VII.B.

690 Chesterfield Pkwy W ● Chesterfield MO 63017-0760
Phone: 636-537-4000 ● Fax 636-537-4798 ● www.chesterfield.mo.us

Planning Commission Staff Report

Project Type: Architectural Specialty Lighting Package

Meeting Date: December 10, 2018

From: Cassie Harashe, Planner

Location: West of Schoettler Rd and south of Green Valley Drive

Description: **Logan College of Chiropractic Lighting Package (2018)**: Architectural Specialty Lighting Package for a 112 acre tract of land zoned "NU" Non-Urban District located west of Schoettler Rd, and south of Green Valley Drive (20R430046).

PROPOSAL SUMMARY

The request is for a lighting package specifically for the uplighting of the legs of the Bell Tower Structure within the Logan College of Chiropractic development.

The applicant is requesting to install two light fixtures at the base of each leg to shine LED lights upward illuminating the legs and crossmember sections of the Bell Tower. While the applicant

Figure 1: Aerial & Surrounding areas

has stated that most of the time fixtures will utilize white lights, they are requesting to utilize the full spectrum of colors for special events on campus.

HISTORY OF SUBJECT SITE

According to St Louis County records, the first buildings were built in 1960. Over the years, there have been many amendments to the site, including an Amended Site Plan approved in 2005 for the addition of the amphitheater.

In 2017, the applicant submitted an application for Amended Architectural Elevations. This application originally included light fixtures located at the bottom of the crossmembers for uplighting of this section of the Bell Tower. During the review process, the applicant moved the lights closer to the roof of the Bell Tower to downlight the cross member sections. At the October 11, 2017 meeting, the Architectural Review Board (ARB) recommended approval of the downlighting with the following conditions:

1. The lights remain static, with no flashing, moving, or changing for a period of no less than 24 hours.
2. All housing, attachments, and accessories match the color of the tower exactly.

Figure 2: Existing Colored Lighting on Bell Tower

These conditions were included in a revised narrative that was submitted to the Planning Commission for their review at their October 23, 2017 meeting. The Planning Commission approved Amended Architectural Elevations for the downlighting of the Bell Tower. The lights have since been installed and are being utilized on the campus. A photo of the Bell Tower with blue lighting can be seen in Figure 2.

Since their approval in 2017, the City of Chesterfield has established a Lighting Package application and procedure. The applicant is proposing to comply with the previous recommendations from the ARB that the lights will remain static, with no flashing, moving, or changing for a period of no less than 24 hours, and that the housings will be integrated within the landscaping planters at the base of the tower. Earlier this year, the applicant applied to add a landscaping planter around the base of the Bell Tower; permits have been issued, but the work has not yet been completed. This planter box will house the proposed lighting fixtures.

LAND USE AND ZONING OF SURROUNDING PROPERTIES

Direction	Zoning	Land Use
North	"R2" Residence District	Baxter Lakes Addition 2 Subdivision
East	"R1A" Residence District	Chesterfield Trails Subdivision
South	"NU" Non-Urban District; and "R1A" Residence District	No Subdivision ward 4; and Brook Hill Estates Subdivision
West	"R2" Residence District	Claymont Manor Subdivision

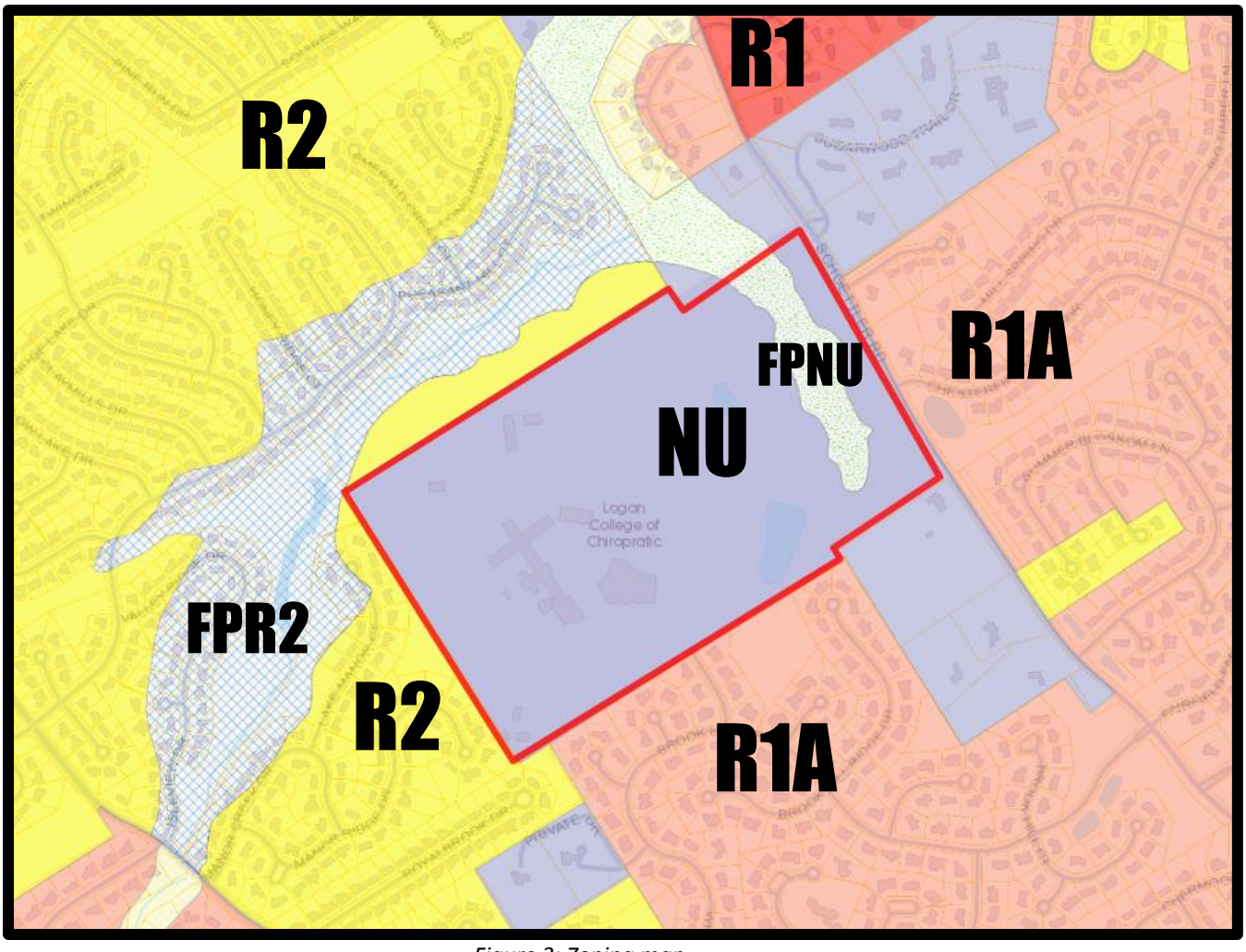


Figure 3: Zoning map

COMPREHENSIVE PLAN ANALYSIS

The City of Chesterfield Comprehensive Land Use Map delineates the subject site within the "College" land use designation.

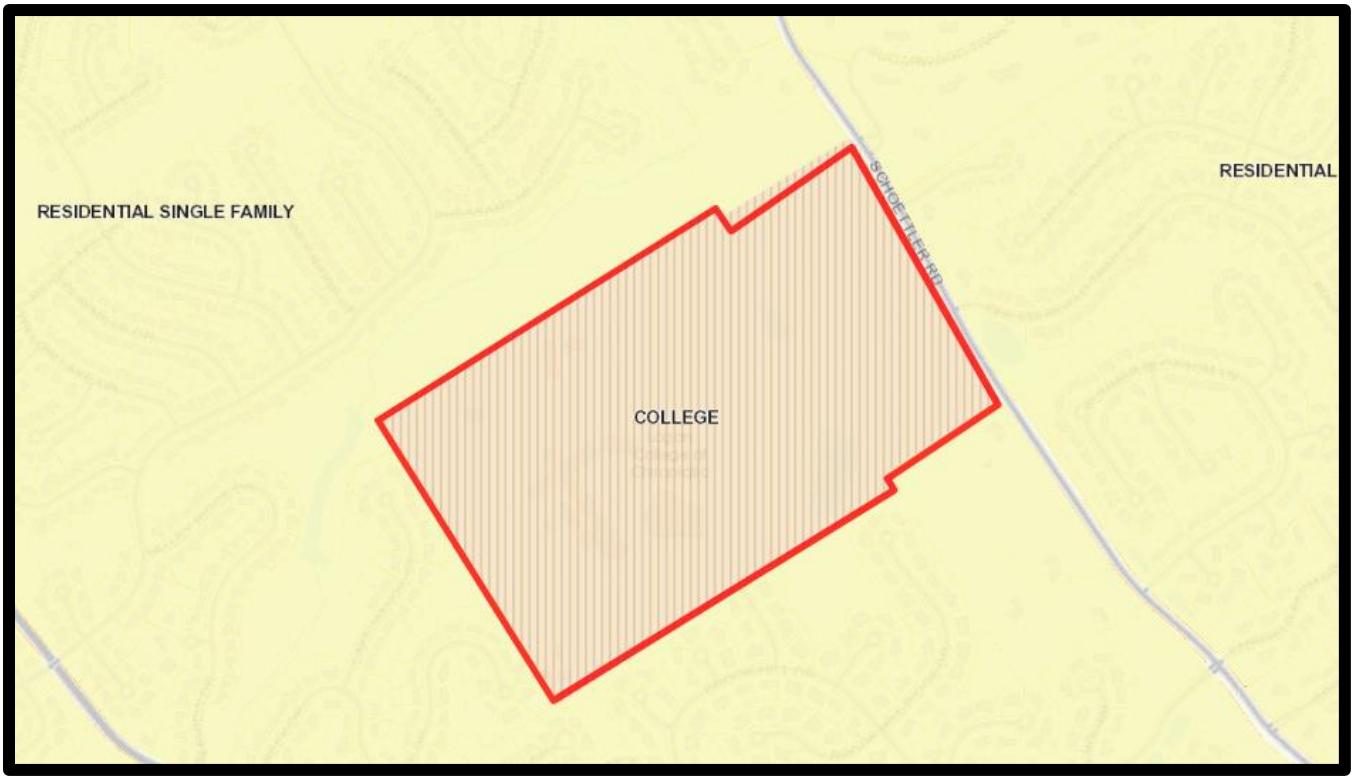


Figure 4: Future Land Use Plan

The Comprehensive Plan provides several plan policies in relation to the subject site.

> *3.3.1 Development Between Nodes - Development along arterial roads between the well-defined nodes of commercial development should include single-family residential or institutional uses that do not require rezoning.*

This use is a permitted use in the "NU" Non-Urban District.

> *3.1.2 Buffering of Neighborhoods - Substantially buffer the neighboring residential uses through site design, vehicular access, building materials, tree preservation, & setbacks.*

The main part of the campus is located a significant distance from the surrounding neighborhoods, however, as will be discussed later, the Bell Tower is visible from offsite due to the topography in the surrounding areas.

STAFF ANALYSIS

The Unified Development Code allows for Architectural Specialty Lighting Packages (Sec. 31-04-03.C) to provide comprehensive, complementary and unified architectural specialty lighting throughout a single development. This is the first applicant to utilize the specialty lighting package application. The review factors include color, intensity, impact on surrounding properties, and accentuation of architectural features of a development. Since this request is for specialty lighting specifically for the Bell Tower at Logan College of Chiropractic, any other lighting fixtures on the campus would have to comply with the regulations of the Unified Development Code.

The Code goes on to provide several considerations for Specialty Lighting Packages.

- Architectural specialty lighting should highlight and accentuate traditional building detailing and architectural features. Additionally, precise lighting applications should highlight distinctive architectural features.

The applicant has stated in their narrative statement that the proposed lighting of the legs would 'accentuate the architectural detailing of the crossmember sections.' The photometric plan (Figure 5) shows the highlighting of the crossmember sections.

- The color temperature of architectural specialty lighting should underscore the building materials and character. Also, when non-traditional lighting color is requested, changes in color shall be limited to one (1) change within any twenty-four (24) hour time period. Modifications to this standard shall require a 2/3 vote of the Planning Commission. Additionally, architectural specialty lighting should be unobtrusive in intensity and should not turn a building into an attention-getting device or blanket signage.

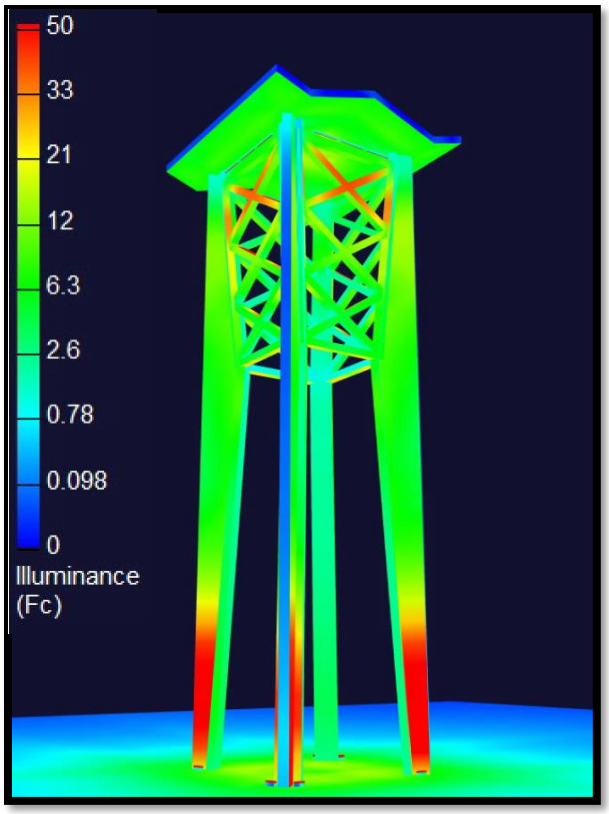


Figure 5: Proposed Color Photometric Plan

The color of the Bell Tower is white. The applicant has indicated that most of the time white lights will be used, but they would like to be able to utilize the full spectrum of colors to allow for campus events, such as 'pink for breast cancer awareness month, blue for Blues or red for St. Louis Cardinal rally days.' The code states that color temperature should underscore the building materials and colors, however the applicant is requesting the full spectrum of colors and therefore a large spectrum of color temperatures. The applicant has provided several photos of the tower lit in a variety of colors for reference.

Figure 6: Dual Color Lighting on Bell Tower

The applicant has indicated the lights will be static in nature and will not change within a 24 hour period. However, due to the LED nature of the lights, this single change could cast two or more colors on the tower at one time. The photos submitted by the applicant show examples of two colors on the tower at the same time (Figure 6).

The light levels are indicated on the color photometric plan (Figure 5), which have footcandles that range from 50 foot candles, at the base of the legs and upper crossmember sections, down to 0 footcandles on the edge of the roof to indicate no sky glow will be emitted. A large portion of the tower will be lit in in the 6 to 12 footcandle range.

- All proposed light fixtures should be permanently mounted.

The applicant has indicated that the fixtures will be permanently mounted.

- Architectural specialty lighting shall not interfere with or obscure the public's capacity to receive information, or cause visual confusion by interfering with pedestrian or vehicular traffic. Architectural specialty lighting shall conform to the character of the community, enhance the visual harmony of development, and preserve the public health, convenience, welfare and/or safety within the City of Chesterfield by maintaining the high aesthetic quality of the community.

Due to the location of the tower being centrally located on the campus and its significant distance from any roads (Figures 1 & 9), the proposed lighting should not interfere with or obscure the public's capacity to receive information, or cause visual confusion by interfering with pedestrian or vehicular traffic. However, the 80' tall Bell Tower is visible from adjacent properties and roadways.

The applicant has also stated that the fixtures will be integrated into the landscaping beds and will coordinate with the existing site lighting components. As of this writing, the applicants have not finalized the planting selections for the planter box. A variety of perennials in a variety of heights are being considered. The planters can be seen at the base of the tower in Figure 7 and the location of the lights can be seen in Figure 8. The landscaping is intended to screen the light fixture housings from view, and does not impact the light that will be cast upwards.

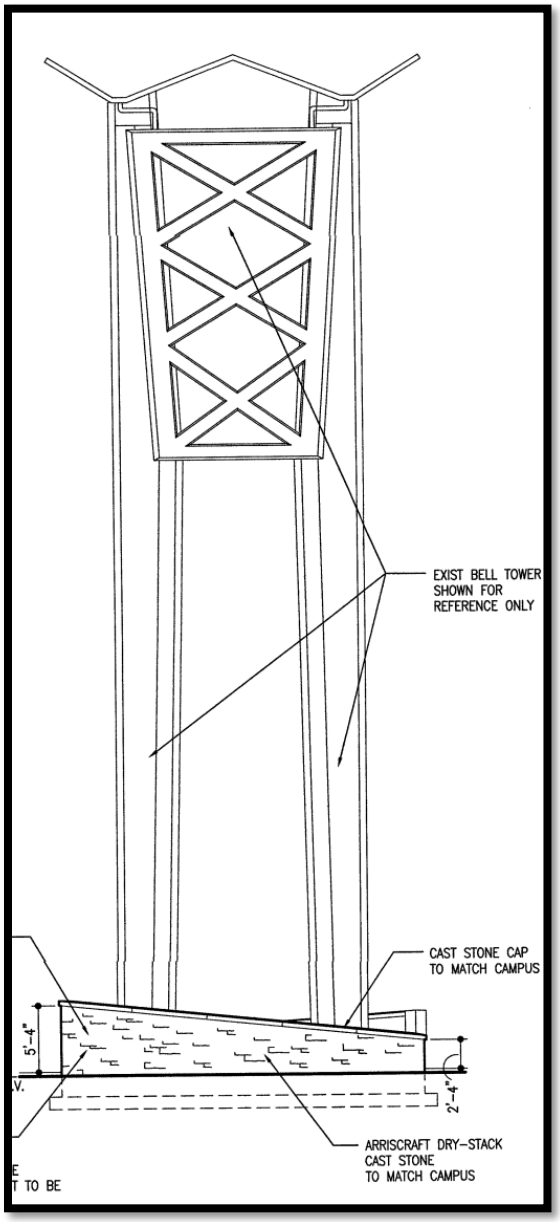


Figure 7: Bell Tower with Planter Box

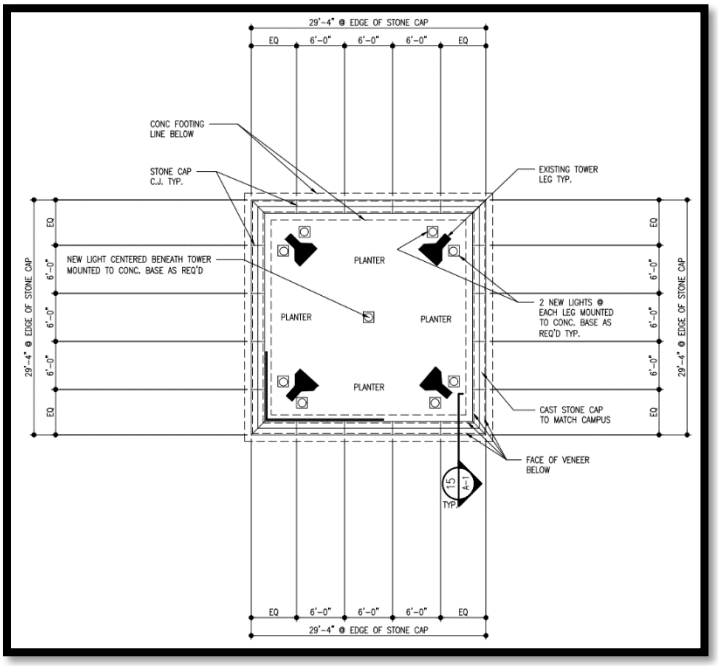


Figure 8: Planter Box with Light Detail

- Consideration of flexibility in architectural specialty lighting criteria is based on a number of review factors, including, but not limited to, the physical impact of the proposed architectural specialty lighting package, the quality of the proposed architectural specialty lighting package, and mitigation of unfavorable conditions such as excessive lighting, light spillover, height, and other related conditions and potentially negative impacts. However, in no instance shall architectural specialty lighting applications result in light trespass at the property line.

As seen in the photometric rendering of the tower in Figure 5, the lights would be pointed upward and placed at an angle to ensure no off site glare, and would be shielded by the tower itself. Below is a Figure 9 which shows the height of various buildings and the distance the Bell Tower is located from property lines. While there is a significant distance between the tower and the adjacent properties, the significant grade change does make the Bell Tower visible from off-site.

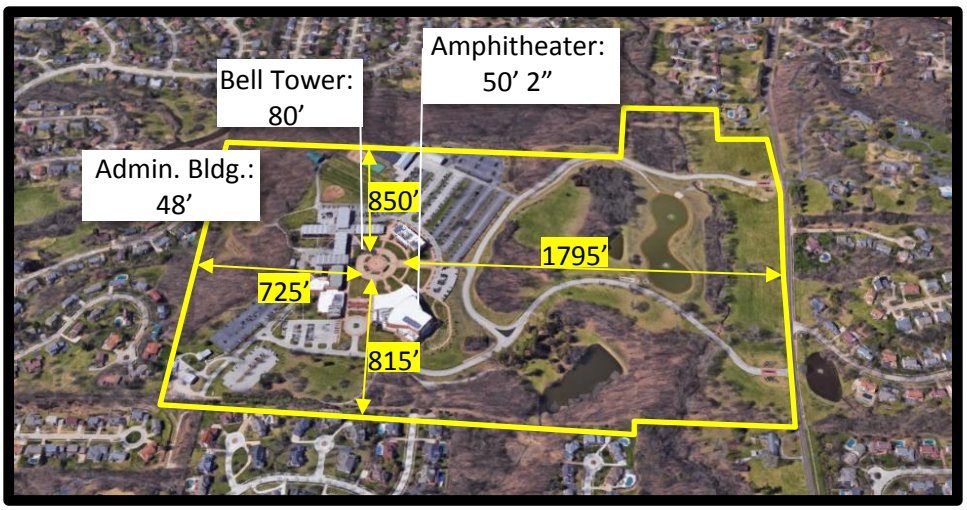


Figure 9: Structure heights and distance of the tower to the property line

Architectural Review Board (ARB):
The project was reviewed by the Architectural Review Board (ARB) on November 8th, 2018. The Board, overall had no issue with the addition of the new lights, but was concerned about the multiple colors being displayed on the tower at one time. There was significant discussion regarding ways to limit the use of multiple colors throughout the year, ultimately, the Board asked the Applicant to submit a calendar with their proposed lighting schedule for Planning Commission review. A motion to forward the submittal to the Planning Commission with a recommendation for approval with two conditions was passed by a vote of 4-0. The conditions were as follows:

1. The new lighting must be one color unless approved by a schedule outlined by the Planning Commission.

2. The lights must remain static with one change in 24-hour period, and one color of lights unless approval has been granted.

As stated in the response attached, the applicant is amenable to the conditions as recommended by the ARB. The applicant has also supplied their proposed calendar for review.

STAFF RECOMMENDATION

Applications of specialty lighting can be permitted if they are found to be architecturally integrated with the building design and harmonious with the surrounding area. As such, Staff is requesting action on the Lighting Package for Logan College of Chiropractic.

MOTION

The following options are provided to the Planning Commission for consideration relative to this application:

1) "I move to approve (or deny) the Lighting Package for Logan College of Chiropractic, as presented."

2) "I move to approve the Lighting Package for Logan College of Chiropractic with the following recommendations…" (Conditions may be added, eliminated, altered or modified)

Attachments

1. Applicant's Response
2. Proposed Lighting Calendar
3. Architectural Review Packet Submittal

LOGAN
UNIVERSITY

1851 Schoettler Road, Chesterfield, MO 63017
(636) 227-2100 | www.logan.edu

November 14, 2018

Sent via Email to charashe@chesterfield.mo.us

Re: Logan College of Chiropractic – Lighting Package 2018

Dear Cassie,

Logan is pleased with the recommendations from the Architectural Review Board listed.

The lights will remain static with one change in 24-hour period.

Attached is our holiday color light schedule.

As you can see on our attached schedule most days will be single colors, with the exception of four holidays, Memorial Day, Independence Day, Veterans Day and Labor Day, the lights will be red, white and blue. Christmas will be red and green.

Sincerely,

Bill Wharton,

Plant Superintendent

Logan University
Tower's Light Schedule

Holiday/Event	*Color*	*Month/Days*
Alzheimer Day	Purple	September - day before, of and day after
Arthritis	Blue	May-day before, of and after annual walk
Breast Cancer Awareness	Pink	October- one week
Cancer	Purple	February-one week
Cultural Diversity week of UN Human Rights	Orange	March-one week
Earth Day	Green	April-day before, of and day after
Hunger	Orange	November-week after Thanksgiving
Prostate Cancer	Blue	September - one week
Sexual Assault	Light Blue	April-one week
Hanukkah	Blue	Eight Days of Hanukkah - Nov or Dec.
Christmas	Green, Red	December-week before and week after
Thanksgiving	Gold	November-week of Thanksgiving
Halloween	Orange	October- day before, of and day after
St. Patrick Day	Green	March - day before, of and day after
Veterans Day	Red, White, Blue	November - day before, of and day after
Memorial Day	Red, White, Blue	May-day before, of and day after
Independence Day	Red, White, Blue	July - day before, of and day after
Labor Day	Red, White, Blue	August - day before, of and day after
NCH Health	Red	October -day before, of and day after
Cardinal Baseball Opening Day	Red	April - day of only
Blues Hockey Opening Day	Blue	October - day of only

LOGAN UNIVERSITY

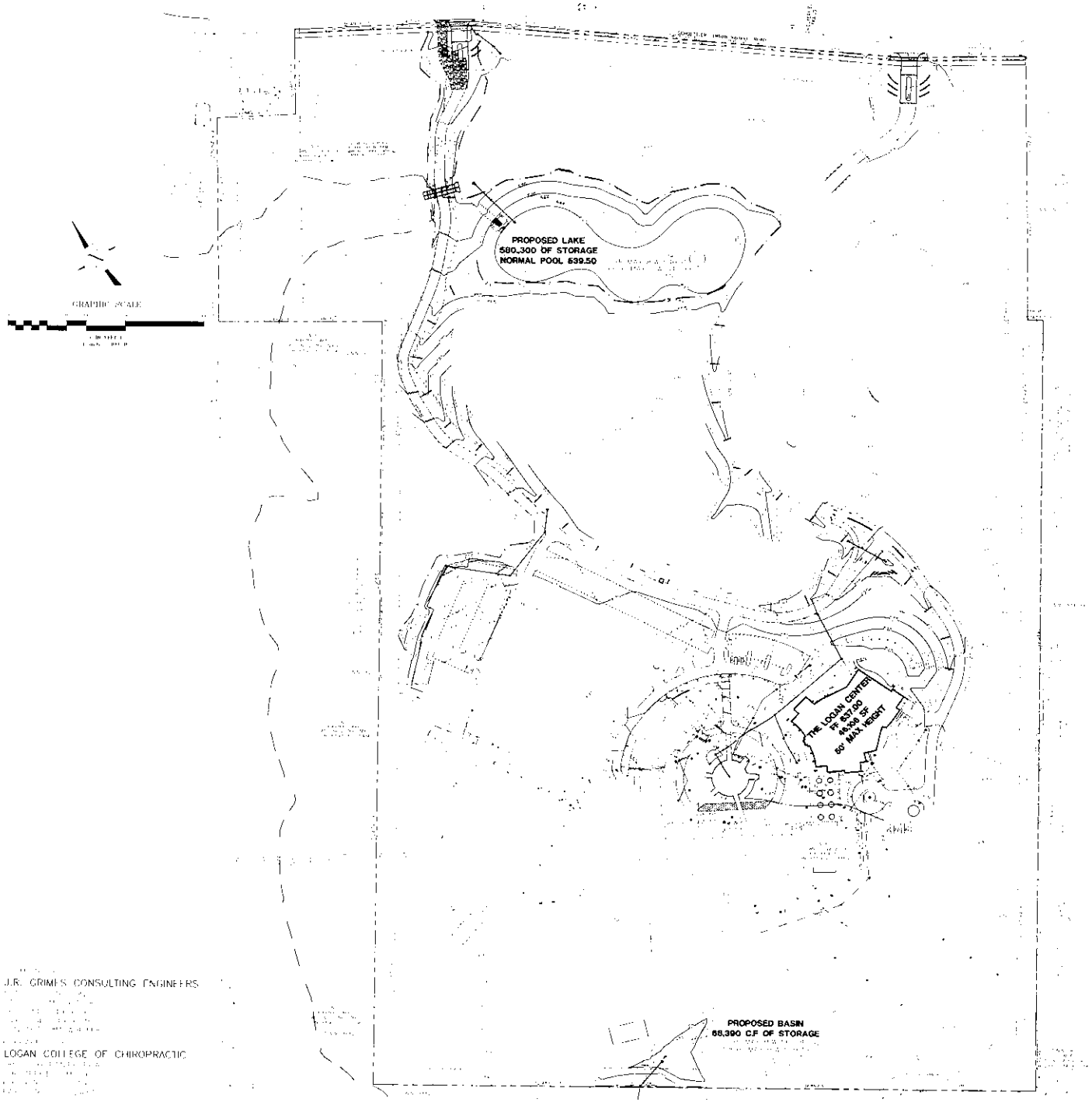
1851 Schoettler Road, Chesterfield, MO 63017
(636) 227-2100 www.logan.edu

Tower Lights,

Logan University's bell tower was constructed in 1960 by its predecessor, MaryKnoll Seminary. The accent lights at the bottom of the tower were upgraded in 2007 when new flood lights were also added. Logan is proposing to change these accent lights to LED lighting to be installed in the third phase of the restoration project. The second phase is under way and the planter is currently being added at the base of the bell tower.

Phase three will include updating two fixtures on either side of each leg at the base of the bell tower to LED fixtures. Each lighting component will project directed LED lighting onto each tower leg. This light will illuminate the inside portion of the legs as well as accentuate the architectural detailing of the crossmember sections. The design intent is that the lighting will be captured by the existing canopy roof structure covering the bell tower. All lighting components will be permanently mounted, and the light fixtures will be architecturally integrated into the landscaping and will coordinate with the existing style of site lighting components.

This proposed lighting will not only save energy but will also act as a marketing tool for Logan. With the new LED lights encompassing the entire spectrum of colors, it gives Logan the opportunity to use different lighting for different events. For example, pink for breast cancer awareness month, blue for the Blues or red for the St. Louis Cardinal rally days. These special events will be occasional and normally the lights will be white, and on a dusk-to-dawn controller, as they are now. The lights will remain static, with no flashing, moving or changing for a period of no less than 24 hours. Also, all housing, attachments, and accessories match the tower exactly.



GRAPHIC SCALE

J.R. GRIMES CONSULTING ENGINEERS

LOGAN COLLEGE OF CHIROPRACTIC

LEGAL DESCRIPTION

GENERAL NOTES

CONTRACTOR MUST CONTACT DIG-RITE (1-800-344-7483) FOR UTILITY LOCATIONS BEFORE PERFORMING ANY EXCAVATION ON THE SITE

GREENSPACE CALCULATIONS

PARKING COUNT WITH NEW LEARNING CENTER

SKY EXPOSURE PLANE

M.S.D. BASE MAP R-20
LOC. NO. 20R 43 0037
ZIP CODE 63121

THOMAS ROOF INC. ARCHITECTS
KPFF CONSULTING ENGINEERS
JR GRIMES CONSULTING
WELLS TAO & ASSOCIATES
GEO ENGINEERING
G & H ENGINEERING CORP
AMERIN FIRE PROTECTION
AUSTIN TAO ASSOCIATES

ARCH-TECT
STRUCTURAL ENGINEER
CIVIL ENGINEER
MECHANICAL ENGINEER
ELECTRICAL ENGINEER
PLUMBING ENGINEER
FIRE PROTECTION ENGINEER
LANDSCAPE ARCHITECT

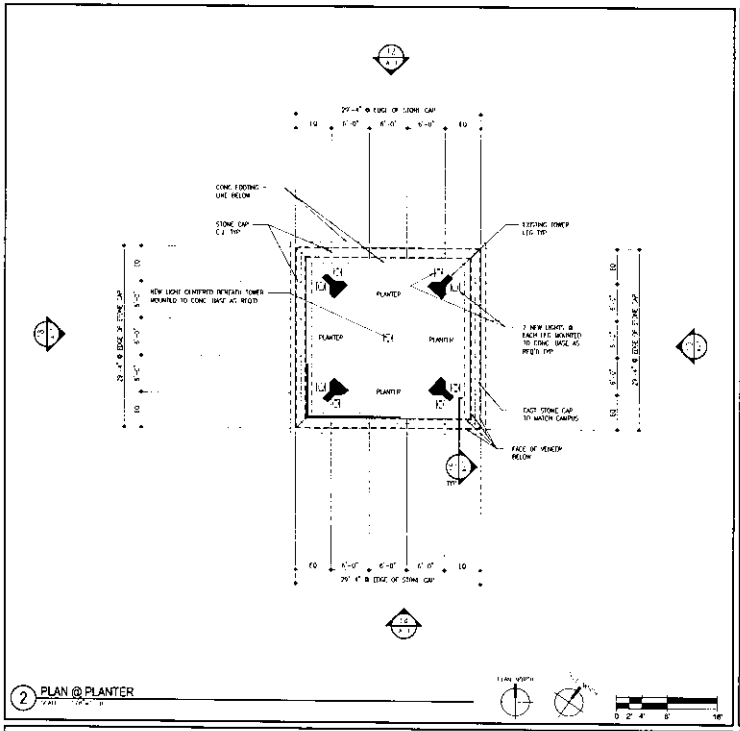
HENRY SPELPY

LOGAN COLLEGE OF CHIROPRACTIC
THE PURSER CENTER
(THE LOGAN CENTER)
1851 Schoettler Road

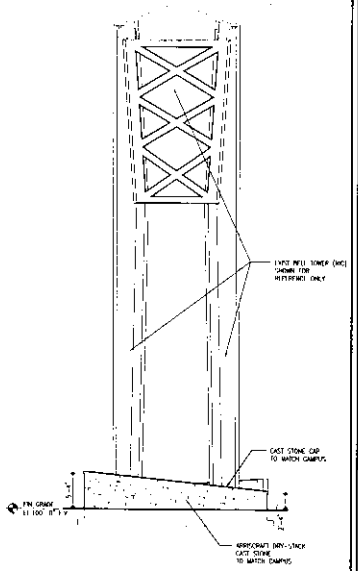
DATE: 08-
REVISIONS

DWG. BY
PROJECT NO. 05-003
SHEET NO.

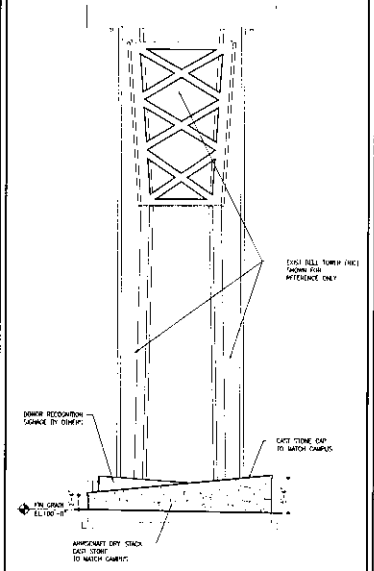
C3.0
OVERALL SITE PLAN



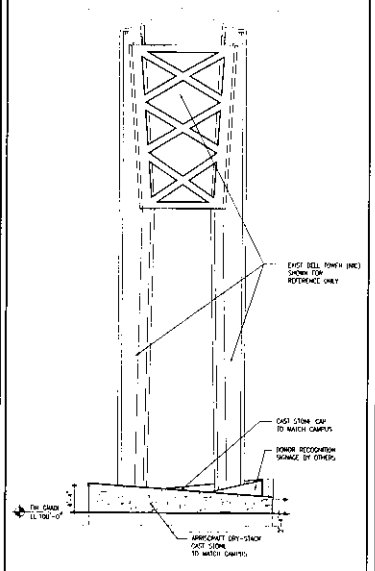
2 PLAN @ PLANTER



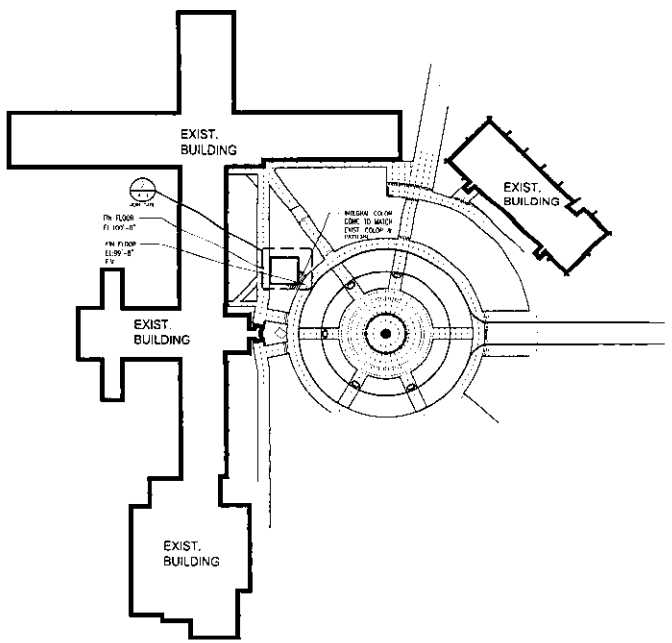
10 EAST ELEVATION



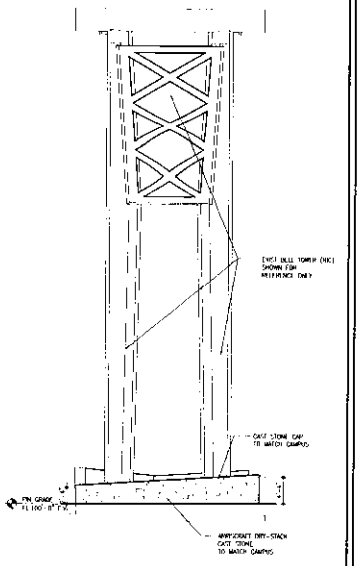
14 SOUTH ELEVATION



18 WEST ELEVATION



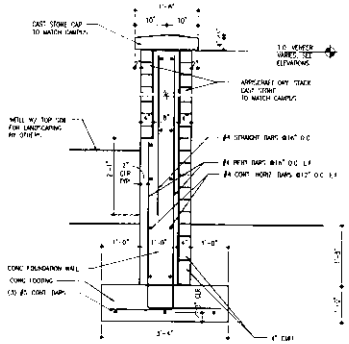
4 SITE PLAN



12 NORTH ELEVATION

CONCRETE NOTES:

1. CONCRETE SHALL HAVE A MIN 28 DAY COMPRESSIVE STRENGTH OF 4,000 PSI
2. MAX WATER CEMENT RATIO=0.45
3. MAX SLUMP = 4" +/- 2"
4. MAX. AGGREGATE SIZE = 1-1/2"
5. CONCRETE SHALL CONTAIN 6% AIR ENTRAINMENT
6. STANDARD ACI 318-08 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
7. PROVIDE CORNER BARS TO MATCH HORIZ REINFORCING AT BOTH INSIDE AND OUTSIDE FACES AT ALL CORNERS AND INTERSECTIONS OF CONCRETE WALLS AND FOOTINGS.
8. LAP ALL REINFORCING W/ CLASS B SPLICES
9. REINFORCING BARS ARE TO BE ASTM A615- GRADE 60 (fy=60 KSI)
10. START ALL CONCRETE POUR MIN OF 2 DAYS.



15 SECTION DETAIL

LOGAN UNIVERSITY
BELL TOWER BASE
1851 SCHOETTLER ROAD
CHESTERFIELD, MISSOURI 63017

ARCHITECT

TRI - ARCHITECTS

I HEREBY SPECIFY PURSUANT TO RSMo 327.411 THAT THIS DRAWING SHEET IS

TRI Architects of the Possible

DATE: 06-20-

REVISIONS

DWG. BY

PROJECT NO 09-0

SHEET NO.

A-1

PLAN, ELEVATIONS & DETAILS

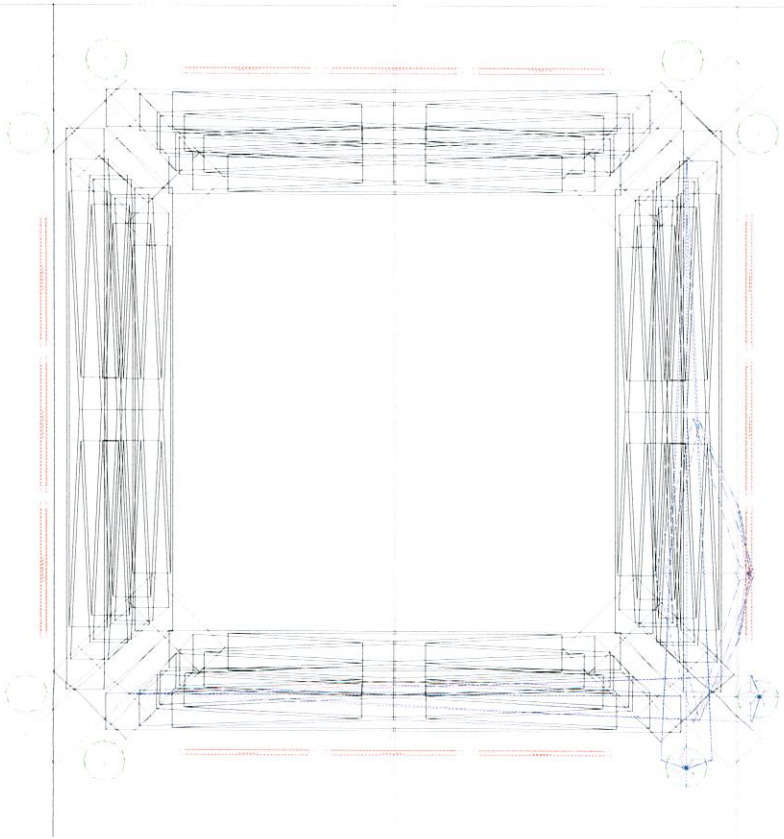
PHOTOMETRIC CALCULATION

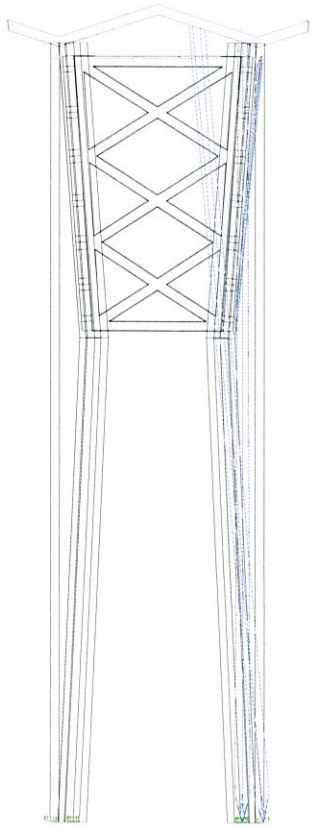
Client :

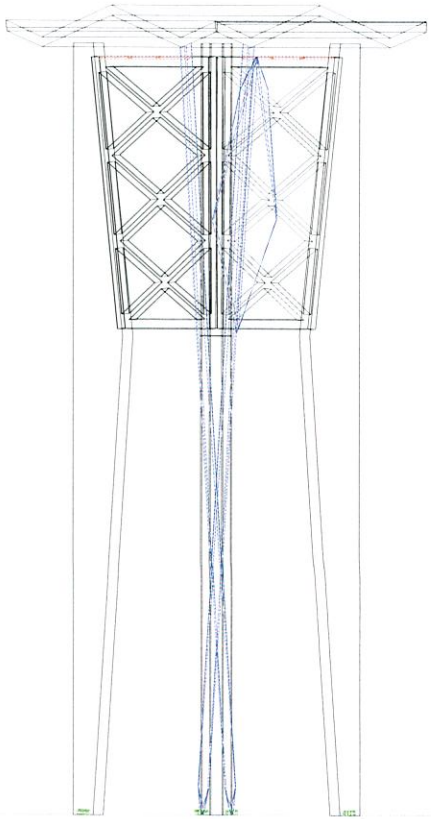
Project name : LP2017-33706-LOGAN UNIVERSITY BELL TOWER-CHESTERFIELD-MO

PROPOSED

NOTE: These calculations are for guidance only. Results depend on provided information. Any change in dimensions, colors, textures or other properties could affect results. Measured values may differ from calculated values due to calculation methods, component perfomace, field conditions, etc.







Luminaire Schedule

Symbol	Qty	Label	Arrangement	Lumens/Lamp	LLF	Description
	12	A	SINGLE	N.A.	0.950	LOG-HO-120-48-40K-10x30-(XX)
	8	B	SINGLE	N.A.	0.950	LBG-120-40K-NS-(XX)

21/08/2018
HG-R4
PHO-FOR-002-EN-R1

Lumenpulse, 1751 Richardson, Suite 1505, Montreal (Quebec) Canada H3K 1G6 1.877.937.3003 P. 514.937.3003 F. 514.937.6289
info@lumenpulse.com www.lumenpulse.com

lumenpulse™ GROUP

PHOTOMETRIC CALCULATION

Client :

Project name : LP2017-33706-LOGAN UNIVERSITY BELL TOWER-CHESTERFIELD-MO

PROPOSED

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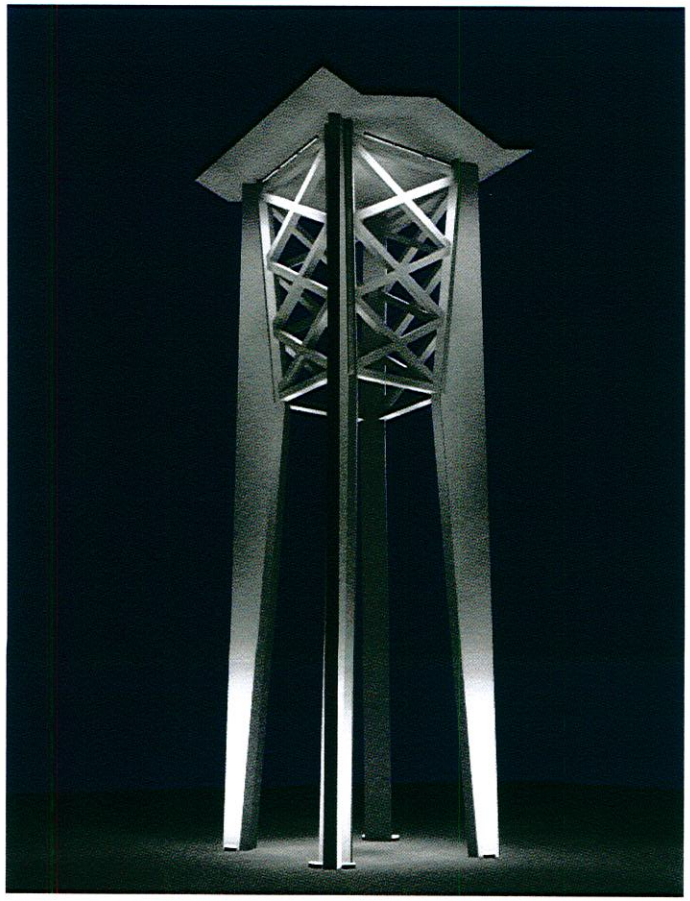
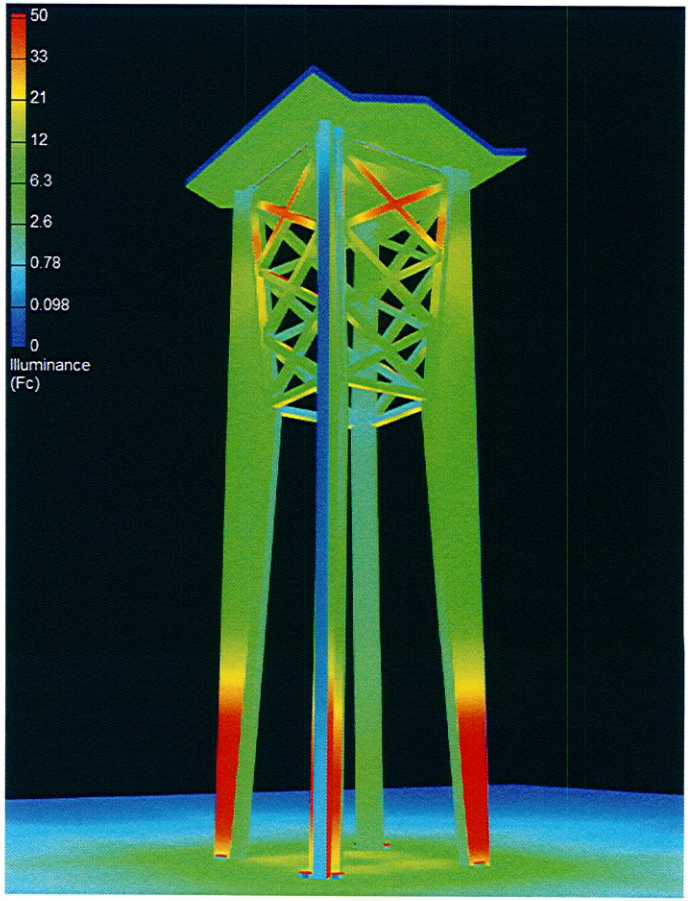




Lumenpulse, 1751 Richardson, Suite 1505, Montreal (Quebec) Canada H3K 1G6 1.877.937.3003 P. 514.937.3003 F. 514.937.6289
info@lumenpulse.com www.lumenpulse.com

lumenpulse™ GROUP

Specification Sheet

lumenbeam™

GRANDE
COLOR CHANGING

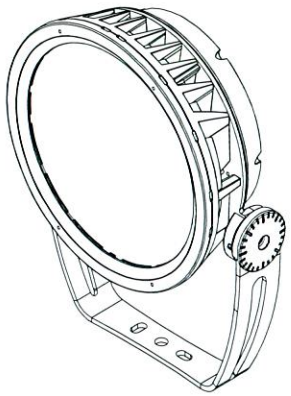
Client _____ **Project name** _____

Order# _____ **Type** _____ **Qty** _____

FEATURES AND BENEFITS

Physical :

- Low copper content high pressure die-cast aluminum housing
- Heavy aluminum formed yoke (standard yoke included)
- Stainless steel hardware
- Silicone sealing devices
- Clear tempered glass lens
- Dual chamber design for heat management and ease of maintenance
- Electro-statically applied polyester powder coat finish
- 10.90 kg / 24 lbs
- EPA: Front = 1.60 sq. ft. / 0.15 sq. m. Side = 0.97 sq. ft./ 0.090 sq. m.
- IP66
- IK09 rated
- Meets 3G ANSI C136.31 Vibration standard for bridge applications
- Corrosion-resistant coating for hostile environments*



c UL us CE RoHS **IK09**

lumentalk

Performance :

- 3,716 delivered lumens and 134,713 candelas at nadir (RGB full output, 6° optic)
- 3,328 delivered lumens and 190,032 candelas at nadir (RGBW full output, 6° optic)
- 2,522 delivered lumens and 126,585 candelas at nadir (RGBA full output, 6° optic)
- Color mixing options: RGB (3 channels), RGBW or RGBA (4 channels)
- 72 LEDs for RGB color mixing option (36 LEDs per board)
- 48 LEDs for RGBW and RGBA color mixing options (24 LEDs per board)
- 6°, 10°, 20°, 40°, 60° optics available
- Lumen maintenance 120,000 hrs [L70 @ 25°C]
- Lumen measurements comply with LM - 79 - 08 standard
- Resolution per board or per fixture (configured with LumenID V3 software & DMX/RDM)
- Operating temperatures: -25° C to 50° C [-13F to 122F]

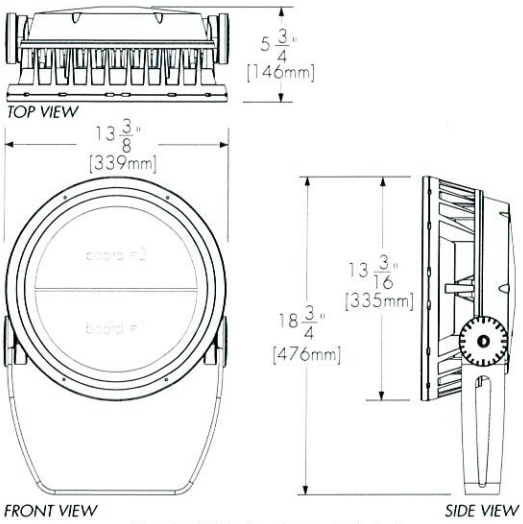
Photometric Summary
(RGBW color mix, full output)

	Delivered Output [lm]	Intensity [peak cd]
VN	3,328	190,032
NS	3,534*	117,684*
NF	3,412*	23,830*
FL	3,332*	8,903*
WFL	2,987*	2,899*

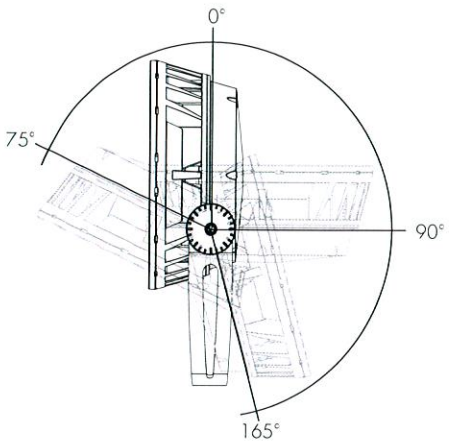
Photometric performance is measured in compliance with IESNA LM-79-08.
*Estimated. Consult Lumenpulse website for the latest IES and LDT files.

Electrical :

- Line voltage luminaire for 100 to 277V
- Power and data in 1 cable, 3ft/1m cord standard (#16-5), other lengths available
- 100 watts
- Control options: Lumentalk or DMX/RDM enabled



Standard Yoke (as shown, included)



Standard Yoke Mounting
Adjustable pivot limits

* Use only when exposed to salt spray and harsh chemicals. This option is not required for normal outdoor exposure!

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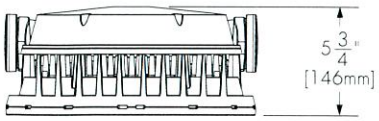
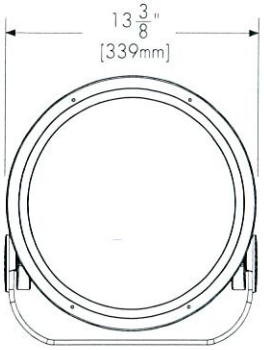
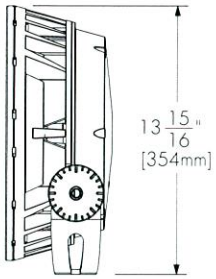
2017.03.30
GS - R11

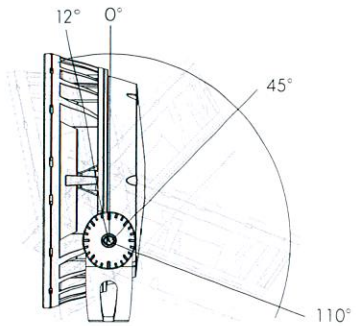
MOUNTING OPTION



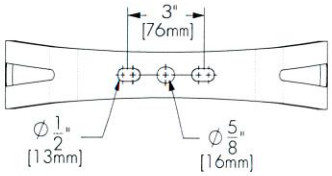


SY
Short Yoke mounting





Short Yoke mounting
adjustable pivot limits



Standard and Short Yoke mounting
holes pattern

OPTICAL OPTIONS
***Factory installed**

LSLH
Linear Spread Lens
Horizontal distribution
(not adjustable on site)

LSLV
Linear Spread Lens
Vertical distribution
(not adjustable on site)

Factory installed, available for VN to FL optics .
See Optical Accessories for field adjustable spread lens.

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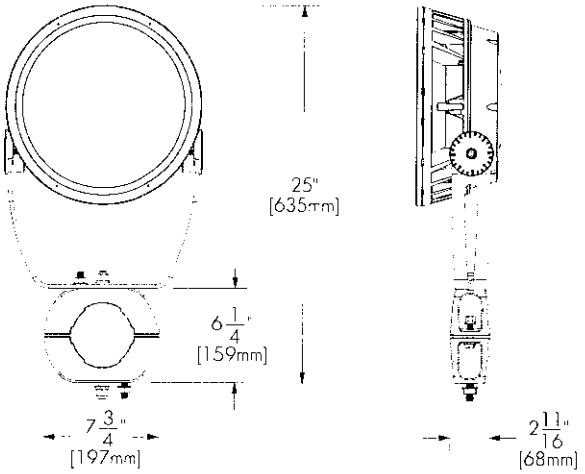
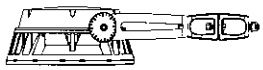
ACCESSORIES

Order separately

Mounting Accessories



PM4 Round Pole Mounting Accessory Shown
*Consult factory for square pole section.



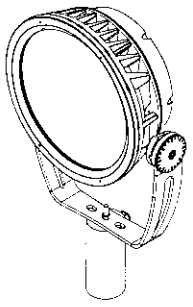
PM4-1, PM4.5-1, PM5-1
Round Pole Mounting accessory
single fixture

PM4-2, PM4.5-2, PM5-2
Round Pole Mounting accessory
twin fixtures

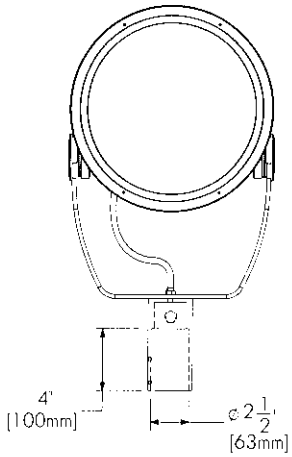
When **PM4-2, PM4.5-2 or PM5-2** are specified, one bracket assembly is supplied per 2 fixtures unless otherwise specified.

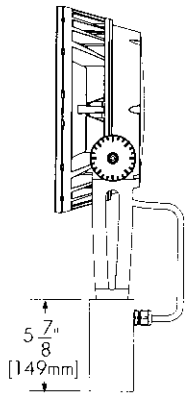
	PM4	PM4.5	PM5
For pole Ø	4"± 1/16' 101.6 mm± 1.6mm	4.5'± 1/16' 114.3mm ± 1.6mm	5' ± 1/16" 127mm ± 1.6mm

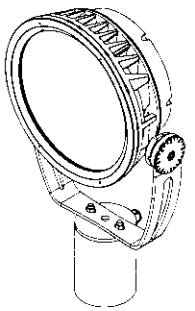
*Consult factory for other pole diameters.



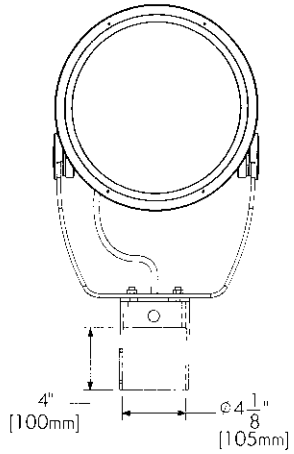
TN2
Tenon adapter
to fit on 2 3/8" O.D. tenon

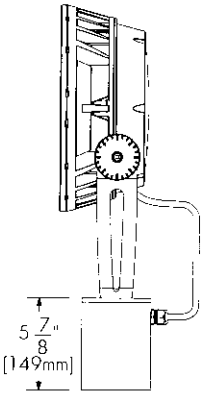






TN4
Tenon adapter
to fit on 4" O.D. tenon





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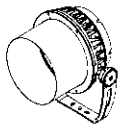
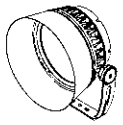
ACCESSORIES - continued
Order separately.
Note: installed optical accessories will affect the maximum pivot limits for each mounting option, consult factory for details.

Optical Accessories:

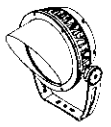
LBG-SN-___-BK Snoot accessory. Please specify desired exterior finish from the list below. Interior surface painted black.



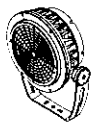
LBG-SNW-___-BK Snoot Wide accessory. Please specify desired exterior finish from the list below. Interior surface painted black.



LBG-VS-___-BK Visor accessory. Please specify desired exterior finish from the list below. Interior surface painted black.



LBG-WG-___ Wire Guard accessory. Please specify desired exterior finish from the list below.



LBG-LSLA-___ Linear Spread Lens Adjustable accessory. Please specify desired exterior finish from the list below.

Available finishes:

BK - Black Sandtex
BRZ - Bronze Sandtex
SI - Silver Sandtex
WH - Smooth white
BKTX - Textured black
BRZTX - Textured bronze, non-metallic
GRATX - Textured medium gray
GRNTX - Textured green
WHTX - Textured white
CC - Custom color and finish (please specify RAL color)[1]

Accessory combinations:

+	Snoot	Snoot Wide	Visor
Linear Spread Lens Adjustable	YES	YES	YES
Wire Guard	YES	NO	YES

Accessory combinations must be ordered together on a single line.
Ex: A Snoot + Wire Guard combination order code is **LBG-SNWG-BK-BK.**

Notes:

[1] North American RAL colors specified with RAL number only are provided with a smooth/high-gloss finish. Please consult factory for other RAL textures and glosses, or to match alternate color charts. Final color matching results may vary.

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ACCESSORIES - continued
Order separately

Control Systems:

LTO2 Lumentouch is a wall mount DMX 512 controller keypad.

LCU Lumencue is a USB / mini SD DMX 512 controller.

LID LumenID is a diagnostic and addressing DMX 512 controller.
It must be specified on all DMX applications.
Refer to LID specification sheet for details.

LID-LT LumentalkID is a diagnostic and addressing controller.
It must be specified for all Lumentalk (LT) applications.
Refer to LID-LT specification sheet for details.

LTN Lumentone is a simple pre-programmed DMX 512 controller with a push button rotary dial and live feedback.

Control Boxes:

CBX DMX/RDM control box.
Up to six power and data outputs to fixtures or fixture runs.
Ethernet enabled option.
Refer to CBX specification sheet for details.

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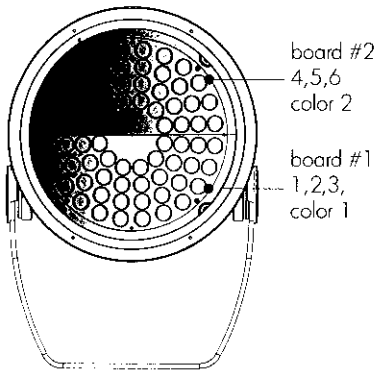
RESOLUTION DETAILS

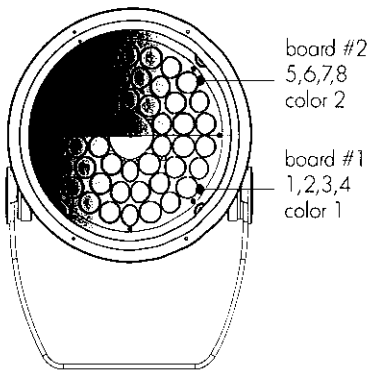
Fixture resolution can be configured on-site within the LumenID V3 software. A DMX/RDM enabled CBX is required.

Resolution per board: each board is addressed independently

DMX ADDRESSES:



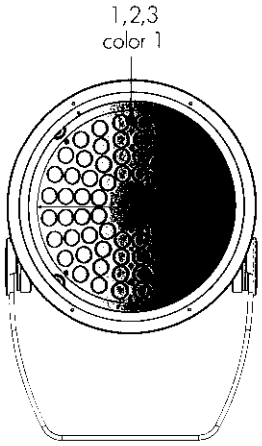
LBG RGB
COLOR MIXING OPTION



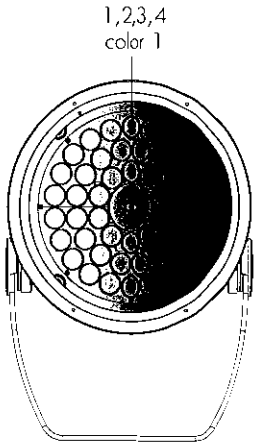
LBG RGBW, LBG RGBA
COLOR MIXING OPTIONS

Resolution per fixture: each fixture is addressed independently

DMX ADDRESSES:



LBG RGB
COLOR MIXING OPTION



LBG RGBW, LBG RGBA
COLOR MIXING OPTION

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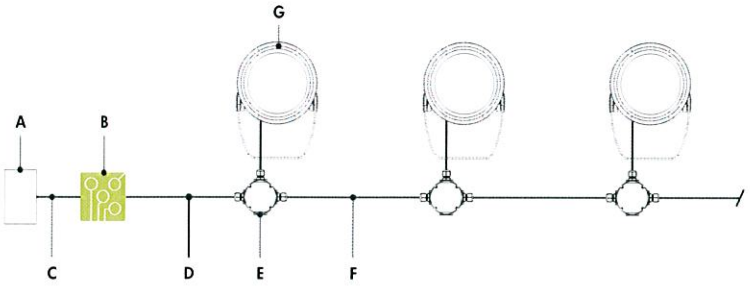
TYPICAL WIRING DIAGRAMS

Wiring Color Code

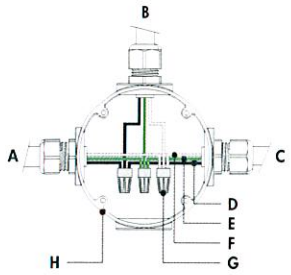
American Color Code	CE Color Code	USE
Green	Yellow/Green	Ground
Black	Brown	Live 100-277V
White	Blue	Neutral
Red/Purple	Black	0-10V / Data +
Orange	Grey	0-10V / Data -

Lumentalk (LT)



A - Third party DMX/RDM controller
B - Lumentranslator (LTL-DMX)
C - Data wiring (by others)
D - Power line (120-277V AC)
E - Junction box (by others)
F - Power wiring (by others)
G - Lumenbeam Grande (LBG-LT)

Lumentalk (LT) - Wiring detail



A - Power input (control over power line via Lumentalk system) or from previous fixture
B - To fixture
C - To next fixture
D - Line
E - Ground
F - Neutral
G - Wire-nuts (by others)
H - Junction box (by others)

Notes:
- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- Lumentalk enabled fixtures must be commissioned using LumentalkID software and a LID-LT. Consult factory for details.
- Maximum of 1 transmitter (Lumentranslator or Lumenlink) per system.
- No third party fixtures allowed on the same circuit.
- 1 DMX controller per Lumentalk network, maximum of 48 DMX channels per Lumentalk network (minimum step transition update rate is 1 second, minimum fade time between two colors is 1 minute). Consult factory for applications that require additional capabilities.
- 100 watts per fixture.

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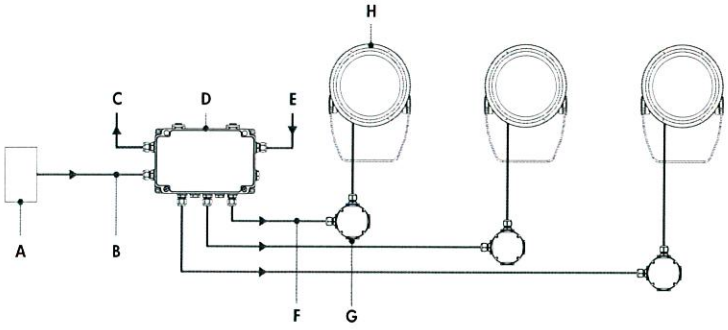
TYPICAL WIRING DIAGRAMS - continued

Wiring Color Code

American Color Code	CE Color Code	USE
Green	Yellow/Green	Ground
Black	Brown	Live 100-277V
White	Blue	Neutral
Red/Purple	Black	0-10V / Data +
Orange	Grey	0-10V / Data -

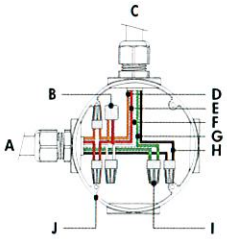
Maximum number of fixtures per run (based on 15A maximum, 16AWG cable, fixtures spaced 10ft [3m] on center, first fixture 50ft [15m] from CBX)				
Configuration/Voltage	**120V**	**208V**	**240V**	**277V**
50ft [15m] from CBX	10	16	18	21

Star Layout (DMX/RDM)



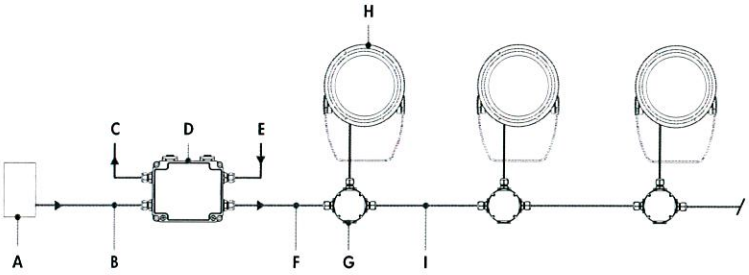
A - Third party DMX/RDM controller
B - Data input (Belden 9841 or equivalent, by others)
C - Data output to next CBX (optional, not isolated/not boosted)
D - CBX-ST
E - Power input (100-277V)
F - Power and data output to fixture (wiring by others)
G - Junction box (by others)
H - Lumenbeam Grande (LBG-DMX/RDM)

DMX/RDM - Wiring detail



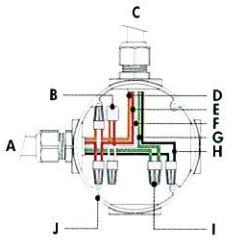
A - From CBX or previous fixture
B - Lumenterminator (use at the end of each run only)*
C - To fixture
D - Data -
E - Data +
F - Neutral
G - Ground
H - Line
I - Wire nuts (by others)
J - Junction box (by others)

Daisy Chain Layout (DMX/RDM)



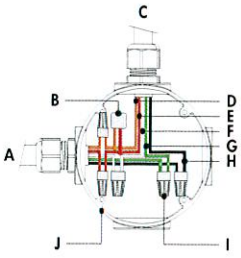
A - Third party DMX/RDM controller
B - Data input (Belden 9841 or equivalent, by others)
C - Data output to next CBX (optional, not isolated/not boosted)
D - CBX-DS
E - Power input (100-277V)
F - Power and data output to fixture (wiring by others)
G - Junction box (by others)
H - Lumenbeam Grande (LBG-DMX/RDM)
I - Power and data wiring (by others)

DMX/RDM - Wiring detail (first or middle of run)



A - From CBX or previous fixture
B - To fixture
C - Data +
D - Data -
E - To next/from previous fixture
F - Line
G - Ground
H - Neutral
I - Wire nuts (by others)
J - Junction box (by others)

DMX/RDM - Wiring detail (end of run)



A - From CBX or previous fixture
B - Lumenterminator*
C - To fixture
D - Data -
E - Data +
F - Neutral
G - Ground
H - Line
I - Wire nuts (by others)
J - Junction box (by others)

Notes:
- Consult factory for specific applications and maximum fixture count/cable length recommendations.
- Maximum of 32 DMX/RDM enabled fixtures per CBX output.
- Maximum of 4 DMX/RDM repeaters/CBX cascading in line.
- Maximum of 6 outputs per CBX-ST, maximum of 1output per CBX-DS.
- Maximum 3ft [1m] fixture cable length recommended for daisy chain layout.
- RGB color mixture option requires 3 DMX addresses. RGBW color mixture option requires 4 DMX addresses. RGBA color mixture option requires 4 DMX addresses.
- 100 watts per fixture.

* DMX terminator is required at the end of each run to maintain data integrity. (2x) DMX lumenterminator included per CBX-DS, (6x) DMX lumenterminator included per CBX-ST. See installation instructions for details.

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Specification Sheet

lumenbeam™

GRANDE
COLOR CHANGING

HOW TO ORDER

LBG	Select:	Select:	Select:	Select:	Select:	Select:	Select:	Select:
1	2	3	Board 1 / Board 2 4	5	6	7	8	9

1 | Housing:

LBG - Lumenbeam™ Grande

2 | Voltage:

100 - 100 volts
120 - 120 volts
208 - 208 volts
220 - 220 volts
240 - 240 volts
277 - 277 volts

3 | Colors and Color temperatures:

RGB - Additive red, green and blue
RGBW - Additive red, green, blue and white 4000K
RGBA - Additive red, green, blue and amber
Consult factory for color mix with Royal Blue, 3000K or other white color temperature LEDs.

4 | Optic (Please specify for each board):

VN - Very Narrow 6°
NS - Narrow Spot 10°
NF - Narrow Flood 20°
FL - Flood 40°
WFL - Wide Flood 60°
(cannot be combined with other optics)

5 | Optical Option:

LSLH - Linear Spread Lens Horizontal distribution[1]
LSLV - Linear Spread Lens Vertical distribution[1]

6 | Finish:

BK - Black Sandtex
BRZ - Bronze Sandtex
SI - Silver Sandtex
WH - Smooth white
BKTX - Textured black
BRZTX - Textured bronze, non-metallic
GRATX - Textured medium gray
GRNTX - Textured green
WHTX - Textured white
CC - Custom color and finish (please specify RAL color)[2]

7 | Control:

LT - Lumentalk[3]
DMX/RDM - DMX/RDM enabled[4]

8 | Option:

SY - Short Yoke
3GV - 3G ANSI C136.31 Vibration Rating
CRC - Corrosion-resistant coating for hostile environments
CE - CE (certification covers European Economic Area)

9 | Cable Length:

3FT - 3ft (standard length unless otherwise specified)[5]
10FT - 10ft
20FT - 20ft
30FT - 30ft
50FT - 50ft
70FT - 70ft
100FT - 100ft
1M - 1m (standard length unless otherwise specified)[5]
5M - 5m
10M - 10m
15M - 15m
20M - 20m
30M - 30m

Notes:

[1] Factory installed, available for 6° (VN) to 40° (FL) optics. See Optical Accessories for field adjustable spread lens. [2] North American RAL colors specified with RAL number only are provided with a smooth/high-gloss finish. Please consult factory for other RAL textures and glosses, or to match alternate color charts. Final color matching results may vary. [3] Lumentalk enabled fixtures must be commissioned using LumentalkID software and a LID-LT. Consult factory for details. [4] Fixtures set to by fixture resolution (consult the Resolution Details page for the number of DMX addresses). [5] Maximum 3ft [1m] fixture cable length recommended for daisy chain DMX applications with CBX-DS.

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