

EXTERIOR LIGHTING STANDARDS FOR STANFORD UNIVERSITY

NOTE: THESE STANDARDS ARE INTENDED AS GUIDELINES FOR CONSULTANT USE IN DEVELOPING A DESIGN STRATEGY. CONSULTANTS SHOULD ALWAYS CONSIDER SPECIFIC PROJECT SITE CONDITIONS AND REQUIREMENTS. ALL PROPOSED PROJECT LIGHT FIXTURES ARE TO BE REVIEWED AND APPROVED BY UA/CPD DURING THE DESIGN AND SUBMITTAL PROCESS. ACCESS THE UNIVERSITY ARCHITECT/CAMPUS PLANNING AND DESIGN WEBSITE, <http://lbre.stanford.edu/architect>, OR CONTACT UA/CPD FOR THE MOST CURRENT LIGHTING INFORMATION.

Lighting Standards Concept

Campus lighting standards have been developed with a focus on campus safety, sustainability, maintenance, and respect for established Stanford aesthetics.

Lighting is an important element used to help unify campus spaces. It can provide consistency across areas where architecture, landscape, circulation and use patterns vary. Uniformity in the light level, color, and fixture type can also aid in orienting evening travelers by clearly indicating pathways and destinations. Circulation routes, campus core, and gathering spaces will be identified by evenly dispersed, color accurate illumination, to enhance pedestrian circulation, nighttime activities, and viewing of historically and architecturally significant buildings and landscapes.

As the campus and technology evolve, additional outdoor lighting needs will develop. These standards establish a framework for selecting campus lighting fixtures and light sources at present, and may be used as a guide to maintaining existing systems and identifying areas of future need. Stanford UA/CPD and Utilities have worked to provide updated standards to include LED fixtures for new and retrofit conditions. The office has completed studies related to lamp efficiency, LED technology, lamp color temperature, and lifetime costs for poletop fixtures, resulting in the current standards.

Technical Notes

The campus standard for all fixtures and posts shall be a black finished color, either approved factory finish or for re-painting and touch up, Kelly Moore DTM 5725 569 Wrought Iron Black, spray finish, or approved equal. Luminaire spacing and wattage listed are intended as guidelines only. Spacing for each lamp type should be chosen based on photometric analysis and specific site conditions to ensure that desired lighting levels are achieved. All proposed lighting shall be reviewed and approved by the Office of the University Architect / Campus Planning and Design.

PATHS AND PEDESTRIAN USE AREAS							
These are standards for campus pole lights at a pedestrian scale							
LIGHTING TYPE GUIDELINES					ORDERING SPECIFICATIONS		
LUMINAIRE TYPE	DESCRIPTION	TYPICAL USES	REFERENCE SPACING	LAMP TYPE	MANUFACTURER/MODEL	ORDER NUMBER	NOTES
Globe Light	10'H Historic Cast iron post with 16" Diameter white acrylic Globe top	Historic campus area light for gathering spaces and adjacent entry corridors. Example: White Plaza	70' O.C. approximate to achieve 0.5 FC average	100 W Metal Halide Stock; Retrofit with 3000K LED kit, incl. dimmable driver and surge protection	Antique Street Lamps S16 Post -Top Sphere, Capitol Series Pole; Eye Lighting LEDioc retrofit kit	LUMINAIRE: S16A - 100M-AWS-(Voltage)-ANBK POLE: PZ C20 10 ANBK LED Retrofit: LEC - 37W333 - 830 - MED - UN02 - UNV	Engineer/Contractor to verify voltage requirement. Verify medium base or mogul base socket for LED retrofit kit
Acorn Light (Ceremonial)	15'H Historic Cast iron post with clear Acorn top	Linear path lighting for major pedestrian malls and select corridors. Example: Serra Mall, Museum Way	70' O.C. approximate to achieve 0.5 FC average	LED 3000K	Antique Street Lamps ATL23 Post-Top Acorn, Capitol Series Pole	LUMINAIRE: ATL23-W-32LED 525MA-3K-ACT-(Voltage)-N5-ANBK POLE: PI C20-15-ANBK	

PATHS AND PEDESTRIAN USE AREAS, CONTINUED

These are standards for campus pole lights at a pedestrian scale

LIGHTING TYPE GUIDELINES					ORDERING SPECIFICATIONS		
LUMINAIRE TYPE	DESCRIPTION	TYPICAL USES	REFERENCE SPACING	LAMP TYPE	MANUFACTURER/MODEL	ORDER NUMBER	NOTES
Acorn Light (Intersection)	16'H Historic Cast iron post with white acrylic Acorn top	Historic tall pole light found at important campus intersections except Palm and Campus Drive. Example: Santa Teresa Street	70' O.C. approximate to achieve 0.5 FC average	LED 3000K	Antique Street Lamps ATL23 Post -Top Acorn, New York Series Pole	LUMINAIRE: ATL23-W-32LED 525MA-3K-ACT-(Voltage)-N5-ANBK POLE: PI NY20-16-ANBK	
Lantern Style Path Light	10'H Tubular aluminum pole with lantern style top and ball finial; Stanford special frosted prismatic glass refractor	Linear path lighting throughout the academic campus. Example: Campus Drive pedestrian paths	70' O.C. approximate to achieve 0.5 FC average	LED 2700K, Dimmable LED Driver incl.	Holophane RSL-350 Stanford Standard Pole	LUMINAIRE: RPE-50-27K-(voltage)-Frosted G3-B-B POLE: S.U. Standard 10' w/ 3 Bolt pattern, BLK	Contact Acuity Brands (Holophane) for Stanford Custom IES File. Verify voltage before ordering; Interior of glass refractor to be sandblasted at factory. (For frosted G3 Optic, reference RFD173627-Quote 2306-14-10364-0)
Lantern Style Path Light LED Retrofit Kit	Retrofit LED lamp for existing RSL-350 Luminaires;	Retrofit kit for linear path lighting	N/A	LED 2700K Retrofit kit, including dimmable driver	Holophane / RP to RPE conversion kit	RPE-50-27K-(voltage)-FROSTED G3-B-B-RETROFIT (For frosted G3 Optic, reference RFD173627-Quote 2306-14-10364-0)	Contact Acuity Brands (Holophane) for Stanford Custom IES File. Verify voltage before ordering; Interior of glass refractor to be sandblasted at factory. (For frosted G3 Optic, reference RFD173627-Quote 2306-14-10364-0)
Arboretum Path Light	10'H Tubular aluminum pole with lantern style top and ball finial; Frosted, tempered glass diffuser lens	Arboretum paths and other paths through landscaped, natural areas. Example: Arboretum paths, Searsville Parking Lot entry path In select courtyards and entries, as contemporary gathering space lighting. Example: SEQ, Cantor Arts Center	70' O.C. approximate to achieve 0.5 FC average	LED 3000K, Dimmable LED Driver incl.	Holophane PUL, Stanford Standard Pole	LUMINAIRE: PUL-070-3K-(voltage)-B-L5-B-FL POLE: S.U. Standard 10' w/ 3 Bolt pattern, BLK	
Contemporary Area Light	12'H (Typical) Tubular aluminum pole with domed disk top and flush clear tempered glass lens		N/A	LED 3000K	BEGA 8309 or BEGA 7210	LUMINAIRE: Bega 8309 LED-K3-BLK Bega 7210 LED-K3-BLK POLE: 906HR-12'-BLK	

VEHICULAR AND ROADWAY LIGHTING

These are standards for Campus pole lights at roadways and other vehicular areas

LIGHTING TYPE GUIDELINES					ORDERING SPECIFICATIONS		
LUMINAIRE TYPE	DESCRIPTION	TYPICAL USES	REFERENCE SPACING	LAMP TYPE	MANUFACTURER/MODEL	ORDER NUMBER	NOTES
Parking Shoebox Light, 14" Head	25'H Square cruciform aluminum pole with base cover, 14" horizontal mount luminaire	Standard at parking lots	90-120' O.C. approximate to achieve 1.0 FC average	LED 3000K, Warm White, 350 mA Driver included	Gardco / Form 10 EH Style	LUMINAIRE: EH14L-(mounting)-(distribution)-85LA-WW-(voltage)-BLA POLE: CA5-STB-25H-(drilling)-BLA	
Roadway Shoebox Light, 19" Head	25'H Square cruciform aluminum pole with base cover, 19" horizontal mount luminaire	Standard at intersections and major pedestrian crossings on Palm Drive and Campus Drive, to replace cobraheads as needed	As required to achieve 1.5 FC average	LED 3000K, Warm White, 350 mA Driver included	Gardco / Form 10 EH Style	LUMINAIRE: EH19L-1-3-110LA-WW-(voltage)-BLA POLE: CA5-STB-25H-D1-BLA	
Shoebox Light LED Lamp Retrofit	For use in retrofitting existing Gardco Form 10	Retrofit Kit for parking lot and roadway lights	N/A	LED 3000K, Warm White LED Retrofit kit, 350 mA Driver incl.	Gardco / Form 10 EH Style Retrofit	RKL-EH(14 or 19)-3-(Wattage)-WW-(voltage)	Verify voltage
Roundabout Light	23'H Round, Tapered Steel Pole, with 20" Dia round post-top luminaire	Campus Drive Roundabout Intersections. Example Campus Dr. at Escondido	As required to achieve 1.5 FC average	LED 3000K, LED Driver included	Gardco / Slenderform Round Post Top, KW RTSP Pole	LUMINAIRE: SFRP-T2-3-105LA-6453-WW-(voltage)-AR-BLP POLE: RTSP-23-7.5-11-BLK-2-BC	

SPECIAL CONDITIONS LIGHTING

Special conditions include landscape area and entryway lighting, accent lights, event and performance lights, building mounted lights, and service yard lighting

The fixtures listed below are standards that have been used previously on Campus. Proposed use in individual projects will be evaluated by the University Architect/Planning Office.

As a general rule, use of spot uplights is discouraged; In-ground uplights are prohibited.

LIGHTING TYPE GUIDELINES					ORDERING SPECIFICATIONS		
LUMINAIRE TYPE	DESCRIPTION	TYPICAL USES	REFERENCE SPACING	LAMP TYPE	MANUFACTURER/MODEL	ORDER NUMBER	NOTES
Bollard Light 1	Dome top, Louvered, Extruded Aluminum bollard, 30"H or 36"H	Select pedestrian areas	approx 10'-20' O.C. to achieve 1.0 FC average	LED 3000K	Kim Lighting / VRB1 Bollard	VRB1 LED series, black metal.	
Bollard Light 2	Dome Top, Louvered, Extruded Aluminum Bollard, 42" high	Select pedestrian areas	approx 10'-20' O.C. to achieve 1.0 FC average	LED 3000K	Gardco / School Bollard	830 LED Series	
Bollard Light 3	Flat Top, Extruded Marine Grade Aluminum Bollard, 37" or 42" high	Select pedestrian areas	approx 20' O.C. to achieve 1.0 FC average	LED 3000K	Bega 8561LED, 8563LED	8561LED or 8563LED, Blk	
Flush Mount Step/Wall Lights	Recessed rectangular wall luminaires	Stair or wall lighting at buildings, landscape walls, or in custom bollards. Example: footcandle average Black House	as required to achieve 1	LED 3000K	Bega, Models Vary	Various	
Landscape Area Light	Copper and bronze landscape small bollard lights	Low level landscape or path lighting. Example: Encina Hall South	as needed	CFL or MH	Shaper 902	Shaper 902 Series	
Event Light	18' Pole mounted flood lights with banner arms	Overhead pole lighting for major performance, event and gathering areas. Example: White Plaza and Knight Mngmt Center	as needed	TBD	TBD	TBD	
Round Wall Mount	Wall mounted full or half moon shape lighting	Building facades, entries, or area lighting near buildings. Example: Cowell Cluster	as needed	LED 3000K	Kenall Millenium Series round lights	Kenall "Millenium" series, sizes vary, black	
Wedge Wall Mount	Wall mounted wedge shape downlight	Building facades, entries, or area lighting near buildings. Example: Bechtel Intl. Center	as needed	LED 3000K	Borden wedge	720 Standard (Other sizes available), wedge downlight; black or dark bronze	

CONTACT INFORMATION**Manufacturers****Sales Representative**

Antique Street Lamps
Oakland, CA

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Lucia Starinska
(510) 208-5005

Bega/US, Carpinteria, CA

Borden Lighting

San Leandro, CA

Philips Gardco

San Marcos, TX

GE Lighting

Kenall Manufacturing

Gurnee, IL

Valmont Structures

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