

# EXTERIOR LIGHTING PROGRAM

# MAW-102 45 Charles Street Boston, MA

#### DRAWING INDEX:

**COVER SHEET** 

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## VICINITY MAP

v2 210406



1629 Smirl Drive, Suite 200, Heath, Texas 75032 www.gmr1.com Office: (972) 771-6038

#### CONTRACTOR RESPONSIBILITY NOTES:

- 1. CONTRACTOR SHALL BE RESPONSIBLE FOR PERMITTING, INCLUDING COORDINATION WITH THE LOCAL JURISDICTION AND ANY ASSOCIATED PERMIT FEES OR PROCESSING. CONTRACTOR SHALL NOTIFY GMR UPON RECEIPT OF PERMIT.
- 2. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITTING DOCUMENTS THAT ARE NOT INCLUDED IN THE LIGHTING DESIGN PACKAGE. THESE INCLUDE, BUT ARE NOT LIMITED TO, STAMPED ELECTRICAL DRAWINGS, STAMPED POLE BASE DRAWINGS, AND PROFESSIONAL SURVEYS.
- 3. SHOULD STAMPED PHOTOMETRIC DRAWINGS BE REQUIRED, CONTRACTOR SHALL ENGAGE LOCAL ENGINEER OR LIGHTING DESIGNER AS REQUIRED TO PROVIDE STAMP ON GMR PHOTOMETRIC DESIGN DOCUMENTS.
- 4. CONTRACTOR SHALL PROVIDE THE BANKING CENTER NOTIFICATION AT LEAST ONE WEEK IN ADVANCE OF VISITING SITES OR STARTING WORK.
- 5. CONTRACTOR SHALL VERIFY VOLTAGE REQUIREMENTS FOR FIXTURES PRIOR TO PLACEMENT OF FIXTURE ORDERS.
- 6. CONTRACTOR TO VERIFY LIGHTING CONTROLS PRIOR TO BEGINNING CONSTRUCTION. SEE LIGHTING CONTROL NOTES.
- 7. CONTRACTOR SHALL RECEIVE FORMAL APPROVAL FROM GMR ON ANY FIXTURE MODIFICATIONS OR VARIATIONS FROM THE LUMINAIRE SCHEDULE.
- 8. CONTRACTOR SHALL VERIFY EXISTING AND PROPOSED FIXTURE MOUNTING CONDITIONS IN FIELD. ANY SPECIAL MOUNTING HARDWARE NEEDED FOR PROPOSED FIXTURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- 9. CONTRACTOR SHALL SUPPLY ALL NEW LIGHT POLES. NEW LIGHT POLES SHALL MATCH EXISTING CONDITIONS ON SITE FOR POLE TYPE AND PAINT COLOR.
- 10. CONTRACTOR SHALL ORDER ALL FIXTURES FROM BORDER STATES IN ACCORDANCE WITH BANK OF AMERICA NATIONAL ACCOUNT. CONTACT NATIONAL ACCOUNT QUOTES DEPARTMENT AT BOA@BORDERSTATES.COM OR 704-372-3040.
- 11. CONTRACTOR SHALL PERFORM ALL NECESSARY PATCHING OR REPAINTING FOR ADDED, REMOVED, OR REPLACED FIXTURES.
- 12. CONTRACTOR SHALL REPAIR ANY DISTURBED AREAS BACK TO EXISTING CONDITION INCLUDING PAVED AREAS, LANDSCAPED AREAS, ETC.
- 13. CONTRACTOR SHALL VERIFY AND DOCUMENT COMPLETED WORK DURING NIGHT HOURS. ALL FIXTURES MUST BE FUNCTIONAL DURING NIGHT HOURS PRIOR TO SCHEDULING A FINAL SURVEY WITH GMR.
- 14. CONTRACTOR SHALL PROVIDE BEFORE AND AFTER NIGHT TIME PHOTOS OF THE SITE.
- 15. CONTRACTOR SHALL UTILIZE THE "BOA ELP INCENTIVE SITE SURVEY FORM" TO DOCUMENT THE EXACT DETAILS OF EACH FIXTURE BEING REMOVED FOR REBATE AND ENERGY SAVINGS CALCULATION PURPOSES.
- 16. CONTRACTOR SHALL RECEIVE A PUNCHLIST FROM GMR UPON FINAL SURVEY FOR ANY REMAINING ITEMS TO BE COMPLETED.

#### **CONTROLS & ADDITIONAL NOTES:**

#### LIGHTING CONTROL NOTES:

THE CONTRACTOR SHALL VERIFY THE CONTROLS FOR ALL EXTERIOR LIGHTING AND ATM/AHD INTERIOR LOBBIES ON THE SITE (EXCLUDING SIGNAGE) AND ADJUST ACCORDING TO THE FOLLOWING:

#### • IC3 CONTROL

CONTRACTOR SHALL VERIFY THAT EXTERIOR LIGHTING CIRCUITS ARE CONTROLLED BY THE CORRECT IC3 CIRCUIT. WHERE EXTERIOR LIGHTING IS INCLUDED ON CONTROL CIRCUITS FOR INTERIOR SYSTEMS, INTERIOR LIGHTING, OR EXTERIOR SIGNAGE, CONTRACTOR SHALL ADJUST EXTERIOR LIGHTING TO THE CORRECT CONTROL CIRCUIT AS REQUIRED.

#### PHOTOCELL CONTROL:

CONTRACTOR SHALL REPLACE EXISTING PHOTOCELLS WITH NEW AND INSTALL IN A LOCATION BEST SUITED TO PROVIDE APPROPRIATE LIGHT EXPOSURE SUCH THAT EXTERIOR LIGHTS ARE ON DURING DARKNESS.

#### • TIME CLOCK CONTROL:

CONTRACTOR SHALL VERIFY LOCATION OF TIME CLOCK. IF TIME CLOCK IS IN ELECTRICAL ROOM ALONG WITH IC3 CONTROLS, CONTRACTOR SHALL ADJUST CIRCUIT TO BE CONTROLLED BY IC3 EXTERIOR LIGHTING CONTROLS. IF TIME CLOCK IS IN A REMOTE LOCATION NOT IN CLOSE PROXIMITY TO THE IC3 CONTROLS, CONTRACTOR SHALL VERIFY TIME CLOCK IS SET PROPERLY AND LEAVE CIRCUIT ON TIME CLOCK CONTROL.

#### MANUAL CONTROL:

CONTRACTOR SHALL VERIFY THAT NO EXTERIOR LIGHTING IS CONTROLLED MANUALLY. IF ANY EXTERIOR LIGHTING IS ON A MANUALLY CONTROLLED CIRCUIT, CONTRACTOR SHALL ADJUST TO BE CONTROLLED BY PHOTOCELL OR IC3, WHICHEVER IS MOST ECONOMICALLY ACCOMPLISHED.

#### ADDITIONAL CONTRACTOR NOTES:

#### CONSTRUCTION COMPLETION VERIFICATION

UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL PROVIDE VERIFICATION IN WRITING TO THE BANK OF AMERICA PJM THAT ALL WORK IS COMPLETE ACCORDING TO THE CONSTRUCTION DOCUMENTS, AND THAT ALL EXTERIOR LIGHTING IS FUNCTIONING DURING NIGHTTIME HOURS. COMPLETION PHOTOS, TAKEN AT NIGHT, SHALL BE PROVIDED IN THE FOLLOWING FORMAT:

#### PROVIDE A SINGLE DOCUMENT CONTAINING THE FOLLOWING:

- SITE PHOTOS FROM ALL SIDES OF BUILDING
- MINIMUM OF 3 PHOTOS OF EACH COMPLIANCE AREA (ATM(S), AFTER-HOUR DEPOSITORIES, ASSOCIATE ENTRY) FROM DIFFERENT ANGLES
- MINIMUM OF 2 PHOTOS OF ALL NON-COMPLIANCE AREAS FROM DIFFERENT ANGLES

#### FIXTURE CLARIFICATION NOTES:

- 1. OUT OF SCOPE EXISTING FIXTURES TO REMAIN ON SITE WITHOUT MODIFICATION.
  NO ACTION REQUIRED UNLESS NOTED OTHERWISE.
- 2. REMOVE AND PATCH EXISTING FIXTURES TO BE FULLY REMOVED AND ANY PAINTING, PATCHING OR ELECTRICAL WORK NEEDED IS TO BE ASSESSED AND PERFORMED BY CONTRACTOR.
- 3. REPLACE EXISTING FIXTURE EXISTING FIXTURE TO BE FULLY REMOVED AND REPLACED IN THE SAME LOCATION WITH A NEW FIXTURE. CONTRACTOR TO VERIFY IF POLE AND/OR POLE BASE IS SUFFICIENT FOR THE NEW FIXTURES. ANY PAINTING, PATCHING OR ELECTRICAL WORK NEEDED IS TO BE ASSESSED AND PERFORMED BY CONTRACTOR.
- 4. ADD NEW FIXTURE NEW FIXTURES TO BE ADDED. ANY PAINTING, PATCHING OR ELECTRICAL WORK NEEDED TO BE ASSESSED AND PERFORMED BY CONTRACTOR.
- 5. ADD NEW POLE & FIXTURE A NEW POLE AND FIXTURE TO BE ADDED. CONTRACTOR TO SPECIFY POLE TO MATCH EXISTING STYLE AND COLOR AND, IF NOT PROVIDED, POLE BASE DATA FOR NEW POLE LOCATIONS. CONTRACTOR TO VERIFY IF POLE AND POLE BASE IS SUFFICIENT FOR THE HEIGHT, LOCATION AND FIXTURE SPECIFIED.
- 6. GMR DOES NOT SPECIFY MOUNTING HARDWARE FOR ANY SPECIFIED FIXTURES.
  CONTRACTOR IS TO WORK WITH DISTRIBUTOR AND/OR MANUFACTURER ON A CASE
  BY CASE BASIS TO IDENTIFY AND ORDER REQUIRED MOUNTING HARDWARE.
- 7. CONTRACTOR TO VERIFY WHETHER EXISTING WIRING LOCATIONS OR THE ADDITION OF WIRING FOR NEW FIXTURE LOCATIONS IS SUFFICIENT FOR THE DESIGNATED FIXTURE LOCATION.
- 8. CONTRACTOR TO SPECIFY POLE COLOR AND TYPE PRIOR TO ORDERING.
- ALL FIXTURES ARE ASSUMED BRONZE IN COLOR UNLESS NOTED OTHERWISE IN THE LUMINAIRE SCHEDULE. CONTRACTOR TO CONFIRM PRIOR TO ORDERING.

#### **GENERAL NOTES:**

- 1. EXISTING CONDITIONS SHOWN ON THE DRAWINGS ARE BASED ON A LIMITED AMOUNT OF INFORMATION AVAILABLE TO THE ENGINEER. ALL SUCH CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO SUBMITTING THE BID AND ADJUSTED IF NECESSARY. NO ADDITIONAL COMPENSATION SHALL BE GRANTED AFTER AWARDING A BID FOR ANY EQUIPMENT, MATERIAL OR LABOR REQUIRED TO REWORK OR OTHERWISE MODIFY EXISTING CONDITIONS.
- THIS LIGHTING DESIGN IS BASED ON A COMBINATION OF STATE STANDARDS, THE BANK'S CURRENT SECURITY POLICY FOR EXTERIOR ATM AND AFTER-HOUR DEPOSITORIES AND BANK GUIDELINES FOR NON-SECURITY COMPLIANCE ZONES.
- 3. TRIM ALL TREES/LANDSCAPING TO MINIMIZE IMPEDING LIGHT FROM ANY LIGHT FIXTURES THAT IMPACT THE 60' RADIUS AROUND ALL ATMS AND A RADIUS OF 50' AROUND ALL AFTER-HOUR DEPOSITORIES. CONSIDERATION MUST BE GIVEN TO TREES/LANDSCAPING IN A STATE OF FULL FOLIAGE/BLOOM AND FUTURE GROWTH. ALL LANDSCAPING WORK WILL BE PERFORMED BY OTHERS WITH A SEPARATE PERMIT (IF REQUIRED).
- 4. ALL MOUNTING HEIGHTS ARE INTENDED TO THE BOTTOM OF THE FIXTURE.
- 5. CONTRACTOR TO FIELD VERIFY FIXTURE PLACEMENT DIMENSIONS PRIOR TO CONSTRUCTION.
- 6. DIMENSIONING PROVIDED IS FOR PROPOSED FIXTURE LOCATIONS ONLY, UNLESS OTHERWISE NOTED ON THE DRAWING.
- 7. THE CONTRACTOR SHALL ATTEMPT TO ELIMINATE THE USE OF EXPOSED CONDUIT WHERE POSSIBLE. IF EXPOSED CONDUIT IS NECESSARY, THE CONTRACTOR SHALL VERIFY USE WITH PROJECT MANAGER.
- 8. ALL EXISTING LIGHTS WILL BE REPLACED WITH LED LIGHTS AND ALL PROPOSED LIGHTS WILL ALSO BE LED, UNLESS OTHERWISE NOTED.
- 9. ALL FIXTURES ARE TO BE MOUNTED ABOVE FINISH GRADE.
- 10. UNLESS OTHERWISE NOTED, MATCH EXISTING POLE BASES.

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Charles Street
MAW-102
45 Charles Street
Boston, MA

GENERAL NOTES

BY: CAS DRAWN BY: RCS

ED BY: APPROVED BY:

LU-1

AWD

SITE ABBREVIATIONS:

PL = PROPERTY LINE

AFG = ABOVE FINISHED GRADE

Fc = FOOTCANDLE

CBO = CONTROLLED BY OTHERS

AHD = AFTER HOUR DEPOSITORY

LUMINAIRE	SCHEDU	LE	**SEE FIXTURE CLARIFICATION	NOTE #9	(NP) = I	NEW POLE (CBO) CONTROLLED BY OTHERS	** CONTRACTO	R TO VERIFY MOU	NTING ACCESSORIES BEFORE ORDERING**	
SYMBOL	QTY	LABEL	FIXTURE ARRANGEMENT	TOTAL FIXTURE COUNT	NEW POLE COUNT	FIXTURE TYPE / MOUNTING / MANUFACTURER	BUG RATING	MOUNTING HEIGHT	MOUNTING ACCESSORIES	NOTES
	10	DT1	SINGLE	10	-	(DT) LR6X-7L-40K / CANOPY MOUNT / CREE	B1-U0-G0	MATCH EXISTING	GR8 TRIM RING	REPLACE EXISTING FIXTURE
	2	DV1	SINGLE	2	-	(DV) LR6X-10L-40K / CANOPY MOUNT / CREE	B1-U0-G0	MATCH EXISTING	GR8 TRIM RING	REPLACE EXISTING FIXTURE
	1	UU1	SINGLE	1	-	ALN445-Y2-32LED-4K-BLS-SBL-700-WMA57 / WALL MOUNT / HUBBELL	B2-U4-G3	9' AFG	-	ADD NEW FIXTURE
	2	YC1	SINGLE	2	-	EXISTING FLOOD FIXTURE	-	-	-	OUT OF SCOPE
	1	YD1	SINGLE	1	-	EXISTING CANOPY FIXTURE	-	-	-	OUT OF SCOPE
	2	YJ1	SINGLE	2	-	EXISTING DECORATIVE POLE FIXTURE	-	-	-	OUT OF SCOPE

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**BLUE = NEW FIXTURE** 

GREEN = EXISTING FIXTURE LOCATION TO BE REPLACED

ORANGE = EXISTING FIXTURE TO REMAIN

TURQUOISE = FIXTURE TO BE REMOVED

PINK = REPLACE WITH NEW POLE AT NEW HEIGHT

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45 Charles Street
Boston, MA

#### LUMINAIRE SCHEDULE

LU		SCHEDUL	<b>-</b>
DESIGN BY:	CAS	DRAWN BY:	RCS
REVIEWED BY:	AWD	APPROVED BY:	KRM
SHEET NO.			

LU-2

QTY	LABEL	NOTES	MOUNTING HEIGHT
10	DT1	REPLACE EXISTING FIXTURE	MATCH EXISTING
2	DV1	REPLACE EXISTING FIXTURE	MATCH EXISTING
1	UU1	ADD NEW FIXTURE	9' AFG
2	YC1	OUT OF SCOPE	-
1	YD1	OUT OF SCOPE	-
2	YJ1	OUT OF SCOPE	-

#### SITE NOTES:

LIGHTING IS REQUIRED FOR COMPLIANCE AND WILL REQUIRE LANDLORD APPROVAL PRIOR TO INSTALLATION. BANK MUST HAVE LANDLORD AGREE TO LEAVE FIXTURES ON ALL HOURS OF DARKNESS.

#### **EXISTING CONDITIONS:**

- 1. EXISTING POLES NOT BANK CONTROLLED
- 2. EXISTING POLE BASES NOT BANK CONTROLLED
- 3. EXISTING DRIVE THRU CEILING N/A

Cedar Ln Way. REMAINDER OF PROPERTY ੂIS OUT OF SCOPE SCOPE OF PROJECT

Charles St.

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**BLUE = NEW FIXTURE** 

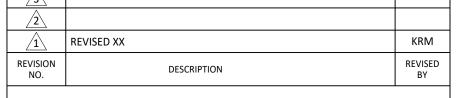
GREEN = EXISTING FIXTURE LOCATION TO BE REPLACED ORANGE = EXISTING FIXTURE TO REMAIN

PINK = REPLACE WITH NEW POLE AT NEW HEIGHT = INDICATES NEW SECURITY FENCE

— PL — = PROPERTY LINE BASED ON COUNTY APPRAISAL INFORMATION

N.T.S.

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**Charles Street MAW-102 45 Charles Street Boston, MA** 

OVERAL	L SITE PLAN
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GN BY:	CAS	DRAWN BY:	RCS
EWED BY:	AWD	APPROVED BY:	KRM

LU-3 MAY VARY DUE TO VARIATIONS IN WEATHER, ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS AND OTHER RELATED VARIABLE FIELD CONDITIONS.

NOTE: THIS LIGHTING PLAN ILLUSTRATES ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA (IESNA) APPROVED METHODS. ACTUAL SITE ILLUMINATION LEVELS AND PERFORMANCE OF LUMINARIES

QTY	LABEL	NOTES	MOUNTING HEIGHT
10	DT1	REPLACE EXISTING FIXTURE	MATCH EXISTING
2	DV1	REPLACE EXISTING FIXTURE	MATCH EXISTING
1	UU1	ADD NEW FIXTURE	9' AFG
2	YC1	OUT OF SCOPE	-
1	YD1	OUT OF SCOPE	-
2	YJ1	OUT OF SCOPE	-

# Cedar Ln Way. ATM2 DT1 DV1 ATM1 St. LOBBY ENTRY YJ1 Charles St.

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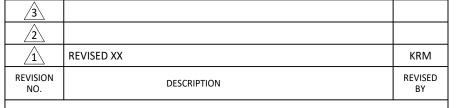
BLUE = NEW FIXTURE

GREEN = EXISTING FIXTURE LOCATION TO BE REPLACED

INFORMATION

SCALE: 1 1/2" = 1'-0"

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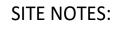


**Charles Street MAW-102 45 Charles Street Boston, MA** 

#### SITE PLAN ENLARGEMENT

DESIGN BY:	CAS	DRAWN BY:	RCS
REVIEWED BY:	AWD	APPROVED BY:	KRM
SHEET NO			

LU-3a



LIGHTING IS REQUIRED FOR COMPLIANCE AND WILL REQUIRE LANDLORD APPROVAL PRIOR TO INSTALLATION. BANK MUST HAVE LANDLORD AGREE TO LEAVE FIXTURES ON ALL HOURS OF DARKNESS.

#### **EXISTING CONDITIONS:**

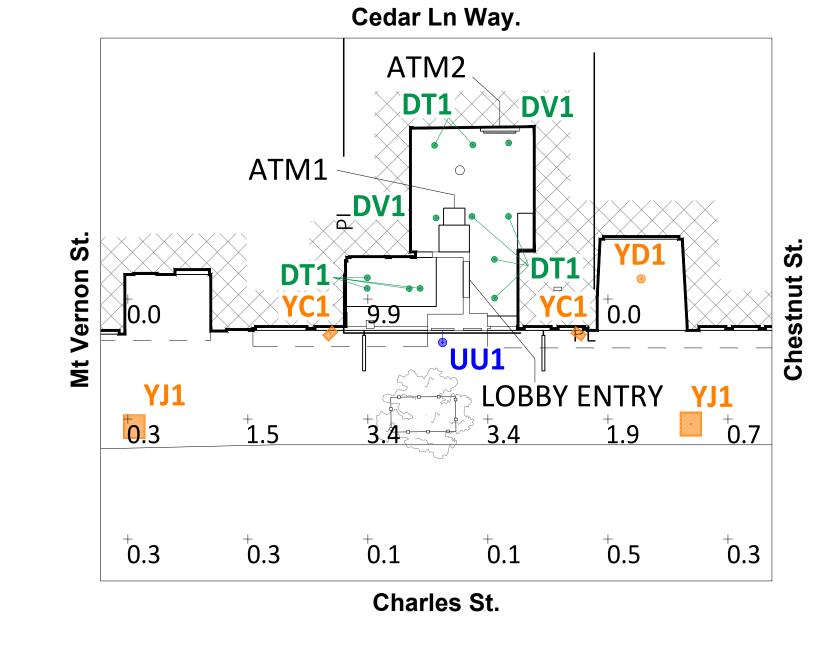
- 1. EXISTING POLES NOT BANK CONTROLLED
- 2. EXISTING POLE BASES NOT BANK CONTROLLED
- 3. EXISTING DRIVE THRU CEILING N/A

METHODS. ACTUAL SITE ILLUMINATION LEVELS AND PERFORMANCE OF LUMINARIES MAY VARY DUE TO VARIATIONS IN WEATHER, ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS AND OTHER RELATED VARIABLE FIELD CONDITIONS.

NOTE: THIS LIGHTING PLAN ILLUSTRATES ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA (IESNA) APPROVED

#### NOTES:

- 1. THE SCOPE OF WORK FOR THIS PROJECT IS LIMITED TO EXTERIOR LIGHTING RENOVATIONS AS SHOWN ON THE PLANS.
- 2. ALL PROPOSED LIGHTS WILL BE FULL CUTOFF LED LIGHT FIXTURES.
- 3. ALL EXISTING LIGHTS WILL BE REPLACED WITH FULL CUT OFF LED LIGHT FIXTURES.
- 4. REFERENCE THE LUMINAIRE SCHEDULE (SHEET LU-2) FOR ADDITIONAL LIGHT FIXTURE INFORMATION.



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BLUE = NEW FIXTURE

GREEN = EXISTING FIXTURE LOCATION TO BE REPLACED

ORANGE = EXISTING FIXTURE TO REMAIN

PINK = REPLACE WITH NEW POLE AT NEW HEIGHT

URQUOISE = FIXTURE TO BE REMOVED

———— = INDICATES NEW SECURITY FENCE

————— = PROPERTY LINE BASED ON COUNTY APPRAISAL INFORMATION

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Charles Street
MAW-102
45 Charles Street
Boston, MA

FULL SITE

PHOTOMETRICS PLAN

SIGN BY: DRAWN BY:

CAS RCS

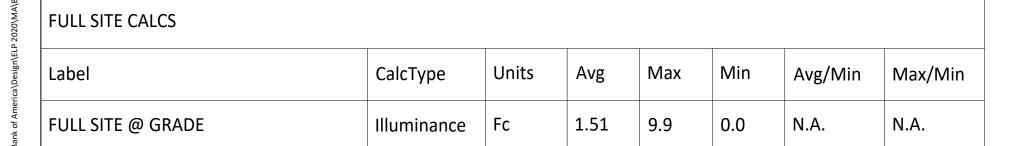
ED BY:

AWD

APPROVED BY:

KRM

LU-4



# SHEET INTENTIONALLY LEFT BLANK

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BILLE = NEW FIXTURE

GREEN = EXISTING FIXTURE LOCATION TO BE REPLACED

LIBOLIOISE - FIXTURE TO BE REMOVED

PINK = REPLACE WITH NEW POLE AT NEW HEIGHT

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Charles Street
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45 Charles Street
Boston, MA

FIXTURE REMOVAL PLAN

DESIGN BY:	CAS	DRAWN BY:	F
REVIEWED BY:	AWD	APPROVED BY:	KI
SHEET NO.		<u> </u>	

**LU-5** 

QTY	LABEL	NOTES	MOUNTING HEIGHT
10	DT1	REPLACE EXISTING FIXTURE	MATCH EXISTING
2	DV1	REPLACE EXISTING FIXTURE	MATCH EXISTING
1	UU1	ADD NEW FIXTURE	9' AFG
2	YC1	OUT OF SCOPE	-
1	YD1	OUT OF SCOPE	-
2	YJ1	OUT OF SCOPE	-

# ATM1 ATM1 DT1 DT1 VC1 YC1 VI LOBBY ENTRY VJ1 Charles St.

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**BLUE = NEW FIXTURE** 

GREEN = EXISTING FIXTURE LOCATION TO BE REPLACED

ORANGE = EXISTING FIXTURE TO REMAIN

DINK - REDIACE WITH NEW DOLF AT NEW

 = INDICATES NEW SECURITY FENCE
 PL = PROPERTY LINE BASED ON COUNTY APPR INFORMATION

SCALE: 1 1/2" = 1'-0"

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<u></u>	REVISED XX	KRM
REVISION NO.	DESCRIPTION	REVISED BY



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#### **DIMENSIONING PLAN**

ET NO.	LU	<b> -6</b>	
EWED BY:	AWD	APPROVED BY:	KRM
GN BY:	CAS	DRAWN BY:	RCS
CNLDY		DD AVA(AL DV	

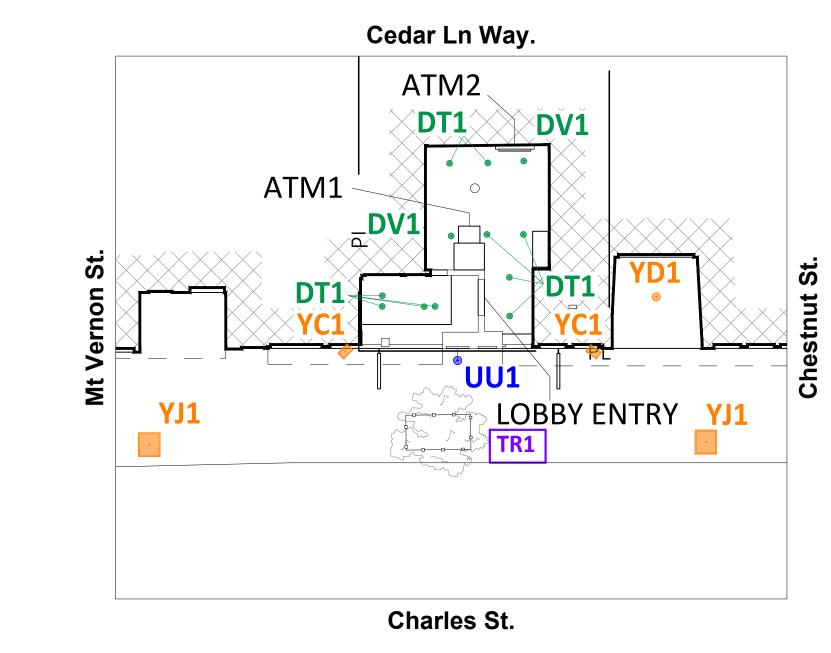
NOTE: THIS LIGHTING PLAN ILLUSTRATES ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA (IESNA) APPROVED METHODS. ACTUAL SITE ILLUMINATION LEVELS AND PERFORMANCE OF LUMINARIES MAY VARY DUE TO VARIATIONS IN WEATHER, ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS AND OTHER RELATED VARIABLE FIELD CONDITIONS.

#### SITE NOTES:

1. LIGHTING IS REQUIRED FOR COMPLIANCE AND WILL REQUIRE LANDLORD APPROVAL PRIOR TO INSTALLATION. BANK MUST HAVE LANDLORD AGREE TO LEAVE FIXTURES ON ALL HOURS OF DARKNESS.

#### EXISTING CONDITIONS:

- 1. EXISTING POLES NOT BANK CONTROLLED
- 2. EXISTING POLE BASES NOT BANK CONTROLLED
- 3. EXISTING DRIVE THRU CEILING N/A



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BLUE = NEW FIXTURE

GREEN = EXISTING FIXTURE LOCATION TO BE REPLACED

— PL — = PROPERTY LINE BASED ON COUNTY APPRAISAL INFORMATION

SCALE: 1 1/2" = 1'-0"

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REVISED XX	KRM
DESCRIPTION	REVISED BY



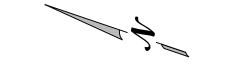
**Charles Street MAW-102 45 Charles Street Boston, MA** 

#### LANDSCAPING PLAN

NO.	LU	<b>J-7</b>	
ED BY:	AWD	APPROVED BY:	KRM
BY:	CAS	DRAWN BY:	RCS

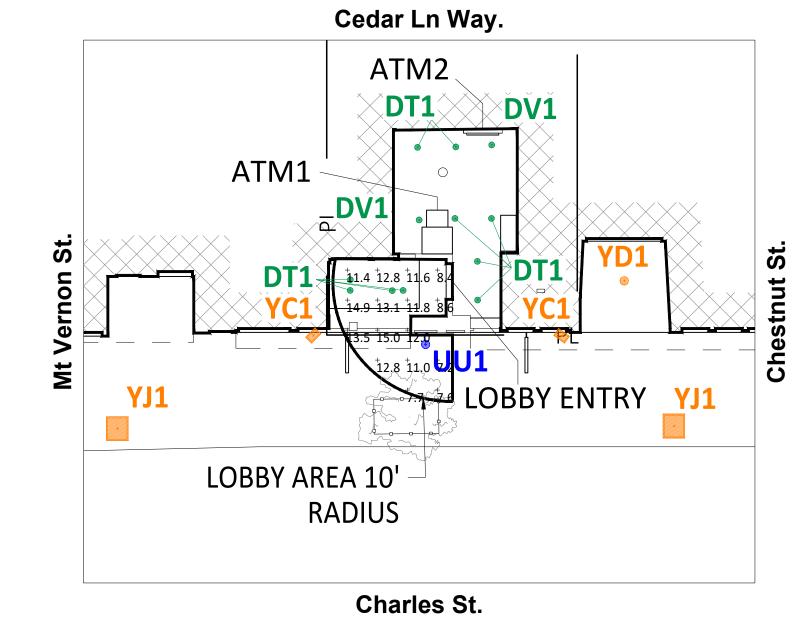
LANDSCAPE SCHEDULE CM = CRAPE MYRTLE UNK = UNKNOWN QTY NOTES TRIM TREE UP TO 5' AND THIN OUT TREE CANOPY

GC TO VERIFY WITH LOCAL AUTHORITY HAVING JURISDICTION ON TREE TRIMMING AND/OR REMOVAL PRIOR TO COMMENCING WORK



#### NOTES:

1. READINGS ARE MEASURED AT 36" (3') ABOVE GRADE.



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BLUE = NEW FIXTURE

GREEN = EXISTING FIXTURE LOCATION TO BE REPLACED

ORANGE = EXISTING FIXTURE TO REMAIN

TURQUOISE = FIXTURE TO BE REMOVED

INFORMATION

= INDICATES NEW SECURITY FENCE

PL = PROPERTY LINE BASED ON COUNTY APPRAISAL

SCALE: 1 1/2" = 1'-0"

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ATM COMPLIANCE

### AREA PHOTOMETRICS PLAN

CAS RCS

VIEWED BY:

AWD

APPROVED BY:

KRN

FET. NO.

**LU-8** 

UNIT CALCS 50'								
ica\Design\EL	Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
ank of Amer	LOBBY ENTRY 10' @ 36''	Illuminance	Fc	11.21	15.0	7.2	1.56	2.08

Rev. Date: V1 11/01/2019

#### LR6X™ LED Downlight - 6" GC TO VERIFY THAT FIXTURES CAN BE MOUNTED PER PLAN AND ALL NECESSARY HARDWARE IS SPECIFIED FOR INSTALLATION **Product Description** PRIOR TO PURCHASING

The LR6X™ downlight is an unparalleled combination of light quality and efficacy – bringing outstanding performance and value to the retrofit downlight space. Delivering up to 3000 lumens of exceptional 90+ CRI light while achieving up to 89 lumens per watt, this breakthrough performance is achieved by combining the high efficacy with an integrated driver and thermal management design. The LR6X<sup>TM</sup> downlight is available in warm or neutral color temperatures, three lumen packages, and offers a variety of trim options.

Applications: Commercial new construction and retrofit

#### **Performance Summary**

Utilizes Cree TrueWhite® Technology

Initial Delivered Lumens: 650L - 3,000L

Input Power: 7.5 - 34 watts

CRI: 90+

**R9:** >54

CCT: 2700K, 3000K, 3500K, 4000K

Limited Warranty\*: 10 years

L<sub>70</sub> Lifetime: > 100,000 hours at 35°C

Dimming: Dimmable to 5%

#### **Housing & Trims**

Reference Housing & Trim documents for more details

#### CONTRACTOR TO DESIGNATE

#### 120V GU24 Base Recessed Housings H6-GU24

- Architectural new construction

RC6-GU24 New construction

Housings

RR6-GU24

120V GU24 Base Recessed

"Pan" Conversion Kit C6-GU24

C6-120V-LSA

- Less socket adapter 120V GU24 Base Surface Mount

SC4-GU24

Textured white finish

SC4-BL-GU24 - Textured black finish 120V GU24 Base Cord Mount Housings SC6-CM-GU24

Textured white finish

SC6-CM-BL-GU24

Textured black finish

120V GU24 Base Wall Mount Housings

SC6-WM-GU24

Textured white finish

SC6-WM-BL-GU24 - Textured black finish 277V Recessed

Housinas H6-277V

- Architectural new construction

RC6-277V

- New construction

RR6-277V

- Retrofit

#### 277V Recessed

'Pan" Conversion Kit C6-277V-LSA

Less socket adapter

277V Surface Mount Housings

SC6-277V

Textured white finish SC6-BL-277V

- Textured black finish

277V Cord Mount Housings SC6-CM-277V

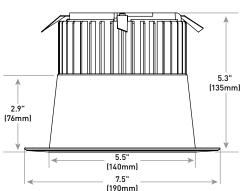
Textured white finish

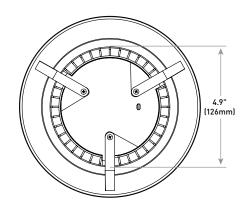
SC6-CM-BL-277V

- Textured black finish

277V Wall Mount Housings

- Textured white finish





#### **Trims**

LXT6AB

Diffused Anodized trim with White Flange

Flat black reflector/flange

8" Adapter GR8

Optional goof ring accomidations existing housings with apertures from 6.25" (159mm) to 8.5" (216mm) in diameter

#### Ordering Information

Example: I R6X-7I -27K

LR6X					
Series	Initial Delivered Lumens	ССТ	Voltage	Base Type	
LR6X	<b>7L</b> 7.5W, 650 lumens – 87 LPW <b>10L</b>	27K 2700K 30K	Blank 120-277 Volts	Blank E26, GU24, 277 Connector	
	12W, 1,050 lumens – 88 LPW <b>18L</b> 20.5W, 1,800 lumens – 88 LPW <b>24L</b> 27W, 2,400 lumens – 89 LPW	3000K 35K 3500K 40K 4000K	GC TO VERIFY VOLTAGE		MUST BE GU24-E26 IN CA
	27W, 2,400 lumens – 89 LPW <b>30L</b> 34W, 3,000 lumens – 88 LPW	4000K			CONTRACTOR TO DESIGNA













<sup>\*</sup> See http://creelighting.com/warranty for warranty terms

#### **Product Specifications**

#### **CREE TRUEWHITE® TECHNOLOGY**

A revolutionary way to generate high-quality white light, Cree TrueWhite® Technology is a patented approach that delivers an exclusive combination of 90+ CRI, beautiful light characteristics and lifelong color consistency, all while maintaining high luminous efficacy – a true no compromise solution.

#### **CONSTRUCTION & MATERIALS**

- Durable aluminum housing protects the light source. Adjustable flip clips provide robust retention for flush ceiling fit
- Thermal management system uses integral heat sink to conduct heat away from LEDs for optimal performance. LED junction temperatures stay below specified maximum even when installed in with worst case installations
- · Suitable for insulated and non-insulated ceilings
- One-piece aluminum lower reflector redirects light while also conducting heat away from LEDs. It creates a comfortable visual transition from the lens to the ceiling plane and easily accommodates LXT6 snap-in trims

#### **OPTICAL SYSTEM**

- Unique combination of reflective and refractive optical components achieves a uniform, comfortable appearance while eliminating pixelation, hot spots and minimizing glare
- Components work together to optimize distribution, balancing the delivery of high illuminance levels on horizontal surfaces with an ideal amount of light on walls and vertical surfaces. This increases the perception of spaciousness
- Deep set polycarbonate diffusing lens shields direct view of LEDs and provides greater visual cut-off

#### **ELECTRICAL SYSTEM**

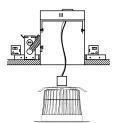
- · Integral, high-efficiency driver and power supply
- Power Factor: > 0.9 (120V)
- Total Harmonic Distortion: < 20% (120V)</li>
- Input Voltage: 120V 277V Universal, 50/60Hz
- 120V is dimmable to 5% with most incandescent dimmers
- 277V is dimmable to 5% with most trailing edge dimmers
- Reference <a href="https://www.creelighting.com">https://www.creelighting.com</a> for recommended dimmers
- Operating Temperature Range: -25°C +35°C (-13°F +95°F);
   For 24L and 30L : -25°C +30°C (-13°F +86°F)

#### **REGULATORY & VOLUNTARY QUALIFICATIONS**

- cULus Classified
- Suitable for wet locations for covered ceilings only
- ENERGY STAR® certified. Please refer to <a href="https://www.energystar.gov/productfinder/product/certified-lightfixtures/">https://www.energystar.gov/productfinder/product/certified-lightfixtures/</a> results
- Meets CA Title 24 JA8 Requirements, and CA Title 20 Appliance Regulations. Refer to <a href="https://cacertappliances.energy.ca.gov/Pages/ApplianceSearch.aspx">https://cacertappliances.energy.ca.gov/Pages/ApplianceSearch.aspx</a> for additional information
- Meets FCC Part 15, Subpart B, Class B standards for conducted and radiated emissions
- RoHS Compliant. Consult factory for additional details
- CA RESIDENTS WARNING: Cancer and Reproductive Harm www.p65warnings.ca.gov

#### INSTALLATION

- Designed to easily install in standard 6" (152mm)downlight housings with minimum housing height of 6.5" (165mm) and diameter of 5.75" - 6.25" (146mm -159mm)
- Quick install system utilizes a unique retention feature. Simply attach socket to LR6X. Move light to ready position and slide into housing



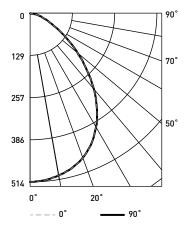
NOTE: Reference <u>www.creelighting.com/lighting</u> for detailed installation instructions

\* Reference <u>www.creelighting.com/lighting</u> for a list of compatible housings

#### **Photometry**

#### LR6-10L-35K-GU24 BASED ON CESTL REPORT TEST #: PL06010-001

Fixture photometry has been conducted in accordance with IESNA LM-79-08. IESNA LM-79-08 specifies the entire luminaire as the source resulting in a fixture efficiency of 100%.



Coefficients of Utilization- Zonal Cavity Method						
RC %:	80					
RW %:	70	50	30	10		
RCR: 0	119	119	119	119		
1	111	107	103	100		
2	103	96	90	85		
3	95	86	79	74		
4	88	78	70	65		
5	82	71	63	57		
6	77	65	57	51		
7	72	60	52	46		
8	67	55	47	42		
9	63	51	44	39		
10	60	48	40	36		

Average Luminance Table (cd/m²)						
	Horiz	zontal Ang	jle			
		0°	45°	90°		
Angle	45°	13,215	13,215	13,215		
Vertical Angle	55°	8,204	8,204	8,204		
Ver	65°	5,541	5,541	5,541		
	75°	3,834	3,834	3,834		
	85°	1,165	1,165	1,165		

Zonal Lumen Summary						
Zone	Lumens	% Lamp	Luminaire			
0-30	403	N/A	41.9%			
0-40	605	N/A	62.9%			
0-60	854	N/A	88.7%			
0-90	962	N/A	100%			
0-180	962	N/A	100%			

Effective Floor Cavity Reflectance: 20%

 $Reference \underline{\ https://www.creelighting.com/products/indoor/retrofit-downlights/lrx-series} for\ detailed\ photometric\ data$ 

#### **Application Reference**

Open Sp	ace					
Spacing	Lumen Package	Lumens	Wattage	LPW	w/ft²	Average fc
	7L	650	7.5	87	0.45	38
	10L	1,050	12	88	0.72	62
4x4	18L	1,800	20.5	88	1.23	106
	24L	2,400	27	89	1.62	142
	30L	3,000	34	88	2.04	177
	7L	650	7.5	87	0.21	18
	10L	1,050	12	88	0.34	29
6x6	18L	1,800	20.5	88	0.57	50
	24L	2,400	27	89	0.76	66
	30L	3,000	34	88	0.95	83
	7L	650	7.5	87	0.11	10
	10L	1,050	12	88	0.18	16
8x8	18L	1,800	20.5	88	0.31	27
	24L	2,400	27	89	0.41	36
	30L	3,000	34	88	0.51	45
	7L	650	7.5	87	0.08	6
	10L	1,050	12	88	0.12	10
10x10	18L	1,800	20.5	88	0.21	17
	24L	2,400	27	89	0.27	23
	30L	3,000	34	88	0.34	29

 $Open \, Space: 50' \, Wide \, x \, 40' \, Long \, x \, 10' \, Ceiling, \, 80/50/20 \, Reflectances, \, 2.5 \, workplane. \, LLF: \, 1.0 \, Initial.$ 

Corridor Space						
Spacing	Initial Delivered Lumens	Lumens	Wattage	LPW	w/ft²	Average fc
	7L	650	7.5	87	0.31	14
	10L	1,050	12	88	0.50	22
4' OC	18L	1,800	20.5	88	0.85	38
	24L	2,400	27	89	1.13	50
	30L	3,000	34	88	1.42	63
	7L	650	7.5	87	0.21	9
	10L	1,050	12	88	0.34	15
6' OC	18L	1,800	20.5	88	0.58	26
	24L	2,400	27	89	0.77	34
	30L	3,000	34	88	0.96	43
	7L	650	7.5	87	0.15	6
	10L	1,050	12	88	0.24	10
8, 0C	18L	1,800	20.5	88	0.41	17
	24L	2,400	27	89	0.54	23
	30L	3,000	34	88	0.68	29
	7L	650	7.5	87	0.13	6
	10L	1,050	12	88	0.20	9
10' OC	18L	1,800	20.5	88	0.34	15
	24L	2,400	27	89	0.45	21
	30L	3,000	34	88	0.57	26

 $Corridor: 6'\ Wide\ x\ 100'\ Long\ x\ 10'\ Ceiling,\ 80/50/20\ Reflectances,\ Light\ levels\ on\ the\ ground.\ LLF:\ 1.0\ Initial.$ 





#### ALN440 – Towne Commons<sup>®</sup> LED

#### TYPE UU1

- Energy Saving LED technology
- Reliable efficient operation
- Type 2, 3, 4, 5 distributions
- 0-10V dimming ready
- Surge protection included
- Wide variety of custom mounting options including post-top, wall mount or pole mount arm
- Cast aluminum struts
- DLC pendina
- Available in 3000K, 4000K and 5000K

GC TO VERIFY THAT FIXTURES CAN BE MOUNTED PER PLAN AND ALL **NECESSARY HARDWARE IS** SPECIFIED FOR INSTALLATION PRIOR TO **PURCHASING** 





1. LUMINAIRE	2. DISTRIBUTION	3. COLOR TEMP	4. DRIVER	5. COLOR	6. OPTIONS	7. CONTROL	8. MOUNTING
ALN 440							

#### 1. LUMINAIRE

ARM OR POST TOP MOUNT

AI N 440

TOP MOUNTED ARM OR PENDANT MOUNT

AI N 440D

#### 2. DISTRIBUTION

Y2 (Type 2)

Y3 (Type 3)

Y4 (Type 4)

Y5 (Type 5)

#### 3. COLOR TEMPERATURE

32LED-3K (Warm White, 3000K output) 32LED-4K (Neutral White, 4000K output) 32LED-5K (Bright White, 5000K output)

#### 4. DRIVER (120 thru 277 volt)

700 (700mA drive current, 75 watts)

#### 5. COLOR

BLS	Black Gloss Smooth	
BLT	Black Matte Textured	
DBS	Dark Bronze Gloss Smoot	h
DBT	Dark Bronze Matte Textured	
GTT	Graphite Matte Textured	
LGS	Light Grey Gloss Smooth	
LGT	Light Grey Matte Textured	1
PSS	Platinum Silver Gloss Smooth	
VGT	Verde Green Matte Textured	
WHS	White Gloss Smooth	ta ur r
WHT	White Matte Textured	Consult factory for custom color, marine and corrosive finish
CC <sup>1</sup>	Custom Color	options

#### 6. OPTIONS

LDL (Lightly diffused lens)

SBL (Sandblast diffused lens)

HSS-L (House side shield, consists of three field installed panels attached to the inside of the lens. Installing three panels blocks 180° of the lens)

MAT (Mast arm adapter slips over a 2 3/8" / 60mm O.D. pipe and is secured with 4 stainless steel set screws. For ALN440D only.)

PMS (Pendant mount with 48" / 1220mm stem and canopy with swivel. For ALN440D only.)

PMC (Pendant kit includes canopy and 48" / 1220mm of brass chain painted the fixture color. For ALN440D only.)

PT5 (Post top adaptor for a 5"/127mm O.D. pole)

#### 7. CONTROL

PCA-C (Contemporary photocell adapter, not for Wall

PCA-T (Traditional photocell adapter, not for Wall Mount)

SCP (Sensor Control Programmable) pole accessory is available to provide occupancy detection for outdoor applications meeting California Title 24. For complete spec sheet and ordering information, visit www.aal.net/ products/sensor\_control\_programmable/

#### 8. MOUNTING

#### **WALL MOUNT**

<u>ALN440</u>		
WMA1M		
WW 381	ī	

WWASOU	WIVIASS	WIVIASO	WIVIASI
WMA7	WMA9U	WMA22U	
ALN440D			
WMA2M	WMA2L	WMA37	WMA38
WMA39	WMA4	WMA6	WMA8
WMA9D	WMA10	WMA11	WMA12
WMA16	WMA17	WMA18	WMA22D

WMA3

W/MASS

WMA35U

\\/\\\\\57

#### **POLE MOUNT**

Post Top Mount: (Standard)

WMA1I

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The fixture shall slip over a 4"/100mm O.D. pole or tenon and be secured to the pole with three (or six) stainless steel set screws

#### Pole Side Mount (4" O.D. or 5" O.D. side mount)

^			4	,	^
Α	L	N	4	4	υ

TRA1M	TRA	3	TRA5U	TRA55
TRA56 (4" on	ly) T	RA57	TRA59U	SLA8U
SLA22U				

<u>ALN440D</u>			
TRA2M	TRA2L	SLA3 (4" only)	SLA8D
SLA22D			

#### Pole Top Mount Arm

#### **ALN440** SI A1

SI A1-2

#### ALN440D

TRA4	TRA7	TRA7-2	TRA8
TRA9	TRA9-2	SLA4	SLA4-2
SLA7	SLA7-2	SLA9	SLA9-2
SLA10	SLA10-2	SLA16	SLA16-2
SLA17	SLA17-2	SLA18	SLA18-2

#### PIER MOUNT

PM2 РМ3

Visit www.aal.net for Arms, Poles & Accessories Specification Guide

#### **SPECIFICATIONS**

#### HOUSING

Luminaire shall be cast A356 alloy aluminum, free of any porosity or cosmetic fillers. Castings shall be of uniform wall thickness, minimum .188 inch with no warping or mold shifting.

The top cap shall hinge open by loosening two captive fasteners. The top shall seal the lamp compartment with a continuous silicone gasket. The lens shall be one-piece clear optical grade acrylic with a one-piece memory retentive silicone gasket on top and bottom. The LED and driver assembly shall be serviceable by backing out three thumb screws to allow for the light engine to be lifted out. Quick disconnects shall be used for all electrical connections

All internal and external hardware shall be stainless steel.

#### OPTICAL MODULE

The optical assembly shall be completely sealed with a one piece injection molded silicone gasket to prevent dust, insect or moisture contamination. The optical array shall consist of high brightness light emitting diodes mounted to a printed metal circuit board with precision injection molded optically clear lenses discretely coupled to each individual diode. The printed circuit board assembly shall have a uniform conformal coating with the exception of the optical output lens at each diode and be mechanically fastened to an anodized die-cast aluminum heat sink. Standard color temperatures shall be 3000K, 4000K and 5000K.

#### FLECTRICAL

Universal voltage, 120 through 277V with a ±10% tolerance. Driver is Underwriters Laboratories listed. Driver has a 0-10V dimming interface for multilevel illumination options. Driver is Underwriters Laboratories listed.

Drivers are 0-10V dimming control with a dimming range of 100%-10%. Drivers are U.L. listed. All luminaires shall accept 120-277 volt input and have integral surge protection."Thermal Shield", secondary side, thermistor provides protection for the sustainable life of LED module and electronic components.

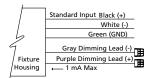
The electrical assembly shall be mounted to a serviceable tray. The surge protector shall be U.L. recognized and have a surge current rating of

See next page

JOB	
TYPE	
NOTES	



10,000 Amps using the industry standard 8/20uSec wave with a clamping voltage of 320V and surge rating of 372J. The surge protector case shall be a high-temperature, flame resistant plastic enclosure. The electrical assembly shall be installed and prewired in the fixture.



#### **CONTROLS**

SCP shall have an integral surge protection device with a currentt rating of 10,000 Amps using the industry standard 8/20uSec wave and sure rating of

Sensor not intended for use with additional photocontrol, wireless control or dimming systems.

#### SERVICING

The top of the fixture shall hinge open for relamping by loosening two stainless steel fasteners.

#### MOUNTING

Post top mounting: The fixture shall slip over a 4"/100mm O.D. pole or tenon and be secured to the pole with three (or six) stainless steel set screws.

Arm or wall mounting: The fixture shall be attached to the cast arm with three stainless steel bolts and a silicone gasket.

#### **FINISH**

Fixture finish shall consist of a five stage pretreatment regimen with a polymer primer sealer, oven dry off and top coated with a thermoset super TGIC polyester powder coat finish.

#### CERTIFICATION

Fixtures shall be listed with ETL for outdoor, wet location use, conforming to the UL 1598 and Canadian CSA 22.2 no. 250 standard. IP54.

This product qualifies as a "designated country construction material" per FAR 52.225-11 Buy American-Construction Materials under Trade Agreements effective 6/06/2020. See Buy American Solutions.

#### WARRANTY / TERMS AND CONDITIONS OF SALE

http://www.hubbelllighting.com/resources/warranty/

AAL reserves the right to change product specifications without notice.

#### PROJECTED LUMEN MAINTENANCE

AMBIENT	0	25,000	50,000	*TM-21-11	100,000	PROJECTED
TEMP.				60,000		L70 (HRS)
25°C/	100%	95%	93%	92%	89%	>60.000
77°F	100%	95%	93%	92%	89%	>60,000
40°C/	100%	94%	91%	90%	85%	>60.000
104°F	100%	94%	91%	90%	85%	>60,000

#### **DIMENSIONS**



**ALN440** 

#### ALN440

HEIGHT: 31"/790mm LENGTH: 18"/460mm WIDTH: 18"/460mm WEIGHT: 40 lbs. FPA: 2.80



#### ALN440D

HEIGHT: 26"/660mm LENGTH: 18"/460mm WIDTH: 18"/460mm WEIGHT: 35 lbs. FPA: 2.59

#### PERFORMANCE DATA (32 LEDS, 700 MA DRIVE CURRENT, 75 WATTS)

TYPE	LENS	5K					4K					3K				
		LUMENS	LPW	В	U	G	LUMENS	LPW	В	U	G	LUMENS	LPW	В	U	G
Y2		5427	72	2	3	3	5156	69	2	2	3	4016	54	1	3	2
Y3	CLEAD	5237	70	2	3	2	4975	66	2	3	2	3875	52	1	3	2
Y4	CLEAR	5736	76	1	3	3	5449	73	1	3	3	4245	57	1	3	2
Y5		5183	69	3	3	3	4945	66	3	3	2	3809	51	2	3	2
Y2		5160	69	2	4	3	4902	65	2	4	3	3818	51	1	3	3
Y3	LDL	4964	66	1	4	3	4716	63	1	4	3	3674	49	1	3	3
Y4	LDL	5449	73	1	4	3	5176	69	1	4	3	4032	54	1	4	3
Y5		4901	65	2	4	3	4685	62	2	4	3	3610	48	2	3	3
Y2		4729	63	2	4	3	4492	60	1	4	3	3499	47	1	4	3
Y3	SBL	4554	61	1	4	3	4327	58	1	4	3	3370	45	1	4	2
Y4	SBL	5004	67	1	4	3	4754	63	1	4	3	3703	49	1	4	3
Y5		4499	60	2	4	3	4292	57	2	4	3	3310	44	1	4	2

**ALN440-Y5-32LED-5K-700** WATTAGE: 75 LUMEN OUTPUT: 5237 EFFICACY: 70 Lm/W

#### B2 U3 G2

B2 U3	G2										Г
ORWA	RD LIGI	HT	LUMEN								H
FL	30°	2.4%	124.3								
FM	60°	34.5%	1804.4				2		-		
FH	80°	29.1%	1523.6	H			5			$\rightarrow$	H
FVH	90°	3.1%	163.2								L
BACK L	IGHT				'	/		,			
BL	30°	1.7%	90.7			1	6	7			Г
BM	60°	12.1%	631.5	H		<u> </u>					H
вн	80°	11.1%	582.8				_				L
BVH	90°	2.5%	133.1		\						L
JPLIGH	ΙT						-				ŕ
UL	100°	1.0%	54.3								L
UH	180°	2.5%	129.2								

14' MOUNTING HEIGHT

#### **ALN440-Y3-32LED-5K-700** WATTAGE: 74.9 LUMEN OUTPUT: 5183 EFFICACY: 69 Lm/W

#### B3 U3 G3

UH

FORWARD LIGHT LUMEN FI 30° 19% 967 16.2% 839.4 FM 60° 25.8% 80° FΗ 1336.3 FVH 90° 4 4% 228.3 **BACK LIGHT** BL30° 19% 967 ВМ 60° 16.2% 839.4 25.8% ВH 80° 1336.3 BVH 90° 4.4% 228.3 UPLIGHT 100° 1.6% 82.2 UL 1.9% 180° 990

14' MOUNTING HEIGHT

IES files can be found at www.aal.net



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