

TWR Lighting, Inc. HARK[®]

Enlightened Technology[®]

10810 W. LITTLE YORK RD., #130 HOUSTON, TX 77041-4051
VOICE (713) 973-6905 FAX (713) 973-9352
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 #	EE0
TYPE	DUAL LED
SERIAL #	
PURCHASE DATE	
PURCHASED FROM	

TWR Lighting, Inc. HARK[®]

Enlightened Technology[®]

EE0 DUAL CONTROLLER

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WARRANTY & RETURN POLICY

RETURN MERCHANDISE AUTHORIZATION (RMA) FORM

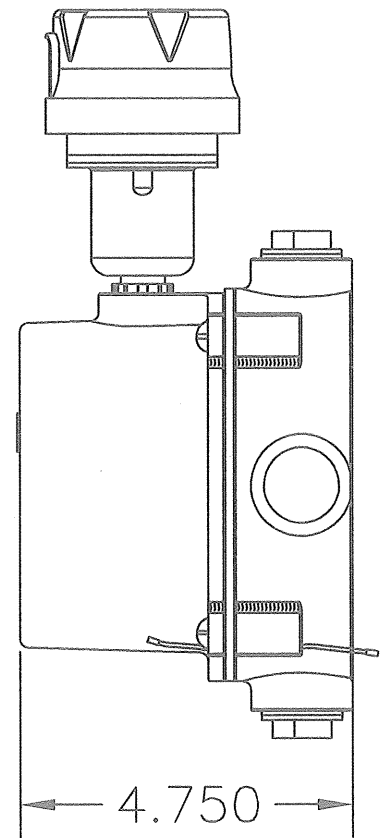
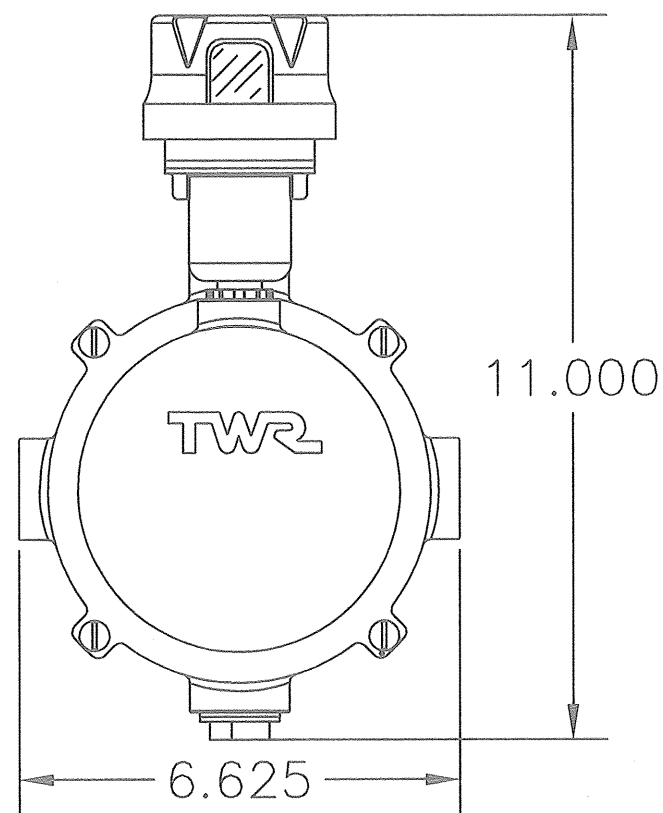
TWR Lighting, Inc. HARK[®]

Enlightened Technology[®]

EE0 DUAL CONTROLLER

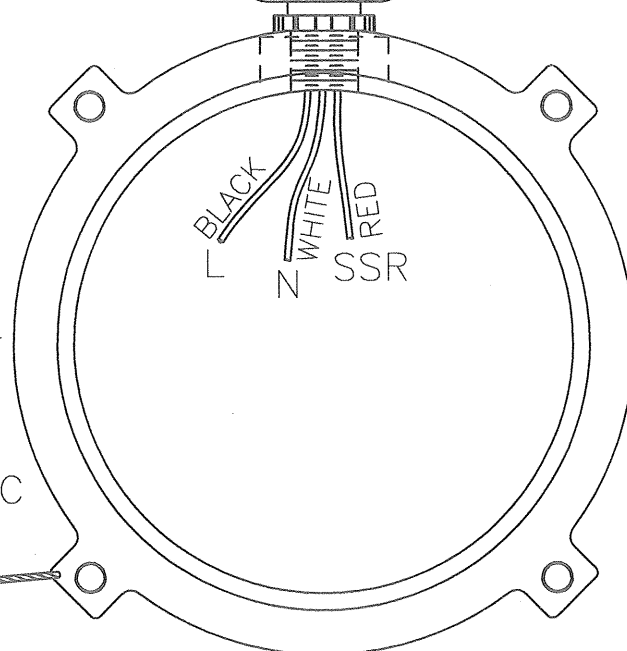
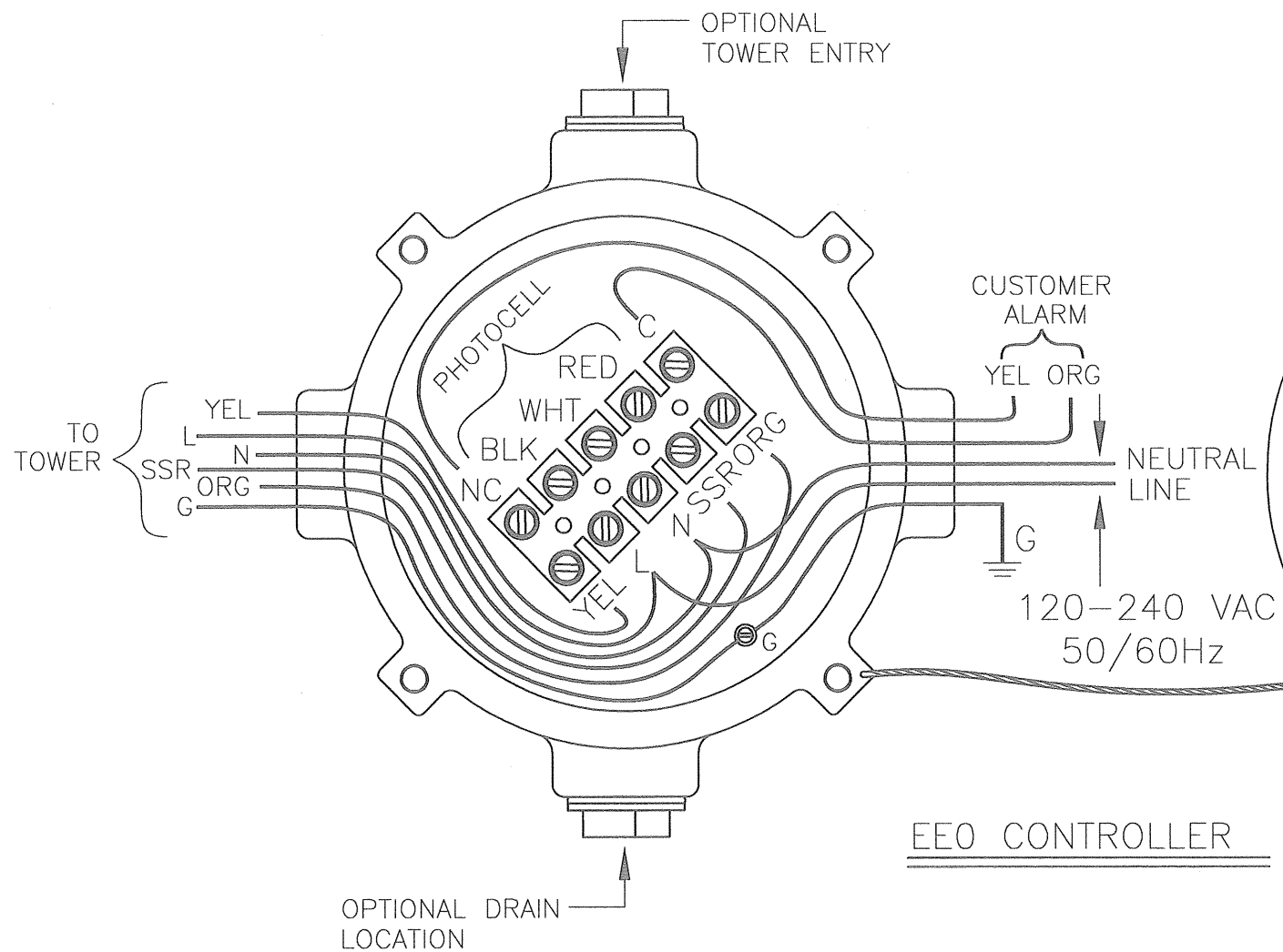
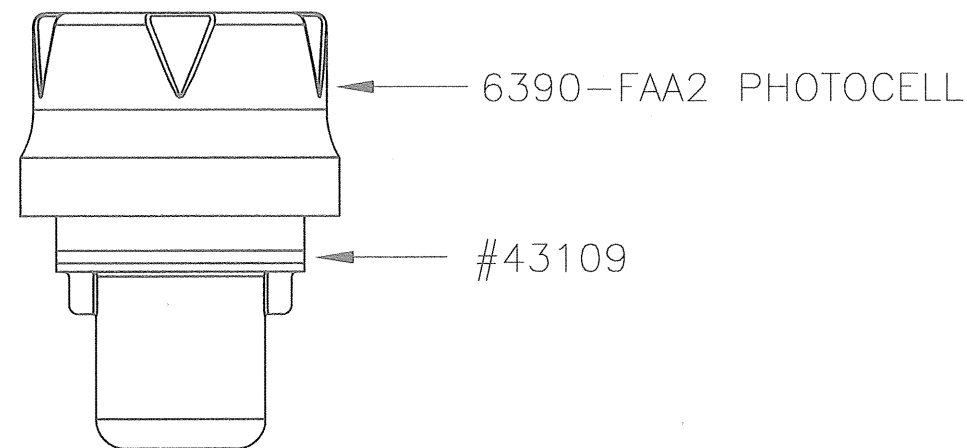
APPENDIX

CHASSIS LAYOUT & SCHEMATIC	1305-R
OL1VLED2 SINGLE OBSTRUCTION LIGHT	100656 (REV E)
JUNCTION AND STRAIN RELIEF BOXES	100089 (REV A)
LK5E1L550 DUAL LED LIGHTING KIT	ORG-648 (REV A)
WRAPLOCK FASTENING DETAIL	100984



NOTES:

- 1) PLUG 6390-FAA2 PHOTOCELL INTO (#43109)
TWIST LOCK RECEPTACLE AND TWIST TO LOCK.



EEO CONTROLLER			
120-240 VAC 50/60Hz			
PROD DEPT	<i>[Signature]</i>		
SERV DEPT	TWR Lighting, Inc.		
ENGINEER	<i>[Signature]</i>		
DRAWN BY	J.ZAMORANO	SHEET SIZE	B
DATE	07/21/2015	SHEET QTY.	1 OF 1
	SCALE	N.T.S.	DWG. NO.
			1305-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.</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>			

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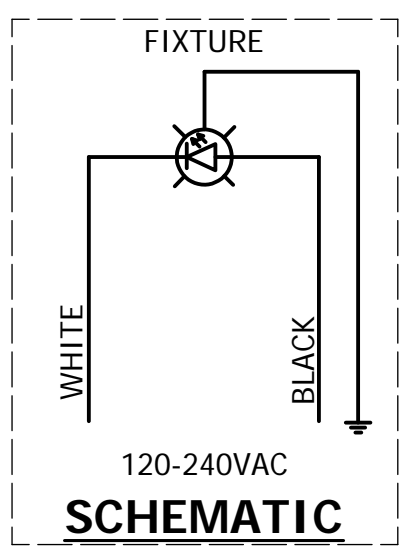
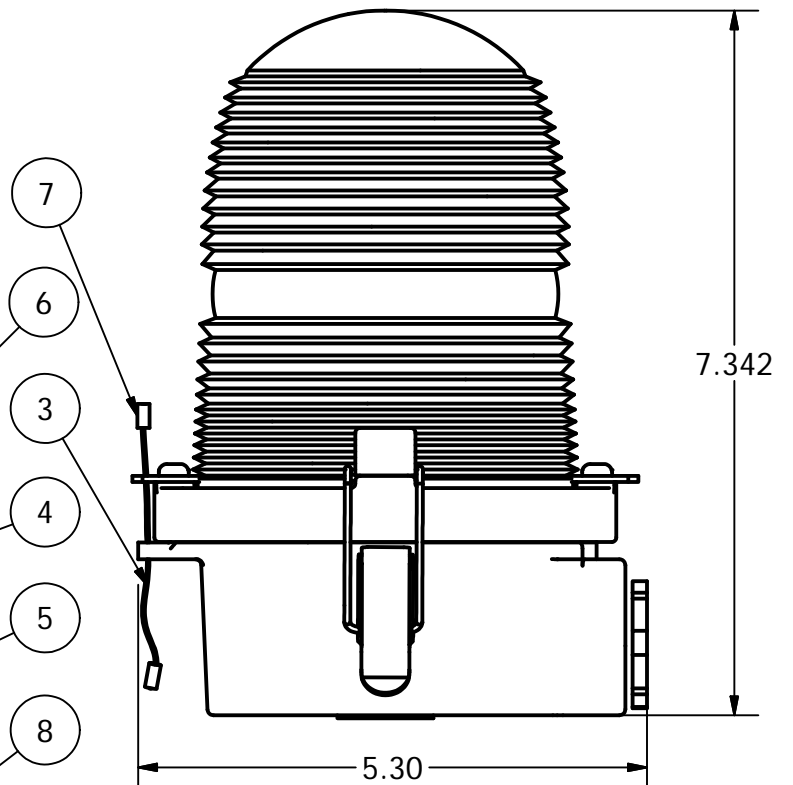
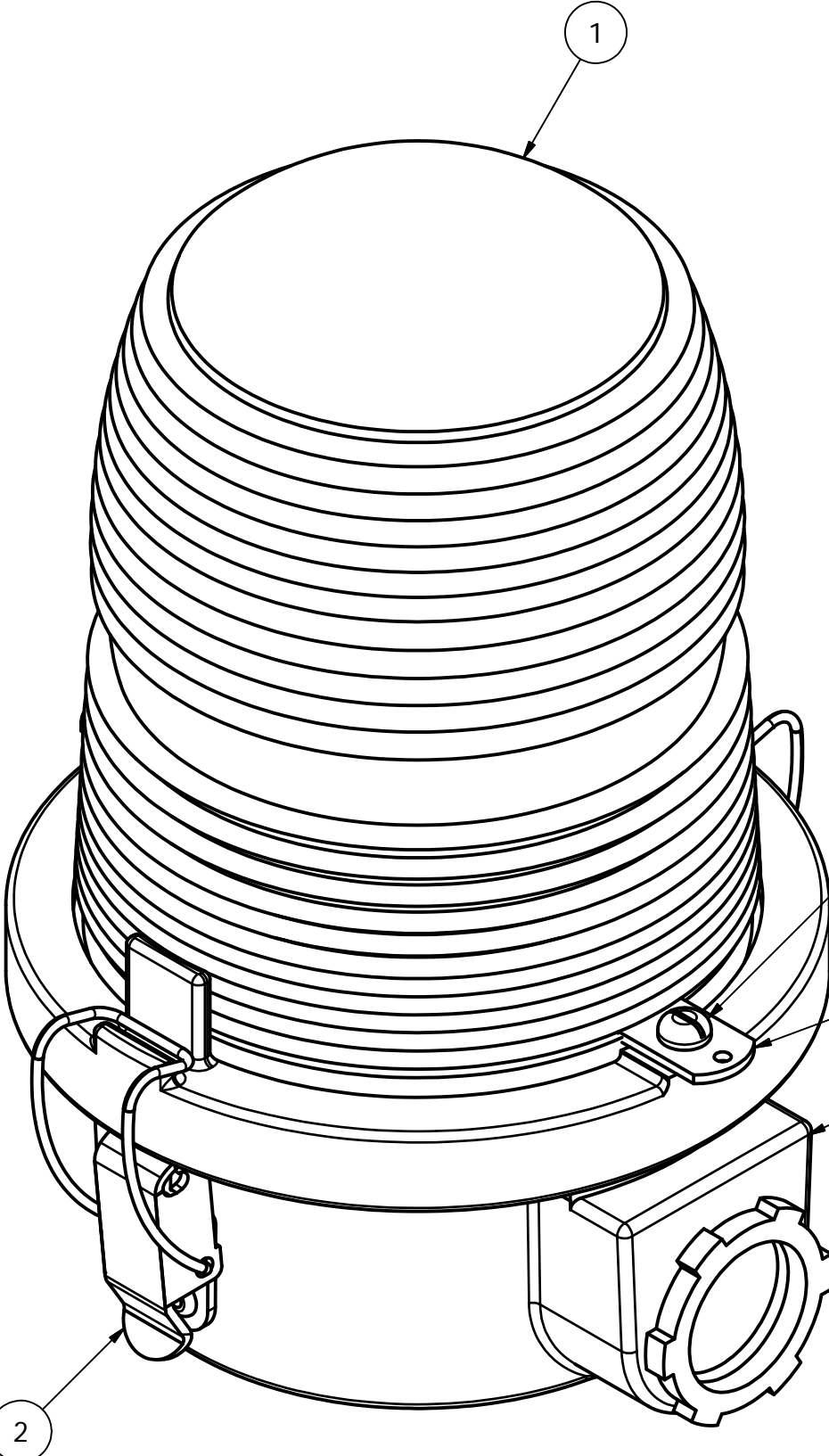
Parts List

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	OL1VLED2	L810 OBSTRUCTION LIGHT
* 1.1	1	100588_RE	OL 6LED BASE PLATE
* 1.2	1	100591	OL 6LED STAR DISK
* 1.3	1	100680	OL1/2 SERIAL # LABEL
* 1.4	1	A10290	5/32" ID RUBBER GROMMET
* 1.5	6	STD05008	LED EMITTER
* 1.6	1	OLG	OL GASKET
* 1.7	1	AP100846	SIDELIGHT LENS CLEAR ACYRLIC
* 1.8	1	106V	LENS HOLDER RING
* 1.9	6	STE01-047	LED VERTICAL PCB
* 1.10	16	18PRSS	1/8 X .45 SS POP RIVET
* 1.11	1	PS90-260/24	POWER SUPPLY
* 1.12	1	20RED	#20AWG RED BELDON WIRE
* 1.13	2	WIRENUTBLU	BLUE WIRE NUT
2	2	HC255SS	SIDELIGHT LATCH
3	1	7X7SS	1/16 HOL 7X7 S.S. WIRE
4	2	12V245	OL LENS CLIP
5	1	105V	SINGLE SIDELIGHT BODY
6	2	832X14PH	8-32 X 1/4 PH SS SLOT SCREW
7	2	A1A	STAKON CRIMP
8	1	A314	3/4" CONDUIT LOCKNUT GALV.

* = ITEMS NOT SHOWN

B

B



* GROUND WIRE MUST BE CONNECTED TO PROPERLY PROTECT POWER SUPPLY. FAILURE TO GROUND WILL VOID ALL WARRANTIES.

A

A

DRAWN	gsebek	8/18/2004
CHECKED		
QA		
MFG		
APPROVED		

TWR Lighting, Inc. **PARK**
Enlightened Technology

TITLE
 OL1VLED2 120-240VAC FAA-OL16LED
 (L810 OBSTRUCTION LIGHT)

SIZE B DWG NO 100656i REV E
 SCALE SHEET 1 OF 1

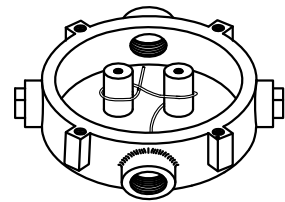
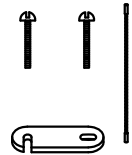
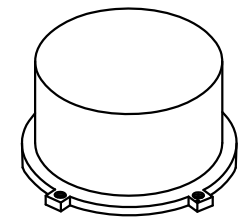
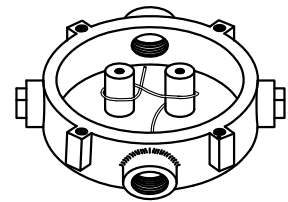
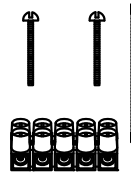
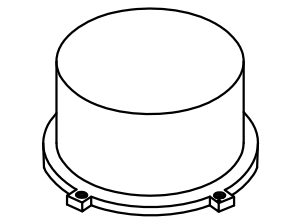
DATE	REV	AUTHOR	DESCRIPTION
11/07/14	E	JZAMORANO	REM. WIRE CONNECT

4

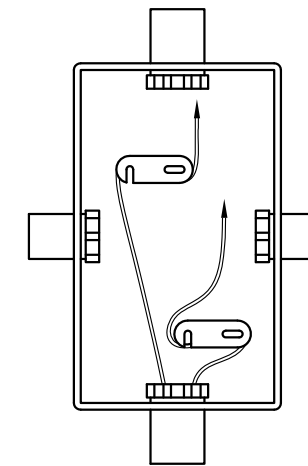
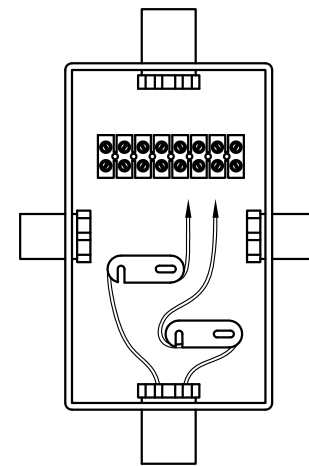
3

2

1



JB-5 AND JB-0
3/4" JUNCTION BOX



JB-8 AND JB-8SR
1" JUNCTION BOX

NOTES:

- 1) DRAWING ILLUSTRATES METHOD OF STRAIN RELIEVING WIRE. USE THIS METHOD ON ALL JUNCTION BOXES.
- 2) THE NATIONAL ELECTRICAL CODE-ARTICLE 300-19-B3 REQUIRES CONDUCTORS IN A VERTICAL CONDUIT BE SUPPORTED TO RELIEVE STRAIN ON TERMINAL BLOCK CONNECTIONS.
- 3) SKETCH ILLUSTRATES METHOD OF STRAIN RELIEVING A SINGLE CONDUCTOR. SEVERAL CONDUCTORS MAY BE GROUPED TOGETHER.
- 4) CONDUCTORS MAY BE MIXED BUT SHOULD NOT TAKE UP MORE THAN 40% OF CONDUIT'S INSIDE AREA.

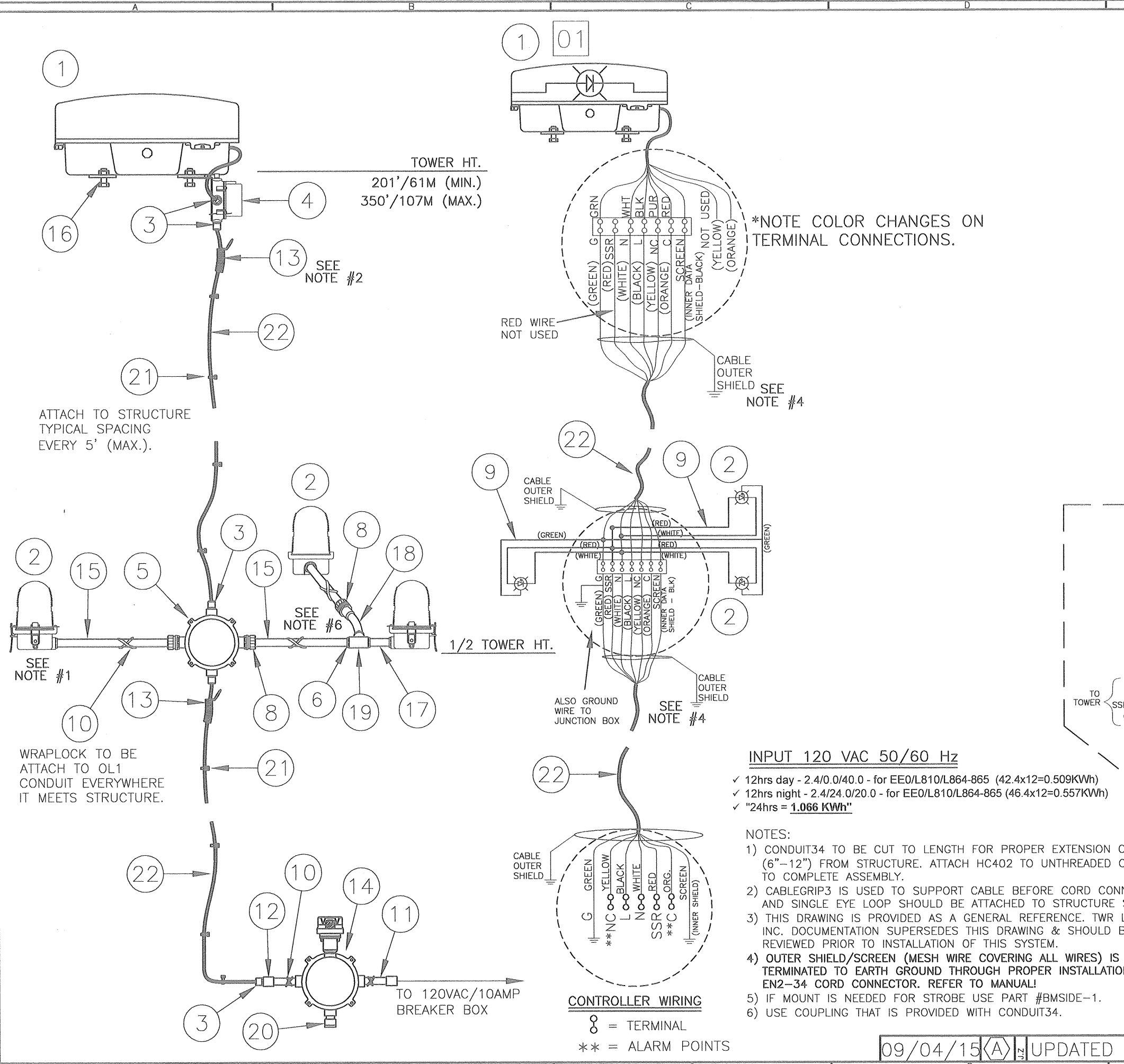
USING THIS JUNCTION BOX METHOD SPACING IS 100 FEET MAXIMUM.

AWG WIRE SIZE	MAX. NUMBER WIRES IN 3/4" CONDUIT	MAX. NUMBER WIRES IN 1" CONDUIT	WIRE AREA SQ. INCHES	WEIGHT PER 100 FEET
12 THHN	16	26	0.0117	2.50
10 THHN	10	17	0.0184	4.10
8 THHN	6	9	0.0373	6.70
6 THHN	4	7	0.0519	10.30
4 THHN	2	4	0.0845	16.20

<u>JUNCTION AND STRAIN RELIEF BOXES</u>					
PROD DEPT	TWR Lighting, Inc. <i>Enlightened Technology®</i>				
SERV DEPT					
ENGINEER					
DRAWN BY	G.D. SEBEK	SHEET SIZE	B	SHEET QTY.	1 OF 1
DATE	07/26/93	SCALE	N.T.S.	DWG. NO.	100089

9/29/00	(A)	UPDATED NOTES
DATE:	LTR.	REVISION

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.



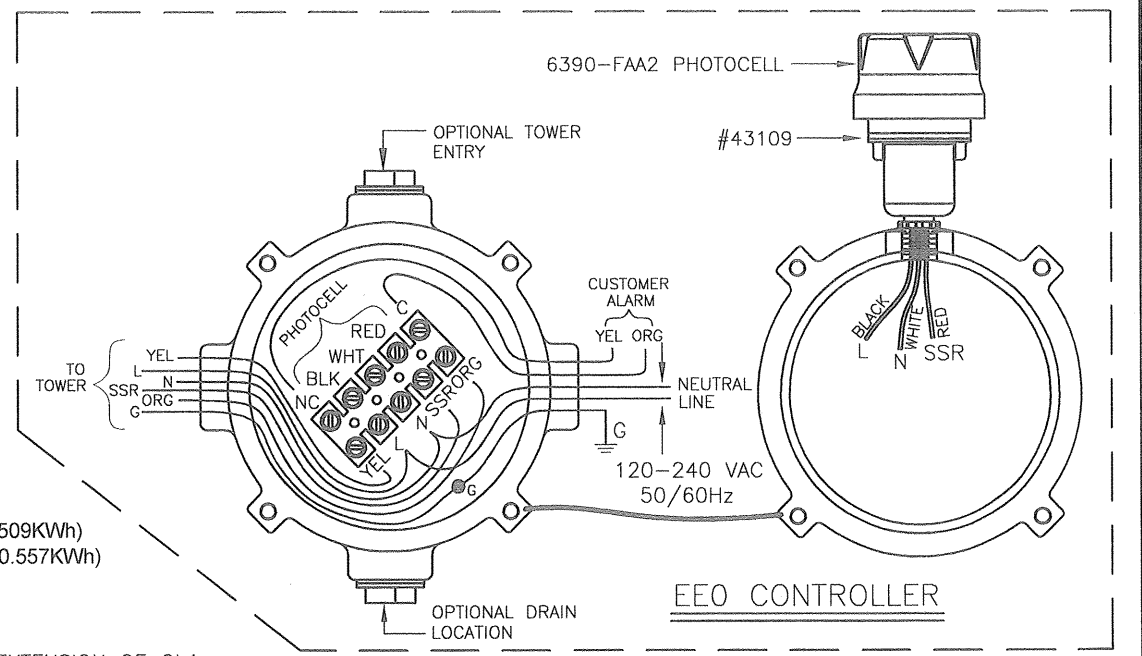
BILL OF MATERIALS

ITEM NO.	QTY.	TWR PART NO.	DESCRIPTION
1	1	L550-864/865	DUAL LED BEACON
2	3	OL1LED	LED SIDELIGHT
3	5	EN2-34	3/4" CORD CONNECTOR
4	1	JB5/7MK	3/4" JUNCTION BOX WITH ANGLE MOUNT
5	1	JB5/7SL	3/4" JUNCTION BOX
6	3	A314	3/4" CONDUIT LOCKNUTS
* 7	1	PIPDOP	4 oz. PIPE DOPE
8	3	HC402	3/4" NO THREAD CONNECTOR
9	3	SLPIGTAIL25G	25' SIDELIGHT PIGTAIL WITH GROUND
10	1	SS5012	STAINLESS STEEL WRAPLOCK 50'
11	2	N34T6	3/4" x 6" NIPPLE (FOR JB MOUNTING)
12	2	CPLG34	3/4" CONDUIT COUPLING
13	2	CABLEGRIP3	SINGLE EYE LACE MESH 0.63 - 0.74
14	1	EEO	EEO CONTROLLER
15	30'	CONDUIT34	3/4" CONDUIT (FOR SIDELIGHTS)
16	4	---	BOLTS/WASHERS/NUTS FOR BEACON MOUNTING
17	1	N34T3	3/4" x 3" NIPPLE
18	1	EL3430	3/4" 30° ELBOW
19	1	T27GC	3/4" CONDULET W/COVER AND GASKET
20	1	5012902	BREATHER

ITEM NUMBERS #21-#22 ARE NOT INCLUDED IN THE KIT BUT ARE AVAILABLE UPON REQUEST, AND REQUIRED FOR INSTALLATION.

21	-	STCABLTI	STROBE CABLE TIES (TWR. HEIGHT + 5)
22	-	STROBCABLE-9	STROBE CABLE (TWR HT. + BRIDGE + 30')

* = ITEMS NOT SHOWN
 ~ = ITEMS QUANTITY CALCULATED ACCORDING TO STRUCTURE HEIGHT.



INPUT 120 VAC 50/60 Hz

- ✓ 12hrs day - 2.4/0.0/40.0 - for EEO/L810/L864-865 (42.4x12=0.509KWh)
- ✓ 12hrs night - 2.4/24.0/20.0 - for EEO/L810/L864-865 (46.4x12=0.557KWh)
- ✓ "24hrs = **1.066 KWh**"

- NOTES:
- 1) CONDUIT34 TO BE CUT TO LENGTH FOR PROPER EXTENSION OF OL1 (6"-12") FROM STRUCTURE. ATTACH HC402 TO UNTHREADED CONDUIT TO COMPLETE ASSEMBLY.
 - 2) CABLEGRIP3 IS USED TO SUPPORT CABLE BEFORE CORD CONNECTOR AND SINGLE EYE LOOP SHOULD BE ATTACHED TO STRUCTURE SECURELY.
 - 3) THIS DRAWING IS PROVIDED AS A GENERAL REFERENCE. TWR LIGHTING, INC. DOCUMENTATION SUPERSEDES THIS DRAWING & SHOULD BE REVIEWED PRIOR TO INSTALLATION OF THIS SYSTEM.
 - 4) OUTER SHIELD/SCREEN (MESH WIRE COVERING ALL WIRES) IS TO BE TERMINATED TO EARTH GROUND THROUGH PROPER INSTALLATION IN EN2-34 CORD CONNECTOR. REFER TO MANUAL!
 - 5) IF MOUNT IS NEEDED FOR STROBE USE PART #BMSIDE-1.
 - 6) USE COUPLING THAT IS PROVIDED WITH CONDUIT34.

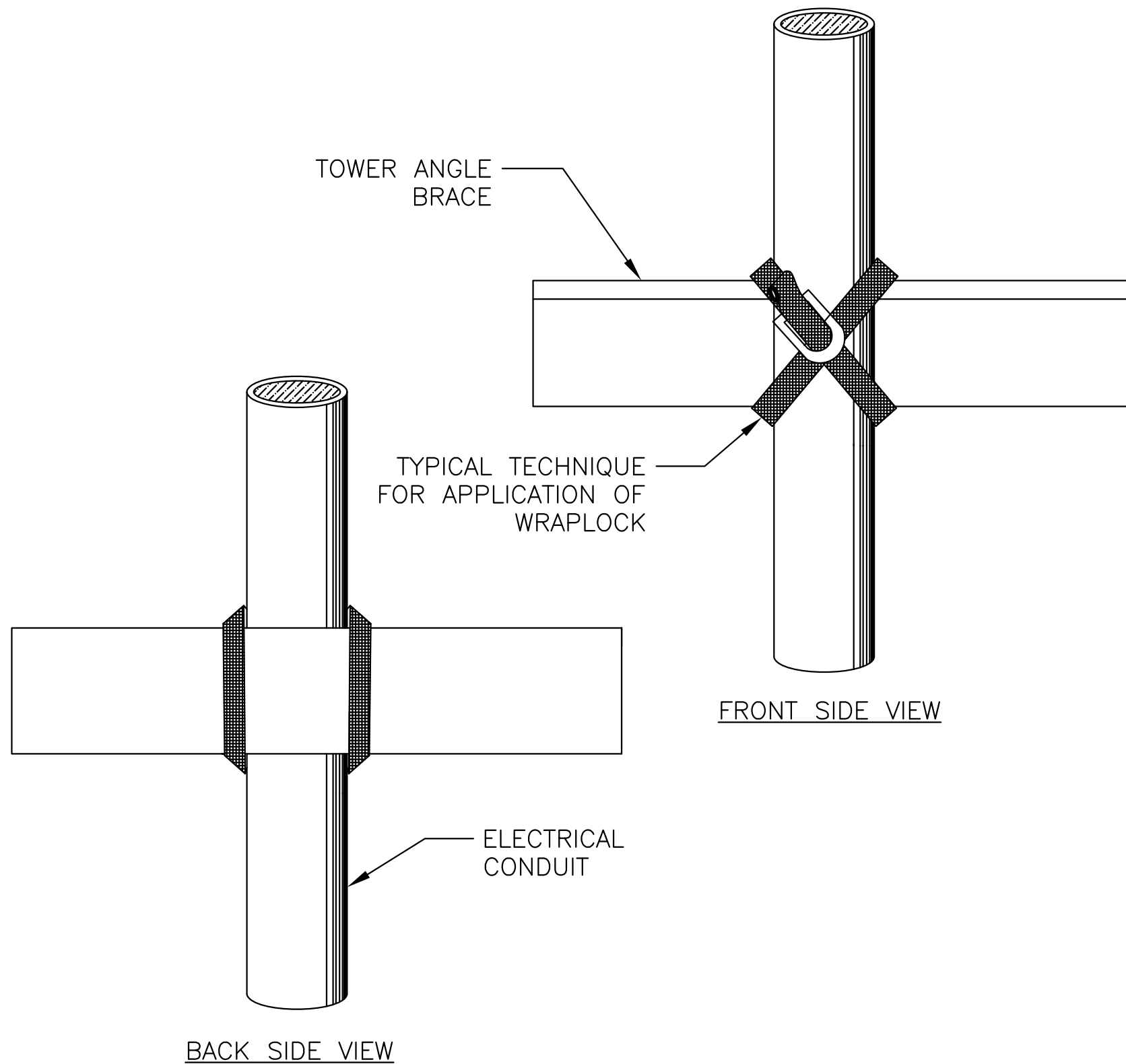
⊗ = TERMINAL
 ** = ALARM POINTS

09/04/15 **A** UPDATED BOM

LK5E1L550 DUAL LED LIGHTING KIT
 (TOWERS 201'/61M TO 350'/107M)

PROD DEPT	TWR Lighting, Inc.		
SERV DEPT	Enlightened Technology		
ENGINEER	<i>[Signature]</i>		
DRAWN BY	J. ZAMORANO	SHEET SIZE	B 1 OF 1
DATE	07/24/2015	SCALE	N.T.S.
			DWG. NO. ORG-648

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

CUT OFF BAND TO PROPER LENGTH.
(SEE TABLE ON COVER OF BOX)

1.— PASS ONE END THROUGH YOKE AND BEND BACK ABOUT 1 1/2" AND FLATTEN DOWN.



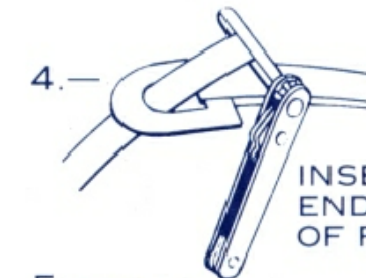
2.— PASS BAND AROUND WORK AND THROUGH YOKE.



3.— REPEAT AND PASS END THROUGH A SECOND TIME, DRAW UP FREE END SNUGLY WITH PLIERS.



4.—



INSERT FREE END IN SLOT OF RATCHET.

5.—



TURN DOWN UNTIL CLAMP IS TIGHT.

6.— BACK OFF SLIGHTLY TO REMOVE RATCHET. CLAMP IS NOW SECURELY LOCKED.

TO REMOVE WrapLock
UNCOIL END WITH RATCHET. PRESS DOWN AT POINT WHERE BAND METAL HAS BEEN FORCED THROUGH CURVED PART OF YOKE.

WRAPLOCK FASTENING DETAIL

ENGINEER	TWR Lighting, Inc. <i>Enlightened Technology®</i>		
APPROVED			
APPROVED			
APPROVED	DRAWN BY M. PETERMAN	SHEET SIZE B	SHEET QTY. 1 OF 1
APPROVED	DATE 05/01/2014	SCALE N.T.S.	DWG. NO. 100984

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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TWR Lighting, Inc. **MARK**[®]

Enlightened Technology[®]

EE0 DUAL CONTROLLER

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.

TWR Lighting, Inc. **HARK**[®]

Enlightened Technology[®]

EE0 DUAL CONTROLLER

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).

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EE0 DUAL CONTROLLER

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.

TWR Lighting, Inc. **MARK**[®]

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EE0 DUAL CONTROLLER

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.

TWR Lighting, Inc. HARK[®]

Enlightened Technology[®]

EE0 DUAL 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

TWR Lighting, Inc. HARK[®]

Enlightened Technology[®]

EE0 DUAL 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