

TWR Lighting, Inc. **MARK**

Enlightened Technology®

10810 W. LITTLE YORK RD. #130 - HOUSTON, TX 77041-4051
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web: www.twrlighting.com

IMPORTANT!!!

PLEASE TAKE THE TIME TO FILL OUT THIS FORM COMPLETELY.
FILE IT IN A SAFE PLACE. IN THE EVENT YOU EXPERIENCE
PROBLEMS WITH OR HAVE QUESTIONS CONCERNING YOUR
CONTROLLER, THE FOLLOWING INFORMATION IS NECESSARY
TO OBTAIN PROPER SERVICE AND PARTS.

MODEL # AA0MTSS24VDC32M

SERIAL #

PURCHASE DATE

PURCHASED FROM

TWR Lighting, Inc. **MARK**

Enlightened Technology®

AA0MTSS24VDC32M CONTROLLER

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WARRANTY & RETURN POLICY

RETURN MERCHANDISE AUTHORIZATION (RMA) FORM

AA0MTSS24VDC32M CONTROLLER

APPENDIX

CHASSIS COMPONENT LAYOUT	1265-R (REV F)
SCHEMATIC LAYOUT	1265-S (REV E)
CURRENT MEASUREMENT RELAY	101104 (REV A)
L864 LED 24V DC LEDBEACON3SL.....	101084
L810 LED 24VDC OBSTRUCTION LIGHTS.....	100895 (REV A)
JB5/7SLSSR	101058
A1MET24VDC TOWER LIGHTING KIT 201' TO 350"	T1693
PHOTOCELL MOUNT KIT (OPTIONAL)	100885
10 x 8 ENCLOSURE POLE MOUNTING KIT (OPTIONAL).....	100886 (REV B)
12 x 10 ENCLOSURE POLE MOUNTING KIT (OPTIONAL).....	100888 (REV A)

AA0MTSS24VDC32M CONTROLLER

1.0 GENERAL INFORMATION

The TWR Lighting®, Inc. (TWR®) Model AA0MTSS24VDC32M Controller is for the A1MET lighting of towers 201' to 350' AGL (above ground level) in accordance with the FAA Advisory Circular 70/7460-1L.

One (1) LEDBEACON3SL should be placed at the top, and two (2) LED Sidelights should be placed at mid-level, with respect to overall tower height.

The flash rate of the LEDBEACON3SL and the LED Sidelights is 30 FPM. All of the fixtures will flash in sync.

A by-pass switch (SW1) allows the controller to be turned on during daylight hours without covering the photocell. This is particularly helpful since the controller can be mounted indoors while the photocell is outdoors. SW1 can be operated by turning the toggle switch up to the "on" position.

The photocell is the three (3) blade, twist to lock, type.

Power supplied to the controller shall be 24V DC.

The controller housing is rated at NEMA 4X. It is suitable for indoor or outdoor mounting.

Controller functions that are monitored by remote alarms in the form of dry contact closures (Form C) are as follows:

POWER FAILURE	Monitors 24V DC to the controller. Alarms in the event of power failure.
LIGHTS "ON"	Gives an indication whenever the controller is activated.
LEDBEACON3SL/ LED SIDELIGHTS	Will give an alarm when the LEDBEACON3SL fails, or if one (1) of the two (2) LED Sidelights fails.

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2.0 INSTALLATION

2.1 MOUNTING THE CONTROL CABINET

(Refer to Drawing 1265-R)

The power supply control cabinet can be located at the base of the structure or in an equipment building. Mounting footprints are shown on drawing 1265-R. Power wiring to the control cabinet should be in accordance with local methods and National Electrical Codes (NEC).

2.1.1 If the control cabinet is mounted inside an equipment building, the photocell should be mounted vertically on ½" conduit outside the building above the eaves facing north. Wiring from the photocell socket to the control cabinet should consist of one (1) each, red, black, and blue wires. The black wire is connected to the socket terminal marked "N," the red wire is connected to the socket terminal marked "Lo," and the blue wire is connected to the socket terminal marked "Li." The photocell should be positioned so that it does not "see" ambient light, which will prevent it from switching to the nightmode.

2.1.2 If the control cabinet is mounted outside an equipment building, the photocell should be mounted vertically on ½" conduit so the photocell is above the control cabinet. Care must be taken to assure that the photocell does not "see" any ambient light that would prevent it from switching into the nightmode. The photocell wiring is the same as in 2.1.1.

The wiring from the photocell, input voltage, LEDBEACON3SL and the LED Sidelights should enter the control cabinet through the watertight connectors in the bottom of the cabinet. Inside the cabinet, the connections will be made on the terminal strips located at the bottom of the chassis. These connections are made as follows:

2.2 EXTERNAL PHOTOCELL WIRING

(Refer to Drawing 1265-R)

2.2.1 Connect the **BLACK** wire from the photocell to terminal block TB2 marked "-."

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2.2.2 Connect the **RED** wire from the photocell to terminal block TB2 marked “SSR.”

2.2.3 Connect the **BLUE** wire from the photocell to terminal block TB2 marked “+.”

2.3 POWER WIRING

(Refer to Drawing 1265-R)

2.3.1 Power wiring to the control cabinet should be in accordance with local methods and National Electrical Codes (NEC).

2.3.2 Connect the positive 24V DC to terminal block TB1 marked “+.”

2.3.3 Connect the negative wire to one (1) of the terminal blocks on TB1 marked “-.”

2.3.4 Connect the “earth” ground wire to the ground lug located to the right fuse holder marked “L.”

2.4 LEDBEACON3SL AND LED SIDELIGHT WIRING

(Refer to Drawings 1265-R, T1693, and 101058)

2.4.1 Connect the **BLACK** wire from the LEDBEACON3SL to terminal block TB1, terminal #2 inside the JB5/7SLSSR. (Refer to Drawing 101058)

2.4.2 Connect the **WHITE** wire from the LEDBEACON3SL to terminal block TB1, terminal #1 inside the JB5/7SLSSR. (Refer to Drawing 101058)

2.4.3 Connect the **RED** wire from the LEDBEACON3SL to terminal block TB1, terminal #4 inside the JB5/7SLSSR. (Refer to Drawing 101058)

2.4.4 Connect the **GREEN** wire from the LEDBEACON3SL to terminal block TB1, terminal #3 inside the JB5/7SLSSR. (Refer to Drawing 101058)

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2.4.5. Connect both **BLACK** wires from the LED sidelights to terminal block TB1, terminal #7 inside the JB5/7SLSSR. (Refer to Drawing 101058)

2.4.6 Connect both **WHITE** wires from the LED sidelights to terminal block TB1, terminal # 5 inside the JB5/7SLSSR. (Refer to Drawing 101058)

2.4.7 Connect both **GREEN** wires from the LED sidelights to terminal block TB1, terminal # 3 inside the JB5/7SLSSR. (Refer to Drawing 101058)

2.5 OBSTRUCTION FIXTURE ALARM WIRING (Refer to Drawings 1265-R and 1265-S)

2.5.1 Alarm relays K1, K2, and Module M1 are provided for independent contact closures for: Power Failure, Lights “ON,” and LEDBEACON3SL / LED Sidelight Burnout.

2.5.2 Alarm wiring: To utilize all of the red light alarms, the customer will need three (3) pairs of wires to interface with the alarm device. One (1) wire from each of the three (3) pairs will terminate at the points marking common (C). The remaining wire from each pair will terminate as follows:

LEDBEACON3SL/ LED Sidelight Burnout:	Connect to Module M1, terminal #14, for normally open, (or) terminal #12, for normally closed monitoring.
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Power Failure Alarm:	Connect to relay K1, terminal #3, for normally closed, (or) terminal #4, for normally open monitoring.
-----------------------------	--

Lights “ON” Alarm:	Connect to relay K2, terminal #3, for normally closed, (or) terminal #4, for normally open monitoring.
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2.5.3 Alarm Testing: To test alarms, follow the procedures using an “ohm” meter between alarm common and alarm points.

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Power Failure

Open 24V DC circuit.

Lights “ON”

Operate photocell by-pass switch (SW1)
or cover the photocell.

**LEDBEACON3SL, and
LED SIDELIGHTS**

Break the circuit on the fuse holder
marked “L.”

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3.0 THEORY OF OPERATION

3.1 POWER SUPPLY

24V DC enters the controller from the main power source. Line sits at the 6589C-FAA photocell waiting to be switched and also keeps the power failure relay K1 energized. When the 6589C-FAA photocell is activated, line SSR energizes K2 “Lights On” relay. This can also be accomplished by using the photocell by-pass switch (SW1). The output from this controller will go to the JB5/7SLSSR for LEDBEACON3SL and LED sidelights synchronization.

3.2 LEDBEACON3SL and LED SIDELIGHTS

SSR is being sent to Module M1, and then to the fuse holder “L.” Module M1 is the current sensor for all the LED fixtures. If either the LEDBEACON3SL, or one (1) of the LED Sidelights burns out, then Module M1 will send a contact closure, along with a visual indication.

3.3 JB5/7SLSSR

This is a control box to synchronize the sidelights to the LEDBEACON3SL. (Refer to Drawings 101084, 101058, and T1693)

WARNING

The use of non-OEM parts or modifications to original equipment design will void the manufacturer warranty and could invalidate the assurance of complying with FAA requirements as published in Advisory Circular 150/5345-43.

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4.0 MAINTENANCE GUIDE

4.1 RED OBSTRUCTION FIXTURE

No scheduled maintenance is required. Perform on an as needed basis.

4.2 CONTROLLER

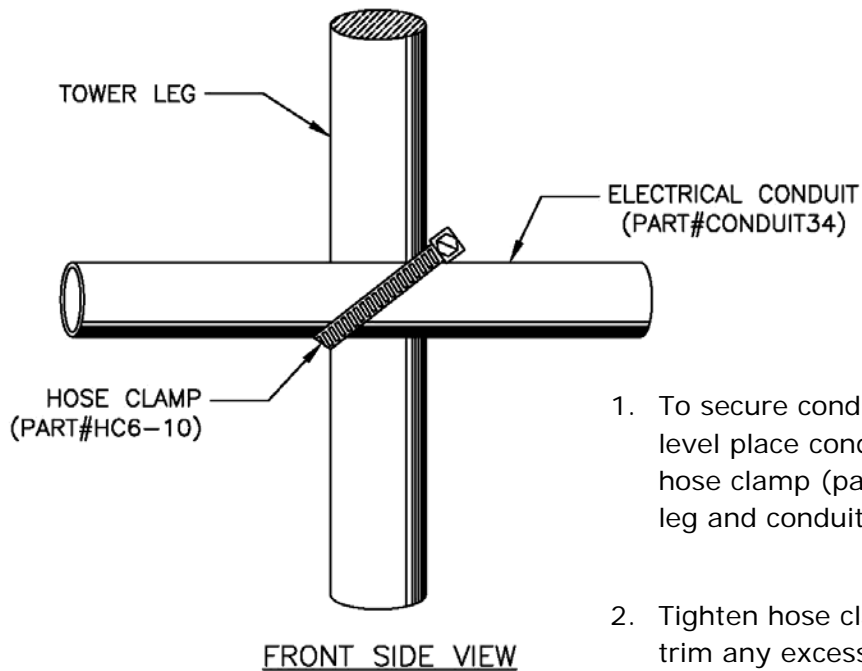
No scheduled maintenance is required. Perform on an as needed basis.

4.3 PHOTOCELL

The photocell is a sealed unit. No maintenance is needed or required other than replacement as necessary.

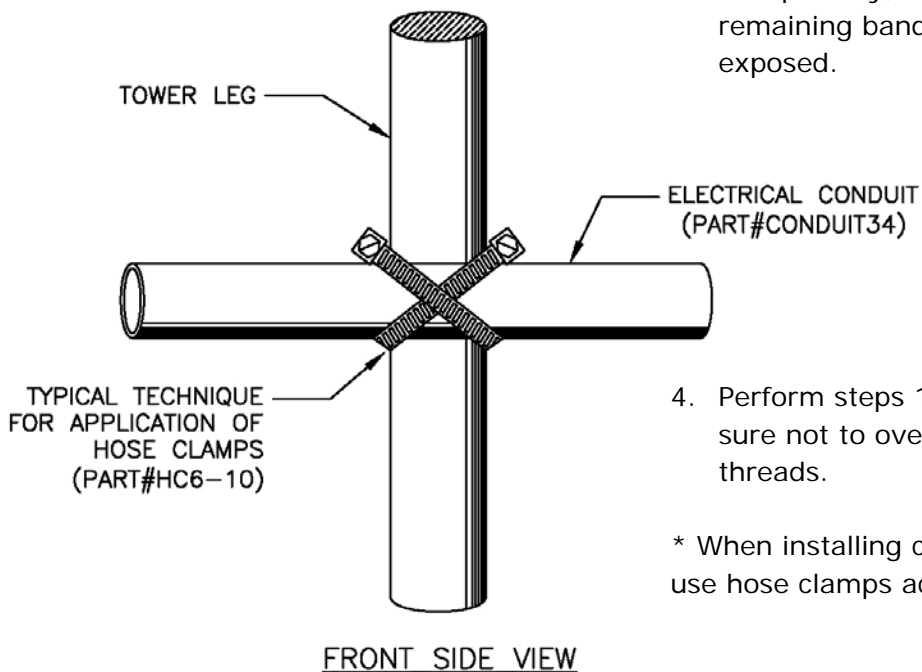
Securing Electrical Conduit

TWR Provides hose clamps (Part#HC6-10) for securing the lighting system conduit to a structure using the following method. Hose clamps require 5/16" tightening tool such as nut driver, wrench, or ratchet bit.



1. To secure conduit (part#CONDUIT34) at side marker level place conduit horizontally to structure leg. Place hose clamp (part#HC6-10) diagonally across structure leg and conduit.
2. Tighten hose clamp firmly. Once hose clamp is secured trim any excess material. Be sure to bend edge of band to prevent any sharp edges being exposed.

3. Place second hose clamp diagonally in the opposite direction of first hose clamp. Repeat to tighten hose clamp firmly, trim any excess material and bend remaining band to prevent any sharp edges being exposed.



4. Perform steps 1 through 3 at remaining structure legs. Be sure not to overtighten hose clamp to prevent damage to threads.

* When installing conduit, other than in horizontal position, use hose clamps accordingly to ensure a secure installation.

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5.0 MAJOR COMPONENTS PARTS LIST

QTY	PART NUMBER	DESCRIPTION
1	6589C-FAA	Photocell 12 – 48 V DC
1	VJ1008HPL1X004	Enclosure
2	PB27E122	Octal Sockets (K1 & K2)
6	8WA1204	Terminal Blocks (TB1 & TB2)
2	8WA1808	End Stop
2	KRPA11DG24VDC	DPDT Relay (K1 & K2)
1	SSPIGTAIL DC	20' Photocell Pigtail DC
1	STJ01002	15 amp SPDT Switch (SW1)
1	RM35JA32MRSP01	LEDBEACON3SL / LED Sidelight Current Sensor (M1)
1	USM-1	Fuse holder
2	KTK-3	3 amp Fuse
1	JB5/7SLSSR	Synchronize Control Box

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6.0 SUGGESTED SPARE PARTS LIST

QTY	PART NUMBER	DESCRIPTION
1	6589C-FAA	Photocell 12 – 48 V DC
1	KRPA11DG24VDC	24V DC DPDT Relay
1	KTK-3	3 amp Fuse
1	RM35JA32MRSP01	LED BEACON3SL / LED Sidelight Current Sensor (M1)

TWR Lighting[®], Inc. HARK[®]

Enlightened Technology[®]

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Warranty & Return Policy

TWR Lighting[®], Inc. (“TWR[®]”) warrants its products (other than “LED Product”) against defects in design, material (excluding incandescent bulbs) and workmanship for a period ending on the earlier of two (2) years from the date of shipment or one (1) year from the date of installation.

TWR Lighting[®], Inc. (“TWR[®]”) warrants its “LED Product” against defects in design, material and workmanship for a period of five (5) years from the date of shipment. TWR[®], at its sole option, will, itself, or through others, repair, replace or refund the purchase price paid for “LED Product” that TWR[®] verifies as being inoperable due to original design, material, or workmanship. All warranty replacement “LED Product” is warranted only for the remainder of the original warranty of the “LED Product” replaced. Replacement “LED Product” will be equivalent in function, but not necessarily identical, to the replaced “LED Product.”

TWR Lighting[®], Inc. (“TWR[®]”) warrants its “LED Product” against light degradation for a period of five (5) years from the date of installation. TWR[®], at its sole option, will, itself, or through others, repair, replace, or refund the purchase price paid for “LED Product” that TWR[®] verifies as failing to meet 75% of the minimum intensity requirements as defined in the FAA Advisory Circular 150/5345-43G dated 09/26/12. All warranty replacement “LED Product” is warranted only for the remainder of the original warranty of the “LED Product” replaced. Replacement “LED Product” will be equivalent in function, but not necessarily identical, to the replaced “LED Product.”

Replacement parts (other than “LED Product”) are warranted for 90 days from the date of shipment.

Conditions not covered by this Warranty, or which might void this Warranty are as follows:

- x Improper Installation or Operation
- x Misuse
- x Abuse
- x Unauthorized or Improper Repair or Alteration
- x Accident or Negligence in Use, Storage, Transportation, or Handling
- x Any Acts of God or Nature
- x **Non-OEM Parts**

The use of Non-OEM parts or modifications to original equipment design will void the manufacturer warranty and could invalidate the assurance of complying with FAA requirements as published in Advisory Circular 150/5345-43.



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Warranty & Return Policy (continued)

Field Service – Labor, Travel, and Tower Climb are not covered under warranty. Customer shall be obligated to pay for all incurred charges. An extensive network of certified and insured Service Representatives is available if requested.

Repair, Replacement or Product Return RMA Terms – You must first contact our Customer Service Department at **713-973-6905** to acquire a Return Merchandise Authorization (RMA) number in order to return the product(s). Please have the following information available when requesting an RMA number:

- x The contact name and phone number of the tower owner or
- x The contact name and phone number of the contractor
- x The site name and number
- x The part number(s)
- x The serial number(s) (if any)
- x A description of the problem
- x The billing information
- x The Ship To address

This RMA number must be clearly visible on the outside of the box. If the RMA number is not clearly labeled on the outside of the box, your shipment will be refused. Please ensure the material you are returning is packaged carefully. **The warranty is null and void if the product(s) are damaged in the return shipment.**

All RMAs must be received by TWR LIGHTING®, INC., 10810 W. LITTLE YORK RD. #130, HOUSTON, TX 77041-4051, within 30 days of issuance.

Upon full compliance with the Return Terms, TWR® will replace, repair and return, or credit product(s) returned by the customer. It is TWR®'s sole discretion to determine the disposition of the returned item(s).

TWR Lighting, Inc.

Enlightened Technology®

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Warranty & Return Policy (continued)

RMA Replacements – Replacement part(s) will be shipped and billed to the customer for product(s) considered as Warranty, pending return of defective product(s). When available, a certified reconditioned part is shipped as warranty replacement with a Return Merchandise Authorization (RMA) number attached. Upon receipt of returned product(s), inspection, testing, and evaluation will be performed to determine the cause of defect. The customer is then notified of the determination of the testing.

- x Product(s) that is deemed defective and/or unrepairable and covered under warranty - a credit will be issued to the customer's account.
- x Product(s) found to have no defect will be subject to a **\$75.00 per hour testing charge (1 hour minimum), which will be invoiced to the customer.** At this time the customer may decide to have the tested part(s) returned and is responsible for the return charges.
- x Product(s) under warranty, which the customer does not wish returned, the customer will be issued a credit against the replacement invoice.

RMA Repair & Return – A Return Merchandise Authorization (RMA) will be issued for all part(s) returned to TWR® for repair. Upon receipt of returned product(s), inspection, testing, and evaluation will be performed to determine the cause of defect. The customer is then notified of the determination of the testing. If the returned part(s) is deemed unrepairable, or the returned part(s) is found to have no defect, the customer will be subject to a **\$75.00 per hour testing charge (1 hour minimum), which will be invoiced to the customer.** Should the returned parts be determined to be repairable, a written estimated cost of repair will be sent to the customer for their written approval prior to any work being performed. In order to have the tested part(s) repaired and/or returned, the customer must issue a purchase order and is responsible for the return shipping charges.

RMA Return to Stock – Any product order that is returned to TWR® for part(s) ordered incorrectly or found to be unneeded upon receipt by the customer, the customer may be required to pay a minimum **20% restocking fee.** Product returned for credit must be returned within 60-days of original purchase, be in new and resalable condition, and in original packaging. Once the product is received by TWR it's condition will be evaluated and a credit will be issued only once it is determined that the RMA Return Terms have been met.

Credits – Credits are issued once it is determined that all of the Warranty and Return Terms are met. All credits are processed on Fridays. In the event a Friday falls on a Holiday, the credit will be issued on the following Friday.



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Warranty & Return Policy (continued)

Freight – All warranty replacement part(s) will be shipped via ground delivery and paid for by TWR®. Delivery other than ground is the responsibility of the customer.

REMEDIES UNDER THIS WARRANTY ARE LIMITED TO PROVISIONS OF REPLACEMENT PARTS AND REPAIRS AS SPECIFICALLY PROVIDED. IN NO EVENT SHALL TWR® BE LIABLE FOR ANY OTHER LOSSES, DAMAGES, COSTS, OR EXPENSES INCURRED BY THE CUSTOMER, INCLUDING, BUT NOT LIMITED TO, LOSS FROM FAILURE OF THE PRODUCT(S) TO OPERATE FOR ANY TIME, AND ALL OTHER DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING ALL PERSONAL INJURY OR PROPERTY DAMAGE DUE TO ALLEGED NEGLIGENCE, OR ANY OTHER LEGAL THEORY WHATSOEVER. THIS WARRANTY IS MADE BY TWR® EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, WHETHER EXPRESSED OR IMPLIED. WITHOUT LIMITING THE GENERALITY OF THE FORGOING, TWR® MAKES NO WARRANTY OF MERCHANTABILITY OR FITNESS OF THE PRODUCT(S) FOR ANY PARTICULAR PURPOSE. TWR® EXPRESSLY DISCLAIMS ALL OTHER WARRANTIES.



AA0MTSS24VDC32M CONTROLLER

RETURN MERCHANDISE AUTHORIZATION (RMA) FORM

RMA#: _____ DATE: _____

CUSTOMER: _____

CONTACT: _____ PHONE NO.: _____

ITEM DESCRIPTION (PART NO.): _____

MODEL NO.: _____ SERIAL NO.: _____

ORIGINAL TWR INVOICE NO.: _____ DATED: _____

DESCRIPTION OF PROBLEM: _____

SIGNED: _____ DATE NEEDED: _____

RETURN ADDRESS: _____

PLEASE RETURN PRODUCT TO: 10810 W. LITTLE YORK RD., #130 HOUSTON TX 77041-4051



AA0MTSS24VDC32M CONTROLLER

RETURN MERCHANDISE AUTHORIZATION (RMA) FORM

RMA#: _____ DATE: _____

CUSTOMER: _____

CONTACT: _____ PHONE NO.: _____

ITEM DESCRIPTION (PART NO.): _____

MODEL NO.: _____ SERIAL NO.: _____

ORIGINAL TWR INVOICE NO.: _____ DATED: _____

DESCRIPTION OF PROBLEM: _____

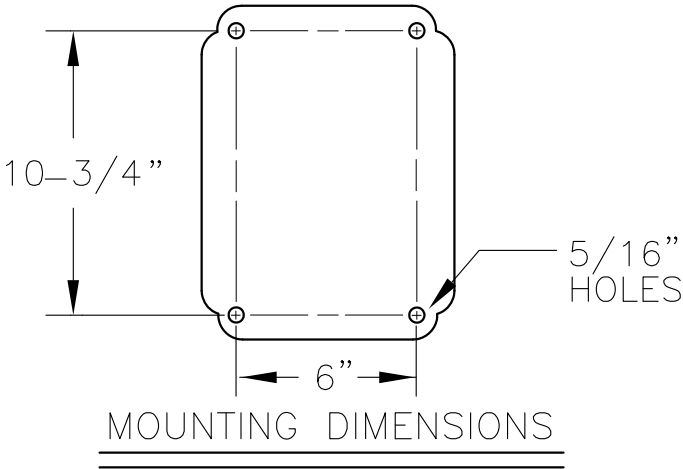
SIGNED: _____ DATE NEEDED: _____

RETURN ADDRESS: _____

PLEASE RETURN PRODUCT TO: 10810 W. LITTLE YORK RD., #130 HOUSTON TX 77041-4051

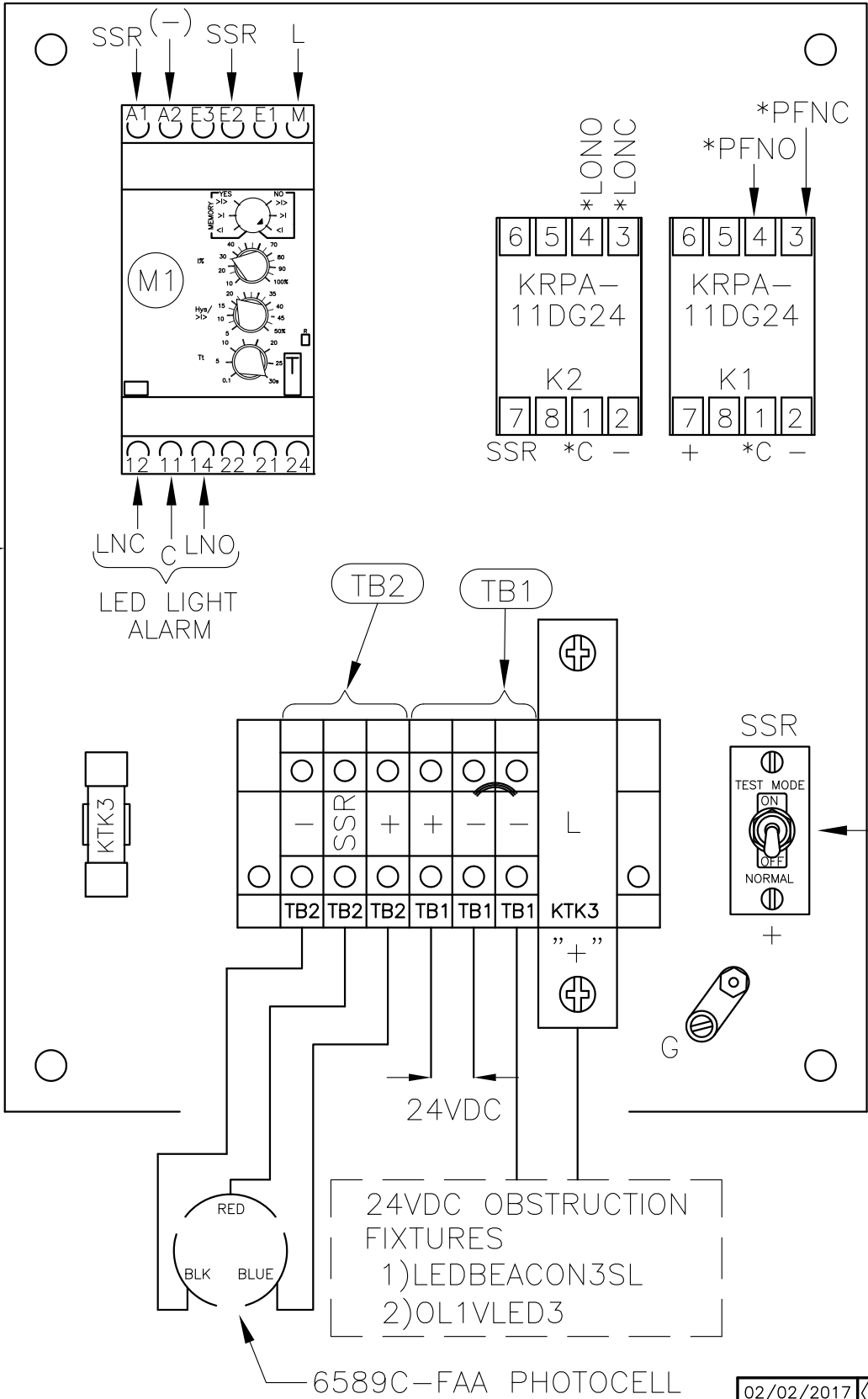
*CUSTOMER ALARM POINTS

- LNC = GROUP MONITORING ALARM (NORMALLY CLOSED)
LNO = GROUP MONITORING ALARM (NORMALLY OPEN)
C = ALARM COMMON
LONO = LIGHTS "ON" (NORMALLY OPENED)
LONC = LIGHTS "ON" (NORMALLY CLOSED)
PFNC = POWERFAILURE (NORMALLY CLOSED)
PFNO = POWERFAILURE (NORMALLY OPENED)



- NOTES:
1. PLUG 6589C-FAA PHOTOCELL INTO 43109 TWIST LOCK RECEPTACLE AND TWIST TO LOCK.
 2. WIRES ARE CONNECTED LETTER TO LETTER. (EXAMPLE) S TO S...

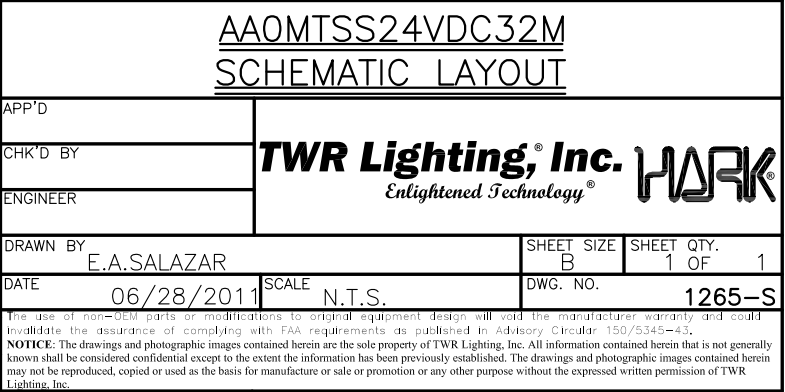
9"X7" PLATE



!!WARNING!!
VERIFY POLARITY CONNECTIONS ON THE INPUT AND OUTPUT.
NEGLIGENCE WILL RESULT IN FAILURE OF THE PHOTOCELL
AND/OR LED SIDELIGHT. THIS WILL VOID YOUR WARRANTY.

AA0MTSS24VDC32M CHASSIS LAYOUT			
APP'D	TWR Lighting, Inc. <i>Enlightened Technology®</i> WARK®		
CHK'D BY			
ENGINEER			
DRAWN BY G.D.SEBEK	SHEET SIZE B	SHEET QTY. 1 OF 1	
DATE 02/10/11	SCALE N.T.S.	DWG. NO. 1265-R	
<small>The use of non-OEM parts or modifications to original equipment design will void the manufacturer warranty and could invalidate the assurance of complying with FAA requirements as published in Advisory Circular 150/5345-43. NOTICE: The drawings and photographic images contained herein are the sole property of TWR Lighting, Inc. All information contained herein that is not generally known shall be considered confidential except to the extent the information has been previously established. The drawings and photographic images contained herein may not be reproduced, copied or used as the basis for manufacture or sale or promotion or any other purpose without the expressed written permission of TWR Lighting, Inc.</small>			

02/02/2017	(F)	M1	UPDATED
DATE:	LTR.	REVISION	



CURRENT MEASUREMENT RELAY RM35JA32MRSP01

120VAC PRODUCT SPECIFIC SETTINGS

QTY.	PART NO.	INPUT	#1	#2	#3	#4	#5	PRD.
2	STLDBEACON2A	E1	*<1	20	20	30	OFF	ORGA
2	LED BEACON2A	E1	*<1	20	20	30	OFF	ORGA
3	LED BEACON2A	E1	*<1	30	20	30	OFF	ORGA
1	116A21TS	E1	*<1	30	20	30	OFF	TWR
2	116A21TS	E2	*<1	30	20	30	OFF	TWR
3	116A21TS	E2	*<1	45	20	30	OFF	TWR
4	116A21TS	E2	*<1	65	20	30	OFF	TWR
6	116A21TS	E2	*<1	35	20	30	OFF	TWR

24VDC PRODUCT SPECIFIC SETTINGS

QTY.	PART NO.	INPUT	#1	#2	#3	#4	#5	PRD.
1	LED BEACON3SL	E2	*<1	30	20	30	OFF	TWR
2	OL1VLED3							

*NO MEMORY

FUNCTIONS

- 1) Configuration: Selection of operation mode (<1 / >1 / >1<) with or without memory.
- 2) Adjustment of current threshold as % of setting range.
- 3) Hysteresis adjustment from 5% to 50%.
- 4) Time Delay adjustment from 0.1 to 30sec.
- 5) Diagnostic button.
- 6) Yellow indicator light (**See conditions below**)
- 7) Dial Pointer (Green) LED
 - Steady green LED indicates that supply to the RM35 is present
 - Flashing green LED indicates a setting has been changed that requires a power cycle.

YELLOW LED CONDITIONS

NOTE: (*) ASTERISK INDICATES LED CONDITIONS OPERATE OPPOSITE FROM RM22JA31MR MODULE

Steady Burn Fixtures

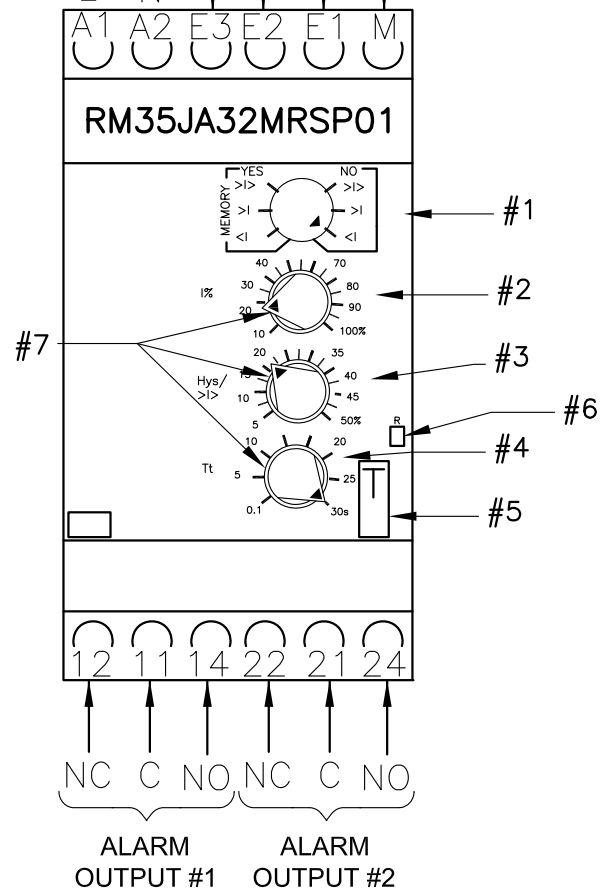
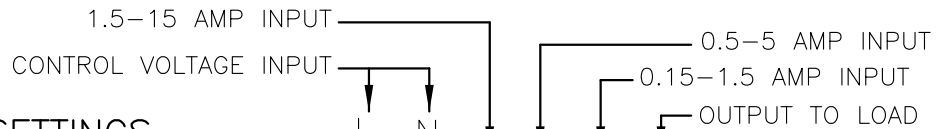
- Yellow light *off : Normal condition (no alarm)
- Yellow light flashing : Undercurrent condition detected and time delay initiated
- Yellow light *on : Alarm condition

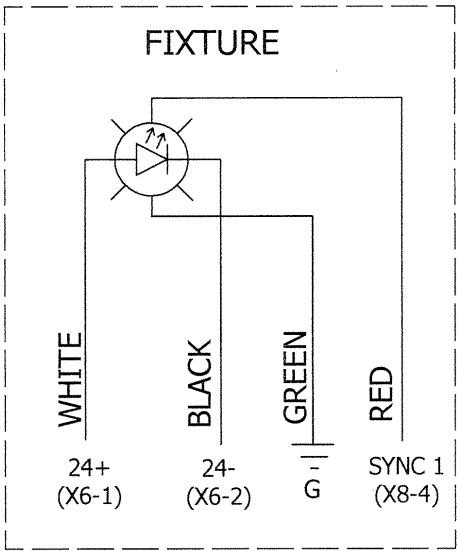
Flashing Fixtures

- Yellow light flashing inconsistent : Normal condition (no alarm)
- Yellow light flashing consistent : Under current condition detected and time delay initiated
- Yellow light *on : Alarm condition

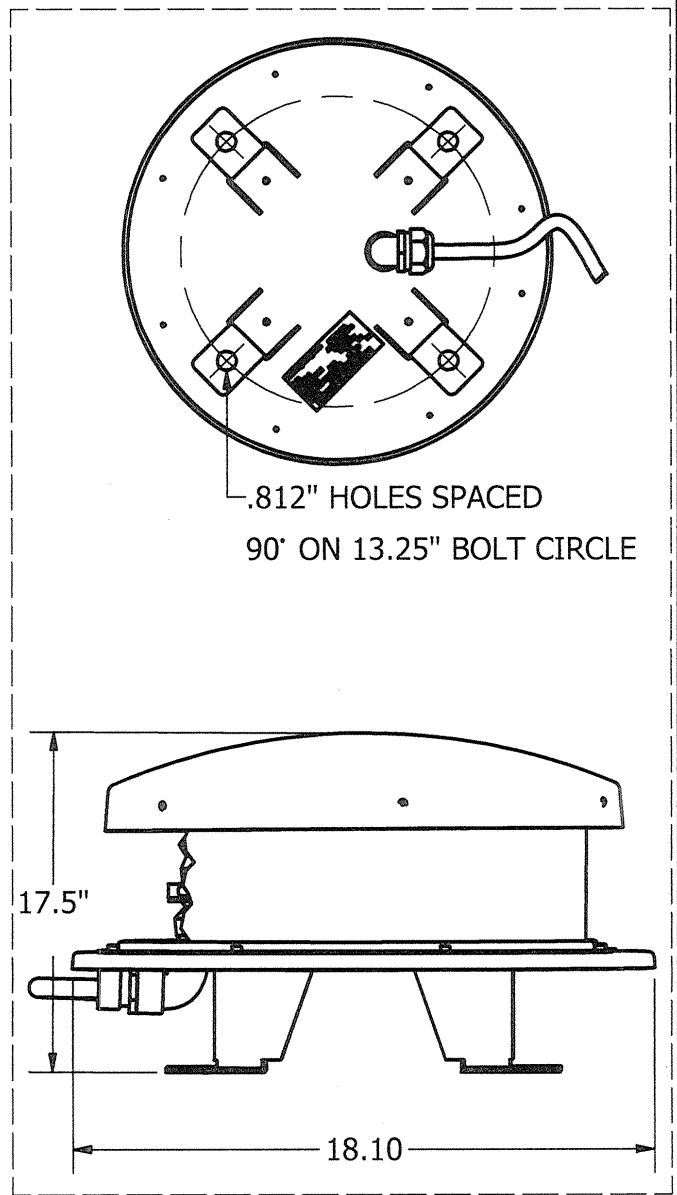
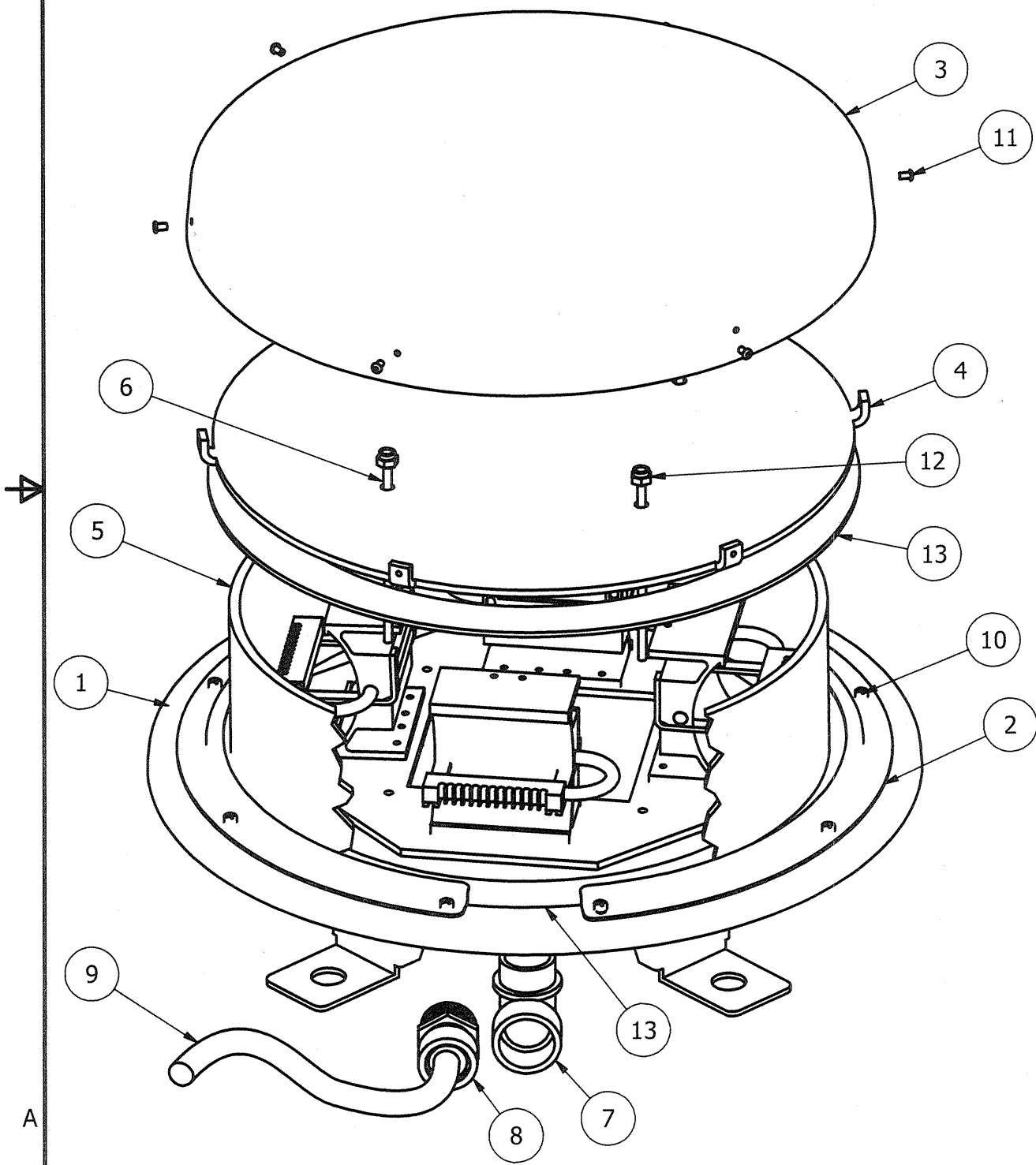
NOTE : To help troubleshoot or to set the sense current, turn the time delay(#4) to 0sec. **Adjusting the current setting(#2) should only be done if it is known that all the lights are functioning.** For Steady Burn adjust the current until the yellow LED comes *off, and the relay is not dropping in and out. For Flashing Fixtures adjust the current setting(#2) until the yellow light starts to flash. This is the normal condition setting. Return the time delay(#4) back to 30sec.

*Due to current draw tolerances slight adjustments to setting #2 may be needed for proper alarming.

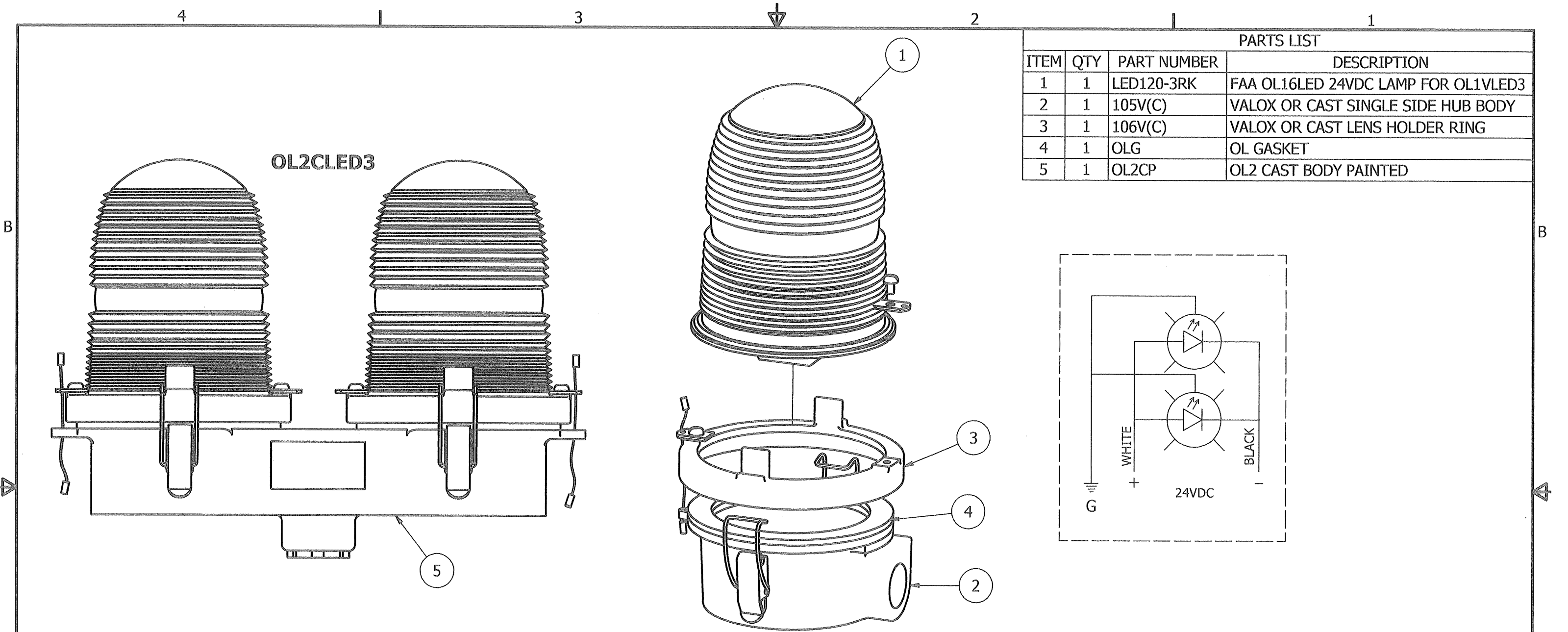




PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	100360	LED BEACON BASE
2	2	100337	LENS RETAINER RING
3	1	100344	LED BEACON CAP
4	1	100673	LED BEACON PLATE
5	1	100775	CLEAR ACRYLIC TUBE 14"
6	4	1420x5AT	1/4-20X5" ROD
7	1	EL190S	1" 90 DEGREE SHORT ELBOW GALV
8	1	CC-MPT-1-G	1" CORD CONNECTOR .700 TO .984
9	1	CSO16/4	S.O. CORD 16AWG/4 CONDUCTOR
10	8	1032X38PHW	10-32 X 3/8 SS PHILIP HD CAPTIVE SCREW
11	6	18PRSS	1/8 X .45 SS POP RIVET
12	4	1420SSNUTN	1/4-20 NUT W/NYLON INSERT
13	2	100807i	GASKET NEOPRENE 3/16 X 15 1/4



LED BEACON 3SL			
ASSEMBLY DETAIL 24VDC			
PROD DEPT		TWR Lighting, Inc. <i>Enlightened Technology®</i>	
SERV DEPT			
ENGINEER			
DRAWN BY	J. ZAMORANO	SHEET SIZE	B
DATE	07/13/2016	SCALE	N.T.S
		SHEET QTY.	1 OF 1
		DWG. NO.	101084
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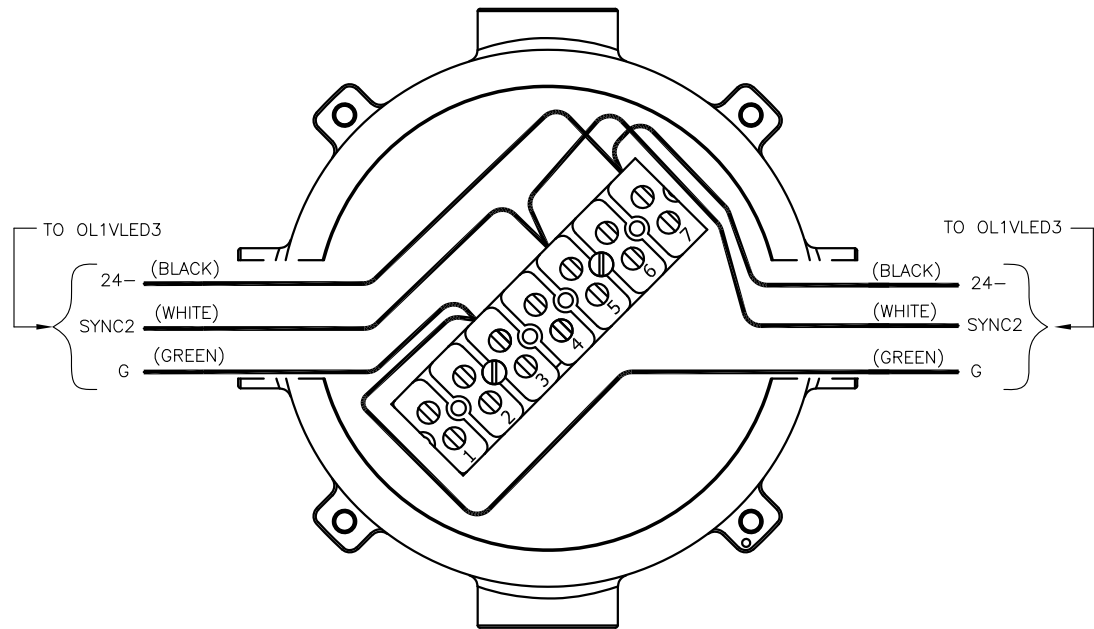
PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	LED120-3RK	FAA OL16LED 24VDC LAMP FOR OL1VLED3
2	1	105V(C)	VALOX OR CAST SINGLE SIDE HUB BODY
3	1	106V(C)	VALOX OR CAST LENS HOLDER RING
4	1	OLG	OL GASKET
5	1	OL2CP	OL2 CAST BODY PAINTED

OL1VLED3/OL1CLED3

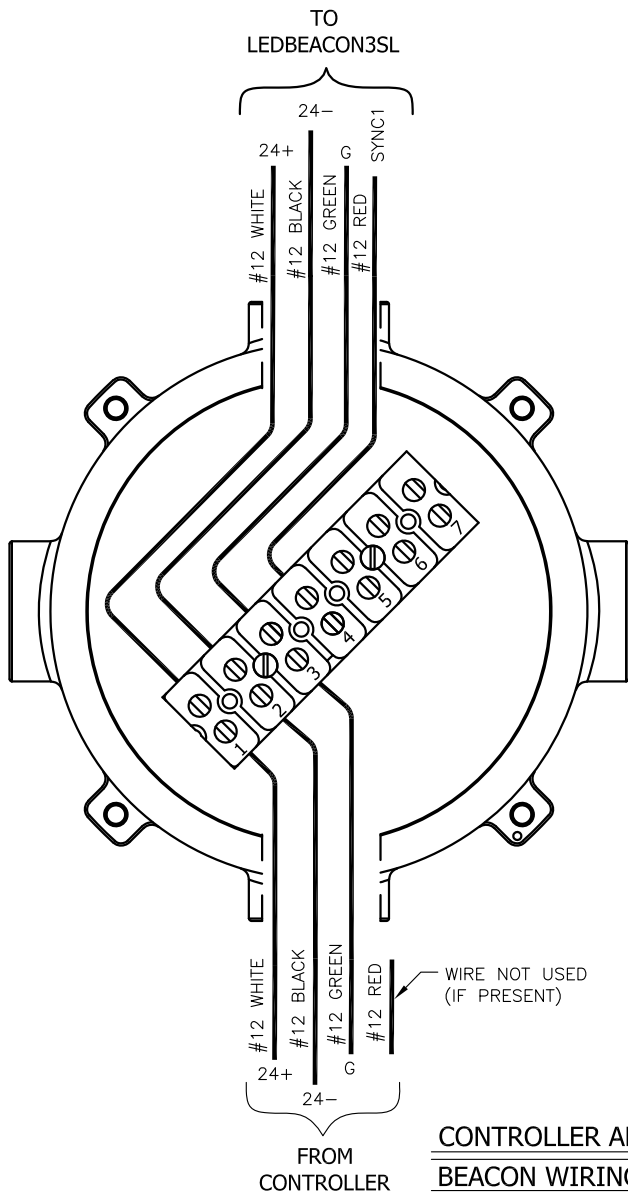
- NOTES:
- 1. ITEM LED120-3RK CAN ONLY BE ORDERED AS A KIT.
 - 2. ITEM'S 105 & 106 CAN BE ORDERED FOR VALOX OR CAST. WHEN ORDERING PLEASE SPECIFY.
 - 3. ITEM #2 CAN ALSO BE ORDERED AS A 3/4" BOTTOM HUB.
 - 4. ITEM OL2CP USED IN OL2CLED3 FIXTURE.

AUTHOR	REV	DATE	DESCRIPTION
J.ZAMORANO	A	12/2/2014	UPDATED LEDS

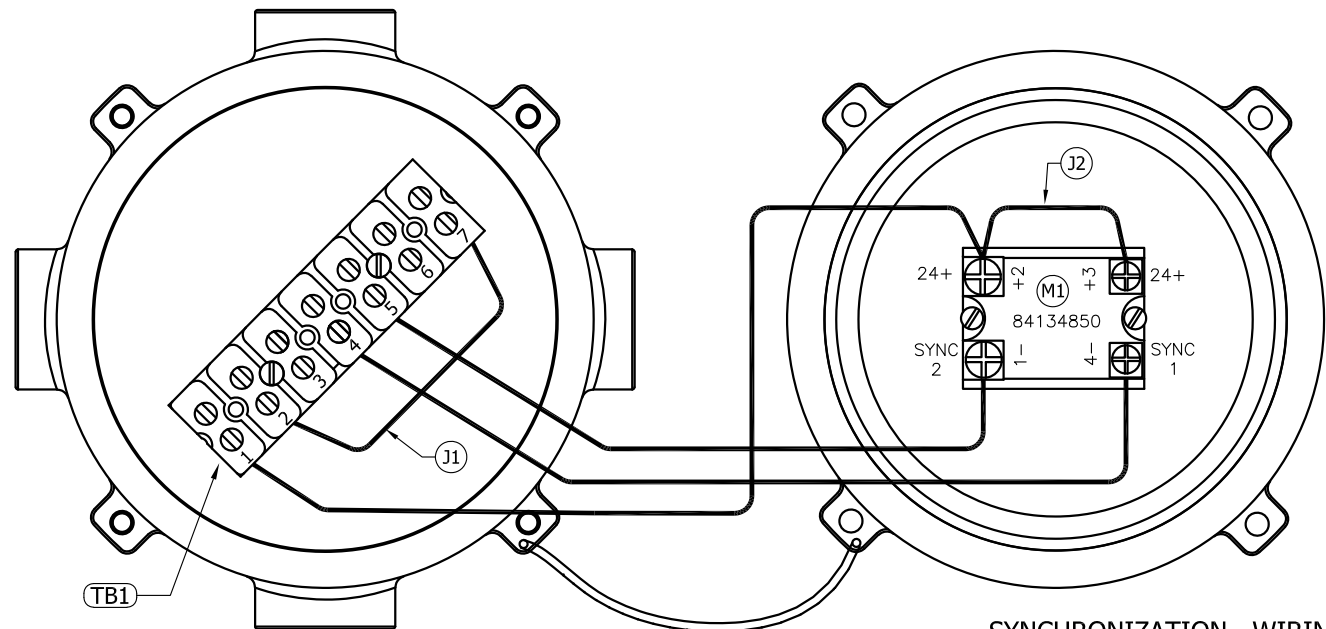
DRAWN E.A.SALAZAR		10/21/2011		TWR Lighting, Inc. <i>Enlightened Technology®</i> MARK	
CHECKED <i>[Signature]</i>		12/2/2014			
QA <i>[Signature]</i>				TITLE OL1VLED3 (VALOX), OL1CLED3 (CAST) & OL2CLED3 (CAST) PARTS ORDER	
MFG <i>[Signature]</i>					
APPROVED <i>[Signature]</i>		12/2/2014			
		SIZE B	DWG NO 100895		REV A
		SCALE		SHEET 1 OF 1	



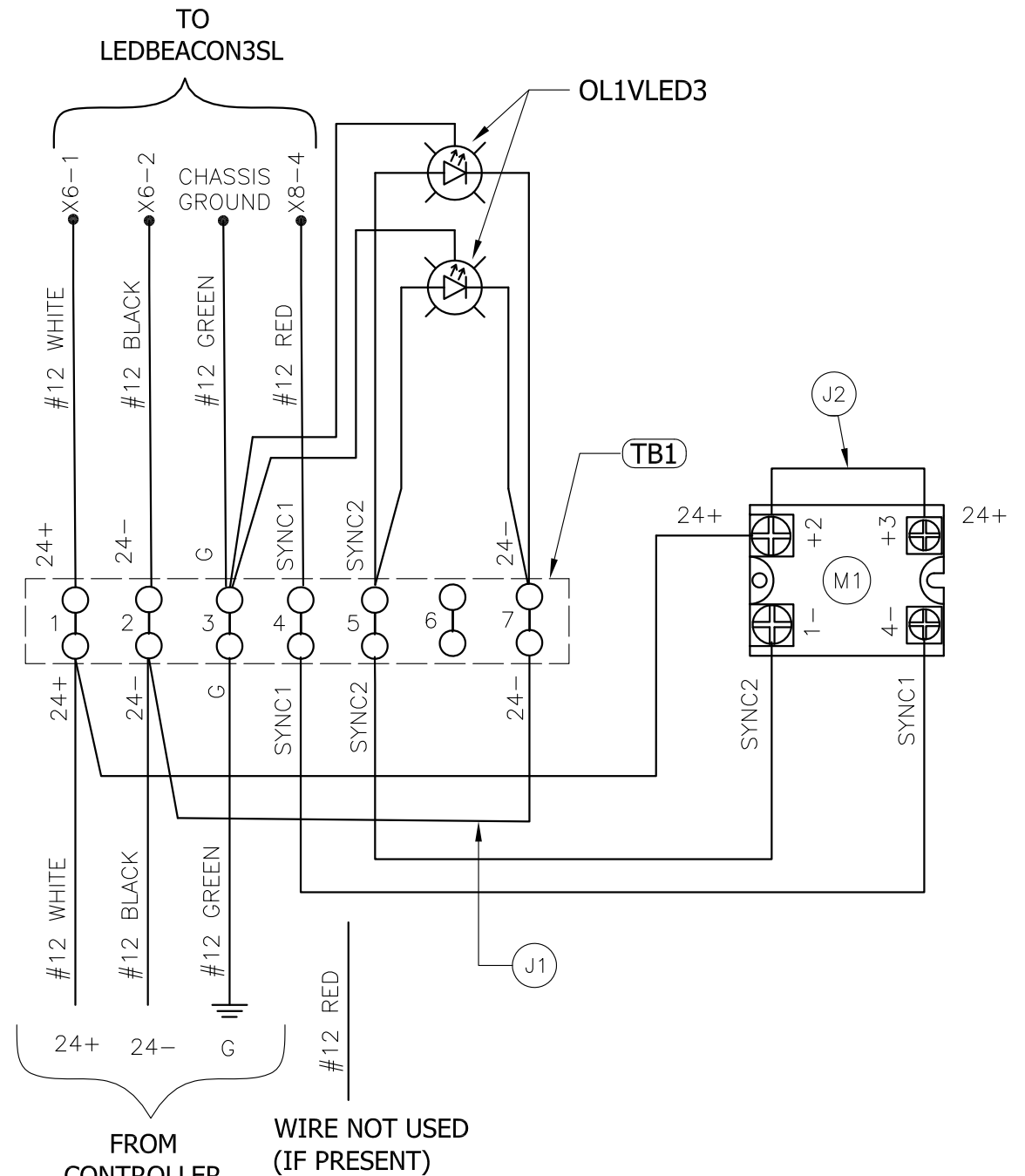
SIDELIGHT WIRING



CONTROLLER AND
BEACON WIRING




SYNCHRONIZATION WIRING



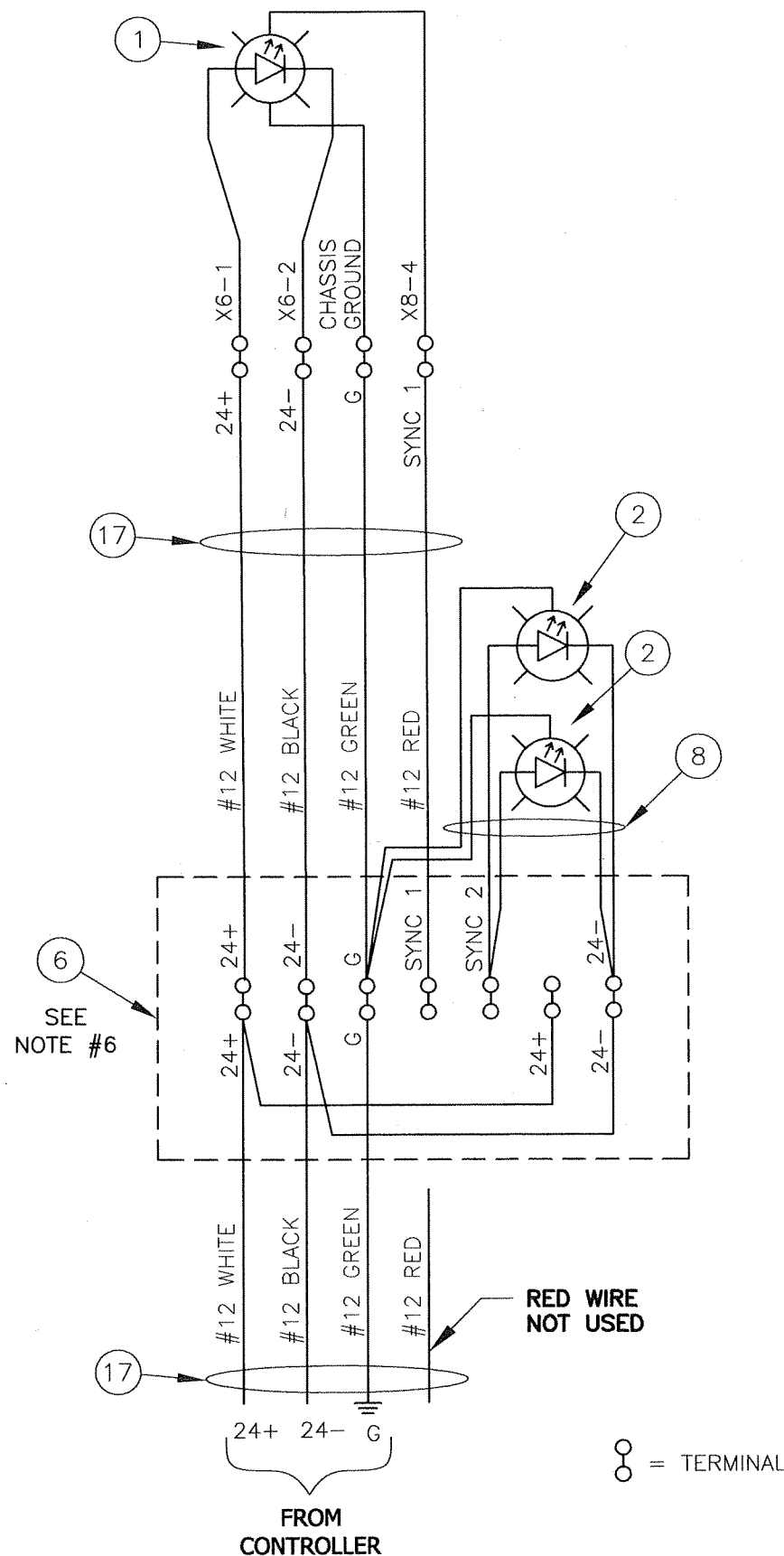
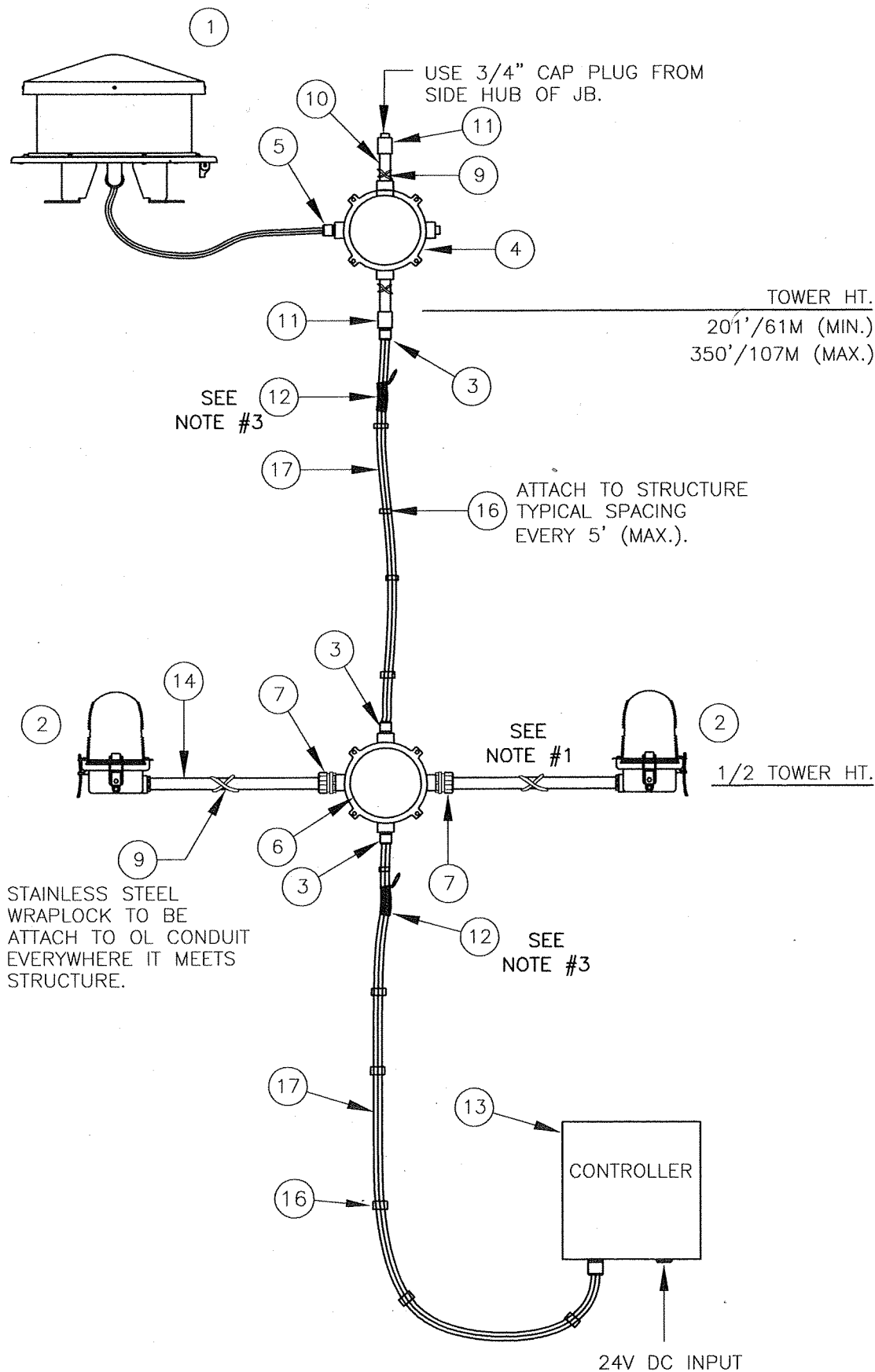
WIRING DIAGRAM

JUNCTION BOX WIRING DIAGRAM
(PART #JB5/7SLSSR)

PROD DEPT	TWR Lighting, Inc. <i>Enlightened Technology®</i> 		
SERV DEPT			
ENGINEER			
DRAWN BY J.ZAMORANO	SHEET SIZE B	SHEET QTY. 1 OF 1	
DATE 10/27/2015	SCALE N.T.S.	DWG. NO. 101058	

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11/22/19   UPDATED DRAWING



BILL OF MATERIALS

ITEM NO.	QTY.	TWR PART NO.	DESCRIPTION
1	1	LED BEACON3SL	RED LED BEACON
2	2	OL1VLED3	LED SIDELIGHT
3	3	CGB295SA	3/4" CORD CONNECTOR 0.50 - 0.62
4	1	JB5	3/4" JUNCTION BOX
5	1	CC-NPT34-G	3/4" BLACK CORD CONNECT (0.35-0.70)
6	1	JB5/7SLSSR	---
7	2	HC402	3/4" NO THREAD CONNECTOR
8	2	SLPIGTAIL25G	25' SIDELIGHT PIGTAIL WITH GROUND
9	1	SS5012	STAINLESS STEEL WRAPLOCK 50'
10	2	N34T6	3/4" x 6" NIPPLE (FOR JB MOUNTING)
11	2	CPLG34	3/4" CONDUIT COUPLING
12	2	CABLEGRIP1	SINGLE EYE LACE MESH
13	1	AA0MTSS24VDC32M	AA0 24V DC LED CONTROLLER
14	20'	CONDUIT34	3/4" CONDUIT
15	1	PIPDOP	4 oz. PIPE DOPE

ITEM NUMBERS #16-#17 ARE NOT INCLUDED IN THE KIT BUT ARE AVAILABLE UPON REQUEST, AND REQUIRED FOR INSTALLATION.

16	-	STCABLETIE	STROBE CABLE TIES (TWR. HEIGHT +5)
17	-	CS012/4	4-#12 AWG STROBE CABLE (TWR. HT.+50')

* = ITEMS NOT SHOWN

~ = ITEMS QUANTITY CALCULATED ACCORDING TO STRUCTURE HEIGHT.

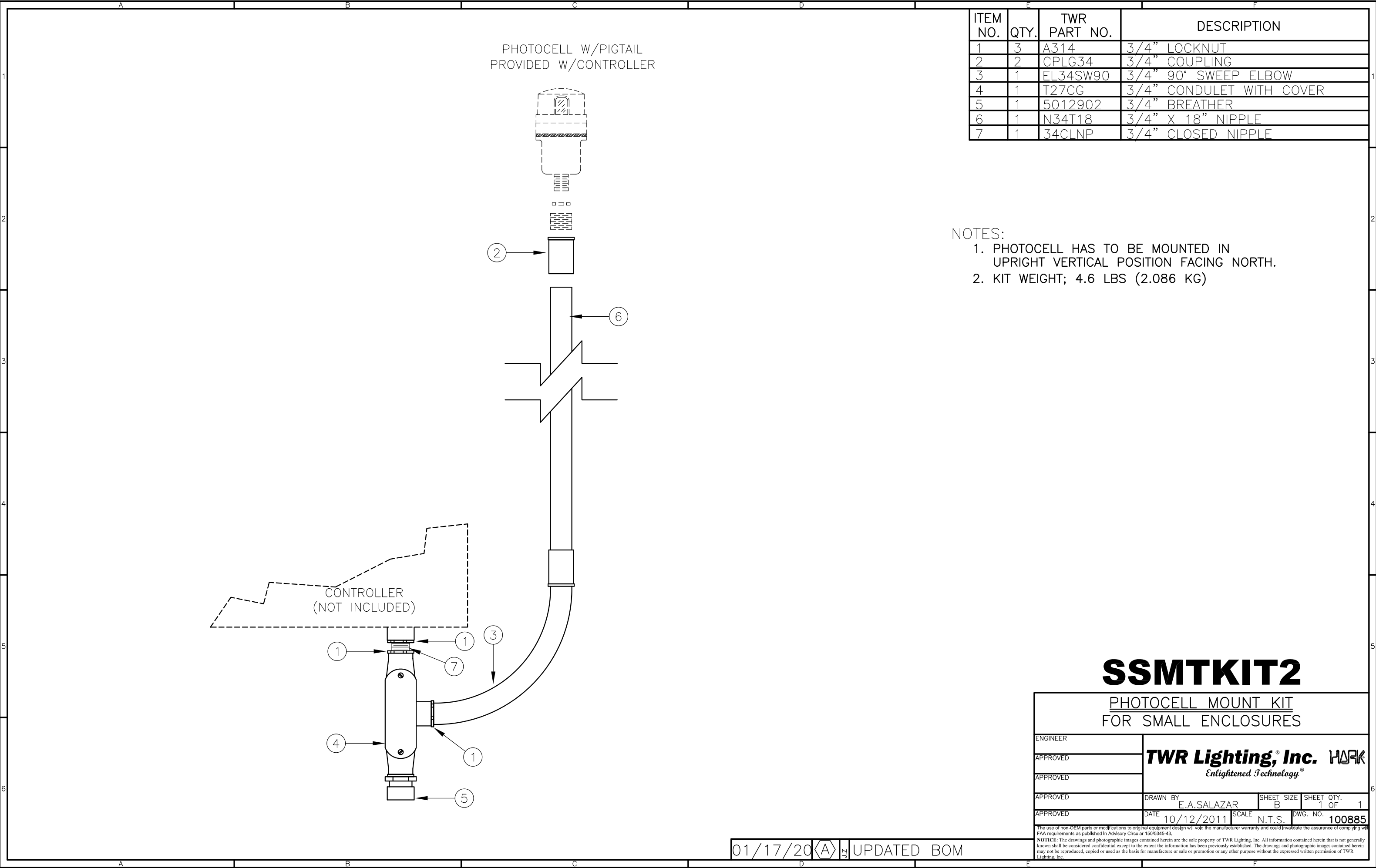
NOTES:

- 1) STAINLESS STEEL WRAPLOCK TO BE ATTACH TO OL CONDUIT EVERYWHERE IT MEETS STRUCTURE.
- 2) CONDUIT34 TO BE CUT TO LENGTH FOR PROPER EXTENSION OF OL1 (6"-12") FROM STRUCTURE. ATTACH HC402 TO UNTHREADED CONDUIT TO COMPLETE ASSEMBLY.
- 3) CABLEGRIP1 IS USED TO SUPPORT CABLE BEFORE CORD CONNECTOR AND SINGLE EYE LOOP SHOULD BE ATTACHED TO STRUCTURE SECURELY.
- 4) THIS DRAWING IS PROVIDED AS A GENERAL REFERENCE. TWR LIGHTING, INC. DOCUMENTATION SUPERSEDES THIS DRAWING & SHOULD BE REVIEWED PRIOR TO INSTALLATION OF THIS SYSTEM.
- 5) IF MOUNT IS NEEDED FOR LED BEACON3 USE PART #BMSIDE-1.
- 6) REFER TO DRAWING #101058 FOR JB5/7SLSSR WIRING.

POWER CONSUMPTION

- ✓ 12hrs day - 1.75/0.0/0.0 - for AA0MTSS24DC32M/OL1VLED3/LED BEACON3 (1.75x12=0.021KWh)
- ✓ 12hrs night - 3.06/16.0/14.43 - for AA0MTSS24DC32M/OL1VLED3/LED BEACON3 (33.5x12=0.402KWh)
- ✓ "24hrs = 0.423 KWh"

A1MET24VDC LIGHTING KIT (TOWERS 201' / 61M TO 350' / 107M)			
PROD DEPT			
SERV DEPT			
ENGINEER			
DRAWN BY	J. ZAMORANO		
DATE	06/29/16	SCALE	N.T.S.
SHEET SIZE B		SHEET QTY. 1 OF 1	
DWG. NO.		T1693	
<small>The use of non-OEM parts or modifications to original equipment design will void the manufacturer warranty and could invalidate the assurance of complying with FAA requirements as published in Advisory Circular 150/5345-43.</small> <small>NOTICE: The drawings and photographic images contained herein are the sole property of TWR Lighting, Inc. All information contained herein that is not generally known shall be considered confidential except to the extent the information has been previously established. The drawings and photographic images contained herein may not be reproduced, copied or used as the basis for manufacture or sale or promotion or any other purpose without the expressed written permission of TWR Lighting, Inc.</small>			



PHOTOCELL W/PIGTAIL
PROVIDED W/CONTROLLER

CONTROLLER
(NOT INCLUDED)

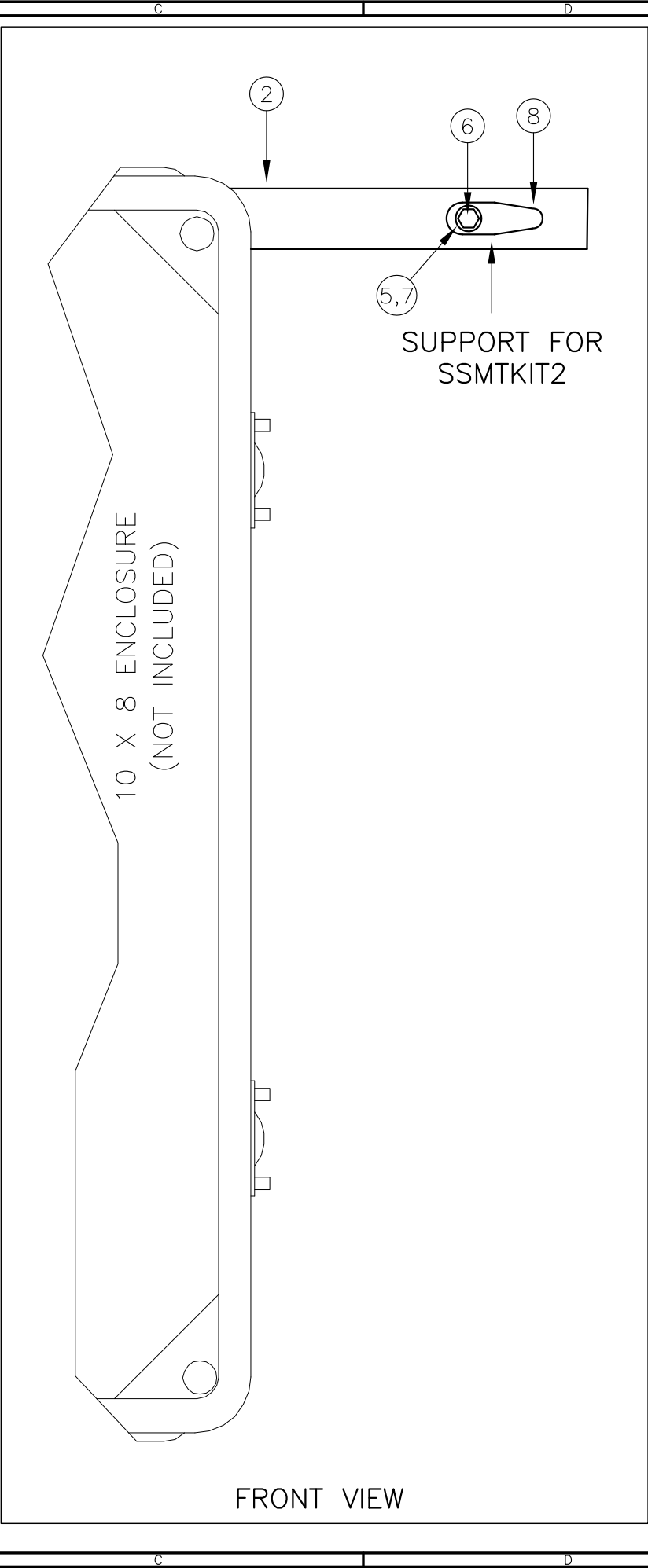
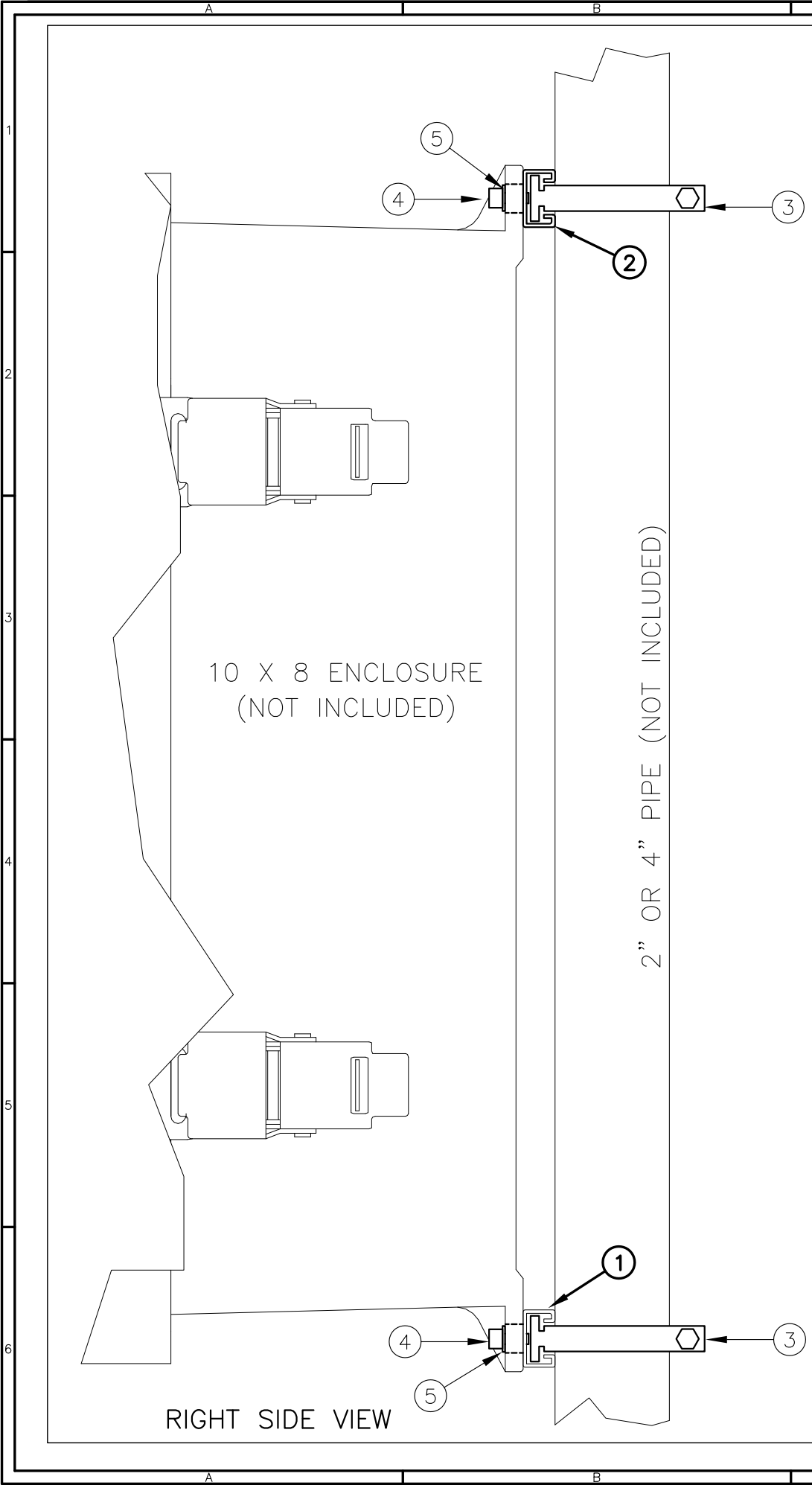
ITEM NO.	QTY.	TWR PART NO.	DESCRIPTION
1	3	A314	3/4" LOCKNUT
2	2	CPLG34	3/4" COUPLING
3	1	EL34SW90	3/4" 90° SWEEP ELBOW
4	1	T27CG	3/4" CONDULET WITH COVER
5	1	5012902	3/4" BREATHER
6	1	N34T18	3/4" X 18" NIPPLE
7	1	34CLNP	3/4" CLOSED NIPPLE

- NOTES:
- 1. PHOTOCELL HAS TO BE MOUNTED IN UPRIGHT VERTICAL POSITION FACING NORTH.
 - 2. KIT WEIGHT; 4.6 LBS (2.086 KG)

SSMTKIT2

PHOTOCELL MOUNT KIT
FOR SMALL ENCLOSURES

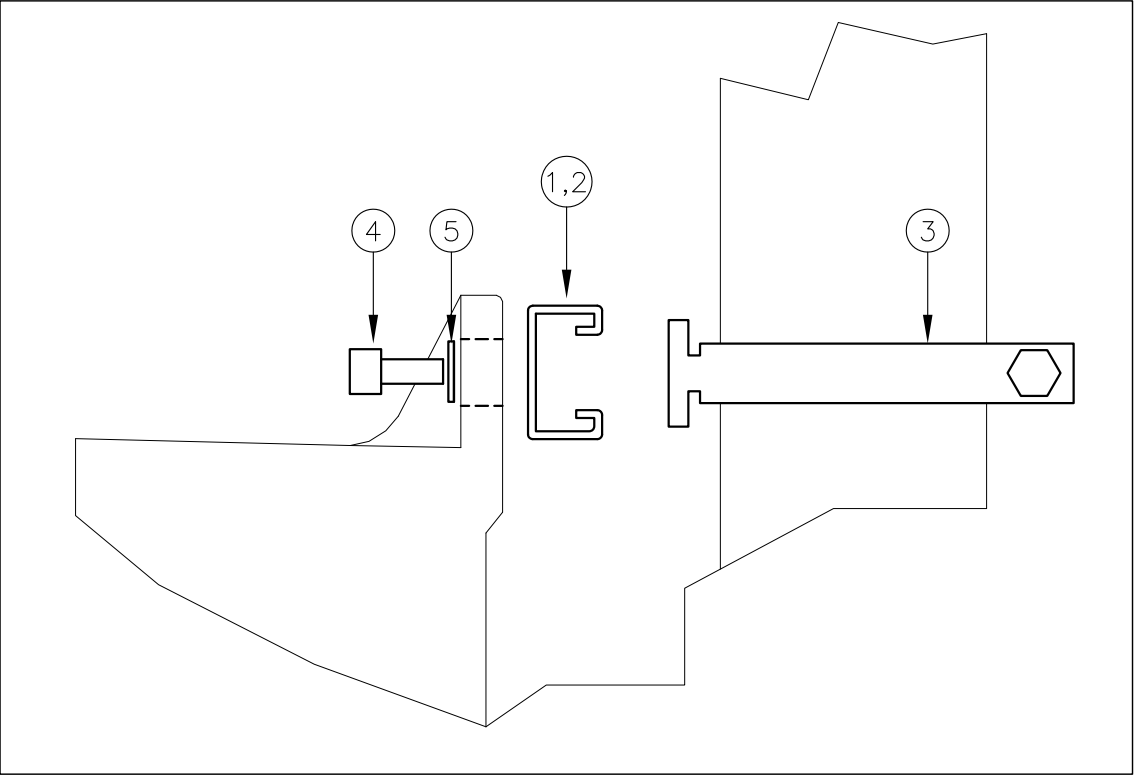
ENGINEER	TWR Lighting, Inc. <i>Enlightened Technology®</i>		
APPROVED			
APPROVED			
APPROVED	DRAWN BY E.A.SALAZAR	SHEET SIZE B	SHEET QTY. 1 OF 1
APPROVED	DATE 10/12/2011	SCALE N.T.S.	DWG. NO. 100885
<small>The use of non-OEM parts or modifications to original equipment design will void the manufacturer warranty and could invalidate the assurance of complying with FAA requirements as published in Advisory Circular 150/5345-43.</small>			
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ITEM NO.	QTY.	TWR PART NO.	DESCRIPTION
1	1	100887	8" B1400 UNISTRUT (BOTT. PIECE)
2	1	100892	15" B1400 UNISTRUT (TOP PIECE)
* 3	2	RIGD200EG	2" UNISTRUT PIPE CLAMP & BOLT
4	4	1420X12	1/4-20 HEX HEAD
5	5	14FW	1/4 FLAT WASHER
6	1	1420X1	1/1-20 HEX HEAD
7	1	14LW	1/4 LOCK WASHER
8	1	902	3/4" ONE HOLE STRAP

* = ITEM RIGD200EG CLAMP TO BE USED TO MOUNT ITEM 100887 & 100892(UNITSTRUT) TO 2" PIPE.
**FOR A 4" PIPE USE PART RIDG400EG

ASSEMBLY DETAIL FOR BACK OF ENCLOSURE

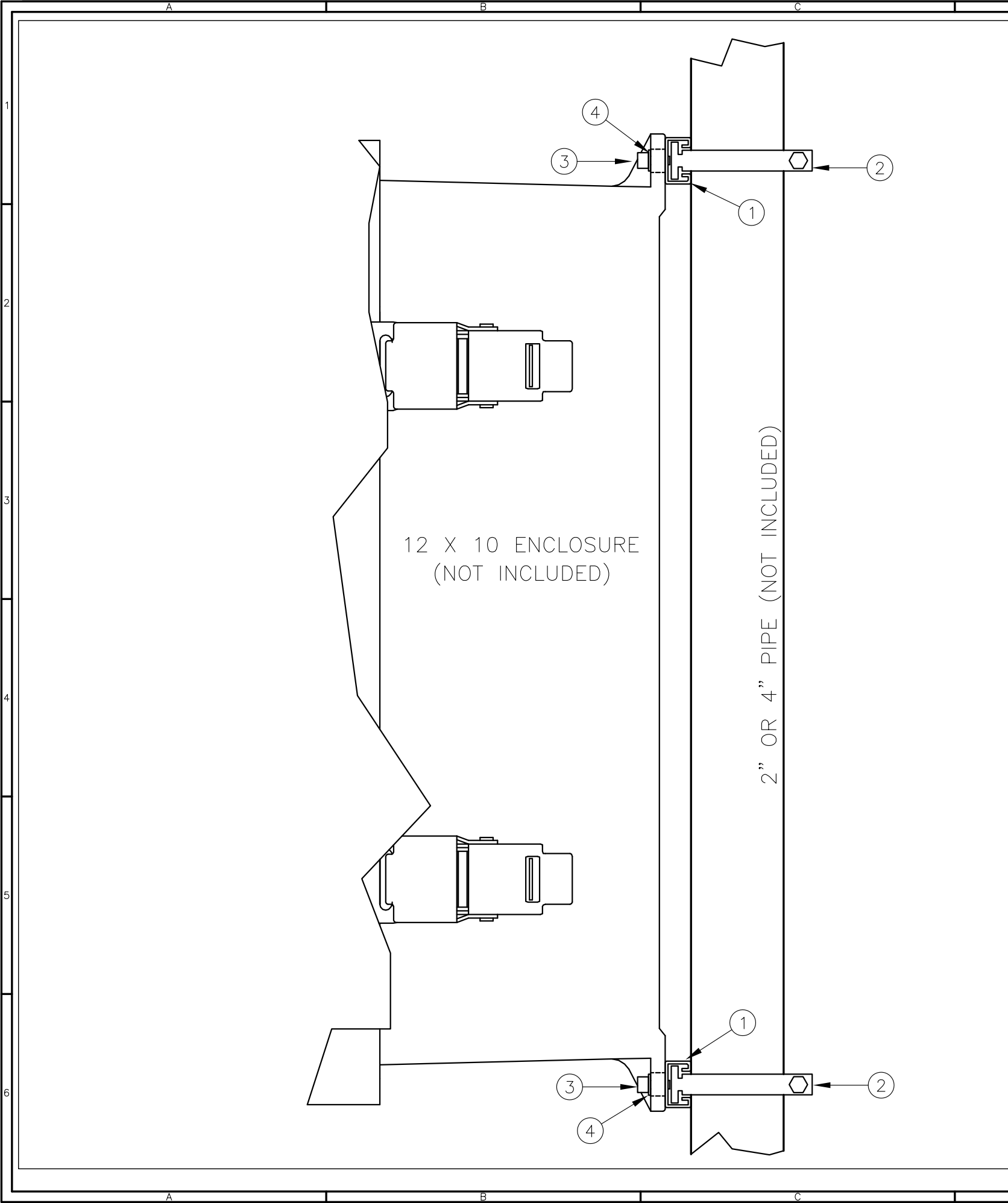


10X8MTKIT

10 X 8 ENCLOSURE PIPE MOUNTING KIT

PROD DEPT		TWR Lighting, Inc. <i>Enlightened Technology®</i> WARK®	
SERV DEPT			
ENGINEER			
DRAWN BY E.A.SALAZAR		SHEET SIZE B	SHEET QTY. 1 OF 1
DATE 10/06/2011		SCALE N.T.S.	DWG. NO. 100886
<small>The use of non-OEM parts or modifications to original equipment design will void the manufacturer warranty and could invalidate the assurance of complying with FAA requirements as published in Advisory Circular 150/5345-43.</small>			
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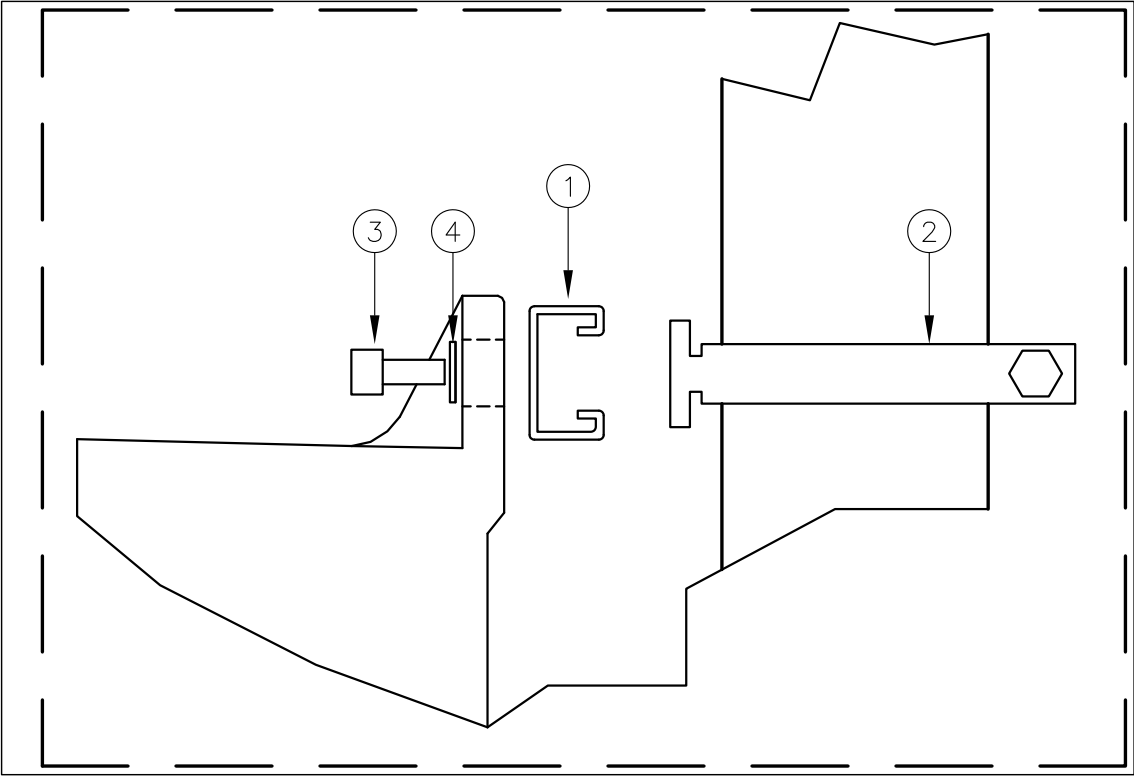
08/14/2013	(B)	UPDATED DRAWING
DATE:	LTR.	REVISION



ITEM NO.	QTY.	TWR PART NO.	DESCRIPTION
1	2	100889	12X10 B1400 UNISTRUT
2	2	RIGD200EG	2" UNISTRUT PIPE CLAMP & BOLT
3	4	1420X12	1/4-20 HEX HEAD
4	4	14FW	1/4 FLAT WASHER

* = ITEM RIGD200EG CLAMP TO BE USED TO MOUNT ITEM 100889(UNITSTRUT) TO 2" PIPE.
**FOR A 4" PIPE USE PART RIDG400EG

ASSEMBLY DETAIL



12X10MTKIT

12X10 ENCLOSURE PIPE MOUNTING KIT

PROD DEPT	TWR Lighting, Inc. <i>Enlightened Technology</i> MARK		
SERV DEPT			
ENGINEER			
DRAWN BY	E.A.SALAZAR	SHEET SIZE B	SHEET QTY. 1 OF 1
DATE	10/06/2011	SCALE N.T.S.	DWG. NO. 100888

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08/14/13 **A** M.P. UPDATED DRAWING