



# **Chevy Chase Circle Francis G. Newlands Memorial Fountain**

## **Lighting Project**

**Rock Creek Park  
National Park Service**

**Friends of Chevy Chase Circle**

**D K T Lighting and Design**

**April 16, 2020**

**LOCATION:**

Chevy Chase Circle is located on the border of Washington, DC, and Chevy Chase, Maryland. The Park, which has an approximately 240 foot diameter, is entirely bounded by a traffic rotary which is also called Chevy Chase Circle. Several roadways radiate from this rotary.

Source: National Park Service Cultural Landscapes Inventory 2005 Chevy Chase Circle Rock Creek Park - DC Street Plan Reservations



## The Circle: Cultural Attributes and Historical Notes

- Originally created as the gateway to Chevy Chase, Maryland in 1890,...its central feature is the Francis G. Newlands Memorial Fountain which was constructed in 1933. The park is important for its associations with Newlands as well as the City Beautiful movement and Picturesque suburb ideas, which help explain the development of Chevy Chase Village. Chevy Chase Circle's current appearance reflects its 1933 design, 1956 alterations and 1990s planting additions.
- Chevy Chase Circle is a 1.05-acre park maintained and managed by the National Park Service's Rock Creek Park unit.
- Walkways lead visitors to the Francis G. Newlands Memorial Fountain, a classically designed Aquia sandstone structure named for the founder of Chevy Chase. Its sixty-foot diameter encompasses a large concrete basin and fountainhead capable of projecting water thirty feet in the air.
- As a senator, Newlands (1848-1917) was dedicated to reclamation and irrigation of the arid West, and the fountain symbolizes that interest.
- The park is significant at the local level under Criterion C of the National Register criteria, in the area of Community Planning and Development. It is also significant under Criteria Consideration F as a commemorative property because of the memorial fountain.
- In addition to having integrity of materials, the park conveys integrity of workmanship through the Newlands Memorial Fountain and two stone walkways. These features convey original construction methods, with stone patterns intact, although the fountain has been repointed and repaired over the years to correct damage by errant automobiles.
- Damage by automobiles has been the largest threat to the park's integrity in all characteristics. Chevy Chase Circle has been mostly well maintained, but some portions of the circle have suffered damage. The fountain in particular has received careful, appropriate restoration, in 1990 and 2003 in addition to periodic repairs due to automobile damage. Thus, integrity at Chevy Chase Circle has been retained despite automobile impacts.

# Project Summary

## Seeking Approval for:

- 1) Adding an array of nine small-scale, white-color temperature submersible lighting fixtures to the fountain's interior basin to illuminate, on a seasonal basis, the fountain's water display.
- 2) Adding six bollard-type lights around the flagstone plaza that would provide all-season illumination to the fountain's basin and the flagstone surround.
- 3) By using LED light sources with a color temperature of no more than 3000K, bring warm white stationary lighting to the fountain and its basin area.

## Project Goals:

By illuminating the fountain and its immediate surrounds, give drivers an additional visual aid as to the presence of the circle and the fountain. Add to the aesthetics and appreciation of the circle, a gateway to the Nation's capital and a beloved local landmark.

## Existing Conditions:

Currently the circle's center and the fountain have no direct lighting and at night, there is no intentional and designed illumination. There have been a number of vehicular accidents at night where drivers have attempted to drive through the circle, resulting in significant damage to the fountain, the benches and the landscape.

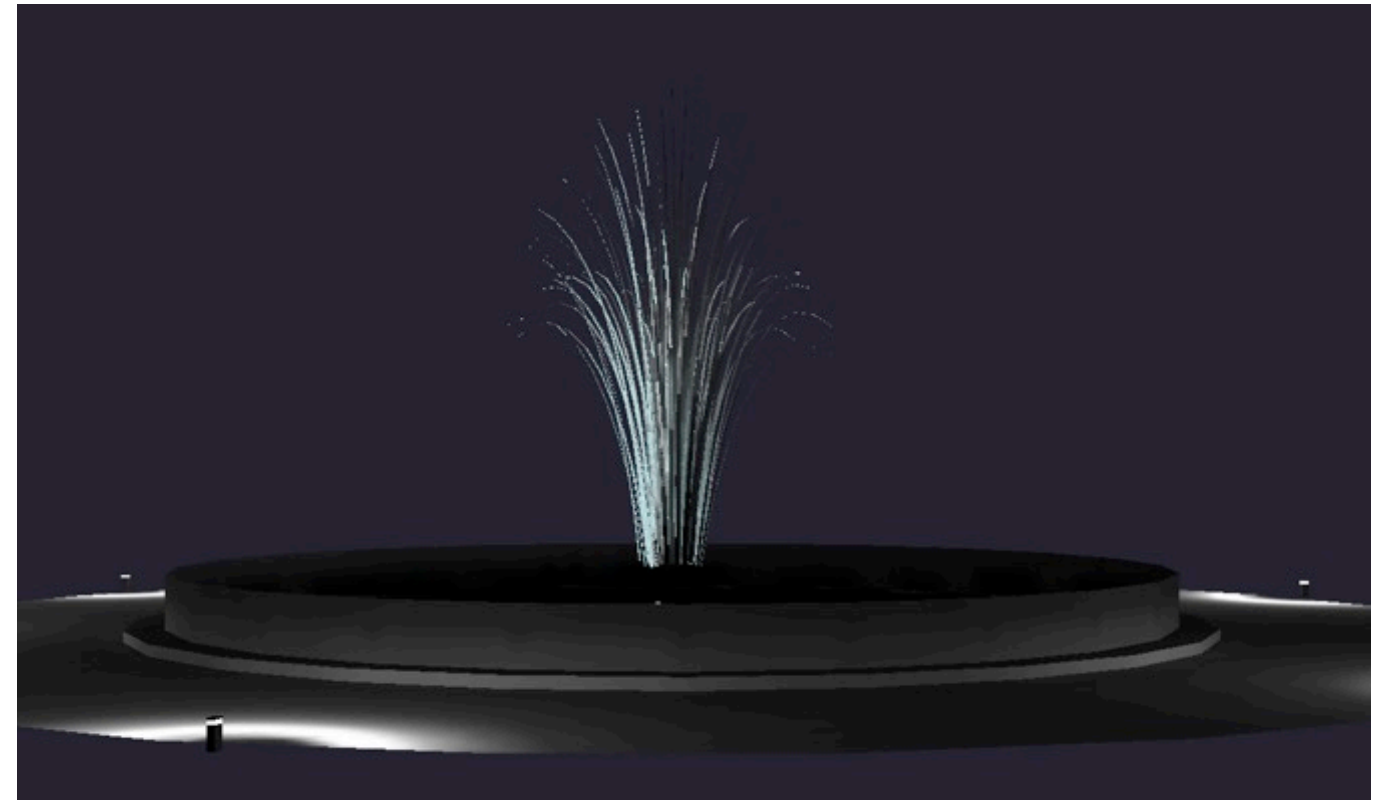


Existing conditions: Currently, the unlit fountain is illuminated only by passing headlights. Lights in the fountain would showcase for drivers the fountain's water plume from early Spring to mid-November. Exterior lights around the fountain would illuminate its base all year long.

**What is the right amount and “color temperature” of the light?  
The October 2019 on-site “Mock-up” Provided Answers**

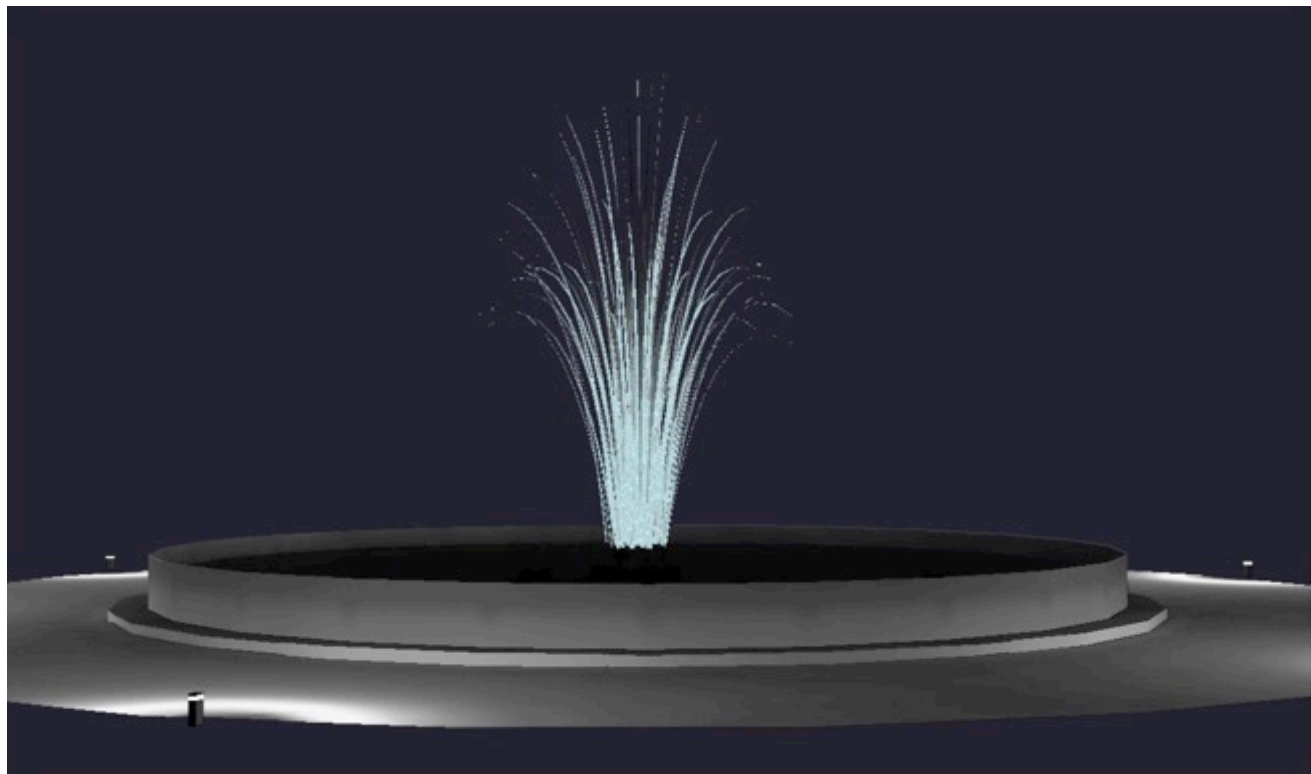


**Photograph of fountain with three submersible light fixtures and one exterior light fixture**



**Computer model of “mock up”**

**Using the data from the mock-up for prediction, what would the fountain look like with all nine fixtures and additional exterior lighting?**  
**This computer model provides a visualization of the fountain plume with nine submersible light fixtures and the exterior bollard lights.**

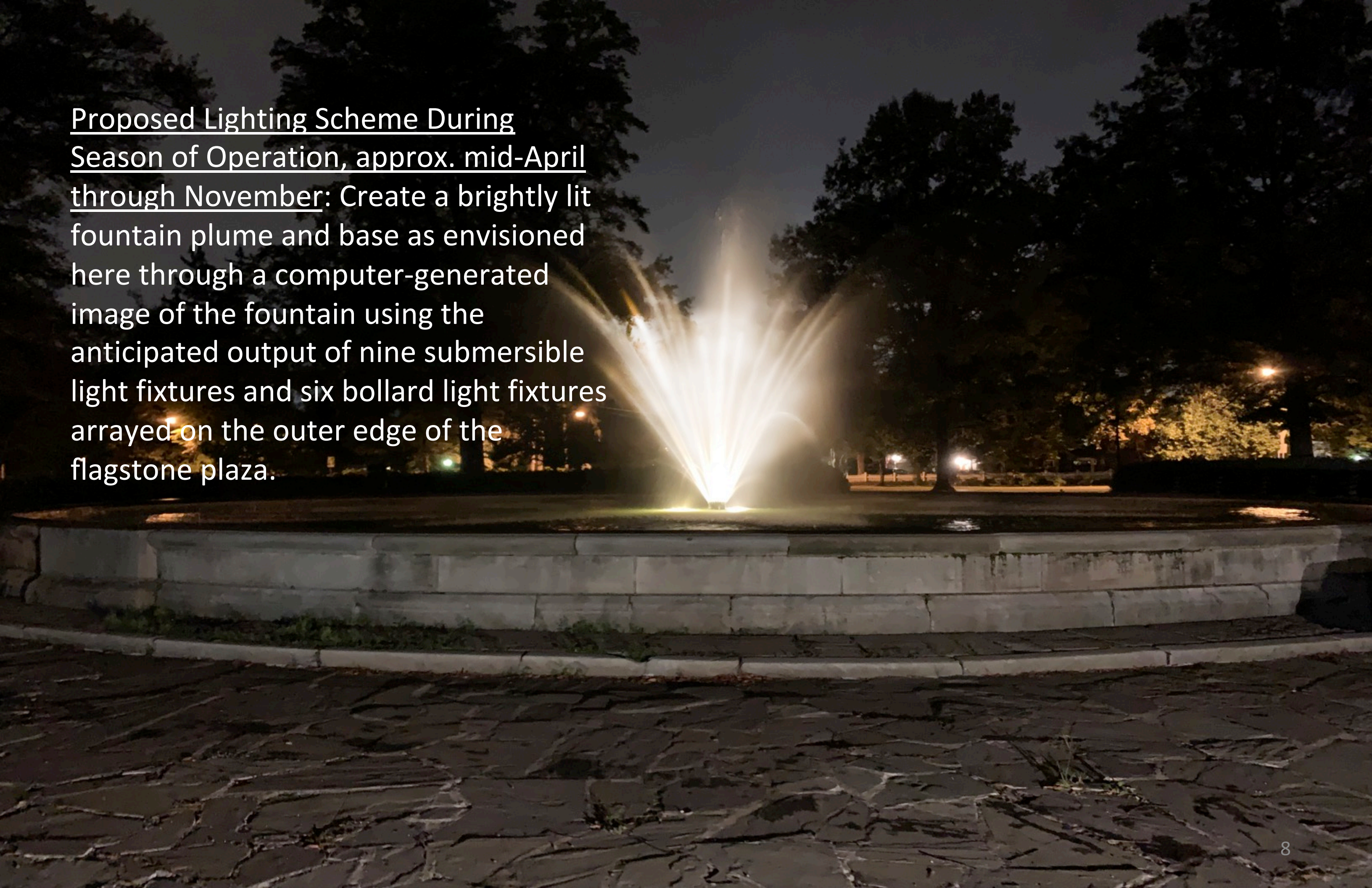


**Computer model**



**Enhanced photograph based on computer modeling**

Proposed Lighting Scheme During Season of Operation, approx. mid-April through November: Create a brightly lit fountain plume and base as envisioned here through a computer-generated image of the fountain using the anticipated output of nine submersible light fixtures and six bollard light fixtures arrayed on the outer edge of the flagstone plaza.

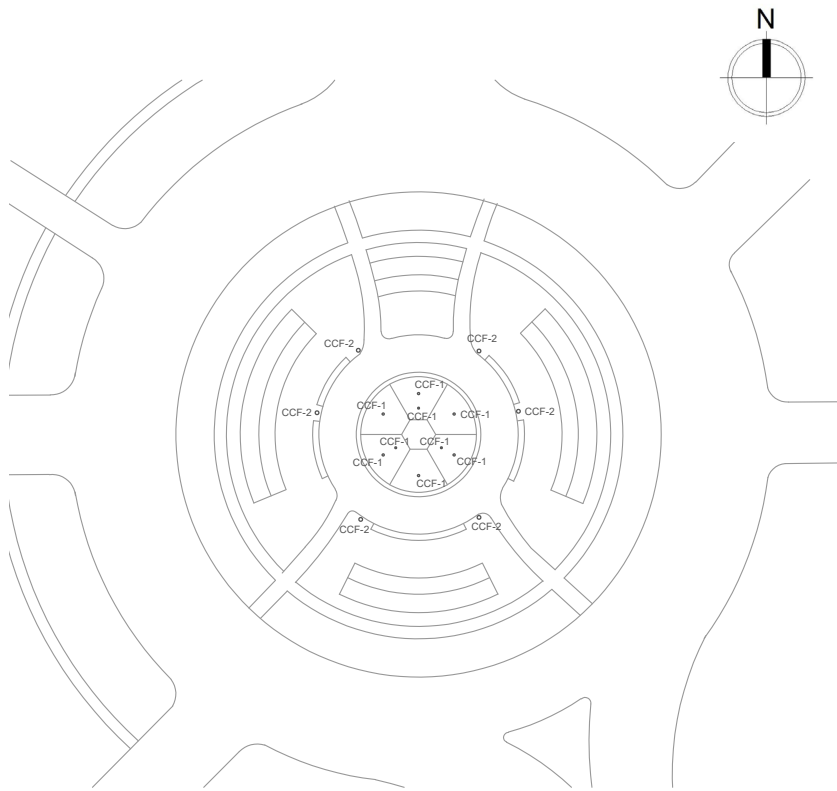


Proposed Lighting Scheme during Winter Shut-down of Fountain:  
Mid-November through mid-April



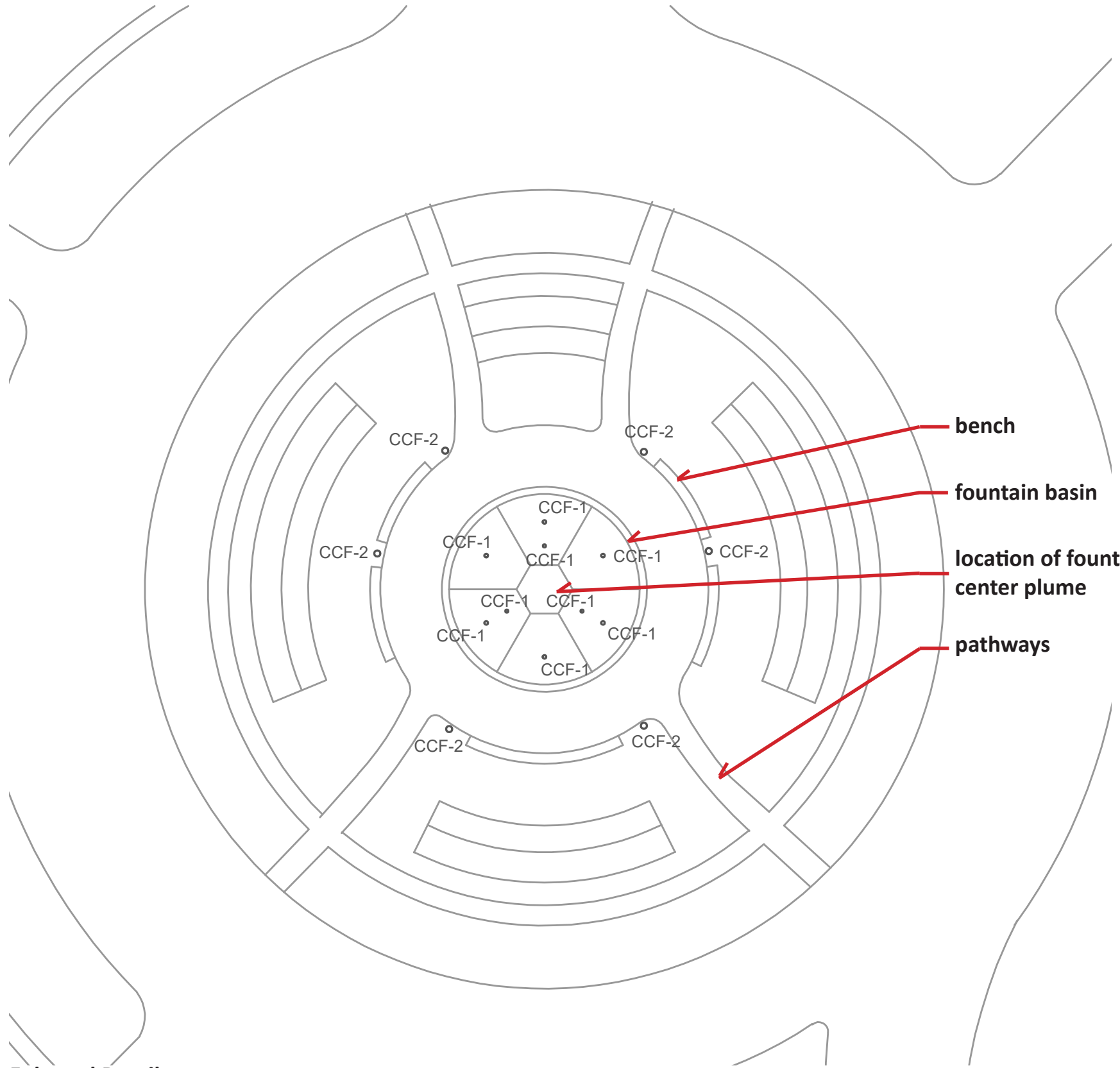


**Aerial View**



**Lighting Diagram**

**Chevy Chase Circle and Fountain**



**Enlarged Detail**

**Lighting Design Concepts by D|K|T Lighting and Design**

# FX-FREESTANDING LIGHT FIXTURE

# CCF - 1

## APPLICATION INFORMATION:

Fountain People FX-Series LED light fixture is designed, engineered and fabricated for illumination of fountain and splash pad spray effects. The fixture includes an angle adjustable yoke to position the fixture as desired. Unit may be anchored to a finished floor or wall.

## PRODUCT SPECIFICATION:

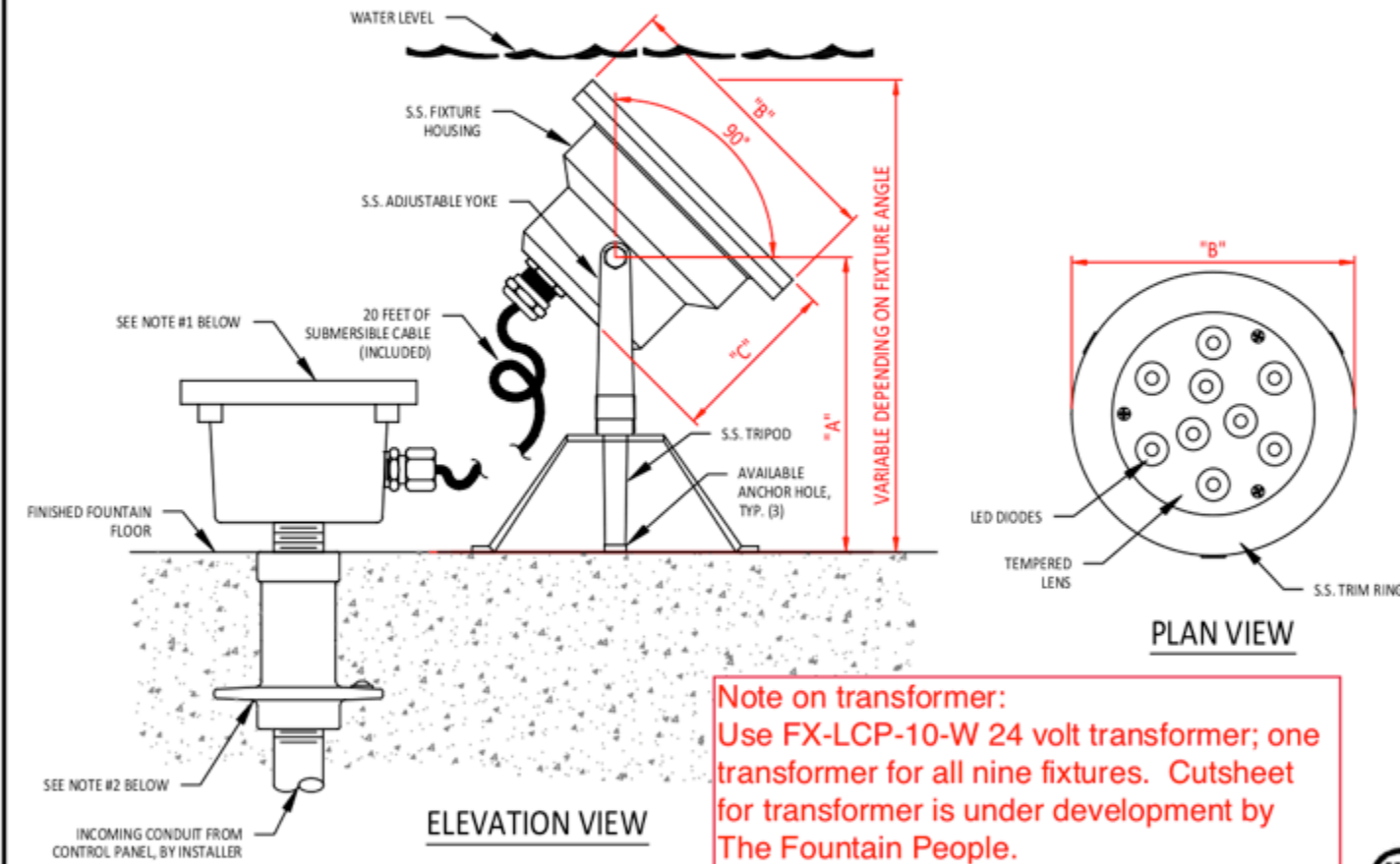
FX-LED-FS Underwater Freestanding LED light fixture; 6" diameter, type 304 stainless steel construction, LED fixture with (9) diodes. Fixture includes adjustable yoke & tripod assembly, tempered glass lens with silicone gasket, stainless steel entry cord seal and 20 feet of submersible cable. 27 watt fixture is available in either RGB, White or Warm White (9) diode configuration.

## NOTES:

- FIXTURE REQUIRES LOW VOLTAGE POWER SUPPLY
- DMX DRIVER REQUIRED FOR DIMMING & COLOR CHANGING CAPABILITY



## Details



Fixture Dimensions	6" Light Diameter
Submersible Rating	6.5 feet
Input Voltage	24VDC
Cable/Length	20 feet- 18/5 (RGB), 18/3 (W)
Power Usage	27 watts
Dimming Capability	Yes (DMX controller required)

Color	RGB or White Diodes
Color Temperature	(RGB), 5000K (W), 3000K (WW)
LED Diode Quantity	9
Beam Angle	25 Degrees (fixed)
Lens Material	Tempered Glass
Fixture Construction	Type 304 stainless steel

Fixture seal	Silicone
Application Location	Underwater environment
LED Diode Lifespan	~ 50,000 hours
Warranty	1 year
Certifications/Standards	CE, IP68, RoHS

## ENGINEERING DATA

CATALOG #	DIM 'A'	DIM 'B'	DIM 'C'	NOTES:
FX-LED-FS-RGB	6.25"	6"	3.5"	1) UNDERWATER JUNCTION BOX REQUIRED. SIZE BASED ON LIGHT QUANTITY. SEE CATALOG ITEM: LJP-SERIES
FX-LED-FS-W	6.25"	6"	3.5"	2) WATERSTOP FITTING REQUIRED FOR CONCRETE POUR. SIZE BASED ON WIRE/CONDUIT SIZE. (SEE CATALOG ITEM: FWS-SERIES)
FX-LED-FS-WW	6.25"	6"	3.5"	



Fountain People, Inc.  
4600 Hwy 123  
San Marcos, TX 78666 USA  
T: (512) 392-1155  
F: (512) 392-1154  
www.fountainpeople.com

# JB8-Series Underwater Junction Box

## DESCRIPTION INFORMATION:

JB8-Series Underwater Junction Box is an universal junction box for either conduit mount or niche mount applications (up to 8 fixtures). The box is tapped for the maximum number of allowable fixtures and includes the appropriate style/quantity cord seals and plugs depending on the number of connections requested.

## PRODUCT SPECIFICATION:

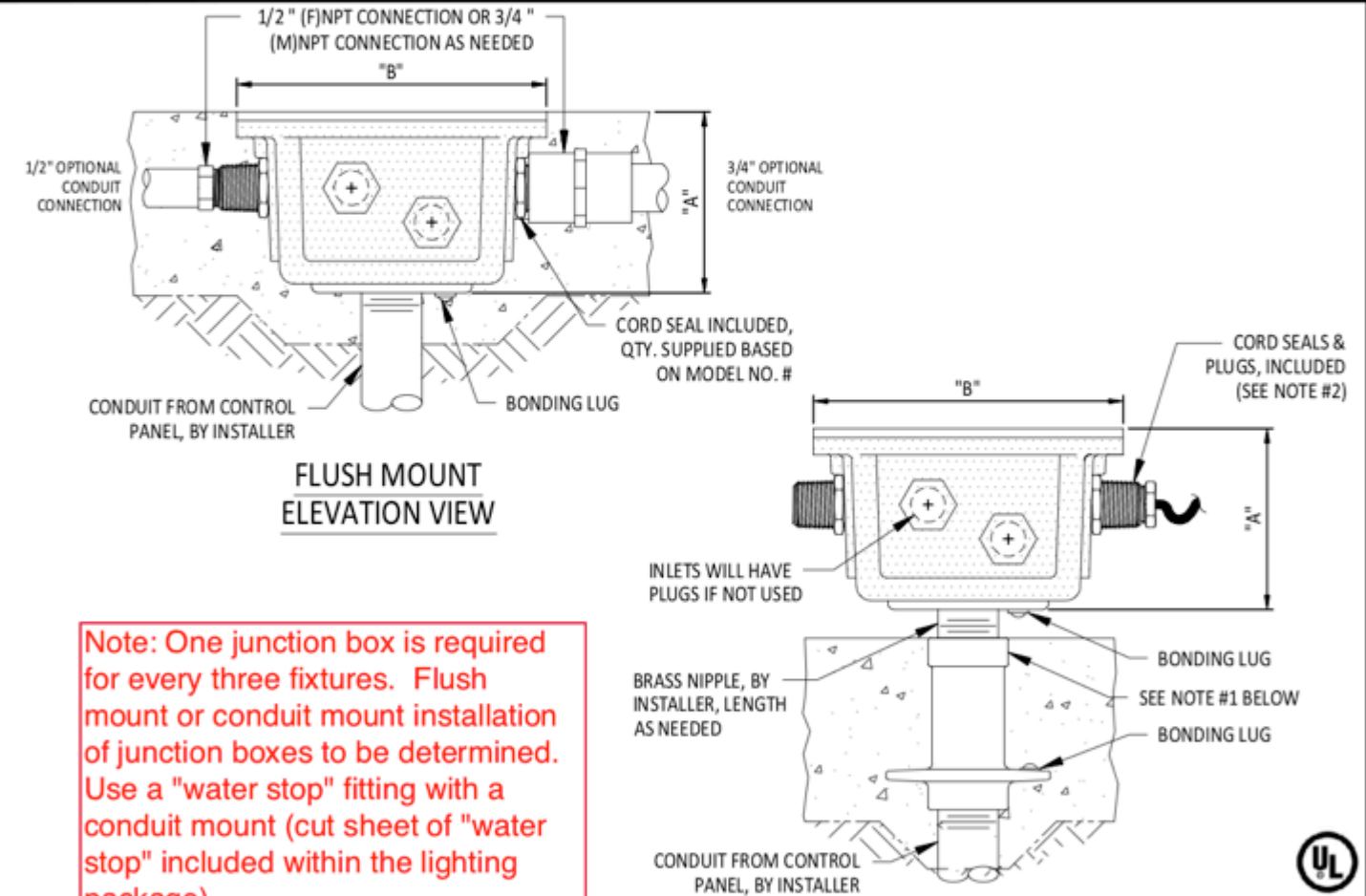
JB8-Series Underwater Junction Box; UL Listed underwater junction box consisting of bronze constructed housing and lid, stainless steel fasteners, neoprene gasket, integral ground bar and external "direct burial" rated bonding lug; includes (1) 1" (F)NPT bottom connection and (8) 3/4" (F)NPT side connections. Junction box may be conduit mounted or flush mounted. Universal brass cord seal provides method for either flush mount or freestanding fixture/conduit connections (3/4" or 1/2" NPT connection). The box has a minimum internal volume of 72.0 cubic inches.



## NOTES:

- CONDUIT MOUNT VERSION REQUIRES EMBED FITTING

## Details



## ENGINEERING DATA

CATALOG #	DIM 'A'	DIM 'B'	DIM 'C'	NOTES:
JB8-1-100	4"	6.75"	6.75"	1) WATERSTOP FITTING REQUIRED FOR CONCRETE POUR WHEN USING JUNCTION BOX FOR CONDUIT APPLICATION. 1" F.N.P.T STANDARD. SEE CATALOG ITEM FWS-100.
JB8-2-100	4"	6.75"	6.75"	
JB8-3-100	4"	6.75"	6.75"	
JB8-4-100	4"	6.75"	6.75"	2) CORD SEALS INCLUDED ARE DESIGNED FOUNTAIN PEOPLE FX/FXPRO SERIES LIGHTS. ANY OTHER FIXTURE STYLE MAY REQUIRE DIFFERENT CORD SEAL.
JB8-6-100	4"	6.75"	6.75"	
JB8-8-100	4"	6.75"	6.75"	3) REQUIRES #8882-D POTTING COMPOUND PER NEC STANDARDS.



Fountain People, Inc.  
4600 Hwy 123  
San Marcos, TX 78666 USA  
T: (512) 392-1155  
F: (512) 392-1154  
www.fountainpeople.com

# CCF - 2

BEGA LED system bollard - luminaire head with unshielded light with safety guard - 180°

**Enclosure:** Housing constructed of die-cast aluminum. Die-castings are marine grade, copper free ( $\leq 0.3\%$  copper content) A360.0 aluminum alloy. Glass diffuser, inside white. Fully gasketed for weather tight operation using molded silicone gasket.

**Installation:** BEGA LED system bollards are designed for easy attachment to system bollard tubes using an interlocking stainless steel mechanism and stainless steel set screw threaded into stainless steel insert. An accompanying bollard tube must be selected for proper installation, see below chart for compatible tube options.

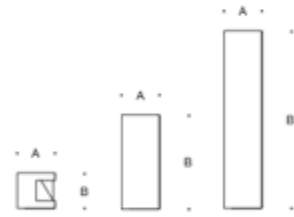
**Electrical:** 16.5W LED luminaire, 19.8 total system watts, -30°C start temperature. Integral 120V through 277V electronic LED driver, 0-10V dimming. LED module(s) are available from factory for easy replacement. Standard LED color temperature is 3000K with a  $>80$  CRI. Available in 4000K ( $>80$  CRI); add suffix K4 to order.

**Note:** LEDs supplied with luminaire. Due to the dynamic nature of LED technology, LED luminaire data on this sheet is subject to change at the discretion of BEGA-US. For the most current technical data, please refer to [www.bega-us.com](http://www.bega-us.com).

**Finish:** All BEGA standard finishes are polyester powder coat with minimum 3 mil thickness. Available in four standard BEGA colors: Black (BLK) White (WHT); Bronze (BRZ); Silver (SLV). To specify, add appropriate suffix to catalog number. Custom colors supplied on special order.

CSA certified to U.S. and Canadian standards, suitable for wet locations. Protection class IP65

Luminaire Lumens: 923



Bollard heads - shielded with reflector - 180°

Lamp	A	B
99 857 16.5W LED	7 1/2	7 1/4

Bollard tubes for luminaire heights 19 1/4 - 21 3/4

	A	B	Anch. unit
99 615	7 1/2	14 1/2	79 817

Bollard tubes for luminaire heights 31 1/2 - 39 1/4

Integrated components	Door	A	B	Anch. unit
99 622 -	✓	7 1/2	32	79 818
99 644 1 LED floodlight 19.3W	✓	7 1/2	32	79 818
99 626 GFCI outlet	✓	7 1/2	32	79 818
99 658 Passive infrared motion sensor	✓	7 1/2	32	79 818
99 635 Emergency lighting battery 10W	✓	7 1/2	32	79 818

Type:  
BEGA Product:  
Project:  
Voltage:  
Color:  
Options:  
Modified:



# CCF - 2

BEGA LED system bollard - bollard tube for luminaire height 39 1/4 with integrated floodlight

**Post construction:** One piece extruded aluminum, 3/16" wall thickness with a one piece base, internally welded into an assembly. Die castings are marine grade, copper free ( $\leq 0.3\%$  copper content) A360.0 aluminum alloy. Designed to accept BEGA LED system bollard heads of 7 1/2" in diameter.

**Integrated components:** Bollard tube provided with one (1) integrated 19.3W LED floodlight. Housing constructed of die-cast aluminum with tempered safety glass in die-cast frame. Reflector of pure anodized aluminum. The inclination angle of the floodlight can be adjustable from 0° to 30°.

**Electrical:** 19.3W floodlight, 23.5 total system watts, -30°C start temperature. Integral 120V through 277V LED driver, 0-10V dimming. LED module(s) are available from factory for easy replacement. Standard LED color temperature is 4000K with a  $>80$  CRI. Available in 3000K ( $>80$  CRI); add suffix K3 to order.

**Note:** LEDs supplied with luminaire. Due to the dynamic nature of LED technology, LED luminaire data on this sheet is subject to change at the discretion of BEGA-US. For the most current technical data, please refer to [www.bega-us.com](http://www.bega-us.com).

**Anchor base:** Heavy cast aluminum, slotted for precise alignment. Mounts to BEGA 79 818 anchorage kit. Bollard secures to base with one stainless steel set screw. The mounting system allows the luminaire to be adjusted independent of anchor bolt orientation.

**Finish:** All BEGA standard finishes are polyester powder coat with minimum 3 mil thickness. Available in four standard BEGA colors: Black (BLK) White (WHT); Bronze (BRZ); Silver (SLV). To specify, add appropriate suffix to catalog number. Custom colors supplied on special order.

**Note:** See below for compatible LED system bollard heads. See specifications for details.

CSA certified to U.S. and Canadian standards, suitable for wet locations. Protection class IP65

Weight: 17.2 lbs.



Bega 99857 head to be added Bega 99857 bollard with Bega 99644 floodlight and Bega 10016 flat beam lens



Bollard tubes for luminaire heights 31 1/2 - 39 1/4

	Door	$\beta$	A	B	Anch. unit
99 644 1 LED floodlight 19.3W	✓	14°	7 1/2	32	79 818
					10 047 10 016

Diffuser lenses  wide beam  flat beam  $\beta$  = Beam angle



Type:  
BEGA Product:  
Project:  
Voltage:  
Color:  
Options:  
Modified:

# FWS-SERIES WATERSTOP FITTING

## DESCRIPTION INFORMATION:

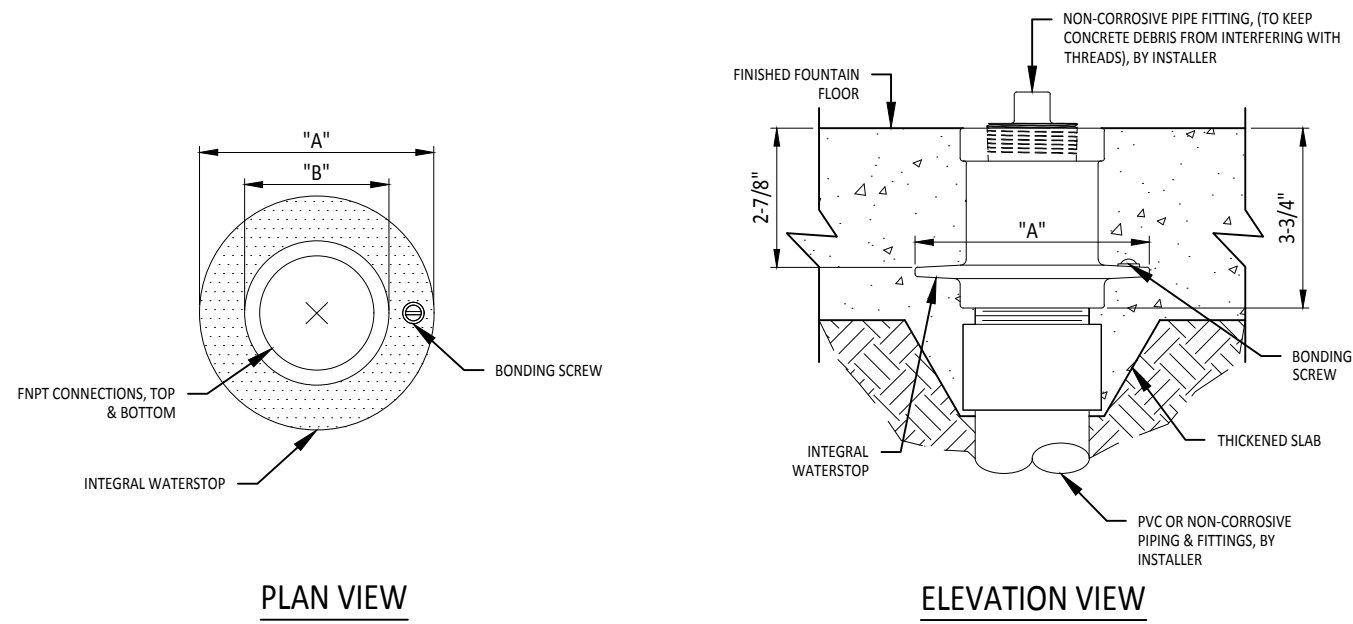
FWS-Series Waterstop Fitting provides a flush mount, "pour-in-place" embedded fitting, that allows a direct connection between in-pool components with piping or conduit. Fitting may be floor or wall mounted.

## PRODUCT SPECIFICATION:

FWS-Series Waterstop Fitting; consists of a coupling with an integral waterstop plate, bonding lug and female threaded connections. Construction is cast bronze, copper and brass with a natural finish.

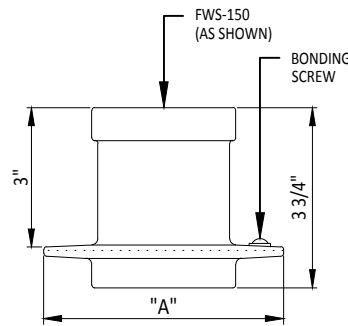


## Details



PLAN VIEW

ELEVATION VIEW



FRONT VIEW

ENGINEERING DATA			
MODEL #	FNPT	Measurements	
		"A"	"B"
FWS-050	1/2"	3-1/2"	1-3/4"
FWS-075	3/4"	3-1/2"	1-3/4"
FWS-100	1"	5"	1-3/4"
FWS-125	1-1/4"	5"	3"
FWS-150	1-1/2"	5"	3"
FWS-200	2"	5"	3"
FWS-300	3"	7"	5-1/4"
FWS-400	4"	7"	5-1/4"

## TECHNICAL NOTES:

1) WATERSTOP FITTING INTENDED FOR FORMED CONCRETE OR GUNITE/SHOTCRETE APPLICATIONS. THIS PRODUCT IS NOT INTENDED FOR POND/POOL LINER APPLICATIONS.

2) WATERSTOP MUST BE BONDED UTILIZING A #8 AWG SOLID COPPER WIRE.



Fountain People, Inc.  
4600 Hwy 123  
San Marcos, TX 78666 USA  
T: (512) 392-1155  
F: (512) 392-1154  
www.fountainpeople.com

# PC-8882 POTTING COMPOUND

## DESCRIPTION INFORMATION:

PC-8882 Potting Compound is made for encapsulating wire connections within electrical junction boxes. Potting compound adheres well and pulls away cleanly for fast splice re-entry. Prevents moisture in junction boxes.

## PRODUCT SPECIFICATION:

Potting Compound; 12.3 oz. package, Two-part, non-urethane, re-enterable encapsulant compound. Meets NEC article 680 as an approved potting compound.

## Details



PC-8882 POTTING COMPOUND

ENGINEERING DATA			
POTTING COMPOUND		OZ.	IN <sup>3</sup>
PC-8882-C	2-PT	12.3	22
PC-8882-D	2-PT	21.3	30



Fountain People, Inc.  
4600 Hwy 123  
San Marcos, TX 78666 USA  
T: (512) 392-1155  
F: (512) 392-1154  
www.fountainpeople.com