Section 17: Consistency with City of Portland Design Manual

17.0 Consistency with City of Portland Design Manual

Sections of the City of Portland Design Manual have been identified within this section, including applicability and identification of any waivers. If a section has not been identified as being applicable to the proposed project, then that section has been given an N/A for the site.

17.1 Transportation Systems and Street Design Standards:

Information regarding traffic studies is indicated within Section 10 of this permit application.

Sidewalks and driveway aprons are proposed to be asphalt with granite curing. Sidewalk width is equal to or greater than 5' in all areas, and no vertical level changes greater than 1/4" are proposed. Sidewalk slopes are designed to be at the running slope of the proposed circulation areas that they abut, with a cross-slope of 2%. Sidewalk ramps have been designed in accordance with section 1.8.4. The former driveway location for the building proposed to be demolished is to be replaced with curbed sidewalk.

Aggregates for roadway surface and base pavement, as well as base gravels and pipe support gravels, have been detailed to be in accordance with section 1.10.

Parking spaces have been designed in accordance with the technical manual, including for compact parking spaces and minimum drive aisles. Bicycle and Motorcycle/Scooter parking are proposed as part of the parking lot re-striping. Section 19 of this permit application discusses the project's ability to meet Division 20 of the City Land Use Code and Site Plan Standards.

Public crosswalks have been designed in accordance with section 1.20.

17.2 Sanitary Sewer and Storm Drain Design Standards

Proposed design is in accordance with the applicable sections of Division 24 of the City Code.

Storm drain trunk pipes are designed to carry stormwater flow through pipes sized as indicated in the plans. A calculation is included to show a minimum of 3cfs flow through the proposed pipes. The proposed drainage system has been designed to replace an existing broken storm drain. Pipe material shall be in accordance with technical manual. Underdrains are sized at 4" for the

stormwater treatment facility; stormwater treatment design has been included in Section 12 of this manual.

Catch basins have been designed in accordance with Figure II-2. Calculations indicating the ability for drainage to pass flows of 3cfs (minimum slope of .004 ft/ft) have been attached to this section.

Standard aggregates have been proposed for use within the circulation facility. Loam and seed will cover the proposed aggregates that are not to be paved or planted.

17.3 Public Safety Standards

Locations of existing fire hydrants have been identified on the project plans. No fire hydrants are proposed to be modified or relocated.

Emergency access lanes are discussed in Section 16 of this permit application.

The proposed project is altering site access/circulation, and as these standards, as well as emergency access, are identified in Section 10 of this application. The proposed project is not a subdivision, and therefore subdivision standards are not anticipated to apply.

Blasting to remove ledge is not part of the proposed project. If ledge is encountered, it will likely remain in place unless it is substantially higher than the proposed surface, or near to proposed pipe locations. If ledge is to be removed, it is preferred to be removed through mechanical means. If any blasting is to occur, it shall be completed in accordance with the City's blasting protocols outlined within the technical manual.

17.4 Landscaping and Landscape Preservation Standards

Significant natural features have been identified on the existing conditions plan, and were identified in the report by Jones Associates, included within Section 11. Trees in the project location greater than 10" diameter have been identified on the existing conditions plan.

Landscaping measures have been incorporated into parking areas, except in areas where snow removal would become impractical if plantings were included.

Retaining walls are proposed in certain areas of the project. In these locations, plantings will be placed to soften the hardscape of the retaining walls.

Trees are proposed along the edge of parking areas in locations where their placement is practicable to provide the general effect of street trees throughout the site. However, where is the proposed site layout is not that of a typical street, street trees standards were not anticipated to be designed.

Shrubs consist of at least 50% native plantings.

Trees are proposed to be installed at the edge of the parking areas. The trees are an approved species in accordance with the technical standards, as indicated in the landscaping plan and details. Grasses will be a standard MaineDEP grass application in areas where lawn grasses are not specified.

17.5 Portland Stormwater Management Standards

Section 12 of this permit application includes for applicability with this section. Please see Section 12 for additional information.

17.6 Erosion and Sedimentation Control Standards for Two-Family Homes

An erosion and sedimentation control plan and report has been developed as part of the permit and contract drawings. This proposed plan and report is in accordance with Maine DEP regulations, and can be found in Section 12.

17.7 Soil Survey Standards

A high intensity soil survey is not required for the proposed project, as the project is being constructed largely on developed soils. However, please see the medium-intensity soils information provided in Section 11.

17.8 Standards for Development in and Adjacent to Wetlands

The site was observed for wetlands by Power Engineers, Inc. on August 25, 2016. The associated wetlands report has been included as an appendix to Section 11. The proposed project does not anticipate filling any wetlands.

17.9 Water Supply Standards

N/A

17.10 Municipal Street Lighting Standards:

N/A

17.11 Shadow Standards:

N/A

17.12 Site Lighting Standards:

An exterior lighting/Site Lighting plan is attached to this section.

17.13 Boundary Survey Requirements

A boundary survey has been incorporated to the Overall Existing Conditions Plan, Sheet C-2.

17.14 Standards for Local Site Location of Development Review:

N/A

17.15 Solar Energy Generation:

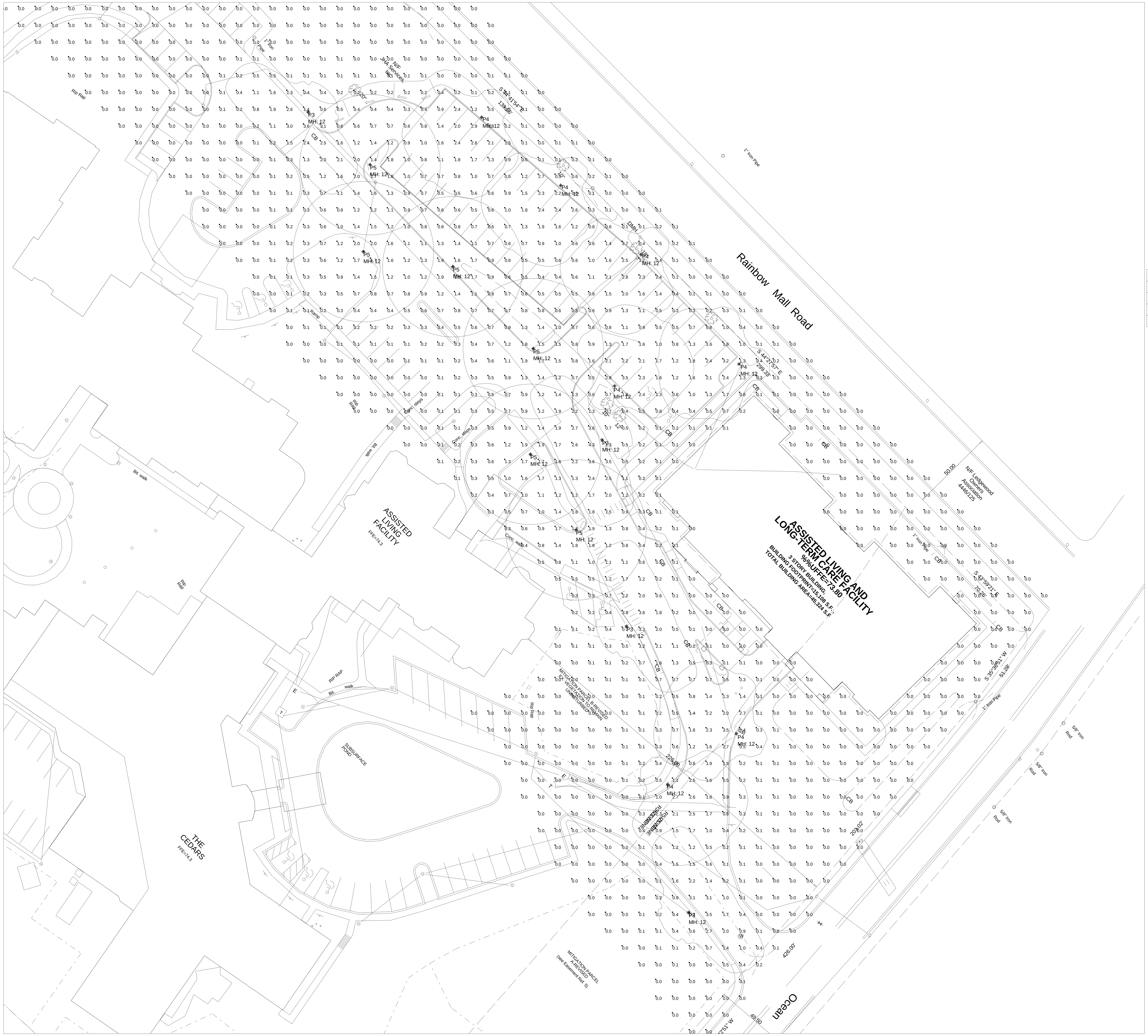
N/A

The Cedars Ocean Avenue
City of Portland, Maine

CAPACITY OF PIPES FLOWING FULL
MINIMUM SLOPES USED IN DESIGN

Pipe Dia. (inches)	Pipe Dia. (feet)	Area (sq. ft.)	R (ft)	Slope (ft/ft)	Capacity with pipe flowing full (MGD) (n=0.012)	(MGD) (n=0.015)	Velocity (n=0.012) (ft/s)	Capacity with pipe flowing full (CFS) (n=0.013)	(CFS) (n=0.015)
Minimum Slopes - Sewers									
12	1	0.785	0.5	0.004	2.51	2.01	4.946	3.880652	3.104521
15	1.25	1.226563	0.625	0.0028	3.81	3.04	4.802	5.887253	4.709802
18	1.5	1.76625	0.75	0.0022	5.48	4.39	4.807	8.486359	6.789087

Quick Flow Conversions:
1 CFS = 448.8 GPM
1 CFS = 0.646 MGD
1 MGD = 1.548 CFS
1 MGD = 694.4 GPM



PLAN VIEW

NOTES:
1) EXACT MOUNTING DETAILS TO BE DETERMINED AT JOBSITE BY OTHERS.
2) CALCULATIONS MAY or MAY NOT SHOW THE EFFECT OF SHADOWING CAUSED BY BUILDINGS AND OBJECTS WITHIN THE CALCULATED SPACE OR IN THE SITE AREA.
3) READINGS SHOWN ARE INITIAL HORIZONTAL FOOTCANDLES ON A FLAT SITE WITHOUT REFLECTIONS OR OBSTRUCTIONS UNLESS OTHERWISE INDICATED.
4) THIS CALCULATION IS BASED ON LIMITED INFORMATION SUPPLIED BY OTHERS TO SWANEY LIGHTING ASSOCIATES AND STANDARD ASSUMPTIONS OF THE SPACE AND/OR SITE.
5) CONFORMANCE TO CODES AND OTHER LOCAL REQUIREMENTS AS DETERMINED BY THE AHJ ARE THE RESPONSIBILITY OF THE OWNER AND/OR THE OWNER'S REPRESENTATIVE.
6) THIS LAYOUT DRAWING MUST BE COORDINATED WITH THE SITE LOCATION FOR CORRECT FIXTURE ORIENTATION.
7) DOCUMENTS PRINTED OR PLOTTED FROM ELECTRONIC FILES MAY APPEAR AT OTHER THAN THE DESIRED OR ASSUMED GRAPHIC SCALES. IT IS THE RESPONSIBILITY OF THE RECIPIENT TO VERIFY THAT THE PRINTED OR PLOTTED-TO-SCALE DRAWING IS PRINTED TO SCALE.

Calculation Summary

Label	Avg	Max	Min	Avg/Min	Max/Min
SITE	0.44	4.3	0.0	N.A.	N.A.
33 park	1.12	2.9	0.4	2.80	7.25

Luminaire Schedule (note fixture cataloge numbers are not complete)

Type	Qty	Lumens	LLF	Watts	Description
P3	4	4800	0.900	57	TRA30-AC-24NB-55-3K-UNV-DIR3
P5	6	4864	0.900	57	TRA30-AC-24NB-55-3K-UNV-DIR5
P4	7	4618	0.900	55	TRA30-AC-24NB-55-3K-UNV-DIR4 (

TITLE
THE CEDARS
PORTLAND, ME
SITE LIGHTING LAYOUT

GENERATED FOR:
WRIGHT-PIERCE

SCALE NOT TO SCALE

Page 1 of 1

Date:11/21/2017

prelim site.AGI

GENERATED BY SWANEY LIGHTING, SCARBOROUGH ME - 207-883-7100 - swaneylighting.com

SWANEY LIGHTING ASSOCIATES, INC.

BEACON
design . performance . technology
www.beaconproducts.com

Type:	
Project Name:	
Notes:	

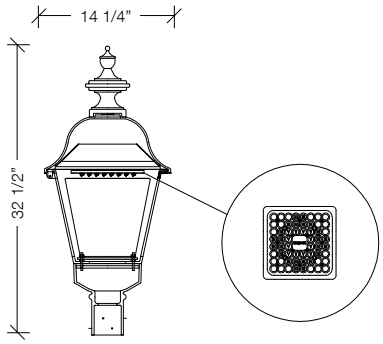
rev. 03.20.2017

TRA30 (LED)

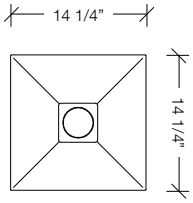
30" Traditional Luminaire
Max Weight: 35.0 lbs
Max EPA: 2.60 sq ft

Sample	*TRA30*		*AC*		*24NB-55*		*5K*		*UNV*		*DIR5*		*PEC*		*GENIXX*		*PM*		*NF*		*BBT*
Ordering		/		/		/		/		/		/		/		/		/		/	
	A		**B**		**C**		**D**		**E**		**F**		**G**		**H**		**I**		**J**		**K**

DETAILS

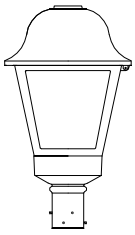


LED direct



Top View

STYLE OPTIONS


NF

A. MODEL

TRA30	Traditional 30"

B. LENS OPTIONS

AC	acrylic, clear
AF	acrylic, frosted
AS	acrylic, seeded
AW	acrylic, white
PC	polycarbonate, clear
PF	polycarbonate, frosted

C. ENGINE-WATTS

24NB-55	55 Watts - LED array
36NB-80	80 Watts - LED array
48NB-110	110 Watts - LED array
60NB-136	136 Watts - LED array

D. CCT - COLOR TEMP

3K	3000K
4K	4000K
5K	5000K (std.)

E. VOLTAGE

UNV	120-277V
347	347V[3]
480	480V[3]

F. OPTICS

DIR2	type II
DIR3	type III
DIR4	type IV
DIR5	type V

G. ELECTRICAL OPTIONS

PEC	photocell, button

H. CONTROL OPTIONS

GENI-XX	energeni [1]

I. MOUNTING OPTIONS

PT	post top
PM	pendant mount [2]

J. STYLE OPTIONS

NF	no finial

K. COLOR

BBT	basic black textured
BMT	black matte textured
WHT	white textured
MBT	metallic bronze textured
BZT	bronze textured
DBT	dark bronze textured
GYS	gray smooth
DPS	dark platinum smooth
GNT	green textured
MST	metallic silver textured
MTT	metallic titanium textured
OWI	old world iron
RAL	_____

[1] When ordering Energeni, specify the routine setting code (example GENI-04). See Energeni brochure and instructions for setting table and options. Not available with sensor options.

[2] consult factory
[3] 24NB - 55 only

rev. 03.20.2017

TRA30 (LED)

30” Traditional Luminaire
Max Weight: 35.0 lbs
Max EPA: 2.60 sq ft

Housing: All cast aluminum parts shall be low copper alloy A356. All extruded aluminum parts shall be alloy 6061-T6, 6063-T5 or equal.

Construction: The upper chamber/lid shall be topped by a decorative cast aluminum finial/cap and mechanically fastened to the optical chamber. The cast multi-sided cage shall accommodate UV stabilized acrylic or polycarbonate lenses (side panels) which shall be sealed for weather tight operation.
The electrical chamber/fitter shall be aluminum, decorative fitter designed to accommodate the ballast assembly and shall mount to 3 OD x 3” H tenon and secured by three stainless steel set screws.

Fasteners: All fasteners shall be Corrosion Resistant. When tamper resistant fasteners are required, spanner HD (snake eye) style shall be provided (special tool required, available at additional cost).

Finish: Finish shall be a Beacote V polyester powder-coat electro-statically applied and thermocured. Beacote V finish shall consist of a five stage iron phosphate chemical pretreatment regimen with a polymer primer sealer, oven dry off, and top coated with a thermoset super TGIC polyester powder coat finish. The finish shall meet the AAMA 605.2 performance specification which includes passing a 3000 hour salt spray test for corrosion resistance and resists cracking or loss of adhesion per ASTM D522 and resists surface impacts of up to 160 inch-pound.

Bezel Optical System: Each luminaire is supplied with an optical one piece cartridge system consisting of an LED engine, LED lamps, optics, gasket and stainless steel bezel. The cartridge is held together with internal brass standoffs soldered to the board so that it can be field replaced as a one piece optical system. Two-piece silicone and polycarbonate foam gasket ensures a weather-proof seal around each individual LED and allows the luminaire to be rated for high-pressure hose down applications.
The optical cartridge is secured to the extruded housing with fasteners and a heat pad to ensure thermal conductivity. The optics are held in place without the use of adhesives and the complete assemble is gasketed for high pressure hose down cleaning. The cartridge assembly is available in various lighting distributions using a specially designed acrylic optical lens over each LED.

Power Supply/Driver Requirements: U.L. UL1310, Class 2 and UL48 compliant

Color Rendering Index (CRI): Luminaire shall have a minimum CRI of 67 at 5000K.

Operating Environment: Shall be able to operate normally in ambient temperatures from -40°C to 40°C

LifeShield™ Circuit: Thermal circuit shall protect the luminaire from excessive temperature by interfacing with its 0-10V dimmable drivers to reduce drive current as necessary. The factory-preset temperature limits shall be designed to ensure maximum hours of operation to assure L70 rated lumen maintenance. The device shall activate at a specific, factory-preset temperature, and progressively reduce power over a finite temperature range in recognition of the effect of reduced current on the internal temperature and longevity of the LEDs and other components. A luminaire equipped with the device may be reliably operated in any ambient temperature up to 55ºC (131ºF).
The thermal circuit will allow higher maximum Wattages than would be permissible on an unregulated luminaire (if some variation in light output is permissible), without risk of premature LED failure. Operation shall be smooth and undetectable to the eye. Thermal circuit shall directly measure the temperature at the LED solder point.

Thermal circuit shall consist of surface mounted components mounted on the LED engine (printed circuit board). For maximum simplicity and reliability, the device shall have no dedicated enclosure, circuit board, wiring harness, gaskets, or hardware. Device shall have no moving parts, and shall operate entirely at low voltage (NEC Class 2). The device shall be located in an area of the luminaire that is protected from the elements.

Thermal circuit shall be designed to “fail on”, allowing the luminaire to revert to full power in the event of an interruption of its power supply, or faulty wiring connection to the drivers.

Device shall be able to co-exist with other 0-10V control devices (occupancy sensors, external dimmers, etc.). The device will effectively control the solder point temperature as needed; otherwise it will allow the other control device(s) to function unimpeded.

Surge Protector: The on-board surge protector shall be a UL recognized component for the United States and Canada and have a surge current rating of 20,000 Amps using the industry standard 8/20 pSec wave. The LSP shall have a clamping voltage of 825V and surge rating of 540J. The case shall be a high-temperature, flame resistant plastic enclosure.
Electrical: Luminaires are equipped with LED driver(s) that accept 90 through 305 VAC, 50 Hz to 60 Hz (UNIV). Power factor is .92 at full load. All electrical components are rated at 50,000 hours at full load and 25°C ambient conditions per MIL-217F Notice 2. All driver components supplied are component-to-component wiring within the luminaire will carry no more than 80% of rated current and is listed by UL for use at 600VAC at 50°C or higher. Plug disconnects are listed by UL for use at 600 VAC, 15A or higher.

Agency Certification: The luminaire shall bear an NRTL label and be marked suitable for wet locations.

Limited Warranty: Beacon luminaires feature a 5 year limited warranty. Beacon LED luminaires with LED arrays feature a 5 year limited warranty covering the LED arrays. LED drivers are covered by a 5 year limited warranty. PIR sensors carry a 5 year limited warranty from the sensor manufacturer. See Warranty Information on www.beaconproducts.com for complete details and exclusions.

Due to our continued efforts to improve our products, product specifications are subject to change without notice.