



ENGINEER OF RECORD
ABBY L. THURMAN
ENGINEER LICENSE NUMBER
38151-E
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PROJECT:
NEW O'REILLY AUTO PARTS STORE
11178 COUNTY LINE ROAD
MADISON, AL 35758
GRIDPOINT EMS

O'Reilly AUTO PARTS
CORPORATE OFFICES
235 SOUTH PATTERSON
SPRINGFIELD, MISSOURI 65802
(417) 882-6874 TELEPHONE

DRAWN BY:
CEV
DATE:
05/10/2019
CHECKED BY:
AT/BC
REVISION:
PROJECT NUMBER:
19098-MS3

SHEET NUMBER
EM1.1

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GRIDPOINT CONTACT
PLEASE CONTACT GRIDPOINT INSTALLATION MANAGEMENT @ 865-800-8906 FOR INSTALLATION CONTACT BASED ON THE STORE LOCATION. EMAIL: SUPPORT@GRIDPOINT.COM

O'REILLY PREFERRED ONE LINE DIAGRAM
5305 VALLEY PARK DRIVE SUITE # 2 - ROANOKE, VA - 24069

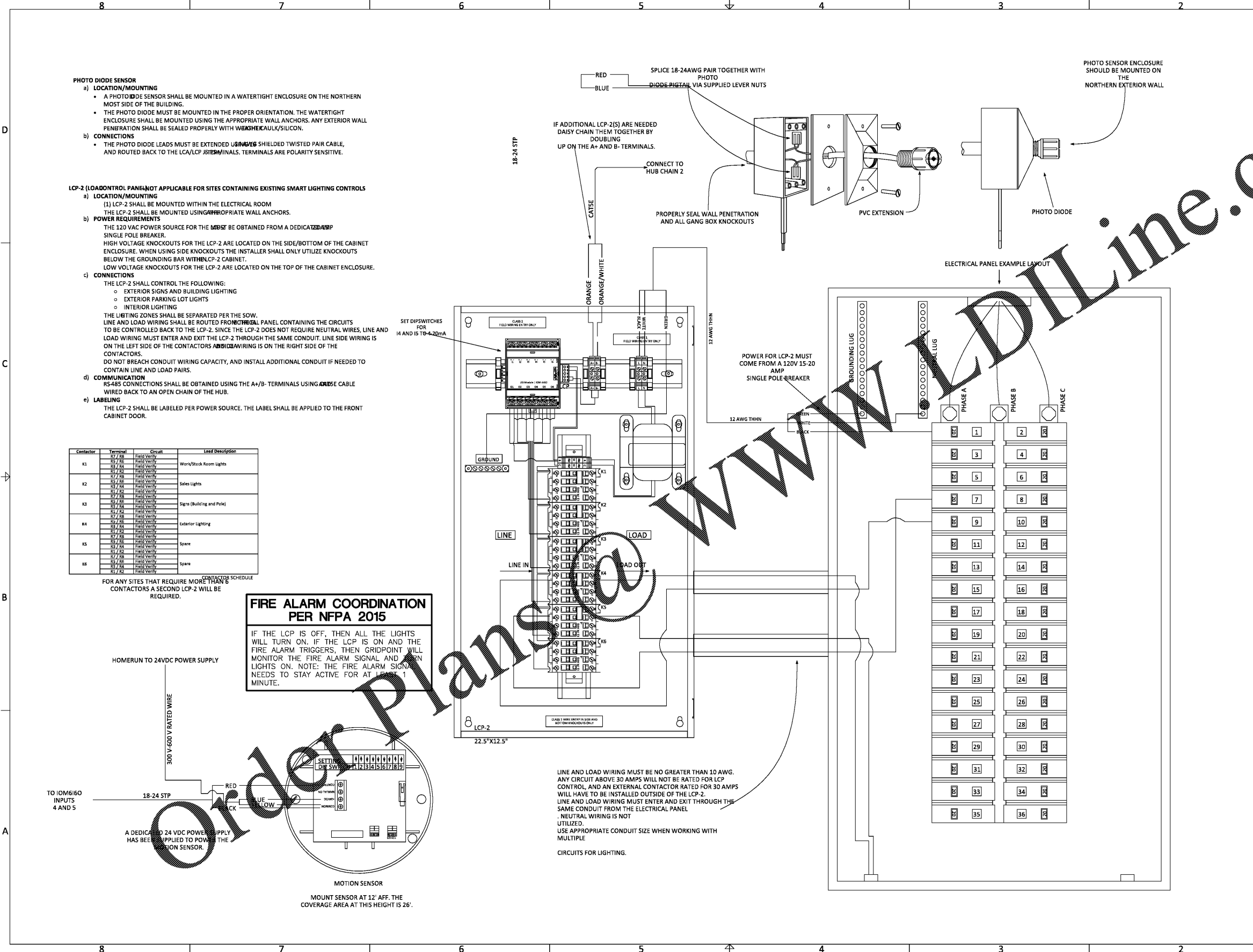
PRINTS ARE FOR:
DESIGN
REVIEW
PERMIT
BIDDING
CONSTRUCTION

REVISIONS
DESCRIPTION:
BY:
DATE:

SHEET TITLE:
LIGHTING CONTROL AND MOTION SENSOR

FILE NAME:
O'REILLY PREFERRED ONE LINE DIAGRAM
DATE: 9/14/2018
DRAWN BY: DAVID COLWELL
SHEET NO:

EM 1.1



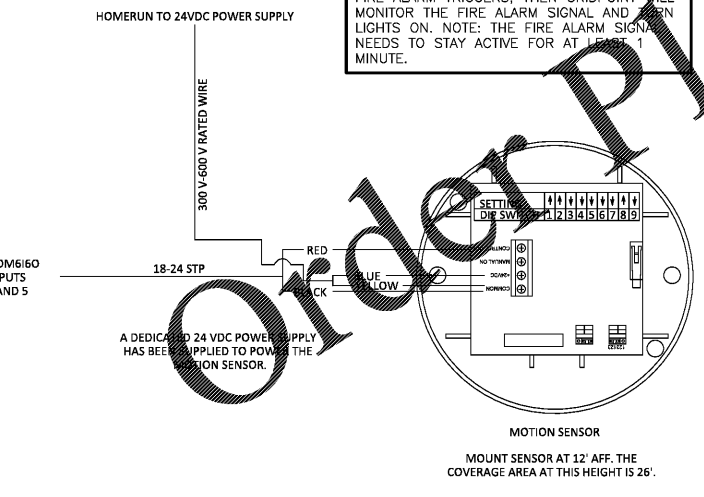
- PHOTO DIODE SENSOR**
- a) **LOCATION/MOUNTING**
 - A PHOTO DIODE SENSOR SHALL BE MOUNTED IN A WATERTIGHT ENCLOSURE ON THE NORTHERN MOST SIDE OF THE BUILDING.
 - THE PHOTO DIODE MUST BE MOUNTED IN THE PROPER ORIENTATION. THE WATERTIGHT ENCLOSURE SHALL BE MOUNTED USING THE APPROPRIATE WALL ANCHORS. ANY EXTERIOR WALL PENETRATION SHALL BE SEALED PROPERLY WITH WEATHERCAULK/SILICON.
 - b) **CONNECTIONS**
 - THE PHOTO DIODE LEADS MUST BE EXTENDED USING SHIELDED TWISTED PAIR CABLE, AND ROUTED BACK TO THE LCA/LCP TERMINALS. TERMINALS ARE POLARITY SENSITIVE.

- LCP-2 (LOAD CONTROL PANEL) NOT APPLICABLE FOR SITES CONTAINING EXISTING SMART LIGHTING CONTROLS**
- a) **LOCATION/MOUNTING**
 - (1) LCP-2 SHALL BE MOUNTED WITHIN THE ELECTRICAL ROOM
 - THE LCP-2 SHALL BE MOUNTED USING APPROPRIATE WALL ANCHORS.
 - b) **POWER REQUIREMENTS**
 - THE 120 VAC POWER SOURCE FOR THE LCP-2 MUST BE OBTAINED FROM A DEDICATED 20 AMP SINGLE POLE BREAKER.
 - HIGH VOLTAGE KNOCKOUTS FOR THE LCP-2 ARE LOCATED ON THE SIDE/BOTTOM OF THE CABINET ENCLOSURE. WHEN USING SIDE KNOCKOUTS THE INSTALLER SHALL ONLY UTILIZE KNOCKOUTS BELOW THE GROUNDING BAR WITHIN THE LCP-2 CABINET.
 - LOW VOLTAGE KNOCKOUTS FOR THE LCP-2 ARE LOCATED ON THE TOP OF THE CABINET ENCLOSURE.
 - c) **CONNECTIONS**
 - THE LCP-2 SHALL CONTROL THE FOLLOWING:
 - EXTERIOR PARKING AND BUILDING LIGHTING
 - EXTERIOR PARKING LOT LIGHTS
 - INTERIOR LIGHTING
 - THE LIGHTING ZONES SHALL BE SEPARATED PER THE SOW.
 - LINE AND LOAD WIRING SHALL BE ROUTED FROM THE ELECTRICAL PANEL CONTAINING THE CIRCUITS TO BE CONTROLLED BACK TO THE LCP-2. SINCE THE LCP-2 DOES NOT REQUIRE NEUTRAL WIRES, LINE AND LOAD WIRING MUST ENTER AND EXIT THE LCP-2 THROUGH THE SAME CONDUIT. LINE SIDE WIRING IS ON THE LEFT SIDE OF THE CONTACTORS AND LOAD WIRING IS ON THE RIGHT SIDE OF THE CONTACTORS.
 - DO NOT BREACH CONDUIT WIRING CAPACITY, AND INSTALL ADDITIONAL CONDUIT IF NEEDED TO CONTAIN LINE AND LOAD PAIRS.
 - d) **COMMUNICATION**
 - RS-485 CONNECTIONS SHALL BE OBTAINED USING THE A+/B- TERMINALS USING ORANGE CABLE WIRED BACK TO AN OPEN CHAIN OF THE HUB.
 - e) **LABELING**
 - THE LCP-2 SHALL BE LABELED PER POWER SOURCE. THE LABEL SHALL BE APPLIED TO THE FRONT CABINET DOOR.

Contactor	Terminal	Circuit	Load Description
K1	27 / 28	Field Verify	Work/Stock Room Lights
	29 / 30	Field Verify	
	31 / 32	Field Verify	
K2	33 / 34	Field Verify	Sales Lights
	35 / 36	Field Verify	
	37 / 38	Field Verify	
K3	39 / 40	Field Verify	Signs (Building and Pole)
	41 / 42	Field Verify	
	43 / 44	Field Verify	
K4	45 / 46	Field Verify	Exterior Lighting
	47 / 48	Field Verify	
	49 / 50	Field Verify	
K5	51 / 52	Field Verify	Spare
	53 / 54	Field Verify	
	55 / 56	Field Verify	
K6	57 / 58	Field Verify	Spare
	59 / 60	Field Verify	
	61 / 62	Field Verify	

FOR ALL SITES THAT REQUIRE MORE THAN 6 CONTACTORS A SECOND LCP-2 WILL BE REQUIRED.

FIRE ALARM COORDINATION PER NFPA 2015
IF THE LCP IS OFF, THEN ALL THE LIGHTS WILL TURN ON. IF THE LCP IS ON AND THE FIRE ALARM TRIGGERS, THEN GRIDPOINT WILL MONITOR THE FIRE ALARM SIGNAL AND TURN LIGHTS ON. NOTE: THE FIRE ALARM SIGNAL NEEDS TO STAY ACTIVE FOR AT LEAST 1 MINUTE.



LINE AND LOAD WIRING MUST BE NO GREATER THAN 10 AWG. ANY CIRCUIT ABOVE 30 AMPS WILL NOT BE RATED FOR LCP CONTROL, AND AN EXTERNAL CONTACTOR RATED FOR 30 AMPS WILL HAVE TO BE INSTALLED OUTSIDE OF THE LCP-2. LINE AND LOAD WIRING MUST ENTER AND EXIT THROUGH THE SAME CONDUIT FROM THE ELECTRICAL PANEL. NEUTRAL WIRING IS NOT UTILIZED. USE APPROPRIATE CONDUIT SIZE WHEN WORKING WITH MULTIPLE CIRCUITS FOR LIGHTING.

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