



URBAN DESIGN COMMISSION APPLICATION CITY OF MADISON

This form may also be completed online at:
<http://www.cityofmadison.com/planning/documents/UDCapplication.pdf>

215 Martin Luther King Jr. Blvd; Room LL-100
PO Box 2985; Madison, Wisconsin 53701-2985
Phone: 608.266.4635 | Facsimile: 608.267.8739

Please complete all sections of the application, including the desired meeting date and the type of action requested.

Date Submitted: <u>July 19, 2017</u>	<input type="checkbox"/> Informational Presentation
UDC Meeting Date: <u>August 16, 2017</u>	<input checked="" type="checkbox"/> Initial Approval
Combined Schedule Plan Commission Date (if applicable): _____	<input checked="" type="checkbox"/> Final Approval

1. Project Address: 722 East Main Street
Project Title (if any): MGE Blount Substation Enclosure

2. This is an application for (Check all that apply to this UDC application):

New Development Alteration to an Existing or Previously-Approved Development

A. Project Type:

- Project in an Urban Design District* (public hearing-\$300 fee)
- Project in the Downtown Core District (DC) or Urban Mixed-Use District (UMX) (\$150 fee, Minor Exterior Alterations)
- Suburban Employment Center (SEC) or Campus Institutional District (CI) or Employment Campus District (EC)
- Planned Development (PD)
 - General Development Plan (GDP)
 - Specific Implementation Plan (SIP)
- Planned Multi-Use Site or Planned Residential Complex

B. Signage:

- Comprehensive Design Review* (public hearing-\$300 fee) Street Graphics Variance* (public hearing-\$300 fee)
- Signage Exception(s) in an Urban Design District (public hearing-\$300 fee)

C. Other:

Please specify: _____

3. Applicant, Agent & Property Owner Information:

Applicant Name: Tim Blieferticht Company: MGE
 Street Address: 623 Railroad St City/State: Madison, WI Zip: 53703
 Telephone: (608) 252-5687 Fax: () Email: TBlieferticht@mge.com

Project Contact Person: Dean Proctor Company: Vandewalle & Associates
 Street Address: 120 East Lakeside St City/State: Madison, WI Zip: 53715
 Telephone: (608) 255-3988 Fax: () Email: dproctor@vandewalle.com

Project Owner (if not applicant) : _____
 Street Address: _____ City/State: _____ Zip: _____
 Telephone: () Fax: () Email: _____

4. Applicant Declarations:

A. Prior to submitting this application, the applicant is required to discuss the proposed project with Urban Design Commission staff. This application was discussed with Kevin Firchow on June 22, 2017.
(name of staff person) (date of meeting)

B. The applicant attests that all required materials are included in this submittal and understands that if any required information is not provided by the application deadline, the application will not be placed on an Urban Design Commission agenda for consideration.

Name of Applicant Tim Blieferticht Relationship to Property Director - Facilities Management

Authorized Signature Tim Blieferticht Date 7/17/17



VANDEWALLE & ASSOCIATES INC.

Date: July 19, 2017
To: City of Madison Urban Design Commission
From: Dean Proctor, Vandewalle & Associates
CC: Kevin Firchow, City of Madison
Tim Bliefernicht, MGE
Re: MGE Blount Substation Enclosure, 722 East Main St

The proposed MGE Substation Enclosure Structure provides (1) protection for important community infrastructure and (2) a bold aesthetic enhancement for a burgeoning entertainment area in Madison's Capitol East District.

Replacing the existing chain link fence enclosing the substation (located on Main, Blount, and Livingston Streets), the new structure will protect facilities that supply downtown Madison and a portion of the city's east isthmus with electrical power. The enclosure will prevent unwelcome vehicles from accessing the facility and prevent potential damage of the facility from the street and pedestrian level while on-site parking and gates will allow MGE access to service and support their facility.

Recognizing that this facility is in the center of a growing entertainment district, located on city streets that see an increasing number of pedestrians, and adjacent to new redevelopment drawing thousands to music and creative ventures as well as the public and employees parking in a major new structure, the new MGE structure was designed as an aesthetic contribution to the neighborhood and Capitol East District. The new structure and adjacent streetscape will also provide a critical link between the downtown core and the growing employment-oriented Capitol East District.

The primary materials (brick and architectural metal) of the enclosure are inspired by its surroundings. The lower portion will be faced with brick that match the color of nearby historic masonry buildings of this working industrial district. Creative detailing and banding of three colors of brick add visual interest to the lower portion of the wall and the pedestrian experience. The upper portion's perforated metal panels are similar in appearance to the industrial metals of the substation, the power plant, and other working structures in the neighborhood. The panels, layered to provide additional visual interest, are partially transparent to reduce the perceived height of the enclosure and to allow light and air to pass through.

120 East Lakeside Street • Madison, Wisconsin 53715 • 608.255.3988 • 608.255.0814 Fax
247 Freshwater Way, Suite 530 • Milwaukee, Wisconsin 53204 • 414.988.8631

www.vandewalle.com

Shaping places, shaping change

Added to these two primary components, large custom-designed metal panels will be mounted to the gates and at several other positions on the enclosure, located to create a pleasing composition on the Main, Blount and Livingston Street facades. With their placement, color, and pattern they will add an artistic touch to the street and cityscape. Also, artistic treatment (emulating electrons) will be integrated into the middle band of the upper metal panels, symbolizing the substation's role in providing electric power to the downtown and east isthmus.

At Livingston Street near the new entertainment venue, and at the intersection of Main and Livingston Streets, space is set aside for potential sculptural art works and interpretive features, enhancing the appearance of the streetscape and enriching the pedestrian experience.

Together, these contextual materials, pedestrian-scaled components, creatively designed elements, and art works will not only protect our community's valuable infrastructure, but will be a positive aesthetic addition to this growing vibrant neighborhood and enhance the experience and image of the Capitol East District and the City of Madison.

Additional notes:

Substation enclosure and future MGE improvement projects

This application is for the substation enclosure (bounded by Main, Blount, and Livingston Streets) only. We have included some information regarding other MGE projects so that the Urban Design Commission gets a complete picture of the project context. The Project Components plan and several visual simulations show the location and character of these neighboring projects.

Utility/HVAC equipment and screening

The project itself is essentially a utility screening. Given the size of the facility, some powerlines and equipment will be visible above the enclosure. There is not additional HVAC equipment involved in this project, as there are no additional enclosed conditioned spaces.

Site Grading

See notes on engineered Site Layout and Grading Plan

Art and Interpretive Features

Several graphics reference "art and interpretive features" or show such features in the visual simulations. The plans note that these are design projects separate from the substation. These are added to the graphics to show the vision for the design and experience, but please note that these will be separately commissioned components of the ultimate build-out.

A photograph of the MGE Blount Substation Enclosure. The building features a brick wall with a perforated metal upper section and vertical orange perforated metal panels. A paved walkway runs alongside the building, with a few people walking. A large tree is on the left side of the frame.

MGE Blount Substation Enclosure

MGE Blount Substation Enclosure

Location Map

Madison, Wisconsin



MGE Blount Substation Enclosure Context and Pedestrian Spine

Madison, Wisconsin



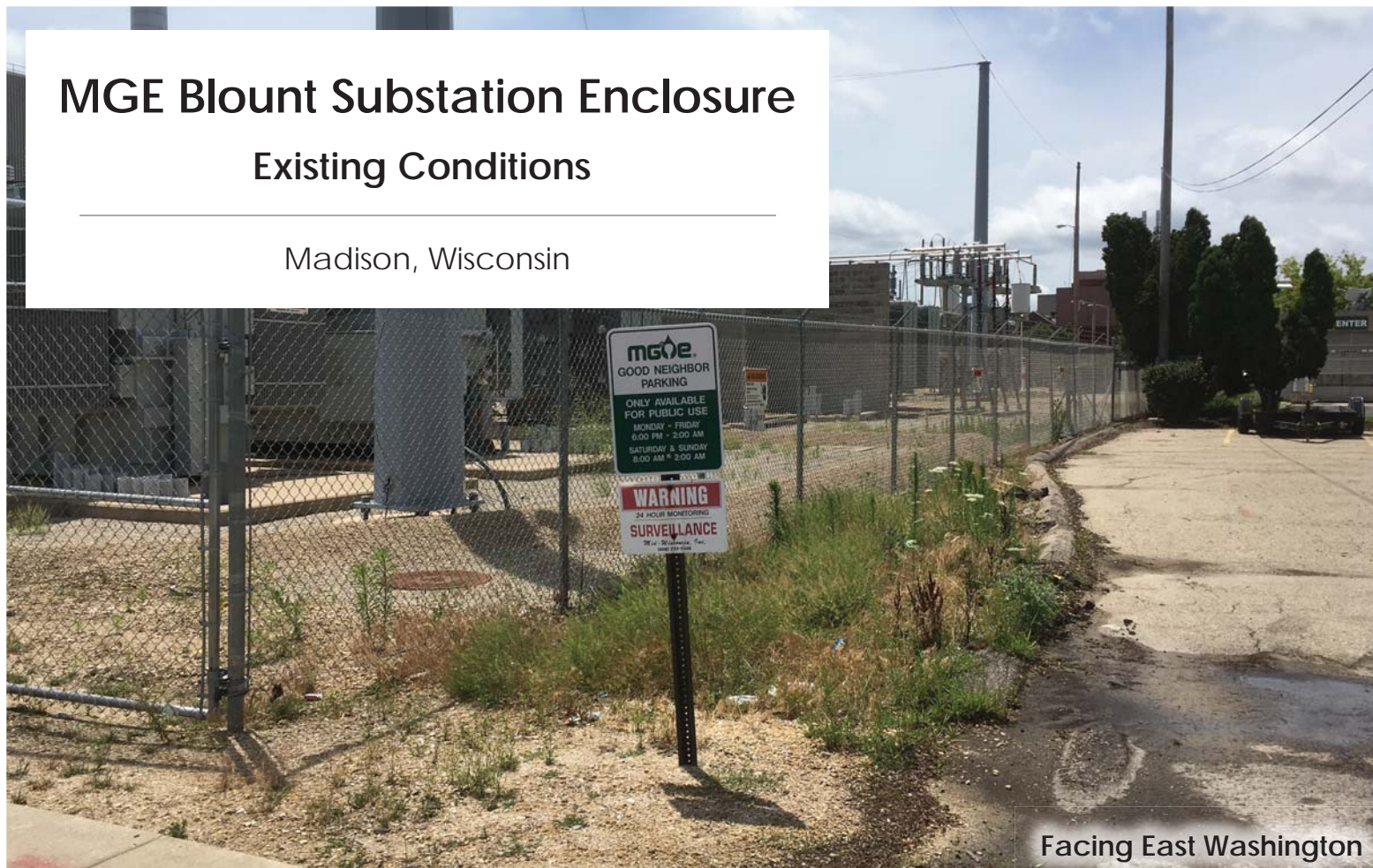
TO EMPLOYMENT

TO THE SQUARE

MGE Blount Substation Enclosure

Existing Conditions

Madison, Wisconsin



Facing East Washington



From Livingston St



From Main St

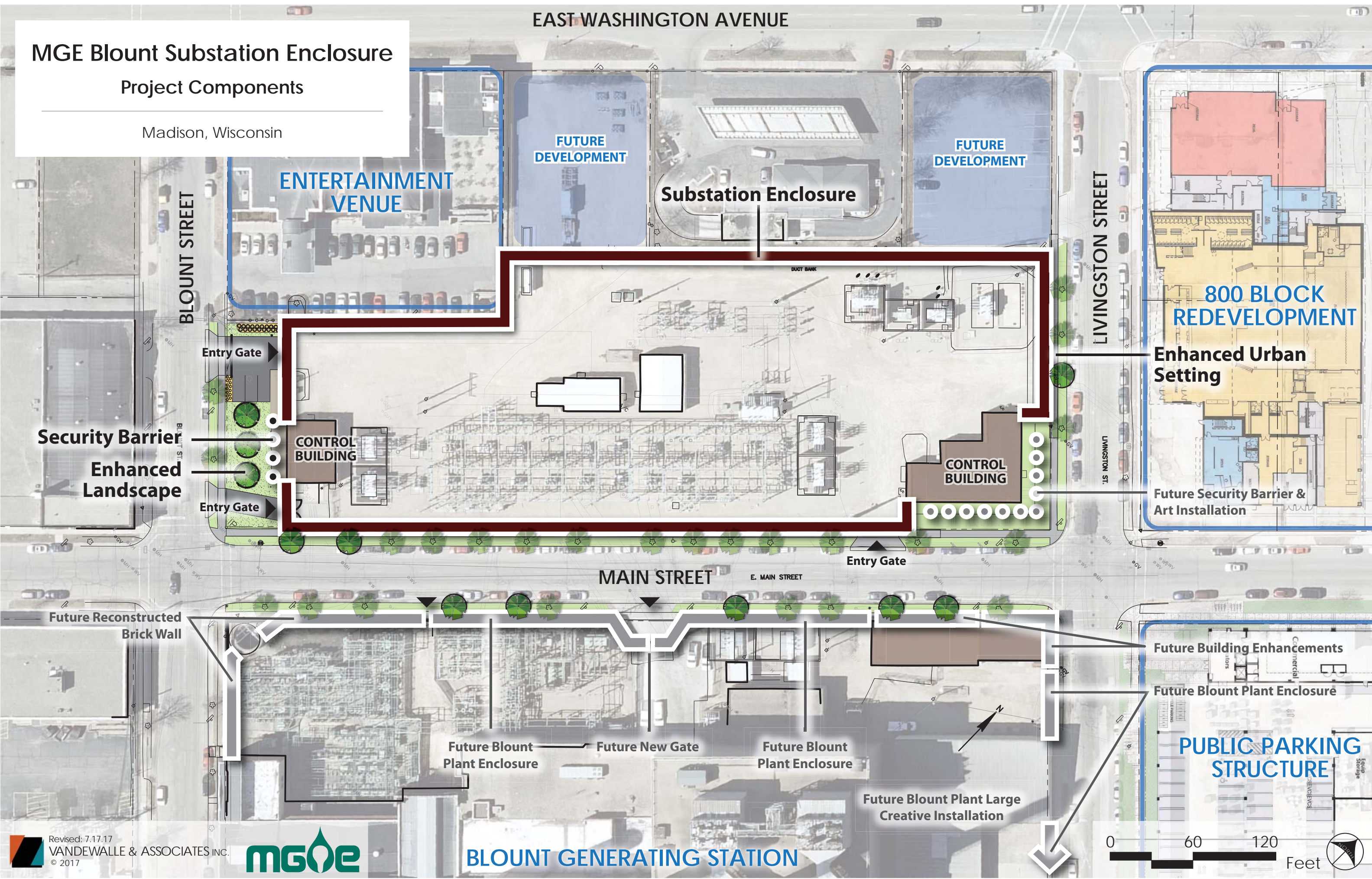


From Blount St

MGE Blount Substation Enclosure

Project Components

Madison, Wisconsin



EAST WASHINGTON AVENUE

FUTURE DEVELOPMENT

FUTURE DEVELOPMENT

ENTERTAINMENT VENUE

Substation Enclosure

800 BLOCK REDEVELOPMENT

Enhanced Urban Setting

Future Security Barrier & Art Installation

Security Barrier
Enhanced Landscape

Entry Gate

CONTROL BUILDING

CONTROL BUILDING

Entry Gate

Entry Gate

MAIN STREET

E. MAIN STREET

Future Reconstructed
Brick Wall

Future Building Enhancements

Future Blount Plant Enclosure

PUBLIC PARKING
STRUCTURE

Future Blount
Plant Enclosure

Future New Gate

Future Blount
Plant Enclosure

Future Blount Plant Large
Creative Installation

EAST WASHINGTON AVENUE

MGE Blount Substation Enclosure Conceptual Landscape Plan

Madison, Wisconsin

BLOUNT STREET

LIVINGSTON STREET

800 BLOCK REDEVELOPMENT

Enhanced Urban Setting

- Ornamental Grasses
- Improved Access Drive
(Concrete apron & asphalt drive)
- Low Ornamental Grasses
- Trees & Lawn
- Existing Stormwater Basin
- New Access Drive
(Concrete apron & asphalt drive)

CONTROL BUILDING

CONTROL BUILDING

Potential New Street Tree Location (typ.)

Existing Street Tree (typ.)

MAIN STREET

E. MAIN STREET

Enlarged Apron
(Concrete)

PUBLIC PARKING STRUCTURE

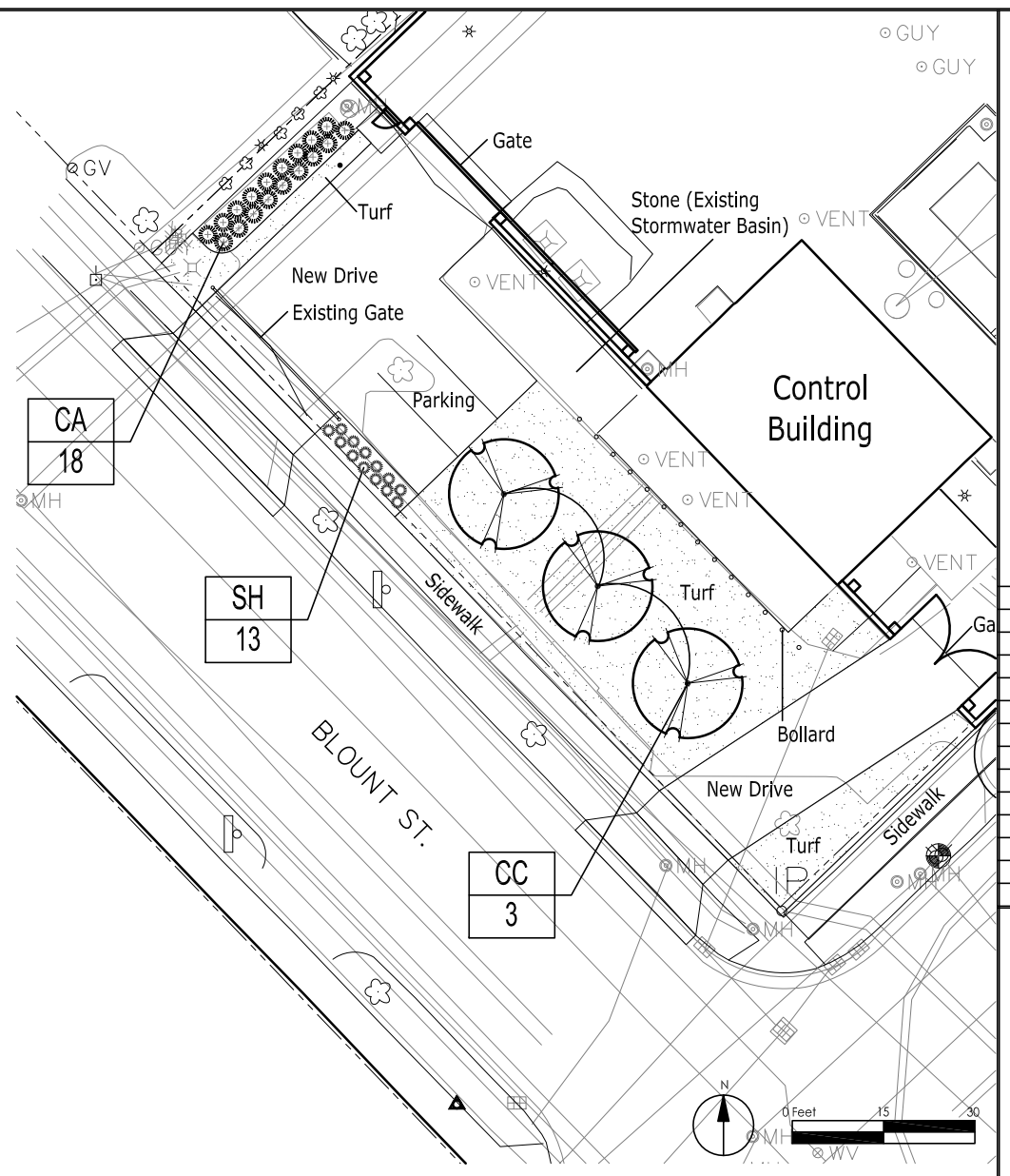
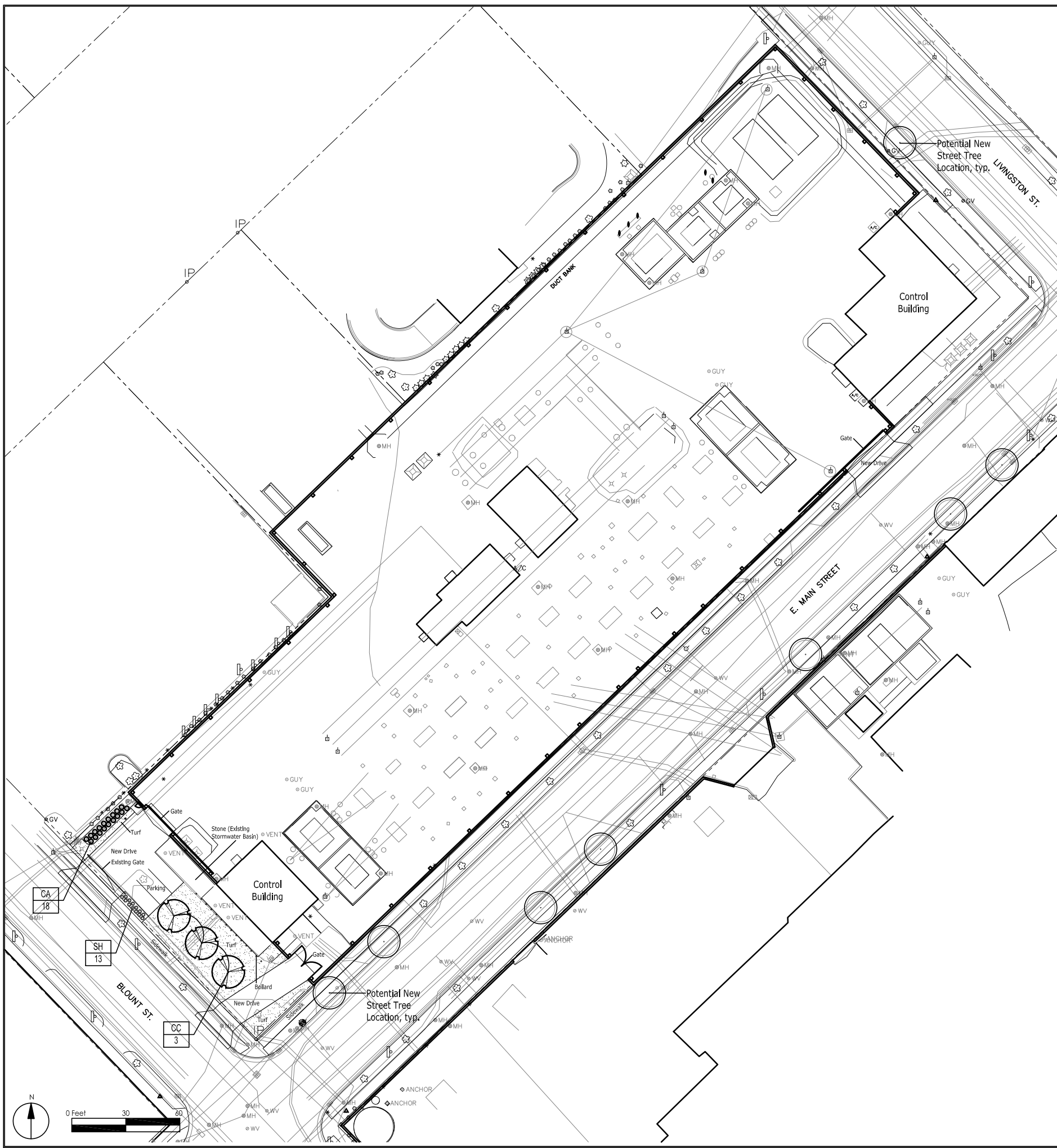


Vandewalle & Associates
 120 East Lakeside Street
 Madison, Wisconsin 53715
 608 255-3988
 www.vandewalle.com

REVISIONS
 7/17/2017

PLANTING PLAN
 MGE Blount Substation Enclosure
 Madison Wisconsin

SCALE: 1"=60'-0"
 DATE: 7/17/2017
 DRAWN BY: EB

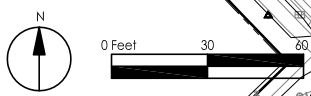


LEGEND

- EXISTING TREE
- NEW TREE
- POTENTIAL NEW STREET TREE LOCATION
(To be Coordinated with City & City Forester)
- ORNAMENTAL GRASS
- TURF

PLANT SCHEDULE

PLANT CODE	COMMON NAME	SCIENTIFIC NAME	QTY	SIZE	CONDITION
OV	MUSCLEWOOD	<i>Carpinus caroliniana</i>	3	2" CAL	B&B
CA	KARL FOERSTER	<i>Calamagrostis x acutiflora 'Karl Foerster'</i>	18	1 GAL	CONTAINER
SH	PRAIRIE DROPSEED	<i>Sporobolus heterolepis</i>	13	1 GAL	CONTAINER



MGE Blount Substation Enclosure
Design Objectives

Madison, Wisconsin

Secure
Functional
Engineered

Contextual
Beautiful
Meaningful



MGE Blount Substation Enclosure

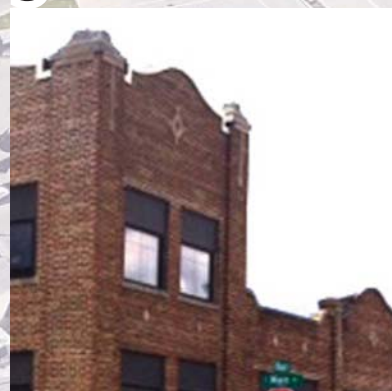
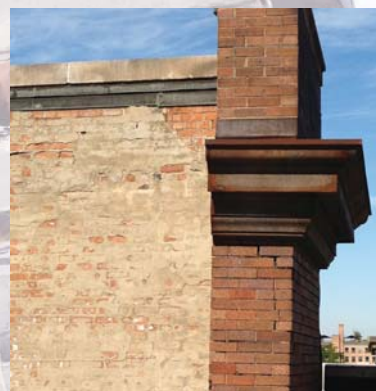
Material Inspirations

Madison, Wisconsin



Industrial/Metal/Electric

Red Brick/History



MGE Blount Substation Enclosure

Materials

Madison, Wisconsin

Perforated Metal, Round Hole, Stainless Steel, 1/8" Thick (11 Gauge), 3/8" Diameter Holes on 9/16" Centers, Staggered Pattern, 40% Open Area

Perforated Metal, Round Hole, Stainless Steel, 1/8" Thick (11 Gauge), 9/16" Diameter Holes, Staggered Pattern, 40% Open Area

3" Metal Spheres, Mounted to Perforated Metal Panel

Ornamental "Direct View" Lights, Low Output, 0.25 to 0.5 Watt per Bulb, 80 Lumens or Less

Perforated Metal, Round Hole, Stainless Steel, 1/8" Thick (11 Gauge), 1/4" Diameter Holes on 3/8" Centers, Staggered Pattern, 40% Open Area

Perforated Aluminum Panel, Anodized or Kynar Finish, Custom Color: Pantone 1505 or Similar

Endicott Thin Brick, Medium Ironspot 77, Smooth Finish
(Similar to MGE Blount Plant Color)

Endicott Thin Brick, Desert Ironspot Dark, Smooth Finish

Endicott Thin Brick, Medium Ironspot 46, Smooth Finish
(Similar to MGE Service Building Color)

Tymetal Bollard, Model TSB-Truck, Stainless Cover, 35" Tall

Metal Cap

Perforated Metal Panels

Perforated Metal Graphic Panel

Brick Faced Precast Wall

Concrete Base

15'

12'

9'

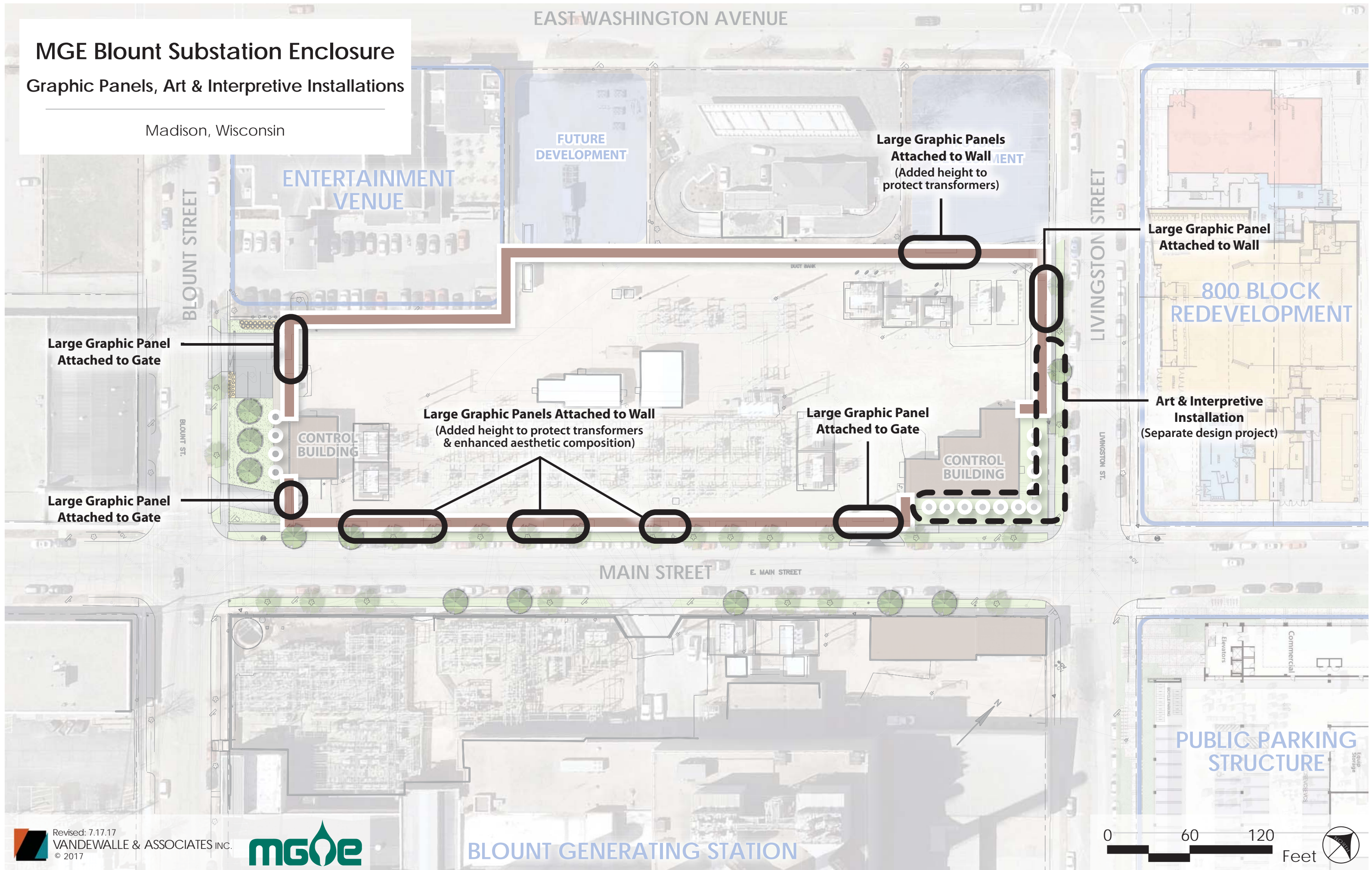
6'

3'

MGE Blount Substation Enclosure

Graphic Panels, Art & Interpretive Installations

Madison, Wisconsin

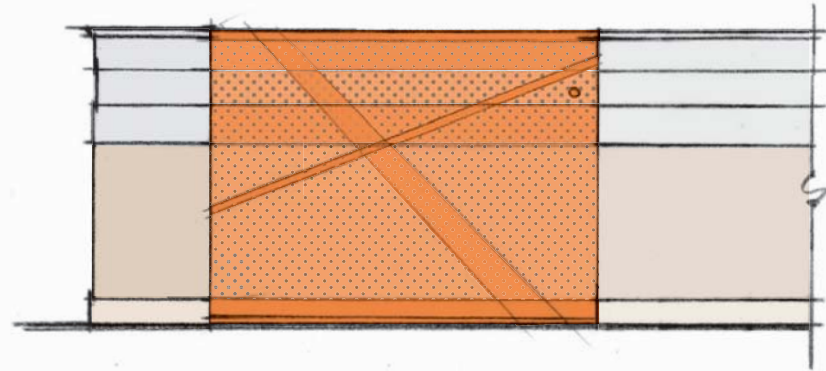


MGE Blount Substation Enclosure

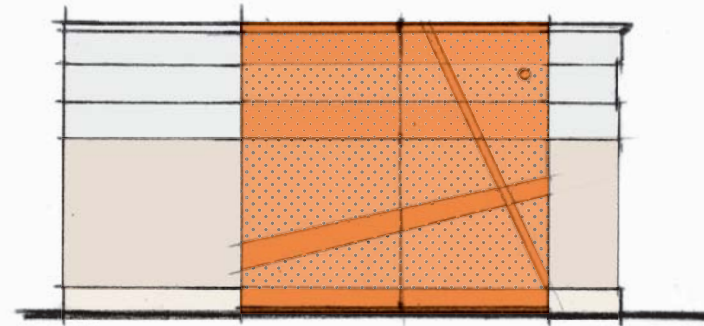
Family of Graphic Panels

Madison, Wisconsin

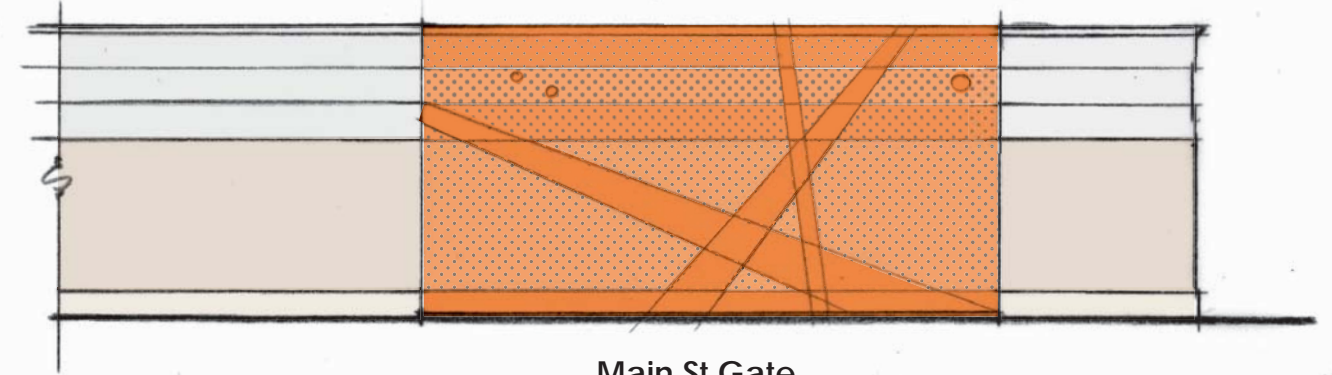
Graphic Panels Mounted to Gate Framework (Setback from face of enclosure)



Blount St North Gate

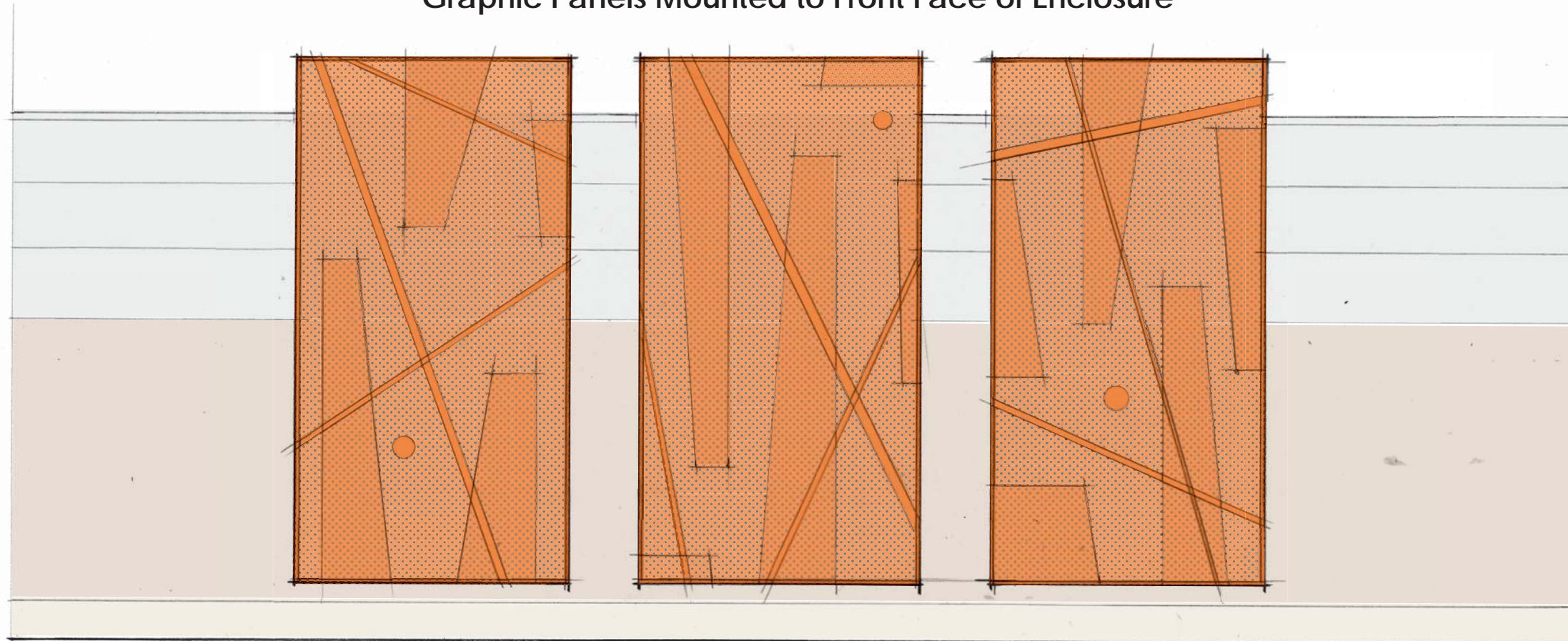


Blount St South Gate



Main St Gate

Graphic Panels Mounted to Front Face of Enclosure



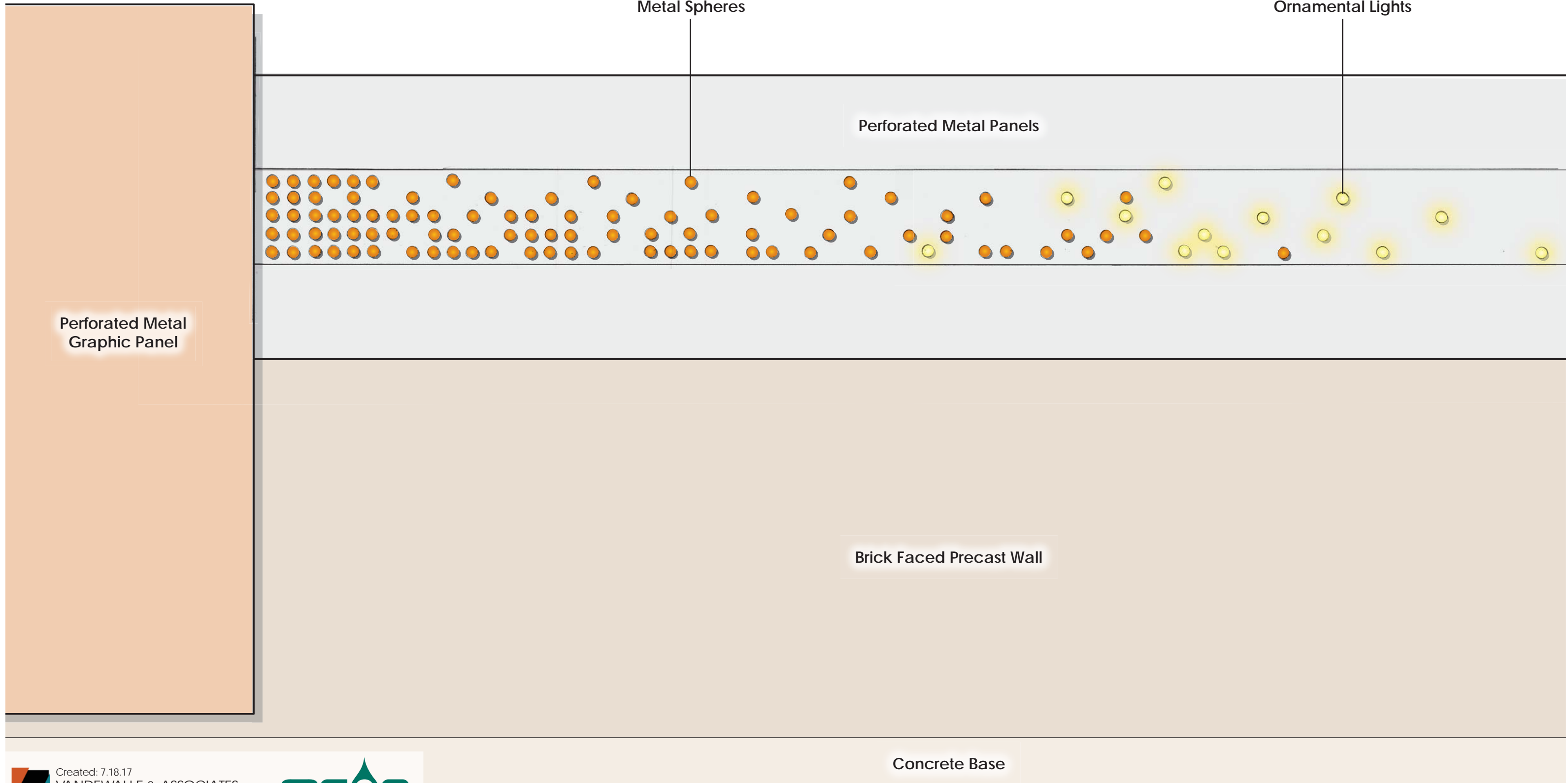
Panels will be constructed of colored perforated metal with perforated open areas that will create the graphic patterns



MGE Blount Substation Enclosure

Ornamentation Concepts

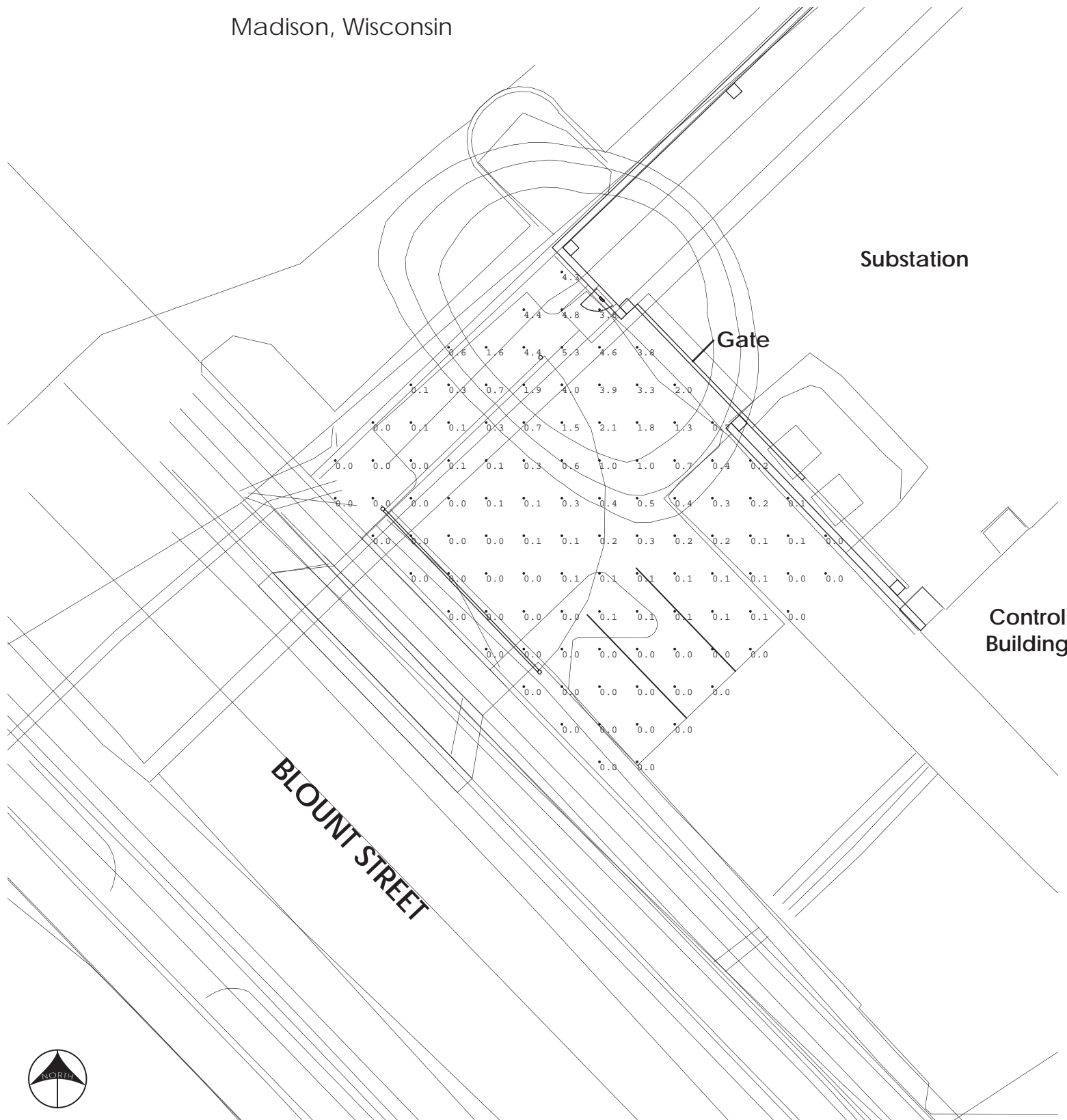
Madison, Wisconsin



MGE Blount Substation Enclosure

Photometric Plan - Blount Street Entrance

Madison, Wisconsin



Cree Edge™ Series

LED Security Wall Pack Luminaire

Product Description

The Cree Edge™ wall mount luminaire has a slim, low profile design. The luminaire end caps are made from rugged die cast aluminum with integral, weathertight LED driver compartments and high performance aluminum heat sinks specifically designed for LED applications. Housing is rugged aluminum. Includes a lightweight mounting box for installation over standard and mud ring single gang J-Boxes. Secures to wall with four 3/16" (5mm) screws (by others). Conduit entry from top, bottom, sides and rear. Allows mounting for uplight or downlight. Designed and approved for easy through-wiring. Includes leaf/debris guard.

Applications: General area and security lighting

Performance Summary

Patented NanoOptic® Product Technology

Made in the U.S.A. of U.S. and imported parts

CRI: Minimum 70 CRI

CCT: 4000K (+/- 300K), 5700K (+/- 500K) standard

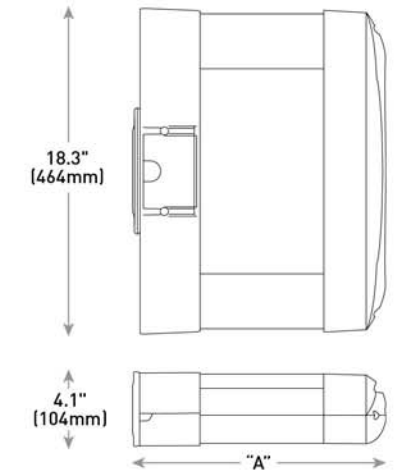
Limited Warranty¹: 10 years on luminaire/10 years on Colorfast DeltaGuard® finish

¹See <http://lighting.cree.com/warranty> for warranty terms

Accessories

Field-Installed	
Bird Spikes XA-BRDSPK	Hand-Held Remote XA-SENSREM - For successful implementation of the programmable multi-level option, a minimum of one hand-held remote is required

MGE Blount Street Light



LED Count (x10)	Dim. "A"	Weight
02	9.9" (251mm)	20 lbs. (9.1kg)
04	11.9" (303mm)	22 lbs. (10.0kg)
06	13.9" (353mm)	25 lbs. (11.3kg)
08	15.9" (404mm)	27 lbs. (12.2kg)
10	17.9" (455mm)	31 lbs. (14.1kg)
12	19.9" (505mm)	32 lbs. (14.5kg)

Ordering Information

Example: SEC-EDG-2M-WM-06-E-UL-SV-700

SEC-EDG	3M	WM	04	E	UL	350	P	
Product	Optic	Mounting	LED Count (x10)	Series	Voltage	Color Options	Drive Current	Options
SEC-EDG	2M Type II Medium 2MB Type II Medium w/BLS 2S Type II Short 2SB Type II Short w/BLS 3M Type III Medium 3MB Type III Medium w/BLS 4M Type IV Medium 4MB Type IV Medium w/BLS	WM Wall Mount	02 04 06 08 10 12	E	UL Universal 120-277V UH Universal 347-480V 34 347V	BK Black BZ Bronze SV Silver WH White	350 350mA 525 525mA 700 700mA 700 700mA	DIM 0-10V Dimming - Control by others - Refer to Dimming spec sheet for details - Can't exceed specified drive current F Fuse - Refer to ML spec sheet for availability with ML options - Available with UL voltage only - When code dictates fusing, use time delay fuse ML Multi-Level - Refer to ML spec sheet for details - Intended for downlight applications of 0° tilt P Photocell - Refer to ML spec sheet for availability with ML options - Must specify UL or 34 voltage PML Programmable Multi-Level - Refer to PML spec sheet for details - Intended for downlight applications of 0° tilt 40K 4000K Color Temperature - Minimum 70 CRI - Color temperature per luminaire



Product Specifications

CONSTRUCTION & MATERIALS

- Slim, low profile design
- Luminaire sides are rugged die cast aluminum with integral, weathertight LED driver compartment and high performance aluminum heat sinks specifically designed for LED applications
- Housing is rugged aluminum
- Furnished with low copper, light weight mounting box designed for installation over standard and mud ring single gang J-Boxes
- Luminaire can also be direct mounted to a wall and surface wired
- Secures to wall with four 3/16" (5mm) screws (by others)
- Conduit entry from top, bottom, sides, and rear
- Allows mounting for uplight or downlight
- Designed and approved for easy through-wiring
- Includes leaf/debris guard
- Exclusive Colorfast DeltaGuard® finish features an E-Coat epoxy primer with an ultradurable powder topcoat, providing excellent resistance to corrosion, ultraviolet degradation and abrasion. Black, bronze, silver and white are available
- **Weight:** See Dimensions and Weight Chart on page 1

ELECTRICAL SYSTEM

- **Input Voltage:** 120–277V or 347–480V, 50/60Hz, Class 1 drivers
- **Power Factor:** > 0.9 at full load
- **Total Harmonic Distortion:** < 20% at full load
- Integral weathertight J-Box with leads (wire nuts) for easy power hook up
- Integral 10kV surge suppression protection standard
- To address inrush current, slow blow fuse or type C/D breaker should be used
- **Maximum 10V Source Current:** 20 LED (350mA): 10mA; 20LED (525 & 700 mA) and 40-120 LED: 0.15mA

REGULATORY & VOLUNTARY QUALIFICATIONS

- cULus Listed
- Suitable for wet locations
- Meets FCC Part 15 standards for conducted and radiated emissions
- Enclosure rated IP66 per IEC 60529 when ordered without P, PML or ML options
- 10kV surge suppression protection tested in accordance with IEEE/ANSI C62.41.2
- Luminaire and finish endurance tested to withstand 5,000 hours of elevated ambient salt fog conditions as defined in ASTM Standard B 117
- DLC qualified. Exceptions apply when ordered with full backlight control. Please refer to www.designlights.org/QPL for most current information
- Dark Sky Friendly, IDA Approved. Please refer to www.darksky.org/ for most current information
- Meets Buy American requirements within ARRA

Electrical Data*								
LED Count (x10)	System Watts 120-480V	Total Current						
		120V	208V	240V	277V	347V	480V	
350mA								
02	25	0.21	0.13	0.11	0.10	0.08	0.07	
04	46	0.36	0.23	0.21	0.20	0.15	0.12	
06	66	0.52	0.31	0.28	0.26	0.20	0.15	
08	90	0.75	0.44	0.38	0.34	0.26	0.20	
10	110	0.92	0.53	0.47	0.41	0.32	0.24	
12	130	1.10	0.63	0.55	0.48	0.38	0.28	
525mA								
02	37	0.30	0.19	0.17	0.16	0.12	0.10	
04	70	0.58	0.34	0.31	0.28	0.21	0.16	
06	101	0.84	0.49	0.43	0.38	0.30	0.22	
08	133	1.13	0.66	0.58	0.51	0.39	0.28	
700mA								
02	50	0.41	0.25	0.22	0.20	0.15	0.12	
04	93	0.78	0.46	0.40	0.36	0.27	0.20	
06	134	1.14	0.65	0.57	0.50	0.39	0.29	

* Electrical data at 25°C (77°F)

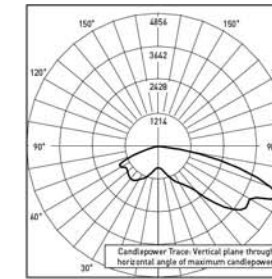
Recommended Cree Edge™ Series Lumen Maintenance Factors (LMF) ¹						
Ambient	Initial LMF	25K hr Projected ² LMF	50K hr Projected ² LMF	75K hr Calculated ³ LMF	100K hr Calculated ³ LMF	
5°C (41°F)	1.04	0.99	0.97	0.95	0.93	
10°C (50°F)	1.03	0.98	0.96	0.94	0.92	
15°C (59°F)	1.02	0.97	0.95	0.93	0.91	
20°C (68°F)	1.01	0.96	0.94	0.92	0.90	
25°C (77°F)	1.00	0.95	0.93	0.91	0.89	

¹Lumen maintenance values at 25°C are calculated per TM-21 based on LM-80 data and in-situ luminaire testing
²In accordance with IESNA TM-21-11, Projected Values represent interpolated value based on time durations that are within six times (6X) the IESNA LM-80-08 total test duration (in hours) for the device under testing (IDUT) i.e. the packaged LED chip
³In accordance with IESNA TM-21-11, Calculated Values represent time durations that exceed six times (6X) the IESNA LM-80-08 total test duration (in hours) for the device under testing (IDUT) i.e. the packaged LED chip

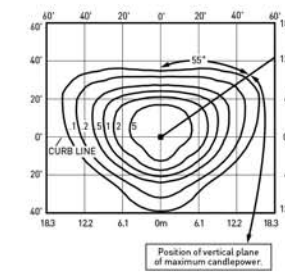
Photometry

All published luminaire photometric testing performed to IESNA LM-79-08 standards by a NVLAP accredited laboratory. To obtain an IES file specific to your project consult: <http://lighting.cree.com/products/outdoor/wall-mount/cree-edge-series-5>

3M

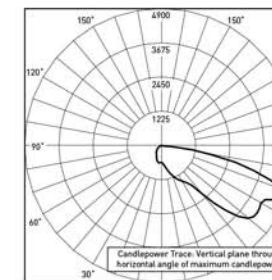


ITL Test Report #: 79173
 SEC-EDG-3M-**-06-E-UL-700-40K
 Initial Delivered Lumens: 10,343

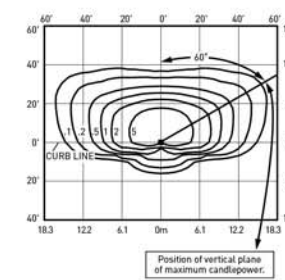


SEC-EDG-3M-**-08-E-UL-525-40K
 Mounting Height: 10' (3.0m) A.F.G.
 Initial Delivered Lumens: 11,220
 Initial FC at grade

3MB



CSA Test Report #: 6448
 ARE-EDG-3MB-**-06-E-UL-700
 Initial Delivered Lumens: 7,740



SEC-EDG-3MB-**-08-E-UL-525-40K
 Mounting Height: 10' (3.0m) A.F.G.
 Initial Delivered Lumens: 8,300
 Initial FC at grade

Type III Medium Distribution				
LED Count (x10)	4000K		5700K	
	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11
350mA				
02	2,027	B1 U0 G1	2,105	B1 U0 G1
04	4,054	B1 U0 G1	4,209	B1 U0 G1
06	6,011	B2 U0 G2	6,242	B2 U0 G2
08	8,015	B2 U0 G2	8,323	B2 U0 G2
10	9,994	B3 U0 G3	10,379	B3 U0 G3
12	11,993	B3 U0 G3	12,454	B3 U0 G3
525mA				
02	2,837	B1 U0 G1	2,947	B1 U0 G1
04	5,675	B2 U0 G2	5,893	B2 U0 G2
06	8,415	B2 U0 G2	8,739	B2 U0 G2
08	11,220	B3 U0 G3	11,652	B3 U0 G3
700mA				
02	3,466	B1 U0 G1	3,599	B1 U0 G1
04	6,932	B2 U0 G2	7,198	B2 U0 G2
06	10,279	B3 U0 G3	10,674	B3 U0 G3

* Initial delivered lumens at 25°C (77°F)
 ** For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit: www.ies.org/PDF/Erratas/TM-15-11BugRatingsAddendum.pdf

Type III Medium Distribution w/BLS				
LED Count (x10)	4000K		5700K	
	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11	Initial Delivered Lumens*	BUG Ratings** Per TM-15-11
350mA				
02	1,499	B1 U0 G1	1,557	B1 U0 G1
04	2,999	B1 U0 G1	3,114	B1 U0 G1
06	4,446	B1 U0 G1	4,617	B1 U0 G1
08	5,929	B1 U0 G2	6,157	B1 U0 G2
10	7,393	B1 U0 G2	7,677	B1 U0 G2
12	8,872	B1 U0 G2	9,213	B1 U0 G2
525mA				
02	2,099	B1 U0 G1	2,180	B1 U0 G1
04	4,198	B1 U0 G1	4,359	B1 U0 G1
06	6,225	B1 U0 G2	6,464	B1 U0 G2
08	8,300	B1 U0 G2	8,619	B1 U0 G2
700mA				
02	2,564	B1 U0 G1	2,662	B1 U0 G1
04	5,127	B1 U0 G2	5,325	B1 U0 G2
06	7,603	B1 U0 G2	7,896	B1 U0 G2

* Initial delivered lumens at 25°C (77°F)
 ** For more information on the IES BUG (Backlight-Uplight-Glare) Rating visit: www.ies.org/PDF/Erratas/TM-15-11BugRatingsAddendum.pdf



Blount St
View (Before)



Blount St
View (After)



Main St
View (Before)



Main St
View (After)



Livingston St View (Before)



Livingston St
View (After)



Northwest View
- Facing East
Washington
Ave (Before)



Northwest View
- Facing East
Washington
Ave (After)





ADJACENT PROJECTS NOT IN UDD #8
Blount Plant Enclosure & Building Enhancements

