





UW Health Union Corners - Madison, WI

1. Narrative Description
2. Letter of Intent
3. Location Map
4. Photographs of Existing Conditions
5. Site Circulation
6. Floor Plans
7. Elevations
8. Renderings
9. Landscape Plan
10. Civil Plans
11. Site Lighting Plan and Fixture Types

1. NARRATIVE DESCRIPTION

The UW Clinic at Union Corners represents Phase 1 in the multi-phased Union Corners development. The clinic is designed as a two story, 60,000 GSF facility providing the following services:

- General Internal Medicine
- General Pediatrics and Adolescent Medicine
- Obstetrics and Gynecology
- Urgent Care
- Laboratory
- Medical Imaging
- Mammography
- Ultrasound
- Health and Nutrition Education
- Pharmacy
- Physical Therapy
- Social Services and Mental Health

The clinic will replace the East Side Clinic, where there are currently 250 clinic visits a day and 75 staff on site/day. Estimated growth in three to five years is 350 clinic visits a day and 100 staff on site/day.

Other features of the clinic include:

- LEED Certification
- A Transit Hub that not only screens the surface parking but also provides amenities for bicyclists and public transit users.
- Parking for 100 staff underground
- Parking for 154 patients above ground
- On-site water remediation
- Irrigation-free landscaping with native plant species

The clinic is designed to set the tone for the rest of the development, using a contemporary design and high quality, locally sourced materials such as brick and stone. It is also an unusually outward focused building for a clinic, since the majority of the exam rooms are located away from the exterior walls. When complete, the clinic will truly signal the rebirth of this long neglected parcel.





2. LETTER OF INTENT

Zoning

Planned Development; General Development Plan

Name of Project

UW Health Union Corners

Address

2401 East Washington Ave.

Land Owner

City of Madison

Developer

Gorman & Company, Inc.
200 N. Main Street
Oregon, WI 53575
608-835-3900

Planner

Plunkett Raysich Architects, Inc.
2310 Crossroads Drive
Madison, WI 53718
608-240-9900

Landscape Architect

Ken Saiki Design
303 S. Paterson Street | Suite 1
Madison, Wisconsin 53703
608-251-3600

Civil Engineer

Vierbicher Associates, Inc.
999 Fourier Dr.
Madison, WI 53717
608-826-0532

Site

UW Health Union Corners is located at the northeast corner of the intersection of East Washington Avenue and 6th Street, Urban Design District 5; Aldermanic District 6 (Rummel); TID #38.

Existing Zoning

The entire existing site is zoned PD. (Planned Development)

Existing Uses

The site is currently vacant.

Adjacent Uses

Across East Washington Avenue and Northeast of 7th Street are a series of one and two-story buildings including Red Letter News, the former Ray's Bar and Assumption Greek Orthodox Church. Zoned TSS. (Commercial and Mixed-Use District)

Southwest of 7th Street is the one story Speedy Muffler, 5 two-story single family homes, 1 two-story multifamily apartment building and a two story mixed-use building. Zoned TSS. (Commercial and Mixed-Use District)

Southwest of 6th Street is a two-story mixed-use building followed by a series of two-story single family homes. Zoning TR-V1. (Residential District.)

Across Milwaukee Street and north of the site are: commercial uses including the Malt House tavern, Jollof Beauty Shop and Rebecca Lynn's Studio. Zoning CC-T. (Commercial and Mixed-Use District.)

The south edge of the site is defined by a bike path which separates the site from the neighborhood of single family homes to the south. Zoning TR-V1. (Residential District.)

The parcel south of 6th Street and west of Winnebago has a one story commercial building currently acting as the sales center for the site.

The neighborhood east of the site is composed of single family homes. Zoning TR-C4. (Residential District.)

Project Schedule

Begin construction in Fall of 2014. Occupancy in Winter of 2015.

Proposed Uses

Medical clinic with associated underground and surface parking.



Hours of Operation

Urgent Care Hours: 9am-9pm, Monday-Friday; 9am-5pm, Saturday and Sunday

Building Hours: 8am-5pm, Monday-Friday

Pharmacy Hours: 9am-7pm Monday-Friday; 9am-5pm Saturday and Sunday

Lab Hours: 8am-9pm Monday-Friday; 9am-5pm Saturday and Sunday

Imaging Hours: X-rays from 8:15am-4:45pm, Monday-Friday; Mammography from 8am-4:30pm, Monday-Friday

Building Square Footage

60,000 GSF on 2 floors.

Number of Dwelling Units

None.

Auto and Bike Parking Stalls

Auto: 154 surface; 100 underground

Bike: 20 employee spaces; 20 visitor spaces

Lot Coverage and Useable Open Space

Lot Area: 3.390 acres

Coverage: 2.486 acres

Open Space: .9 acres (26.5%)

Value of Land

Per the Purchase and Sale Agreement (PSA) the imputed value of the land is \$12.00/SF. The land area is approximately 3.39 acres resulting in an estimated value of the land of \$1,772,020.

Estimated Project Cost

Approximately \$19,600,000 (includes hard and soft cost). This is an estimate only as the project has not yet been fully designed at this time and therefore final bids are not yet available.

Number of Construction and Full -Time Equivalent Jobs Created

Clinic Staff: 150

Construction: Estimated 200-300

Public Subsidy Requested

The PSA calls for the City to sell the land for \$1.00. In return the Developer will guarantee \$6 million in increment generated over the life of the Tax Increment District.





6th Street and E. Washington Ave. - Looking West



6th Street and E. Washington Ave. - Looking North



6th Street and E. Washington Ave. - Looking South



6th Street and Winnebago - Looking Southwest



6th Street and Winnebago Street - Looking East



Winnebago Street - Looking South



Winnebago St. - Looking East

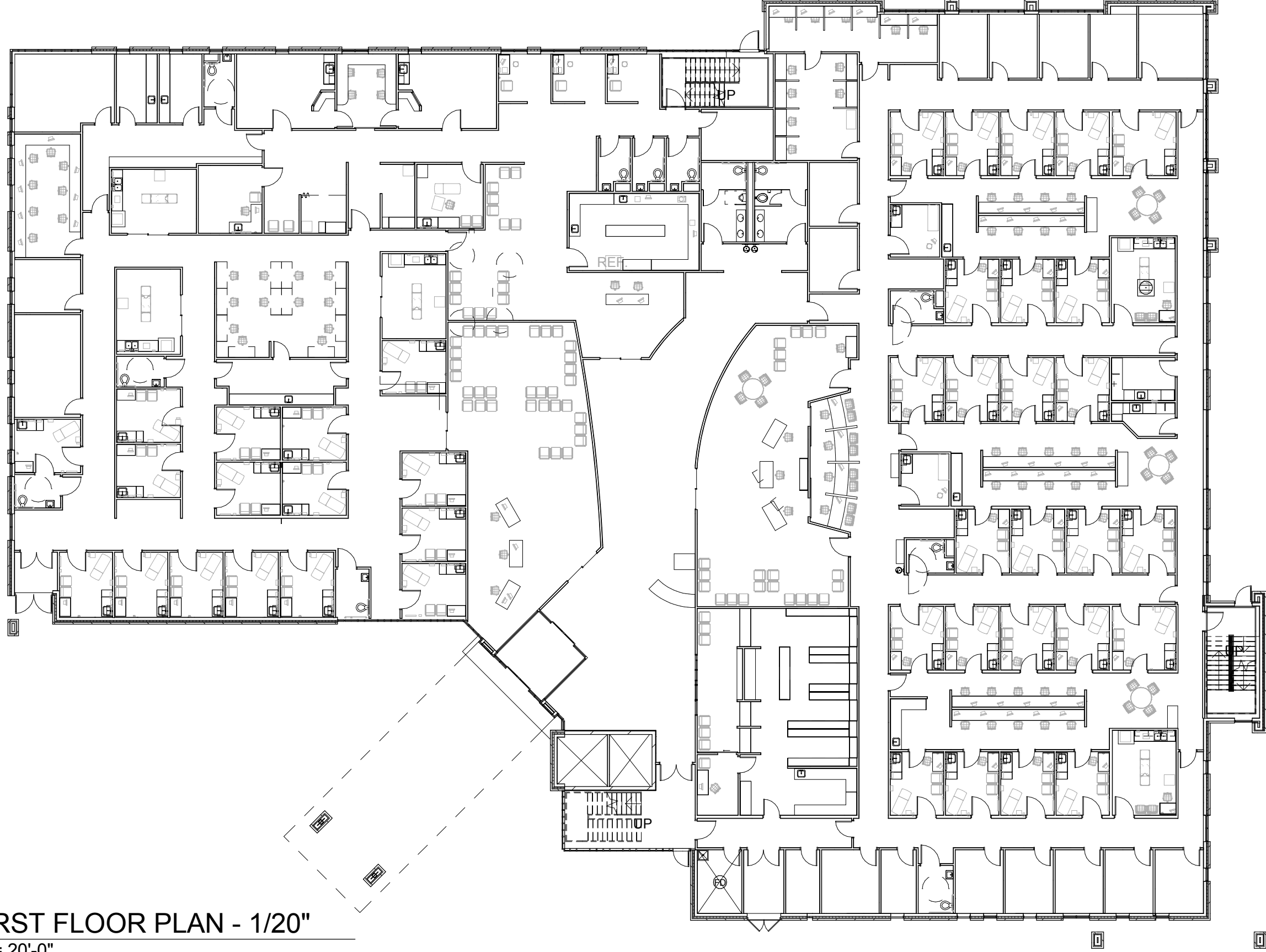




1
215

FIRST FLOOR PLAN - 1/20"

1" = 20'-0"



Gorman & Company
UW Health Union Corners Clinic
2401 E. Washington Ave, Madison, WI

Date: 6/19/14
Job Number: 130020-01
Drawn By: Author
Sheet Number: 215

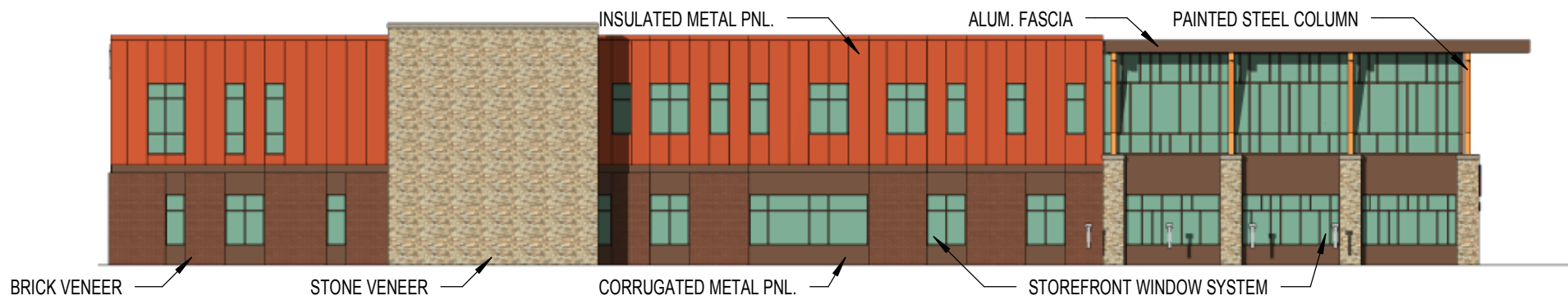
pro

PLUNKETT RAYSICH
ARCHITECTS, LLP

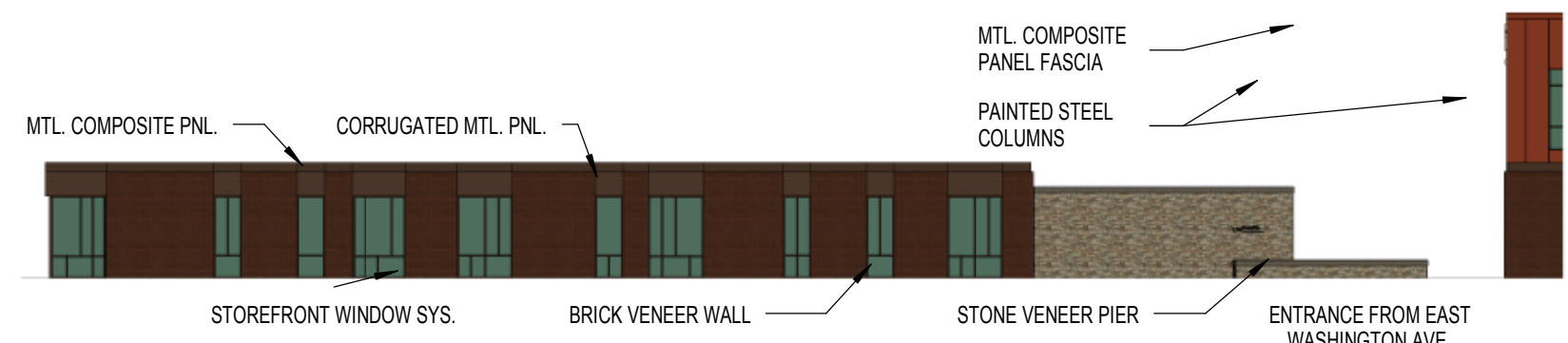
17000 West Bank Place, Milwaukee, WI 53224 t 414.359.3060
2310 Courthouse Square, Suite 2000, Madison, WI 53718 t 608.240.0900
1613 T. H. Lee Road, Suite 3, Sarasota, Florida 34236 t 941.342.3618
www.prarch.com

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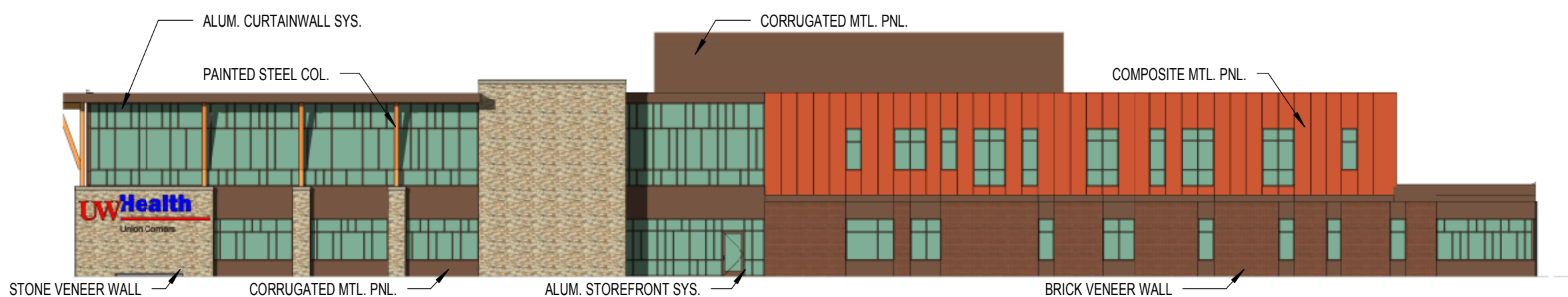




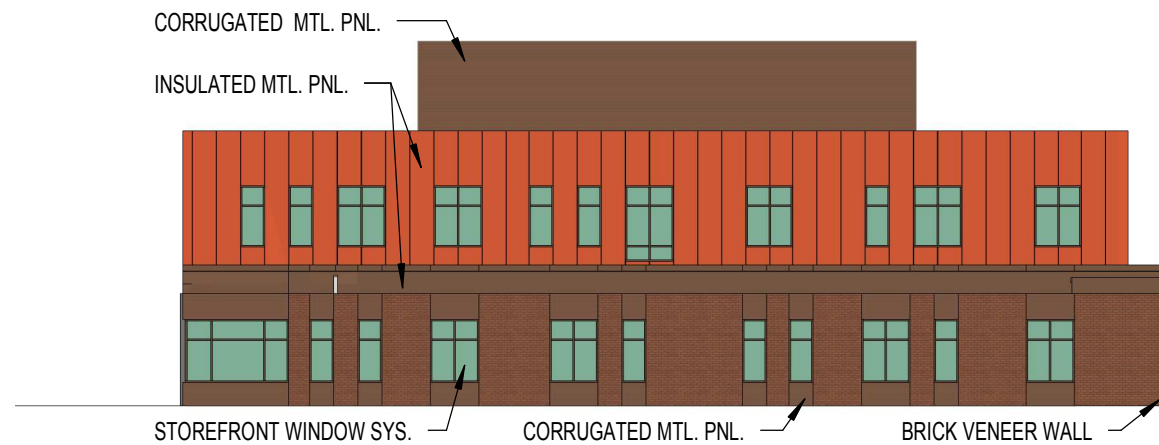
1 WEST ELEVATION-1/20"
410 1" = 20'-0"



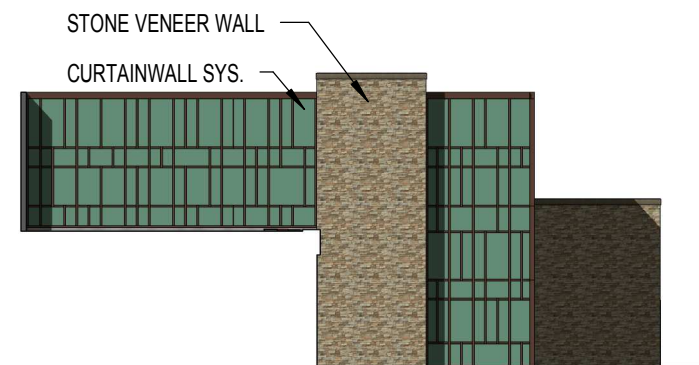
2 TRANSIT - WEST ELEVATION - OPTION 2
410 1" = 20'-0"



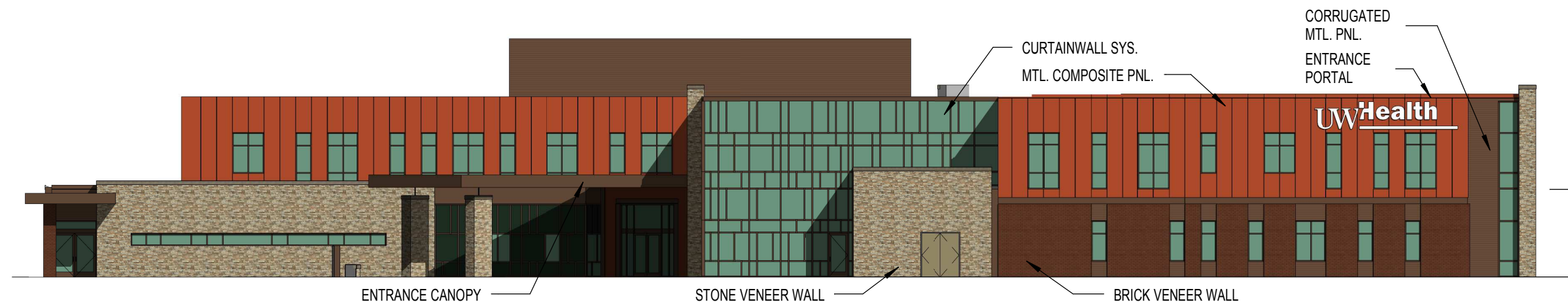
3 SOUTH ELEVATION
410 1" = 20'-0"



1 EAST ELEVATION 2 - 1/20"
411 1" = 20'-0"



2 EAST ELEVATION 4 - 1/20"
411 1" = 20'-0"



3 NORTH ELEVATION 2 - OPT2
411 1" = 20'-0"



4 TRANSIT HUB - EAST ELEVATION - OPT2 - 1/20"
411 1" = 20'-0"



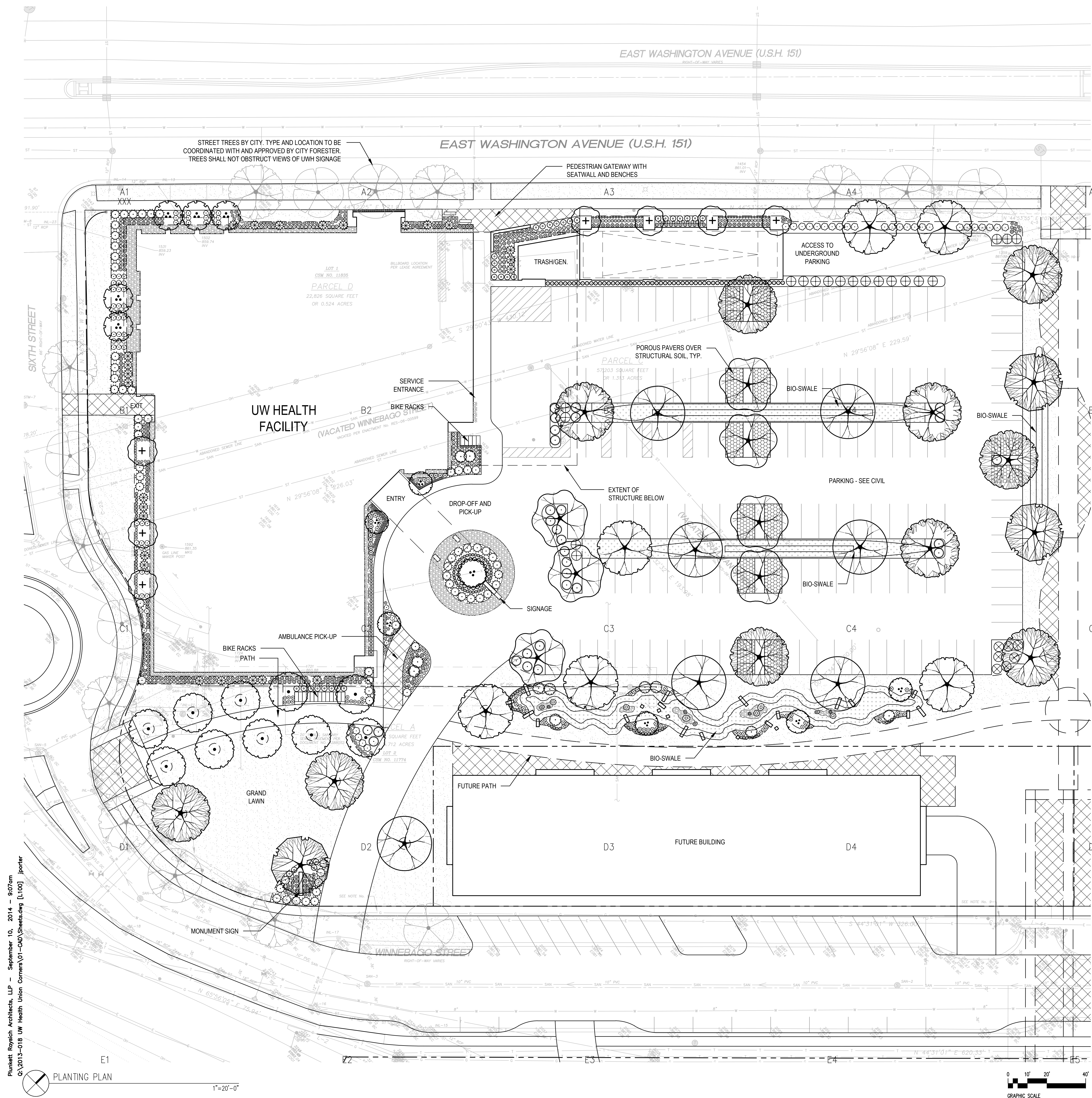
UW Health Union Corners Clinic - Madison, WI











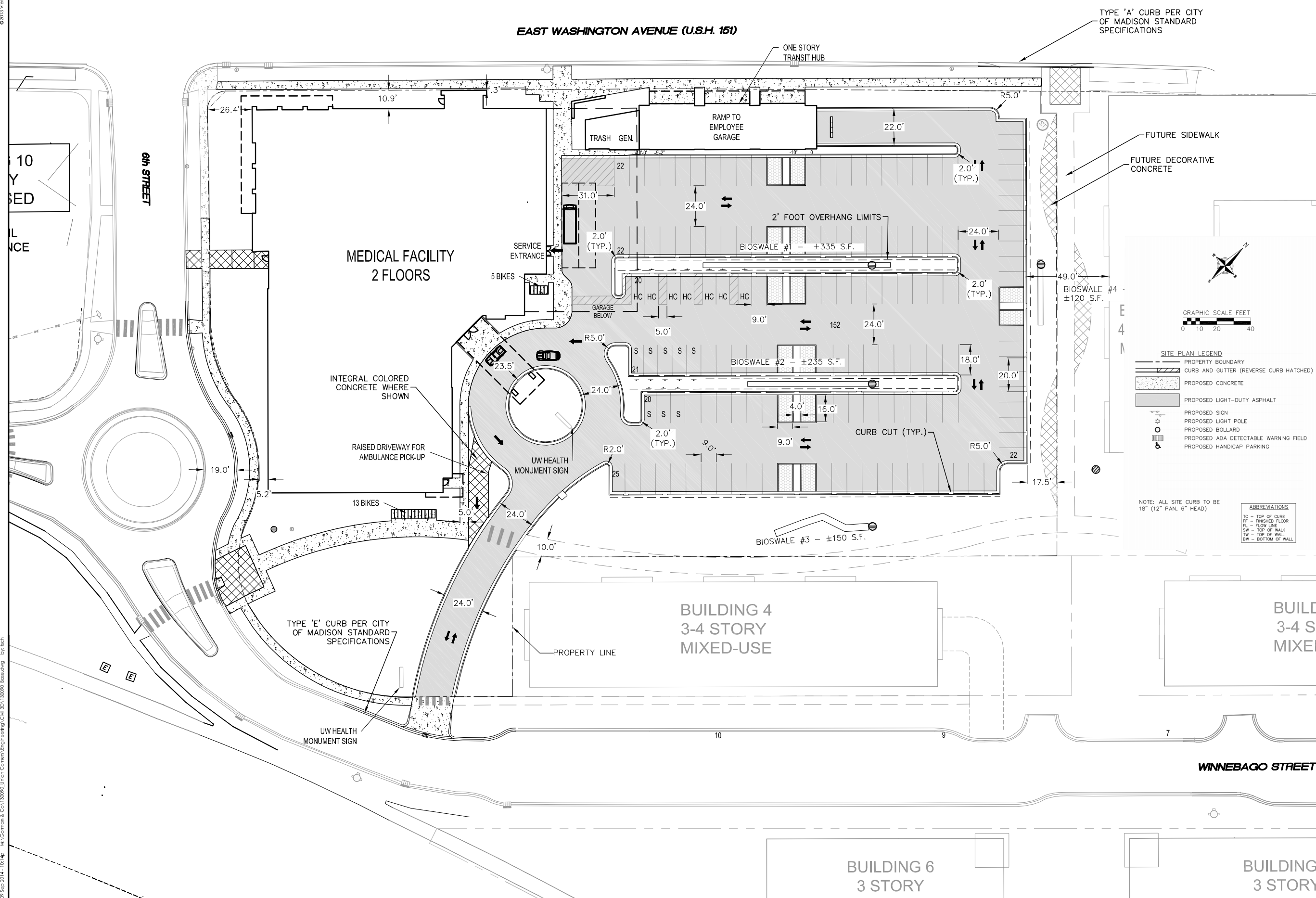
PLANT SCHEDULE

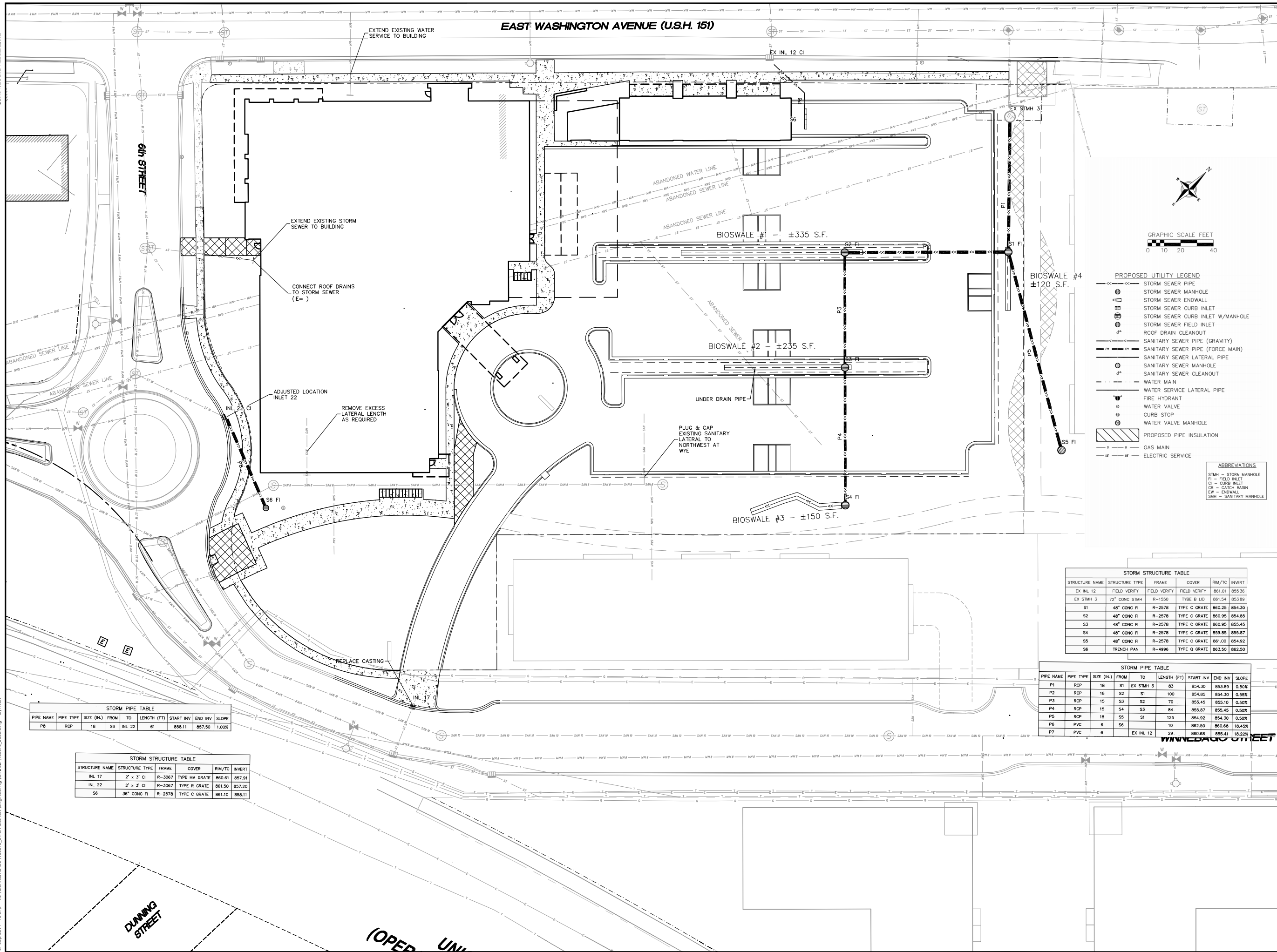
DECIDUOUS TREES	CODE	BOTANICAL NAME / COMMON NAME	CONT	CAL	SIZE	QTY
	AFJ	Acer freemanii 'Jeffersred' TM / Autumn Blaze Maple	B & B	3"Cal	8' H (MIN.)	7
	AAB	Amelanchier x grandiflora 'Autumn Brilliance' / 'Autumn Brilliance' Serviceberry	B & B	MULTI-STEM	4' H (MIN.)	6
	ARH	Amelanchier x grandiflora 'Robin Hill' / Robin Hill Serviceberry	B & B	MULTI-STEM	6' H (MIN.)	5
	CWK	Crataegus viridis 'Winter King' / 'Winter King' Hawthorn	B & B	MULTI-STEM	6' H (MIN.)	1
	GTS	Gleditsia triacanthos 'Skyline' / Skyline Honey Locust	B & B	3"Cal	8' H (MIN.)	6
	GDE	Gymnocladus dioica 'Espresso' / Kentucky Coffeetree	B & B	3"Cal	8' H (MIN.)	7
	PAB	Pyrus calleryana 'Autumn Blaze' / Autumn Blaze Pear	B & B	2.5"Cal	8' H (MIN.)	10
	QB	Quercus bicolor / Swamp White Oak	B & B	3"Cal	8' H (MIN.)	3
	QRC	Quercus robur 'Crimschmidt' TM / English Oak	B & B	2.5"Cal	8' H (MIN.)	7
	UAP	Ulmus americana 'Princeton' / American Elm	B & B	3"Cal	8' H (MIN.)	7
	UVF	Ulmus americana 'Valley Forge' / American Elm	B & B	3"Cal	8' H (MIN.)	3
	DECIDUOUS SHRUBS	CODE	BOTANICAL NAME / COMMON NAME	SIZE	FIELD2	FIELD3
	Aib	Aronia melanocarpa 'Iroquois Beauty' TM / Black Chokeberry	2 gal			28
	Mp	Myrica pensylvanica / Northern Bayberry	3 gal			26
	Rgl	Rhus aromatica 'Gro-Low' / Gro-Low Fragrant Sumac	3 gal			29
	Rtb	Rhus typhina 'Baltiger' TM / Tiger Eyes Sumac	3 gal			11
	Sbt	Spiraea betulifolia 'Tor' / Birchleaf Spirea	3 gal			67
EVERGREEN SHRUBS	CODE	BOTANICAL NAME / COMMON NAME	SIZE	FIELD2	FIELD3	QTY
	Bgg	Buxus x 'Green Gem' / Green Gem Boxwood	2 gal			13
	Jcs	Juniperus chinensis 'Spartan' / Spartan Juniper	B & B		6' H (MIN.)	25
	Jcc	Juniperus sabinia 'Calgary Carpet' TM / Calgary Carpet Juniper	3 gal			65
HERBACEOUS PERENNIALS	CODE	BOTANICAL NAME / COMMON NAME	SIZE	FIELD2	FIELD3	QTY
	aor	Achillea millefolium 'Oertel's Rose' / Common Yarrow	1 gal			43
	asb	Allium tanguticum 'Summer Beauty' / Summer Beauty Globe Lily	1 gal			29
	axg	Allium x 'Globemaster' / Hybrid Star of Persia	1 gal			17
	axm	Allium x 'Millenium' / Millenium Ornamental Chive	1 gal			56
	cnn	Calamintha nepeta ssp. nepeta / Lesser Calamint	1 gal			51
	hhr	Hemerocallis x 'Happy Returns' / Happy Returns Daylily	1 gal			48
	hgs	Hosta fortunei 'Gold Standard' / Gold Standard Plantain Lily	1 gal			29
	icb	Iris sibirica 'Caesar's Brother' / Caesar's Brother Siberian Iris	1 gal			54
	ls	Liriope spicata / Creeping Lily Turf	Quart Pot			101
	nwl	Nepeta x faassenii 'Walkers Low' / Walkers Low Catmint	1 gal			34
	pls	Perovskia atriplicifolia 'Little Spire' TM / Little Spire Russian Sage	1 gal			70
	saj	Sedum x 'Autumn Joy' / Autumn Joy Sedum	1 gal			47
ORNAMENTAL GRASSES	CODE	BOTANICAL NAME / COMMON NAME	SIZE	FIELD2	FIELD3	QTY
	ckf	Calamagrostis x acutiflora 'Karl Foerster' / Feather Reed Grass	1 gal			65
	mmi	Miscanthus sinensis 'Morning Light' / Eulalia Grass	1 gal			14
	pnw	Panicum virgatum 'North Wind' / Northwind Switch Grass	1 gal			106
	pvs	Panicum virgatum 'Shenendoah' / Burgundy Switch Grass	1 gal			111
	sbh	Schizachyrium scoparium 'Blue Heaven' / Blue Heaven Little Bluestem	1 gal			75
	sa	Sesleria autumnalis / Autumn Moor Grass	1 gal			100

- BIO-SWALE - SEE CIVIL FOR STORMWATER MANAGEMENT PLAN
- LOW-MAINTENANCE LAWN SEED MIX
- DECORATIVE STONE MULCH

- NOTES:
- DECORATIVE STONE MULCH INTENDED FOR MAINTENANCE STRIPS ALONG BUILDING AND DROP-OFF AREA ONLY. ALL PLANTING BEDS AND TREES SHALL RECEIVE 3" OF SHREDDED HARDWOOD BARK MULCH.
 - SEE ARCHITECTURE AND CIVIL DRAWINGS FOR LAYOUT OF ROAD, PARKING LOT AND PATHS.
 - SEE CIVIL DRAWINGS FOR INFORMATION PERTAINING TO STORMWATER MANAGEMENT AND BIO-REMEDIATION.

PLANTS FOR BIO-SWALES	
Botanical Name	Common Name
Grasses and Sedges	
Calamagrostis acutiflora	Feather Reed Grass
Calamagrostis brachytricha	Korean Feather Reed Grass
Carex scoparia	Lance-fruited Oval Sedge
Carex vulpinoidea	Brown Fox Sedge
Panicum virgatum	Switchgrass
Spartina pectinata	Prairie Cordgrass
Perennials	
Agastache foeniculum	Anise Hyssop
Asclepias incarnata	Marsh Milkweed
Aster nova-angiae	New England Aster
Desmodium canadense	Canada Tick Trefoil
Echinacea pallida	Pale Purple Coneflower
Echinacea purpurea	Purple Coneflower
Eupatorium perfoliatum	Boneset
Helenium autumnale	Sneezeweed
Helicopsis helianthoides	Ox-eye
Hemerocallis sp.	Daylily
Iris sibirica	Siberian Iris
Liatris pycnostachya	Prairie Blazingstar
Lobelia siphilitica	Great Blue Lobelia
Monarda fistulosa	Bergamot
Physostegia virginiana	Obedient Plant
Rudbeckia hirta	Black-Eyed Susan
Silphium perfoliatum	Cup Plant
Solidago rigida	Stiff Goldenrod
Solidago speciosa	Showy Goldenrod
Verbena hastata	Blue Vervain
Verbena stricta	Hairy Vervain

[illegible]



STORM PIPE TABLE								
PIPE NAME	PIPE TYPE	SIZE (IN.)	FROM	TO	LENGTH (FT)	START INV	END INV	SLOPE
P8	RCP	18	S6	INL 22	61	858.11	857.50	1.00%

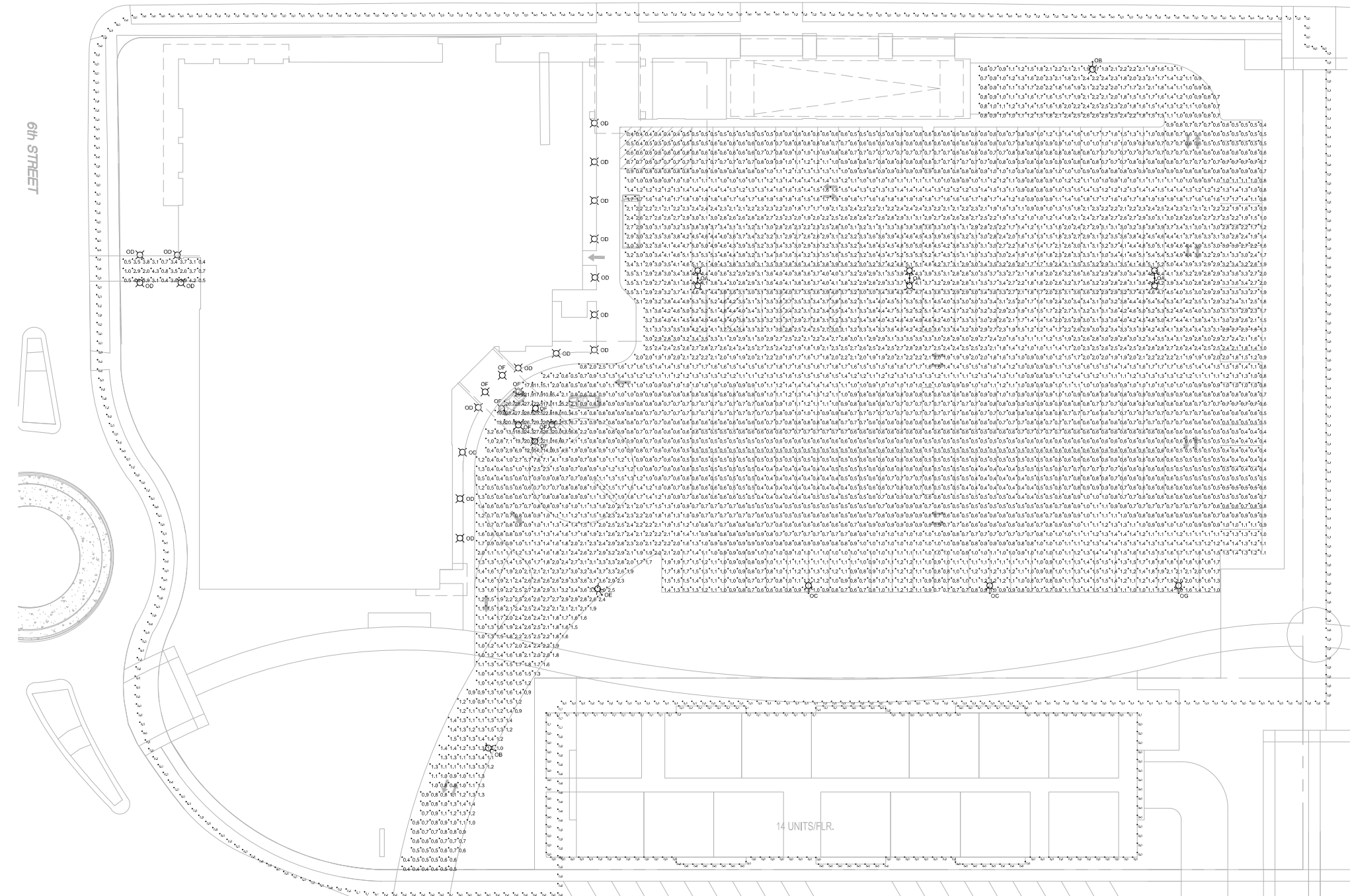
STORM STRUCTURE TABLE							
STRUCTURE NAME	STRUCTURE TYPE	FRAME	COVER	RIM/TC	INVERT		
INL 17	2' x 3' CI	R-3067	TYPE HM GRATE	860.61	857.91		
INL 22	2' x 3' CI	R-3067	TYPE R GRATE	861.50	857.20		
S6	36" CONC FI	R-2578	TYPE C GRATE	861.10	858.11		

STORM STRUCTURE TABLE							
STRUCTURE NAME	STRUCTURE TYPE	FRAME	COVER	RIM/TC	INVERT		
EX INL 12	FIELD VERIFY	FIELD VERIFY	FIELD VERIFY	861.01	855.36		
EX STMH 3	72" CONC STMH	R-1550	TYPE B LID	861.54	853.89		
S1	48" CONC FI	R-2578	TYPE C GRATE	860.25	854.30		
S2	48" CONC FI	R-2578	TYPE C GRATE	860.95	854.85		
S3	48" CONC FI	R-2578	TYPE C GRATE	860.95	855.45		
S4	48" CONC FI	R-2578	TYPE C GRATE	859.85	855.87		
S5	48" CONC FI	R-2578	TYPE C GRATE	861.00	854.92		
S6	TRENCH PAN	R-4996	TYPE Q GRATE	863.50	862.50		

STORM PIPE TABLE									
PIPE NAME	PIPE TYPE	SIZE (IN.)	FROM	TO	LENGTH (FT)	START INV.	END INV.	SLOPE	
P1	RCP	18	S1	EX STMH 3	83	854.30	853.89	0.50%	
P2	RCP	18	S2	S1	100	854.85	854.30	0.55%	
P3	RCP	15	S3	S2	70	855.45	855.10	0.50%	
P4	RCP	15	S4	S3	84	855.87	855.45	0.50%	
P5	RCP	18	S5	S1	125	854.92	854.30	0.50%	
P6	PVC	6	S6		10	862.50	860.68	18.45%	
P7	PVC	6		EX INL 12	29	860.68	855.41	18.22%	

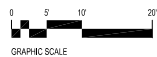
PROPOSED UTILITY LEGEND	
	STORM SEWER PIPE
	STORM SEWER MANHOLE
	STORM SEWER ENDWALL
	STORM SEWER CURB INLET
	STORM SEWER CURB INLET W/MAN-OLE
	STORM SEWER FIELD INLET
	ROOF DRAIN CLEANOUT
	SANITARY SEWER PIPE (GRAVITY)
	SANITARY SEWER PIPE (FORCE MAIN)
	SANITARY SEWER LATERAL PIPE
	SANITARY SEWER MANHOLE
	SANITARY SEWER CLEANOUT
	WATER MAIN
	WATER SERVICE LATERAL PIPE
	FIRE HYDRANT
	WATER VALVE
	CURB STOP
	WATER VALVE MANHOLE
	PROPOSED PIPE INSULATION
	GAS MAIN
	ELECTRIC SERVICE

ABBREVIATIONS	
STMH	STORM MANHOLE
FI	FIELD INLET
CI	CURB INLET
CB	CATCH BASIN
EW	ENDWALL
SMH	SANITARY MANHOLE



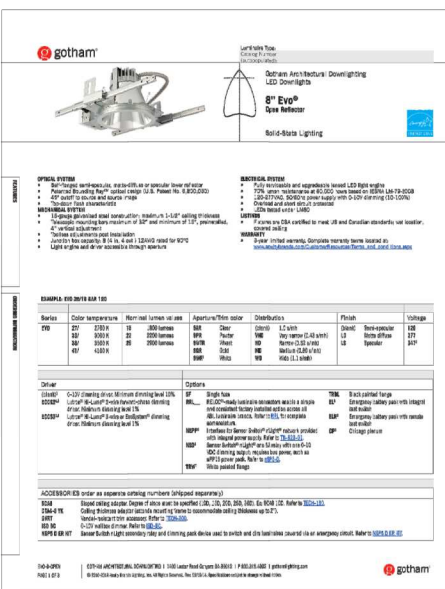
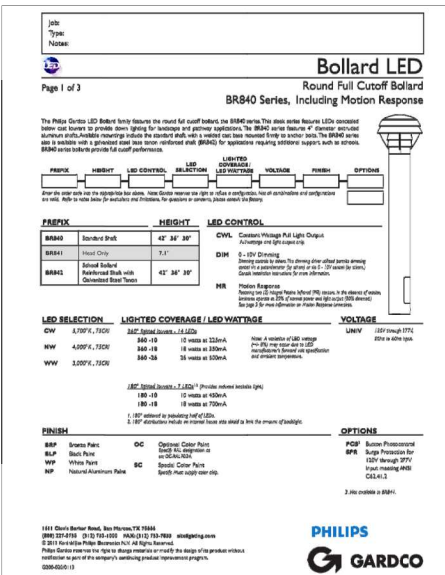
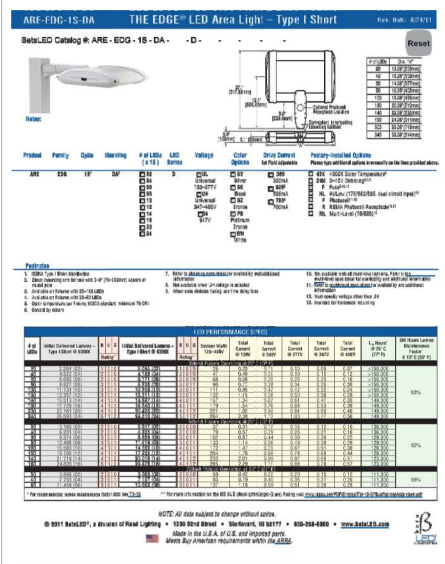
CALCULATION SUMMARY					
LABELS	AVERAGE	MAXIMUM	MINIMUM	MAX/MIN	AVG/MIN
GROUND	1.8fc	29.2fc	0.4fc	73.0:1	4.5:1

LUMINAIRE SCHEDULE			
TYPE	MANUFACTURER	CATALOG NUMBER	LUMENS
OA 	BETA	(2)ARE-EDG-4M-160	(2)17,729
OB 	BETA	ARE-EDG-2MB-80	8,927
OC 	BETA	ARE-EDG-4M-60	6,695
OD 	GARDCO	BR840-CWL-CW-180-18	...
OE 	BETA	ARE-EDG-4M-180	16,340
OF 	GOTHAM	EVO-41/29-8AR-WD	2,900
OG 	BETA	ARE-EDG-4M-100	11,131



PHOTOMETRIC PLAN

1°=20'-0"

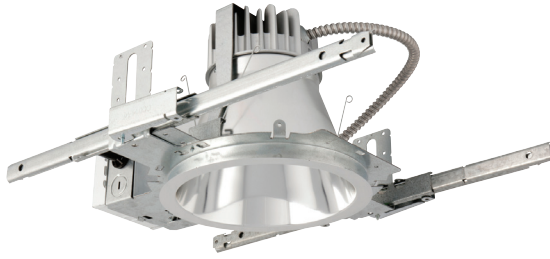


EXAMPLE: ESD 2010 AIA 100

Series	Color temperature	Nominal luminous flux	Aperture/Trim color	Distribution	Finish	Voltage
E70	27° 2700 K	18 300 lumens	84A Clear	(color)	1.5 inch	Direct
	30° 2700 K	22 350 lumens	84B Factor	YMC	Very rough (2.40 a/s)	L3
	30° 3000 K	25 350 lumens	84B White	NO	Medium (3.50 a/s)	L8
	40° 4200 K	25 250 lumens	84B Black	MC	Medium (3.50 a/s)	

[illegible]

 **JDR**
ENGINEERING, INC.
5525 NOBEL DRIVE
SUITE 110
MADISON, WI 53711
ph:608.277.1728 fax:608.271.7046
JDR Project No. 130163



Luminaire Type:
Catalog Number
(autopopulated):



Gotham Architectural Downlighting
LED Downlights

8" Evo®
Open Reflector

Solid-State Lighting



FEATURES

OPTICAL SYSTEM

- Self-flanged semi-specular, matte-diffuse or specular lower reflector
- Patented Bounding Ray™ optical design (U.S. Patent No. 5,800,050)
- 45° cutoff to source and source image
- Top-down flash characteristic

MECHANICAL SYSTEM

- 16-gauge galvanized steel construction; maximum 1-1/2" ceiling thickness
- Telescopic mounting bars maximum of 32" and minimum of 15", preinstalled, 4" vertical adjustment
- Toolless adjustments post installation
- Junction box capacity: 8 (4 in, 4 out) 12AWG rated for 90°C
- Light engine and driver accessible through aperture

ELECTRICAL SYSTEM

- Fully serviceable and upgradeable lensed LED light engine
- 70% lumen maintenance at 60,000 hours based on IESNA LM-79-2008
- 120-277VAC, 50/60hz power supply with 0-10V dimming (10-100%)
- Overload and short circuit protected
- LEDs tested under LM80

LISTINGS

- Fixtures are CSA certified to meet US and Canadian standards; wet location, covered ceiling

WARRANTY

- 5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

ORDERING INFORMATION

EXAMPLE: EVO 35/18 8AR 120

Series	Color temperature	Nominal lumen values	Aperture/Trim color	Distribution	Finish	Voltage
EVO	27/ 2700 K	18 1800 lumens	8AR Clear	(blank) 1.0 s/mh	(blank) Semi-specular	120
	30/ 3000 K	22 2200 lumens	8PR Pewter	VND Very narrow (0.43 s/mh)	LD Matte diffuse	277
	35/ 3500 K	29 2900 lumens	8WTR Wheat	ND Narrow (0.52 s/mh)	LS Specular	347²
	41/ 4100 K		8GR Gold	MD Medium (0.80 s/mh)		
			8WR¹ White	WD Wide (1.1 s/mh)		

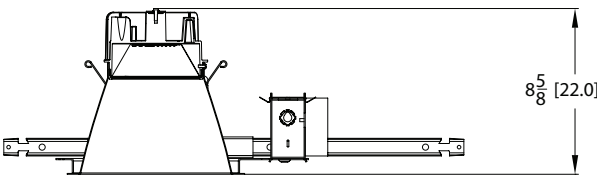
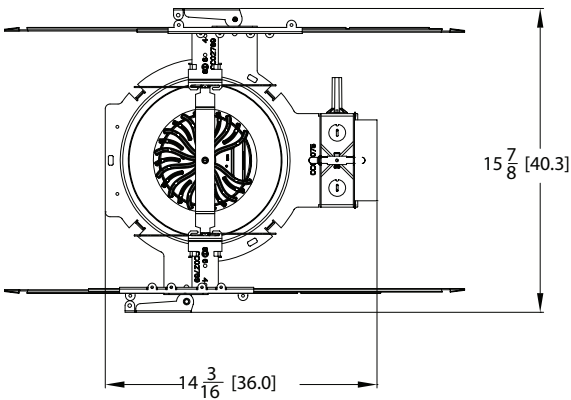
Driver	Options
(blank) ³ 0-10V dimming driver. Minimum dimming level 10%	SF Single fuse
ECOS2^{4,5} Lutron® Hi-Lume® 2-wire forward-phase dimming driver. Minimum dimming level 1%	RRL RELOC®-ready luminaire connectors enable a simple and consistent factory installed option across all ABL luminaire brands. Refer to RRL for complete nomenclature.
ECOS3^{3,4} Lutron® Hi-Lume® 3-wire or EcoSystem® dimming driver. Minimum dimming level 1%	NEPP⁶ Interface for Sensor Switch® nLight® network provided with integral power supply. Refer to TN-623-01 .
	NSD⁶ Sensor Switch® nLight® one 5A relay with one 0-10 VDC dimming output; requires bus power, such as nPP16 power pack. Refer to nSP5-D .
	TRW⁷ White painted flange
	TRBL Black painted flange
	EL⁸ Emergency battery pack with integral test switch
	ELR⁸ Emergency battery pack with remote test switch
	CP⁹ Chicago plenum

ACCESSORIES order as separate catalog numbers (shipped separately)

SCA8	Sloped ceiling adapter. Degree of slope must be specified (10D, 15D, 20D, 25D, 30D). Ex: SCA8 10D. Refer to TECH-190 .
CTA4-8 YK	Ceiling thickness adapter (extends mounting frame to accommodate ceiling thickness up to 2").
GVRT	Vandal-resistant trim accessory. Refer to TECH-200 .
ISD BC	0-10V wallbox dimmer. Refer to ISD-BC .
nSP5 D ER KIT	Sensor Switch nLight secondary relay and dimming pack device used to switch and dim luminaires powered via an emergency circuit. Refer to nSP5 D ER KIT .

DIMENSIONAL DATA

All dimensions are inches (centimeters) unless otherwise noted.



Aperture: 7-7/8 (20.1)
Ceiling Opening: 8-7/8 (21.5)
Overlap Trim: 9-1/4 (23.5)

ELECTRICAL

WATTAGE CONSUMPTION MATRIX

LUMENS	WATTAGE	LUMENS per WATT
2900	49	64
2200	39	63
1800	35	55

NOTES

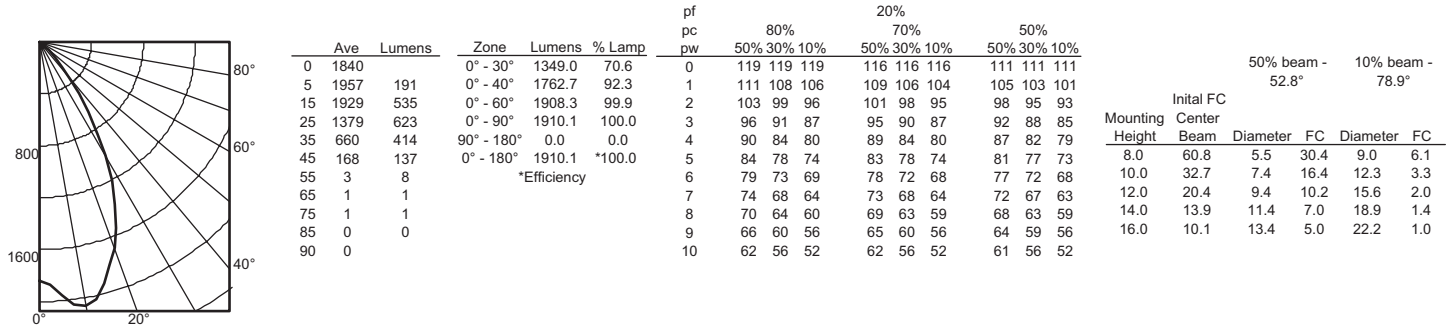
ORDERING NOTES

1. Not available with finishes.
2. Not valid with emergency options, i.e., EL and ELR.
3. Refer to [TECH-240](#) for compatible dimmers.
4. Not available with NEPP option.
5. 120V only.
6. For Emergency generator/inverter applications order non-nLight-enabled fixture and NSP5 D ER KIT as an accessory. Refer to [NSP5 D ER KIT](#).
7. Not available with white reflector.
8. For dimensional changes, refer to [TECH-140](#). Not available with CP option. Not available with 347V.
9. Not available with EL or ELR options.

Distribution Curve	Distribution Data	Output Data	Coefficient of Utilization	Illuminance: Single Luminaire 30" Above Floor
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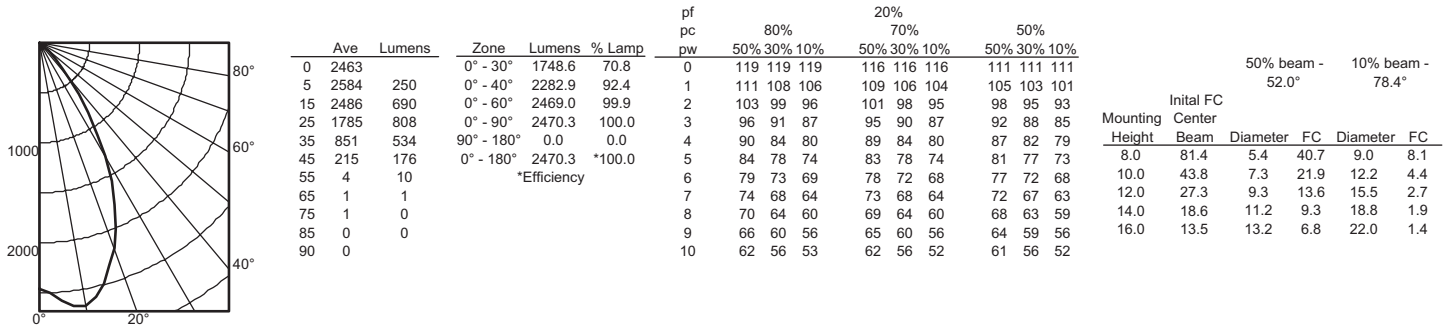
EVO 35/18 8R LS

INPUT WATTS: 34.6, DELIVERED LUMENS: 1910.1, LM/W=55.2, 1.0 S/MH, TEST NO. LTL21102



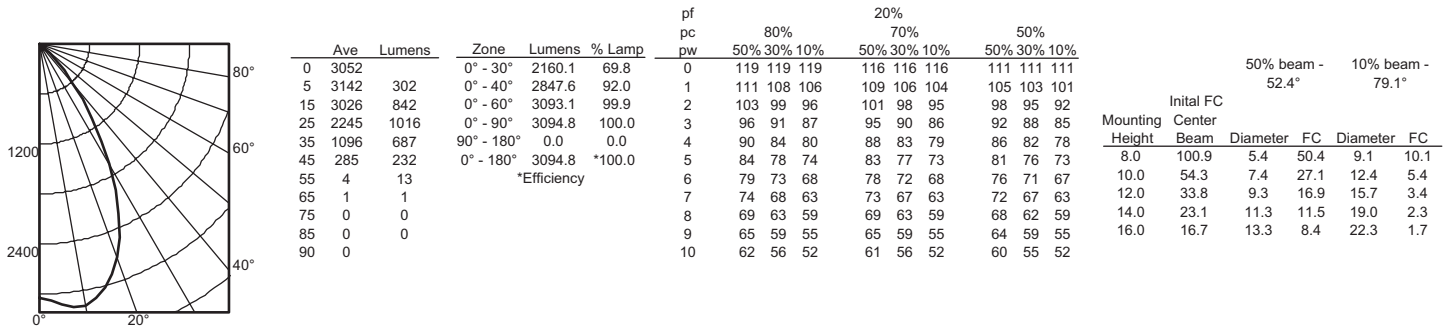
EVO 35/22 8R LS

INPUT WATTS: 39.3, DELIVERED LUMENS: 2470.3, LM/W=62.9, 1.0 S/MH, TEST NO. LTL21112



EVO 35/29 8R LS

INPUT WATTS: 48.6, DELIVERED LUMENS: 3094.8, LM/W=63.7, 1.0 S/MH, TEST NO. LTL21108



PHOTOMETRY NOTES

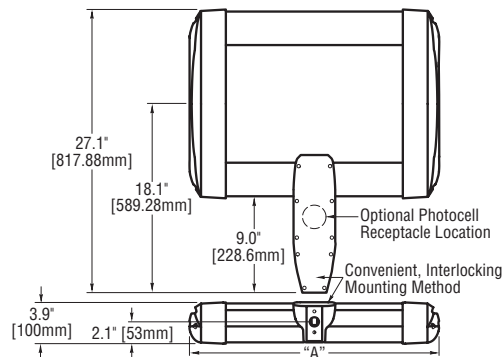
- Tested in accordance with IESNA LM-79-08.
- Tested to current IES and NEMA standards under stabilized laboratory conditions.
- Actual performance may differ as a result of end-user environment and application.
- Actual wattage may differ by +/- 10% when operating between 120-277V +/- 10%.
- CRI: 83 typical.
- Consult factory or IES file for microgroove baffle, black cone or other photometric reports.

BetaLED Catalog #: ARE - EDG - 1S - DA - - D - - - - -

Reset



Notes:



# of LEDs	Dim. "A"
20	12.06" [306mm]
40	12.06" [306mm]
60	14.06" [357mm]
80	16.06" [408mm]
100	18.06" [459mm]
120	20.06" [510mm]
140	22.06" [560mm]
160	24.06" [611mm]
200	28.06" [713mm]
240	32.06" [814mm]

Product	Family	Optic	Mounting	# of LEDs (x 10)	LED Series	Voltage	Color Options	Drive Current Not Field Adjustable	Factory-Installed Options Please type additional options in manually on the lines provided above.
ARE	EDG	1S ¹	DA ²	☐ 02 ☐ 04 ☐ 06 ☐ 08 ☐ 10 ☐ 12 ☐ 14 ☐ 16 ☐ 20 ☐ 24	D	☐ UL Universal 120–277V ☐ UH Universal 347–480V ☐ 34 347V	☐ SV Silver ☐ BK Black ☐ BZ Bronze ☐ PB Platinum Bronze ☐ WH White	☐ 350 350mA ☐ 525 ³ 525mA ☐ 700 ⁴ 700mA	☐ 43K 4300K Color Temperature ⁵ ☐ DIM 0–10V Dimming ^{6,7,8} ☐ F Fuse ^{9,10,11} ☐ HL Hi/Low (175/350/525, dual circuit input) ¹² ☐ P Photocell ^{11,13} ☐ R NEMA Photocell Receptacle ^{11,13} ☐ ML Multi-Level (75/525) ¹²

Footnotes

1. IESNA Type I Short distribution
2. Direct mounting arm for use with 3–6" (76–152mm) square or round pole
3. Available on fixtures with 20–160 LEDs
4. Available on fixtures with 20–60 LEDs
5. Color temperature per fixture; 6000K standard minimum 70 CRI
6. Control by others
7. Refer to [dimming spec sheet](#) for availability and additional information
8. Not available when UH voltage is selected
9. When code dictates fusing use time delay fuse
10. Not available with all multi-level options. Refer to [the multi-level spec sheet](#) for availability and additional information
11. Refer to [multi-level spec sheet](#) for availability and additional information
12. Must specify voltage other than UH
13. Intended for horizontal mounting

LED PERFORMANCE SPECS

# of LEDs	Initial Delivered Lumens – Type I Short @ 6000K	B	U	G	Initial Delivered Lumens – Type I Short @ 4300K	B	U	G	System Watts 120–480V	Total Current @ 120V	Total Current @ 240V	Total Current @ 277V	Total Current @ 347V	Total Current @ 480V	L ₇₀ Hours* @ 25° C (77° F)	50K Hours Lumen Maintenance Factor* @ 15° C (59° F)
		Rating**				Rating**										
350mA Fixture Operating at 25° C (77° F)																
20	2,261 (02)	1	0	0	2,084 (02)	1	0	0	26	0.20	0.11	0.10	0.09	0.07	>150,000	93%
40	4,522 (04)	2	0	0	4,168 (04)	2	0	0	47	0.40	0.21	0.19	0.15	0.12	>150,000	
60	6,695 (06)	2	0	0	6,171 (06)	2	0	0	68	0.58	0.30	0.26	0.20	0.16	>150,000	
80	8,927 (08)	3	0	1	8,228 (08)	3	0	1	90	0.77	0.38	0.34	0.26	0.20	>150,000	
100	11,131 (10)	3	0	1	10,259 (10)	3	0	1	111	0.95	0.47	0.42	0.32	0.24	>150,000	
120	13,357 (12)	3	0	1	12,311 (12)	3	0	1	132	1.15	0.56	0.50	0.38	0.28	>150,000	
140	15,513 (14)	4	1	1	14,297 (14)	4	0	1	157	1.34	0.67	0.61	0.47	0.35	149,000	
160	17,729 (16)	4	1	1	16,340 (16)	4	1	1	179	1.54	0.76	0.68	0.53	0.39	149,000	
200	22,161 (20)	4	1	2	20,425 (20)	4	1	2	221	1.92	0.95	0.84	0.65	0.48	149,000	
240	26,593 (24)	5	1	2	24,510 (24)	5	1	2	264	2.30	1.12	1.00	0.77	0.56	149,000	
525mA Fixture Operating at 25° C (77° F)																
20	3,165 (02)	2	0	0	2,917 (02)	2	0	0	37	0.31	0.17	0.16	0.12	0.10	136,000	92%
40	6,331 (04)	2	0	0	5,835 (04)	2	0	0	70	0.57	0.29	0.26	0.21	0.16	136,000	
60	9,374 (06)	3	0	1	8,639 (06)	3	0	1	102	0.87	0.44	0.39	0.30	0.22	129,000	
80	12,498 (08)	3	0	1	11,519 (08)	3	0	1	133	1.14	0.56	0.49	0.39	0.29	129,000	
100	15,583 (10)	4	1	1	14,362 (10)	4	0	1	172	1.47	0.75	0.67	0.51	0.38	128,000	
120	18,700 (12)	4	1	1	17,235 (12)	4	1	1	204	1.76	0.88	0.78	0.60	0.44	128,000	
140	21,718 (14)	4	1	2	20,016 (14)	4	1	2	233	2.01	0.99	0.87	0.69	0.51	123,000	
160	24,820 (16)	5	1	2	22,876 (16)	4	1	2	265	2.29	1.11	0.98	0.78	0.57	123,000	
700mA Fixture Operating at 25° C (77° F)																
20	3,866 (02)	2	0	0	3,563 (02)	2	0	0	50	0.42	0.22	0.20	0.15	0.12	111,000	90%
40	7,733 (04)	3	0	1	7,127 (04)	3	0	1	93	0.79	0.40	0.35	0.27	0.20	111,000	
60	11,449 (06)	3	0	1	10,552 (06)	3	0	1	137	1.18	0.59	0.51	0.39	0.29	111,000	

* For recommended lumen maintenance factor data see [TD-13](#)** For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit www.iesna.org/PDF/Erratas/TM-15-07BugRatingsAddendum.pdf

NOTE: All data subject to change without notice.

© 2011 BetaLED®, a division of Ruud Lighting • 1200 92nd Street • Sturtevant, WI 53177 • 800-236-6800 • www.betaLED.comMade in the U.S.A. of U.S. and imported parts.
Meets Buy American requirements within the [ARRA](#).

General Description

Slim, low profile design minimizes wind load requirements. Fixture sides are rugged cast aluminum with integral, weather-tight LED driver compartments and high performance aluminum heatsinks. Convenient, interlocking mounting method. Mounting housing is rugged die cast aluminum and mounts to 3–6" (76–152mm) square or round pole. Fixture is secured by two (2) 5/16-18 UNC bolts spaced on 2" (51mm) centers. Includes leaf/debris guard. Five year limited warranty on fixture.

Electrical

Modular design accommodates varied lighting output from high power, white, 6000K (+/- 500K per full fixture), minimum 70 CRI, long life LED sources. Optional 4300K (+/- 300K per full fixture) also available. 120–277V 50/60 Hz, Class 1 LED drivers are standard. 347–480V 50/60 Hz driver is optional. LED drivers have power factor >90% and THD <20% at full load. Units provided with integral 10kV surge suppression protection standard. Integral weather-tight electrical box with terminal strips (12Ga - 20Ga) for easy power hook-up. Surge protection tested in accordance with IEEE/ANSI C62.41.2.

Testing & Compliance

UL listed in the U.S. and Canada for wet locations and enclosure rated IP66 per IEC 60529 when ordered without P or R options. Consult factory for CE Certified products. Certified to ANSI C136.31-2001, 3G bridge and overpass vibration standards. Dark Sky Friendly. IDA Approved. RoHS Compliant.



Product qualified on the Design Lights Consortium ("DLC") Qualified Products List ("QPL") when ordered without backlight control shield.

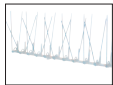
Finish

Exclusive Colorfast DeltaGuard® finish features an E-Coat epoxy primer with an ultra-durable silver powder topcoat, providing excellent resistance to corrosion, ultraviolet degradation and abrasion. Bronze, black, white and platinum bronze powder topcoats are also available. The finish is covered by our 10 year limited warranty.

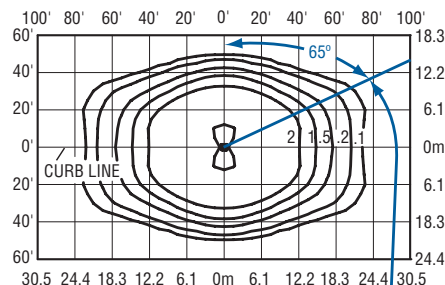
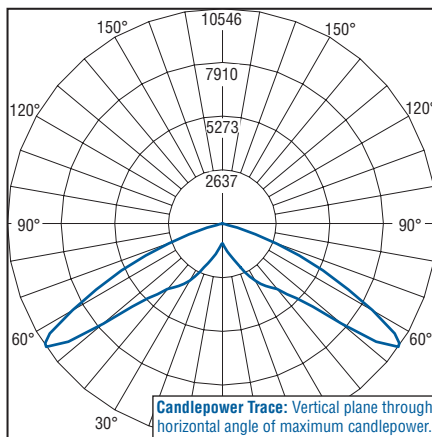
Fixture and finish are endurance tested to withstand 5,000 hours of elevated ambient salt fog conditions as defined in ASTM Standard B 117.

Patents

U.S. and international patents granted and pending. BetaLED is a division of Ruud Lighting, Inc. For a listing of Ruud Lighting, Inc. patents, visit www.uspto.gov.

Field-Installed Accessories

Bird Spikes
☐ XA-BRDSKP

Photometrics

Independent Testing Laboratories certified test. Report No. ITL68091. Candlepower trace of 4300K, 120 LED Type I Short area luminaire with 17,295 initial delivered lumens operating at 525mA. All published luminaire photometric testing performed to IESNA LM-79-08 standards.

Isofootcandle plot of 4300K, 120 LED Type I Short area luminaire at 25' (7.6m) A.F.G. Luminaire with 17,235 initial delivered lumens operating at 525mA. Initial FC at grade.

THE EDGE® EPA & Weight Calculations

# of LEDs	Approximate Weight	Single	2@ 180°	2@ 90°	3@ 90	4@ 90°
	120–480V ¹					
Fixed Arm Mount						
20	21.0 lbs. (9.5kg)	0.60	1.20	0.87	1.47	1.75
40	23.7 lbs. (10.8g)	0.60	1.20	0.87	1.47	1.75
60	27.0 lbs. (12.3kg)	0.60	1.20	0.92	1.51	1.83
80	28.1 lbs. (12.8kg)	0.60	1.20	0.96	1.55	1.91
100	32.3 lbs. (14.7kg)	0.60	1.20	1.00	1.60	2.00
120	33.5 lbs. (15.2kg)	0.60	1.20	1.04	1.64	2.08
140	36.9 lbs. (16.7kg)	0.60	1.20	1.08	1.68	2.16
160	41.4 lbs. (18.8kg)	0.60	1.20	1.12	1.72	2.24
200	43.3 lbs. (19.6kg)	0.61	1.21	n/a ²	n/a ²	n/a ²
240	47.8 lbs. (21.7kg)	0.69	1.38	n/a ²	n/a ²	n/a ²
1. Add 5 lbs. (2.3kg) for transformer in 347–480V fixtures when multi-level options are selected.						
2. For applications requiring 200 or more LEDs at 90 degrees refer to the <u>DL mount</u> version of our spec sheet.						

NOTE: All data subject to change without notice.

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Made in the U.S.A. of U.S. and imported parts.
 Meets Buy American requirements within the [ARRA](#).

Job:
Type:
Notes:

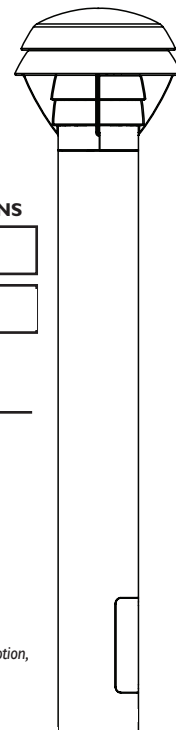


Bollard LED

Page 1 of 3

Round Full Cutoff Bollard BR840 Series, Including Motion Response

The Philips Gardco LED Bollard family features the round full cutoff bollard, the BR840 series. This sleek series features LEDs concealed below cast louvers to provide down lighting for landscape and pathway applications. The BR840 series features 4" diameter extruded aluminum shafts. Available mountings include the standard shaft, with a welded cast base mounted firmly to anchor bolts. The BR840 series also is available with a galvanized steel base tenon reinforced shaft (BR842) for applications requiring additional support, such as schools. BR840 series bollards provide full cutoff performance.



PREFIX	HEIGHT	LED CONTROL	LED SELECTION	LIGHTED COVERAGE / LED WATTAGE	VOLTAGE	FINISH	OPTIONS

Enter the order code into the appropriate box above. Note: Gardco reserves the right to refuse a configuration. Not all combinations and configurations are valid. Refer to notes below for exclusions and limitations. For questions or concerns, please consult the factory.

PREFIX	HEIGHT	LED CONTROL
BR840	Standard Shaft	42" 36" 30"
BR841	Head Only	7.1"
BR842	School Bollard Reinforced Shaft with Galvanized Steel Tenon	42" 36" 30"

CWL	Constant Wattage Full Light Output Full wattage and light output only.
DIM	0 - 10V Dimming Dimming controls by others. The dimming driver utilized permits dimming control via a potentiometer (by others) or via 0 - 10V control (by others.) Consult installation instructions for more information.
MR	Motion Response Featuring two (2) integral Passive Infrared (PIR) sensors. In the absence of motion, luminaires operate at 20% of normal power and light output (80% dimmed.) See page 3 for more information on Motion Response luminaires.

LED SELECTION	LIGHTED COVERAGE / LED WATTAGE	VOLTAGE
CW 5,700°K, 75CRI	<u>360° lighted louvers - 14 LEDs</u>	UNIV 120V through 277V, 50hz to 60hz input.
NW 4,000°K, 75CRI	360 -10 10 watts at 225mA	
	360 -18 18 watts at 350mA	
WW 3,000°K, 75CRI	360 -26 26 watts at 500mA	

180° lighted louvers - 7 LEDs^{1,2} (Provides reduced backside light.)

180 -10	10 watts at 450mA
180 -18	18 watts at 700mA

1. 180° achieved by populating half of LEDs.
2. 180° distributions include an internal house side shield to limit the amount of backlight.

FINISH	OPTIONS
BRP Bronze Paint	OC Optional Color Paint Specify RAL designation as ex: OC-RAL7024.
BLP Black Paint	SC Special Color Paint Specify. Must supply color chip.
WP White Paint	
NP Natural Aluminum Paint	PCB³ Button Photocontrol
	SPR Surge Protection for 120V through 277V Input meeting ANSI C62.41.2

3. Not available in BR841.

1611 Clovis Barker Road, San Marcos, TX 78666
(800) 227-0758 (512) 753-1000 FAX: (512) 753-7855 sitelighting.com

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G200-020/0113

PHILIPS



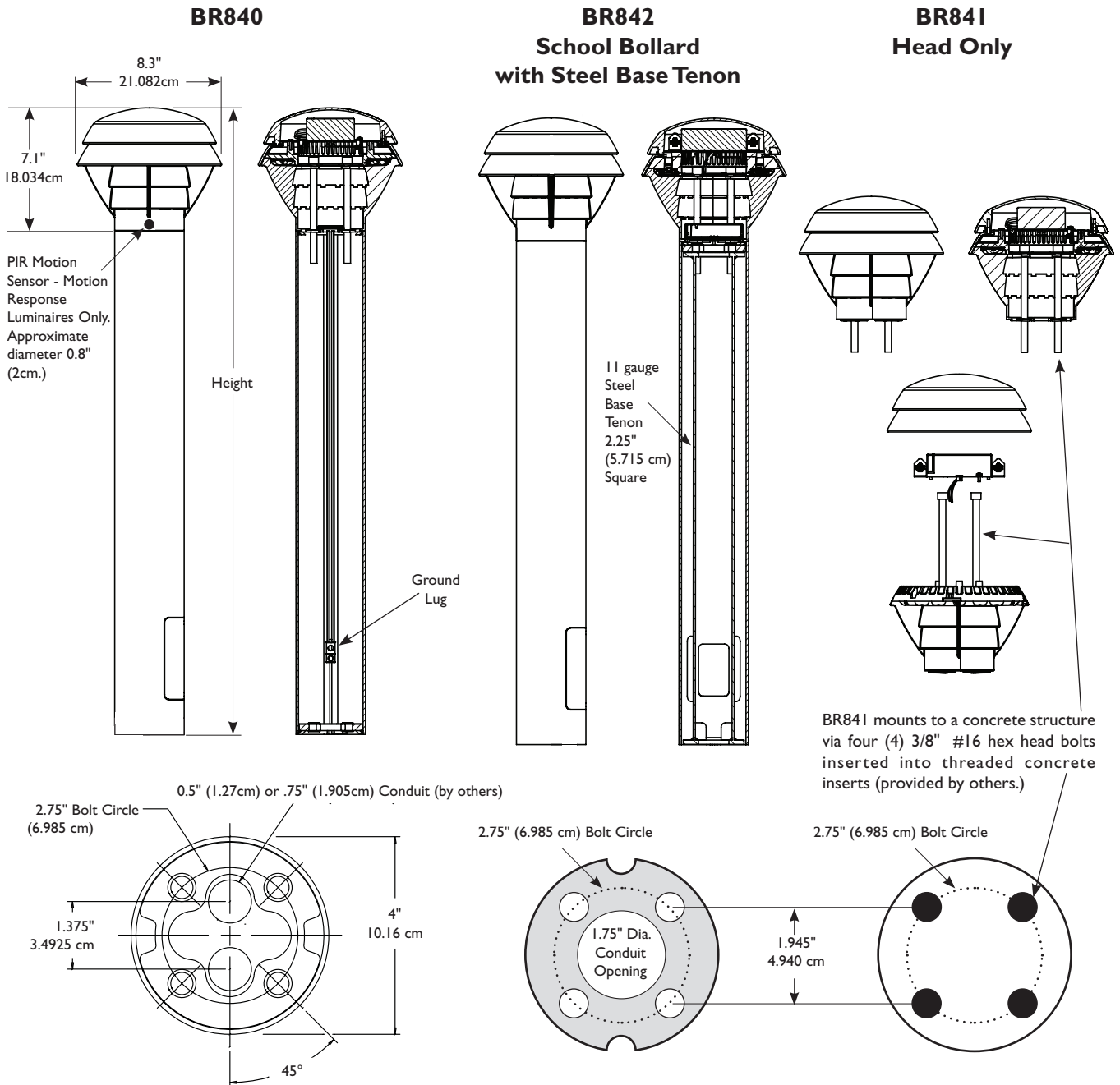


Bollard LED

Page 2 of 3

Round Full Cutoff Bollard BR840 Series, Including Motion Response

DIMENSIONS



NOTE: Factory supplied template must be used when setting anchor bolts. Philips Gardco will not honor any claim for incorrect anchorage placement from failure to use factory supplied templates.

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G200-020/0113

PHILIPS





Bollard LED

Round Full Cutoff Bollard

BR840 Series, Including Motion Response

SPECIFICATIONS

UPPER HOUSING: Die cast aluminum upper housing featuring shielding louvers to provide down light.

LOWER HOUSING:

BR840 : The lower housing assembly consists of a .140" wall by 4" diameter high strength 6063-T6 extruded aluminum section incorporating a flush, weather-tight gasketed hand hole cover.

BR41 : Louver head assembly is suitable for attachment to architectural elements (by others).

BR842 : The lower housing assembly consists of a .140" wall by 4" diameter high strength 6063-T6 extruded aluminum section, incorporating a flush, weather-tight gasketed hand hole cover, for placement over the galvanized steel tenon support structure. Tenon support structure is made from a .12" thick wall, 11 gauge steel, 2.25" square tube, welded to top and bottom round steel support plates. The steel tenon support structure includes an opening aligned with the aluminum shaft hand hole to permit wiring. The entire steel tenon support structure is hot dipped galvanized after fabrication.

LED PERFORMANCE:

PREDICTED LUMEN DEPRECIATION DATA ⁴		
Ambient Temperature °C	Driver mA	L ₇₀ Hours ⁵
25 °C	225	230,000
	350	220,000
	450 / 500	165,000
	700	150,000
40 °C	225	212,000
	350	188,000
	450 / 500	150,000
	700	137,000

4. Predicted performance derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions.
5. L₇₀ is the predicted time when LED performance depreciates to 70% of initial lumen output.

OPTICAL SYSTEM: Philips Gardco LED Bollards feature advanced Philips Gardco LED technology, assuring maximized light output. LED arrays are replaceable.

ANCHORAGE:

BR840: Base assembly consists of an internal welded cast ring section that provides for mounting to the foundation with four (4) 3/8" X 8" X 1 1/2" anchor bolts on a 2 3/4" bolt circle.

BR841: The luminaire head mounts to a concrete structure utilizing four (4) 3/8" #16 hex head bolts inserted into threaded concrete inserts (provided by others) on a 2 3/4" bolt circle.

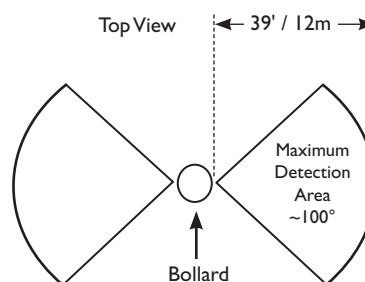
BR842: A high strength steel mounting tenon, hot-dip galvanized after fabrication, is secured to the concrete footing with (4) 3/8" x 8" x 1 1/2" anchor bolts on a 2 3/4" bolt circle.

IP RATING: IP66 is the rating for the optical compartment.

ELECTRICAL: The LED power supply is located within the bollard head. Bollards accept from 120 Volts through 277 Volts, 50hz to 60 hz, input. supply. The LED driver is located in the upper dome. LED drivers are replaceable. LEDs provided as specified. Power factor is not less than 90%. Luminaires consume 0.0 watts in the off state.

MOTION RESPONSE LUMINAIRES: Each Motion Response (MR) luminaire includes two (2) Panasonic EKMB1203112 Passive Infrared (PIR) sensors to detect motion. When motion is not detected for a 5 minute period, luminaires automatically dim to 20% power and light, gradually over a 2 minute period. Once Motion is detected, luminaires immediately ramp to full power and light output until motion is not detected for a 5 minute period.

PIR sensors are able to detect motion in the approximate patterns shown below:



Note: Motion sensors rely on specific zonal crossings to detect motion. It is possible for a person to directly approach the bollard motion sensor without crossing between zones until 15 feet from the motion sensor. The actual motion detection distance may vary based on specific application characteristics.

LUMINAIRE FINISH: Each luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured textured powdercoat finish

LABELS: All luminaires bear UL or CUL (where applicable) Wet Location labels.

WARRANTY: Philips Gardco luminaires feature a 5 year limited warranty. Philips Gardco LED luminaires with LED arrays or modules feature a 5 year limited warranty covering the LED arrays or modules. LED drivers carry a 5 year limited warranty. See Warranty Information on www.sitelighting.com for complete details and exclusions.

FULL CUTOFF PERFORMANCE: Full cutoff performance means a luminaire distribution where zero candela intensity occurs at an angle at or above 90° above nadir. Additionally, the candela per 1000 lamp lumens does not numerically exceed 100 (10 percent) at a vertical angle of 80° above nadir. This applies to all lateral angles around the luminaire.

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(800) 227-0758 (512) 753-1000 FAX: (512) 753-7855 [sitelighting.com](http://www.sitelighting.com)

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G200-020/0113

PHILIPS

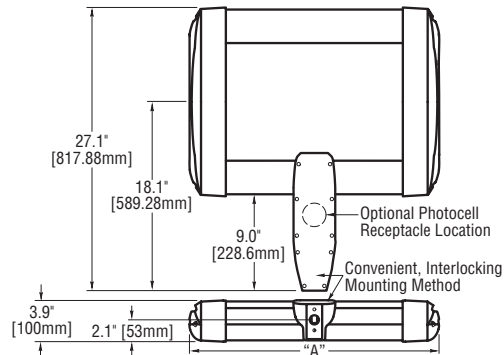


BetaLED Catalog #: ARE - EDG - 1S - DA - - D - - - - -

Reset



Notes:



# of LEDs	Dim. "A"
20	12.06" [306mm]
40	12.06" [306mm]
60	14.06" [357mm]
80	16.06" [408mm]
100	18.06" [459mm]
120	20.06" [510mm]
140	22.06" [560mm]
160	24.06" [611mm]
200	28.06" [713mm]
240	32.06" [814mm]

Product	Family	Optic	Mounting	# of LEDs (x 10)	LED Series	Voltage	Color Options	Drive Current Not Field Adjustable	Factory-Installed Options Please type additional options in manually on the lines provided above.
ARE	EDG	1S ¹	DA ²	☐ 02 ☐ 04 ☐ 06 ☐ 08 ☐ 10 ☐ 12 ☐ 14 ☐ 16 ☐ 20 ☐ 24	D	☐ UL Universal 120–277V ☐ UH Universal 347–480V ☐ 34 347V	☐ SV Silver ☐ BK Black ☐ BZ Bronze ☐ PB Platinum Bronze ☐ WH White	☐ 350 350mA ☐ 525 ³ 525mA ☐ 700 ⁴ 700mA	☐ 43K 4300K Color Temperature ⁵ ☐ DIM 0–10V Dimming ^{6,7,8} ☐ F Fuse ^{9,10,11} ☐ HL Hi/Low (175/350/525, dual circuit input) ¹² ☐ P Photocell ^{11,13} ☐ R NEMA Photocell Receptacle ^{11,13} ☐ ML Multi-Level (75/525) ¹²

Footnotes

1. IESNA Type I Short distribution
2. Direct mounting arm for use with 3–6" (76–152mm) square or round pole
3. Available on fixtures with 20–160 LEDs
4. Available on fixtures with 20–60 LEDs
5. Color temperature per fixture; 6000K standard minimum 70 CRI
6. Control by others
7. Refer to [dimming spec sheet](#) for availability and additional information
8. Not available when UH voltage is selected
9. When code dictates fusing use time delay fuse
10. Not available with all multi-level options. Refer to [the multi-level spec sheet](#) for availability and additional information
11. Refer to [multi-level spec sheet](#) for availability and additional information
12. Must specify voltage other than UH
13. Intended for horizontal mounting

LED PERFORMANCE SPECS

# of LEDs	Initial Delivered Lumens – Type I Short @ 6000K	B	U	G	Initial Delivered Lumens – Type I Short @ 4300K	B	U	G	System Watts 120–480V	Total Current @ 120V	Total Current @ 240V	Total Current @ 277V	Total Current @ 347V	Total Current @ 480V	L ₇₀ Hours* @ 25° C (77° F)	50K Hours Lumen Maintenance Factor* @ 15° C (59° F)
		Rating**				Rating**										
350mA Fixture Operating at 25° C (77° F)																
20	2,261 (02)	1	0	0	2,084 (02)	1	0	0	26	0.20	0.11	0.10	0.09	0.07	>150,000	93%
40	4,522 (04)	2	0	0	4,168 (04)	2	0	0	47	0.40	0.21	0.19	0.15	0.12	>150,000	
60	6,695 (06)	2	0	0	6,171 (06)	2	0	0	68	0.58	0.30	0.26	0.20	0.16	>150,000	
80	8,927 (08)	3	0	1	8,228 (08)	3	0	1	90	0.77	0.38	0.34	0.26	0.20	>150,000	
100	11,131 (10)	3	0	1	10,259 (10)	3	0	1	111	0.95	0.47	0.42	0.32	0.24	>150,000	
120	13,357 (12)	3	0	1	12,311 (12)	3	0	1	132	1.15	0.56	0.50	0.38	0.28	>150,000	
140	15,513 (14)	4	1	1	14,297 (14)	4	0	1	157	1.34	0.67	0.61	0.47	0.35	149,000	
160	17,729 (16)	4	1	1	16,340 (16)	4	1	1	179	1.54	0.76	0.68	0.53	0.39	149,000	
200	22,161 (20)	4	1	2	20,425 (20)	4	1	2	221	1.92	0.95	0.84	0.65	0.48	149,000	
240	26,593 (24)	5	1	2	24,510 (24)	5	1	2	264	2.30	1.12	1.00	0.77	0.56	149,000	
525mA Fixture Operating at 25° C (77° F)																
20	3,165 (02)	2	0	0	2,917 (02)	2	0	0	37	0.31	0.17	0.16	0.12	0.10	136,000	92%
40	6,331 (04)	2	0	0	5,835 (04)	2	0	0	70	0.57	0.29	0.26	0.21	0.16	136,000	
60	9,374 (06)	3	0	1	8,639 (06)	3	0	1	102	0.87	0.44	0.39	0.30	0.22	129,000	
80	12,498 (08)	3	0	1	11,519 (08)	3	0	1	133	1.14	0.56	0.49	0.39	0.29	129,000	
100	15,583 (10)	4	1	1	14,362 (10)	4	0	1	172	1.47	0.75	0.67	0.51	0.38	128,000	
120	18,700 (12)	4	1	1	17,235 (12)	4	1	1	204	1.76	0.88	0.78	0.60	0.44	128,000	
140	21,718 (14)	4	1	2	20,016 (14)	4	1	2	233	2.01	0.99	0.87	0.69	0.51	123,000	
160	24,820 (16)	5	1	2	22,876 (16)	4	1	2	265	2.29	1.11	0.98	0.78	0.57	123,000	
700mA Fixture Operating at 25° C (77° F)																
20	3,866 (02)	2	0	0	3,563 (02)	2	0	0	50	0.42	0.22	0.20	0.15	0.12	111,000	90%
40	7,733 (04)	3	0	1	7,127 (04)	3	0	1	93	0.79	0.40	0.35	0.27	0.20	111,000	
60	11,449 (06)	3	0	1	10,552 (06)	3	0	1	137	1.18	0.59	0.51	0.39	0.29	111,000	

* For recommended lumen maintenance factor data see [TD-13](#)** For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit www.iesna.org/PDF/Erratas/TM-15-07BugRatingsAddendum.pdf

NOTE: All data subject to change without notice.

© 2011 BetaLED®, a division of Ruud Lighting • 1200 92nd Street • Sturtevant, WI 53177 • 800-236-6800 • www.betaLED.comMade in the U.S.A. of U.S. and imported parts.
Meets Buy American requirements within the [ARRA](#).

General Description

Slim, low profile design minimizes wind load requirements. Fixture sides are rugged cast aluminum with integral, weather-tight LED driver compartments and high performance aluminum heatsinks. Convenient, interlocking mounting method. Mounting housing is rugged die cast aluminum and mounts to 3–6" (76–152mm) square or round pole. Fixture is secured by two (2) 5/16-18 UNC bolts spaced on 2" (51mm) centers. Includes leaf/debris guard. Five year limited warranty on fixture.

Electrical

Modular design accommodates varied lighting output from high power, white, 6000K (+/- 500K per full fixture), minimum 70 CRI, long life LED sources. Optional 4300K (+/- 300K per full fixture) also available. 120–277V 50/60 Hz, Class 1 LED drivers are standard. 347–480V 50/60 Hz driver is optional. LED drivers have power factor >90% and THD <20% at full load. Units provided with integral 10kV surge suppression protection standard. Integral weather-tight electrical box with terminal strips (12Ga - 20Ga) for easy power hook-up. Surge protection tested in accordance with IEEE/ANSI C62.41.2.

Testing & Compliance

UL listed in the U.S. and Canada for wet locations and enclosure rated IP66 per IEC 60529 when ordered without P or R options. Consult factory for CE Certified products. Certified to ANSI C136.31-2001, 3G bridge and overpass vibration standards. Dark Sky Friendly. IDA Approved. RoHS Compliant.



Product qualified on the Design Lights Consortium ("DLC") Qualified Products List ("QPL") when ordered without backlight control shield.

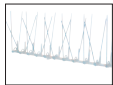
Finish

Exclusive Colorfast DeltaGuard® finish features an E-Coat epoxy primer with an ultra-durable silver powder topcoat, providing excellent resistance to corrosion, ultraviolet degradation and abrasion. Bronze, black, white and platinum bronze powder topcoats are also available. The finish is covered by our 10 year limited warranty.

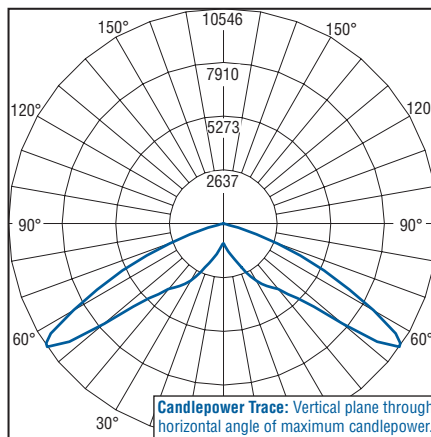
Fixture and finish are endurance tested to withstand 5,000 hours of elevated ambient salt fog conditions as defined in ASTM Standard B 117.

Patents

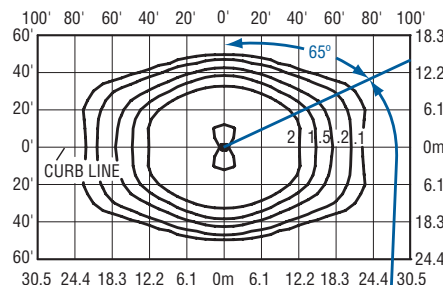
U.S. and international patents granted and pending. BetaLED is a division of Ruud Lighting, Inc. For a listing of Ruud Lighting, Inc. patents, visit www.uspto.gov.

Field-Installed Accessories

Bird Spikes
☐ XA-BRDSKP

Photometrics

Independent Testing Laboratories certified test. Report No. ITL68091. Candlepower trace of 4300K, 120 LED Type I Short area luminaire with 17,295 initial delivered lumens operating at 525mA. All published luminaire photometric testing performed to IESNA LM-79-08 standards.



Isofootcandle plot of 4300K, 120 LED Type I Short area luminaire at 25' (7.6m) A.F.G. Luminaire with 17,235 initial delivered lumens operating at 525mA. Initial FC at grade.

THE EDGE® EPA & Weight Calculations

# of LEDs	Approximate Weight		2@ 180°	2@ 90°	3@ 90°	4@ 90°
	120–480V ¹	Single				
						
Fixed Arm Mount						
20	21.0 lbs. (9.5kg)	0.60	1.20	0.87	1.47	1.75
40	23.7 lbs. (10.8g)	0.60	1.20	0.87	1.47	1.75
60	27.0 lbs. (12.3kg)	0.60	1.20	0.92	1.51	1.83
80	28.1 lbs. (12.8kg)	0.60	1.20	0.96	1.55	1.91
100	32.3 lbs. (14.7kg)	0.60	1.20	1.00	1.60	2.00
120	33.5 lbs. (15.2kg)	0.60	1.20	1.04	1.64	2.08
140	36.9 lbs. (16.7kg)	0.60	1.20	1.08	1.68	2.16
160	41.4 lbs. (18.8kg)	0.60	1.20	1.12	1.72	2.24
200	43.3 lbs. (19.6kg)	0.61	1.21	n/a ²	n/a ²	n/a ²
240	47.8 lbs. (21.7kg)	0.69	1.38	n/a ²	n/a ²	n/a ²

1. Add 5 lbs. (2.3kg) for transformer in 347–480V fixtures when multi-level options are selected.

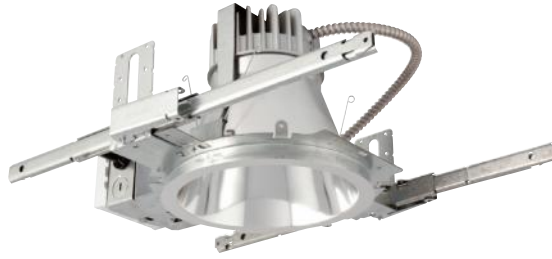
2. For applications requiring 200 or more LEDs at 90 degrees refer to the [DL mount](#) version of our spec sheet.

NOTE: All data subject to change without notice.

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Made in the U.S.A. of U.S. and imported parts.
 Meets Buy American requirements within the [ARRA](#).



Luminaire Type:
Catalog Number
(autopopulated):



Gotham Architectural Downlighting
LED Downlights

8" Evo®
Open Reflector

Solid-State Lighting



FEATURES

OPTICAL SYSTEM

- Self-flanged semi-specular, matte-diffuse or specular lower reflector
- Patented Bounding Ray™ optical design (U.S. Patent No. 5,800,050)
- 45° cutoff to source and source image
- Top-down flash characteristic

MECHANICAL SYSTEM

- 16-gauge galvanized steel construction; maximum 1-1/2" ceiling thickness
- Telescopic mounting bars maximum of 32" and minimum of 15", preinstalled, 4" vertical adjustment
- Toolless adjustments post installation
- Junction box capacity: 8 (4 in, 4 out) 12AWG rated for 90°C
- Light engine and driver accessible through aperture

ELECTRICAL SYSTEM

- Fully serviceable and upgradeable lensed LED light engine
- 70% lumen maintenance at 60,000 hours based on IESNA LM-79-2008
- 120-277VAC, 50/60hz power supply with 0-10V dimming (10-100%)
- Overload and short circuit protected
- LEDs tested under LM80

LISTINGS

- Fixtures are CSA certified to meet US and Canadian standards; wet location, covered ceiling

WARRANTY

- 5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

ORDERING INFORMATION

EXAMPLE: EVO 35/18 8AR 120

Series	Color temperature	Nominal lumen values	Aperture/Trim color	Distribution	Finish	Voltage
EVO	27/ 2700 K	18 1800 lumens	8AR Clear	(blank) 1.0 s/mh	(blank) Semi-specular	120
	30/ 3000 K	22 2200 lumens	8PR Pewter	VND Very narrow (0.43 s/mh)	LD Matte diffuse	277
	35/ 3500 K	29 2900 lumens	8WTR Wheat	ND Narrow (0.52 s/mh)	LS Specular	347²
	41/ 4100 K		8GR Gold	MD Medium (0.80 s/mh)		
			8WR¹ White	WD Wide (1.1 s/mh)		

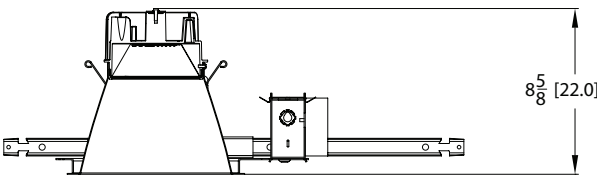
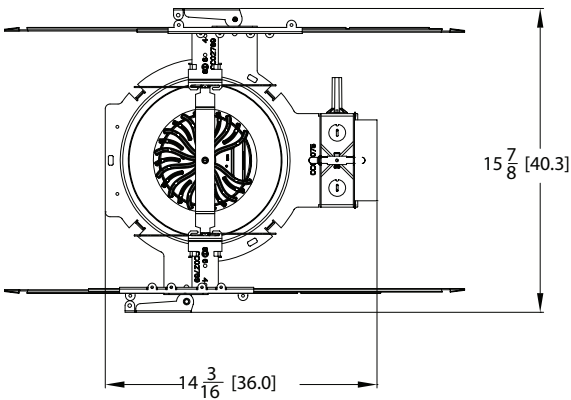
Driver	Options
(blank) ³ 0-10V dimming driver. Minimum dimming level 10%	SF Single fuse
ECOS2^{4,5} Lutron® Hi-Lume® 2-wire forward-phase dimming driver. Minimum dimming level 1%	RRL RELOC®-ready luminaire connectors enable a simple and consistent factory installed option across all ABL luminaire brands. Refer to RRL for complete nomenclature.
ECOS3^{3,4} Lutron® Hi-Lume® 3-wire or EcoSystem® dimming driver. Minimum dimming level 1%	NEPP⁶ Interface for Sensor Switch® nLight® network provided with integral power supply. Refer to TN-623-01 .
	NSD⁶ Sensor Switch® nLight® one 5A relay with one 0-10 VDC dimming output; requires bus power, such as nPP16 power pack. Refer to nSP5-D .
	TRW⁷ White painted flange
	TRBL Black painted flange
	EL⁸ Emergency battery pack with integral test switch
	ELR⁸ Emergency battery pack with remote test switch
	CP⁹ Chicago plenum

ACCESSORIES order as separate catalog numbers (shipped separately)

SCA8	Sloped ceiling adapter. Degree of slope must be specified (10D, 15D, 20D, 25D, 30D). Ex: SCA8 10D. Refer to TECH-190 .
CTA4-8 YK	Ceiling thickness adapter (extends mounting frame to accommodate ceiling thickness up to 2").
GVRT	Vandal-resistant trim accessory. Refer to TECH-200 .
ISD BC	0-10V wallbox dimmer. Refer to ISD-BC .
nSP5 D ER KIT	Sensor Switch nLight secondary relay and dimming pack device used to switch and dim luminaires powered via an emergency circuit. Refer to nSP5 D ER KIT .

DIMENSIONAL DATA

All dimensions are inches (centimeters) unless otherwise noted.



Aperture: 7-7/8 (20.1)
Ceiling Opening: 8-7/8 (21.5)
Overlap Trim: 9-1/4 (23.5)

ELECTRICAL

WATTAGE CONSUMPTION MATRIX		
LUMENS	WATTAGE	LUMENS per WATT
2900	49	64
2200	39	63
1800	35	55

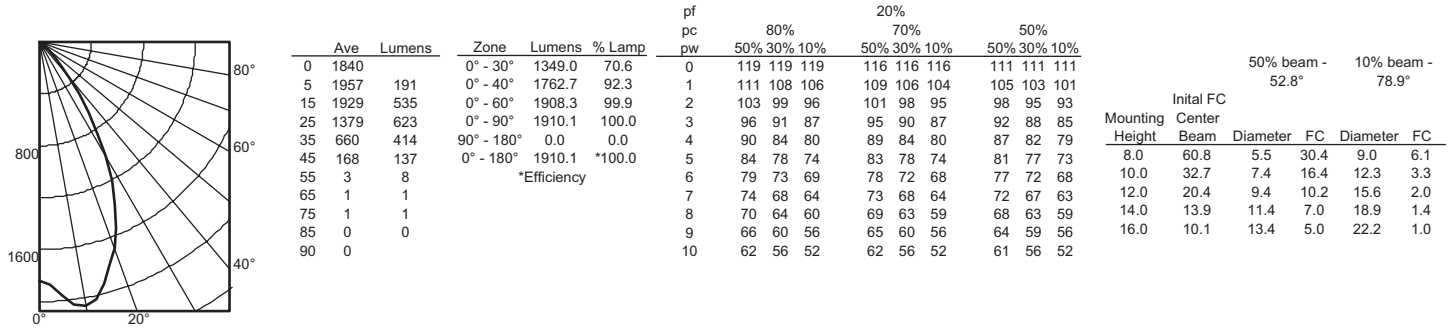
NOTES

ORDERING NOTES	
1. Not available with finishes.	6. For Emergency generator/inverter applications order non-nLight-enabled fixture and NSP5 D ER KIT as an accessory. Refer to NSP5 D ER KIT .
2. Not valid with emergency options, i.e., EL and ELR.	7. Not available with white reflector.
3. Refer to TECH-240 for compatible dimmers.	8. For dimensional changes, refer to TECH-140 . Not available with CP option. Not available with 347V.
4. Not available with NEPP option.	9. Not available with EL or ELR options.
5. 120V only.	

Distribution Curve	Distribution Data	Output Data	Coefficient of Utilization	Illuminance: Single Luminaire 30" Above Floor
--------------------	-------------------	-------------	----------------------------	---

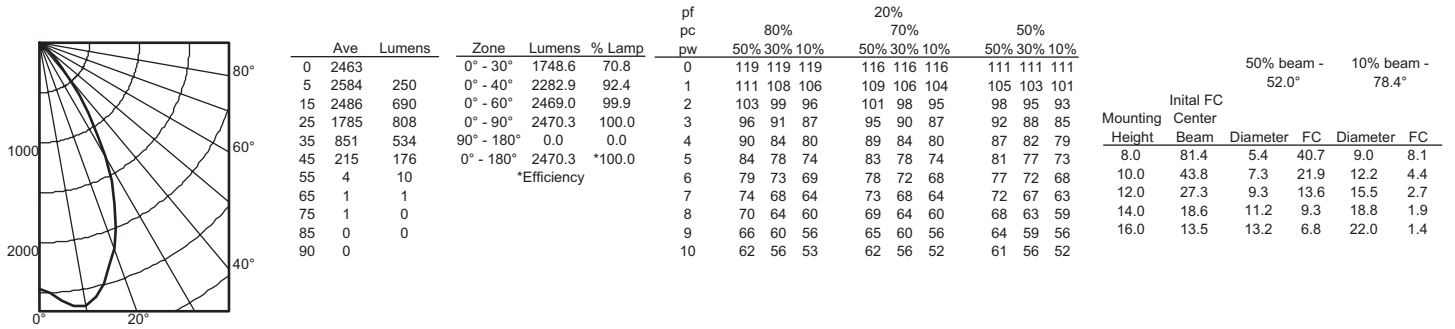
EVO 35/18 8R LS

INPUT WATTS: 34.6, DELIVERED LUMENS: 1910.1, LM/W=55.2, 1.0 S/MH, TEST NO. LTL21102



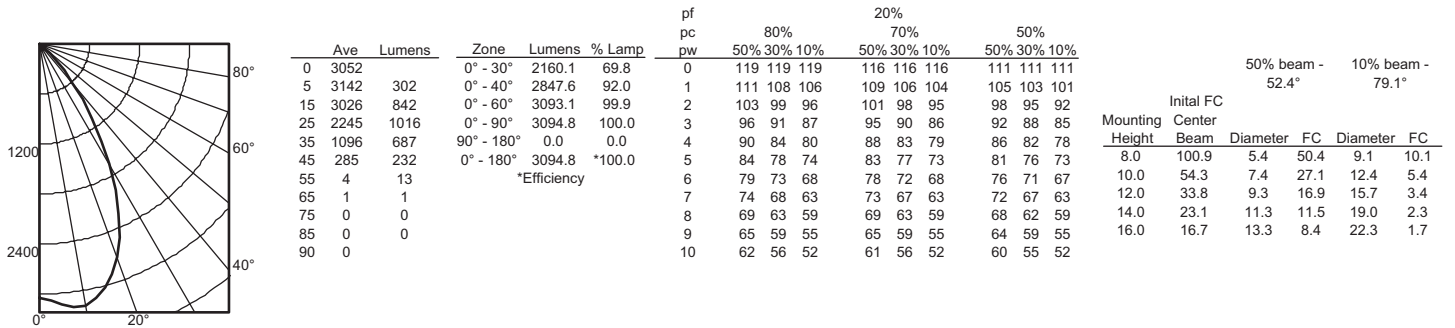
EVO 35/22 8R LS

INPUT WATTS: 39.3, DELIVERED LUMENS: 2470.3, LM/W=62.9, 1.0 S/MH, TEST NO. LTL21112



EVO 35/29 8R LS

INPUT WATTS: 48.6, DELIVERED LUMENS: 3094.8, LM/W=63.7, 1.0 S/MH, TEST NO. LTL21108



PHOTOMETRY NOTES

- Tested in accordance with IESNA LM-79-08.
- Tested to current IES and NEMA standards under stabilized laboratory conditions.
- Actual performance may differ as a result of end-user environment and application.
- Actual wattage may differ by +/- 10% when operating between 120-277V +/- 10%.
- CRI: 83 typical.
- Consult factory or IES file for microgroove baffle, black cone or other photometric reports.

Job:
Type:
Notes:

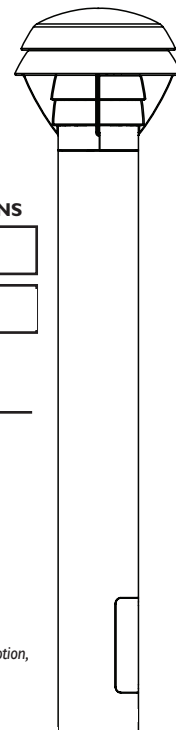


Bollard LED

Page 1 of 3

Round Full Cutoff Bollard BR840 Series, Including Motion Response

The Philips Gardco LED Bollard family features the round full cutoff bollard, the BR840 series. This sleek series features LEDs concealed below cast louvers to provide down lighting for landscape and pathway applications. The BR840 series features 4" diameter extruded aluminum shafts. Available mountings include the standard shaft, with a welded cast base mounted firmly to anchor bolts. The BR840 series also is available with a galvanized steel base tenon reinforced shaft (BR842) for applications requiring additional support, such as schools. BR840 series bollards provide full cutoff performance.



PREFIX	HEIGHT	LED CONTROL	LED SELECTION	LIGHTED COVERAGE / LED WATTAGE	VOLTAGE	FINISH	OPTIONS

Enter the order code into the appropriate box above. Note: Gardco reserves the right to refuse a configuration. Not all combinations and configurations are valid. Refer to notes below for exclusions and limitations. For questions or concerns, please consult the factory.

PREFIX	HEIGHT	LED CONTROL
BR840	Standard Shaft	42" 36" 30"
BR841	Head Only	7.1"
BR842	School Bollard Reinforced Shaft with Galvanized Steel Tenon	42" 36" 30"

CWL	Constant Wattage Full Light Output Full wattage and light output only.
DIM	0 - 10V Dimming Dimming controls by others. The dimming driver utilized permits dimming control via a potentiometer (by others) or via 0 - 10V control (by others.) Consult installation instructions for more information.
MR	Motion Response Featuring two (2) integral Passive Infrared (PIR) sensors. In the absence of motion, luminaires operate at 20% of normal power and light output (80% dimmed.) See page 3 for more information on Motion Response luminaires.

LED SELECTION	LIGHTED COVERAGE / LED WATTAGE	VOLTAGE
CW 5,700°K, 75CRI	<u>360° lighted louvers - 14 LEDs</u>	UNIV 120V through 277V, 50hz to 60hz input.
NW 4,000°K, 75CRI	360 -10 10 watts at 225mA	
	360 -18 18 watts at 350mA	
WW 3,000°K, 75CRI	360 -26 26 watts at 500mA	

180° lighted louvers - 7 LEDs^{1,2} (Provides reduced backside light.)

180 -10	10 watts at 450mA
180 -18	18 watts at 700mA

1. 180° achieved by populating half of LEDs.
2. 180° distributions include an internal house side shield to limit the amount of backlight.

FINISH	OPTIONS
BRP Bronze Paint	OC Optional Color Paint Specify RAL designation as ex: OC-RAL7024.
BLP Black Paint	SC Special Color Paint Specify. Must supply color chip.
WP White Paint	
NP Natural Aluminum Paint	PCB³ Button Photocontrol
	SPR Surge Protection for 120V through 277V Input meeting ANSI C62.41.2

3. Not available in BR841.

1611 Clovis Barker Road, San Marcos, TX 78666
(800) 227-0758 (512) 753-1000 FAX: (512) 753-7855 sitelighting.com

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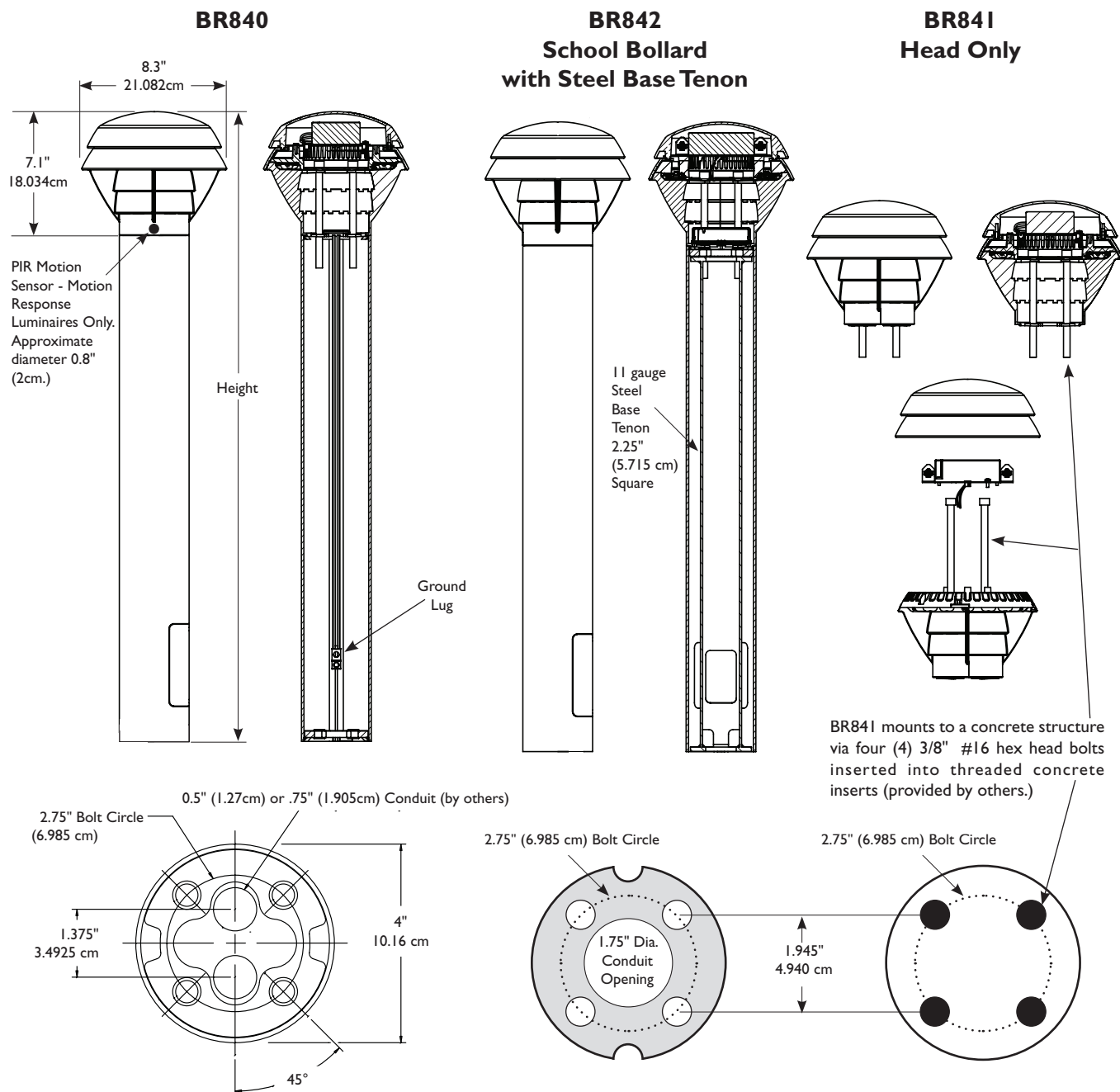
G200-020/0113

PHILIPS





DIMENSIONS



NOTE: Factory supplied template must be used when setting anchor bolts. Philips Gardco will not honor any claim for incorrect anchorage placement from failure to use factory supplied templates.

1611 Clovis Barker Road, San Marcos, TX 78666

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G200-020/0113

PHILIPS





Round Full Cutoff Bollard BR840 Series, Including Motion Response

SPECIFICATIONS

UPPER HOUSING: Die cast aluminum upper housing featuring shielding louvers to provide down light.

LOWER HOUSING:

BR840 : The lower housing assembly consists of a .140" wall by 4" diameter high strength 6063-T6 extruded aluminum section incorporating a flush, weather-tight gasketed hand hole cover.

BR41 : Louver head assembly is suitable for attachment to architectural elements (by others).

BR842 : The lower housing assembly consists of a .140" wall by 4" diameter high strength 6063-T6 extruded aluminum section, incorporating a flush, weather-tight gasketed hand hole cover, for placement over the galvanized steel tenon support structure. Tenon support structure is made from a .12" thick wall, 11 gauge steel, 2.25" square tube, welded to top and bottom round steel support plates. The steel tenon support structure includes an opening aligned with the aluminum shaft hand hole to permit wiring. The entire steel tenon support structure is hot dipped galvanized after fabrication.

LED PERFORMANCE:

PREDICTED LUMEN DEPRECIATION DATA ⁴		
Ambient Temperature °C	Driver mA	L ₇₀ Hours ⁵
25 °C	225	230,000
	350	220,000
	450 / 500	165,000
	700	150,000
40 °C	225	212,000
	350	188,000
	450 / 500	150,000
	700	137,000

4. Predicted performance derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions.
5. L₇₀ is the predicted time when LED performance depreciates to 70% of initial lumen output.

OPTICAL SYSTEM: Philips Gardco LED Bollards feature advanced Philips Gardco LED technology, assuring maximized light output. LED arrays are replaceable.

ANCHORAGE:

BR840: Base assembly consists of an internal welded cast ring section that provides for mounting to the foundation with four (4) 3/8" X 8" X 1 1/2" anchor bolts on a 2 3/4" bolt circle.

BR841: The luminaire head mounts to a concrete structure utilizing four (4) 3/8" #16 hex head bolts inserted into threaded concrete inserts (provided by others) on a 2 3/4" bolt circle.

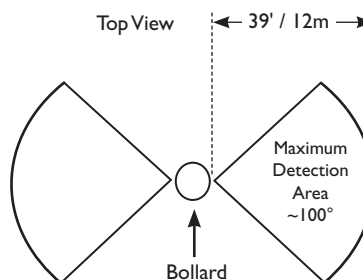
BR842: A high strength steel mounting tenon, hot-dip galvanized after fabrication, is secured to the concrete footing with (4) 3/8" x 8" x 1 1/2" anchor bolts on a 2 3/4" bolt circle.

IP RATING: IP66 is the rating for the optical compartment.

ELECTRICAL: The LED power supply is located within the bollard head. Bollards accept from 120 Volts through 277 Volts, 50hz to 60 hz, input. supply. The LED driver is located in the upper dome. LED drivers are replaceable. LEDs provided as specified. Power factor is not less than 90%. Luminaires consume 0.0 watts in the off state.

MOTION RESPONSE LUMINAIRES: Each Motion Response (MR) luminaire includes two (2) Panasonic EKMB1203112 Passive Infrared (PIR) sensors to detect motion. When motion is not detected for a 5 minute period, luminaires automatically dim to 20% power and light, gradually over a 2 minute period. Once Motion is detected, luminaires immediately ramp to full power and light output until motion is not detected for a 5 minute period.

PIR sensors are able to detect motion in the approximate patterns shown below:



Note: Motion sensors rely on specific zonal crossings to detect motion. It is possible for a person to directly approach the bollard motion sensor without crossing between zones until 15 feet from the motion sensor. The actual motion detection distance may vary based on specific application characteristics.

LUMINAIRE FINISH: Each luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured textured powdercoat finish

LABELS: All luminaires bear UL or CUL (where applicable) Wet Location labels.

WARRANTY: Philips Gardco luminaires feature a 5 year limited warranty. Philips Gardco LED luminaires with LED arrays or modules feature a 5 year limited warranty covering the LED arrays or modules. LED drivers carry a 5 year limited warranty. See Warranty Information on www.sitelighting.com for complete details and exclusions.

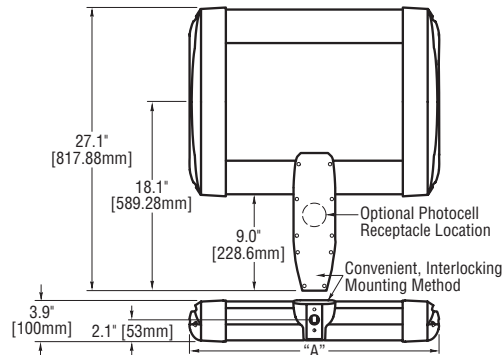
FULL CUTOFF PERFORMANCE: Full cutoff performance means a luminaire distribution where zero candela intensity occurs at an angle at or above 90° above nadir. Additionally, the candela per 1000 lamp lumens does not numerically exceed 100 (10 percent) at a vertical angle of 80° above nadir. This applies to all lateral angles around the luminaire.

BetaLED Catalog #: ARE - EDG - 1S - DA - - D - - - - -

Reset



Notes:



# of LEDs	Dim. "A"
20	12.06" [306mm]
40	12.06" [306mm]
60	14.06" [357mm]
80	16.06" [408mm]
100	18.06" [459mm]
120	20.06" [510mm]
140	22.06" [560mm]
160	24.06" [611mm]
200	28.06" [713mm]
240	32.06" [814mm]

Product	Family	Optic	Mounting	# of LEDs (x 10)	LED Series	Voltage	Color Options	Drive Current Not Field Adjustable	Factory-Installed Options Please type additional options in manually on the lines provided above.
ARE	EDG	1S ¹	DA ²	☐ 02 ☐ 04 ☐ 06 ☐ 08 ☐ 10 ☐ 12 ☐ 14 ☐ 16 ☐ 20 ☐ 24	D	☐ UL Universal 120–277V ☐ UH Universal 347–480V ☐ 34 347V	☐ SV Silver ☐ BK Black ☐ BZ Bronze ☐ PB Platinum Bronze ☐ WH White	☐ 350 350mA ☐ 525 ³ 525mA ☐ 700 ⁴ 700mA	☐ 43K 4300K Color Temperature ⁵ ☐ DIM 0–10V Dimming ^{6,7,8} ☐ F Fuse ^{9,10,11} ☐ HL Hi/Low (175/350/525, dual circuit input) ¹² ☐ P Photocell ^{11,13} ☐ R NEMA Photocell Receptacle ^{11,13} ☐ ML Multi-Level (75/525) ¹²

Footnotes

1. IESNA Type I Short distribution
2. Direct mounting arm for use with 3–6" (76–152mm) square or round pole
3. Available on fixtures with 20–160 LEDs
4. Available on fixtures with 20–60 LEDs
5. Color temperature per fixture; 6000K standard minimum 70 CRI
6. Control by others
7. Refer to [dimming spec sheet](#) for availability and additional information
8. Not available when UH voltage is selected
9. When code dictates fusing use time delay fuse
10. Not available with all multi-level options. Refer to [the multi-level spec sheet](#) for availability and additional information
11. Refer to [multi-level spec sheet](#) for availability and additional information
12. Must specify voltage other than UH
13. Intended for horizontal mounting

LED PERFORMANCE SPECS

# of LEDs	Initial Delivered Lumens – Type I Short @ 6000K	B	U	G	Initial Delivered Lumens – Type I Short @ 4300K	B	U	G	System Watts 120–480V	Total Current @ 120V	Total Current @ 240V	Total Current @ 277V	Total Current @ 347V	Total Current @ 480V	L ₇₀ Hours* @ 25° C (77° F)	50K Hours Lumen Maintenance Factor* @ 15° C (59° F)
		Rating**				Rating**										
350mA Fixture Operating at 25° C (77° F)																
20	2,261 (02)	1	0	0	2,084 (02)	1	0	0	26	0.20	0.11	0.10	0.09	0.07	>150,000	93%
40	4,522 (04)	2	0	0	4,168 (04)	2	0	0	47	0.40	0.21	0.19	0.15	0.12	>150,000	
60	6,695 (06)	2	0	0	6,171 (06)	2	0	0	68	0.58	0.30	0.26	0.20	0.16	>150,000	
80	8,927 (08)	3	0	1	8,228 (08)	3	0	1	90	0.77	0.38	0.34	0.26	0.20	>150,000	
100	11,131 (10)	3	0	1	10,259 (10)	3	0	1	111	0.95	0.47	0.42	0.32	0.24	>150,000	
120	13,357 (12)	3	0	1	12,311 (12)	3	0	1	132	1.15	0.56	0.50	0.38	0.28	>150,000	
140	15,513 (14)	4	1	1	14,297 (14)	4	0	1	157	1.34	0.67	0.61	0.47	0.35	149,000	
160	17,729 (16)	4	1	1	16,340 (16)	4	1	1	179	1.54	0.76	0.68	0.53	0.39	149,000	
200	22,161 (20)	4	1	2	20,425 (20)	4	1	2	221	1.92	0.95	0.84	0.65	0.48	149,000	
240	26,593 (24)	5	1	2	24,510 (24)	5	1	2	264	2.30	1.12	1.00	0.77	0.56	149,000	
525mA Fixture Operating at 25° C (77° F)																
20	3,165 (02)	2	0	0	2,917 (02)	2	0	0	37	0.31	0.17	0.16	0.12	0.10	136,000	92%
40	6,331 (04)	2	0	0	5,835 (04)	2	0	0	70	0.57	0.29	0.26	0.21	0.16	136,000	
60	9,374 (06)	3	0	1	8,639 (06)	3	0	1	102	0.87	0.44	0.39	0.30	0.22	129,000	
80	12,498 (08)	3	0	1	11,519 (08)	3	0	1	133	1.14	0.56	0.49	0.39	0.29	129,000	
100	15,583 (10)	4	1	1	14,362 (10)	4	0	1	172	1.47	0.75	0.67	0.51	0.38	128,000	
120	18,700 (12)	4	1	1	17,235 (12)	4	1	1	204	1.76	0.88	0.78	0.60	0.44	128,000	
140	21,718 (14)	4	1	2	20,016 (14)	4	1	2	233	2.01	0.99	0.87	0.69	0.51	123,000	
160	24,820 (16)	5	1	2	22,876 (16)	4	1	2	265	2.29	1.11	0.98	0.78	0.57	123,000	
700mA Fixture Operating at 25° C (77° F)																
20	3,866 (02)	2	0	0	3,563 (02)	2	0	0	50	0.42	0.22	0.20	0.15	0.12	111,000	90%
40	7,733 (04)	3	0	1	7,127 (04)	3	0	1	93	0.79	0.40	0.35	0.27	0.20	111,000	
60	11,449 (06)	3	0	1	10,552 (06)	3	0	1	137	1.18	0.59	0.51	0.39	0.29	111,000	

* For recommended lumen maintenance factor data see [TD-13](#)** For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit www.iesna.org/PDF/Erratas/TM-15-07BugRatingsAddendum.pdf

NOTE: All data subject to change without notice.

© 2011 BetaLED®, a division of Ruud Lighting • 1200 92nd Street • Sturtevant, WI 53177 • 800-236-6800 • www.betaLED.comMade in the U.S.A. of U.S. and imported parts.
Meets Buy American requirements within the [ARRA](#).

General Description

Slim, low profile design minimizes wind load requirements. Fixture sides are rugged cast aluminum with integral, weather-tight LED driver compartments and high performance aluminum heatsinks. Convenient, interlocking mounting method. Mounting housing is rugged die cast aluminum and mounts to 3–6" (76–152mm) square or round pole. Fixture is secured by two (2) 5/16-18 UNC bolts spaced on 2" (51mm) centers. Includes leaf/debris guard. Five year limited warranty on fixture.

Electrical

Modular design accommodates varied lighting output from high power, white, 6000K (+/- 500K per full fixture), minimum 70 CRI, long life LED sources. Optional 4300K (+/- 300K per full fixture) also available. 120–277V 50/60 Hz, Class 1 LED drivers are standard. 347–480V 50/60 Hz driver is optional. LED drivers have power factor >90% and THD <20% at full load. Units provided with integral 10kV surge suppression protection standard. Integral weather-tight electrical box with terminal strips (12Ga - 20Ga) for easy power hook-up. Surge protection tested in accordance with IEEE/ANSI C62.41.2.

Testing & Compliance

UL listed in the U.S. and Canada for wet locations and enclosure rated IP66 per IEC 60529 when ordered without P or R options. Consult factory for CE Certified products. Certified to ANSI C136.31-2001, 3G bridge and overpass vibration standards. Dark Sky Friendly. IDA Approved. RoHS Compliant.



Product qualified on the Design Lights Consortium ("DLC") Qualified Products List ("QPL") when ordered without backlight control shield.

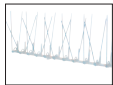
Finish

Exclusive Colorfast DeltaGuard® finish features an E-Coat epoxy primer with an ultra-durable silver powder topcoat, providing excellent resistance to corrosion, ultraviolet degradation and abrasion. Bronze, black, white and platinum bronze powder topcoats are also available. The finish is covered by our 10 year limited warranty.

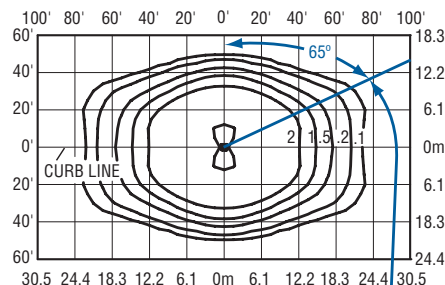
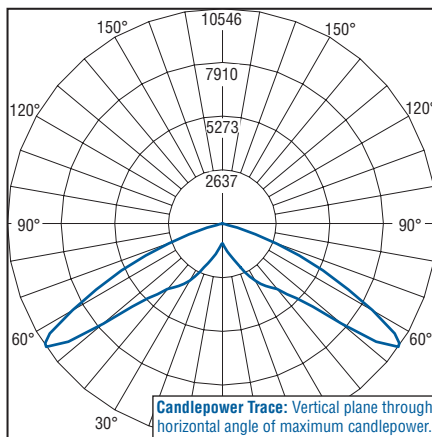
Fixture and finish are endurance tested to withstand 5,000 hours of elevated ambient salt fog conditions as defined in ASTM Standard B 117.

Patents

U.S. and international patents granted and pending. BetaLED is a division of Ruud Lighting, Inc. For a listing of Ruud Lighting, Inc. patents, visit www.uspto.gov.

Field-Installed Accessories

Bird Spikes
☐ XA-BRDSPK

Photometrics

Independent Testing Laboratories certified test. Report No. ITL68091. Candlepower trace of 4300K, 120 LED Type I Short area luminaire with 17,295 initial delivered lumens operating at 525mA. All published luminaire photometric testing performed to IESNA LM-79-08 standards.

Isofootcandle plot of 4300K, 120 LED Type I Short area luminaire at 25' (7.6m) A.F.G. Luminaire with 17,235 initial delivered lumens operating at 525mA. Initial FC at grade.

THE EDGE® EPA & Weight Calculations

# of LEDs	Approximate Weight	Single	2@ 180°	2@ 90°	3@ 90	4@ 90°
	120–480V ¹					
Fixed Arm Mount						
20	21.0 lbs. (9.5kg)	0.60	1.20	0.87	1.47	1.75
40	23.7 lbs. (10.8g)	0.60	1.20	0.87	1.47	1.75
60	27.0 lbs. (12.3kg)	0.60	1.20	0.92	1.51	1.83
80	28.1 lbs. (12.8kg)	0.60	1.20	0.96	1.55	1.91
100	32.3 lbs. (14.7kg)	0.60	1.20	1.00	1.60	2.00
120	33.5 lbs. (15.2kg)	0.60	1.20	1.04	1.64	2.08
140	36.9 lbs. (16.7kg)	0.60	1.20	1.08	1.68	2.16
160	41.4 lbs. (18.8kg)	0.60	1.20	1.12	1.72	2.24
200	43.3 lbs. (19.6kg)	0.61	1.21	n/a ²	n/a ²	n/a ²
240	47.8 lbs. (21.7kg)	0.69	1.38	n/a ²	n/a ²	n/a ²

1. Add 5 lbs. (2.3kg) for transformer in 347–480V fixtures when multi-level options are selected.

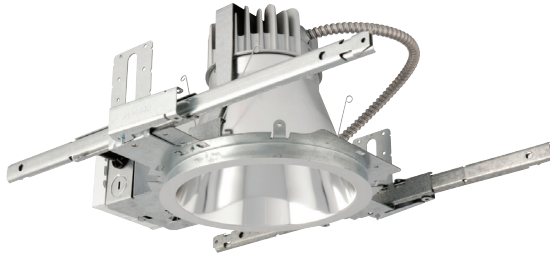
2. For applications requiring 200 or more LEDs at 90 degrees refer to the [DL mount](#) version of our spec sheet.

NOTE: All data subject to change without notice.

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Made in the U.S.A. of U.S. and imported parts.
 Meets Buy American requirements within the [ARRA](#).



Luminaire Type:
Catalog Number
(autopopulated):



Gotham Architectural Downlighting
LED Downlights

8" Evo®
Open Reflector

Solid-State Lighting



FEATURES

OPTICAL SYSTEM

- Self-flanged semi-specular, matte-diffuse or specular lower reflector
- Patented Bounding Ray™ optical design (U.S. Patent No. 5,800,050)
- 45° cutoff to source and source image
- Top-down flash characteristic

MECHANICAL SYSTEM

- 16-gauge galvanized steel construction; maximum 1-1/2" ceiling thickness
- Telescopic mounting bars maximum of 32" and minimum of 15", preinstalled, 4" vertical adjustment
- Toolless adjustments post installation
- Junction box capacity: 8 (4 in, 4 out) 12AWG rated for 90°C
- Light engine and driver accessible through aperture

ELECTRICAL SYSTEM

- Fully serviceable and upgradeable lensed LED light engine
- 70% lumen maintenance at 60,000 hours based on IESNA LM-79-2008
- 120-277VAC, 50/60hz power supply with 0-10V dimming (10-100%)
- Overload and short circuit protected
- LEDs tested under LM80

LISTINGS

- Fixtures are CSA certified to meet US and Canadian standards; wet location, covered ceiling

WARRANTY

- 5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

ORDERING INFORMATION

EXAMPLE: EVO 35/18 8AR 120

Series	Color temperature	Nominal lumen values	Aperture/Trim color	Distribution	Finish	Voltage
EVO	27/ 2700 K	18 1800 lumens	8AR Clear	(blank) 1.0 s/mh	(blank) Semi-specular	120
	30/ 3000 K	22 2200 lumens	8PR Pewter	VND Very narrow (0.43 s/mh)	LD Matte diffuse	277
	35/ 3500 K	29 2900 lumens	8WTR Wheat	ND Narrow (0.52 s/mh)	LS Specular	347²
	41/ 4100 K		8GR Gold	MD Medium (0.80 s/mh)		
			8WR¹ White	WD Wide (1.1 s/mh)		

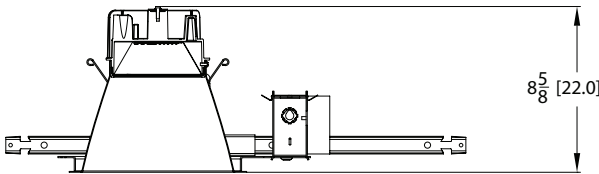
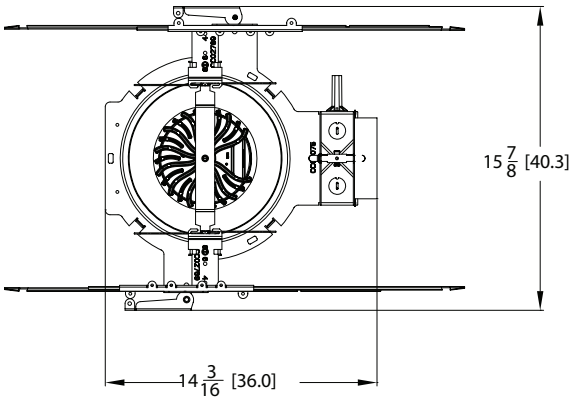
Driver	Options
(blank) ³ 0-10V dimming driver. Minimum dimming level 10%	SF Single fuse
ECOS2^{4,5} Lutron® Hi-Lume® 2-wire forward-phase dimming driver. Minimum dimming level 1%	RRL RELOC®-ready luminaire connectors enable a simple and consistent factory installed option across all ABL luminaire brands. Refer to RRL for complete nomenclature.
ECOS3^{3,4} Lutron® Hi-Lume® 3-wire or EcoSystem® dimming driver. Minimum dimming level 1%	NEPP⁶ Interface for Sensor Switch® nLight® network provided with integral power supply. Refer to TN-623-01 .
	NSD⁶ Sensor Switch® nLight® one 5A relay with one 0-10 VDC dimming output; requires bus power, such as nPP16 power pack. Refer to nSP5-D .
	TRW⁷ White painted flange
	TRBL Black painted flange
	EL⁸ Emergency battery pack with integral test switch
	ELR⁸ Emergency battery pack with remote test switch
	CP⁹ Chicago plenum

ACCESSORIES order as separate catalog numbers (shipped separately)

SCA8	Sloped ceiling adapter. Degree of slope must be specified (10D, 15D, 20D, 25D, 30D). Ex: SCA8 10D. Refer to TECH-190 .
CTA4-8 YK	Ceiling thickness adapter (extends mounting frame to accommodate ceiling thickness up to 2").
GVRT	Vandal-resistant trim accessory. Refer to TECH-200 .
ISD BC	0-10V wallbox dimmer. Refer to ISD-BC .
nSP5 D ER KIT	Sensor Switch nLight secondary relay and dimming pack device used to switch and dim luminaires powered via an emergency circuit. Refer to nSP5 D ER KIT .

DIMENSIONAL DATA

All dimensions are inches (centimeters) unless otherwise noted.



Aperture: 7-7/8 (20.1)
Ceiling Opening: 8-7/8 (21.5)
Overlap Trim: 9-1/4 (23.5)

ELECTRICAL

WATTAGE CONSUMPTION MATRIX

LUMENS	WATTAGE	LUMENS per WATT
2900	49	64
2200	39	63
1800	35	55

NOTES

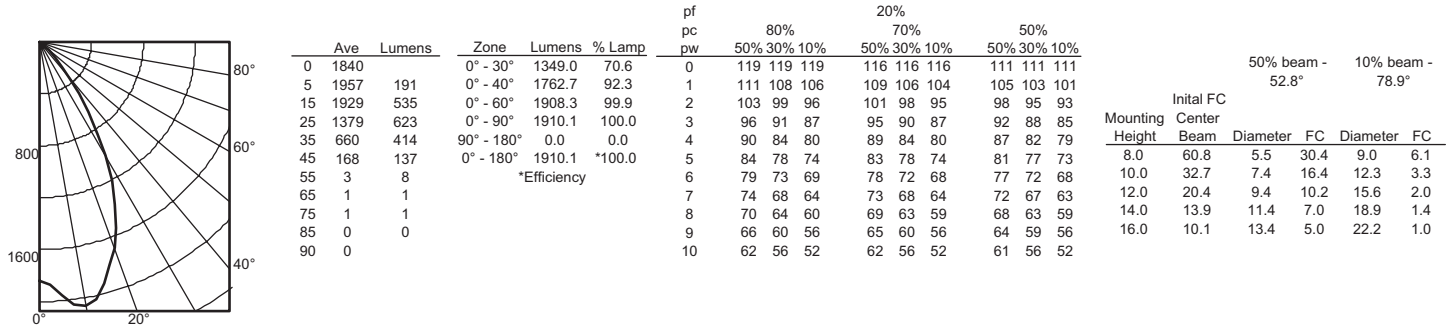
ORDERING NOTES

1. Not available with finishes.
2. Not valid with emergency options, i.e., EL and ELR.
3. Refer to [TECH-240](#) for compatible dimmers.
4. Not available with NEPP option.
5. 120V only.
6. For Emergency generator/inverter applications order non-nLight-enabled fixture and NSP5 D ER KIT as an accessory. Refer to [NSP5 D ER KIT](#).
7. Not available with white reflector.
8. For dimensional changes, refer to [TECH-140](#). Not available with CP option. Not available with 347V.
9. Not available with EL or ELR options.

Distribution Curve	Distribution Data	Output Data	Coefficient of Utilization	Illuminance: Single Luminaire 30" Above Floor
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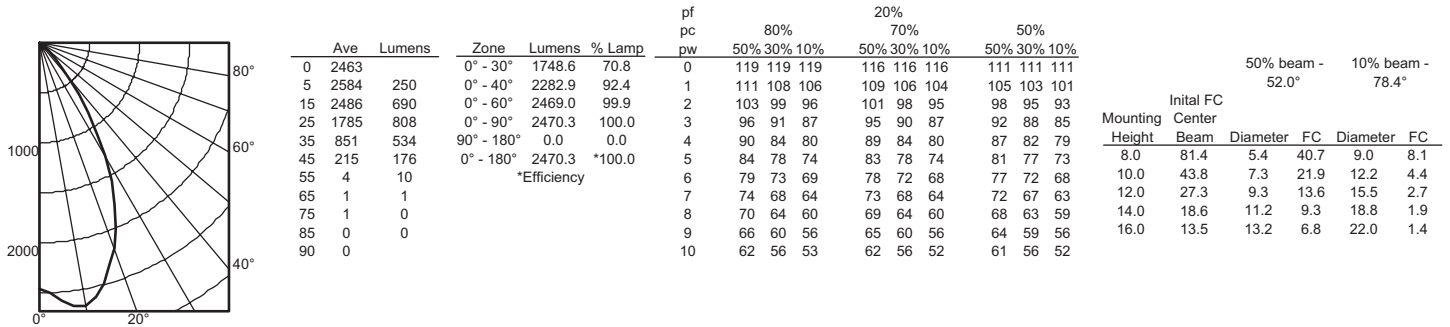
EVO 35/18 8R LS

INPUT WATTS: 34.6, DELIVERED LUMENS: 1910.1, LM/W=55.2, 1.0 S/MH, TEST NO. LTL21102



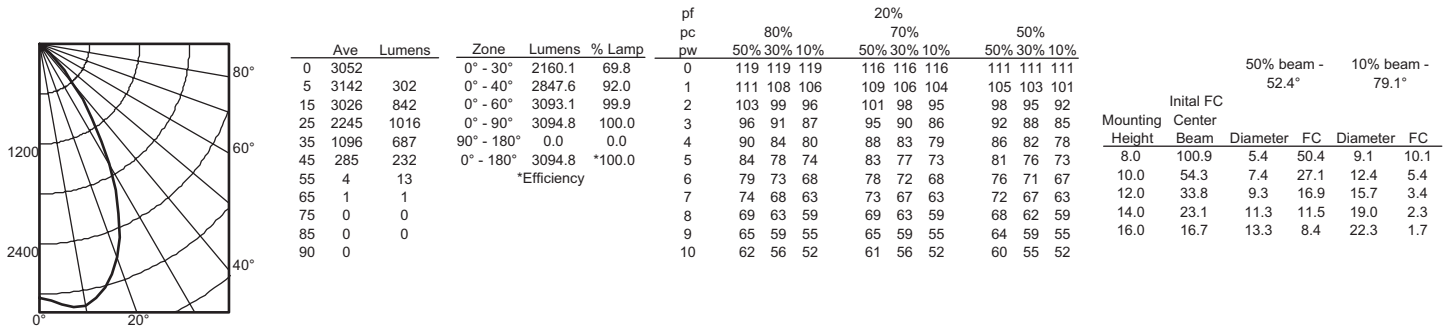
EVO 35/22 8R LS

INPUT WATTS: 39.3, DELIVERED LUMENS: 2470.3, LM/W=62.9, 1.0 S/MH, TEST NO. LTL21112



EVO 35/29 8R LS

INPUT WATTS: 48.6, DELIVERED LUMENS: 3094.8, LM/W=63.7, 1.0 S/MH, TEST NO. LTL21108



PHOTOMETRY NOTES

- Tested in accordance with IESNA LM-79-08.
- Tested to current IES and NEMA standards under stabilized laboratory conditions.
- Actual performance may differ as a result of end-user environment and application.
- Actual wattage may differ by +/- 10% when operating between 120-277V +/- 10%.
- CRI: 83 typical.
- Consult factory or IES file for microgroove baffle, black cone or other photometric reports.

Job:
Type:
Notes:

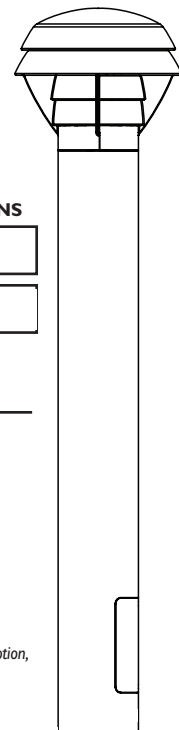


Bollard LED

Page 1 of 3

Round Full Cutoff Bollard BR840 Series, Including Motion Response

The Philips Gardco LED Bollard family features the round full cutoff bollard, the BR840 series. This sleek series features LEDs concealed below cast louvers to provide down lighting for landscape and pathway applications. The BR840 series features 4" diameter extruded aluminum shafts. Available mountings include the standard shaft, with a welded cast base mounted firmly to anchor bolts. The BR840 series also is available with a galvanized steel base tenon reinforced shaft (BR842) for applications requiring additional support, such as schools. BR840 series bollards provide full cutoff performance.



PREFIX	HEIGHT	LED CONTROL	LED SELECTION	LIGHTED COVERAGE / LED WATTAGE	VOLTAGE	FINISH	OPTIONS

Enter the order code into the appropriate box above. Note: Gardco reserves the right to refuse a configuration. Not all combinations and configurations are valid. Refer to notes below for exclusions and limitations. For questions or concerns, please consult the factory.

PREFIX	HEIGHT	LED CONTROL
BR840	Standard Shaft	42" 36" 30"
BR841	Head Only	7.1"
BR842	School Bollard Reinforced Shaft with Galvanized Steel Tenon	42" 36" 30"

CWL	Constant Wattage Full Light Output Full wattage and light output only.
DIM	0 - 10V Dimming Dimming controls by others. The dimming driver utilized permits dimming control via a potentiometer (by others) or via 0 - 10V control (by others.) Consult installation instructions for more information.
MR	Motion Response Featuring two (2) integral Passive Infrared (PIR) sensors. In the absence of motion, luminaires operate at 20% of normal power and light output (80% dimmed.) See page 3 for more information on Motion Response luminaires.

LED SELECTION	LIGHTED COVERAGE / LED WATTAGE	VOLTAGE
CW 5,700°K, 75CRI	<u>360° lighted louvers - 14 LEDs</u>	UNIV 120V through 277V, 50hz to 60hz input.
NW 4,000°K, 75CRI	360 -10 10 watts at 225mA	
	360 -18 18 watts at 350mA	
WW 3,000°K, 75CRI	360 -26 26 watts at 500mA	

Note: A variation of LED wattage (+/- 8%) may occur due to LED manufacturer's forward volt specification and ambient temperature.

180° lighted louvers - 7 LEDs^{1,2} (Provides reduced backside light.)

180 -10	10 watts at 450mA
180 -18	18 watts at 700mA

1. 180° achieved by populating half of LEDs.
2. 180° distributions include an internal house side shield to limit the amount of backlight.

FINISH	OPTIONS
BRP Bronze Paint	OC Optional Color Paint Specify RAL designation as ex: OC-RAL7024.
BLP Black Paint	SC Special Color Paint Specify. Must supply color chip.
WP White Paint	
NP Natural Aluminum Paint	PCB³ Button Photocontrol
	SPR Surge Protection for 120V through 277V Input meeting ANSI C62.41.2

3. Not available in BR841.

1611 Clovis Barker Road, San Marcos, TX 78666
(800) 227-0758 (512) 753-1000 FAX: (512) 753-7855 sitelighting.com

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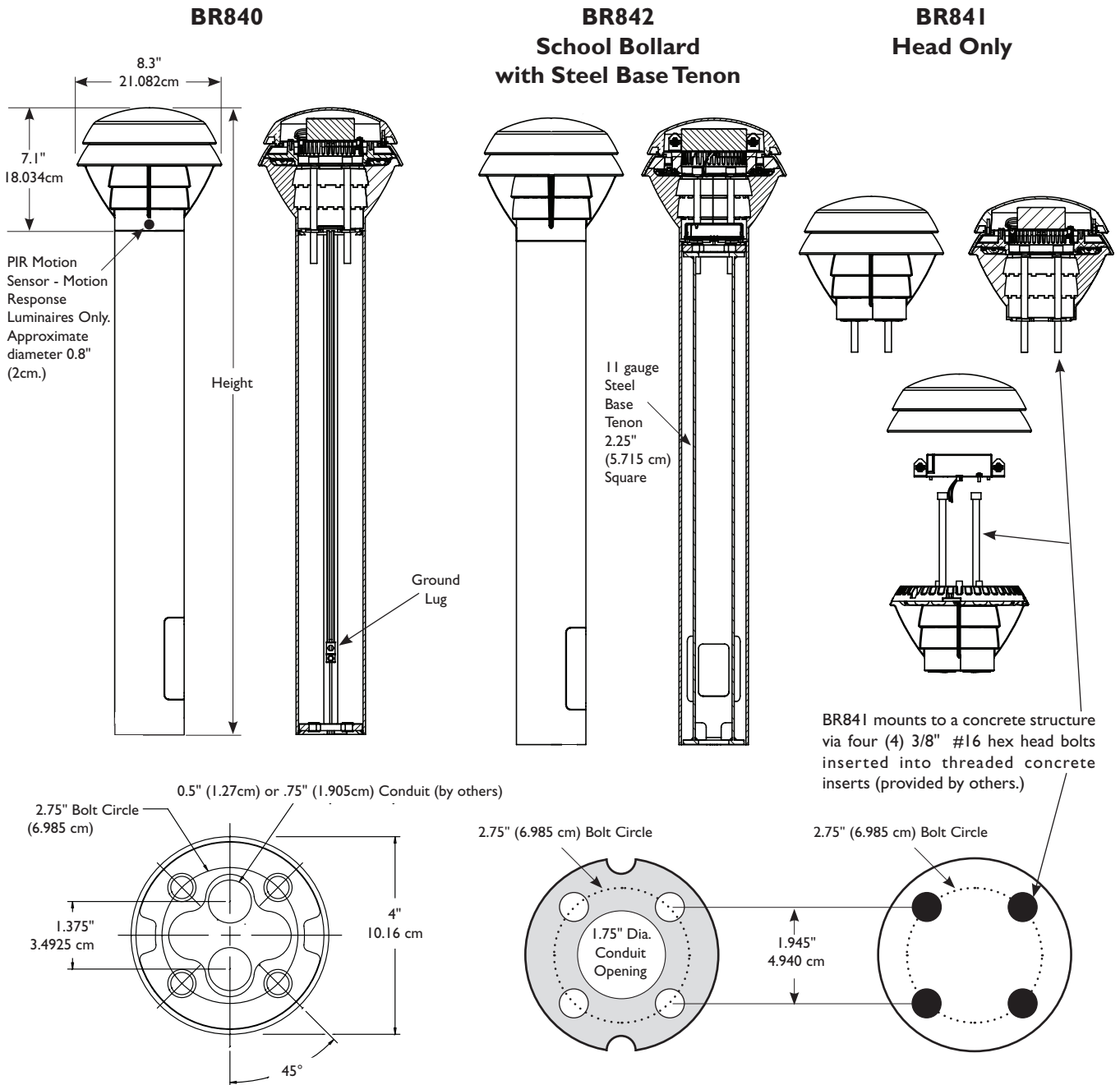
G200-020/0113

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DIMENSIONS



NOTE: Factory supplied template must be used when setting anchor bolts. Philips Gardco will not honor any claim for incorrect anchorage placement from failure to use factory supplied templates.

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G200-020/0113

PHILIPS





Bollard LED

Round Full Cutoff Bollard

BR840 Series, Including Motion Response

SPECIFICATIONS

UPPER HOUSING: Die cast aluminum upper housing featuring shielding louvers to provide down light.

LOWER HOUSING:

BR840 : The lower housing assembly consists of a .140" wall by 4" diameter high strength 6063-T6 extruded aluminum section incorporating a flush, weather-tight gasketed hand hole cover.

BR41 : Louver head assembly is suitable for attachment to architectural elements (by others).

BR842 : The lower housing assembly consists of a .140" wall by 4" diameter high strength 6063-T6 extruded aluminum section, incorporating a flush, weather-tight gasketed hand hole cover, for placement over the galvanized steel tenon support structure. Tenon support structure is made from a .12" thick wall, 11 gauge steel, 2.25" square tube, welded to top and bottom round steel support plates. The steel tenon support structure includes an opening aligned with the aluminum shaft hand hole to permit wiring. The entire steel tenon support structure is hot dipped galvanized after fabrication.

LED PERFORMANCE:

PREDICTED LUMEN DEPRECIATION DATA ⁴		
Ambient Temperature °C	Driver mA	L ₇₀ Hours ⁵
25 °C	225	230,000
	350	220,000
	450 / 500	165,000
	700	150,000
40 °C	225	212,000
	350	188,000
	450 / 500	150,000
	700	137,000

4. Predicted performance derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions.
5. L₇₀ is the predicted time when LED performance depreciates to 70% of initial lumen output.

OPTICAL SYSTEM: Philips Gardco LED Bollards feature advanced Philips Gardco LED technology, assuring maximized light output. LED arrays are replaceable.

ANCHORAGE:

BR840: Base assembly consists of an internal welded cast ring section that provides for mounting to the foundation with four (4) 3/8" X 8" X 1 1/2" anchor bolts on a 2 3/4" bolt circle.

BR841: The luminaire head mounts to a concrete structure utilizing four (4) 3/8" #16 hex head bolts inserted into threaded concrete inserts (provided by others) on a 2 3/4" bolt circle.

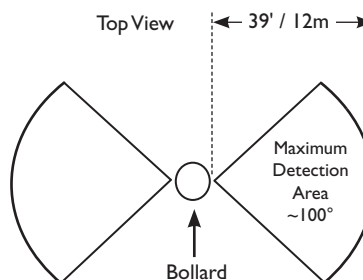
BR842: A high strength steel mounting tenon, hot-dip galvanized after fabrication, is secured to the concrete footing with (4) 3/8" x 8" x 1 1/2" anchor bolts on a 2 3/4" bolt circle.

IP RATING: IP66 is the rating for the optical compartment.

ELECTRICAL: The LED power supply is located within the bollard head. Bollards accept from 120 Volts through 277 Volts, 50hz to 60 hz, input. supply. The LED driver is located in the upper dome. LED drivers are replaceable. LEDs provided as specified. Power factor is not less than 90%. Luminaires consume 0.0 watts in the off state.

MOTION RESPONSE LUMINAIRES: Each Motion Response (MR) luminaire includes two (2) Panasonic EKMB1203112 Passive Infrared (PIR) sensors to detect motion. When motion is not detected for a 5 minute period, luminaires automatically dim to 20% power and light, gradually over a 2 minute period. Once Motion is detected, luminaires immediately ramp to full power and light output until motion is not detected for a 5 minute period.

PIR sensors are able to detect motion in the approximate patterns shown below:



Note: Motion sensors rely on specific zonal crossings to detect motion. It is possible for a person to directly approach the bollard motion sensor without crossing between zones until 15 feet from the motion sensor. The actual motion detection distance may vary based on specific application characteristics.

LUMINAIRE FINISH: Each luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured textured powdercoat finish

LABELS: All luminaires bear UL or CUL (where applicable) Wet Location labels.

WARRANTY: Philips Gardco luminaires feature a 5 year limited warranty. Philips Gardco LED luminaires with LED arrays or modules feature a 5 year limited warranty covering the LED arrays or modules. LED drivers carry a 5 year limited warranty. See Warranty Information on www.sitelighting.com for complete details and exclusions.

FULL CUTOFF PERFORMANCE: Full cutoff performance means a luminaire distribution where zero candela intensity occurs at an angle at or above 90° above nadir. Additionally, the candela per 1000 lamp lumens does not numerically exceed 100 (10 percent) at a vertical angle of 80° above nadir. This applies to all lateral angles around the luminaire.

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