



## Application for URBAN DESIGN COMMITTEE Review

Department of Planning and Development Review  
Planning & Preservation Division  
900 E. Broad Street, Room 510  
Richmond, Virginia 23219  
(804) 646-6335

<http://www.richmondgov.com/CommitteeUrbanDesign>

### Application Type

- Addition/Alteration to Existing Structure  
 New Construction  
 Streetscape  
 Site Amenity

- Encroachment  
 Master Plan  
 Sign  
 Other

### Review Type

- Conceptual  
 Final

Project Name: \_\_\_\_\_

Project Address: \_\_\_\_\_

Brief Project Description (this is not a replacement for the required detailed narrative) : \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### Applicant Information

(on all applications other than encroachments, a City agency representative must be the applicant)

Name: \_\_\_\_\_ Email: \_\_\_\_\_

City Agency: \_\_\_\_\_ Phone: \_\_\_\_\_

Address: \_\_\_\_\_

Main Contact (if different from Applicant): \_\_\_\_\_

Company: \_\_\_\_\_ Phone: \_\_\_\_\_

Email: \_\_\_\_\_

### Submittal Deadlines

All applications and support materials must be filed no later than 21 days prior to the scheduled meeting of the Urban Design Committee (UDC). Please see the schedule on page 3 as actual deadlines are adjusted due to City holidays. **Late or incomplete submissions will be deferred to the next meeting.**

### Filing

Applications can be mailed or delivered to the attention of "Urban Design Committee" at the address listed at the top of this page. **It is important that the applicant discuss the proposal with appropriate City agencies, Zoning Administration staff, and area civic associations and residents prior to filing the application with the UDC.**

### UDC Background

The UDC is a ten member committee created by City Council in 1968 whose purpose is to advise the City Planning Commission on the design of projects on City property or right-of-way. The UDC provides advice of an aesthetic nature in connection with the performance of the duties of the Commission under Sections 17.05, 17.06 and 17.07 of the City Charter. The UDC also advises the Department of Public Works in regards to private encroachments in the public right-of-way.



August 20, 2015

Project: Kanawha Plaza Improvements

Subject: Project Narrative

Date: For UDC Submittal, for review at September 8, 2015 Hearing

Kanawha Plaza was built over the newly constructed RMA expressway around 1980. The Plaza has been the home of very successful music concerts, small festivals and passive activities. It is accented with a gushing stepped water fountain at the street corner. The Plaza is in a state of disrepair; the concrete steps are damaged and decayed, the existing trees are overgrown, declining, or irregular. The fountain plumbing and pumps have been updated and functions well, but the concrete structure requires major renovation.

The City of Richmond is partnering with a number of private sector corporation sponsors, including Dominion Resources, who are working collectively to improve Kanawha Plaza. The goal is to renovate the park to create a safe, user friendly, attractive and semi-active outdoor amenity.

The City's Planning Commission approved the design for the Park Design with the requirement that the Applicant present specifically highlighted design details to the Urban Design Committee for review and approval. Those include:

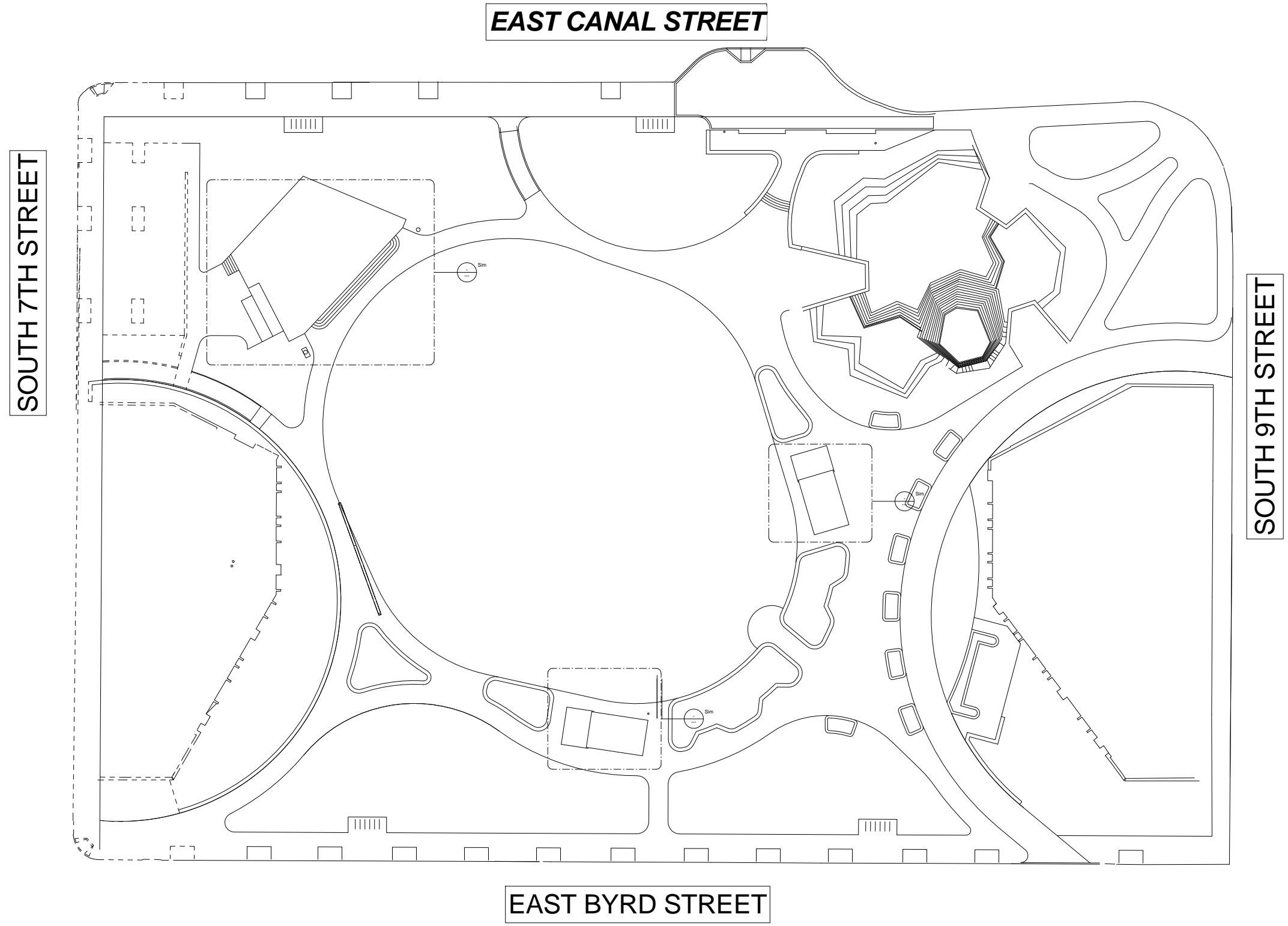
#### 1. **Stage Canopy Materials**

- a. Roofing: Metal standing seam, gray
- b. Structure:
  - i. Columns: 10" round steel tube, painted with embossed metal paint (hammered silver metallic gray) in round sonotube formed column bases that are at grade level
  - ii. Truss members: 6" round steel tube, same color
- c. Underside of canopy: wood grained veneer (MEG rain screen), color # 754 CS
- d. Letters (RVA): 2'(depth)X16'8"(h), 16 ga. Cor-ten steel (Weathering Steel A606-4/ A588) panels; color, natural oxidation (rust colored – to mimic and represent the rustic metallic look that would be associated with the industrial era of the Turning Basin) with stainless steel wave pattern at the bottom.
- e. Type WA Light Fixture in the ceiling is a 6" LED Downlight

#### 2. **Sun Shelters**

- a. Roofing: Metal standing seam, gray
- b. Structure:
  - i. Columns: 8" round steel tube, painted with embossed metal paint (hammered silver metallic gray) in granite veneer seat wall
  - ii. 6" steel joists and 8" steel beams
- c. Underside of canopy: wood grained veneer (MEG rain screen), color # 754 CS
- d. Type WB Light Fixture in the ceiling is a 4" LED Downlight





① Site  
1/16" = 1'-0"

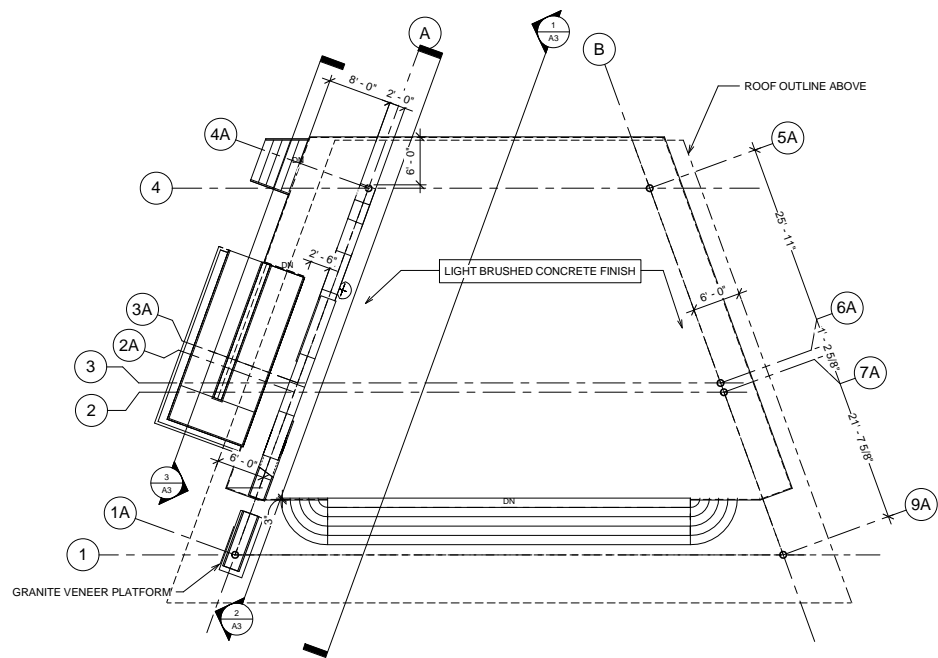
**KEi**  
ARCHITECTURE  
INTERIORS  
URBAN DESIGN  
101 West Broad Street, Suite 1010  
Richmond, Virginia 23220  
TELEPHONE 804.788.0338  
www.keiarchitects.com

**vhb**  
115 South 15th Street  
Suite 200  
Richmond, VA 23219  
804-343-7100

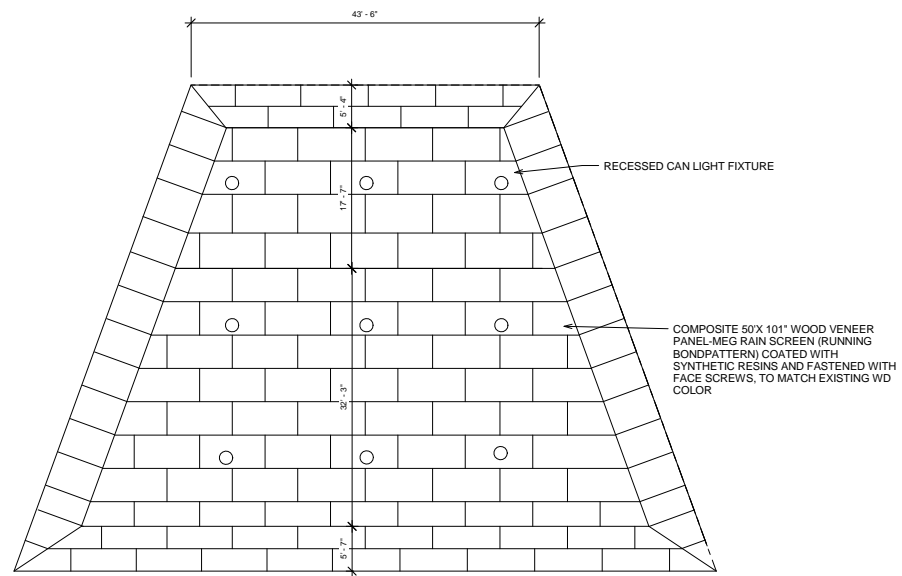
**DANIELS & ASSOCIATES, P.C.**  
Civil/Structural Engineers  
2102 W. Latham Avenue, Suite 110  
Richmond, Virginia 23227  
Richmond, Virginia 23227

**Snead Associates, P.C.**  
Landscape Architecture  
Landscape Planning  
8001 Colquhoun Plaza #700  
Mechanicsville, VA 23111  
C81804240-7823 / C81804240-691-8500

**HS**  
**HS ENGINEERING, INC.**  
CONSULTING ENGINEERS  
479 Southlake Boulevard  
Richmond, VA 23236  
804.594.7210



① STAGE / CANOPY FLOOR PLAN  
1/8" = 1'-0"



② STAGE REFLECTED CEILING PLAN  
1/8" = 1'-0"



3D CANOPY VIEW



3D CANOPY LIGHTING VIEW

THIS VIEW IS TO SHOW THE APPEARANCE OF THE GENERAL AMBIENT LIGHTING OF THE STAGE ONLY.



ARCHITECTURE  
INTERIORS  
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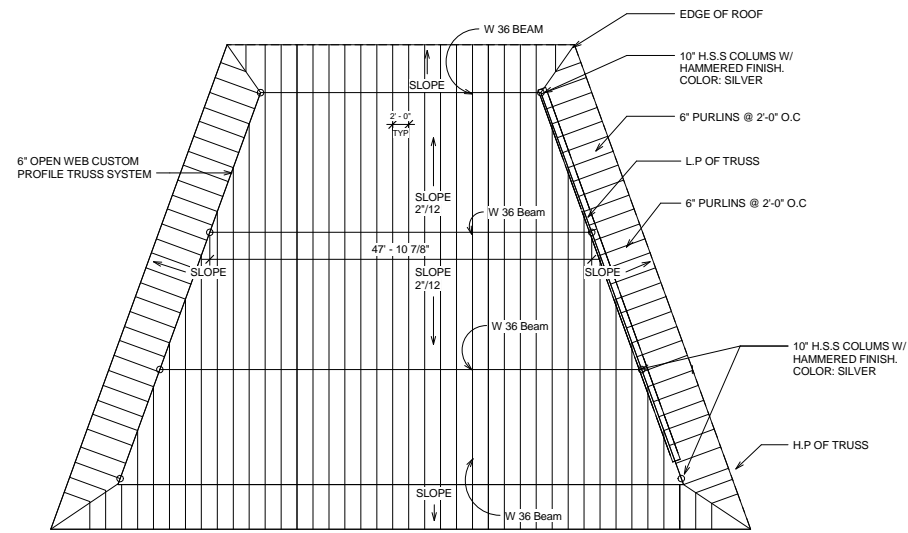
DANIELS & ASSOCIATES, P.C.  
Consulting Engineers  
1312 W. Lakeside Avenue, Suite 210  
Richmond, Virginia 23227  
Richmond, Virginia 23227



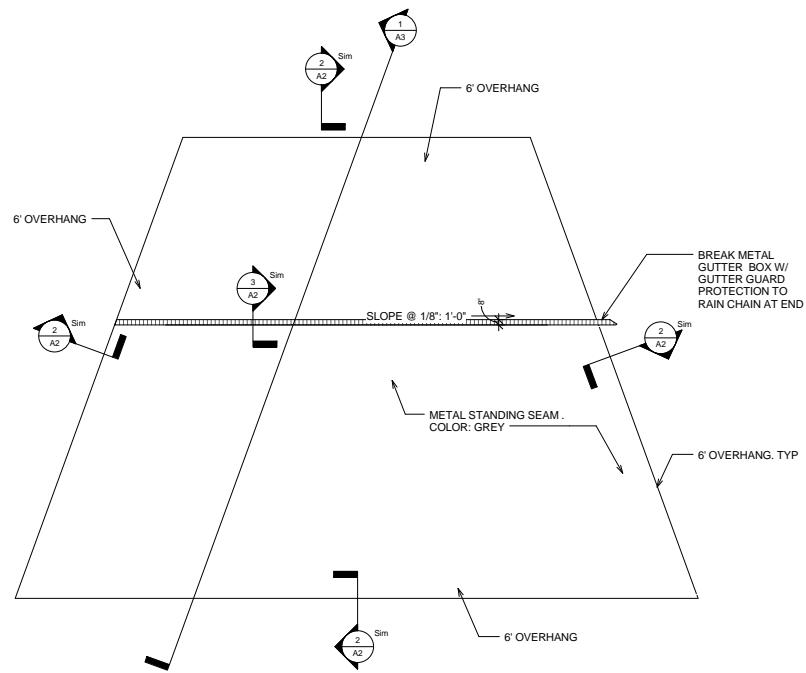
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8001 Colquhoun Plaza #703  
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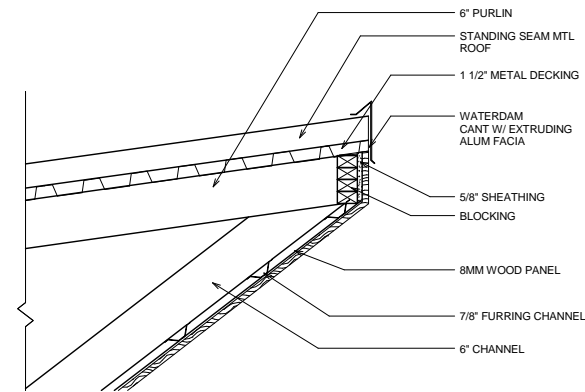
HS ENGINEERING, INC.  
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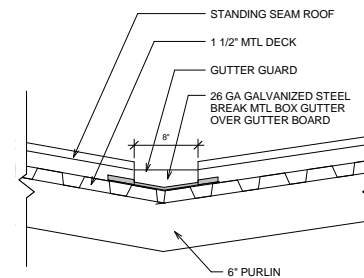
1 CANOPY FRAMING PLAN  
1/8" = 1'-0"



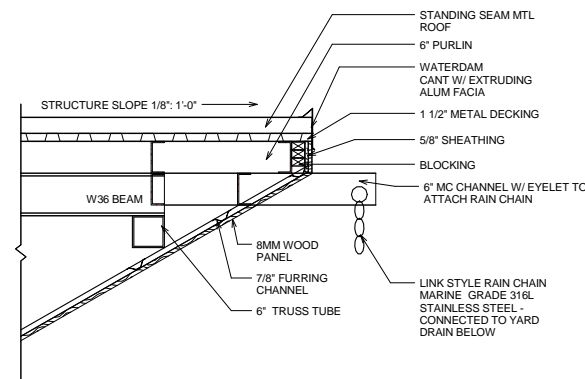
4 CANOPY ROOF PLAN  
1/8" = 1'-0"



2 DRIP EDGE DETAIL  
1 1/2" = 1'-0"



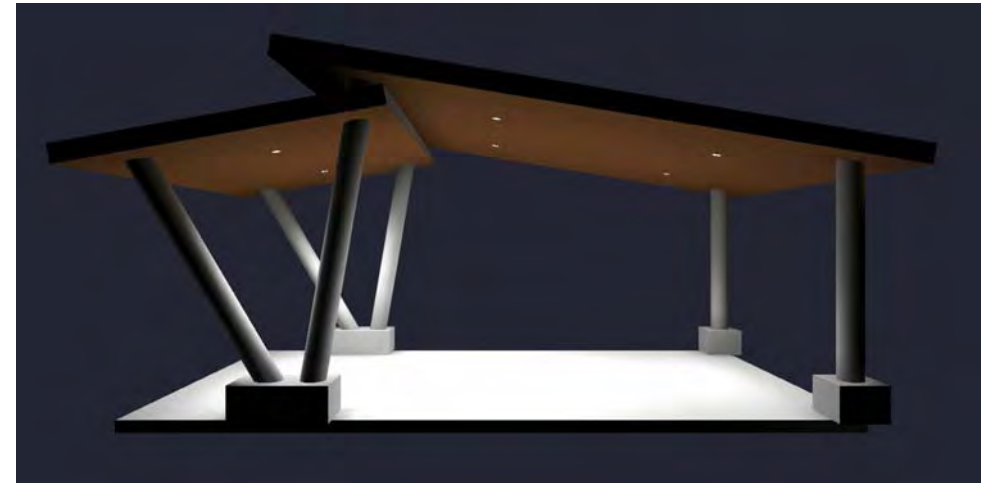
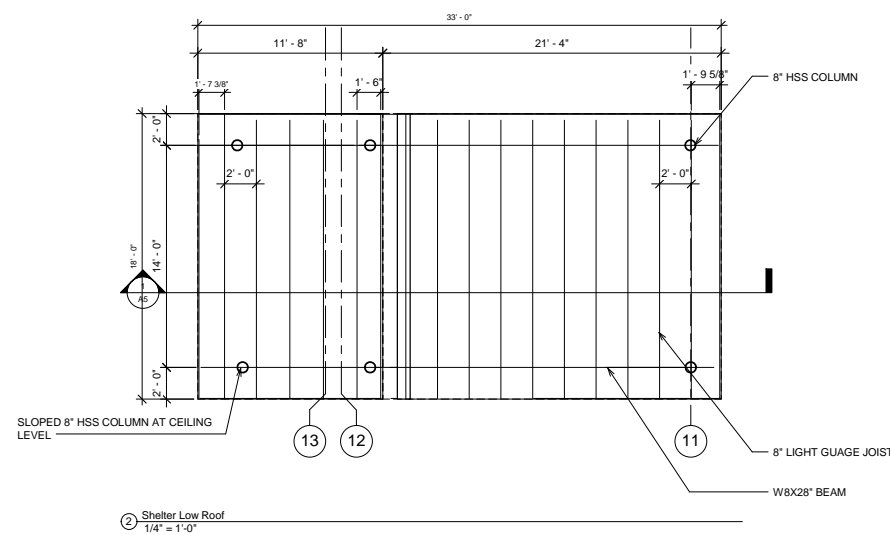
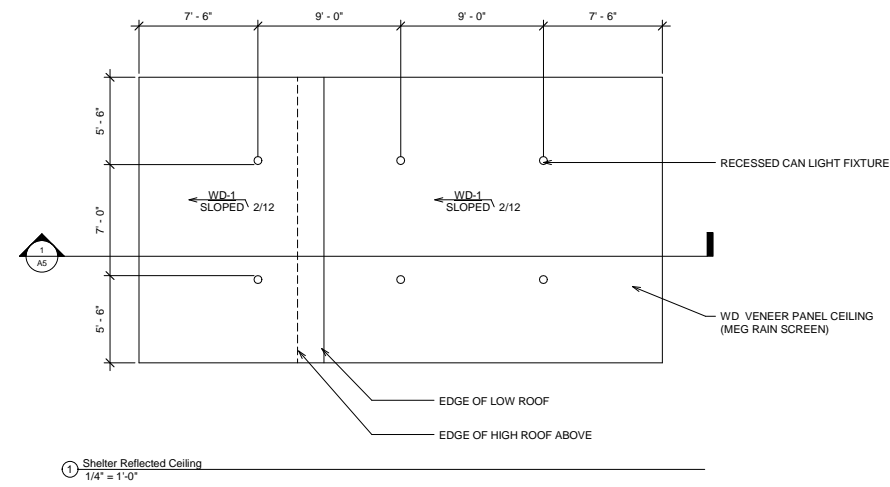
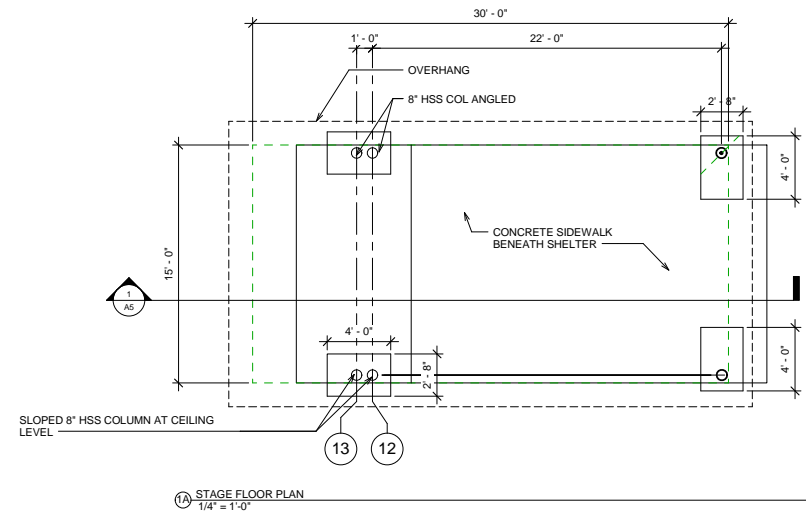
3 GUTTER DETAIL  
1 1/2" = 1'-0"



5 GUTTER EDGE  
1" = 1'-0"

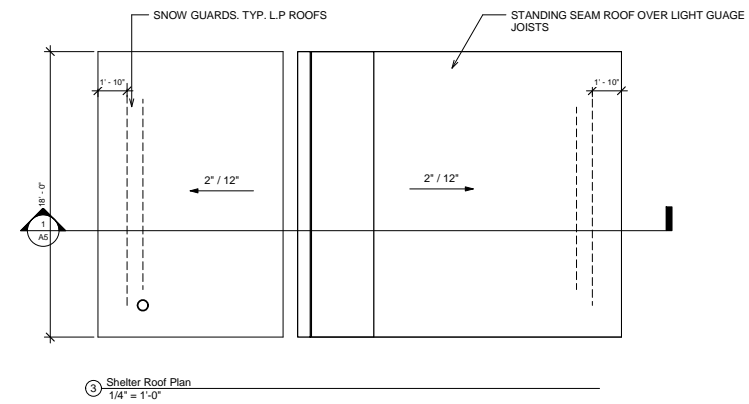






3D SHELTER LIGHTING VIEW

THIS VIEW IS TO SHOW THE APPEARANCE OF THE GENERAL AMBIENT LIGHTING OF THE SHELTER ONLY.



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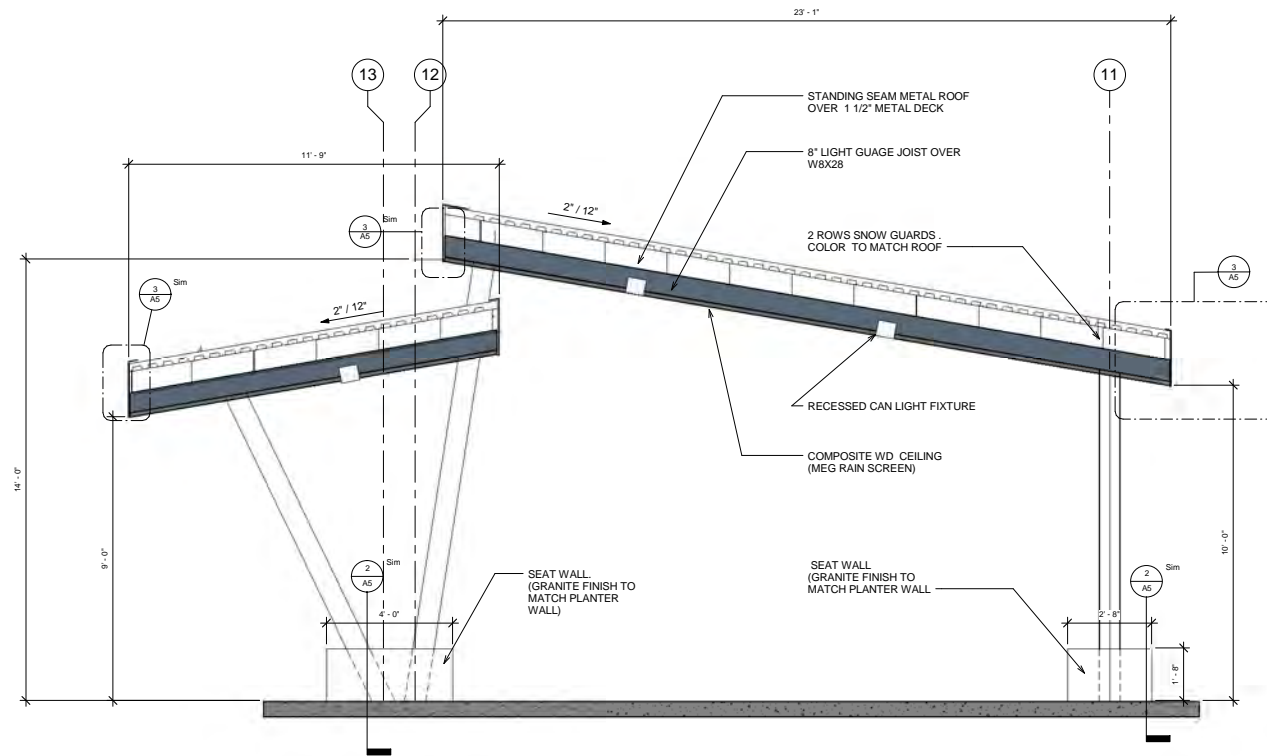
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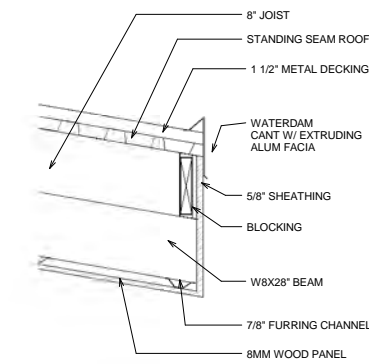
**Snead Associates, P.C.**  
Landscape Architects  
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9000 Crystal Drive #200  
Manassas, VA 20108  
Contact: (703) 762-0800 / (703) 649-8500

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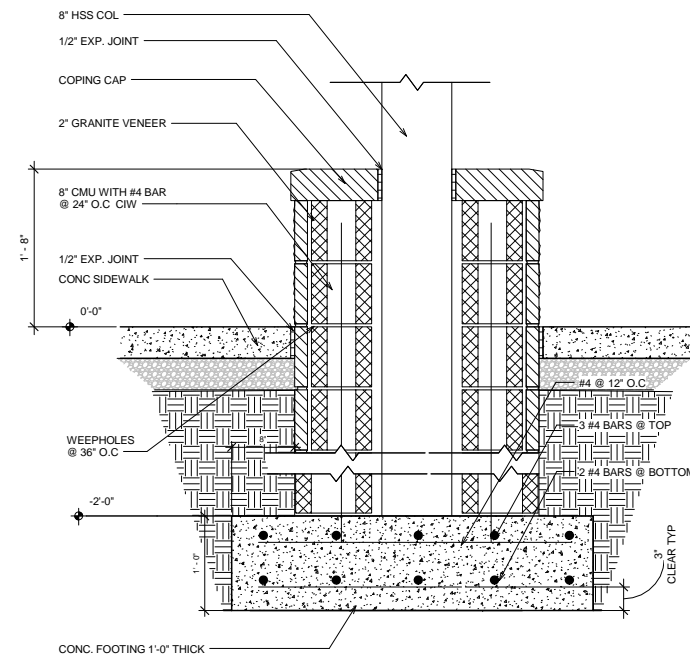
1 SHELTER CROSS SECTION  
1/2" = 1'-0"



2 SHELTER DRIP EDGE  
1 1/2" = 1'-0"



3D SHELTER VIEW



2 SHELTER SEAT WALLS DETAIL TYPICAL  
1 1/2" = 1'-0"





ROOF: METAL STANDING SEAM

COLOR: GREY

FINISH: GALVALUME

RIB SPACING: 12"



CEILINGS: COMPOSITE WOOD VENEER PANEL  
(MEG RAIN SCREEN)

THE CEILING LAYOUT PATTERN IS RUNNING BOND

FACE SCREWS PAINTED TO MATCH CEILING ATTACH  
THE PANELS TO THE FURRING BENEATH PAINTED  
BLACK



STAGE LETTERS: CORTEN STEEL

THE LETTERS ARE MADE OF CORTEN STEEL PRE-OXYDATED

THE LETTERS ARE SUPPORTED BY A TUBE FRAME AT FACE AND  
INFILLED WHERE REQUIRED WITH L 3 1/2" X 3 1/2" X 1/2" FOR PANEL SUPPORT

THE PANELS ARE FASTENED WITH TAMPER PROOF STAINLESS STEEL SCREWS

THE WAVE PATTERN IS AN OVERLAY OF STAINLESS STEEL



COLUMN / BEAMS

THE STEEL SUPPORTS WILL BE TUBULAR STEEL GALVANIZED AND PAINTED  
WITH RUST INHIBITIVE PAINT

COLOR: SILVER

FINISH: HAMMERED





**Job Name:**  
Kanawha Plaza

**Catalog Number:**  
A6VPLEDX-3000-35K-L6014SCL

**Type:**  
**WA**

Notes:

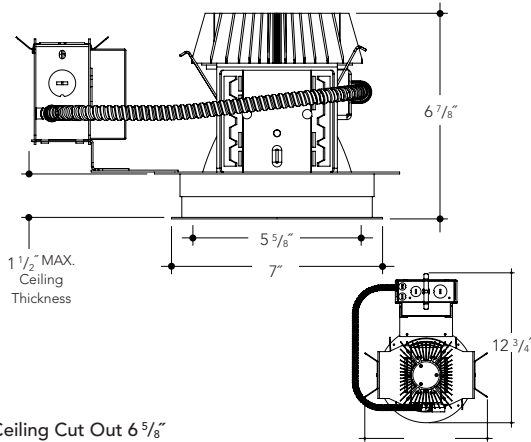
LV - CENTRAL15-17875

6" LED

6" ARCHITECTURAL LED ROUND - PHILIPS

Project Name: \_\_\_\_\_ Type: \_\_\_\_\_

**DIMENSIONS**



Ceiling Cut Out 6 5/8"

**FEATURES**

**Fortimo LED DLM Flex Systems**

New Fortimo LED Downlight Module (DLM) Flex systems now provide the latest advances, including high quality LED options to satisfy both functional and performance requirements along with excellent energy efficiency and color consistency. For practical and general lighting applications, the Fortimo LED DLM Flex Module is an excellent solution.

Its direct white mid-power LED technology combines high light quality and energy efficiency levels over 100 Lm/W, offering superior price/performance along with low maintenance costs and a long lifetime of 50,000 hours. Five lumen packages are available: 1100, 1500, 2000, 3000, and 5000.

**Features and Benefits**

- High energy efficiency system up to 107 lm/W
- Wide range of lumen packages from 1,100-5,000 lm
- High quality of light with CRI 80 and 3 SDCM color consistency
- Xitanium driver output 25-56V and dimmable with 0-10 volt controls
- Input volts 120-277V
- 50,000 hours of life at L70 standard
- Smart systems with Philips Advance Xitanium drivers
- 5 year warranty on LED module and driver

**Frame**

Heavy duty galvanized steel components including frame, adjustable mounting ears and junction box. Fixture is prewired and grounded with easy access from below, listed for through branch circuit wiring.

Standard mounting bars (included) incorporate rigid formed cross sections and include joist positioning tabs, integral nails, auxiliary nailholes, T-Bar slots and holes for locking to grid using self-tapping screws (supplied by others). Mounting ears will accept our standard bars (14"-24" ext), optional Caddy #517B (27" ext) and other mounting methods.

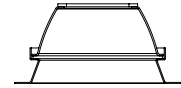
Insulation must be kept 3" away from fixture. Listed for damp locations.

**REFLECTOR KIT**

**LENSED - LED - ROUND**

LED \_\_\_\_\_ 6" Aperture

L601(X) Alzak or Painted Splay  
add lens suffix, see below.  
Reflector standard Clear "Alzak".  
Other options consult factory.



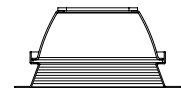
Vantage Lighting offers high efficiency diffuse optics in a wide variety of distributions.

**Please see optical diffuser option below for lensed fixtures.**

**LENSED BAFFLED - LED - ROUND**

L602(X) Baffled Splay  
add lens suffix see below

Reflector standard Clear "Alzak".  
Other options consult factory.



**Baffled Finish Options**

- BL Black Baffle
- WH White Baffle



Manufactured and Listed to UL 1598, ETL and IESNA standards.  
Suitable for Damp Locations. Wet location under covered ceiling.



**ORDERING INFORMATION**

**EXAMPLE: A6VEPLED1-2035K-L6011-SCL**

Wattage	Housing	Voltage	Lumens	Kelvin	Reflector	Lens	Finish	Options
LED								
See Chart	A6VEPLED	1	-11 = 1100	27K = 2700K	L601(X)	1	SCL	AT
Below		2	-15 = 1500	30K = 3000K	L602(X)	1P	SGC	DL-3
			-20 = 2000	35K = 3500K		1FR	ECL	DL-2
			-30 = 3000	40K = 4000K		4	WHT	EM
			-50 = 5000			4P		PF
						2D		R
						4D	BL	RETRO
						6D	WH	
						8D		

Lumens	Wattage*
1100-3k	13
1100-4k	12
1500-3k	18
1500-4k	16
2000-3k	25.5
2000-4k	23
3000-3k	37
3000-4k	33
5000-3k	50
5000-4k	58

Voltage	Lens	Special Optics	Options
1 - 120 Volts	1 Clear Glass	2D - Optical Diffuser-20°	AT - Airtight
2 - 277 Volts	1P Clear Polycarbonate	4D - Optical Diffuser-40°	DL-3 - Lutron 3-Wire - Please Consult Factory
3 - 347 Volt - Please Consult Factory	1FR Frosted	6D - Optical Diffuser-60°	DL-2 - Lutron 2-Wire - Please Consult Factory
	4 Prismatic Glass	8D - Optical Diffuser-80°	
	4P Prismatic Acrylic		

Vantage reserves the right to change components, finishes or design details in any manner which does not alter the installed appearance or reduce performance and intended function.

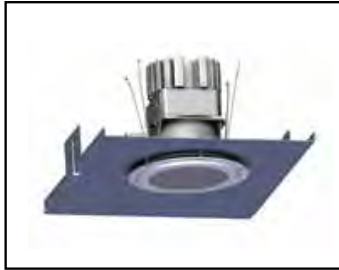
▲ See Options pages for other options and finishes.



**Job Name:**  
Kanawha Plaza

**Catalog Number:**  
LF4LEDG4-4LFLED5G4-30K-IP65-  
B6  
Notes:

**Type:**  
**WB**  
LV - CENTRAL15-17875



**4" LED Flush Lens  
Downlight  
LF4LEDG4**  
120V-277V  
High Efficacy  
0-10V Dimming  
IP65 or VR

**APPLICATIONS:**

LiteFrame LF4LED is a 4" specification grade LED lensed downlight that utilizes remote phosphor technology to obtain color consistency, energy savings, and low maintenance costs. 50,000 hours minimum life up to 35°C (95°F) in open plenum applications.

**HOUSING:**

One-piece 22 gauge non-corrosive steel platform. Pre-wired j-box with snap-on cover for easy access. Snap-in connection from driver compartment allows easy installation of light engine/trim assembly without tools above or below the ceiling and can be upgraded to accommodate technology improvements. Approve for 8 (4 in/4 out) No. 12 AWG conductors rated for 90°C through wiring.

**REFLECTOR:**

High purity aluminum, Alzak, iridescence suppressed, semi-diffuse reflector. Self-trim standard.

**IP65 AND VR:**

IP65 and vandal-resistant (VR) options are made of 16GA cold rolled steel stampings and come standard with a clear high impact polycarbonate lens. Each option uses self tapping stainless steel screws painted to match the white trim color standard; tamper-resistant screws are used on the VR option only. The IP65 rated option is completely sealed without the use of silicone on standard non-porous ceiling surfaces.

**LED LIGHT ENGINE:**

The LF4LED uses the Philips Fortimo DLM Gen 4 LED Module with remote phosphor technology.

This technology provides controlled color consistency (3 SCDM) from fixture to fixture. The system is designed for optimal life and lumen maintenance (>50,000 hours at 70% lumen maintenance). Both reflector and light engine assembly are mechanically retained to housing. The light engine comes standard with 80 CRI in all Kelvin temperatures

**LED DRIVER:**

The LF4LED utilizes the Philips Fortimo LED Driver specifically designed to optimize efficiency of the Fortimo DLM Module. Driver is designed to match the 50,000 hours minimum life expectancy of the system. Meets UL Class 2, inherent short circuit protection, self limited, overload protected. If critical temperatures are reached on driver or LED module, integrated thermal feedback loop will gradually reduce current to protect system life. Driver is universal 120V-277V. Optional Lutron Series A driver is also available.

**DIMMING:**

Comes standard with 0-10V dimming capability. Flicker-free dimming to 10%. 0-10V control may consume up to 1mA. 0-10V, Lutron 2 wire, 3 wire, and EcoSystem dimming available to 1%.

**INSTALLATION:**

Adjustable Bar hangers included. Universal adjustable mounting brackets also accept 1/2" EMT conduit or 1 1/2" or 3/4" lathing channel (by others) or Prescolite 24" bar hangers (B24 or B6).

**CERTIFICATIONS:**

CSA certified to US and Canadian safety standards. Suitable for wet locations. Approved for through wiring. Non-IC rated. EMR is damp rated use only.

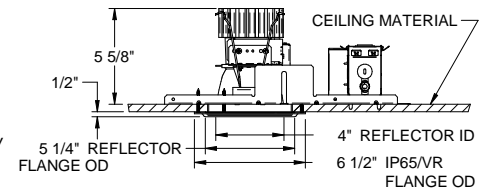
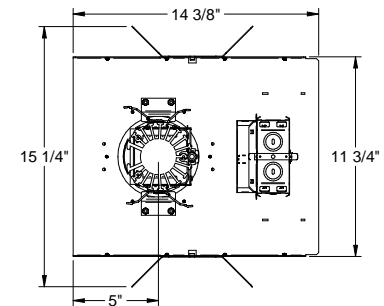
**WARRANTY:**

5 year warranty. See www.prescolite.com for details.

DATE: \_\_\_\_\_ TYPE: \_\_\_\_\_  
FIRM NAME: \_\_\_\_\_  
PROJECT: \_\_\_\_\_



Ceiling Cutout: 5"  
Maximum Ceiling Thickness 1 1/4"  
For conversion to millimeters,  
multiply inches by 25.4  
Not to Scale



See page 2 for EMR line art.

EXAMPLE: LF4LEDG4 -4LFLED5G430KIP65

CATALOG NUMBER:

Order housing, reflector, and accessories separately

STANDARD 0-10V DIMMING	HOUSING/LED GENERATION	VOLTAGE	OPTIONS	TRIM	LED COLOR TEMP	REF. FINISH	REFLECTOR COLORS	REF. OPTIONS	ACCESSORIES
	ALTERNATIVE DIMMING TO 1%	<input type="checkbox"/> LF4LEDG4 4" High Efficacy LED Housing with 0-10V Dimming to 10%	<input type="checkbox"/> Blank 120V-277V <input type="checkbox"/> 347 <sup>1</sup>	<input type="checkbox"/> EMR <sup>1</sup> Emergency Battery Pack with remote test switch	<input type="checkbox"/> 4LFLED5G4 1100 Lumen Module <input type="checkbox"/> 4LFLED6G4 1500 Lumen Module <input type="checkbox"/> 4LFLED7G4 2000 Lumen Module	<input type="checkbox"/> 30K <input type="checkbox"/> 35K <input type="checkbox"/> 40K	<input type="checkbox"/> Blank Semi-Diffuse	<input type="checkbox"/> Blank Clear	<input type="checkbox"/> IP65 <sup>3</sup> Flush lens. Dust and water tight to IP65. <input type="checkbox"/> VR <sup>3</sup> Vandal Resistant

**Use with HDM/DM1/2DM dimming option:  
Match Housing to Trim Output**

- LF4LED5G4     120     HDM<sup>2</sup>  
Lutron 3-wire /Eco System to 1%
- LF4LED6G4     277     2DM<sup>2</sup>  
Lutron 2-wire Leading Edge to 1% (120V only)
- LF4LED7G4     EMR<sup>1</sup>  
Emergency Battery Pack with remote test switch
- DM1<sup>2</sup>  
0-10V dimming to 1%

**NOTES**

- 1 347V not available with EMR
- 2 For HDM, DM1, & 2DM options, housing output must match trim output
- 3 IP65 and VR can not be chosen together



In a continuing effort to offer the best product possible we reserve the right to change, without notice, specifications or materials that in our opinion will not alter the function of the product.  
Web: [www.prescolite.com](http://www.prescolite.com) • Tech Support: (888) 777-4832

**LFR-LED-031**



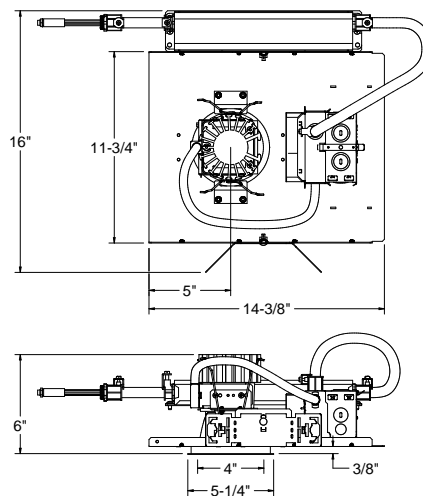
# PHOTOMETRIC DATA

DRIVER DATA	LF4LED5G4 30K	LF4LED6G4 30K	LF4LED7G4 30K
Input Voltage	120-277V	120-277V	120-277V
Input Frequency	50/60 Hz	50/60 Hz	50/60 Hz
Input Current	0.12A (120v) 0.05A (277v)	0.16A (120v) 0.07A (277v)	0.22A (120v) 0.10A (277v)
Input Power	14.3W	18.9W	26.6W
Constant Current Output	200-1000mA	200-1000mA	200-1000mA
Power Factor	≥0.90	≥0.90	≥0.90
THD	<20%	<20%	<20%
EMI Filtering	FCC 47CFR Part 15, Class A	FCC 47CFR Part 15, Class A	FCC 47CFR Part 15, Class A
Operating Temperature	-20°C to 55°C	-20°C to 55°C	-20°C to 55°C
Dimming	0-10V	0-10V	0-10V
Over-voltage, over-current, short-circuit protected			

When operating in EM mode, the fixture will deliver approximately 30% of the published full lumen output.

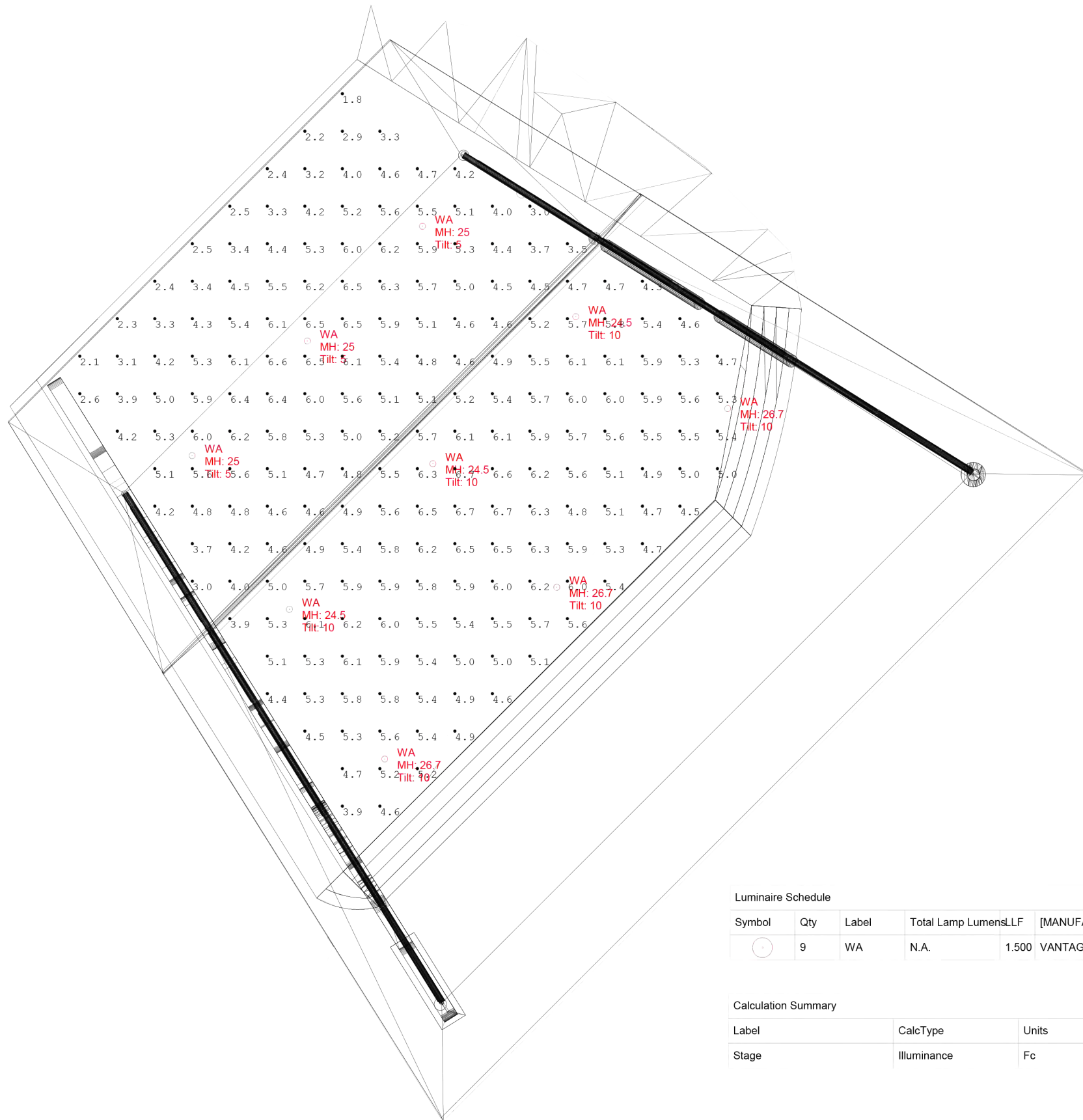
### Integral EM Pack (Remote Test Switch)

Prescolite provides photometric performance of the LiteFrame LED when operating on integral EM (Remote Test Switch) back up power as a tool to approximate light levels in back-up battery operation. This should not be deemed a guarantee of performance. The LiteFrame LED is CSA listed as an emergency fixture for applications not to exceed 16ft.



**LF4LEDG4EMR**





Luminaire Schedule

Symbol	Qty	Label	Total Lamp LumensLLF	[MANUFAC]	Description	Lum. Watts	Lum. Lumens
○	9	WA	N.A.	1.500	VANTAGE LIGHTING PLAINFIELD, CT, USA	37	1183

Calculation Summary

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Stage	Illuminance	Fc	5.11	6.7	1.8	2.84	3.72

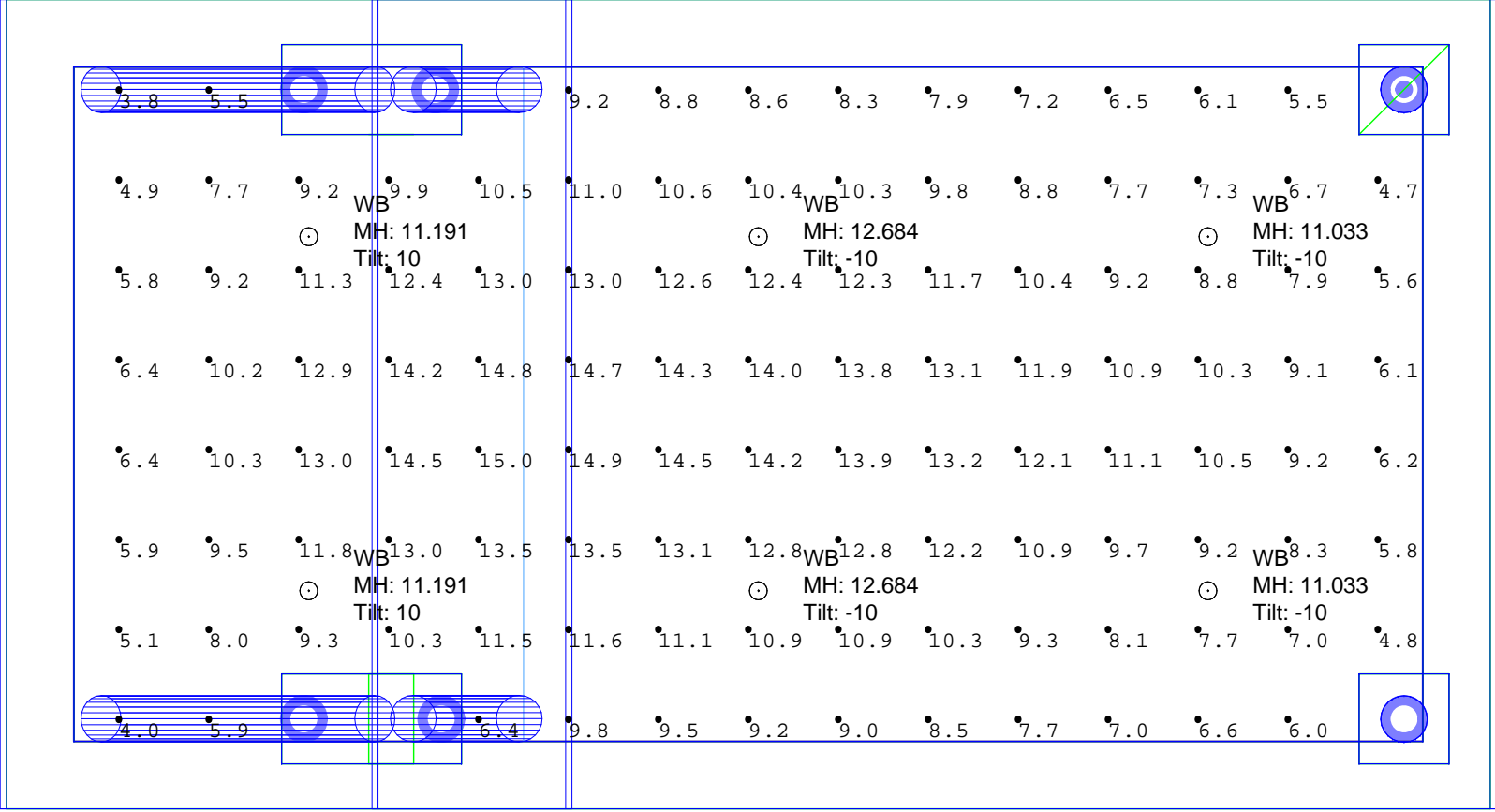
Prepared by:  
Lighting Virginia Central  
Adams Parnell LLC  
400 G2 Southlake Blvd  
Richmond, VA 23236  
tel: 804-379-7777

#	Date	Comments

Revisions

Drawn By:	Diana Ades
Checked By:	
Date:	7/20/2015
Scale:	As noted

**Kanawha Stage**  
rev072015



Luminaire Schedule								
Symbol	Qty	Label	Total Lamp Lumens	LLF	[MANUFAC]	Description	Lum. Watts	Lum. Lumens
⊙	6	WB	N.A.	0.900	PRESCOLITE	LF4LEDG4 4LFLED5G430K	14.33	1133

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Floor_Top	Illuminance	Fc	9.78	15.0	3.8	2.57	3.95

Prepared by:  
Lighting Virginia Central  
Adams Parnell LLC  
400 G2 Southlake Blvd.  
Richmond, VA 23236  
tel: 804-379-7777

Scale: 1 inch= 4 Ft.

#	Date	Comments

Revisions

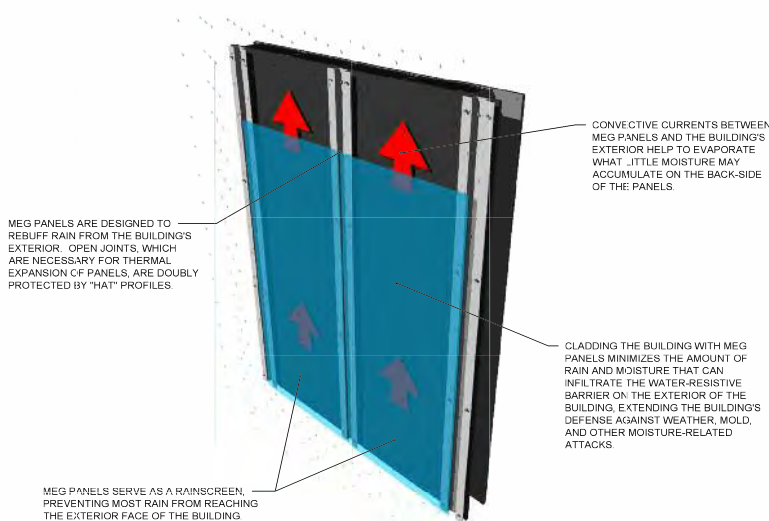
Drawn By: Diana Ades
Checked By:
Date: 7/16/2015
Scale: As noted

Kanawha Shelter

# MEG PRESENTS: AN OVERVIEW OF THE RAINSCREEN PRINCIPLE

The Rainscreen Principle is a method for controlling rain penetration through a wall cladding system. Also referred to as “open joint”, “dry joint” and “back ventilated”, a rainscreen building system is one where panels are attached to a fastening system (profiles) that creates air flow between the panels and a building’s structural wall. These open joints allow for expansion and contraction of the exterior panels and also enable air pressure in the cavity behind cladding to equal outside air pressure, resisting wind driven rain and other factors that can drive water into the building’s envelope such as gravity, kinetic surface tension and capillary action.

A rainscreen system uses a “double-wall construction”. The inner structural wall of the building is covered with a water-resistant barrier. The profiles are then attached to the structural wall and the exterior cladding is fixed to the profiles. The open joints between the exterior panels allow any rain that does penetrate to deflect, drain, or dry via “chimney effect”. A rainscreen system can improve the performance of the building’s interior climate by allowing moisture to escape and preventing mold formation. Rainscreen cladding also allows heat from the sun to be dispersed, which can prevent temperature fluctuations on the building’s interior and improve the overall energy efficiency of the building.



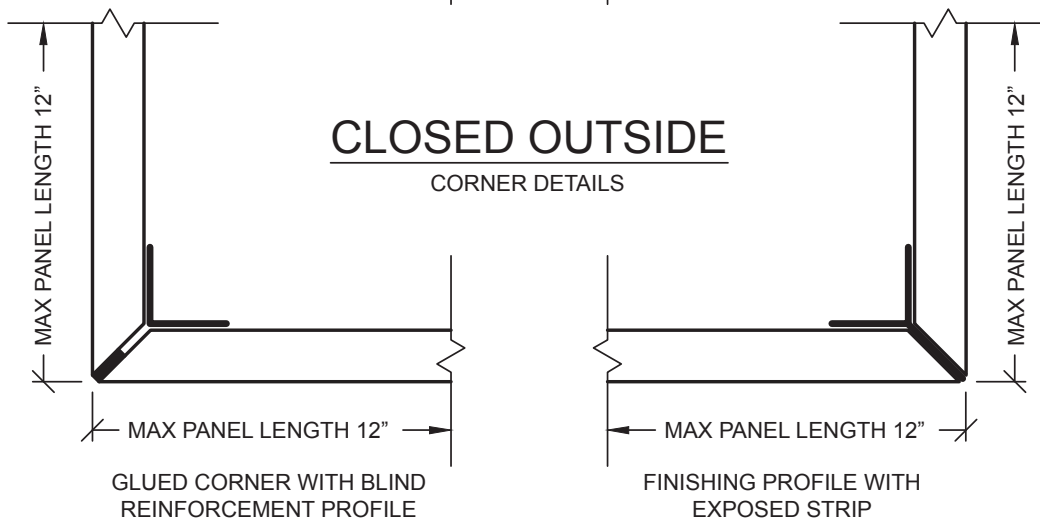
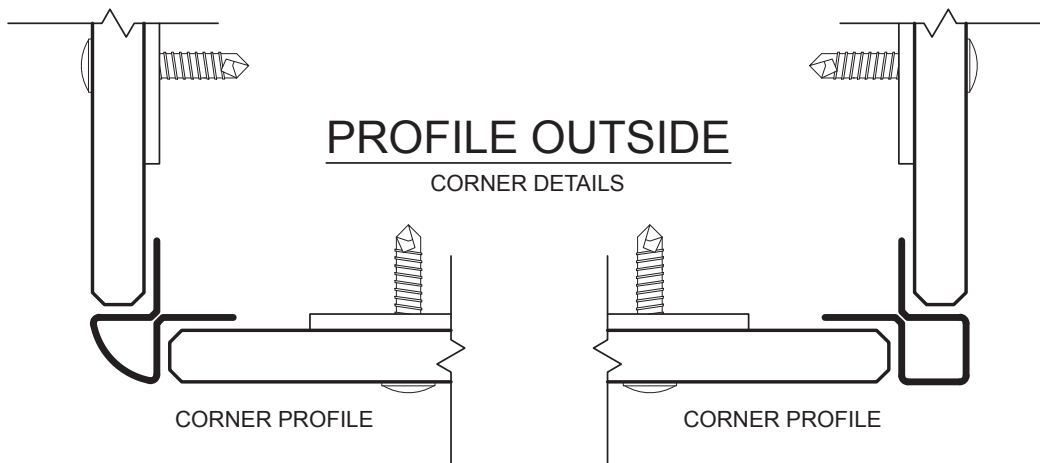
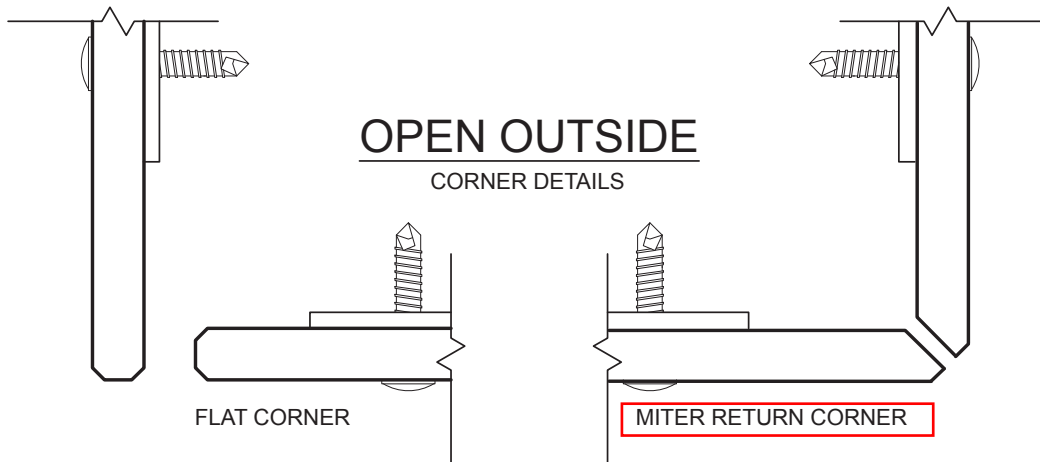
**MEG PANELS: RAINSCREEN**

Here are some of the reasons you should consider using MEG rainscreen panels for your next build project:

- **Weatherproof** – Durable and fade resistant, MEG panels are designed to withstand rapid temperature shifts and harsh environments including prolonged exposure to direct sun, rain and sea salt.
- **Sturdy** – MEG panels don't warp, splinter, crack, check, peel or delaminate.
- **Non-corrosive** – Built to endure, MEG panels are composed of durable materials highly resistant to corrosion.
- **Quality appearance** – Extraordinary design comes standard and never at the expense of durability. MEG panels are available in a variety of colors and finishes resulting in beautiful exteriors of enduring performance.
- **Maintainable** – Your MEG panels are built to last and are easily maintained using non-abrasive household cleansers with sponges, cloths or paper towels.
- **Graffiti resistant** – MEG's smooth finish hampers spray paints, inks, lipstick, crayons and other emulsions from penetrating its surface and does not require any preventive graffiti treatments prior to installation.
- **Ecofriendly** – MEG panels are designed to beautify an exterior environment and are made with materials that will not harm the environment. Additionally, MEG panels can be ordered FSC-certified and use of panels may contribute points to LEED projects.
- **Termite resistant** – MEG's high performance laminates are resistant to termite and insect infestation.
- **Excellent fire performance** – MEG 10mm F1 panels have superior thermal resistance and have passed the National Fire Protection Association's (NFPA) most stringent tests including NFPA #285 and #268.



OUTSIDE CORNER INSTALLATION OPTIONS  
DETAIL NO. 8B



R1114

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July 16, 2015

**Ms. Monica Flippen**

Kelso & Easter, Inc.  
101 West Broad Street, Suite 101B  
Richmond, VA 23220

**Re: Kanawha Plaza  
Stage Review  
SMW# 15305**

Dear Monica,

This letter summarizes our review of the proposed stage design for the Kanawha Plaza in Richmond, VA. The following are our notes and recommendations regarding acoustical issues of the materials and layout of the stage design.

**Notes on Design**

We understand that a new stage is being designed for the renovation of Kanawha Plaza. The stage will be located in the corner of the park near Highway 60 and will open up towards an open lawn. We note that this is a small park, approximately three acres where small to medium gatherings of people are planned to occur.

We understand that as a large covered space, it will serve a variety of uses. The stage may serve as a meeting place, a gathering spot for families or visitors of the park, as well as a stage for musical performances. It is our understanding that musical performances are not the main purpose of this stage, but that it can accommodate this function. We assume that any amplified performance will include loudspeakers at the front of the stage facing outward towards the audience with small monitors facing back to the performers.



*Kanawha Park Layout Design*

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BEIJING

SINGAPORE

We understand that there are acoustic concerns regarding the layout and design of the metal letters incorporated in the stage. We note that the letters will be approximately two feet deep and constructed from COR-TEN steel.

***Letters Placed Along the Side of the Stage:***

We understand that this position is most desirable as it allows a view into the park from the outside. It also allows the letters to be in the correct orientation when a person is viewing it from the lawn or the highway.



***Letter Location***

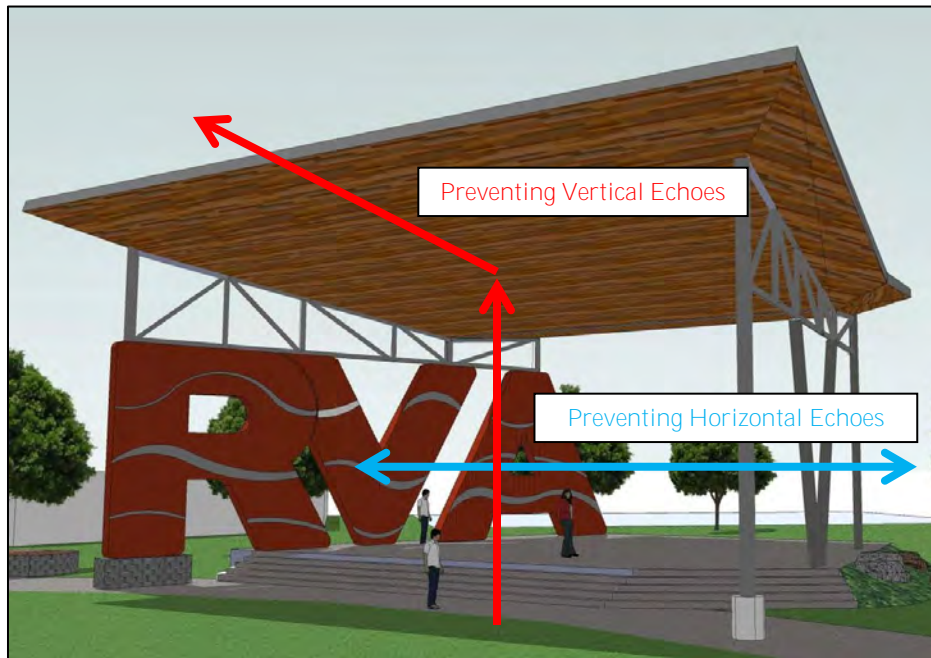
**Recommendations**

The following are our recommendations regarding the shape and layout of the stage.

Flutter echoes are an important issue to consider with this design. This is an acoustical phenomenon when an echo is caused because of two parallel reflective surfaces. This may sound like a ping or a fast echo.

We note that the ceiling above the stage is angled out towards the lawn with a smaller section angled out toward the street behind the stage. This is beneficial acoustically as it prevents any echoes from occurring between the floor and ceiling of the stage.

We note that only one side of the stage will have the large metal letters. Any sound reflections will move towards open air, either towards the lawn or the opposite open side of the stage. For example, vertical reflections will be projected out into the lawn area due to the angle of the roof overhead and horizontal reflections will pass out of the stage through the open side. Therefore this design prevents any echoes from occurring either horizontally or vertically on stage.



*Stage Reflections*

We note that there is a concern that the letters may create unwanted acoustical issues or sounds. It is our understanding that there is worry that a ringing sound could occur during a musical performance. To avoid this issue, we recommend filling the cavity of the metal letters with a blown in foam insulation. This will dampen any **'ringing' in the letters and reduce unwanted acoustical effects.**

If you have any questions regarding the comments or recommendations contained in this letter, please do not hesitate to contact us.

Best Regards,  
**Shen Milsom & Wilke, LLC**

Kevin Galbreath  
**Associate Consultant**

CC: Julie Fischer (SM&W)