

TWR Lighting, Inc. **HARK**[®]

Enlightened Technology[®]

AA3-MDF w/BOOST CONTROLLER

TABLE OF CONTENTS

1.0	GENERAL INFORMATION	1
2.0	INSTALLATION	2
2.1	MOUNTING THE CONTROL CABINET	2
2.2	PHOTOCELL WIRING	2
2.3	POWER WIRING.....	2
2.4	RED BEACON AND SIDELIGHT WIRING	3
3.0	THEORY OF OPERATION	4
3.1	POWER SUPPLY.....	4
3.2	SIDELIGHTS.....	4
3.3	BEACONS	4
4.0	MAJOR COMPONENTS PARTS LIST.....	5
5.0	SUGGESTED SPARE PARTS LIST	6

WARRANTY & RETURN POLICY

RETURN MERCHANDISE AUTHORIZATION (RMA) FORMS

TWR Lighting, Inc. **HARK**

Enlightened Technology

AA3-MDF w/BOOST CONTROLLER

APPENDIX

CHASSIS LAYOUT	215B-R (REV B)
SCHEMATIC LAYOUT	215B-S (REV B)
TOWER LIGHTING KIT w/BOOST 351' TO 400'	261-31B (REV. E)
TOWER LIGHTING KIT w/BOOST 401' TO 700'	261-32B (REV. E)
SIDELIGHT RECEPTACLE WIRING.....	274-S (REV A)
L-864 FB 300 MM WIRING DETAIL	273-B
JUNCTION BOX DETAIL.....	100089 (REV A)
PHOTOCELL HOUSING DETAIL	100239 (REV H)

TWR Lighting[®], Inc. HARK[®]

Enlightened Technology[®]

AA3-MDF w/BOOST CONTROLLER

1.0 GENERAL INFORMATION

The TWR Lighting[®], Inc. (TWR[®]) Model AA3-MDF w/Boost Controller is for A2 lighting of towers 351' to 700' above ground level (AGL) in accordance with the FAA Advisory Circular 70/7460-1K. One (1) beacon should be placed at the top, and two (2) beacons at mid-level. Obstruction lights should be placed at the $\frac{3}{4}$ and $\frac{1}{4}$ intervals with respect to overall tower height.

The flash rate of the beacons is 30 per minute. The beacons flash synchronized to one another. The sidelights burn steady.

A by-pass switch (SW1) allows the controller to be turned on during daylight hours without covering the photocell. A red neon lamp will be illuminated whenever the controller is activated by the photocell, or the photocell by-pass switch.

Each beacon requires two (2) 620 watt, or two (2) 700 watt, 120V bulbs. TWR[®] recommends that you use only these bulbs. Do not try to use 130V bulbs. Each sidelight requires one (1) 116 watt, 120V bulb (620PS40P, 700PS40P, and 116A21TS)

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

Power supplied to the controller shall be 120/240V, three (3) wire, single phase.

TWR Lighting, Inc. **HARK**

Enlightened Technology®

AA3-MDF w/BOOST CONTROLLER

2.0 INSTALLATION

2.1 MOUNTING THE CONTROL CABINET

(Refer to Drawing 215B-R)

2.1.1 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 215B-R. Power wiring to the control cabinet should be in accordance with local methods and the National Electrical Codes (NEC).

2.1.2 The wiring from the service breaker, photocell, the red incandescent beacon, and the sidelights should enter the control cabinet through the water-tight connectors in the bottom of the cabinet. Inside the cabinet, the connections will be made on the terminals and Circuit Breakers marked B1, B2, B3, and S, which are located at the bottom of the chassis.

2.2 PHOTOCELL WIRING

(Refer to Drawing 215B-R)

2.2.1 Connect the **BLACK** wire from the pigtail to TB2-L2.

2.2.2 Connect the **WHITE** wire from the pigtail to TB2-N.

2.2.3 Connect the **RED** wire from the pigtail to TB2-SSR.

2.2.4 Insert the photocell into the socket, and twist to lock. No further connections are needed.

2.3 POWER WIRING

(Refer to Drawing 215B-R)

2.3.1 The power wiring to the control cabinet should be in accordance with local methods and the NEC.

2.3.2 The Circuit Breaker needs to be a two (2) pole common strip rated at 40 amps.

2.3.3 Connect incoming 120V AC “Hot #1” to terminal block TB1-L1.

AA3-MDF w/BOOST CONTROLLER

- 2.3.4 Connect incoming 120V AC “Hot #2” to terminal block TB1-L2.
- 2.3.5 Connect the neutral wire to one of the terminal blocks TB1-N.
- 2.3.6 Connect the AC ground to the aluminum mounting plate.

2.4 RED BEACON AND SIDELIGHT WIRING

(Refer to Drawings 215B-R, 261-31B, and 261-32B)

- 2.4.1 Connect the **BLACK** wire from Beacon #1 to Circuit Breaker marked “B1.”
- 2.4.2 Connect the first **BLUE** wire from Beacon #2 to Circuit Breaker marked “B2.”
- 2.4.3 Connect the second **BLUE** wire from Beacon #3 to Circuit Breaker marked “B3.”
- 2.4.4 Connect the **RED** and **YELLOW** wires from sidelight groups #1, and #2, to Circuit Breaker marked “S.”
- 2.4.5 Connect the **NEUTRAL** wire(s) to one (1) of the terminals marked TB1-N.

TWR Lighting, Inc. HARK[®]

Enlightened Technology[®]

AA3-MDF w/BOOST CONTROLLER

3.0 THEORY OF OPERATION

3.1 POWER SUPPLY

120/240V AC enters the controller from the Circuit Breaker panel. Lines L1, and L2, sit at the PRD, waiting to be switched. When the 6390-FAA photocell is activated, Line L2 energizes the coil of the PRD. This also can be accomplished by using the photocell by-pass switch (SW1).

3.2 SIDELIGHTS

LD1 is sent to the Circuit Breaker marked "S," which powers both sidelight circuits.

3.3 BEACONS

LD1, LD2, and LD3 are sent to the primary of the boost transformers T1, T2, and T3, and the coil of the motorized flasher. The boosted output voltage (126V at 120V nominal input) is sent to the three (3) contacts on the motorized flasher. The output side of these contacts operates Circuit Breakers B1, B2, and B3, at 30 flashers per minute.

TWR Lighting, Inc. **HARK**

Enlightened Technology®

AA3-MDF w/BOOST CONTROLLER

4.0 MAJOR COMPONENTS PARTS LIST

QTY	PART NUMBER	DESCRIPTION
1	6390-FAA	120 – 240V Photocell
1	33-S4F	Motorized Flasher
1	CR360L303	Mechanical Load Contactor (PRD)
3	XFMR-15 amp	P-5546 Boost Transformer (T1, T2, and T3)
4	S261D20	20 amp Breakers (B1, B2, B3, and S1)
8	8WA1204	Single Pole Terminal TB1, and TB2
2	MOV524V15	MOV (MOV1, AND MOV2)
1	STJ01002	15 amp SPDT Switch (SW1)
1	SSPIGTAIL	20' Photocell Pigtail
1	VJ1412HWPL2	Enclosure

TWR Lighting, Inc. HARK[®]

Enlightened Technology[®]

AA3-MDF w/BOOST CONTROLLER

5.0 SUGGESTED SPARE PARTS LIST

QTY	PART NUMBER	DESCRIPTION
1	6390-FAA	120 – 240V Photocell
2	MOV524V15	MOV (MOV1, AND MOV2)

TWR Lighting, Inc. **MARK**

Enlightened Technology

AA3-MDF w/BOOST 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[®]

AA3-MDF w/BOOST 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).

TWR Lighting, Inc. **HARK**[®]

Enlightened Technology[®]

AA3-MDF w/BOOST 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. **HARK**[®]

Enlightened Technology[®]

AA3-MDF w/BOOST 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[®]

AA3-MDF w/BOOST 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[®]

AA3-MDF w/BOOST CONTROLLER

RETURN MERCHANDISE AUTHORIZATION (RMA) FORM

RMA#: _____ **DATE:** _____

CUSTOMER: _____

CONTACT: _____ **PHONE NO.:** _____

ITEM DESCRIPTION (PART NO.): _____

MODEL NO.: _____ **SERIAL NO.:** _____

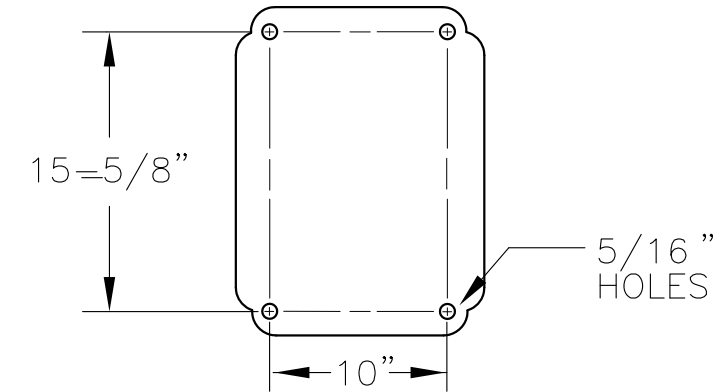
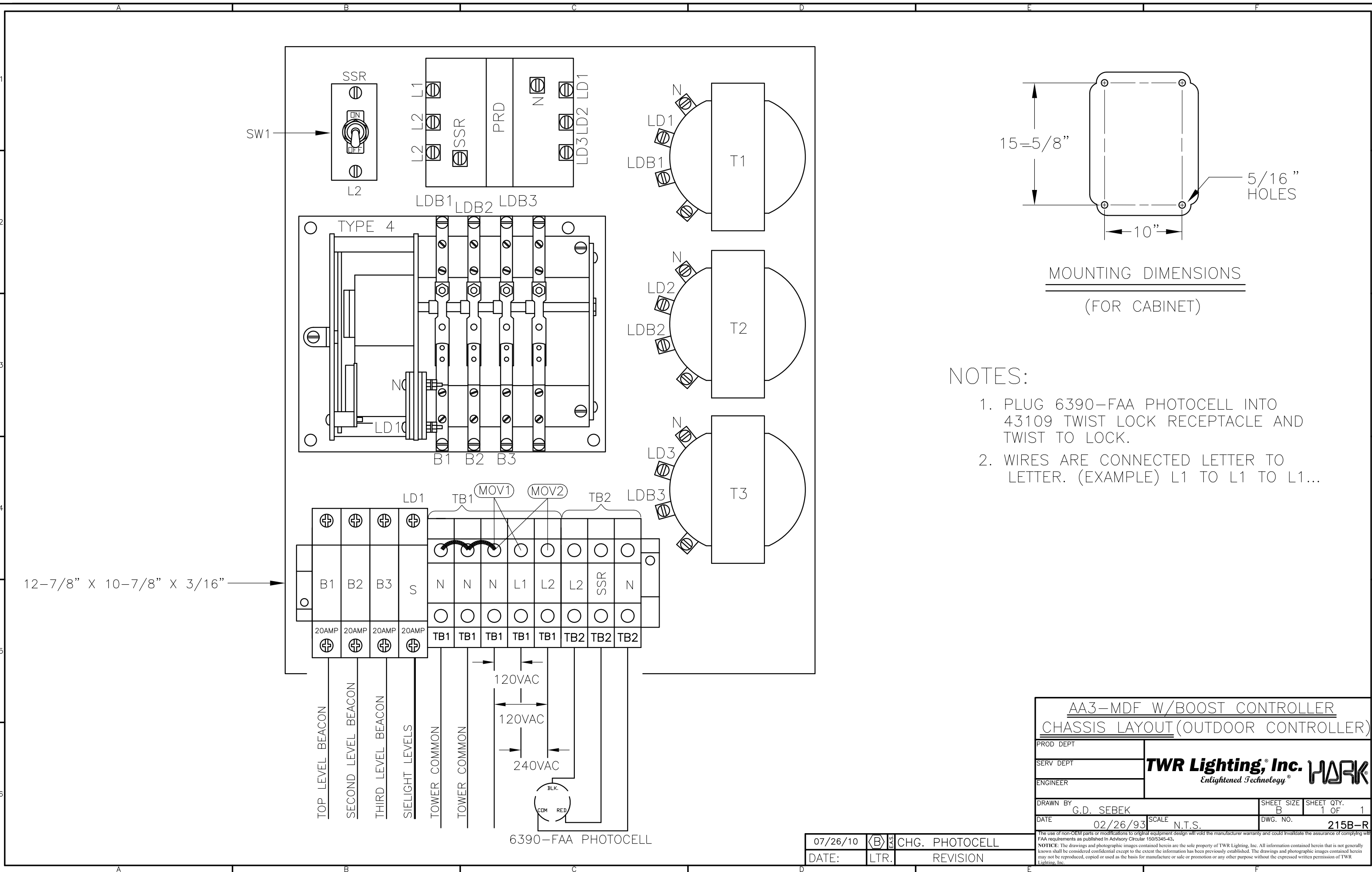
ORIGINAL TWR INVOICE NO.: _____ **DATED:** _____

DESCRIPTION OF PROBLEM: _____

SIGNED _____ **DATE NEEDED** _____

RETURN ADDRESS: _____

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



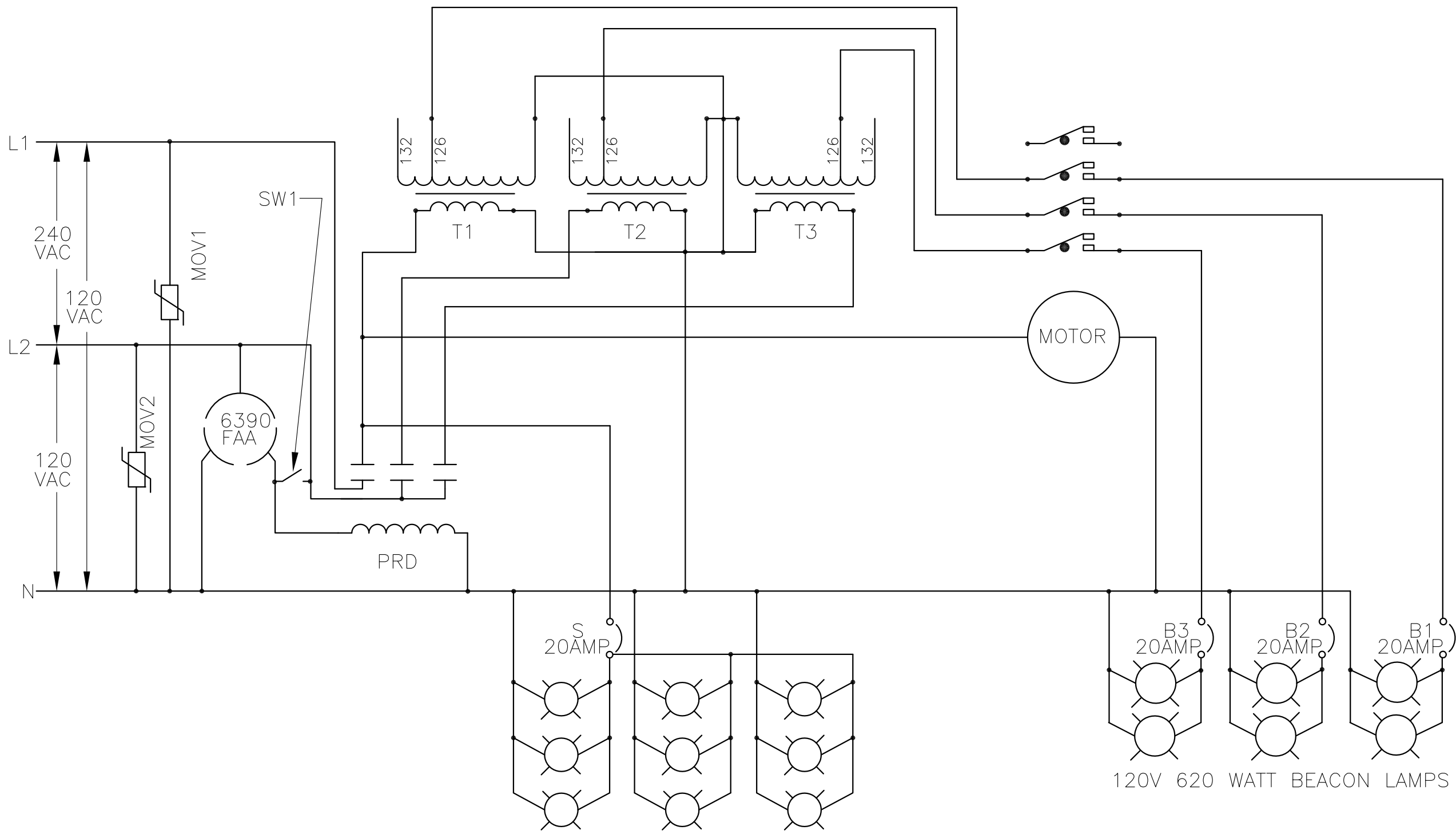
MOUNTING DIMENSIONS
(FOR CABINET)

NOTES:

1. PLUG 6390-FAA PHOTOCCELL INTO 43109 TWIST LOCK RECEPTACLE AND TWIST TO LOCK.
2. WIRES ARE CONNECTED LETTER TO LETTER. (EXAMPLE) L1 TO L1 TO L1...

AA3-MDF W/BOOST CONTROLLER			
CHASSIS LAYOUT (OUTDOOR CONTROLLER)			
PROD DEPT	TWR Lighting, Inc. <i>Enlightened Technology</i>		
SERV DEPT			
ENGINEER			
DRAWN BY	G.D. SEBEK	SHEET SIZE	SHEET QTY.
DATE	02/26/93	SCALE	N.T.S.
		DWG. NO.	215B-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>			

07/26/10	(B)	CHG. PHOTOCCELL
DATE:	LTR.	REVISION



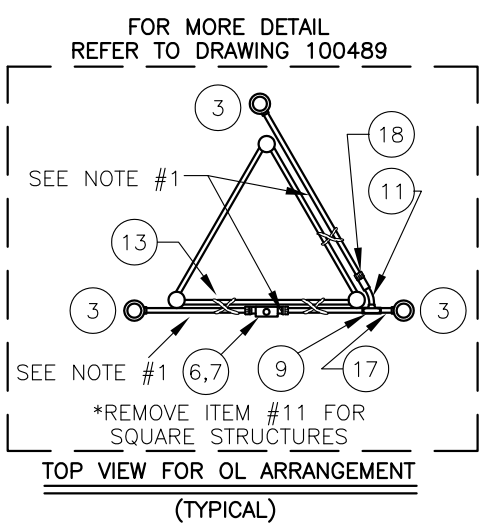
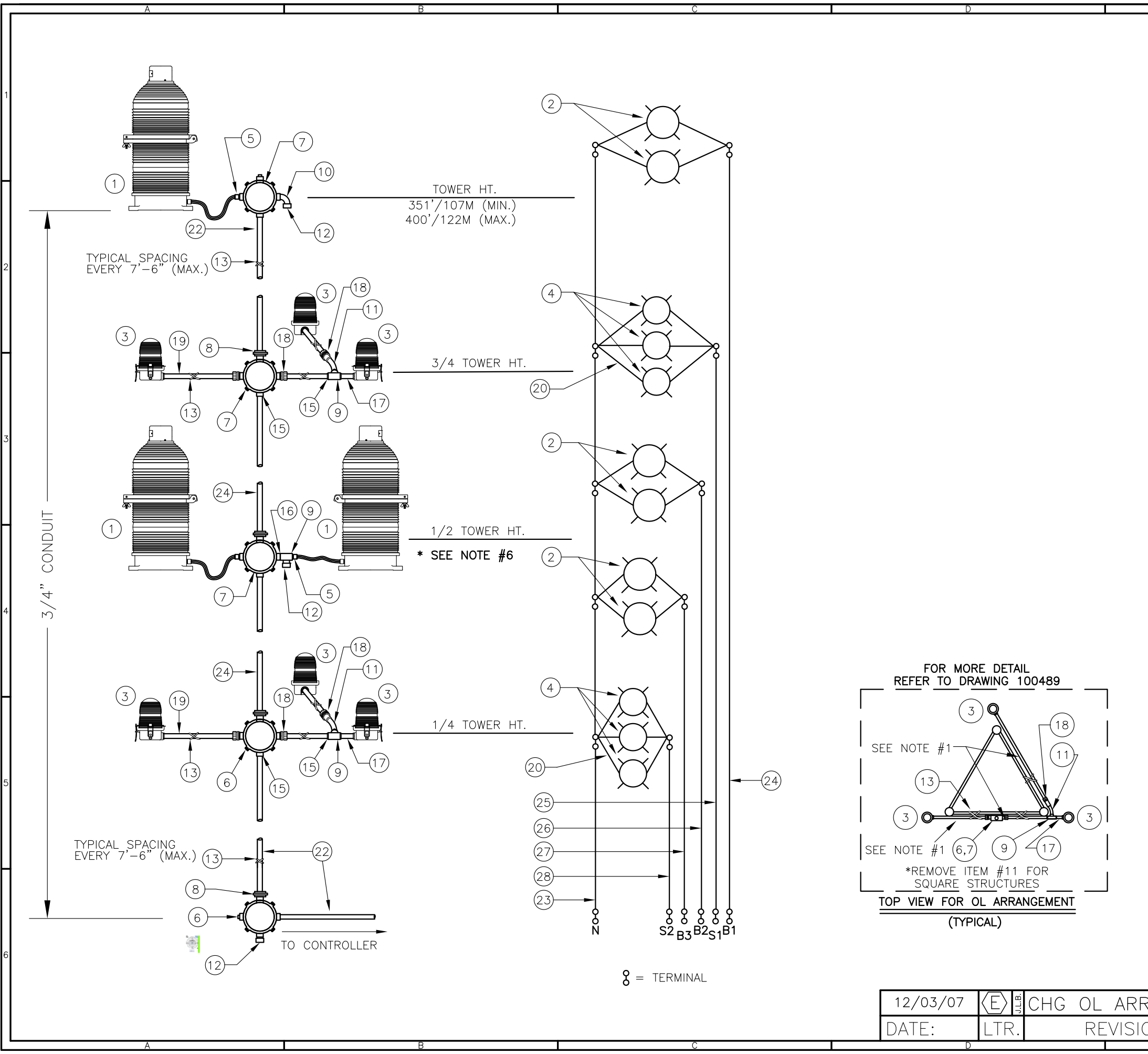
120V 116 WATT SIDELIGHT LAMPS

120V 620 WATT BEACON LAMPS

<u>AA3-MDF W/ BOOST SCHEMATIC</u>			
PROD DEPT	TWR Lighting, Inc. <i>Enlightened Technology®</i>		
SERV DEPT			
ENGINEER			
DRAWN BY	G.D. SEBEK	SHEET SIZE	SHEET QTY.
DATE	03/05/93	SCALE	N.T.S.
		DWG. NO.	215B-S

07/26/10	(B)	CHG. PHOTOCELL
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	3	BEACON	300 MM BEACON RED
2	6	620PS40P	620 WATT 120 VOLT LAMP
3	6	OL1	3/4" OBSTRUCTION LIGHT
4	6	116A21TS	116 WATT 120 VOLT LAMP
5	3	CGB295SA	3/4" CORD CONNECTOR
6	2	JB5/7	3/4" JUNCTION BOX W/ 7 TERMINALS
7	3	JB5	3/4" JUNCTION BOX
8	5	UNY205	3/4" UNION
9	4	T27CG	3/4" CONDULET W/COVER AND GASKET
10	2	EL3490	3/4" 90° SHORT ELBOW
11	2	EL3430	3/4" 30° ELBOW
12	3	5012902	3/4" BREATHER
13	2	SS10012	WRAPLOCK
* 14	2	PIPDOP	4 oz. PIPE DOPE
15	15	A314	3/4" CONDUIT LOCKNUTS
* 16	16	CPLG34	3/4" GALVANIZED COUPLING
17	2	N34T3	3/4" x 3" NIPPLE
18	6	HC402	3/4" NO THREAD CONNECTOR
19	60'	CONDUIT34	3/4" CONDUIT (FOR OL)
20	6	SLPIGTAIL25	25' SIDELIGHT PIGTAIL
* 21	1	AA2/3 B	AA2/3 B CONTROLLER W/BOOST
22	-	CONDUIT34	3/4" CONDUIT (TOWER HT.+ 30'/9M)
23	-	6THHNWHT	#6 THHN WHT. WIRE (TOWER HT.+40'/12M)
24	-	10THHNBLK	#10 THHN BLK. WIRE (TOWER HT.+40'/12M)
25	-	12THHNRED	#12 THHN RED WIRE (3/4 TWR HT.+40'/12M)
26	-	12THHNBLUE	#12 THHN BLUE WIRE (1/2 TWR HT.+40'/12M)
27	-	12THHNBLUE	#12 THHN BLUE WIRE (1/2 TWR HT.+40'/12M)
28	-	12THHNYLW	#12 THHN YLW. WIRE (1/4 TWR HT.+40'/12M)

ITEM NUMBERS #22-#28 ARE NOT INCLUDED IN THE KIT BUT ARE AVAILABLE UPON REQUEST, AND REQUIRED FOR INSTALLATION.

* = ITEMS NOT SHOWN

NOTES:

- PART #CONDUIT34 CUT TO LENGTH FOR PROPER EXTENTION OF OL1 (6"-12") FROM STRUCTURE. ATTACH PART #HC402 TO UNTHREADED CONDUIT TO COMPLETE ASSEMBLY.
- CONDUIT SIZE BASED ON USING TYPE THHN WIRE.
- USE RIGID GALVANIZED STEEL CONDUIT.
- BREATHERS ALLOW FOR CIRCULATION OF AIR TO PREVENT CONDENSATION.
- USE COUPLING THAT IS PROVIDED WITH PART #CONDUIT34 TO ATTACH ITEM EL3430 TO PART #HC402.
- MIDDLE LEVEL BEACON CAN NOT BE MOUNTED AT LESS THAN 200'/61M

LK1A2/3B TOWER LIGHTING KIT W/BOOST
(TOWERS 351'/107M TO 400'/122M)

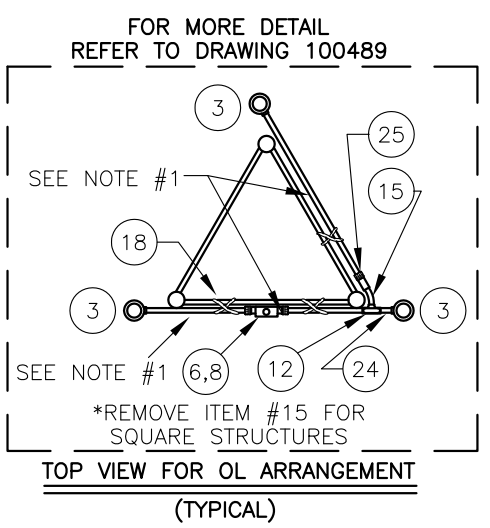
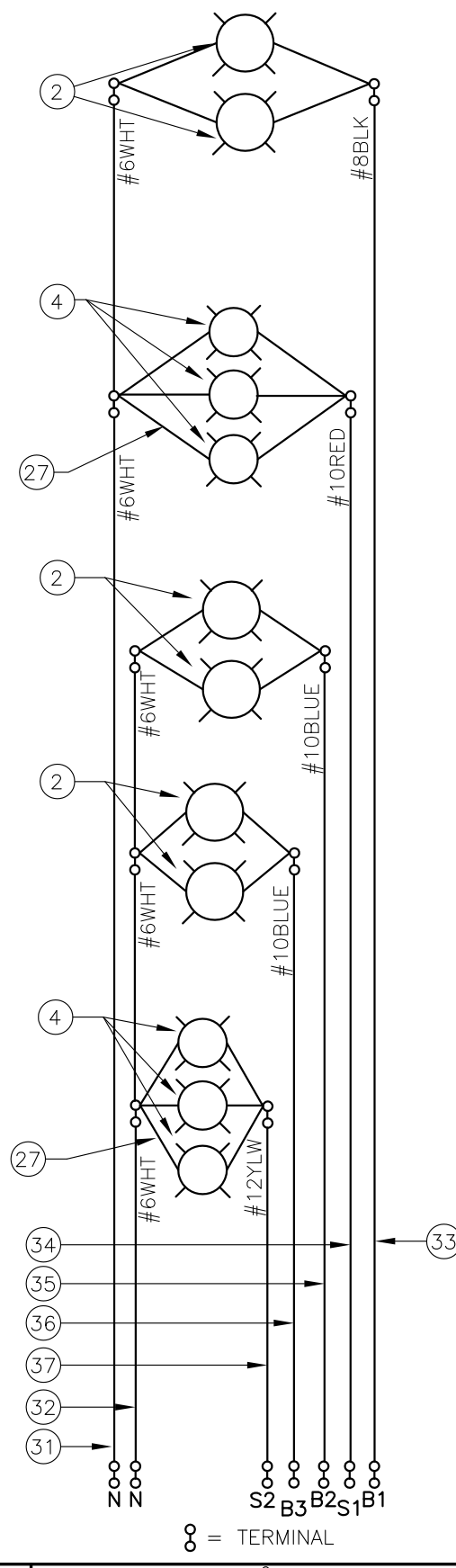
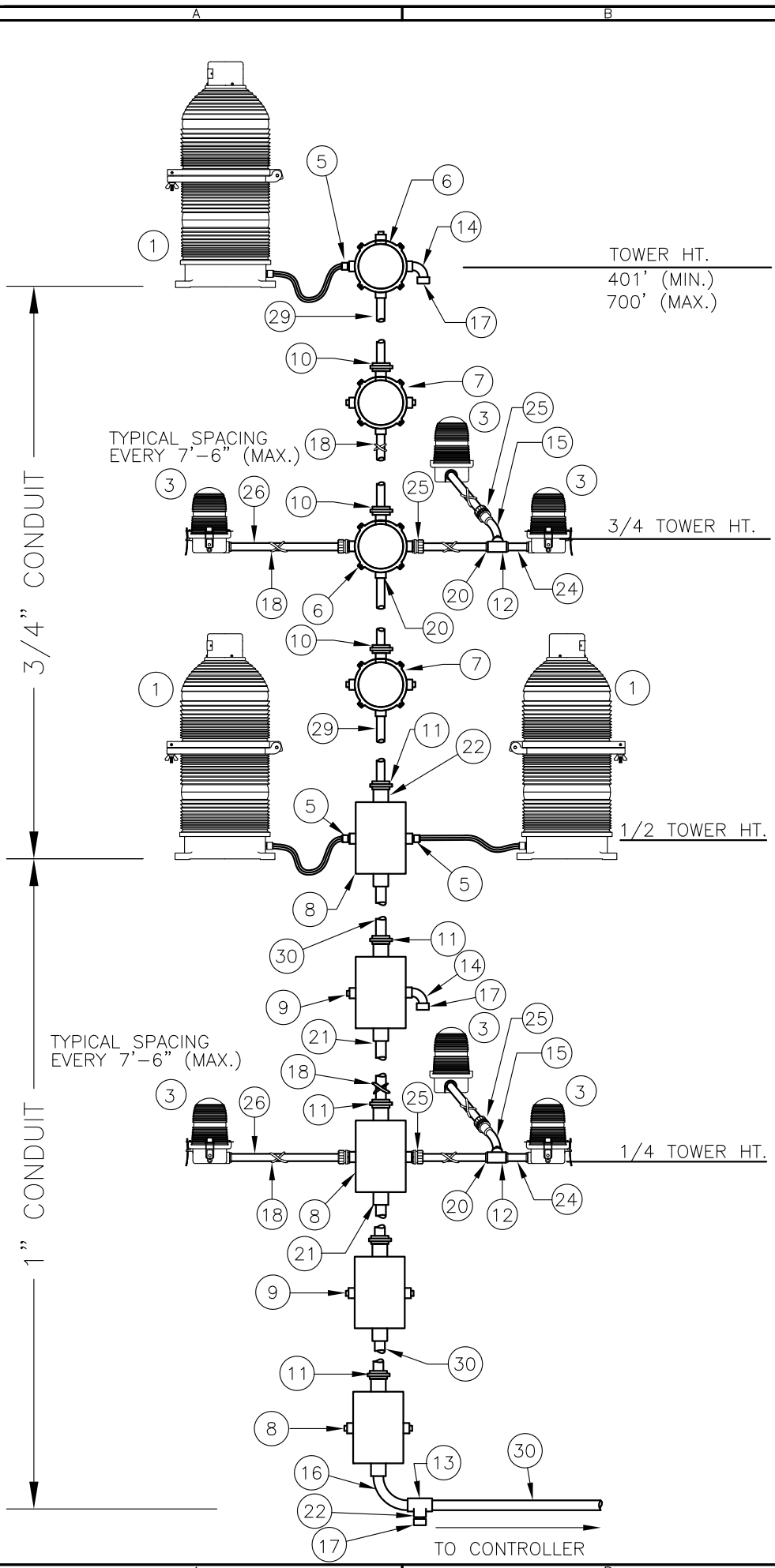
PROD DEPT	TWR Lighting, Inc. Enlightened Technology®	SHEET SIZE	SHEET QTY.
SERV DEPT		B	1 OF 1
ENGINEER			
DRAWN BY	E.A.SALAZAR	SCALE	N.T.S.
DATE	12/08/92	DWG. NO.	261-31B

DATE: 12/03/07

REVISION: CHG OL ARRANGEMENT

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	3	BEACON	300 MM BEACON RED
2	6	620PS40P	620 WATT 120 VOLT LAMP
3	6	OL1	3/4" OBSTRUCTION LIGHT
4	6	116A21TS	116 WATT 120 VOLT LAMP
5	4	CGB295SA	3/4" CORD CONNECTOR
6	2	JB5	3/4" JUNCTION BOX
7	2	JB0	3/4" STRAIN RELIEF BOX
8	3	JB8	1" JUNCTION BOX
9	2	JB8SR	1" STRAIN RELIEF BOX
10	6	UNY205	3/4" UNION
11	5	UNY305	1" UNION
12	3	T27CG	3/4" CONDULET W/COVER AND GASKET
13	2	T37CG	1" CONDULET W/COVER AND GASKET
14	2	EL3490	3/4" 90° SHORT ELBOW
15	2	EL3430	3/4" 30° ELBOW
16	2	EL190	1" 90° ELBOW
17	3	5012902	3/4" BREATHER
18	2	SS10012	WRAPLOCK
* 19	2	PIPDOP	4 oz. PIPE DOPE
20	19	A314	3/4" CONDUIT LOCKNUTS
21	12	A315	1" CONDUIT LOCKNUT
22	2	RE32	1" TO 3/4" REDUCER
* 23	16	CPLG34	3/4" GALVANIZED COUPLING
24	2	N34T3	3/4" x 3" NIPPLE
25	6	HC402	3/4" NO THREAD CONNECTOR
26	60'	CONDUIT34	3/4" CONDUIT (FOR OL)
27	6	SLPIGTAIL25	25' SIDELIGHT PIGTAIL
* 28	1	AA2/3 B	AA2/3 B CONTROLLER

ITEM NUMBERS #29-#37 ARE NOT INCLUDED IN THE KIT BUT ARE AVAILABLE UPON REQUEST, AND REQUIRED FOR INSTALLATION.

29	-	CONDUIT34	3/4" CONDUIT (1/2 TOWER HT.)
30	-	CONDUIT1	1" CONDUIT (1/2 TOWER HT.+ 30'/9M)
31	-	6THHNWHT	#6 THHN WHT. WIRE (TOWER HT.+40'/12M)
32	-	6THHNWHT	#6 THHN WHT. WIRE (1/2 TWR HT.+40'/12M)
33	-	8THHNBLK	#8 THHN BLK. WIRE (TOWER HT.+40'/12M)
34	-	10THHNRED	#10 THHN RED WIRE (3/4 TWR HT.+40'/12M)
35	-	10THHNBLUE	#10 THHN BLUE. WIRE (1/2 TWR HT.+40'/12M)
36	-	10THHNBLUE	#10 THHN BLUE. WIRE (1/2 TWR HT.+40'/12M)
37	-	12THHNYLW	#12 THHN YLW. WIRE (1/4 TWR HT.+40'/12M)

* = ITEMS NOT SHOWN

NOTES:

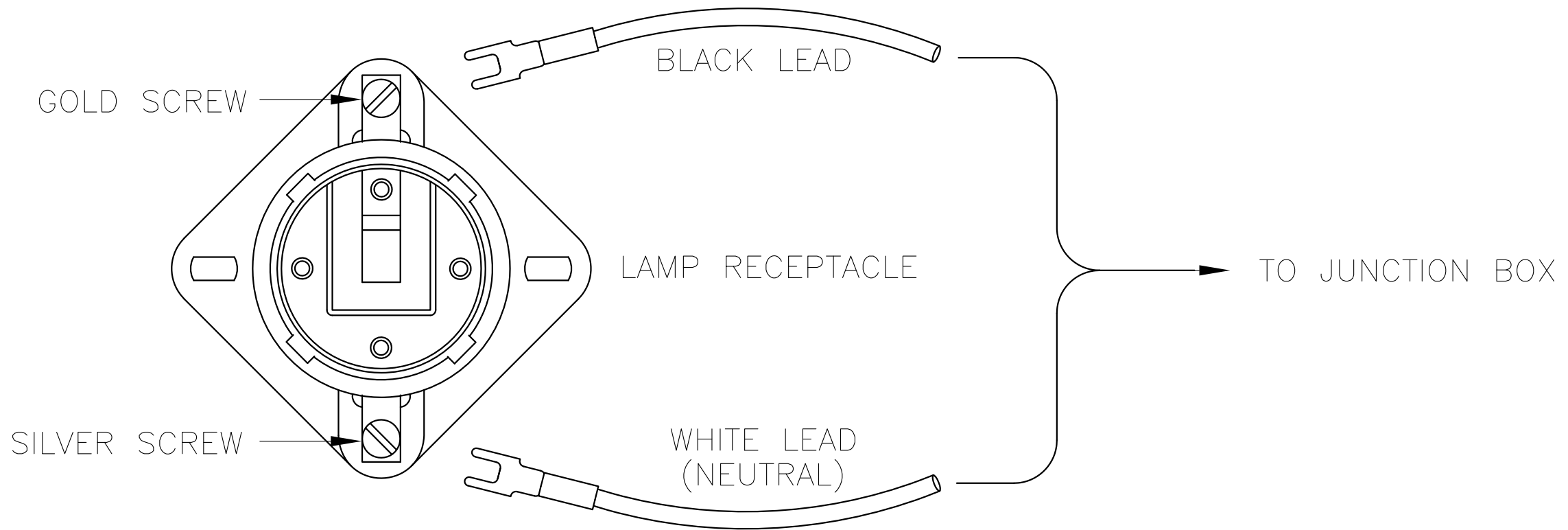
- 1) PART #CONDUIT34 CUT TO LENGTH FOR PROPER EXTENSION OF OL1 (6"-12") FROM STRUCTURE. ATTACH PART #HC402 TO UNTHREADED CONDUIT TO COMPLETE ASSEMBLY.
- 2) CONDUIT SIZE BASED ON USING TYPE THHN WIRE.
- 3) USE RIGID GALVANIZED STEEL CONDUIT.
- 4) BREATHERS ALLOW FOR CIRCULATION OF AIR TO PREVENT CONDENSATION.
- 5) USE COUPLING THAT IS PROVIDED WITH PART #CONDUIT34 TO ATTACH ITEM EL3430 TO PART #HC402.

LK2A2/3B TOWER LIGHT KIT W/BOOST (TOWERS 401'/122M TO 700'/213M)

PROD DEPT	TWR Lighting, Inc. <i>Enlightened Technology®</i>	SHEET SIZE	SHEET QTY.
SERV DEPT		B	1 OF 1
ENGINEER			
DRAWN BY	E.A.SALAZAR	SCALE	N.T.S.
DATE	12/15/92	DWG. NO.	261-32B

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.

12/03/07	(E)	CHG OL ARRANGEMENT
DATE:	LTR.	REVISION

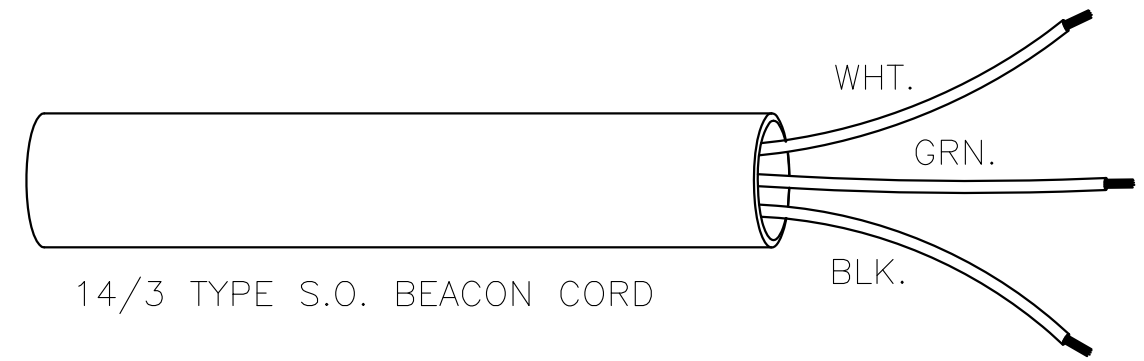
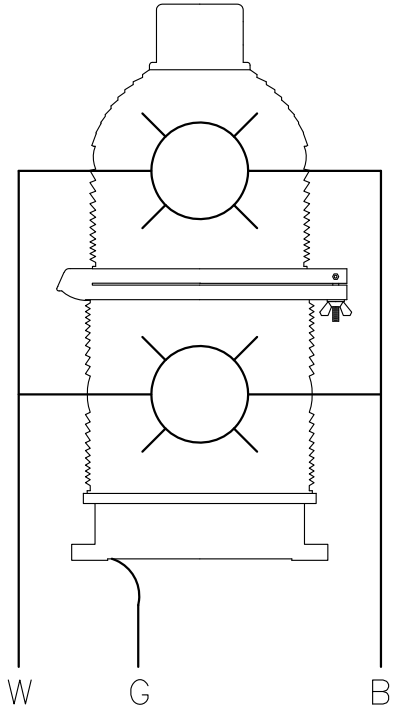


SIDELIGHT RECEPTACLE WIRING			
PROD DEPT	TWR Lighting, Inc. <i>Enlightened Technology</i> WORK		
SERV DEPT			
ENGINEER			
DRAWN BY	G.D. SEBEK	SHEET SIZE	SHEET QTY.
DATE	06/08/91	B	1 OF 1
		SCALE	DWG. NO.
		N.T.S.	274-S
<small>NOTE: The use of non-OEM parts or modifications to original equipment design 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>			

7/2/98	(A)	CHANGED LABEL
DATE:	LTR.	REVISION

- 1) WHITE WIRE IS NEUTRAL TO BOTH LAMPS.
- 2) BLACK WIRE IS LINE TO BOTH LAMPS.
- 3) GREEN WIRE IS EARTH GROUND.

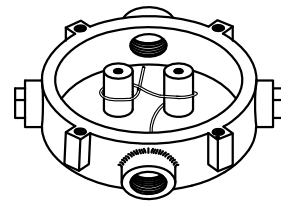
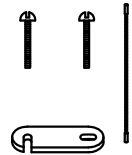
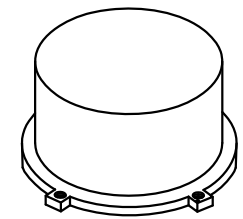
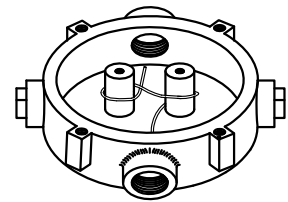
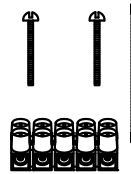
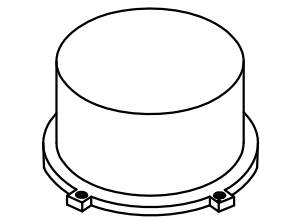
300 MM BEACON



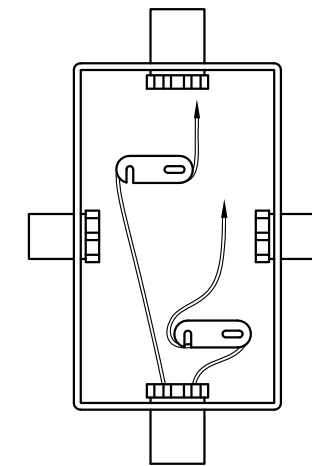
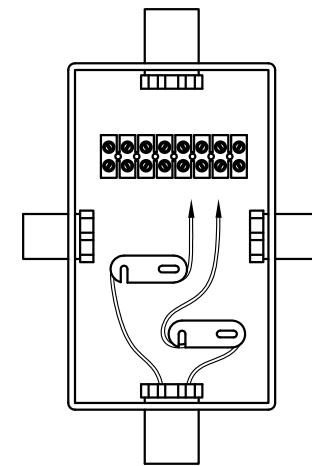
300 MM BEACON WIRE

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	6/10/91	SCALE	N.T.S.	DWG. NO.	273-B

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.



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.

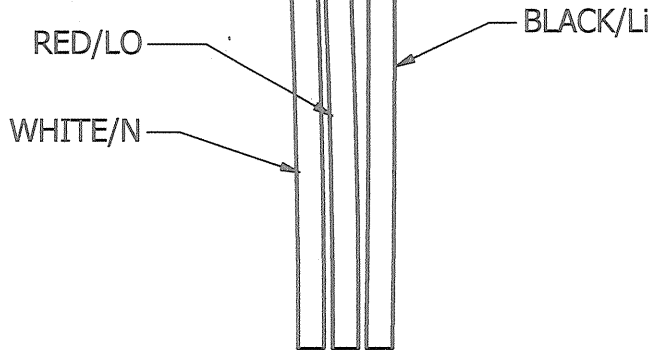
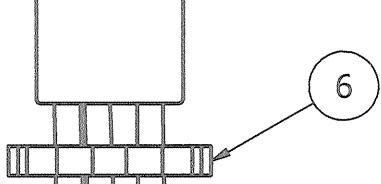
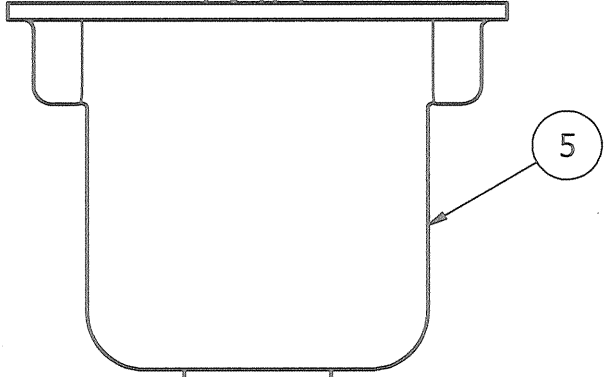
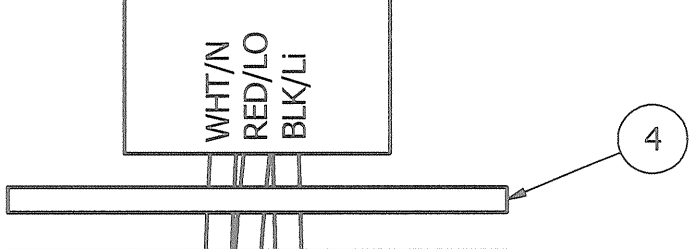
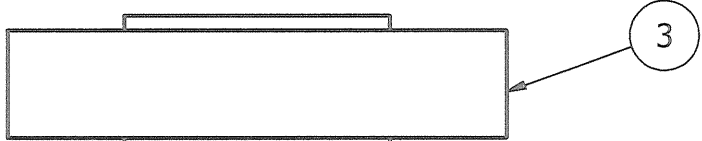
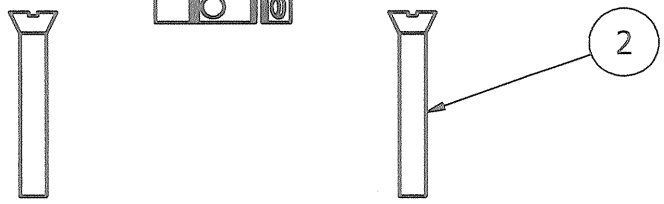
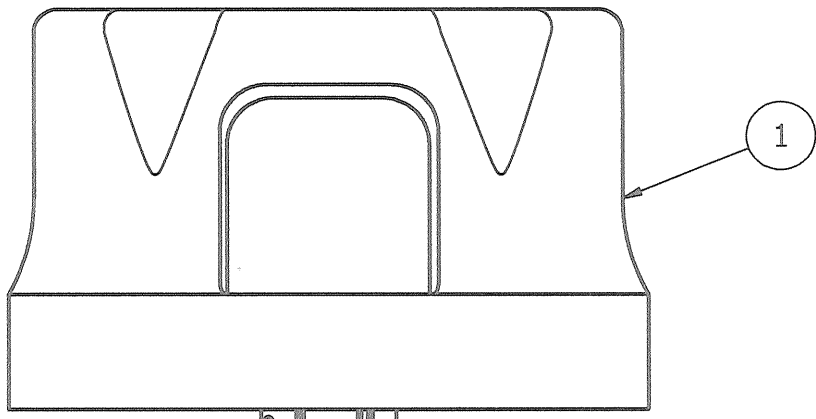
4

3

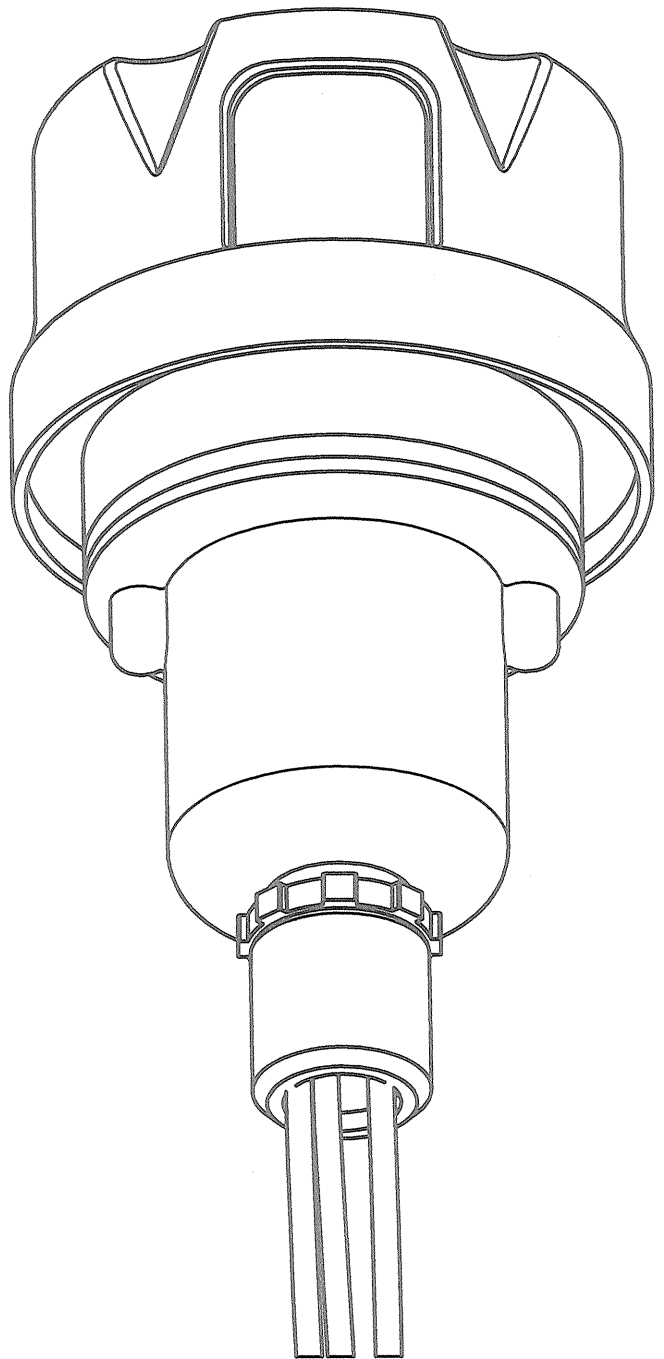
2

1

PARTS LIST		
ITEM	QTY	PART NUMBER
1	1	PHOTOCELL
2	2	6-32 x 1" SCREW
3	1	RECEPTACLE SOCKET
4	1	RECEPTACLE GASKET
5	1	RECEPTACLE HOUSING
6	1	1/2" CONDUIT LOCKNUT
7	1	3/4" TO 1/2" REDUCER



EXPLODED VIEW



ASSEMBLY

NOTES:

- 1. ITEM #7 CAN BE USED TO REDUCE 3/4" CONDUIT TO 1/2" CONDUIT AT THE HOUSING OR AT THE CONTROLLER ITSELF.
- 2. IF ADDITIONAL WIRE IS REQUIRED OVER THE FACTORY 20', USE THE FOLLOWING CHART.
 21' TO 300' - 16 AWG TFFN
 301' TO 500' - 14 AWG TFFN

PHOTOCELL HOUSING DETAIL

PROD. DEPT
 SERV. DEPT
 ENGINEER
TWR Lighting, Inc. HARK
Enlightened Technology®

DRAWN BY	vhernandez	SHEET SIZE	B	SHEET QTY.	1 OF 1
DATE	10/18/1995	SCALE	1/1	DWG. NO.	100239i

DATE	REV	AUTHOR	DESCRIPTION
02/03/2015	H	JZAMORANO	UPDATED NOTES

4

3

2

1