UCHealth – University of Colorado Hospital Parking Garage 2 Project

University of Colorado Design Review Board Design Development December 8, 2020



Agenda

I. Introductions

II. Landscape

III. Building

IV. Sustainable Strategies



I. Introductions





A/E Team







Kimley »Horn





Pact Studios, LLC – Architectural Design

Martin & Martin - Civil and Structural Engineering

Specialized Engineering Solutions – MEP Design; Low Voltage; Lighting Design

Kimley>Horn – Landscape Architecture

Felsburg Holt & Ullevig – Traffic, Transportation, and Parking Study

Lerch Bates - Vertical Transportation

Fd2s – Graphic and Signage Design



Campus Plan



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Context of Project – Campus





II. Site & Landscape





DRB SD Meeting Notes - Landscape

- Simplify and unify the alignment of the site design of the plaza along the North Entry Drive
- Create a pedestrian plaza, an improved walkway that connects and visually relates to the parking structure access/elevator core and pedestrian crossing
- Determine the extents of the reinforced grass fire lane, consider reducing the turf and widening the pedestrian area
- Eliminate the 90-degree turn in the sidewalk at the elevator core, revisit the planting plan along the revised pedestrian plaza
- Evaluate the need for the at-grade planters adjacent to the parking structure
- Evaluate the location, design, construction detail and appropriate materials for all landscape walls, walks, crossings.
- Re-evaluate the relationship of the site and landscape materials related to the building materials
- Determine a cohesive family of site furnishings that accentuate pedestrian spaces provide a plan showing location and call-outs for site furnishings, fixtures, and pavement materials
- Provide a detailed planting plan







Fire Truck Pull Out



Pedestrian and Vehicular Circulation



PEDESTRIAN AND VEHICULAR CIRCULATION



Hardscape Material Finishes



Site Furnishings





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Planting Plan



PLANTING PLAN



North Plaza Enlargement Plan



NORTH PLAZA ENLARGEMENT PLAN



Entry Drive Section







North Plaza Perspective Views



NORTH PLAZA PERSPECTIVE VIEWS



West Plaza and Elevator Core Enlargement Plan



WEST PLAZA AND ELEVATOR CORE ENLARGEMENT PLAN



Drop Off Section





DROP OFF AREA FACING SOUTHWEST



West Plaza Section



WEST PLAZA FACING NORTH



West Plaza Perspective Views



WEST PLAZA AND ELEVATOR CORE PERSPECTIVE VIEWS



Proposed Plant Palette





PYRAMIDAL ENGLISH OAK

RED OAK 🦂



PROPOSED PLANT PALETTE









SKYLINE HONEY LOCUST 🔌

W CRAB APPLE

Proposed Plant Palette







ALDER LEAVED SERVICEBERRY 🍝

BAILEY DOGWOOD

KELSEY DOGWOOD



FORSYTHIA 🔆





CREEPING MAHONIA 🔌







Proposed Plant Palette







PLANTAIN LILY 🔆

SEDGE 🔆

BLUE FESCUE 🔆



COMMON YARROW 🔆



BUTTERFLY MILWEED 🔆



BLUE MIST BLUEBEARD







Detailed Hardscape Plan



PROPOSED HARDSCAPE PLAN

Detailed Hardscape Plan



PROPOSED HARDSCAPE PLAN



Detailed Planting Plan





PROPOSED LANDSCAPE PLAN

Detailed Planting Plan



PLANT SCHEDULE

| TREES | CODE | QTY | BOTANICAL NAME | COMMON NAME |
|----------------|------|-----|--|-------------------------------|
| (\cdot) | cc | 4 | CERCIS CANADENSIS | EASTERN REDBUD |
|) | GT | 11 | GLEDITSIA TRIACANTHOS | HONEY LOCUST |
| (\cdot) | MS | 8 | MALUS X SPRING SNOW | SPRING SNOW CRABAPPLE |
| \sum | QR | 3 | QUERCUS ROBUR | ENGLISH OAK |
| $\overline{(}$ | QR2 | 1 | QUERCUS RUBRA | RED OAK |
| SHRUBS | CODE | QTY | BOTANICAL NAME | COMMON NAME |
| \odot | AS | 12 | AMELANCHIER LAEVIS ANLNIFOLIA 'REGENT' | ALDER-LEAVED SERVICEBERRY |
| \odot | CB | 65 | CORNUS BAILEYI | BAILEY'S RED-TWIG DOGWOOD |
| \odot | CC3 | 107 | CARYOPTERIS X CLANDONENSIS BLUE MIST | BLUE MIST BLUEBEARD |
| \odot | CK2 | 30 | CORNUS SERICEA KELSEYI | KELSEYI DWARF REDTWIG DOGWOOD |
| \odot | FS | 5 | FORSYTHIA X INTERMEDIA 'SUNRISE' | FORSYTHIA |
| \circledast | IG | 80 | ILEX GLASRA | INKBERRY HOLLY |
| \bigcirc | MR | 83 | MAHONIA REPENS | CREEPING MAHONIA |

|--|

| GRASSES | CODE | QTY | BOTANICAL NAME | COMMON NAME |
|---------------|------|----------|-----------------------------|--------------------------------------|
| \odot | CG | 23 | CAREX SWANII | SWAN'S SEDGE |
| 0 | rt. | 85 | FESTUCA GLAUCA 'ELUAH BLUE' | BLUE PESCUE |
| PERENNIALS | CODE | QTY | BOTANICAL NAME | COMMON NAME |
| \odot | AM | 22 | ACHILLEA MILLEFOLIUM | COMMON YARROW |
| \odot | AT | 29 | ASCLEPIAS TUBEROSA | BUTTERFLY MILKWEED |
| 泰 | HF | 41 | HOSTA X FRANCEE | PLANTAIN LILY |
| GROUND COVERS | CODE | | BOTANICAL NAME | COMMON NAME |
| | VA | 1,473 | VINCA MINOR 'ALSA' | WHITE DWARF PERIWINKLE |
| MULCH | CODE | QTY | BOTANICAL NAME | COMMON NAME |
| | RM | 653 SF | ROCK MULCH | 5'-12" HORIZON RIVER ROCK MULCH |
| | RM2 | 3,315 SF | ROCK MULCH | 1 1/2" - 2" HORIZON RIVER ROCK MULCH |
| SODISEED | CODE | | BOTANICAL NAME | COMMON NAME |
| | GV | 2,164 SF | GRASS PAVEMENT | GRASS PAVEMENT |
| * * * * | RTF | 1,054 SF | GREEN VALLEY TURF. CO | RTF WATER SAVER SOD |



III. Building





DRB SD Meeting Notes - Architecture

- Continue to coordinate and collaborate on building massing with the revised site/landscape improvements
- Illustrate the proposed frit patterns
- DRB prefers continuous brick spandrel design in leu of perforated panel cladding system spandrel design to screen adjacent buildings from headlights
















Materials







ROSE BRICK

- THIN BRICK SET IN PRECAST SPANDRELS
- BRICK VENEER OVER COLD-FORMED STEEL FRAMING VERTICAL WALLS







CAST-IN-PLACE CONCRETE

- CIP CONCRETE GARAGE STRUCTURE ELEVATOR CORE
- CIP CONCRETE WITH FORMLINER UPTURNED BEAMS AND SITE WALLS



- BROOM/BRUSH FINISH FIELD FINISH OF WALKS AND PLAZA
- SANDBLAST FINISH ACCENT BANDS IN PAVING AND SITE WALLS



*All Proposed Materials Currently Exist on UCHA Campus

CAST STONE CAP

 CAST STONE CAP - LOCATED ON TOP OF PRECAST SPANDREL AND UP-TURNED BEAM BARRIER WALLS - CONCEALS CONNECTION BETWEEN PRECAST SPANDREL PANELS AND CAST-IN-PLACE CONCRETE



Materials







SINGLE GLAZED CURTAIN WALL

- SINGLE GLAZED ALUMINUM CURTAIN WALL SYSTEM STAIR TOWERS AND STAIR/ELEVATOR CORE
- PAINTED FINISH TO MATCH EXISTING CAMPUS STANDARD

ALUMINUM COMPOSITE MATERIAL SYSTEM

- ALUMINUM COMPOSITE MATERIAL SYSTEM ENTRY DRIVE CANOPIES AND FRAMED CANOPY AT STAIR ELEVATOR CORE
- PAINTED FINISH TO MATCH CURTAIN WALL



- STAINLESS STEEL METAL FABRIC SOUTH AND EAST ELEVATIONS AT FIRST LEVEL
- USED TO LIMIT ACCESS TO CONTROLLED POINTS AT FIRST LEVEL



*All Proposed Materials Currently Exist on UCHA Campus

POLYCARBONATE GLAZING SYSTEM

 POLYCARBONATE GLAZING SYSTEM - LIGHTING AND WAYFINDING AT STAIR/ELEVATOR CORE FROM THE INTERIOR OF THE GARAGE



Materials Diagram





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Materials Diagram





Aluminum Single Glazed System Details





EXTRUDED CAP







JAMB







MEDIUM GRAY





HORIZONTAL MULLIONS

- EXTRUDED 8" MULLION CAP
- STANDARD 1" MULLION CAP
- STRUCTURAL SILICONE GLAZED MULLION
- PAINTED FINISH TO MATCH EXISTING CAMPUS STANDARD

VERTICAL MULLIONS

- OVERLAPPING JAMB MULLION
- STRUCTURAL SILICONE GLAZED MULLION
- PAINTED FINISH TO MATCH EXISTING CAMPUS STANDARD

SILK-SCREEN GLAZING

- SILK-SCREEN GLAZING HORIZONTAL BANDS AT FLOOR LINE
- SILK-SCREEN GLAZING GLASS CANOPY SYSTEM

SILK-SCREEN PATTERN

- DOT PATTERN
- 1/8" DOTS 40% COVERAGE
- MEDIUM GRAY SILK-SCREEN



North Elevator/Stair Core





N/S Section Looking East



E/W Section Looking South





Illuminated Polycarbonate Glazing at Entry – Signage/Wayfinding



Precast Spandrel Details



Typical Section Through Precast Spandrel Panels





Section Detail Through Precast Spandrel

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Precast Spandrel Details

Plan Detail at Column – Cap Condition



Plan Detail at Column – Precast Panel Condition



North Plaza - Screen Wall





Access from Garage to North Plaza



Screen Wall - Typical

Plan View of Screen Wall - Typical







Screen Wall - Typical



View 2 - North Elevation of Thin Brick C.I.P. Walls from Entry Drive



View 3 - North Elevation of Crash Wall from North Walkway







North Elevation

West Elevation



South Elevation



East Elevation





North Elevation



West Elevation





South Elevation





East Elevation



Aerial Plan View



Plan View of Site

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North Elevation





View Looking Southeast

uchealth



View Looking Northeast





View Looking Northwest





View from Entry Drive





View from North Crosswalk





View from West Crosswalk





View from Plaza Looking Northwest



DRB SD Meeting Notes – Signage/Wayfinding

- Provide additional detail and continue to develop the overall project signage and wayfinding plan for both building-mounted and site placed signage
- Ensure the proposed signage meets the functional needs of the garage and campus signage standards
- Incorporate detailed building and site signage locations into drawings, provide detail about size and material of each sign, how signs will be illuminated and how signs will be mounted
- Explain how wayfinding signage for internal features of the garage have been incorporated into the final design











Garage 2, Sign Location 5: Southeast Corner Axonometric



2 Garage 2, Sign Location 4: Southwest Corner Axonometric





Perspectives







5 Garage 2, Sign Locations 7


Interior Signage/Wayfinding



Interior Signage/Wayfinding Garage 2



Garage 2: Typical Elevation-Levels PO-P5





4 Garage 2: Stair 2 - Level P2 SCALE: NTS



5 Garage 2: Elevator Lobby -Level P5



Interior Signage/Wayfinding Garage Standards



DRB SD Meeting Notes – Lighting

- Provide additional detail and continue to develop the lighting plan for both the building and site improvements
- Study all interior and exterior lighting fixtures to ensure there are sufficient foot-candles and the color temperature is warm enough
- On the top level of the garage, provide sufficient lighting for safety, consider the use of motion detectors to limit night lighting; examine the height and number of poles used on the top level to create the best possible lighting plan
- Determine the best way to light external signage
- Illustrate detailed photometrics and illustrate the proposed lighting plan at night











Sixth Level – Lighting Floor Plan

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Introduction

The RADEAN arm mount luminaire is the perfect choice for pedestrian applications where daytime aesthetics and visual comfort are needed. Adding architectural flair to any space, the RADEAN's low-profile shape and smooth curves blend in while adding a touch of elegance.

Perfect for campuses, parks, pedestrian malls, courtyards and pathways, the RADEAN arm mount is the Architect's choice to provide beautiful aesthetics both day and night.



Exterior Light Poles on Top Level



Width: 24" (61cm)

Height: 4" (10.2cm)

Weight 29lbs (max): (13.15Kg)

> R One Lithonia Way • Conyers, Georgia 30012 • Phone: 1-800-705-SERV (737 © 2011-2019 Acuity Brands Lighting, Inc. All rights reserved.



LED wall luminaire - light output on one side

Lighting Fixtures

Application

This LED wall mounted luminaire has light output in one direction. Arranged individually or in groups, it is a great design element for a host of lighting applications. Downward orientation only.

Materials

Luminaire housing and constructed of die-cast marine grade, copper free (<0.3% copper content) A360.0 aluminum alloy Matte safety glass

High temperature silicone gasket

Mechanically captive stainless steel fasteners

NRTL listed to North American Standards, suitable for wet locations Protection class IP65 Weight: 4.2 lbs

Electrical

Operating voltage Minimum start temperature LED module wattage System wattage Controllability Color rendering index Luminaire lumens LED service life (L70) 120-277VAC -20°C 15.4W 20.5W 0-10V, TRIAC, and ELV dimmable Ra> 80 1024 lumens (3000K) 60,000 hours

LED color temperature

© 4000K - Product number + K4 © 3500K - Product number + K35 © 3000K - Product number + K3 (EXPRESS) © 2700K - Product number + K27 © Amber - Product number + AMB

Wildlife friendly amber LED - Optional

Luminaire is optionally available with a narrow bandwidth, amber LED source (585-600nm) approved by the FWC. This light output is suggested for use within close proximity to sea turtle nesting and hatching habitats. Electrical and control information may vary from standard luminaire.

| 12.0W (Amber) |
|--------------------|
| 15.0W (Amber) |
| 243 lumens (Amber) |
| |

BEGA can supply you with suitable LED replacement modules for up to 20 years after the purchase of LED luminaires - see website for details

Finish

All BEGA standard finishes are matte, textured polyester powder coat with minimum 3 mil thickness.

| Available colors | Black (BLK) | White (WHT) | BRAL: | |
|------------------|--------------|--------------|--------|--|
| | Bronze (BRZ) | Silver (SLV) | O CUS: | |



LED wall luminaire - light output on one side



Exterior Sconces – South & East of Garage

BEGA 1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 info@bega-us.com

Due to the dynamic nature of lighting products and the associated technologies, luminaire data on this aneet is subject to change at the discretion of BEGA North America. For the to copyright BEGA 2018

| Type: WI AND WIEM | |
|-------------------|--|
| BEGA Product: | |
| Project: | |
| Modified: | |



uchea

D3 | SPECIFICATION GUIDE

Lighting Fixtures



BASELINE PERFORMANCE (80 CRI - 4000K)

| | | NOM, LUMEN OUTPUT | INPUT WATTS | EFFICACY | LIGHT LOSS | FACTORS | | MOUNTING OPTIONS |
|--------|---------------------|-------------------|-------------|----------|------------|---------|----------|--|
| OUTPUT | DISTRIBUTION | | | | | - | | |
| | HE Tech" | 762 lm/ft | 9.5 W/ft | 80 lm/W | CRI | LED CCT | FACTOR | 2 |
| 101 | | 0001 10 | 0.0.14100 | | 80+ CRI | 4000K | BASELINE | ALLA DI A DI TA |
| HB F | WISP | 665 lm/ft | 9.5 W/ft | 70 Im/W | 80+ CRI | 3500K | 99% | |
| ΞΞ | Drop Lens | 692 lm/ft | 9.5 W/ft | 73 lm/W | 80+ CRI | 3000K | 95% | 2 2 2 3 5 5 |
| | Flat Blade Louvers* | 527 lm/ft | 9.5 W/ft | 55 lm/W | 90+ CRI | 4000K | 83% | (b) [Arout Calls: $\langle P_2 \rangle$ Figst from $\langle PV_2 \rangle$ based base |
| | HE Tech" | 408 lm/ft | 4.5 W/ft | 90 lm/W | 90+ CRI | 3500K | 83% | |
| P | | 100 11111 | 1.0 1111 | | 90+ CRI | 3000K | 84% | |
| s) da | WISP | 333 lm/ft | 4.5 W/ft | 70 lm/W | | | | I TI TI H) |
| (L | Drop Lens | 370 lm/ft | 4.5 W/ft | 82 lm/W | 1 | | | Villoniumov etilmetov etilmetov |
| ŝ | Flat Blade Louvers* | 282 lm/ft | 4.5 W/ft | 62 lm/W | 1 | | | (P) Chost Mail Basks Selof Baylot (JR) |

Custom tuned output available from 25% to 125% of high output. Please consult factory for custom lumen output and wattage. *Plat Blade Louver calculated using the aluminum finish.

IF ALL PRODUCT NOMENCLATURE IS LISTED WITH A Q8, THIS PRODUCT IS AVAILABLE IN OUR QUICK SHIP PROGRAM

| D3 | | | | | | | | |
|---|--|---|---|----------------------------------|---|--|---|--|
| SERIES | LENGTH OR PATTE | RN TYPE | OUTPUT | LED | CCT | VOLTAGE | | DIRECT OPTICS |
| D3 | 3 Nominal Length* LS M_ Exact Length** LH PL_ "L' Shape*** PU_ "U' Shape*** PR_ Rectangle / Square*** CP Custom Pattern**** "Spenish kat be insensed for (a 12) "Spenish kat be insensed for (a 12) "Custom Catter in the insense to (b for formal custom)" "Custom Catter in the insense to (b for formal custom)" "Aust | | ominal Length* LS LED Standard Output 30 35 'Shape*** 'LH LED Usho Output 40 40 'Shape*** 'L'Shape*** 'L'LED High Output 40 40 'Shape*** 'L'Shape*** 'L'LED High Output 40 40 'Statem Pattern**** 'L'LED High Output 40 40 visitom Pattern**** 'L'L'LED High Output 40 40 visitom Pattern**** 'L'L'LED High Output 40 40 visitom Pattern**** 'L'L'L'L'L'L'L'L'L'L'L'L'L'L'L'L'L'L'L | | 00K U Universal 120V - 27 00K 3 347V | | '7V HE HE Tech™ KS Awash Kicker + WISP DL 1' Drop Lens LV Flat Blade Louvers* ™Amsum Standard | |
| | MOUNTING | FINISH | DIMMING | | | EMERGENCY | | SENSORS |
| S AR PPR B R D M H JS Fi Stated at a seventeel at | rcraft Cable* gid Stem** yoel Stem** frect Wall Mourt Ulion Blocks*** grouple Steft Bracket*** artial Span elling / Surface Mount fred Planka order, sovely reg ht mod Planka order, sovely angle fred Planka order independent fred Planka order independent fred Planka order independent | T a-lightanium W White B Black O_ Other* | 1" D Standard 0-10 dimr D1 HiLume Ecosystem D3 Other Dimming** | ning* s 1% (LDE t) domning | EC Er E_ Er | nergency - circuited nergency - battery* select energency tellery and Specify the riteries to reside on the | O C P P OP C | Decupancy Sensor* hotocell / Daylight Sensor** bocupancy & Daylight Sensor #r530101 entropy the sense of the sense of the sense #r530101 entropy the sense of the sense #r53010 entropy the sense of the sense #r53010 entropy the sense of the sense #r53010 entropy the sense #r53010 en |

3728 Maritime Way | Oceanside, CA 92056 | 760,727,7675 | alights.com

uchealth

Stairs and Elevator Core Interior

2" LED Downlight Module*

rotty, see LED Module Addentitat

Multi-Circuit**

a·light

Right Endcap Feed

Left Endcap Feed New York City Code

к

Q

CRI 90+ MRI

MRI

Natatorium Application***

Wet Location****

9

MRL_

м

R



19*

3.75* (4.85" with Up-Light)

18 lbs

00

19

10

Specifications

A+ Capable options indicated by this color background.

Diameter:

Height:

Weight (max, with

no options):



3.75"

4.85"



Introduction

The all new VCPG LED (Visually Comfortable Parking Garage) luminaire is designed to bring glare control, optical performance and energy savings into one package. The recessed lens design of VCPG LED minimizes high angle glare, while its precision molded acrylic lens eliminates LED pixilation and delivers the required minimums, verticals and uniformity. The dedicated up-light module option reduces the contrast between the luminaire and the ceiling creating a more visually comfortable environment.

The VCPG LED delivers up to 87% in energy savings when replacing 175W metal halide luminaires. With over 100,000 hour life expectancy (12+ years of 24/7 continuous operation), the VCPG LED luminaire provides significant maintenance savings over traditional luminaires.

| Orde | ring Information | | EXAMPLE: VCPG LED V4 P4 40K 70CRI T5M MVOL | T SRM DNAX |
|---|---|--|---|-----------------------------|
| VCPG LED | | | | |
| eries | LED Light Package Col | or Co nperature In | lor Rendering Distribution Comments Mounting | |
| VCPG LED | V41 4 Light P11 98 Engines P32 44 Engines P34 50 P31 98 P31 98 P31 P31 98 P31 P31 98 P31 98 P31 98 P | K 3500 K K 3500 K K 5000 K | SCR TSM lype V, median MVDLT For ordering with fuse, and the second seco | 24-inch length supply leads |
| ptions | | | | Finish required |
| Shipped i | nstalled | Standalone Sen | sors/Controls ² | DWHXD White |
| UPL1 | Up-Light: 500 lumens | PIR | Motion/ambient sensor for 8-15' mounting heights | DNAXD Natural |
| UPL2 | Up-Light: 700 lumens | PIRH | Motion/ambient sensor for 15-30/ mounting heights | aluminum |
| E8WC | Emergency battery backup, Certified in | PIR3FC3V | Motion/ambient sensor for 8-15' mounting heights, pre programmed to 3fc and 35% light output | DDBXD Bark bronz |
| E10WH | CA Litle 20 MAEDBS (8W, -2011, min)*** Emergency battery backup, Certified in CA Title 20 MAEDBS (10W, 510 min)*** | PIRH3FC3V PIR3FC3V924 | Motion/ambient sensor for 15-30' mounting heights, pre-programmed to 3% and 35% light output. UL924 Lissed motion/ambient sensor for emergency circuit for 8-15' mounting heights, pre-programmed to 3k and 35% light | DBLXD Black |
| HA | High ambient (50°C, only P1-P4) | PIPH36/3V034 | output 10.924 listed motion/ambient sensor for enservence circuit for 15,30 mountion beidet, no programmed to 36 and 35% light | |
| SF | Single fuse (120V, 277V, 347V) | TIMBICO 1724 | output ⁱⁿ | |
| DF | Double fuse (208V, 240V, 480V) | Networked Sens | ers/Controls ¹ | |
| SPD10KV | 10KV Surge Pack | NLTAIR2 PIR | nLIGHT AIR Wireless enabled motion/ambient sensor for 8-15' mounting heights | |
| | | NITAIR2 PIRH | nUGHT AIR Wineless enabled motion/ambient sensor for 15'-30' mounting heights | |
| LDS36 | 36in (3ft) lead length | | | |
| LD536 LD572 | 36in (3ft) lead length 72in (6ft) lead length | NLTAIR2 PIR924 | nLIGHT AIR Wireless enabled, UL 924 Listed motion/ambient sensor for emergency circuits for 8-15' mounting heights" | |
| LD536 LD572 LD5108 | 36in (3ft) lead length 72in (6ft) lead length 108in (9ft) lead length | NLTAIR2 PIR924 NLTAIR2 PIRH924 | nLIGHT AIR Wireless enabled, UI. 924 Listed motion/ambient sensor for emergency cituals for 8-15" mounting heights" INLIGHT AIR Wireless enabled, UI. 924 Listed motion/ambient sensor for emergency cituals for 15-30" mounting heights" | |
| LDS36 LDS72 LDS108 DMG | 36in (3ft) lead length 72in (6ft) lead length 108in (9ft) lead length External 0-10V leads (no controls) ⁷ | NLTAIR2 PIR924 NLTAIR2 PIRH924 XAD | aLIGHT AIR Wireless enabled, UL 924 Listed motion/ambient sensor for emergency circuits for 8-15" mounting heights" nLIGHT AIR Wireless enabled, UL 924 Listed motion/ambient sensor for emergency circuits for 15-30" mounting heights" XPoint [™] Wireless enabled [™] | |
| LDS36 LDS72 LDS108 DMG Shipped S | 36in (3ft) lead length 72in (6ft) lead length 108in (9ft) lead length External 0–10V leads (no controls) ⁷ eparately | NLTAIR2 PIR924 NLTAIR2 PIR924 XAD XAD924 | aLGAFL AIR Witeless enabled, UL 924 Listed motion/ambient sensor for emergency circuits for 8–15" mounting heights" aLGAFL AIR Witeless enabled, UL 924 Listed motion/ambient sensor for emergency circuits for 15–30" mounting heights" XPoint ¹¹⁶ Witeless enabled UL 924 Listed for emergency circuit ^{4, 11} | |
| LDS36 LDS72 LDS108 DMG Shipped S WG | 36in (3ft) lead length 72in (6ft) lead length 108in (9ft) lead length External 0-10V leads (no controls) ⁷ eparately Wite Guard | NLTAIR2 PIR924 NLTAIR2 PIRH924 XAD XAD924 XAD PIR | aLIGHT AIR Wineless enabled, UI. 924 Listed motion/ambient sensor for emergency circuits for 8-15' mounting heights" nLIGHT AIR Wineless enabled. UI. 924 Listed motion/ambient sensor for emergency circuits for 15-30' mounting heights" XPoint" Weiless enabled. ⁴¹⁹ Woint" Weiless enabled. ⁴¹⁰ Weint" Weiless enabled motion/ambient sensor for 8-15' mounting heights | |
| LDS36 LDS72 LDS108 DMG Shipped S WG BDS | 366 (3t) lead length 72m (6th) lead length 108in (9th) lead length External (0-10V leads (no controls) ² eparately Wire Guard Eing Stroud | NLTAIR2 PIR924 NLTAIR2 PIRH924 XAD XAD924 XAD PIR XAD PIRH | aLIGHT AIR Witeless enabled, UL 924 Listed motion/ambient sensor for emergency circuits for 8–15 mounting heights" aLIGHT AIR Witeless enabled ¹⁰ XPoint ¹⁰ Wheless enabled ¹⁰ XPoint ¹⁰ Wheless enabled ¹⁰ XPoint ¹⁰ Wheless enabled ¹⁰ XPoint ¹⁰ Wheless enabled motion/ambient sensor for 8–15 mounting heights XPoint ¹⁰ Wheless enabled motion/ambient sensor for 8–15 mounting heights XPoint ¹⁰ Wheless enabled motion/ambient sensor for 15–30 mounting heights | |
| LD536 LD572 LD5108 DMG Shipped S WG BDS HS | 36in (31) lead length 72in (6it) lead length 108in (9it) lead length External 0-10V leads (no controls) ⁷ eparately Wire Guard Bird Stroud House Side Shield | NLTAIR2 PIR924 NLTAIR2 PIRH924 XAD XAD924 XAD PIR XAD PIRH XAD924 PIR | aLIGHT AIR Wireless enabled, UL 924 Listed motion/ambient sensor for emergency circuits for 8-15" mounting heights" aLIGHT AIR Wireless enabled, UL 924 Listed motion/ambient sensor for emergency circuits for 15-30" mounting heights" XPoint" Wireless enabled, UL 924 Listed for emergency circuit ¹¹ XPoint" Wireless enabled, UL 924 Listed for emergency circuit ¹¹ XPoint" Wireless enabled motion/ambient sensor for 8-15" mounting heights XPoint" Wireless enabled motion/ambient sensor for 15-30" mounting heights XPoint" Wireless enabled motion/ambient sensor for 15-30" mounting heights XPoint" Wireless enabled motion/ambient sensor for the 15" mounting heights XPoint" Wireless enabled, UL 924 Listed motion/ambient sensor for emergency circuits for 8-15" mounting heights ⁴ | |
| LD536 LD572 LD5108 DMG Shipped S WG BDS HS | 36in (311) lead length 72in (611) lead length 108in (911) lead length External 0-10V leads (no controls)' eparately Wire Goard Bird Stroud House Side Shield | NLTAIR2 PIR924 NLTAIR2 PIRH924 XAD XAD924 XAD PIR XAD PIRH XAD924 PIR XAD924 PIR XAD924 PIRH | aLIGHT AIR Wireless enabled, UL 924 Listed motion/ambient sensor for emergency circuits for 8-15 mounting heights" aLIGHT AIR Wireless enabled, UL 924 Listed motion/ambient sensor for emergency circuits for 15-30" mounting heights" XPoint" Wireless enabled, UL 924 Listed for emergency circuit ¹ ¹⁰ XPoint" Wireless enabled, UL 924 Listed for emergency circuit ¹ ¹⁰ XPoint" Wireless enabled motion/ambient sensor for 8-15" mounting heights XPoint" Wireless enabled motion/ambient sensor for 15-30" mounting heights XPoint" Wireless enabled motion/ambient sensor for 15-30" mounting heights XPoint" Wireless enabled, UL 924 Listed motion/ambient sensor for emergency circuits for 8-15" mounting heights ⁴ XPoint" Wireless enabled, UL 924 Listed motion/ambient sensor for emergency circuits for 8-15" mounting heights ⁴ | |

Interior Bays of the Garage

G GARDCO by (s)ignify

Site & Area

Form 10 LED

Gardco Form 10 LED round post top luminaires are cutoff luminaires featuring LED arrays. These products provide performance excellence and feature advanced Gardco LED thermal management technology. High performance Class 1 LED systems offer the potential for energy savings up to 50% when compared to HID systems.

LED Project: Cat.No: Oty:

| Profix - | Number of LEDs | Drive Current | LED Color - Generation | Hounting | Distr.1 | Voltage | Controls - | Electrical | Luminaire - | Finish |
|--|---|--|--|---|--|--|---|--|---------------------------------------|--|
| CP17L 7: Cylindrical CMP07L 7: Semi- Spherical CP22C Cylindrical CP22C Cylindrical CP22C Cylindrical CP22C Cylindrical CP22C Cylindrical CP22C Cylindrical CP22C Cylindrical CP22C Cylindrical CP22C Cylindrical CP22C C | 32L 32 LEDS 48L 48 LEDS 48 LEDS 96 LEDS 96 LEDS | 450 450mA 900 900mA 700mA 900mA 900mA 560 560mA 650mA | WW-G2 Neutral White 4000K, 70CRI Generation 2 WW-G2 Ww-G2 Warm White 1000K, 70CRI Generation 2 Cw-G2 Cod White S700K, 70CRI Generation 2 | P11 P12 P21 P22 P33 P41 P42 P43 P43 P44 P43 P44 P44 P44 T14 T15 T14 T16 T24 T25 T36 T35 T35 T35 T37 T44 T45 T46 T47 | 2 Type 2 3 Type 3 4 Type 4 5 Type 5 | 120 120V 208v 208v 240 2400 2777 347 347 480 480V UNV 120-277V 50hz/60hz 480V 50hz/60hz | DD O-10V Dimming Driver Photoelectric/ Receptacle Systems (Twist Lock Receptacle) TLRDO TURDC TURDC TURDC Receptacle SPin ⁶³ TURDC Receptacle with Photocel ¹⁴ | Fusing FI Single F1 Single (20, 27, 347VAC) ¹ F2 Double (208, 240, 480VAC) ¹ (74, 1400) F3 Canadian Double Puil (208, 240, 480VAC) ¹ (208, 240, 480VAC) ¹ FP2 Double (208, 240, 480VAC) ¹ (208, 240, 480VAC) ¹ FP2 Double (208, 240, 480VAC) ¹ (208, 240, 480VAC) ¹ Surge Protection SPI ¹ Standard 10KVA SPI ² | HIS Internal House Side Snield* | BRA Bronze Anodized BLA Black Anodized NA Natural Anodized BK Black paint BZ Bronze paint BZ Bronze paint BZ White paint MGY Medium Gray paint Customer specified RAL Specify optional color (ex: RAL/2024) CC Custom color Must supply color chip for terminet factory cupto |

Retrofit kit ordering guide

| Profu | Number of LEDs - | Drive Current | LED Color - Generation | Distr.* | Voltag | - | Controis | Electrical | | | | | | | | |
|---|-----------------------|------------------------------|---|---|---|------------------------------------|----------------------------|----------------------------------|---|-------------|-------------|--------------------|--------------------|-------------|--------------------|-----------------|
| CP/MP17L-RK 17" Cylindrical or Semi- Spherical Retrofit Kit | 32L 32 LEDs | 450 450mA 900 900mA | NW-G2 Neutral White 4000K, 70CRI Generation 2 WW-G2 Warm White 3000K, 70CRI | NW-G2 Neutral White 4000K, 70CRI Generation 2 WW-G2 Warm White 3000K, 70CRI | V-G2 2 Utral White Type 2 OK, 70CRI 3 Type 3 | | 347 347V 480 480V | DD 0-10V Dimming Driver | Surge Protection SP1 Standard 10KVA | | | | | | | |
| CP/MP22L-RK 22* Cylindrical or Semi- | 48L 48 LEDs | 900 900mA | | | WW-G2 Warm White 3000K, 70CRI | 4 Type 4 | 4 Type 4 | 4 Type 4 | 4 Type 4 | 4 Type 4 | 4 Type 4 | 4 Type 4 | 4 Type 4 | 4 Type 4 | 240 240V | UNV 120-277V |
| Spherical Retrofit Kit | 96L 96 LEDs | 560 560mA | Generation 2 CW-G2 Cool White 5700K, 70CRI Generation 2 | 5 Type 5 | 277 277v | 50hz/60hz 347-480V 50hz/60hz | | | | | | | | | | |



Site Poles – Matches AMC Facility Masterplan

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DVB Bollard & Light Column Series





LED recessed wall - asymmetric floodlight

Lighting Fixtures

Application

Recessed wall luminaire with asymmetric floodlight optics, designed to be installed in walls or other vertical or horizontal surfaces for both interior and exterior locations.

Materials

Luminaire housing constructed 316 grade stainless steel Clear safety glass with optical texture Reflector made of pure anodized aluminum Factory sealed Stainless steel screw clamps Painted aluminum installation housing

NRTL listed to North American Standards, suitable for wet locations Protection class IP67

Weight: 12.8 lbs

Electrical

Operating voltage LED module wattage System wattage Color rendering index Luminaire lumens Lifetime at Ta=15°C Lifetime at Ta=65°C 24V DC (remote power supply req.) 9.7W 13W Ra> 80 453 lumens (3000K) 500,000 h (L70) 270,000 h (L70)

LED color temperature

4000K - Product number + K4
 3500K - Product number + K35
 3000K - Product number + K3
 2700K - Product number + K27

BEGA can supply you with suitable LED replacement modules for up to 20 years after the purchase of LED luminaires - see website for details

Finish

#4 brushed stainless steel. Custom colors are not available. Stainless steel requires regular cleaning and maintenance, much like household appliances to maintain its luster and prevent tarnishing or the appearance of rust like stains.



Available Accessories

19580 Remote 25W LED driver and box
 19591 Remote 50W LED driver and box
 See individual accessory spec sheet for details.



LED recessed wall - asymmetric floodlight

 LED
 A
 B
 C

 77002
 9.7W 24V DC
 39% 2 % 4



Site Wall Lights

BEGA 1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 info@bega-us.com

Due to the dynamic nature of lighting products and the associated technologies, luminare data on this sheet is subject to change at the decretion of BEGA North America. For th to copyright BEGA 2018

IV. Sustainable Strategies





Sustainable Strategies



EV Parking Stalls | Active Sensor Lighting | Low CO2 Concrete Mix



EV Parking Stalls



Photo of Existing EV stations in Garage 8



EV Parking Stalls

- 2 EV Stalls on First Level
- 6 Future EV Stalls on Second Level
- 6 Future EV Stalls on Third Level
- 6 Future EV Stalls on Fourth Level
- 20 Total EV Parking Stalls



Active Sensor Lighting



Active Sensor Lighting

- Active Sensor Lighting will be utilized on the interior lighting of First Level through Fifth Level
- Sixth Level will not use active sensor lighting due to safety concerns



Concrete Mix

| Compressive Strength | @ Curing Time | | | | yd3 |
|---|----------------------|---------------------|----------------|-----------------|---|
| ≅ 5000 psi | 28d 👻 | \cong Compressive | Strength Other | @ Curing Time 🕶 | Tour: BOXPLOT |
| Slump (min) Options | * | ≤ W/C Ratio | ≥ SCM | ≤ EC3 / 1 yd3 | DISTON |
| | 2 | | | | 800 |
| http://profile.ought | | | | | |
| Standardweight Or Lightweigh | n. | | | | 700 |
| GEOGRAPHIC | n. | | | | 700 600 Max 616 |
| GEOGRAPHIC | | ince | | | 700 600 <i>Max</i> 616 500 |
| GEOGRAPHIC ilter by Country/Region | Filter by State/Prov | inceX * | - | | 700 600 Max 616 500 406 Drservative 25 Base |
| GEOGRAPHIC ilter by Country/Region USA × | Filter by State/Prov | ince X T | • | | 700 600 Max 616 500 406 onservative 235 Base Achievable 343 |
| GEOGRAPHIC Filter by Country/Region USA × ADVANCED | Filter by State/Prov | ince X 1 | • | | 700 600 Max 616 500 406 ^c onservative 343 300 Min 265 |
| GEOGRAPHIC Filter by Country/Region USA × ADVANCED | Filter by State/Prov | ince × 1 | • | | 700 600 Max 616 500 406 ⁻ <i>onservative</i> 43 ¹ 5 ⁻ Bere Achievable 343 300 Min 三 265 |

EC3 Online Tool for Material Comparisons

| Organization Name: Martin Marietta | 10 |
|---|------------------------------------|
| Plant Name: Quivas | |
| Product Name: A5512 | 200 |
| Description: Exterior 5000 PSI | 600 <u> </u> |
| GWP: 400 kgCO2e | 500 |
| Declared Unit: 1 yd3 | 400 - 431 CLF Baseline |
| Concrete Compressive Strength 28D: 5000 psi | 300 |
| Original EPD File: DOWNLOAD EPD | 200 |
| View | 0 THIS SEARCH SELECTED MATERIAL |

Example of Concrete Mix that would fall below the Carbon Leadership Forum (CLF) baseline for Ready Mix concrete, which is 458.73

Notes:

Design team is using the EC3 website as a tool for selecting a concrete mix. Other variables will need to be considered and evaluated to ensure the proper concrete mix is selected.

Concrete mix will be considered in both cast-inplace concrete structure as well as precast cladding.

Lighting levels will be used as the final criteria in determining the darkness of the concrete mix.



Energy Design Consideration Summary

| | Typical Parking Structure | Best Practices | Project Implementation |
|-------------------|--|---|--|
| Performance | | | Design team has set annual energy goal of 51kWH/parking |
| Specification | None. | Energy goal-driven specification | stall/year. |
| | Mechanical ventilation if underground or | | |
| Ventilation | enclosed | Natural ventilation only | Garage will be entirely naturally ventilated. |
| | | | Daylighting sensors provided to reduce power to luminaires |
| Daylighting | None | Daylight provides 75%-100% energy use reduction for electric lighting during daytime hours | by 30%. |
| | | | |
| Electric Lighting | 0.18-0.30 W/ft2 installed load | 0.05-0.18 W/ft2 installed load depending on illuminance requirements | 0.17 W/ft2 installed load. |
| | | Concern for safety and way finding, driving time, and lighting use. Flow considerations reduce energy | |
| Pedestrian Flow | Concern for safety and way finding | use by 75% during nighttime hours (can vary based on garage use patterns). | High priority on pedestrian experience and way finding. |
| | Active heating methods to prevent freezing | | |
| Equipment | in drainpipes and elevator gear. | Passive heating and heat recovery methods to prevent freezing in drain-pipes and elevator gear. | TBD |
| | | | |
| Incentives | Preferred parking. | Preferred parking and onsite charging stations powered by renewable energy | Infrastructure for (2) EV charging stations per floor. |
| | | | |
| Renewable Energy | None | Solar electricity and wind used in appropriate climate zones | Alternate for solar electricity on top level is included. |
| | Commissioning but no measurement and | | |
| Commissioning | verification (M&V) | Commissioning and ongoing M&V | TBD |

Notes:

- 1. US Energy Star does not provide Energy Use Intensity (EUI) data for parking garage projects.
- 2. This list is adapted from NREL guidelines for Low-Energy Parking Structure Design.



Thank you



Appendix





Raised Crosswalk



Sidewalk Chase at Raised Crosswalk









Lighting Calculations





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Lighting Calculations

North Elevator/Stair Lobby



| Statistics | | | | | | |
|-------------------------|--------|---------|---------|---------|---------|---------|
| Description | Symbol | Avg | Max | Min | Max/Min | Avg/Min |
| Calc Zone #6 | + | 18.7 fc | 27.7 fc | 6.9 fc | 4.0:1 | 2.7:1 |
| LEVEL 1 N ELEV LOBBY | ж | 18.9 fc | 27.7 fc | 7.3 fc | 3.8:1 | 2.6:1 |
| STAIR | ж | 20.1 fc | 26.7 fc | 12.6 fc | 2.1:1 | 1.6:1 |



Slides From Initial Preview



Pedestrian and Vehicular Circulation



PEDESTRIAN AND VEHICULAR CIRCULATION



Hardscape Material Finishes



Site Furnishings



Site Lighting



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Planting Plan



PLANTING PLAN

North Plaza Enlargement Plan



NORTH PLAZA ENLARGEMENT PLAN



North Plaza Perspective Views









NORTH PLAZA PERSPECTIVE VIEWS


West Plaza and Elevator Core Enlargement Plan



WEST PLAZA AND ELEVATOR CORE ENLARGEMENT PLAN



West Plaza Perspective Views



WEST PLAZA AND ELEVATOR CORE PERSPECTIVE VIEWS



Detailed Planting Plan





PROPOSED LANDSCAPE PLAN

Detailed Planting Plan



PLANT SCHEDULE

| TREES | CODE | QTY | BOTANICAL NAME | COMMON NAME |
|----------------------|------|-----|--|-------------------------------|
| (\cdot) | cc | 4 | CERCIS CANADENSIS | EASTERN REDBUD |
| ·) | GT | 12 | GLEDITSIA TRIACANTHOS | HONEY LOCUST |
| (\cdot) | MS | 8 | MALUS X 'SPRING SNOW' | SPRING SNOW CRABAPPLE |
| .) | QR | 3 | QUERCUS ROBUR | ENGLISH OAK |
| $\overline{(\cdot)}$ | QR2 | 1 | QUERCUS RUBRA | RED OAK |
| SHRUBS | CODE | QTY | BOTANICAL NAME | COMMON NAME |
| \odot | AS | 13 | AMELANCHIER LAEVIS ANLNIFOLIA 'REGENT' | ALDER-LEAVED SERVICEBERRY |
| \odot | CB | 65 | CORNUS BAILEYI | BAILEY'S RED-TWIG DOGWOOD |
| \odot | CC3 | 73 | CARYOPTERIS X CLANDONENSIS 'BLUE MIST' | BLUE MIST BLUEBEARD |
| \odot | CK2 | 30 | CORNUS SERICEA 'KELSEYI' | KELSEYI DWARF REDTWIG DOGWOOD |
| \otimes | FS | 5 | FORSYTHIA X INTERMEDIA 'SUNRISE' | FORSYTHIA |
| ۲ | IG | 89 | ILEX GLABRA | INKBERRY HOLLY |
| \odot | MR | 84 | MAHONIA REPENS | CREEPING MAHONIA |
| | | | | |

PROPOSED LANDSCAPE PLAN

| GRASSES | CODE | OTY | BOTANICAL NAME | COMMON NAME |
|---------------|------|----------|------------------------------|--------------------------------------|
| \odot | CG | 23 | CAREX SWANII | SWAN'S SEDGE |
| 0 | FE | 217 | FESTUCA GLAUCA 'ELIJAH BLUE' | BLUE FESCUE |
| PERENNIALS | CODE | QTY | BOTANICAL NAME | COMMON NAME |
| \odot | АМ | 22 | ACHILLEA MILLEFOLIUM | COMMON YARROW |
| \odot | AT | 29 | ASCLEPIAS TUBEROSA | BUTTERFLY MILKWEED |
| 恭 | HF | 44 | HOSTA X 'FRANCEE' | PLANTAIN LILY |
| GROUND COVERS | CODE | QTY | BOTANICAL NAME | COMMON NAME |
| | VA | 1,230 | VINCA MINOR "ALBA" | WHITE DWARF PERIWINKLE |
| MULCH | CODE | | BOTANICAL NAME | COMMON NAME |
| | RM | 653 SF | ROCK MULCH | 5"-12" HORIZON RIVER ROCK MULCH |
| :: | RM2 | 3,315 SF | ROCK MULCH | 1 1/2" - 2" HORIZON RIVER ROCK MULCH |
| SOD/SEED | CODE | QTY | BOTANICAL NAME | COMMON NAME |
| | GV | 2,664 SF | GRASS PAVEMENT | GRASS PAVEMENT |
| ••• | RTF | 1,054 SF | GREEN VALLEY TURF. CO | RTF WATER SAVER SOD |



North Plaza





Access from Garage to North Plaza



Garage Access at Grade



Garage Access Rhythm - Typical

uchealth

Exterior Perspective



North Elevation



Exterior Perspective



View Looking Southeast

uchealth

Exterior Perspective



View from Plaza Looking Northwest

