPMENT GROUND BAR		
KAC: 22K AIC		+ MUST BE TYPE "HACR" BREAKER		
CKT	BREAKER SIZE	WIRE SIZE	LOAD	LOAD DESCRIPTION
1	225AGP	SEE RISER	41.94	PANEL MP & PLP
2				SPACE
3	90AGP	#3s	29.54	RTU-1 (15.0 KW)
4	125AGP	#1s	43.23	RTU-2 (24.0 KW)
5	125AGP	#1s	43.23	RTU-3 (24.0 KW)
6				SPACE
TOTAL LOAD =			157.94	TOTAL AMPS
				439

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 RECEPTACLE	0.72	PLP-40
E	20A/1P	LIGHTING OFFICE/BATHROOMS	0.50	MP-1
F	20A/1P	LIGHTING HARD PARTS (DIMMED TO 40% ON)	0.36	MP-3
G	20A/1P	LIGHTING HARD PARTS (DIMMED TO 40% ON)	0.50	MP-5
H	20A/1P	LIGHTING SECURITY (DIMMED TO 40% ON)	0.19	MP-13
I	20A/1P	INSTALLER ISOLATED GRD RECEPTACLE	0.72	PLP-17
J	20A/1P	INSTALLER (RECEPTACLE)	0.36	PLP-19
GENERATOR (6,000 WATTS) RATED, MAX KVA=5.0 LOAD				4.60 TOTAL

ELECTRIC SERVICE RESPONSIBILITIES				
SEE SITE PLAN FOR UTILITY COMPANY CONTACT.				
ITEM NO.	DESCRIPTION (IF APPLICABLE)	FURNISHED BY	INSTALL BY	
		UTILITY CO.	CONTRACTOR	UTILITY CO. / CONTRACTOR
1	SERVICE LATERAL	X		X
2	SERVICE LATERAL RACEWAY	X		X
3	METER BASE		X	X
4	METER		X	X
5	CT CABINET	X		X
6	SEE RISER POLE	X		X
7	SERVICE DROP	X		X

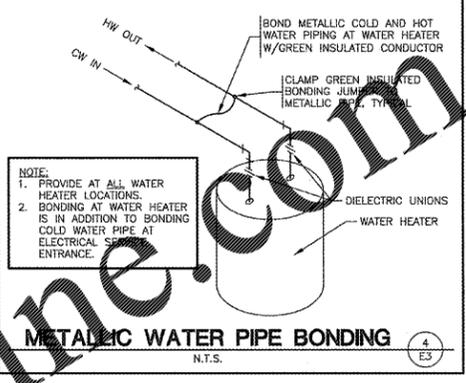
EQUIPMENT LABELS CHART						
SEE ELECTRICAL SERVICE DIAGRAM.						
EQUIPMENT	SERVICE DISCONNECT	STANDBY SOURCE	SERIES RATING	GENERATOR POWER INLET	AVAILABLE FAULT CURRENT	
MDP	X	X				
MP						
PLP						
E						
GENERATOR POWER INLET				X		
CT CABINET						

**SERVICE DISCONNECT LABEL**  
THE SERVICE DISCONNECTING MEANS SHALL BE PROPERLY MARKED. SERVICE DISCONNECT, REFER TO NEC SECTION 26\_00\_20 FOR IDENTIFICATION PLATE REQUIREMENTS.

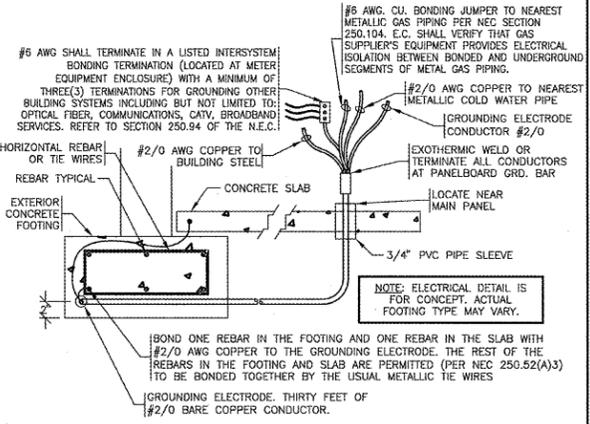
**WIRING & LABELING OF EXIT & EMERGENCY LIGHT CIRCUITS**  
1. SEE DETAIL 1/E1 FOR WIRING OF EXIT & EMERGENCY LIGHTS ON THESE CIRCUITS.  
2. ALL EXIT & EMERGENCY LIGHTING CIRCUITS SHALL BE LABELED BY THE CONTRACTOR ON THE "PANEL DIRECTORY". (SPEC: NEPA 70\_408.4 & 700.12.)

**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.

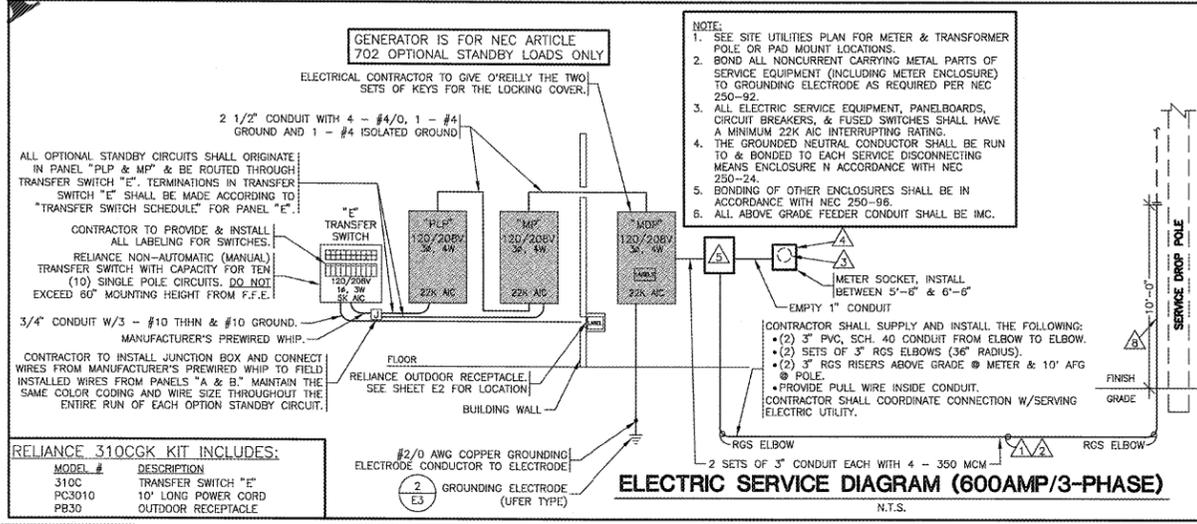
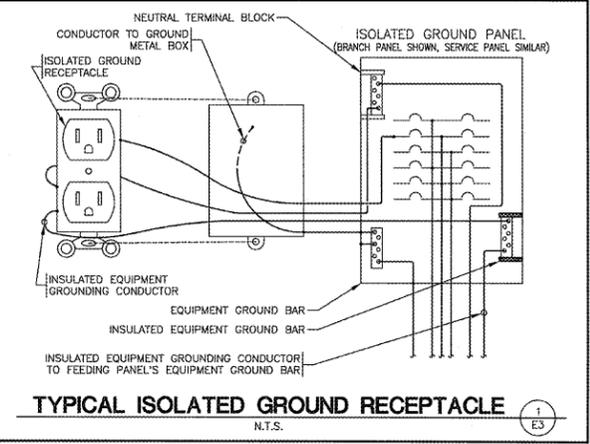
**GENERATOR POWER INLET LABEL**  
PERMANENT LABEL SHALL BE 2 x 3 IN SIZE AND SHALL BE BLUE LETTERING ON A CONTRASTING BACKGROUND. LABEL TO BE PLACED 6 INCHES ABOVE GENERATOR RECEPTACLE.  
**WARNING:**  
FOR CONNECTION OF NONSEPARATELY DERIVED (FLOATING NEUTRAL) SYSTEM ONLY  
(MAX. 6,000 WATT GENERATOR)



**METALLIC WATER PIPE BONDING**  
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 250-24c.  
3. BONDING OF OTHER ENCLOSURES SHALL BE IN ACCORDANCE WITH NEC 250-96.  
SERVICE EQUIPMENT GROUNDING & BONDING SHALL BE IN ACCORDANCE WITH: NEC 250-24, NEC 250-28, NEC 250-53, NEC 250-86, NEC 250-90, NEC 250-92, NEC 250-130  
**BONDING REQUIREMENTS**  
N.T.S.



**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.



Order Plans

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PROJECT:  
**NEW O'REILLY AUTO PARTS STORE**  
**OLD FRANKLIN TURNPIKE**  
**ROCKY MOUNT, VA**  
**ELECTRICAL DETAILS**

**O'Reilly Auto Parts**  
CORPORATE OFFICES  
233 SOUTH PATTERSON  
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COMM # 4252  
DATE: 11-2-18  
REVISION  
DATE:

E3