



Grandview Commons Grocery Store



**Planned Unit Development:
Specific Implementation Plan**

Submittal: September 19, 2012

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Letter of Intent

Statement of Purpose

The following document outlines the Planned Unit Development: Specific Implementation Plan, for the creation of a grocery store within the Grandview Commons Town Center.

Zoning Request

Planned Unit Development: Specific Implementation Plan

Project Information

Applicant

1200 South, LLC.
3315A N. Ballard Road
Appleton, Wisconsin 54911
Phone: (920) 739-0101
Fax: (920) 585-9142
Chris Winter
cwinter@rolliewinter.com

Design Team

Architect:

Briohn Design Group, LLC.
3885 North Brookfield Road
Suite 200
Brookfield, Wisconsin 53045
Phone: (262) 790-0500
Fax: (414) 588-3874
Domenico Ferrante
dferrante@briohn.com

Engineer:

D'Onofrio Kottke
7530 Westward Way
Madison, WI 53717
Phone: (608) 833-7530
Fax: (608) 206-6879
Dan Day
dday@donofrio.cc

Planner Landscape Architect:

Vandewalle & Associates
120 East Lakeside Street
Madison, WI 53715
Phone: (608) 255-3988
Fax: (608) 255-0814
Brian Munson
bmunson@vandewalle.com

Landscape Architect:

Schaefer Land Design
405 N. Page Street
Stoughton, WI 53589
Phone: (608) 225-7946
Jim Schaefer
jschaeferld@sbcglobal.net

Existing Conditions

Address	6002 Cottage Grove Road
Aldermanic District:	District 5 Alder Lauren Cnare
Neighborhood Association:	McClellan Park Neighborhood Association
Alder/Neighborhood Notification:	April 23, 2012
Legal Description:	See Exhibit A
Lot Area:	5.92 acres
Existing Land Use:	Undeveloped Land Former Doric Lodge Site
Existing Zoning:	Planned Unit Development: General Development Plan
Comp. Plan Designation:	Community Mixed Use
Surrounding Uses:	
North:	Mixed Residential (Grandview Commons)
East:	Single Family Residential (Grandview Commons)
South:	Cottage Grove Road Single Family Residential (Richmond Hill) Schoenstatt Sisters of Mary Property
West:	Mixed Use (Grandview Commons)
Development Schedule:	2013 Construction Start 14-18 Month Construction Period Target Opening: Spring 2014

Zoning Text

Permitted Uses:

Accessory uses, including but not limited to the following:

- a. Signs as regulated in this section
- b. Temporary buildings for construction purposes, for a period not to exceed the duration of such construction

Banks and financial institutions
Catering establishments
Drugstores
Dry goods stores
Film developing and processing
Florist shops and conservatories
Food stores--grocery stores, meat stores, fish markets, bakeries, and delicatessens
Liquor stores
Meat markets

Lot Area:

5.92 acres

Floor Area Ratio:

As shown on approved plans.

Height

As shown on approved plans.

<u>Yard Requirements:</u>	Yard areas will be provided as shown on approved plans.
<u>Landscaping:</u>	Site landscaping areas will be provided as shown on approved plans.
<u>Accessory Off-Street Parking & Loading:</u>	Accessory off-street parking and loading will be provided as shown on approved plans.
<u>Lighting:</u>	Site lighting will be provided as shown on approved plans.
<u>Signage:</u>	Signage for the project shall be limited to the maximum permitted in the R6 zoning district for the residential uses and as per the in the C2 zoning district for the commercial uses and as approved by the Urban Design Commission and Zoning Administrator.
<u>Alterations and Revisions:</u>	No alterations or revisions of this planned unit development shall be permitted unless approved by the City Plan Commission, however, the Zoning Administrator may issue permits for minor alterations or additions which are approved by the Director of Planning and Development and the alderperson of the district and are compatible with the concept approved by the City Plan Commission.

General Project Components

<u>Deliveries/Loading:</u>	No delivery, loading, trash removal, or compaction, or other such operations shall be permitted between the hours of 9:00 PM and 7:00 AM.
<u>Truck Idling:</u>	Vehicles shall not have idling engines for more than five (5) minutes except when actively loading. When actively loading no operator of any large motor truck shall permit such vehicle to remain stationary with the main power train motor running for more than fifteen (15) minutes when the outside air temperature is between 40°F and 80°F. This restriction shall not apply to maintenance, construction, or public utility vehicles.
<u>Outdoor Storage:</u>	Outdoor storage of materials is limited to the fully enclosed storage area at the rear of the building or within the loading dock enclosure. Outdoor display of seasonal merchandise is allowed within the plaza areas adjacent to the entries.
<u>Shared Parking:</u>	The parking field will be part of an overall shared parking strategy and will be available for use by any of the customers or patrons of the C Block.
<u>Outdoor Eating/Sales:</u>	The plaza area adjacent to the building may be used for outdoor dining and limited food preparation/sales, including seasonal merchandise displays, a temporary cashier station, and a grill for food preparation. This area may be utilized by the primary tenant or other community groups.

TDM Framework

The Grandview Commons Town Center has been designed and implemented as a walkable mixed-use destination featuring a blend of retail, residential, and institutional uses. Building a multi-modal transportation network and tenant group will be key to maintaining a balanced and healthy transportation system. Transportation Demand Management techniques will be utilized throughout the site with a goal of reducing single occupant vehicles and encouraging transportation choices.

The following techniques will be implemented on a Town Center and Tenant basis as part of this approach:

Transit Encouragement

Provide workers with information regarding existing Metro services, shared ride, and car pool options.

Currently Madison Metro does not provide bus service east of Interstate 90. The Grandview Commons Town Center will work with City to support extension of transit service to the site and surrounding neighborhood.

Incorporate transit facilities into the infrastructure design for the town center for ease of accommodating future transit

Pedestrian & Bicycle Encouragement

Distribute bicycle parking throughout the town center, located near entrances, travel corridors, and prominent locations.

Create walkways and off-street facility connections in complete segments to create a inter-connected network.

Work with the City to identify off-site barriers and impediments to the pedestrian and bicycle network.

Work with City to create safe route maps to the town center for distribution to employees and the general public.

Operational

Encourage employers to offer flex time, or staggered shift times to distribute trip timing.

Encourage businesses to offer transit encouragement programs such as setting up car pools/rideshare, ride matching, or offering transit subsidies for employees. Work with employers to participate in the Rideshare Etc, State Van Pool service, or other carpooling options.

Explore the potential for community car/shared car placement in the town center.

Require shared parking throughout the town center, discourage assigning parking stalls to specific buildings or users.

Encourage employers to offer emergency ride home vouchers for users of alternative transportation.

Exhibit A: Legal Description

Part of Lots 1 and 2, Certified Survey Map Number 12305, recorded in Volume 76 of Certified Survey Maps on Pages 166-169 as Document Number 4371415, also being part of Lot 2, Certified Survey Map Number 11058, recorded in Volume 66 of Certified Survey Maps on Pages 221-225 as Document Number 3908382, Dane County Registry, and a parcel of land all located in the SE1/4 of the NW1/4 and the SW1/4 of the NE1/4 of Section 11, T7N, R10E, City of Madison, Dane County, Wisconsin to-wit: Commencing at the North $\frac{1}{4}$ corner of said Section 11; thence S00°57'41"E, 2184.22 feet to the Northeast corner of said Lot 2, Certified Survey Map Number 12305 and the point of beginning; thence N50°53'16"E, 20.38 feet; thence N10° 13'10"E, 30.44 feet to a point of curve; thence along a curve to the left which has a radius of 180.00 feet and a chord which bears S86°04'28"E, 39.46 feet; thence N87°37'58"E, 343.86 feet; thence S00°57'41"E, 443.91 feet; thence S88°24'55"W, 617.04 feet; thence N01°35'05"W, 164.15 feet; thence S88°24'55"W, 74.69 feet; thence N01°35'05"W, 144.41 feet to a point of curve; thence along a curve to the left which has a radius of 190.00 feet and chord which bears N12°12'32"W, 70.06 feet; thence N88°31'57"E, 196.13 feet; thence S39°06'44"E 46.87 feet; thence N50°53'16"E, 100.00 feet to the point of beginning.

Project Plans

Adopted General Development Plan: Town Center

Site Plan

Final Plat

Grading & Erosion Control

Utility Plan

Elevations

Perspectives

Floor Plan

Signage

Landscape Plan

Landscape Elements

Fire Access Plan/Hydrant Plan

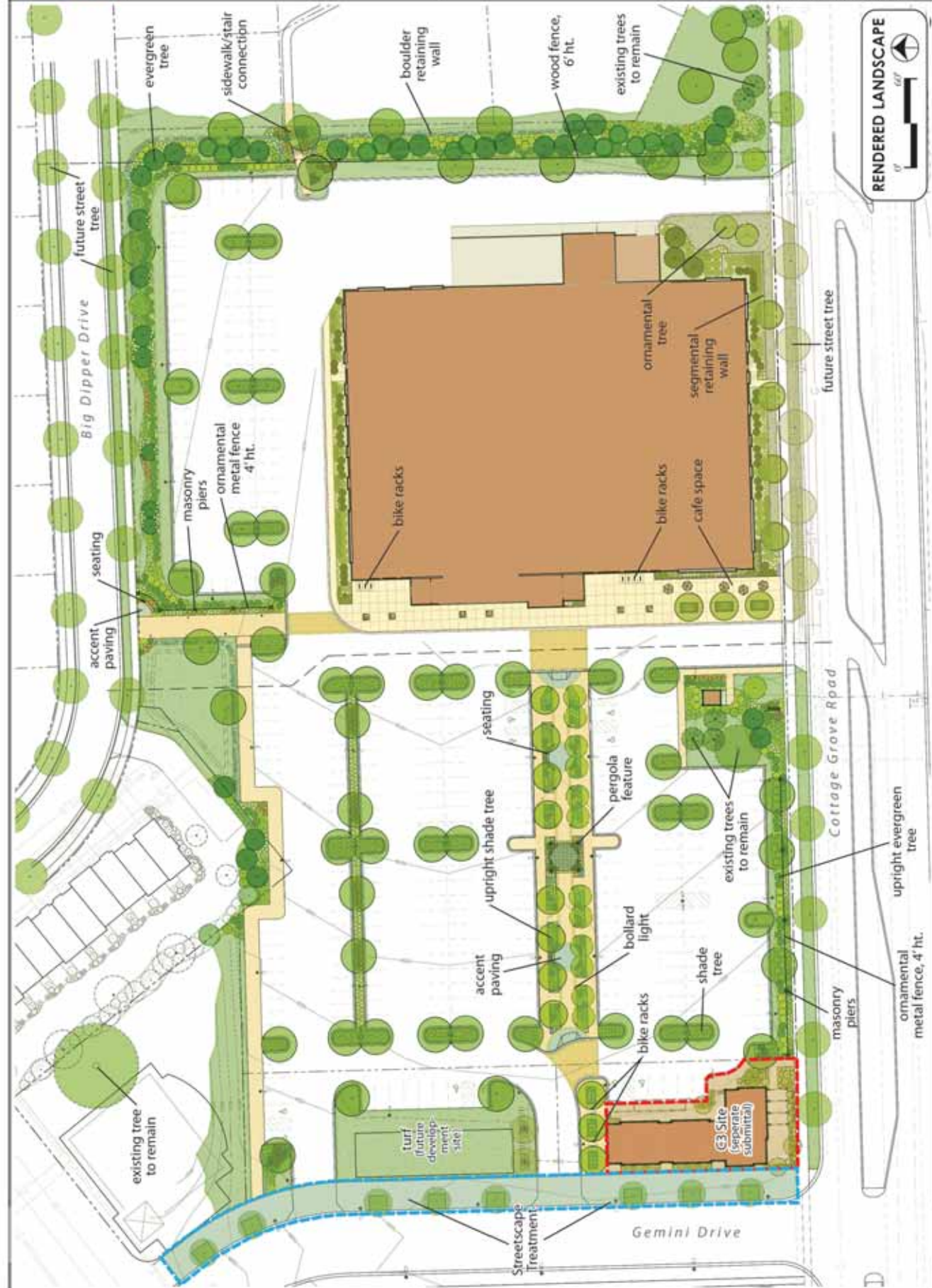
Fire Hydrant Worksheet

Lighting Plan

Lighting Cut Sheets

Grandview Commons
 Town Center/Doric Lodge
 Revised General Development Plan





RENDERED LANDSCAPE
 1" = 10'

Coppes Grocery Store
 LANDSCAPE PLAN
 GRAYSON COUNTY - MADISON WISCONSIN

SL1
 4/27/2024
 10:00 AM
 10/10/2024
 10:00 AM
 10/10/2024
 10:00 AM

SL1
 4/27/2024
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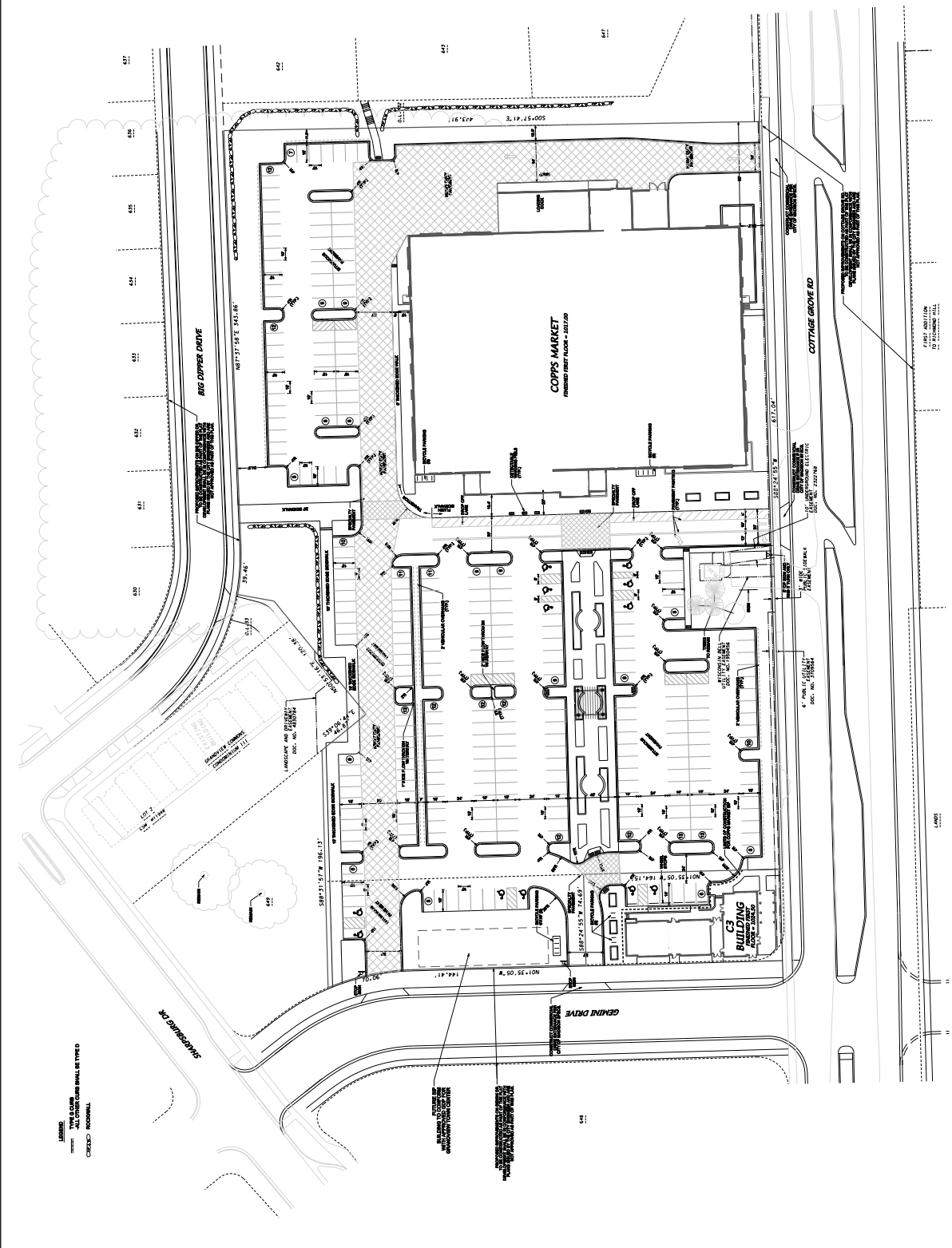
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 4/27/2024
 10:00 AM
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 10/10/2024
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SL1
 4/27/2024
 10:00 AM
 10/10/2024
 10:00 AM
 10/10/2024
 10:00 AM

PROFESSIONAL ENGINEER AND ARCHITECT, INC.
 7500 Wisconsin Ave., Madison, WI 53717
 Phone: (608) 259-1100 Fax: (608) 259-1888
 STATE OF WISCONSIN
 OFFICIAL RECORD FOR LAND DEVELOPMENT

CITY OF MADISON, DANE COUNTY, WISCONSIN
COPPS MARKET
 SITE PLAN


 SCALE: 1" = 30'
 DATE: 09-19-12
 DRAWN BY: [Name]
 CHECKED BY: [Name]
 PROJECT NO.: 12-05-12A
 SHEET NUMBER: C101



LEGEND:
 TYPE: [Symbol] CONCRETE
 ALL OTHERS: [Symbol] AS SHOWN
 CONCRETE: [Symbol] CONCRETE

TOTAL LOT AREA: 100,000 SQ. FT.
 TOTAL BUILDING AREA: 100,000 SQ. FT.
 TOTAL PAVED LOT AREA: 100,000 SQ. FT.

PROFESSIONAL ENGINEER AND ARCHITECT, INC.
 7530 Wisconsin Drive, Madison, WI 53717
 Phone: (608) 259-8888 • Fax: (608) 259-8888
 WWW.MTEA.WISCONSIN.GOV

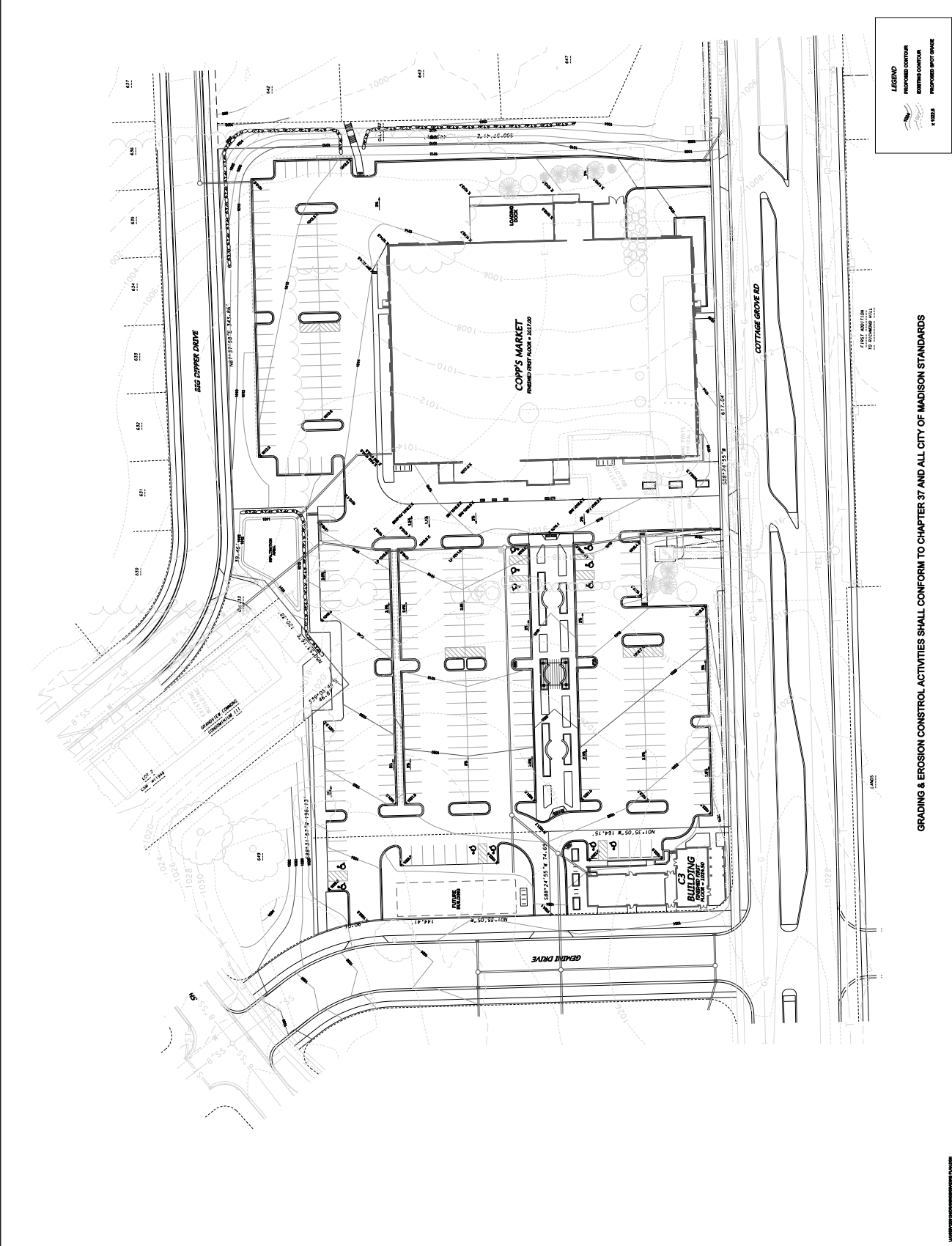
CITY OF MADISON, DANE COUNTY, WISCONSIN

COPP'S MARKET

SITE GRADING PLAN

SCALE: 1" = 30'
 DATE: 09-19-12
 DRAWN: [Signature]

PROJECT NO.	12-05-124
SHEET NO.	C1.02



LEGEND

[Symbol]	PROPOSED CONTOUR
[Symbol]	EXISTING CONTOUR
[Symbol]	PROPOSED SPOT ELEVATION

GRADING & EROSION CONTROL ACTIVITIES SHALL CONFORM TO CHAPTER 37 AND ALL CITY OF MADISON STANDARDS

UNIVERSITY MICROFILMS

PROFESSIONAL ENGINEER AND ARCHITECT
 7530 Wisconsin Ave., Madison, WI 53717
 Phone: (608) 259-7800 Fax: (608) 259-7899
 WWW.METTLER-ENGINEERS.COM

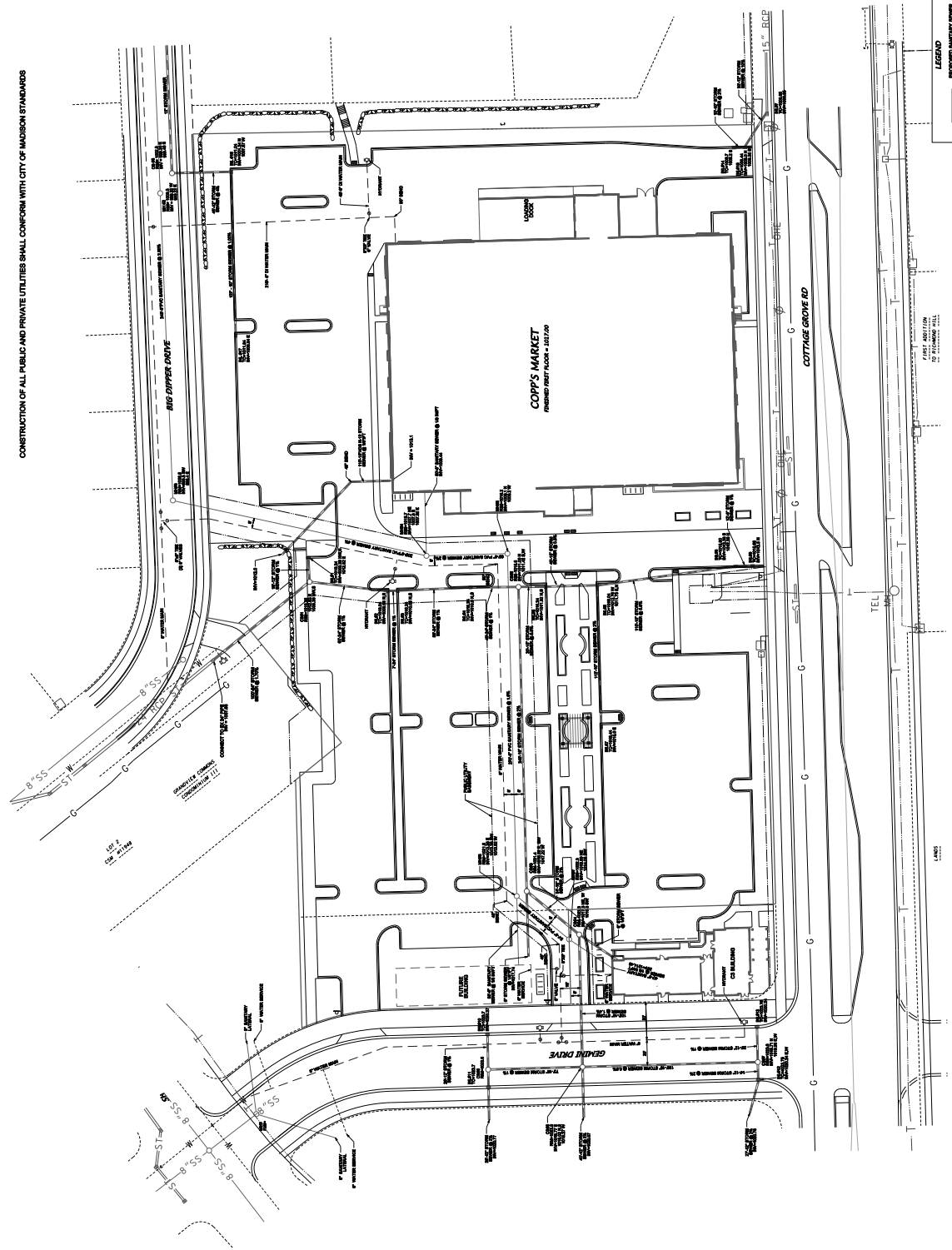
CITY OF MADISON, DANE COUNTY, WISCONSIN

COPP'S MARKET

SITE UTILITY PLAN

DATE: 09-19-12
 SCALE: 1" = 30'
 SHEET NO. 12-05-12A
 SHEET NUMBER: C1.03

CONSTRUCTION OF ALL PUBLIC AND PRIVATE UTILITIES SHALL CONFORM WITH CITY OF MADISON STANDARDS



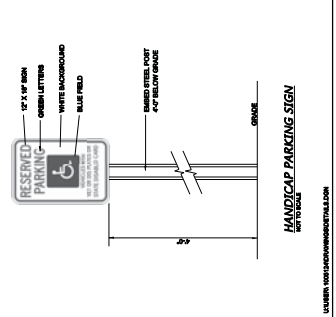
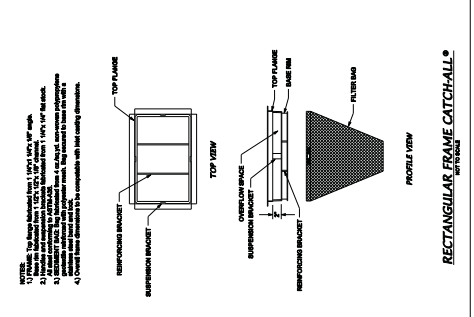
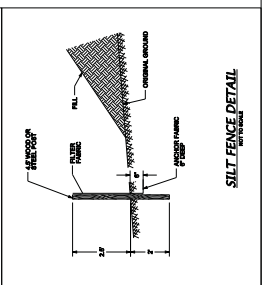
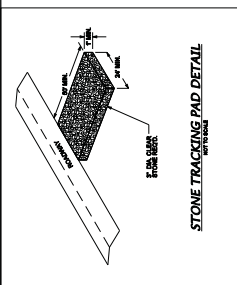
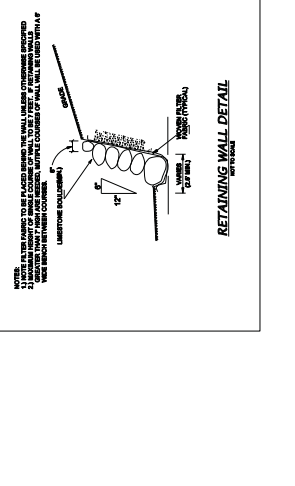
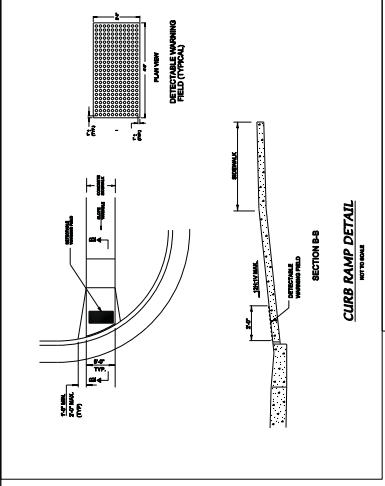
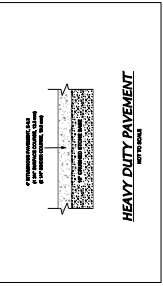
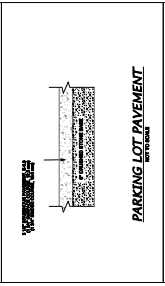
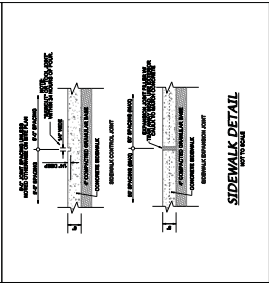
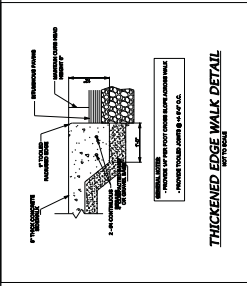
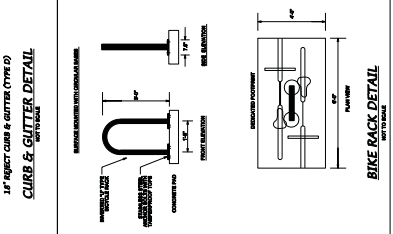
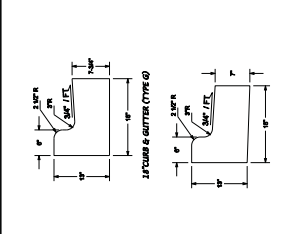
LEGEND

- PROPOSED SANITARY SEWER
- PROPOSED WATER SERVICE
- PROPOSED STORM SEWER
- PROPOSED CATCHBASIN OR MANHOLE
- PROPOSED METER

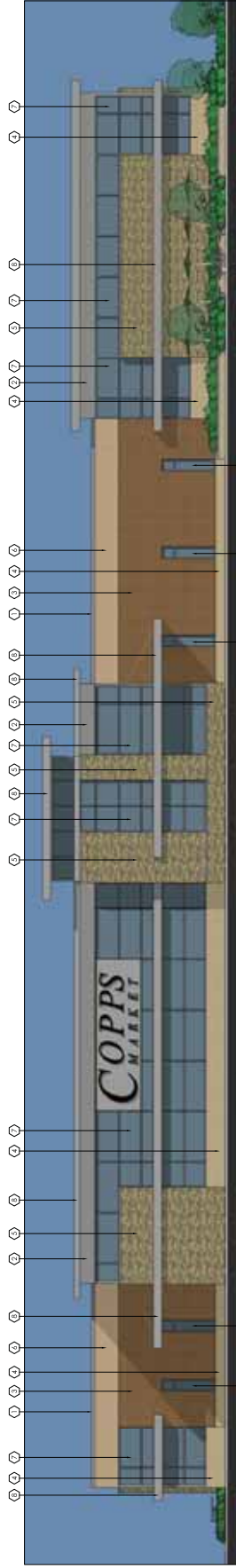
PROFESSIONAL ENGINEER AND ARCHITECT, INC.
 1750 Wisconsin Street, Madison, WI 53717
 Phone: (608) 259-1100 Fax: (608) 259-1888
 STATE OF WISCONSIN REG. NO. 1000000000

COPPS MARKET
 SITE DETAILS
 CITY OF MADISON, DANE COUNTY, WISCONSIN

DATE: 09-19-12
 DRAWING NO.:
 SHEET NO. 08
 PROJECT NO.:
 SHEET NUMBER: C1.05



LSI URL: www.lsi.com



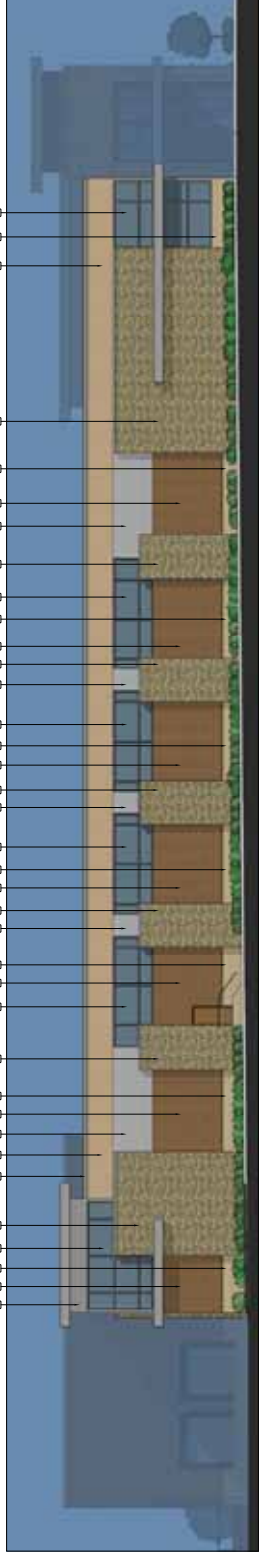
FRONT ELEVATION



REAR ELEVATION

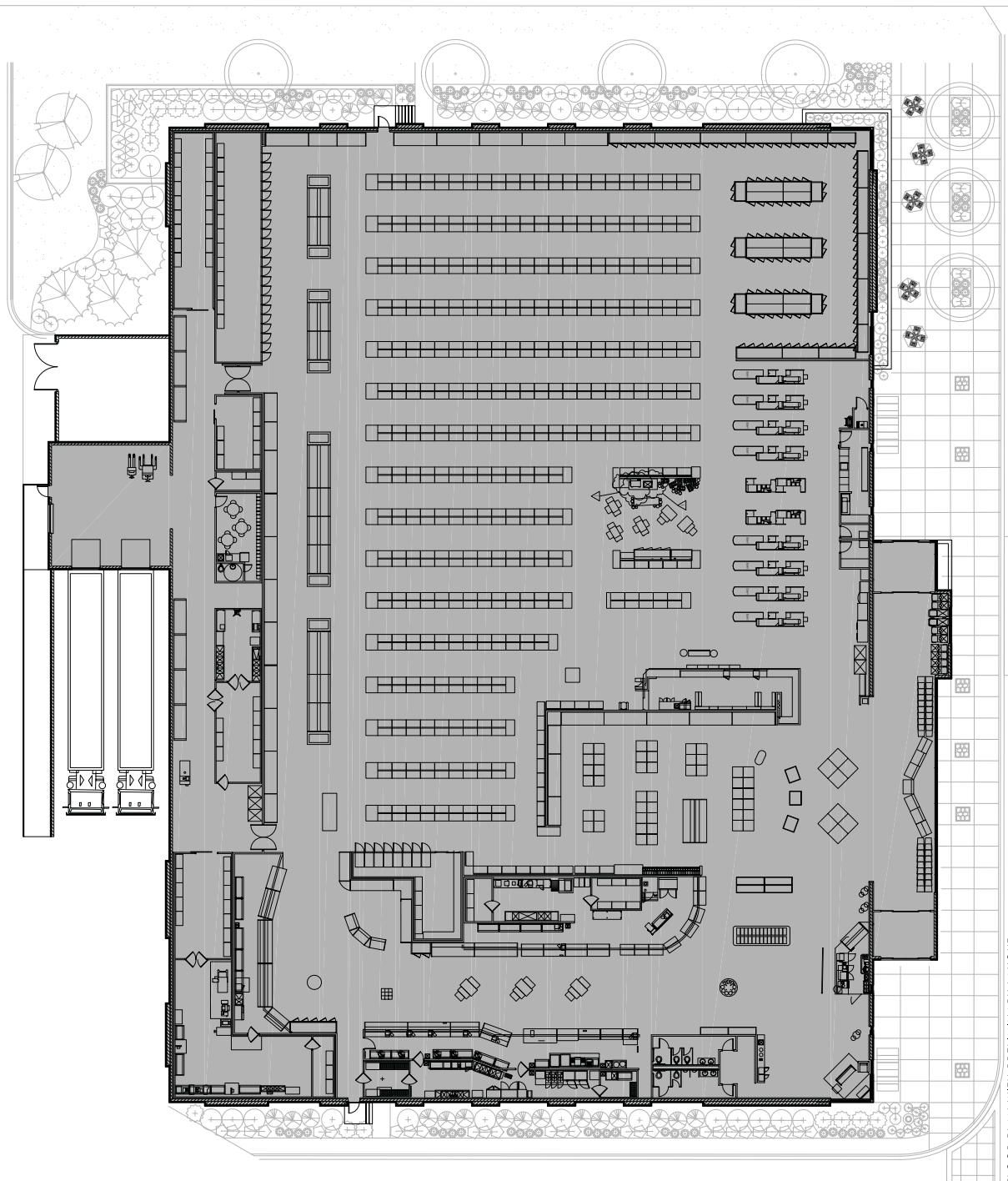


RIGHT ELEVATION



LEFT ELEVATION

ELEVATION KEY NOTES	
①	REFINISH METAL CORING (COLOR: CLEAR ANODIZED)
②	REFINISH STAINLESS STEEL (COLOR: POLISHED)
③	REFINISH COPPER (COLOR: PATINA)
④	RECORABLE BRICK (COLOR: MICHIGAN)
⑤	RECORABLE BLOCK (COLOR: MICHIGAN)
⑥	COURTESY STONE
⑦	NET FACIAL WITH UNPAINTED (COLOR: TAN)
⑧	CLAY FACED BRICK (COLOR: REDDISH BROWN)
⑨	RECORABLE BRICK (COLOR: CLEAR ANODIZED)
⑩	REFINISH OPTI-FLUOR FINISH (COLOR: PAI)



FLOOR PLAN WITH PRELIMINARY LAYOUT

COPPS GROCERY STORE
 COTTAGE GROVE ROAD
 MADISON, WISCONSIN
 SEPTEMBER 17, 2012



VIEW FROM PARKING LOT LOOKING NORTHEAST AT ENTRY



VIEW FROM COTTAGE GROVE ROAD LOOKING NORTHEAST AT ENTRY



VIEW FROM PARKING LOT LOOKING SOUTHEAST AT ENTRY



VIEW FROM ARBOR LOOKING EAST AT ENTRY



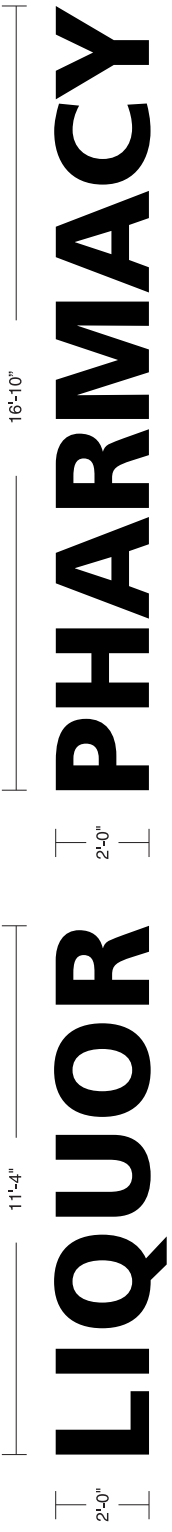
VIEW FROM COTTAGE GROVE ROAD LOOKING NORTHWEST



A ONE (1) SET OF NON-ILLUMINATED CHANNEL LETTERS.
 SCALE: 1/2"=1'
 2 1/2" DEEP FABRICATED ALUMINIUM LETTERS, NON-ILLUMINATED. FLUSH MOUNT TO FASCIA PANEL PROVIDED BY OTHERS.
 VERIFY ALL MEASUREMENTS PRIOR TO FABRICATION



FRONT ELEVATION
 SCALE: 1/32"=1'



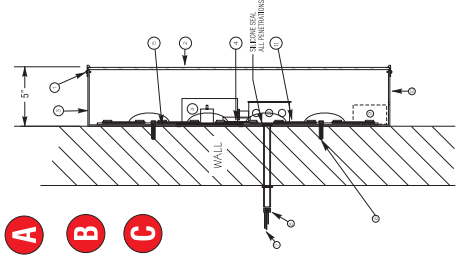
B ONE (1) SET OF LED ILLUMINATED CHANNEL LETTERS.
 SCALE: 3/8"=1'
 WHITE PLEX FACES WITH APPLIED BLACK PERFORATED VINYL. BLACK TRIM CAP AND WHITE RETURNS. ILLUMINATE WITH WHITE LED. FLUSH MOUNT TO FASCIA.
 VERIFY ALL MEASUREMENTS PRIOR TO FABRICATION

3M #3635 - 222
 BLACK PERF

C ONE (1) SET OF LED ILLUMINATED CHANNEL LETTERS.
 SCALE: 3/8"=1'
 WHITE PLEX FACES WITH APPLIED BLACK PERFORATED VINYL. BLACK TRIM CAP AND WHITE RETURNS. ILLUMINATE WITH WHITE LED. FLUSH MOUNT TO FASCIA.
 VERIFY ALL MEASUREMENTS PRIOR TO FABRICATION

3M #3635 - 222
 BLACK PERF

TYP. SECTION THRU LTRS.



- 1 TRIM CAP / BLACK
- 2 .177 LEXAN FACES - BLACK PERF VINYL OVERLAY
- 3 .063 ALUM. RETURNS / WHITE
- 4 L.E.D. POWER SUPPLY 12V.
- 5 .090 ALUMINIUM BACK
- 6 MOUNTING ANCHORS
- 7 120V PRIMARY, No.12 THHN STRANDED WIRE
- 8 FLEXIBLE, WEATHERPROOF, CONDUIT PER LOCAL CODE
- 9 SAFETY SWITCH, PER LOCAL CODE
- 10 1/4" DRAIN HOLE
- 11 L.E.D. WHITE SLOAN
- 12 1/2" J-BOX

252 INTERSTATE RD. P.O. BOX 1068
 ADDISON, IL 60101
 630-543-9490
 630-543-9493
 FAX 630-543-9493

DATE	REVISION

CUSTOMER APPROVAL	DATE
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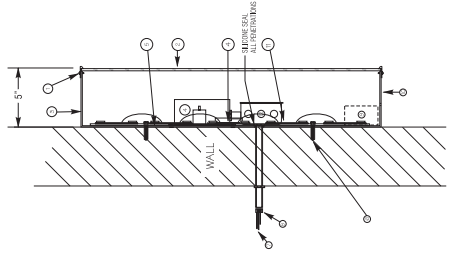
CLIENT	COPPS	ADDRESS	COTTAGE GROVE ROAD	DESIGNER	AT	SALESPERSON	TD
CITY	COTTAGE GROVE	STATE	WI	DATE	8.1.12	SHEET NO.	1 of 3
DRWG. NO.	1.2882	SCALE	NOTED				

11'-4"

COPPS

MARKET

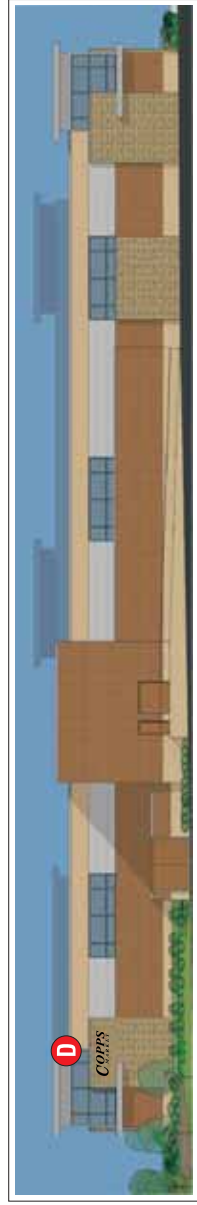
3'-2"



IYP. SECTION THRU LTRS.

- 1 TRIM CAP / BLACK
- 2 .177 LEXAN FACES - BLACK PERFORATED VINYL OVERLAY
- 3 .063 ALUM. RETURNS / WHITE
- 4 L.E.D. POWER SUPPLY 12V.
- 5 .090 ALUMINUM BACK
- 6 MOUNTING ANCHORS
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- 8 FLEXIBLE, WEATHERPROOF, CONDUIT PER LOCAL CODE
- 9 SAFETY SWITCH, PER LOCAL CODE
- 10 1/4" DRAIN HOLE
- 11 L.E.D. WHITE SLOAN
- 12 1/2" BOX

D ONE (1) SET OF LED ILLUMINATED CHANNEL LETTERS.
 SCALE: 1/4" = 1'
 WHITE PLEX FACES WITH APPLIED BLACK PERFORATED VINYL.
 BLACK TRIM CAP AND RETURNS. ILLUMINATE WITH WHITE LED.
 FLUSH MOUNT TO MASONRY FASCIA. VERIFY ALL
 MEASUREMENTS PRIOR TO FABRICATION



REAR ELEVATION
 SCALE: 1/32" = 1'

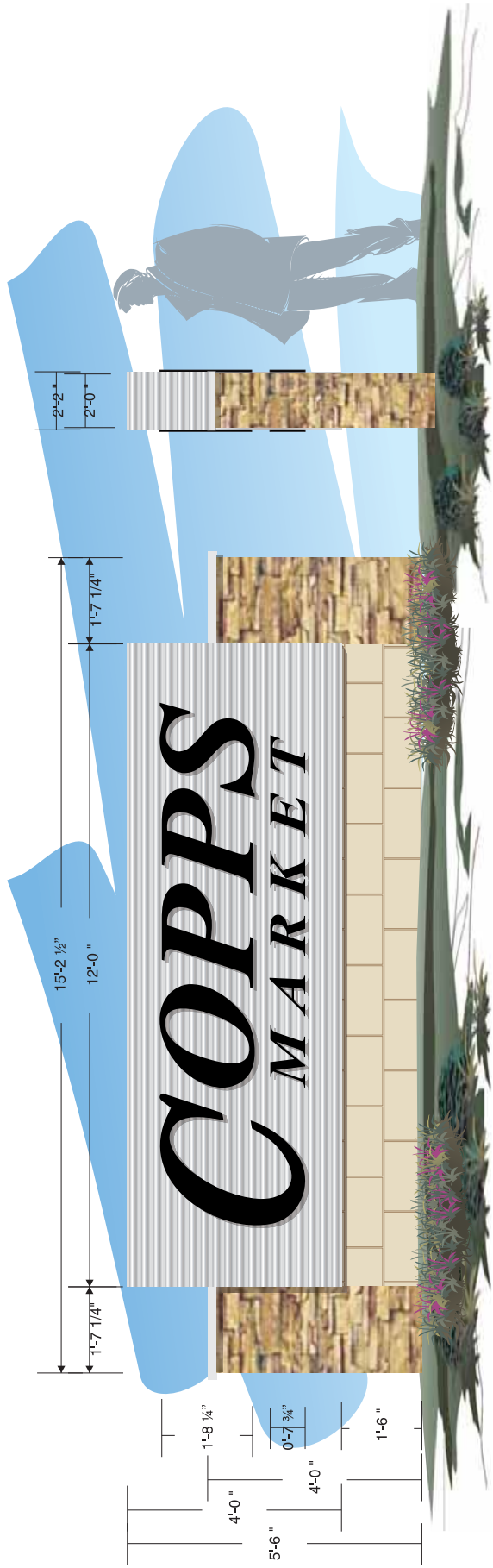
DOYLE
 GENERAL SIGN CONTRACTORS
 252 INTERSTATE RD., P.O. BOX 1068
 ADDISON, IL 60101
 630-543-9480
 FAX 630-543-9483

DATE	REVISION

CUSTOMER APPROVAL **DATE**

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CLIENT	COPPS	DESIGNER AT	SALESPERSON	TD
ADDRESS	COTTAGE GROVE ROAD	STATE	WI	
CITY	COTTAGE GROVE	SCALE	NOTED	DATE
DRWG. NO.	12882			8.1.12
				SHEET NO. 2 of 3



E ELEVATION - D/F Monument Sign ONE (1) REQ'D.

1/8" = 1'-0"

END VIEW - D/F Monument Sign

1/8" = 1'-0"

252 INTERSTATE RD., P.O. BOX 1068
ADDISON, IL 60101
830-543-9480
FAX 830-543-9483

DATE	REVISION

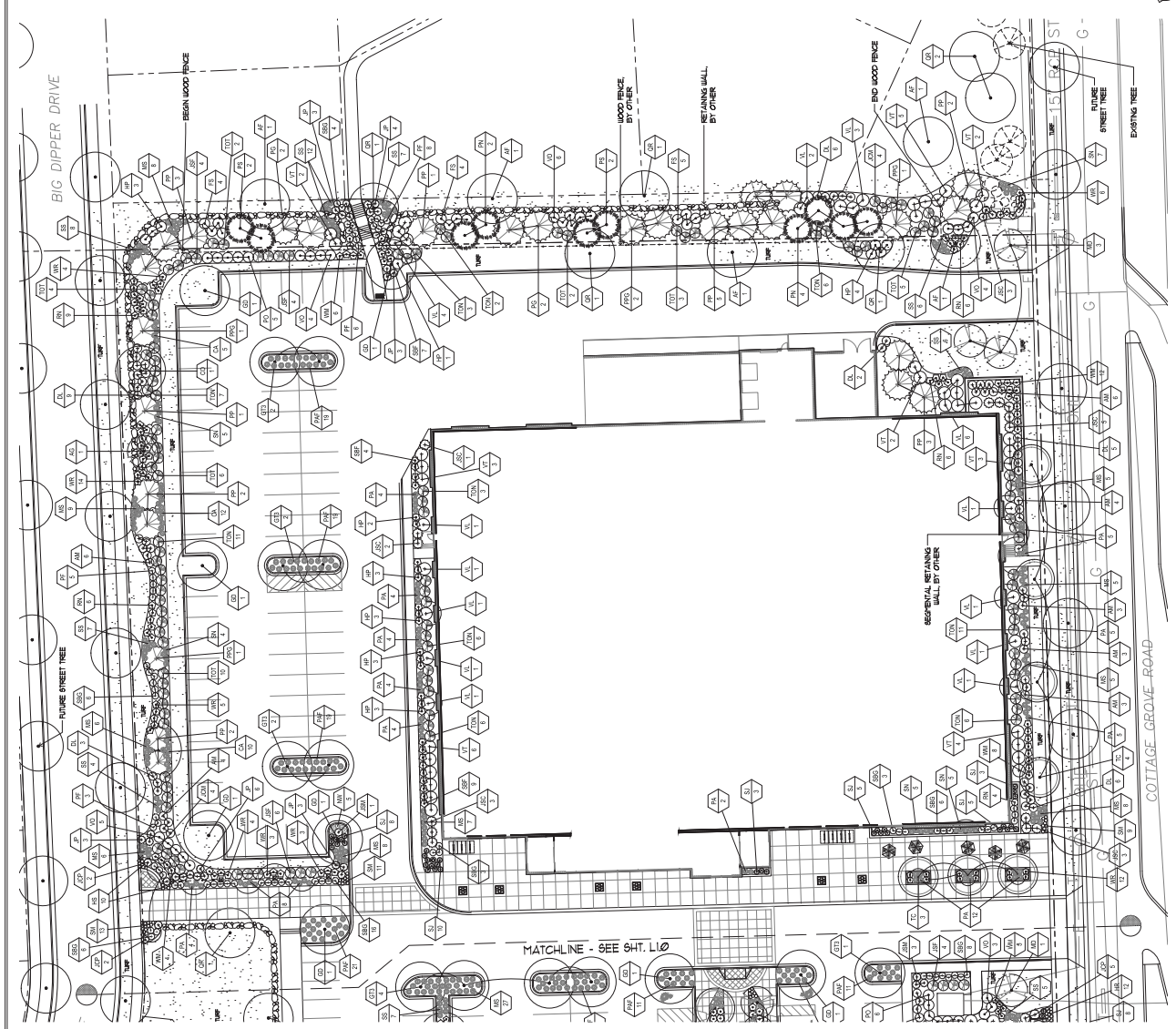
CUSTOMER APPROVAL **DATE**

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CLIENT	COPPS	DESIGNER AT	SALESPERSON	TD
ADDRESS	COTTAGE GROVE ROAD	STATE	WI	
CITY	COTTAGE GROVE	SCALE	NOTED	DATE: 8.1.12
DRWG. NO.	12882			SHEET NO. 3 of 3



DATE	12-27-07
DRAWN BY	MMB
PROJECT NO.	085
COPYRIGHT	© 2007



PLANTING NOTES

GENERAL

Digging
Contact local Doggers' Hotline prior to any digging.
Topsoil shall be classified as a sandy loam soil to silty loam. No organic topsoil from peaty, mucky, or other sources shall be used. Topsoil shall be tested for heavy metals and shall be supplied for more than 12 months to be relatively free of visible weed seeds. Topsoil shall be sifted and/or screened to be free of stones and city lumps, stumps, or other extraneous materials.

Fire Grading
Fire Grading is a safety procedure that adequate special has been provided for all seed and planting beds. Remove all stumps and stone exceeding 2 inches in diameter from area to a depth of 2 inches prior to bed preparation and planting. Fire grade to within 1/2" of finished grade. All lawn areas to be sloped evenly to meet drain and approximate contours on grading plan.

PLANTING

Plant starter mix
A 2:1 ratio mix of two parts peat moss and one part manure.

Trees
Protect plant and back fill pits with a mix of 10% plant starter mix, and 90% existing soil. Tree depth of root ball to be same as grown in nursery or slightly higher if planting in clay soil.

Shrubs
Protect plant and back fill pits with a mix of 10% plant starter mix, and 90% existing soil. Set depth of root ball to be same as grown in nursery or slightly higher if planting in clay soil.

Perennials
Protect plants in perennial planting beds by adding 3" plant starter mix. Add heavy mulch bed mulch, each at the rate of 1.5 lbs. per 100 S.F. Add granular sulfur at the rate of 3.4 lbs. per 100 S.F. Rotate to blend and re-grade as necessary. Set plant depth to be same as grown in nursery. Water-in well.

MULCHING
Apply a 2" layer of shredded bark throughout tree, shrub, and perennial planting beds. For trees in lawn, install a 4.5 diameter circle of mulch around each tree. Do not allow mulch to touch plant stems. Contractor shall provide shredded bark mulch from disease-free hardwood material. Mulch shall be applied in a minimum of 1" wide and 4" long, graded down to handweed, and relatively free of detritus matter.

SEED EDGING
All planting beds adjacent to turf areas shall be edged with poly-nyl edging. Install per manufacturer's instructions.

TURF SEEDING

ESPECIALLY BY CONTRACTOR, DATE, BY WEEDS

A. Baron Kentucky bluegrass	20 %
B. Penn State tall fescue	20 %
C. Penn State tall fescue	20 %
D. Penn State tall fescue	20 %
E. Palmer's perennial ryegrass	20 %

Apply at the rate of 5 lbs. per 1000 S.F.

Method of grass seeding may be varied at discretion of Contractor on their responsibility to establish smooth, uniform turf composed of the grasses specified.

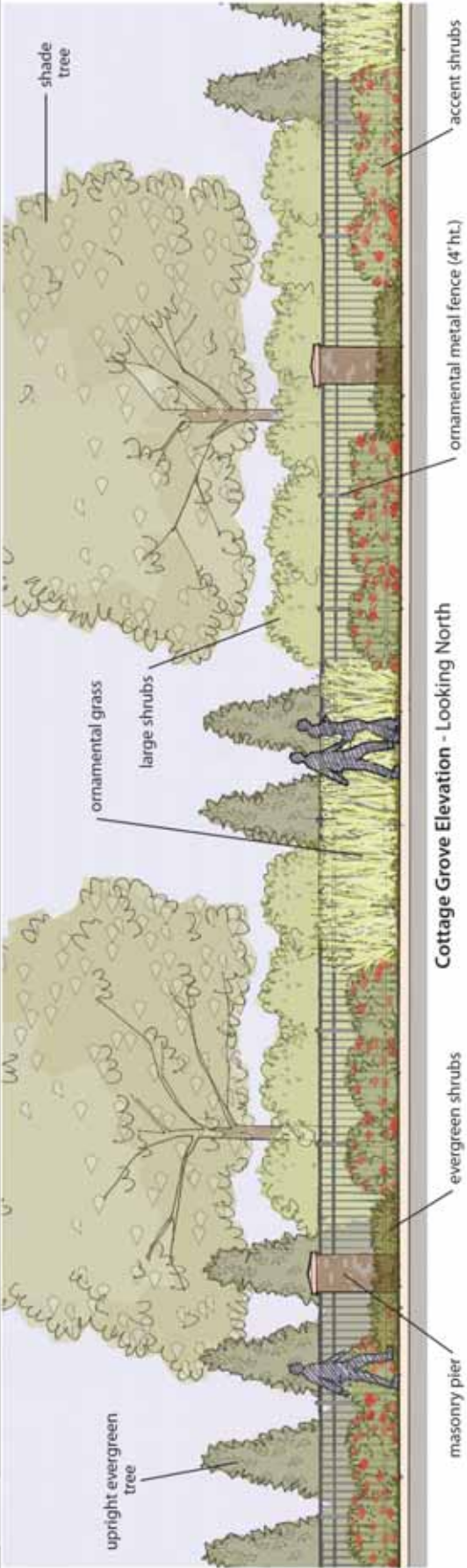
- Spread lawn fertilizer per manufacturer's specifications.
- Do not seed following rain or if surface has been compacted by rain.
- Do not seed when wind velocity exceeds 15 m.p.h.
- Seed must be mixed with seed and fertilizer if hydroseeding. Or, protect seeded areas by spreading straw mulch to form a continuous blanket over seeded areas.
- Keep protected moist for 4 weeks.

MAINTENANCE

Contractor shall provide regular maintenance until a state of 60 days after completion of planting. Maintenance shall begin when planting is started for ongoing planting areas. Maintenance operations shall include watering, weeding, and mowing. Contractor shall provide a minimum of 1" of water per week throughout the maintenance period for all planting areas.

PLANT GUARANTEE

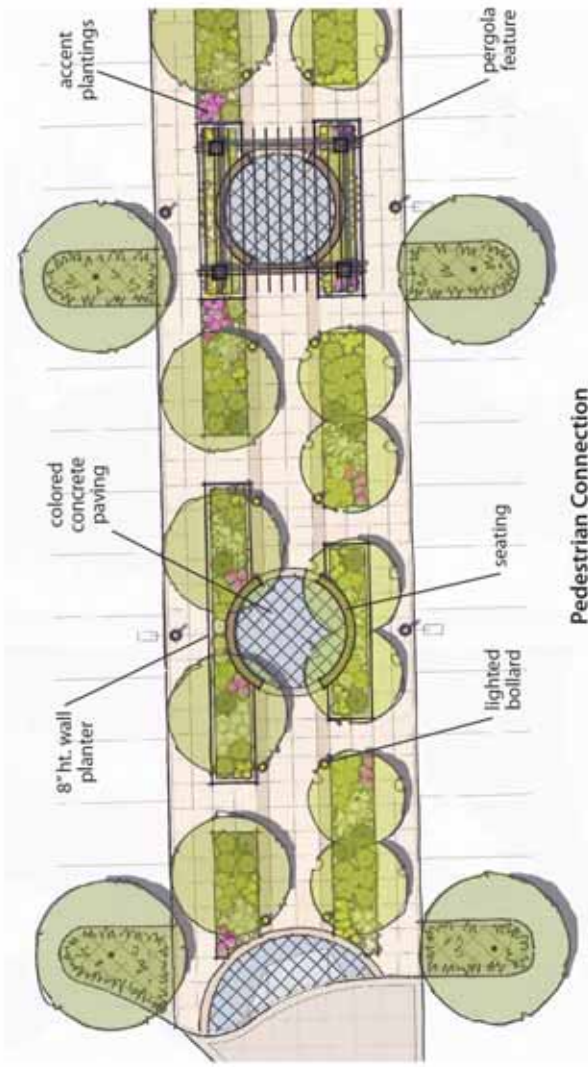
The landscape contractor shall guarantee to replace stock, without charge, any woody plant material (deciduous or evergreen trees & shrubs) that dies within one year of installation, provided that the plant care (regular watering). The owner must report plant losses within the guarantee period.



Cottage Grove Elevation - Looking North



Cafe & Outdoor Sales Area



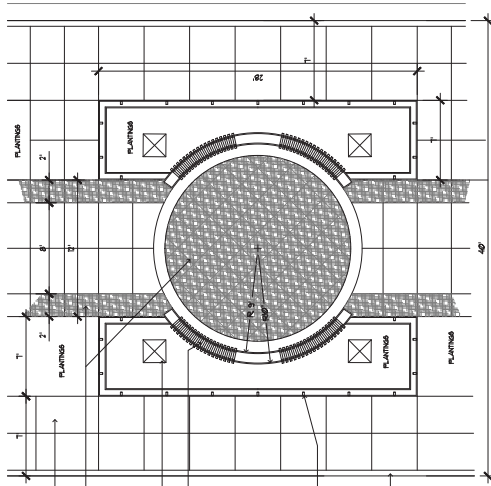
Pedestrian Connection

LANDSCAPE ELEMENTS



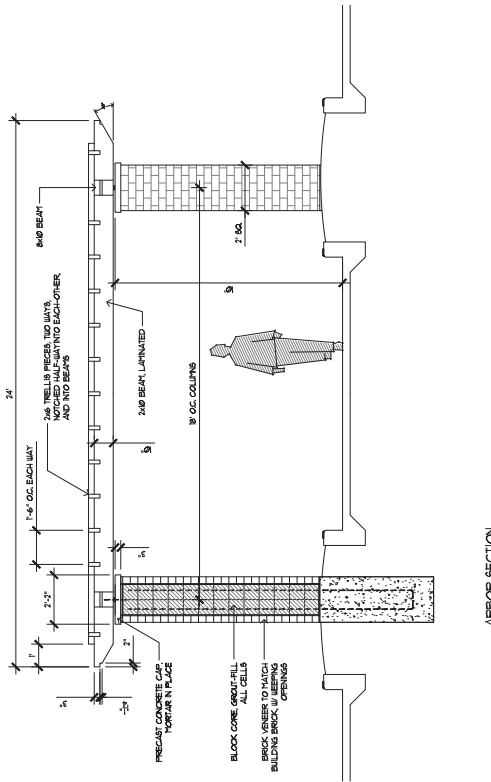
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SCALE	AS SHOWN
DRAWN BY	AMS
CHECKED BY	AMS
PROJECT NO.	17-000

L3.0

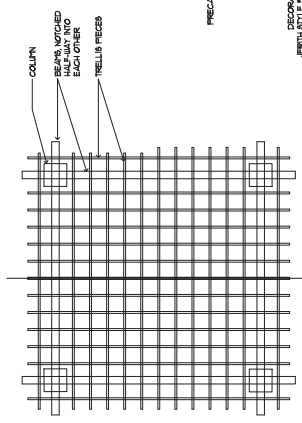


CONCRETE PAVING
 COLORED CONCRETE
 COORDINATING PAVING
 BY GRANITE SEPT COLOR
 PAVING TO MATCH CONCRETE
 ANCHOR COLUMN
 METAL BEAM & LENGTH
 CUSTOM FABRICATED TO FIT
 CONTACT LOCAL MANUFACTURER
 THICKENED EDGE
 6" ASPERATE STONE BASE, COMPACTED
 1/2" EXPANSION JOINT
 CURE BY OTHER

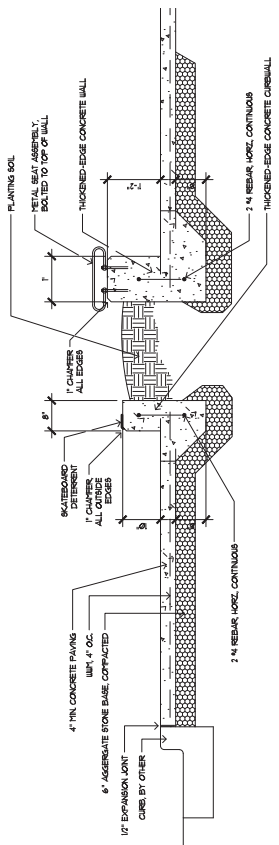
SEATING NODE
 1/4" = 1'-0"



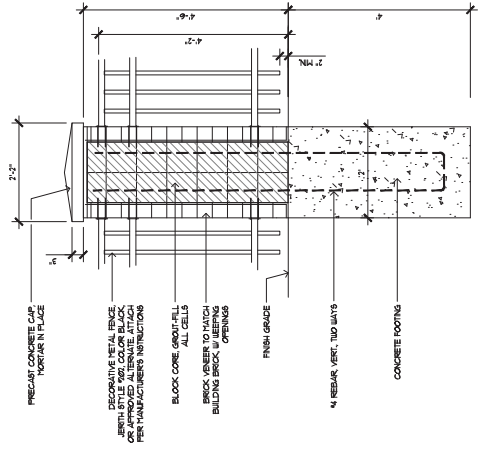
ABEOKS SECTION
 1/2" = 1'-0"



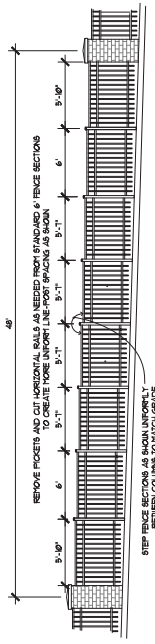
ABEOKS PLAN
 1/4" = 1'-0"



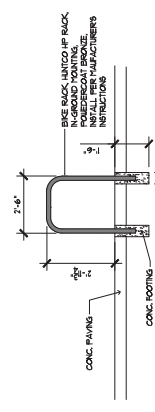
SEATING NODE SECTION
 1" = 1'-0"



DECORATIVE FENCE COLUMN SECTION
 1" = 1'-0"



DECORATIVE FENCE ELEVATION
 1/4" = 1'-0"



BIKE RACK
 1/2" = 1'-0"

PROVIDING OFFICE AND ASSOCIATES, INC.
 7500 Wisconsin Ave., Suite 100, Bethesda, MD 20814
 Phone: (301) 251-2500 • Fax: (301) 251-1888
 WWW.AERIALACCESS.COM

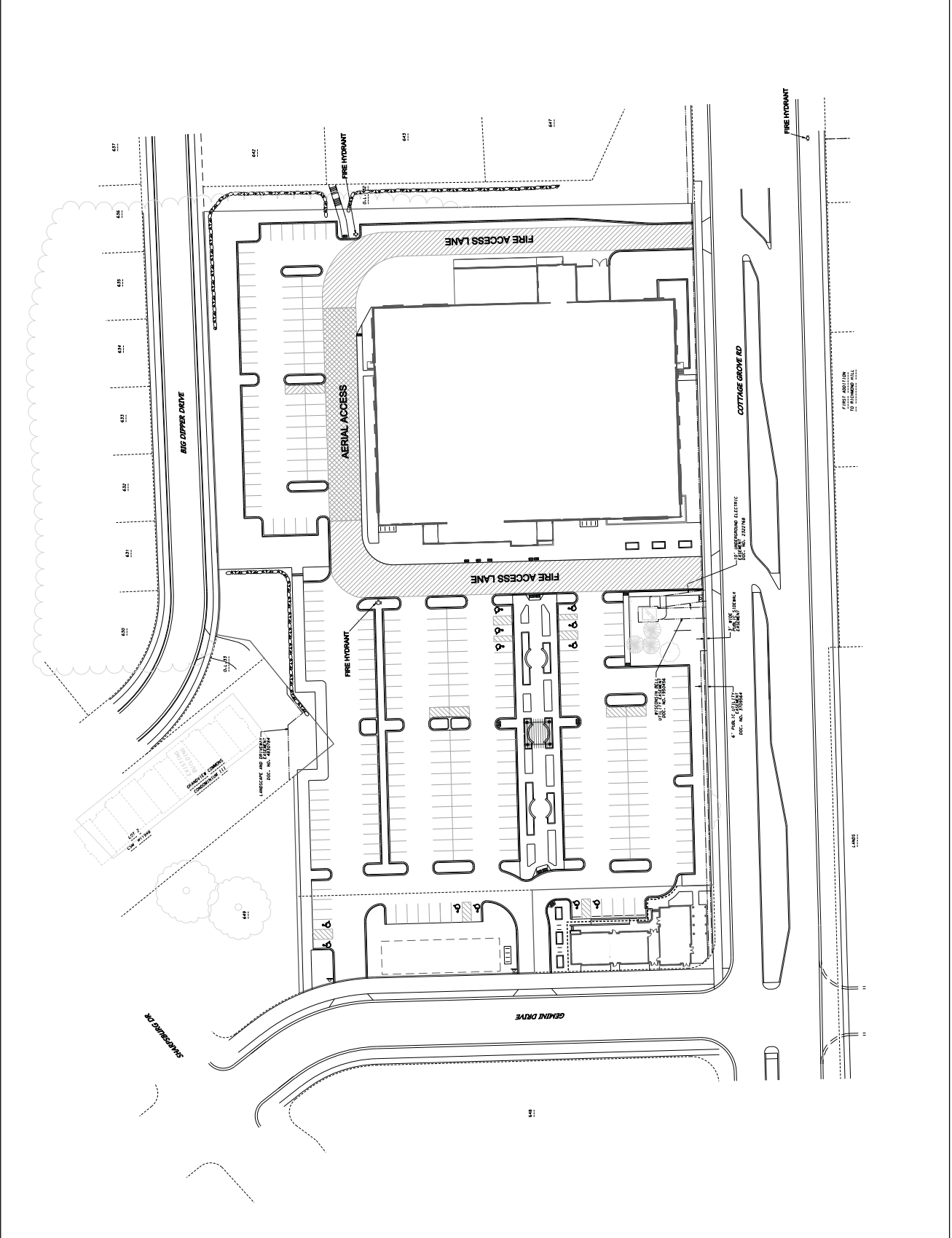
CITY OF MADISON, DANE COUNTY, WISCONSIN

COPPS MARKET

FIRE ACCESS PLAN

SCALE: 1" = 30'
 DATE: 09-19-12
 DRAWN BY: [Name]
 CHECKED BY: [Name]

PROJECT NO: 12-05-124
 SHEET NUMBER: C104





CITY OF MADISON FIRE DEPARTMENT

Fire Prevention Division, 325 W. Johnson St., Madison, WI 53703 ♦ Phone: 608-266-4484 ♦ FAX: 608-267-1153

Project Address: 6002 Cottage Grove Road

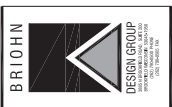
Contact Name & Phone #: Brian Munson, (608) 255-3988

FIRE APPARATUS ACCESS AND FIRE HYDRANT WORKSHEET

1. Is the building completely protected by an NFPA 13 or 13R automatic fire sprinkler system? If non-sprinklered , fire lanes extend to within 150-feet of all portions of the exterior wall? If sprinklered , fire lanes are within 250-feet of all portions of the exterior wall?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> Yes <input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No	<input type="checkbox"/> N/A <input checked="" type="checkbox"/> N/A <input type="checkbox"/> N/A
2. Is the fire lane constructed of concrete or asphalt, designed to support a minimum load of 85,000 lbs? a) Is the fire lane a minimum unobstructed width of at least 20-feet? b) Is the fire lane unobstructed with a vertical clearance of at least 13½-feet? c) Is the minimum inside turning radius of the fire lane at least 28-feet? d) Is the grade of the fire lane not more than a slope of 8%? e) Is the fire lane posted as fire lane? a. Is a detail of the signage included on the site plan? f) Is a roll-able curb used as part of the fire lane? a. Is a detail of the curb included on the site plan? g) Is part of a sidewalk used as part of the required fire lane? a. Is the sidewalk constructed to withstand 85,000-lbs?	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No	<input type="checkbox"/> N/A <input type="checkbox"/> N/A <input type="checkbox"/> N/A <input type="checkbox"/> N/A <input type="checkbox"/> N/A <input type="checkbox"/> N/A <input type="checkbox"/> N/A <input type="checkbox"/> N/A <input type="checkbox"/> N/A <input type="checkbox"/> N/A <input type="checkbox"/> N/A <input type="checkbox"/> N/A
3. Is the fire lane obstructed by security gates or barricades? If yes: a) Is the gate a minimum of 20-feet clear opening? b) Is an approved means of emergency operations installed, key vault, padlock or key switch?	<input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No	<input type="checkbox"/> N/A <input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/> N/A
4. Is the Fire lane dead-ended with a length greater than 150-feet? If yes, is the area for turning around fire apparatus provided by: a) A cul-de-sac with a minimum inside diameter of 70-feet? b) A 45-degree wye with a minimum length of 60-feet per side? c) A 90-degree tee with a minimum length of 60-feet per side?	<input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> Yes <input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No	<input type="checkbox"/> N/A <input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/> N/A
5. Is any portion of the building to be used for high-piled storage in accordance with IFC Chapter 23? If yes, see IFC 2306.6 for further requirements.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
6. Is any part of the building greater than 30-feet above the lowest level of fire apparatus access? If yes, answer the following questions: a) Is the aerial apparatus fire lane parallel to one entire side of the building? b) Is the near edge of the aerial apparatus fire lane between 15' and 30' from the building? c) Are there any overhead power or utility lines located across the aerial apparatus fire lane? d) Does the aerial apparatus fire lane have a minimum unobstructed width of 26-feet?	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> No <input checked="" type="checkbox"/> No <input type="checkbox"/> No	<input type="checkbox"/> N/A <input type="checkbox"/> N/A <input type="checkbox"/> N/A <input type="checkbox"/> N/A
7. Are all portions of the required fire lanes within 500-feet of at least (2) hydrants? <i>Note: Distances shall be measured along the path of the hose lay as it comes off the fire apparatus.</i> a) Is the fire lane at least 26' wide for at least 20-feet on each side of the hydrants? b) Is there at least 40' between a hydrant and the building? c) Are the hydrant(s) setback no less than 5-feet nor more than 10-feet from the curb or edge of the street or fire lane? d) Are hydrants located in parking lot islands a minimum of 3½-feet from the hydrant to the curb? e) Are there no obstructions, including but not limited to: power poles, trees, bushes, fences, posts located, or grade changes exceeding 1½-feet, within 5-feet of a fire hydrant? <i>Note: Hydrants shall be installed and in-service prior to combustible construction on the project site.</i>	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/> No	<input type="checkbox"/> N/A <input type="checkbox"/> N/A <input type="checkbox"/> N/A <input type="checkbox"/> N/A <input type="checkbox"/> N/A

Attach an additional sheet if further explanation is required for any answers.

This worksheet is based on MGO 34.20 and IFC 2006 Edition Chapter 5 and Appendix D; please see the codes for further information.



SITE LIGHTING PLAN

PROPOSED NEW BUILDING FOR
Copp's Market - Madison
Madison, Wisconsin

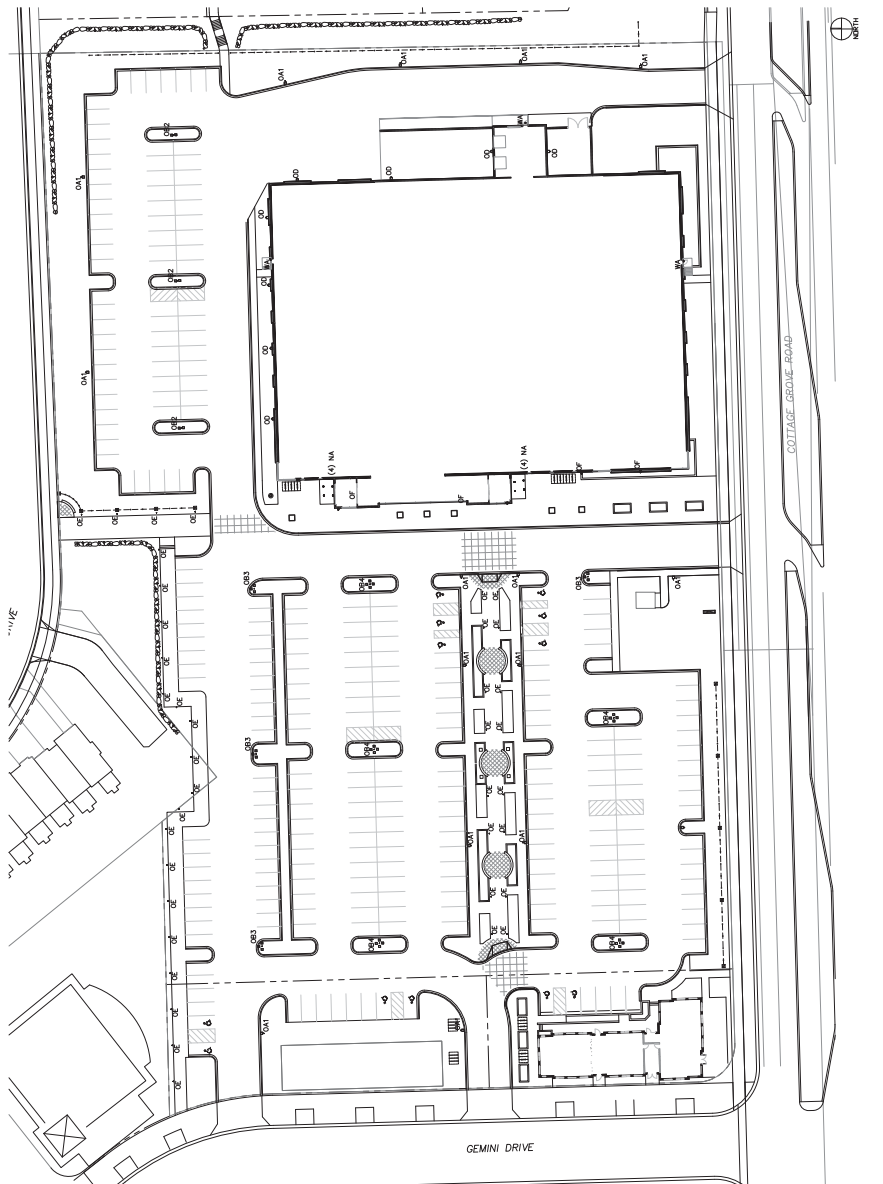


PROFESSIONAL ENGINEER
ENDING, LLC
1211 W. WASHINGTON AVENUE
MADISON, WISCONSIN 53704
TEL: 608.261.8800
FAX: 608.261.8801

E1.0

DATE: 07/25/2016
SCALE: AS SHOWN
SHEET: 10 OF 21

SYMBOL	DESCRIPTION	TYPE	WATTAGE	HEIGHT	SPACING	NOTES
□	RECESSED CAN	20W	20	1.0	12.0	
○	OUTDOOR LIGHT FIXTURE	200W	200	15.0	12.0	
□	RECESSED CAN	20W	20	1.0	12.0	
□	RECESSED CAN	20W	20	1.0	12.0	
□	RECESSED CAN	20W	20	1.0	12.0	
□	RECESSED CAN	20W	20	1.0	12.0	
□	RECESSED CAN	20W	20	1.0	12.0	
□	RECESSED CAN	20W	20	1.0	12.0	
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□	RECESSED CAN	20W	20	1.0	12.0	
□	RECESSED CAN	20W	20	1.0	12.0	
□	RECESSED CAN	20W	20	1.0	12.0	
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□	RECESSED CAN	20W	20	1.0	12.0	
□	RECESSED CAN	20W	20	1.0	12.0	
□	RECESSED CAN	20W	20	1.0	12.0	
□	RECESSED CAN	20W	20	1.0	12.0	
□	RECESSED CAN	20W	20	1.0	12.0	
□	RECESSED CAN	20W	20	1.0	12.0	



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Copp's Market - Madison
Madison, Wisconsin



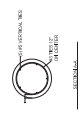
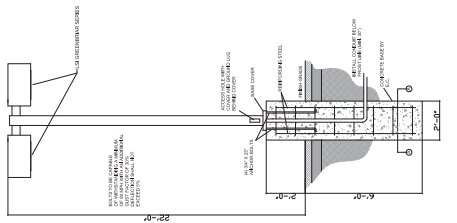
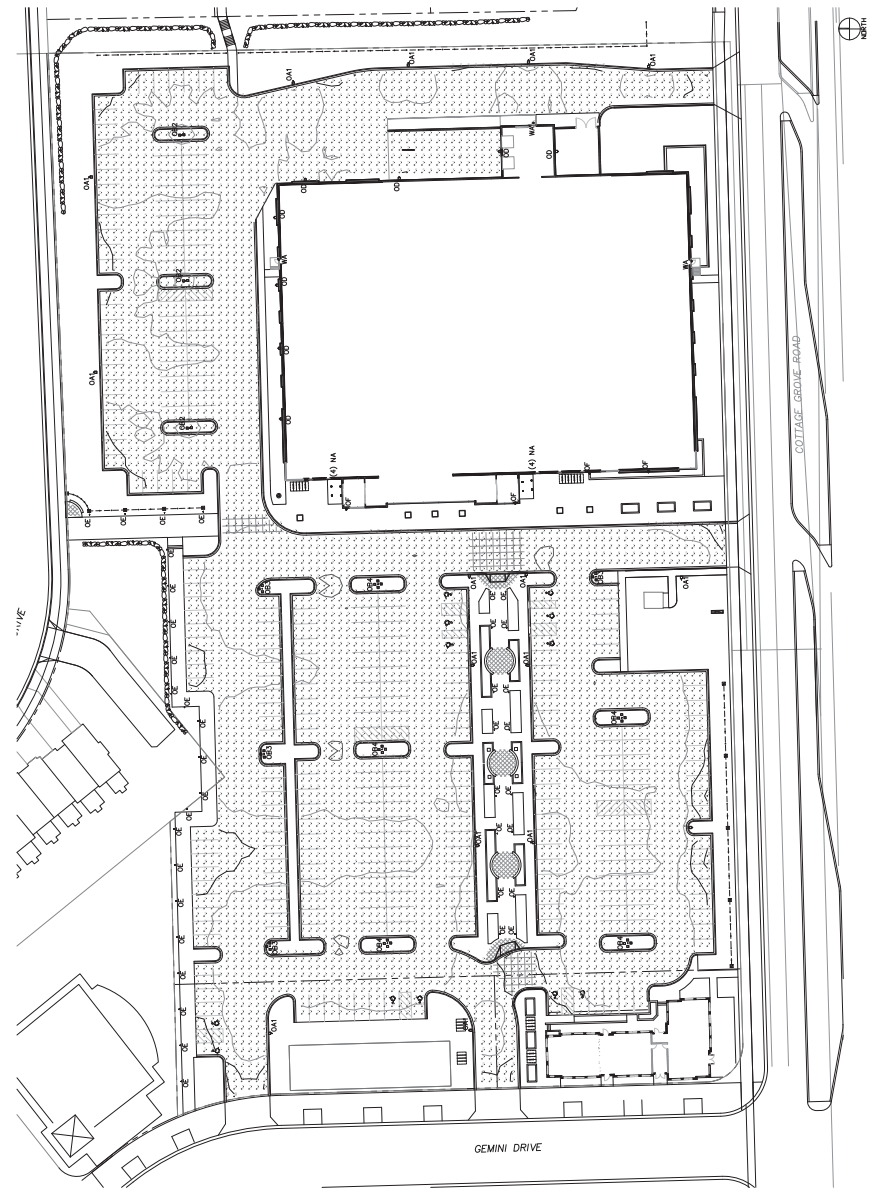
PROFESSIONAL ENGINEER
ENDING, LLC
1211 W. WASHINGTON AVENUE
MADISON, WISCONSIN 53704
TEL: 608.261.8800
FAX: 608.261.8801

E1.0

DATE: 07/25/2016
SCALE: AS SHOWN
SHEET: 10 OF 21

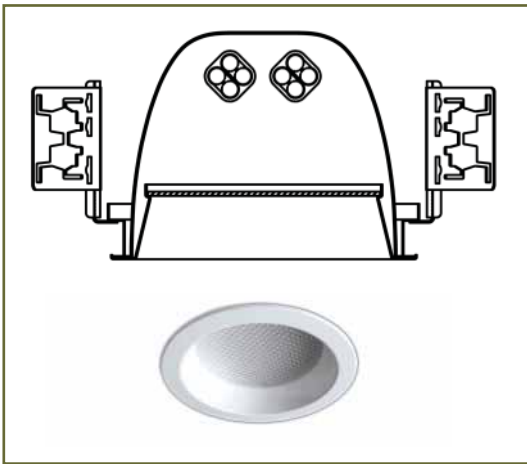
REFERENCES		DATE		BY		REVISION	
NO.	DESCRIPTION	DATE	BY	DATE	BY	DESCRIPTION	DATE
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2	REVISED PER COMMENTS	10/15/2019	[REDACTED]	10/15/2019	[REDACTED]	REVISED PER COMMENTS	10/15/2019

LUMINAIRE SCHEDULE		DATE		BY		REVISION	
NO.	DESCRIPTION	DATE	BY	DATE	BY	DESCRIPTION	DATE
1	ISSUED FOR PERMIT	10/15/2019	[REDACTED]	10/15/2019	[REDACTED]	ISSUED FOR PERMIT	10/15/2019
2	REVISED PER COMMENTS	10/15/2019	[REDACTED]	10/15/2019	[REDACTED]	REVISED PER COMMENTS	10/15/2019

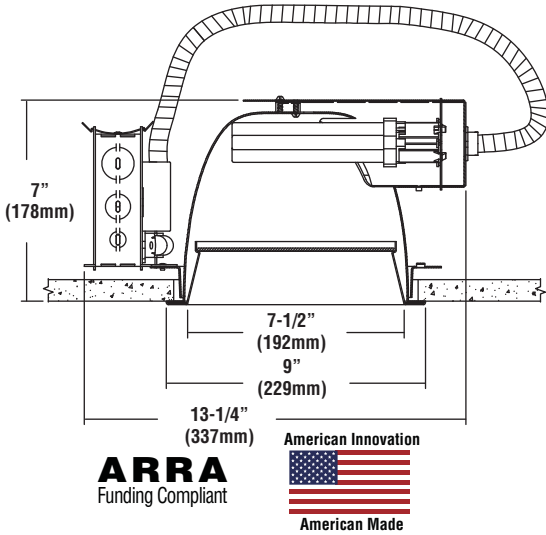


208HCFL

8" HORIZONTAL FLUORESCENT - LENSED



DIMENSIONS **ROUGH IN: 8-1/2" (216mm)**



PRODUCT HIGHLIGHTS

- Premium quality reflector with a white or clear semi-specular regressed splay and acrylic or glass lens insert.
- 050" spun aluminum reflector with low-iridescent Alzak®.
- White self-trim flange.
- Horizontal orientation provides medium beam spread for even illumination.
- Computer-aided design optimizes visual comfort, efficiency and distribution.

CONSTRUCTION - Frame-in housing constructed of galvanized heavy gauge steel with adjustable yoke to retain reflector. Socket housing made of die formed galvanized steel.

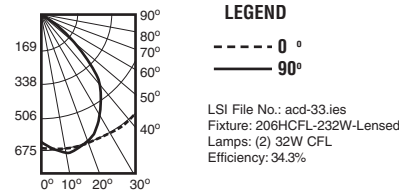
ELECTRICAL - Ballasts are Class P, solid state electronic, universal voltage (120V thru 277V) with end-of-life shutdown protection.

MOUNTING - Minimized overall housing dimensions simplify installation and access to junction box. Butterfly brackets accept 27" or 52" C-Channels, nailer bars or EMT conduit. Accommodates ceilings up to 2" thick.

PHOTOMETRICS - Please visit our web site at www.lsi-industries.com for detailed photometric data.

LISTING - UL listed to U.S. and Canadian safety standards. Non-IC rated. Suitable for wet locations, covered ceiling mount only. Listed for use with thru wiring. IBEW Union made in the U.S.A.

CANDLEPOWER DISTRIBUTION



CO-EFFICIENTS OF UTILIZATION

Effective Floor Cavity Reflectance 0.20

RC	80	70	50	30	10	0
RW	70	50	30	10	0	0
0	41 41	41 41	40 40	40 40	38 38	36 36
1	38 37	36 34	37 36	35 34	35 34	33 33
2	35 33	31 30	35 32	31 29	31 30	30 29
3	33 30	28 26	32 29	27 26	29 27	28 26
4	31 27	25 23	30 27	25 23	26 24	25 24
5	29 25	22 21	28 25	22 20	24 22	23 22
6	27 23	20 19	26 23	20 19	22 20	21 19
7	25 21	19 17	25 21	19 17	21 18	20 18
8	24 20	17 16	23 20	17 15	19 17	18 17
9	22 18	16 14	22 18	16 14	18 16	17 15
10	21 17	15 13	21 17	15 13	17 15	16 14

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	11431	12854	13372
55	6807	7870	8668
65	5196	6135	7723
75	4125	5303	7896
85	4200	73491	3649

LUMINAIRE ORDERING INFORMATION

TYPICAL ORDER EXAMPLE: **208H CFL 32T UNIV EB C27**

Luminaire Prefix	Light Source	Lamp Quantity	Rated Wattage	Line Voltage	Options	Field Installed Accessories
208H	CFL - Compact Fluorescent	1 or 2 1 or 2 1 or 2 1 or 2 1 or 2 1 or 2 1 or 2 1	13 Q 18 Q 26 Q 13 T 18 T 26 T 32 T 42 T	UNIV - Universal	DB - Dimming Ballast* EB - Emergency Battery Pack EBHL - Emergency Battery Pack High Lumen FUS - Fuse 347 - 347 Volt Operation	C27 - 27" Channel Bars (pair) C52 - 52" Channel Bars (pair) NB - Nailer Bar Kit (set of 4) SCIK - Suspended Ceiling Installation Kit (set of 4 bars and 4 grid clips)

* See Price Guide for available dimming ballasts

TYPICAL ORDER EXAMPLE: **208HPALW E**

Reflector	Emergency
208HPALW - Prismatic Acrylic Lens, White Splay 208HPALC - Prismatic Acrylic Lens, Clear Semi-specular Splay 208HPGLW - Prismatic Glass Lens, White Splay (C73 pattern) 208HPGLC - Prismatic Glass Lens, Clear Semi-specular Splay (C73 pattern) 208HFGLW - Fresnel Glass Lens, White Splay 208HFGLC - Fresnel Glass Lens, Clear Semi-specular Splay 208HCGLW - Clear Tempered Glass Lens, White Splay 208HCGLC - Clear Tempered Glass Lens, Clear Semi-specular Splay	E - Emergency Indicator / Test Switch Mounting Hole (Use only with EB option)



Project Name COPPS MADISON Fixture Type NA
 Catalog # 208HCFL 2 32T UNIV EBHL C27 / 208HCGLC E

GREENBRIAR[®] - FLAT LENS (Various reflectors are protected by U.S. Patent No. 6,464,378.)

HOUSING - The aluminum housing is available in two sizes. Both housings are the same dimensions square, however, the GFR is deeper. Both are finished to produce a clean, sharp appearance, and designed to ensure weather-tight construction. Top-access covers provide ease of installation and servicing.

LENS/GASKET - The flat clear tempered glass lens is sealed to the housing with an EPDM gasket, preventing entry of moisture, dust and insects.

TOP COVER FASTENERS - The four captive stainless steel fasteners secure the top-access cover to the housing.

SOCKETS - Porcelain mogul-base sockets. All sockets are pulse-rated.

LIGHT SOURCES - Pulse-Start Metal Halide, Super Metal Halide Reduced Envelope, Metal Halide, Metal Halide Reduced Envelope, or High Pressure Sodium. Clear lamp is supplied as standard.

BALLASTS - Pulse-Start Metal Halide, Super Metal Halide, Metal Halide, and High Pressure Sodium fixtures feature a high-power factor type CWA ballast, designed for -20° F operation.

REFLECTORS/DISTRIBUTION PATTERNS - The series is available in a variety of reflector systems and distribution patterns, all with vertical oriented lamps: **GFR:** Type II (2), Type III (3), Perimeter Forward Throw (FP), Type V (5), Automotive Forward Throw (FA), as well as, ART (Advanced Reflector Technology) optical systems: Automotive Forward Throw (AFT), Automotive Interior (AI), and a high performance Type V (540) for 38' - 42' mounting heights.

GFM: Type II (2), Type III (3), Perimeter Forward Throw (FP), and Type V (5) .

All reflectors are field-rotatable, enabling generous flexibility in distribution patterns without moving the fixture. Photometric data is tested in accordance with IESNA guidelines.

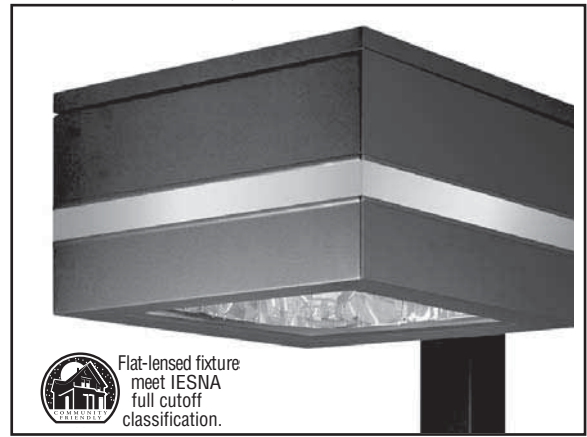
BRACKETS - Arm Mount: 2-1/2" x 5-3/8" x 12" extruded aluminum bracket is shipped standard. An 8" bracket is available for single or D180° configurations, but must be ordered from the Options column of the ordering chart. A Round Pole Plate (RPP2) is required for mounting to 3"-5" round poles. (See Accessory Ordering Information chart.)

Pole Top: The cast aluminum mounting hub conceals the wiring compartment and mounts directly to LSI's unique "pole-top mounting plate", via a high-strength grade five steel bolt with nylon insert and split lock washer for double locking. Support arms consist of four 11/16" O.D. aluminum rods and are pre-wired for ease of installation.

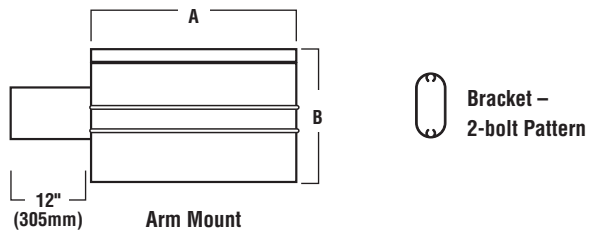
FINISHES - Each fixture is finished with LSI's DuraGrip[®] polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling, and is guaranteed for five full years. Standard colors include bronze, black, platinum plus, buff, white, satin verde green, metallic silver, and graphite.

DECAL STRIPING - LSI offers optional color-coordinated decals in 9 standard colors to accent the fixture. Decal is guaranteed for five years against peeling, cracking, or fading.

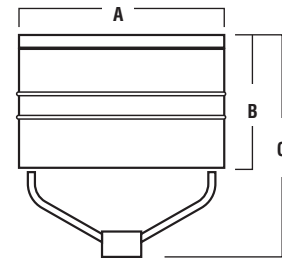
PHOTOMETRICS - Please visit our web site at www.lsi-industries.com for detailed photometric data.



DIMENSIONS



Arm Mount



Pole Top Mount

	A	B	C
GFM Arm Mount	21-5/8"(549mm)	12-3/4"(324mm)	—
GFBM Pole Top	21-5/8"(549mm)	12-3/4"(324mm)	21-15/16"(557mm)
GFR Arm Mount	21-5/8"(549mm)	16-1/8"(410mm)	—
GFBM Pole Top	21-5/8"(549mm)	16-1/8"(410mm)	25"(635mm)

LUMINAIRE EPA CHART

Greenbriar Flat Lens	GFM 12" Bracket	GFR 12" Bracket
Single	3.2	3.8
D180°	6.3	7.6
D90°	5.7	7.6
T90°	8.8	11.4
TN120°	9.0	11.4
Q90°	11.3	15.2
Pole Top	3.2	4.0

Note: House Side Shield adds to fixture EPA. Consult factory.

SHIPPING WEIGHTS - Greenbriar Flat Lens

Catalog Number	Est. Weight (kg/lbs.)	Length (mm/in.)	Width (mm/in.)	Height (mm/in.)
GFM	19/41	635/25	635/25	495/19.5
GFBM	24/53	730/28.75	724/28.5	635/25
GFR	26/57	724/28.5	711/28	648/25.5
GFBM	29/64	724/28.5	724/28.5	737/29



Project Name COPPS MADISON | Fixture Type OA
 Catalog # GFM 5 250 PSMV F HSS

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GREENBRIAR® - FLAT LENS

LUMINAIRE ORDERING INFORMATION

Luminaire Prefix	Distribution	Lamp Wattage	Light Source	Lens	Line Voltage ³	Luminaire Finish
Medium Vertical Burn GFM - Arm Mount GFPM - Pole Top ¹	2 - Type II	200	PSMV - Pulse-Start Metal Halide 200, 250, 320 Watt SMVR - Super Metal Halide Reduced Envelope 400 Watt MH - Metal Halide 250 Watt MHR - Metal Halide Reduced Envelope 400 Watt HPS - High Pressure Sodium 250, 400 Watt	F - Flat Clear Tempered Glass	480 MT - Multi Tap ⁴ TT - Tri-Tap ⁵	BRZ - Bronze BLK - Black PLP - Platinum Plus BUF - Buff WHT - White SVG - Satin Verde Green GPT - Graphite MSV - Metallic Silver
	3 - Type III FP - Perimeter Forward Throw 5 - Type V	250 320 400				
Reduced Vertical Burn GFR - Arm Mount GFPR - Pole Top ¹	2 - Type II	400	PSMV - Pulse-Start Metal Halide 400, 750, 1000 ² Watt MHR - Metal Halide Reduced Envelope 1000 Watt			
	3 - Type III FP - Perimeter Forward Throw FA - Automotive Forward Throw 5 - Type V	750 1000				
	Advanced Reflector Technology Optical Systems: AFT - Automotive Forward Throw AI - Automotive Interior 540 - Type V (38'-42' Mtg. Ht.)	750 1000				



EXAMPLE OF A TYPICAL ORDER

FOOTNOTES:

- When ordering pole top fixtures for tenon mounting, a pole top adaptor must be ordered.
- Tri-Tap not available in 1000 Watt PSMV. Voltage must be specified - 120V, 277V or 347V.
- For international voltages, consult factory.
- MT - Multi Tap is shipped standard unless otherwise specified. Multi Tap consists of 120V, 208V, 240V, and 277V. Multi Tap is pre-wired for highest voltage. Alternate voltages will require field re-wiring.
- Tri-Tap is shipped standard for Canadian applications. Tri-Tap consists of 120V, 277V, and 347V. Tri-Tap is pre-wired for highest voltage. Alternate voltages will require field re-wiring.
- An 8" bracket can only be ordered with single and D180° configurations.
- On GFR/GFPR photoelectric control can only be used with 400 Watt PSMV.
- Available with GFR AFT reflector only. Can be ordered as an accessory, use Order #288116BLK.

Options

- 8BK - 8" Bracket⁶
- PC1120 - Button-Type Photoelectric Control⁷
- PC1208 - Button-Type Photoelectric Control⁷
- PC1240 - Button-Type Photoelectric Control⁷
- PC1277 - Button-Type Photoelectric Control⁷
- PC1347 - Button-Type Photoelectric Control⁷
- LL - Less Lamp
- IL - Internal Louver⁸

Color Decals

- 45 - Light Gold Metallic
- 20 - Charcoal Metallic
- 94 - Blue Metallic
- 59 - Dark Green
- 21 - Tomato Red
- 55 - Black
- 50 - White
- 51 - Dark Red
- 700 - Aztec Silver Metallic

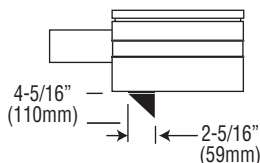
ACCESSORY ORDERING INFORMATION

(Accessories are field installed)

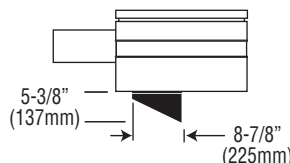
Description	Order Number	Description	Order Number
FK120 - Single Fusing	FK120+	GFR/GFM 2 HSS - House Side Shield	4342901++
FK277 - Single Fusing	FK277+	GFPR/GFPM 2 HSS - House Side Shield	4342901++
DFK208, 240 - Double Fusing	DFK208, 240+	GFR/GFM 3 HSS - House Side Shield	4342902++
DFK480 - Double Fusing	DFK480+	GFPR/GFPM 3 HSS - House Side Shield	4342902++
FK347 - Single Fusing	FK347+	GFR/GFM FP HSS - House Side Shield	4342902++
RPP2 - Round Pole Plate	162914BLK++	GFPR/GFPM FP HSS - House Side Shield	4342902++
BKS-BO-WM-* - CLR Wall Mount Plate	123111CLR	GFR/GFPR FA/AFT HSS - House Side Shield	4342902++

+Fusing must be located in the hand-hole of the pole on GFR/GFPR Series - not in the fixture.
++ Black only.

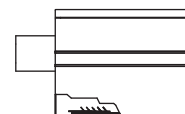
HOUSE SIDE SHIELDS



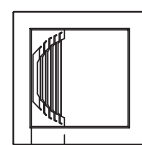
TYPE II
(4342901)



TYPE III AND FORWARD THROW (FA/FP/AFT)
(4342902)



BOTTOM VIEW



GFR WITH INTERNAL
HOUSE SIDE SHIELD (288116BLK)

GREENBRIAR® - FLAT LENS (Various reflectors are protected by U.S. Patent No. 6,464,378.)

HOUSING - The aluminum housing is available in two sizes. Both housings are the same dimensions square, however, the GFR is deeper. Both are finished to produce a clean, sharp appearance, and designed to ensure weather-tight construction. Top-access covers provide ease of installation and servicing.

LENS/GASKET - The flat clear tempered glass lens is sealed to the housing with an EPDM gasket, preventing entry of moisture, dust and insects.

TOP COVER FASTENERS - The four captive stainless steel fasteners secure the top-access cover to the housing.

SOCKETS - Porcelain mogul-base sockets. All sockets are pulse-rated.

LIGHT SOURCES - Pulse-Start Metal Halide, Super Metal Halide Reduced Envelope, Metal Halide, Metal Halide Reduced Envelope, or High Pressure Sodium. Clear lamp is supplied as standard.

BALLASTS - Pulse-Start Metal Halide, Super Metal Halide, Metal Halide, and High Pressure Sodium fixtures feature a high-power factor type CWA ballast, designed for -20° F operation.

REFLECTORS/DISTRIBUTION PATTERNS - The series is available in a variety of reflector systems and distribution patterns, all with vertical oriented lamps: **GFR:** Type II (2), Type III (3), Perimeter Forward Throw (FP), Type V (5), Automotive Forward Throw (FA), as well as, ART (Advanced Reflector Technology) optical systems: Automotive Forward Throw (AFT), Automotive Interior (AI), and a high performance Type V (540) for 38' - 42' mounting heights.

GFM: Type II (2), Type III (3), Perimeter Forward Throw (FP), and Type V (5) .

All reflectors are field-rotatable, enabling generous flexibility in distribution patterns without moving the fixture. Photometric data is tested in accordance with IESNA guidelines.

BRACKETS - Arm Mount: 2-1/2" x 5-3/8" x 12" extruded aluminum bracket is shipped standard. An 8" bracket is available for single or D180° configurations, but must be ordered from the Options column of the ordering chart. A Round Pole Plate (RPP2) is required for mounting to 3"-5" round poles. (See Accessory Ordering Information chart.)

Pole Top: The cast aluminum mounting hub conceals the wiring compartment and mounts directly to LSI's unique "pole-top mounting plate", via a high-strength grade five steel bolt with nylon insert and split lock washer for double locking. Support arms consist of four 11/16" O.D. aluminum rods and are pre-wired for ease of installation.

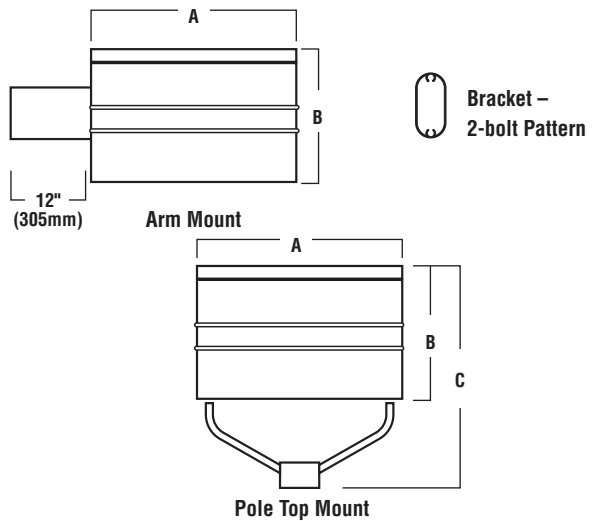
FINISHES - Each fixture is finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling, and is guaranteed for five full years. Standard colors include bronze, black, platinum plus, buff, white, satin verde green, metallic silver, and graphite.

DECAL STRIPING - LSI offers optional color-coordinated decals in 9 standard colors to accent the fixture. Decal is guaranteed for five years against peeling, cracking, or fading.

PHOTOMETRICS - Please visit our web site at www.lsi-industries.com for detailed photometric data.



DIMENSIONS



	A	B	C
GFM Arm Mount	21-5/8"(549mm)	12-3/4"(324mm)	—
GFBM Pole Top	21-5/8"(549mm)	12-3/4"(324mm)	21-15/16"(557mm)
GFR Arm Mount	21-5/8"(549mm)	16-1/8"(410mm)	—
GFBM Pole Top	21-5/8"(549mm)	16-1/8"(410mm)	25"(635mm)

LUMINAIRE EPA CHART

Greenbriar Flat Lens	GFM 12" Bracket	GFR 12" Bracket
Single	3.2	3.8
D180°	6.3	7.6
D90°	5.7	7.6
T90°	8.8	11.4
TN120°	9.0	11.4
Q90°	11.3	15.2
Pole Top	3.2	4.0

Note: House Side Shield adds to fixture EPA. Consult factory.

SHIPPING WEIGHTS - Greenbriar Flat Lens

Catalog Number	Est. Weight (kg/lbs.)	Length (mm/in.)	Width (mm/in.)	Height (mm/in.)
GFM	19/41	635/25	635/25	495/19.5
GFBM	24/53	730/28.75	724/28.5	635/25
GFR	26/57	724/28.5	711/28	648/25.5
GFBM	29/64	724/28.5	724/28.5	737/29



Project Name COPPS MADISON | Fixture Type OA
 Catalog # GFM 5 250 PSMV F HSS

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GREENBRIAR® - FLAT LENS

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Luminaire Prefix	Distribution	Lamp Wattage	Light Source	Lens	Line Voltage ³	Luminaire Finish
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	3 - Type III FP - Perimeter Forward Throw 5 - Type V	250 320 400				
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	Advanced Reflector Technology Optical Systems: AFT - Automotive Forward Throw AI - Automotive Interior 540 - Type V (38'-42' Mtg. Ht.)	750 1000				



EXAMPLE OF A TYPICAL ORDER

FOOTNOTES:

- When ordering pole top fixtures for tenon mounting, a pole top adaptor must be ordered.
- Tri-Tap not available in 1000 Watt PSMV. Voltage must be specified - 120V, 277V or 347V.
- For international voltages, consult factory.
- MT - Multi Tap is shipped standard unless otherwise specified. Multi Tap consists of 120V, 208V, 240V, and 277V. Multi Tap is pre-wired for highest voltage. Alternate voltages will require field re-wiring.
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- On GFR/GFPR photoelectric control can only be used with 400 Watt PSMV.
- Available with GFR AFT reflector only. Can be ordered as an accessory, use Order #288116BLK.

Options

- 8BK - 8" Bracket⁶
- PC1120 - Button-Type Photoelectric Control⁷
- PC1208 - Button-Type Photoelectric Control⁷
- PC1240 - Button-Type Photoelectric Control⁷
- PC1277 - Button-Type Photoelectric Control⁷
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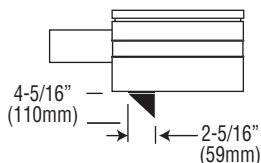
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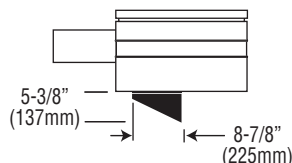
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FK120 - Single Fusing	FK120+	GFR/GFM 2 HSS - House Side Shield	4342901++
FK277 - Single Fusing	FK277+	GFPR/GFPM 2 HSS - House Side Shield	4342901++
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RPP2 - Round Pole Plate	162914BLK++	GFPR/GFPM FP HSS - House Side Shield	4342902++
BKS-BO-WM-* - CLR Wall Mount Plate	123111CLR	GFR/GFPR FA/AFT HSS - House Side Shield	4342902++

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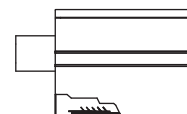
HOUSE SIDE SHIELDS



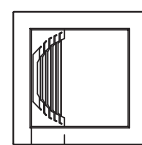
TYPE II
(4342901)



TYPE III AND FORWARD THROW (FA/FP/AFT)
(4342902)



BOTTOM VIEW



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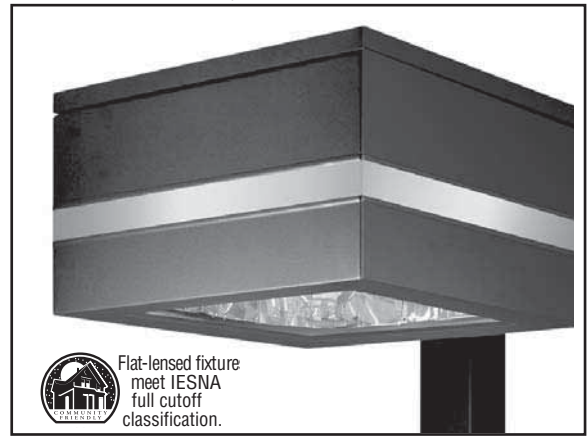
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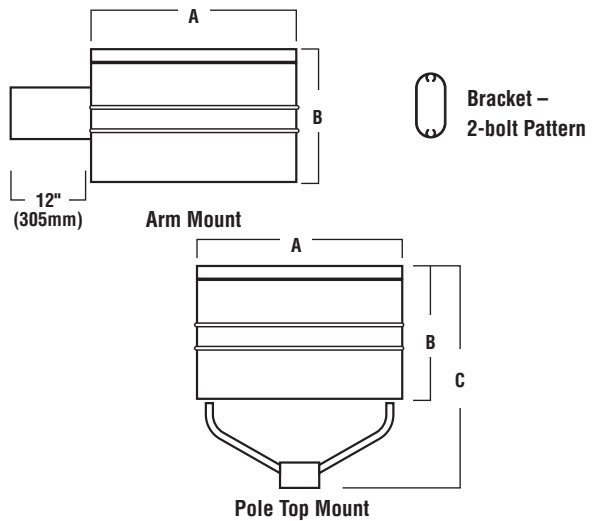
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DECAL STRIPING - LSI offers optional color-coordinated decals in 9 standard colors to accent the fixture. Decal is guaranteed for five years against peeling, cracking, or fading.

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EXAMPLE OF A TYPICAL ORDER

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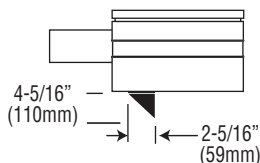
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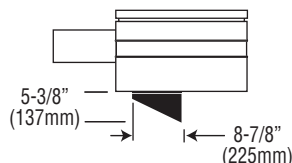
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FK347 - Single Fusing	FK347+	GFR/GFM FP HSS - House Side Shield	4342902++
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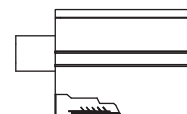
HOUSE SIDE SHIELDS



TYPE II
(4342901)

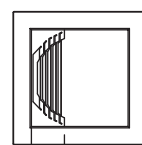


TYPE III AND FORWARD THROW (FA/FP/AFT)
(4342902)



GFR WITH INTERNAL
HOUSE SIDE SHIELD (288116BLK)

BOTTOM VIEW



5-3/8"
(137mm)

BOLLARD

HOUSING - One-piece, seamless, heavy-walled, extruded aluminum. The housing top cap is die-cast aluminum and seals the crown assembly with a silicone gasket to prevent entry of moisture and insects. After maintenance or re-lamping, the top cap slides back into place. The housing is 42" and available in Round or Square. Various heights are available in 6" increments. Minimum height is 20".

LENS/GASKET - Both Round and Square Bollard lenses are pure acrylic with .25 inch minimum wall thickness.

SOCKETS - Porcelain medium-base sockets on all HID lamp types feature spring-reinforced contacts for long life. Compact Fluorescent fixtures feature a one-piece thermoplastic socket.

LIGHT SOURCES - Metal Halide, High Pressure Sodium, Compact Fluorescent, or Incandescent. Coated lamp is supplied as standard. Incandescent lamps are to be provided by others.

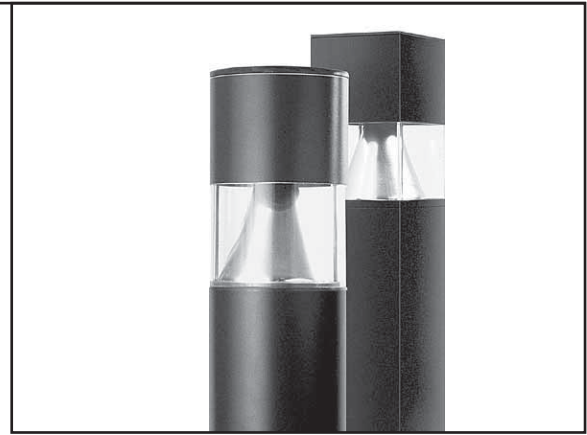
BALLASTS - High-power factor type ballast is designed for -20° F operation. Multi-tap ballast is standard for HID units. Compact Fluorescent ballasts are Electronic Universal Voltage (120-277V, 50/60Hz) or 347V (60Hz), 0°F starting.

REFLECTOR/DISTRIBUTION PATTERNS - Indirect or internal louver optics provide a uniform, symmetrical distribution that yields 360° light dissipation and offers an aesthetically pleasing visual light source. Lower distributing reflector of spun aluminum provides a wide, even, glare-free pattern of light. It also conceals the lamp socket. Photometric data is tested in accordance with IESNA guidelines.

FINISHES - Each fixture is finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling, and is guaranteed for five full years. Standard colors include bronze, black, platinum plus, buff, white, green, graphite, satin verde green, and metallic silver.

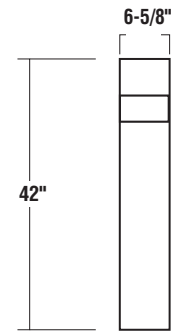
ANCHOR BOLTS - Requires four 3/8" x 10" galvanized steel anchor bolts.

PHOTOMETRICS - Please visit our web site at www.lsi-industries.com for detailed photometric data.

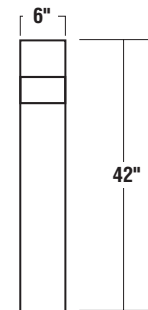


DIMENSIONS

ROUND

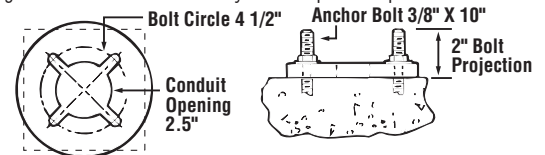


SQUARE



BASE DETAIL

Note: Base plate dimensions may change without notice. Do not use for setting anchor bolts. Consult factory for base plate templates.



SHIPPING WEIGHTS - Bollard

Catalog Number	Est. Weight (lbs.)	Length (in.)	Width (in.)	Height (in.)
VBR (42")	34	45.25	16.625	6.75
VBS (42")	34	45.25	16.875	6.75
Anchor Bolts (3/8" x 10")	1/set	-	-	-



Project Name COPPS MADISON Fixture Type OA
 Catalog # GFM 5 250 PSMV F HSS

BOLLARD

LUMINAIRE ORDERING INFORMATION

Luminaire Prefix	Distribution	Lamp Wattage	Light Source ¹	Lens	Line Voltage ⁵	Luminaire Finish
VBR – Round VBS – Square	ID – Indirect IL – Internal Louver	35 50 70 100	MH – Metal Halide 50, 70, 100 Watt HPS – High Pressure Sodium 35 ² , 50 ³ , 70, 100 Watt MV - Mercury Vapor 100 Watt	CA – Clear Acrylic	480 ⁶ MT – Multi Tap ⁷ TT - Tri-Tap ⁸	BRZ – Bronze BLK – Black PLP – Platinum Plus BUF – Buff WHT – White GRN – Green GPT - Graphite SVG - Satin Verde Green MSV - Metallic Silver
		26 32 42	CFL - Compact Fluorescent 26, 32, 42 Watt		UE - Universal Electronic (120-277V 50/60Hz) 347 (60Hz)	
		100	INC – Incandescent ⁴ Max. 100 Watt		120	

VBR	ID	100	MH	CA	MT	BRZ	PC120
------------	-----------	------------	-----------	-----------	-----------	------------	--------------

EXAMPLE OF A TYPICAL ORDER

Options
H – XX (Specify Height) ⁹
PC120 - Photocell
PC208,240,277 - Photocell ¹⁰
PC347 - Photocell
GFR - GFCI Duplex Receptacle
LL – Less Lamp

FOOTNOTES:

- 1- Coated lamps are supplied as standard.
- 2- 35 Watt HPS is available in 120V only.
- 3- 50W HPS is not available in TT or 347V.
- 4- Incandescent lamps are to be provided by others.
- 5- For international voltages, consult factory.
- 6- 480V is available in 100W MH, 70W and 100W HPS only.
- 7- MT – Multi Tap is shipped standard unless otherwise specified. Multi Tap consists of 120V, 208V, 240V, and 277V. Multi Tap is pre-wired for highest voltage. Alternate voltages will require field re-wiring.
- 8- Tri-Tap is shipped standard for Canadian applications. Tri-Tap consists of 120V, 277V, and 347V. Tri-Tap is pre-wired for highest voltage. Alternate voltages will require field re-wiring.
- 9- Taller or shorter heights are available in 6" increments. Minimum height is 20". Maximum height is 60".
- 10- Photocell on 208V, 240V, or 277V fixture is wired to 277V. 208V or 240V photocell will require field rewiring.

ACCESSORY ORDERING INFORMATION (Accessories are field installed)

Description	Order Number	Description	Order Number
HSS – House Side Shield	122512	DFK208, 240 - Double Fusing	FK208, 240
ABKIT - Anchor Bolt Kit (BVR/BVS) 3/8" x 10" -Galv.	122513	DFK480 - Double Fusing	DFK480
FK120 - Single Fusing	FK120	FK347 - Single Fusing	FK347
FK277 - Single Fusing	FK277		



Project Name COPPS MADISON | Fixture Type OA
 Catalog # GFM 5 250 PSMV F HSS



KIM LIGHTING

Wall Forms® WFS51/WFS71 through WFS55/WFS75

Shallow and Deep Front Face Surface Mount Square

revision 2/15/06 • wfs.pdf

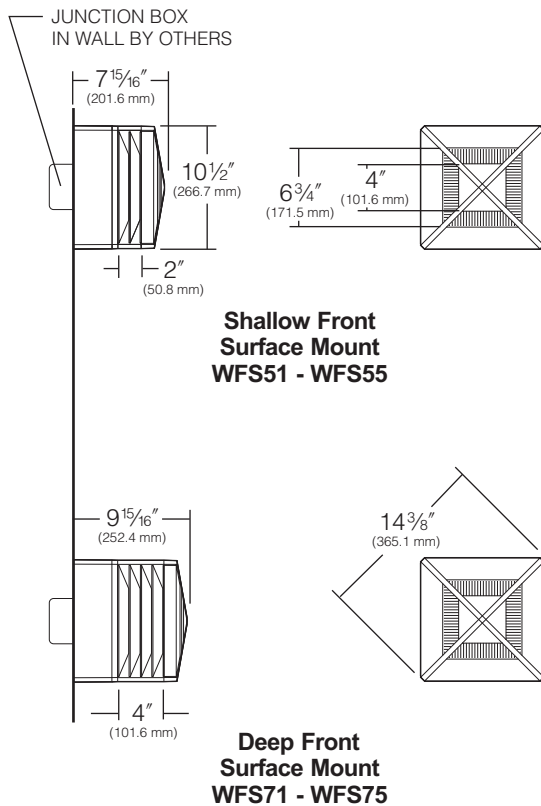
Type: OF
Job: COPPS MADISON
Catalog number:

Approvals:

NA	/ 100MH277	/ PS-P	/
Fixture See page 2	Electrical Module See page 3	Finish	Options See page 4

Date:
Page: 1 of 4

Specifications



Surface Mount: Die-cast, low copper alloy (<0.6% Cu) aluminum with double side walls. Zinc plated steel mounting plate supplied for mounting to standard 3" or 4" junction box.

Component Mounting Plate: Die-cast, low copper alloy (<0.6% Cu) aluminum with mounting holes and lens seating cavity. Sealed to housing with one-piece silicone gasket.

Louver Module: Die-cast, low copper alloy (<0.6% Cu) aluminum with mounting guides for interchangeable side panels. Louvered, open, and closed, secured to housing with four stainless steel screws.

Face Plate: Die-cast, low copper alloy (<0.6% Cu) aluminum with lighted front accent. Face plate provided with spring loaded latch for tool-less removal. The assembly is preassembled and includes a hanging cable for ease of lamp replacement. Secures to louver module with stainless steel hanger and spring latch. No exposed hardware.

Lens: Molded and heat treated glass, 3/16" minimum thickness with internal flutes. Sealed to component mounting plate with one-piece silicone gasket.

Socket: (H.I.D.): Porcelain medium base socket rated 4KV. (Fluorescent): Plastic GX24q-3/GX24q-4 base socket.

Ballast: All components mounted within housing with quick disconnect plug. (H.I.D.): Reactor - High power factor with starting temperatures of -40°F. for HPS and -20°F. for MH lamp modes. For MH/120 volt, a step-up transformer is provided. For HPS/277 volt, a step-down transformer is provided. For MH and HPS/347 volt, a step-down transformer is provided. (Fluorescent): Encapsulated with thermal cutoff. Electronic with multi-voltage (108V to 305V) input, 50/60 HZ, High power factor with starting temperatures of -0°F.

Finish: Super TGIC thermoset polyester powder coat paint, 2.5 mil nominal thickness, applied over a titanated zirconium conversion coating; 2500 hour salt spray test endurance rating. Standard colors are Black, Dark Bronze, Light Gray, Platinum Silver, or White. Custom colors are available.

Certification: UL Listed to U.S. and Canadian safety standards for wet locations. Fixture manufacturer shall employ a quality program that is certified to meet the ISO 9001:2000 standard.

Finishing Items: Electrical modules, panels and face plates. Each set of finishing items shall be in one container, clearly marked with the fixture catalog number.

CAUTION: Fixtures must be grounded in accordance with national, state, and/or local electrical codes. Failure to do so may result in serious personal injury.



KIM LIGHTING RESERVES THE RIGHT TO CHANGE SPECIFICATIONS WITHOUT NOTICE.



Type: OF
Job: COPPS MADISON



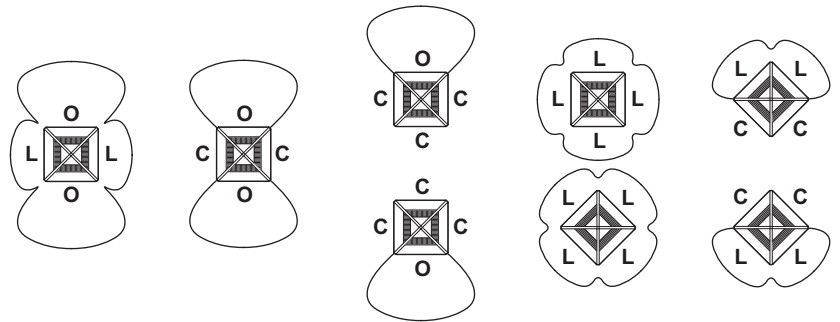
Standard Features

Fixture

Cat. No. designates **WF** panel configuration, mounting and front depth.

Panel Configuration

- L** = Louvered
- O** = Opened
- C** = Closed



Cat No.:

Shallow Front

WFS51

WFS52

WFS53

WFS54

WFS55

Deep Front

WFS71

WFS72

WFS73

WFS74

WFS75

NOTE:

Side panels may be re-configured during installation to suit specific design needs. Specify the product indicated that includes the combination of different panels desired (**O**pen, **C**losed and/or **L**ouvered). Communicate to the fixture installer the exact final configuration desired, to be adjusted during installation.



Type: OF

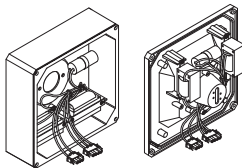
Job: COPPS MADISON



Standard Features

Electrical Module

HPS = High Pressure Sodium
MH = Metal Halide
PL = Compact Fluorescent



Lamp Watts	Lamp Type	Line Volts
100 HPS 277		

Cat. Nos. for Electrical Modules available:

	<input type="checkbox"/> 50HPS120	<input type="checkbox"/> 70HPS120	<input type="checkbox"/> 100HPS120	<input type="checkbox"/> 150HPS120
	<input type="checkbox"/> 50HPS277	<input type="checkbox"/> 70HPS277	<input type="checkbox"/> 100HPS277	<input type="checkbox"/> 150HPS277
	<input type="checkbox"/> 50HPS347	<input type="checkbox"/> 70HPS347	<input type="checkbox"/> 100HPS347	<input type="checkbox"/> 150HPS347
Lamp	ED-17, Coated	ED-17, Coated	ED-17, Coated	ED-17, Coated
Socket	Medium Base	Medium Base	Medium Base	Medium Base
ANSI Ballast Type	S68	S62	S54	S55
	<input type="checkbox"/> 50MH120	<input type="checkbox"/> 70MH120	<input type="checkbox"/> 100MH120	<input type="checkbox"/> 150MH120
	<input type="checkbox"/> 50MH277	<input type="checkbox"/> 70MH277	<input checked="" type="checkbox"/> 100MH277	<input type="checkbox"/> 150MH277
	<input type="checkbox"/> 50MH347	<input type="checkbox"/> 70MH347	<input type="checkbox"/> 100MH347	<input type="checkbox"/> 150MH347
Lamp	ED-17, Coated	ED-17, Coated	ED-17, Coated	ED-17, Coated
Socket	Medium Base	Medium Base	Medium Base	Medium Base
ANSI Ballast Type	M110	M98	M90	M102
	<input type="checkbox"/> 42PL ^{1,2}			
Lamp	Compact Fluor.			
Socket	GX24q-4 Base			

¹Maximum fluorescent lamp in shallow front fixtures is 32 watt PL

²42PL operates one 26, 32, and 42 watt lamps at 120 thru 277 volts (50-60 Hz.)

Finish

Super TGIC powder coat paint over a titanated zirconium conversion coating.

Color: Black Dark Bronze Light Gray Platinum Silver White Custom Colors³
 Cat. No.: BL-P DB-P LG-P PS-P WH-P CC-P

Light colors recommended for optimum fixture visibility and output.

³Custom colors subject to additional charges, minimum quantities and extended lead times. Consult representative. Custom color description: _____



KIM LIGHTING

Wall Forms® **WFS51/WFS71 through WFS55/WFS75**

Shallow and Deep Front Face Surface Mount Square

revision 2/15/06 • wfs.pdf

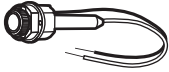
Type: OF

Job: COPPS MADISON

Page: 4 of 4



Optional Features

<p>Fusing Cat. No. <input type="checkbox"/> SF <input type="checkbox"/> No Option</p>	<p>Single Fusing (SF) for 120V, 277V, and 347V primary.</p> 
<p>Tamper-Resistant Face Plate Screw Cat. No. <input type="checkbox"/> TS <input type="checkbox"/> No Option</p>	<p>Face plate provided with stainless steel flat head allen screw to prevent unauthorized opening of spring latch.</p>



Industrial Lighting Products

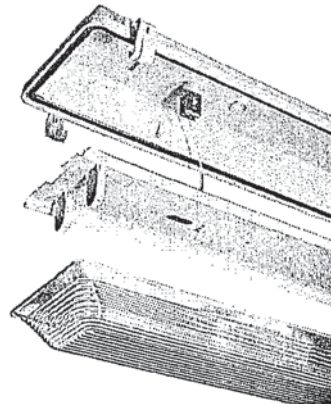
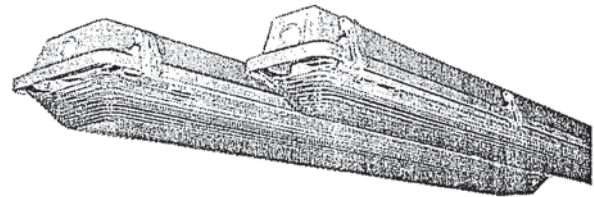
CATALOG NUMBER <i>WT4-2T8 IOP 32 nombCAL</i>	
PROJECT NAME <i>Metro market</i>	TYPE <i>4ft Vaporite</i>
VOLTAGE <i>120/277V</i>	LAMPS <i>F32T8/835/HL</i>

SPECIFICATIONS

- UL Listed Wet Location
- Fiberglass body
- Continuous poured, closed cell polyurethane gasket
- Impact resistant acrylic lens, polycarbonate optional
- Stainless steel mounting brackets for drill free mounting
- Polycarbonate latches standard, stainless steel latches optional
- Tamper proof screws optional
- Suitable for wall or ceiling mount
- 2, 4, and 8 foot enclosures
- 1, 2, and 3 lamp cross sections
- Narrow body available for 1 lamp unit (4 foot only)
- Body Attributes
 - IP 67 (Dust tight, immerse 1m, 30min)
 - High Pressure Hose Down 1500 PSI
 - 5VA flame rating
 - UL Listed / Wet Locations
 - NSF Rated for food safety
 - (f1) rated for outdoor use

AMAZON

T5HO & T8



APPLICATIONS

- Parking garages
- Food processing and preparation
- Horse barns
- Car washes with stainless steel latches
- Pool areas
- Hallways and stair wells

ORDERING GUIDE:

WT - **2T5** - **UH** - **SS**

SERIES	LAMP TOTAL	BALLAST CONFIG	OPTIONS
<input type="checkbox"/> WT - 4 FOOT UNIT	<input type="checkbox"/> 1T5 - 1 F54 OR (F24 2 FT ONLY)	<input type="checkbox"/> UL - 120/277 T8 LBF	<input type="checkbox"/> E - 95% MIRO 4 REFLECTOR
<input type="checkbox"/> WT2 - 2 FOOT UNIT	<input type="checkbox"/> 2T5 - 2 F54 OR (F24 2 FT ONLY)	<input type="checkbox"/> UR - 120/277 T8 NBF	<input type="checkbox"/> PLS - PLUNGER SOCKETS
<input type="checkbox"/> WT8 - 8 FOOT UNIT	<input type="checkbox"/> 4T5 - 4 F54 (8 FOOT ONLY)	<input type="checkbox"/> UH - 120/277 T8 HBF	<input type="checkbox"/> SS - STAINLESS STEEL LATCHES
ONE LAMP UNITS WILL COME STAND- DARD IN THE NAR- ROW BODY	<input type="checkbox"/> 1T8 - 1 F32 OR (F17 2 FOOT ONLY)	<input type="checkbox"/> UH - 120/277 T5HO	<input type="checkbox"/> NOMB - NO MOUNTING BRACKETS
	<input type="checkbox"/> 2T8 - 2 F32 OR (F17 2 FOOT ONLY)	<input type="checkbox"/> 4H - 347/480V (T5 ONLY)	<input type="checkbox"/> XXXXBBY - Y= # OF LAMPS XXXX= TOTAL # OF LUMENS REQUIRED
	<input type="checkbox"/> 3T8 - 3 F32 OR (F17 2 FOOT ONLY)		<input type="checkbox"/> PC - POLYCARBONATE LENS
	<input type="checkbox"/> 4T8 - 4 F32 (8 FOOT ONLY)		<input type="checkbox"/> FIOS - FACTOR INSTALLED OS
	<input type="checkbox"/> 6T8 - 6 F32 (8 FOOT ONLY)		<input type="checkbox"/> WLOS - WET LOCATION SENSOR INSTALLED
			<input type="checkbox"/> LIXX - LAMPS INSTALLED XX = LAMP COLOR (EX. LI85 = 850 5000K)
		<input type="checkbox"/> CORDX - CORD WITH A WET LOCATION STRAIN RELIEF, X= SPEC LENGTH	
		<input type="checkbox"/> EB - EXTRA BALLAST	
		<input type="checkbox"/> SD480 - 480V STEP DOWN TRANSFORMER	



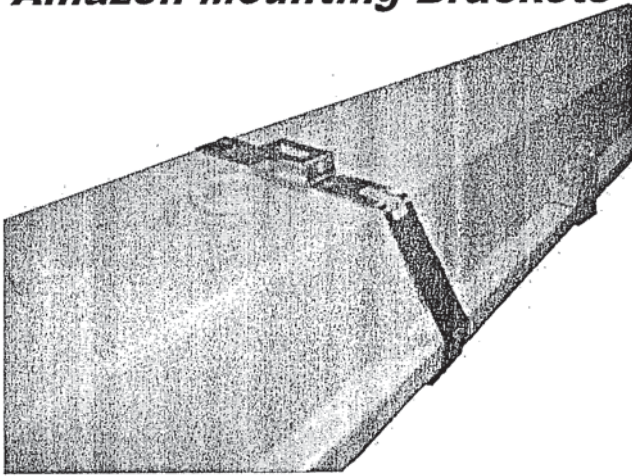
Industrial Lighting Products

CATALOG NUMBER	
PROJECT NAME	TYPE
VOLTAGE	LAMPS

MOUNTING OPTIONS

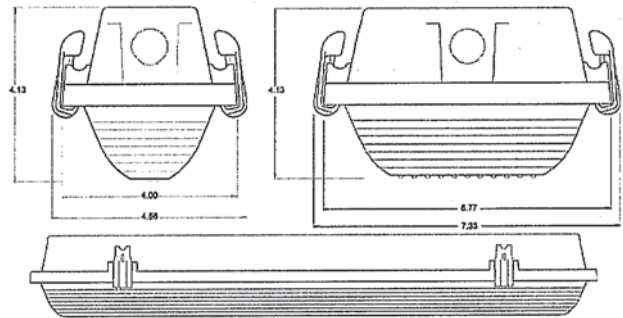
- Drill-free stainless steel mounting brackets come standard with each unit
- Stainless brackets can attach to 1/4 in. all thread.
- Dual point mounting optional. Body has 3/4 in hole template for easy location and drilling

Amazon Mounting Brackets



AMAZON

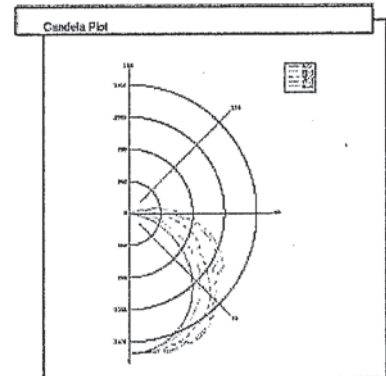
T5HO & T8



4 FOOT UNIT - 51.25 IN. LONG
 8 FOOT UNIT - 99.5 IN. LONG
 2 FOOT UNIT - 27.75 IN. LONG

WT-2T5-UH

Coefficients of Utilization																
plc=	0.20															
pcc->	0.70	0.50	0.30	0.10	0.70	0.50	0.30	0.10	0.50	0.30	0.10	0.50	0.30	0.10	0.00	0.00
pcw->	0.70	0.50	0.30	0.10	0.70	0.50	0.30	0.10	0.50	0.30	0.10	0.50	0.30	0.10	0.00	0.00
RCR																
0	73	73	73	73	71	71	71	71	67	67	67	64	64	64	60	60
1	45	62	58	55	63	60	57	54	56	51	52	53	51	49	47	47
2	59	53	48	44	57	51	47	43	48	44	41	46	42	40	37	37
3	53	48	40	35	51	44	38	35	42	37	34	40	38	33	30	30
4	48	40	34	29	46	39	33	29	37	32	28	36	31	27	25	25
5	44	38	30	25	43	35	28	25	33	28	24	31	27	23	22	22
6	41	32	26	22	39	31	25	21	30	25	21	28	24	20	19	19
7	38	29	23	19	38	28	23	19	27	22	18	26	21	18	16	16
8	36	26	21	17	34	26	20	17	24	20	16	23	19	16	14	14
9	33	24	18	15	32	23	18	15	22	18	15	21	17	14	13	13
10	31	22	17	13	29	22	17	13	21	16	13	20	15	13	12	12



Luminaire Properties	
Number of Lamps:	2
Lumens Per Lamp:	5000
Input Watts:	105
Distribution:	Direct
Symmetry:	Quadilateral
Photometric Type:	Type C
Luminous Shape:	Rectangle
Units:	Feet
Luminous Dimensions:	
0-180 Axis:	4.3
90-270 Axis:	0.65
Height:	0.44

Zonal Lumen Summary			
Zone	Lumens	% Lamp	% Fixture
0-30	1264	13	20
0-40	2127	21	34
0-60	3870	40	64
0-90	5878	59	94
90-120	381	4	6
90-150	369	4	6
90-180	369	4	6
0-180	6247	62	100



Industrial Lighting Products

CATALOG NUMBER <i>WT8-4T8 IOP432 NOMB CAL</i>	
PROJECT NAME <i>metro market</i>	TYPE <i>8Ft Vapor lite</i>
VOLTAGE <i>120/277</i>	LAMPS <i>F32T8/835/H/L</i>

SPECIFICATIONS

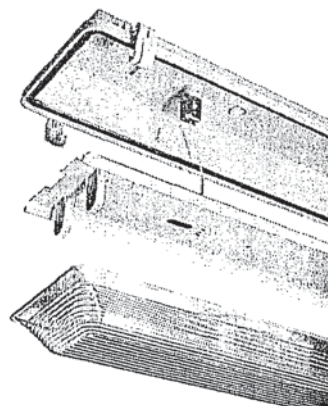
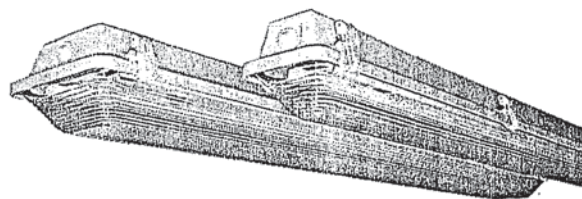
- UL Listed Wet Location
- Fiberglass body
- Continuous poured, closed cell polyurethane gasket
- Impact resistant acrylic lens, polycarbonate optional
- Stainless steel mounting brackets for drill free mounting
- Polycarbonate latches standard, stainless steel latches optional
- Tamper proof screws optional
- Suitable for wall or ceiling mount
- 2, 4, and 8 foot enclosures
- 1, 2, and 3 lamp cross sections
- Narrow body available for 1 lamp unit (4 foot only)
- Body Attributes
 - IP 67 (Dust tight, immerse 1m, 30min)
 - High Pressure Hose Down 1500 PSI
 - 5VA flame rating
 - UL Listed / Wet Locations
 - NSF Rated for food safety
 - (f1) rated for outdoor use

APPLICATIONS

- Parking garages
- Food processing and preparation
- Horse barns
- Car washes with stainless steel latches
- Pool areas
- Hallways and stair wells

AMAZON

T5HO & T8



ORDERING GUIDE:

WT2T5UHSS

SERIES	LAMP TOTAL	BALLAST CONFIG	OPTIONS
<input type="checkbox"/> WT - 4 FOOT UNIT	<input type="checkbox"/> 1T5 - 1 F54 OR (F24 2 FT ONLY)	<input type="checkbox"/> UL - 120/277 T8 LBF	<input type="checkbox"/> E - 95% MIRO 4 REFLECTOR
<input type="checkbox"/> WT2 - 2 FOOT UNIT	<input type="checkbox"/> 2T5 - 2 F54 OR (F24 2 FT ONLY)	<input type="checkbox"/> UR - 120/277 T8 NBF	<input type="checkbox"/> PLS - PLUNGER SOCKETS
<input type="checkbox"/> WT8 - 8 FOOT UNIT	<input type="checkbox"/> 4T5 - 4 F54 (8 FOOT ONLY)	<input type="checkbox"/> UH - 120/277 T8 HBF	<input type="checkbox"/> SS - STAINLESS STEEL LATCHES
ONE LAMP UNITS WILL COME STAND- DARD IN THE NAR- ROW BODY	<input type="checkbox"/> 1T8 - 1 F32 OR (F17 2 FOOT ONLY)	<input type="checkbox"/> UH - 120/277 T5HO	<input type="checkbox"/> NOMB - NO MOUNTING BRACKETS
	<input type="checkbox"/> 2T8 - 2 F32 OR (F17 2 FOOT ONLY)	<input type="checkbox"/> 4H - 347/480V (T5 ONLY)	<input type="checkbox"/> XXXXBBY - Y = # OF LAMPS XXXX = TOTAL # OF LUMENS REQUIRED
	<input type="checkbox"/> 3T8 - 3 F32 OR (F17 2 FOOT ONLY)		<input type="checkbox"/> PC - POLYCARBONATE LENS
	<input type="checkbox"/> 4T8 - 4 F32 (8 FOOT ONLY)		<input type="checkbox"/> FIOS - FACTOR INSTALLED OS
	<input type="checkbox"/> 6T8 - 6 F32 (8 FOOT ONLY)		<input type="checkbox"/> WLOS - WET LOCATION SENSOR INSTALLED
			<input type="checkbox"/> LIXX - LAMPS INSTALLED XX = LAMP COLOR (EX. LI85 = 850 5000K)
		<input type="checkbox"/> CORDX - CORD WITH A WET LOCATION STRAIN RELIEF, X = SPEC LENGTH	
		<input type="checkbox"/> EB - EXTRA BALLAST	
		<input type="checkbox"/> SD480 - 480V STEP DOWN TRANSFORMER	



Industrial Lighting Products

CATALOG NUMBER	
PROJECT NAME	TYPE
VOLTAGE	LAMPS

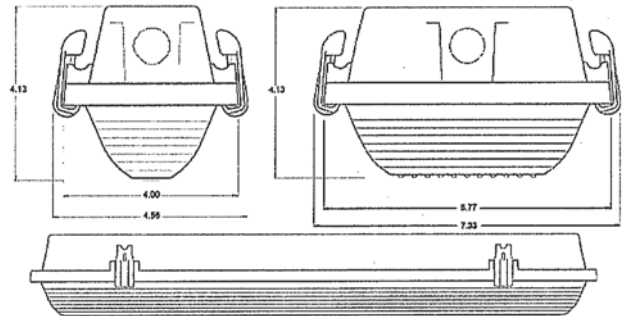
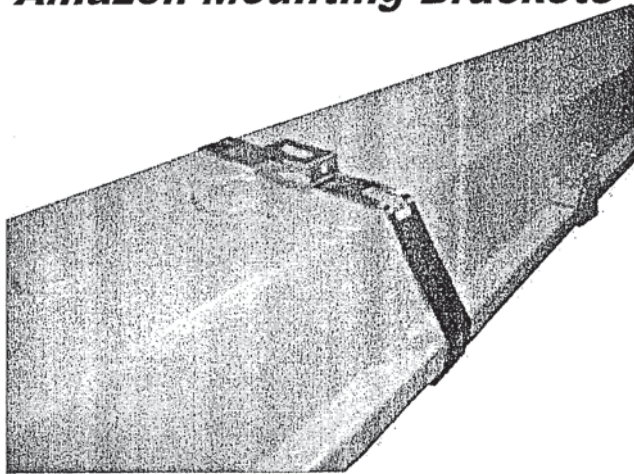
AMAZON

T5HO & T8

MOUNTING OPTIONS

- Drill-free stainless steel mounting brackets come standard with each unit
- Stainless brackets can attach to 1/4 in. all thread.
- Dual point mounting optional. Body has 3/4 in hole template for easy location and drilling

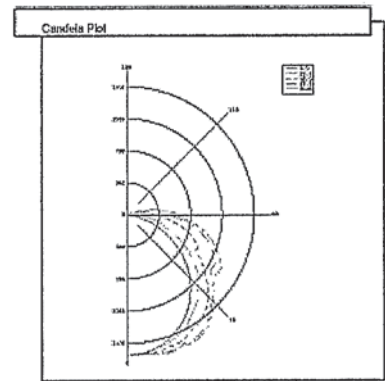
Amazon Mounting Brackets



4 FOOT UNIT - 51.25 IN. LONG
 8 FOOT UNIT - 99.5 IN. LONG
 2 FOOT UNIT - 27.75 IN. LONG

WT-2T5-UH

Coefficients of Utilization																	
plc=	0.20																
pcc=>	0.70	0.50	0.30	0.10	0.70	0.50	0.30	0.10	0.50	0.30	0.10	0.50	0.30	0.10	0.00	0.00	
RCR	0	1	2	3	4	5	6	7	8	9	10	0	1	2	3	4	
0	73	73	73	73	71	71	71	71	67	67	67	64	64	64	60	60	60
1	85	82	80	55	63	60	57	51	56	51	52	53	51	49	47	47	47
2	89	53	49	44	57	51	47	43	48	44	41	46	42	40	37	37	37
3	53	46	40	35	51	44	39	35	42	37	34	40	36	33	30	30	30
4	48	40	34	29	46	39	33	29	37	32	28	35	31	27	25	25	25
5	44	36	30	25	43	35	29	25	33	28	24	31	27	23	22	22	22
6	41	32	26	22	39	31	25	21	30	25	21	28	24	20	19	19	19
7	38	29	23	19	38	28	23	19	27	22	18	26	21	18	16	16	16
8	35	26	21	17	34	26	20	17	24	20	16	23	19	16	14	14	14
9	33	24	18	15	32	23	18	15	22	18	15	21	17	14	13	13	13
10	31	22	17	13	30	22	17	13	21	16	13	20	16	13	12	12	12



Luminaire Properties	
Number of Lamps:	2
Lumens Per Lamp:	5000
Input Watts:	105
Distribution:	Direct
Symmetry:	Quadrilateral
Photometric Type:	Type C
Luminous Streets:	Rectangle
Units:	Feet
Luminous Dimensions:	
0-180 Axis:	4.3
90-270 Axis:	0.55
Height:	0.14

Zonal Lumen Summary			
Zone	Lumens	% Lamp	% Fixture
0-30	1261	13	20
0-40	2127	21	34
0-60	3970	40	64
0-90	5678	59	94
90-120	991	4	6
90-150	358	4	6
90-180	369	4	6
0-180	6247	62	100

COOPER LIGHTING - METALUX®

DESCRIPTION

The SSF Series is a functional and multi-purpose standard strip family that incorporates premium performance and construction durability. Designed with our easy-to-use Flip-Up socket design, the SSF significantly reduces installation time. The performance and application versatility of this series can be increased by incorporating symmetrical or asymmetrical reflectors. The SSF Series can be installed using various mounting methods and numerous options and accessories are available. The SSF Series can be the illumination solution in commercial, industrial, retail and residential applications. Fixtures can be used in storage/utility areas, coves, display cases, shops, task and general area lighting.

Catalog #	SSF232-UNVEB81	Type	
Project	Metro Market	Date	
Comments	4FT STRIP		
Prepared by			

SPECIFICATION FEATURES

A... Construction

Channel die cold rolled steel with numerous KOs for ease of installation. Groove for Tong Hanger. End plate quickly converts to snap-in channel connector for continuous row alignment. Lamp holder bracket flips in place. Channel/wireway cover secured with quarter-turn fasteners.

B... Electrical *

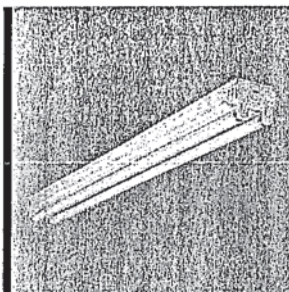
Ballasts are CBM/ETL Class "P" and are positively secured by mounting bolts. Rotor Lock lampholders. UL/CUL listed. Suitable for damp locations.

C... Finish

Multistage iron phosphate pretreatment ensures maximum bonding and rust inhibitor. Lighting upgrade, baked white enamel finish. Pre-painted material is standard, PAF optional.

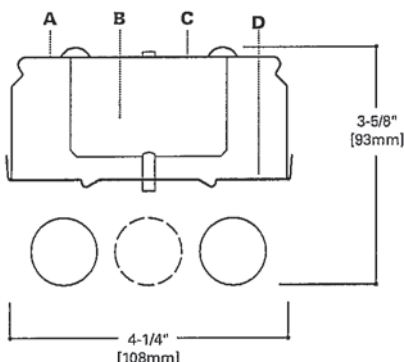
D... Channel/Wireway Cover

Die formed heavy gauge steel. Tight fit for ease of maintenance. Easily removed without use of tools. Optional reflector available incorporating silver technology enhancements (Silver Lining). Consult Pre Sales Technical Support.

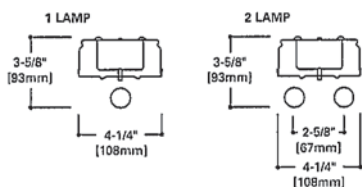


SSF
 117, 125
 128T8
 132, 217, 225
 228T8
 232
 328T8
 332

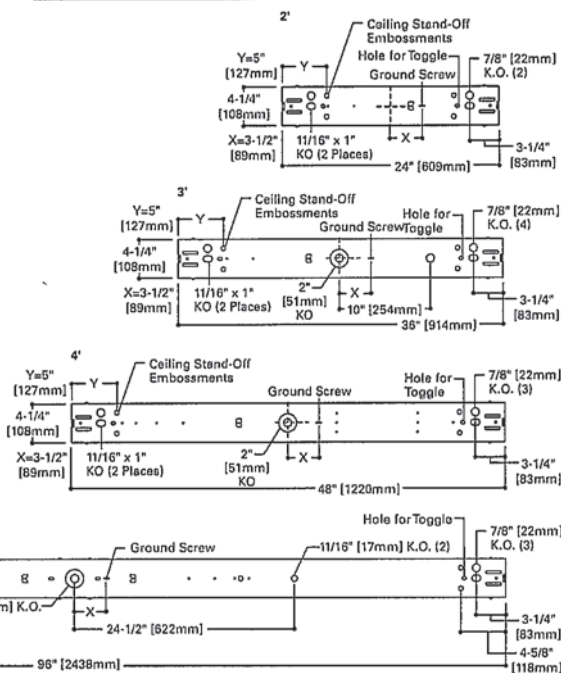
2', 3' OR 4' STRIP
 1, 2 OR 3 T8 LAMPS
 Standard Striplite



LAMP CONFIGURATIONS



MOUNTING DATA



ENERGY DATA

Input Watts:
 EB Ballasts Normal Ballast Factor
 117 (20), 217 (34), 125 (23), 225 (53),
 128T8 (25), 228T8 (49), 328T8 (71),
 132 (28), 232 (58), 332 (80)
 EB Ballasts Low Ballast Factor
 125 (21), 225 (40), 128T8 (22),
 228T8 (44), 328T8 (64), 132 (25),
 232 (48), 332 (72)

Luminaire Efficacy Rating
 LER = FS-88
 Catalog Number: SSF-232

Yearly Cost of 1000 lumens,
 3000 hrs at .08 KWH = \$2.73

(*Reference the lamp/ballast data in the Technical Section for specific lamp/ballast requirements.)

LAMPS CONTAIN MERCURY. DISPOSE ACCORDING TO LOCAL, STATE OR FEDERAL LAWS

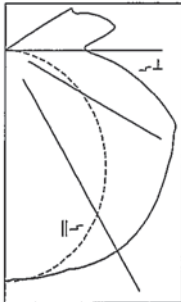
LINEAR DISCONNECT

Safe and convenient means of disconnecting power.



ADF081661

PHOTOMETRICS



SSF-228T8
Electronic Ballast
F28T8-SP35-UMX-ECO Lamps
2750 Lumens
Spacing criterion:
(H) 1.3 x mounting height, (L) 1.5 x mounting height
Efficiency 86.2%
Test Report: SS232.IES
LER = FS95
Yearly Cost of 1000 lumens, 3000 hrs at .08 KWH = \$2.53

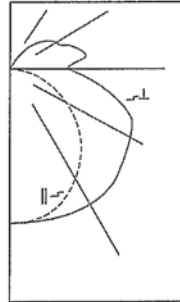
Candlepower			
Angle	Along H	45°	Across L
0	929	929	929
5	927	928	927
10	916	925	928
15	896	914	927
20	869	899	936
25	834	888	945
30	792	876	949
35	742	860	946
40	687	837	934
45	627	808	915
50	561	771	889
55	492	727	866
60	418	675	845
65	340	632	818
70	261	598	775
75	181	554	674
80	106	443	568
85	41	340	453
90	5	234	349

Coefficients of Utilization

rc	Effective floor cavity reflectance																	
	80%			70%			50%			30%			10%			0%		
rw	70	50	30	70	50	30	50	30	10	50	30	10	50	30	10	0		
RCR																		
0	99	99	99	99	95	95	95	95	88	88	88	81	81	81	75	75	75	73
1	88	83	78	74	84	79	75	71	73	69	66	67	64	62	62	60	58	55
2	79	70	63	57	75	67	61	56	62	57	52	57	53	49	52	49	46	43
3	71	61	53	46	67	58	51	45	53	47	42	49	44	40	45	41	37	35
4	64	53	45	38	61	51	43	37	47	40	35	43	38	33	40	35	31	29
5	59	47	38	32	56	45	37	31	42	35	30	38	33	28	35	31	27	24
6	54	42	34	28	51	40	33	27	37	31	26	34	29	24	32	27	23	21
7	50	38	30	24	48	36	29	23	34	27	22	31	26	21	29	24	20	18
8	46	34	26	21	44	33	26	21	31	24	20	28	23	19	26	22	18	15
9	43	31	24	19	41	30	23	18	28	22	18	26	21	17	24	20	16	14
10	40	29	22	17	39	28	21	17	26	20	16	24	19	15	23	18	14	13

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	758	13.8	16.0
0-40	1291	23.5	27.2
0-60	2533	46.1	53.5
0-90	3988	72.5	84.2
90-180	751	13.6	15.8
0-180	4739	86.2	100.0



SSF-232
Electronic Ballast
FO32T8 Lamps
2900 Lumens
Spacing criterion:
(H) 1.3 x mounting height, (L) 1.6 x mounting height
Efficiency 91.6%
Test Report: SS232.IES
LER = FS-88
Yearly Cost of 1000 lumens, 3000 hrs at .08 KWH = \$2.73

Candlepower			
Angle	Along H	45°	Across L
0	1017	1017	1017
5	1007	1010	1021
10	949	985	1030
15	857	951	1042
20	738	906	1029
25	588	830	978
30	422	727	920
35	252	632	834
40	104	456	601
45	0	253	393
50	0	320	518
55	0	246	430
60	0	199	353
65	0	131	263
70	0	69	167
75	0	17	76
80	0	1	7
85	0	0	0
90	0	0	0

Coefficients of Utilization

rc	Effective floor cavity reflectance																	
	80%			70%			50%			30%			10%			0%		
rw	70	50	30	70	50	30	50	30	10	50	30	10	50	30	10	0		
RCR																		
0	105	105	105	105	100	100	100	100	92	92	92	84	84	84	77	77	77	74
1	93	87	83	78	88	84	79	75	76	73	70	70	67	64	64	61	59	56
2	83	74	67	61	79	71	65	59	65	60	55	59	55	51	54	51	47	44
3	75	64	56	49	71	62	54	48	56	50	45	51	46	42	47	42	39	36
4	68	56	48	41	65	54	46	40	49	43	37	45	39	35	41	36	32	30
5	62	50	41	35	59	48	40	34	44	37	32	40	34	30	37	32	28	25
6	57	44	36	30	54	43	35	29	39	32	27	36	30	26	33	28	24	22
7	53	40	32	26	50	38	31	25	35	29	24	33	27	22	30	25	21	19
8	49	36	28	23	47	35	27	22	32	26	21	30	24	20	27	22	19	17
9	46	33	25	20	44	32	25	20	30	23	19	27	22	18	25	20	17	15
10	43	30	23	18	41	29	22	18	27	21	17	25	20	16	23	18	15	13

Zonal Lumen Summary

Zone	Lumens	%Lamp	%Fixture
0-30	830	14.3	15.6
0-40	1411	24.3	26.6
0-60	2753	47.5	51.8
0-90	4288	73.9	80.7
90-180	1023	17.6	19.3
0-180	5311	81.6	100.0

ORDERING INFORMATION

SAMPLE NUMBER: SSF-232-UNV-EB81-U

<p>Tandem Blank=2', 3' or 4' Length 8T=8' Length</p> <p>Series SSF=Commercial Standard Striplite</p>	<p>Number of Lamps (Not Included) 1=1 Lamp 2=2 Lamps 3=3 Lamps⁽¹⁾</p> <p>Wattage 17=17W T8 (24") 25=25W T8 (36") 28T8=28W T8 (48")⁽²⁾ 32=32W T8 (48")</p>	<p>Voltage⁽³⁾ 120V=120 Volt 277V=277 Volt 347V=347 Volt UNV=Universal Voltage 120-277</p>	<p>Options⁽⁴⁾ GL=Single Element Fuse GM=Double Element Fuse EL4=Emergency Installed^{(4) (5)}</p>	<p>Ballast Type⁽⁶⁾ EB8_=T8 Electronic Instant Start. Total Harmonic Distortion < 10% No. of Ballast 1 or 2 EB8_/PLUS=T8 Electronic Instant Start. High Ballast Factor >1.13. No. of Ballast 1 or 2 ER8_=T8 Electronic Program Rapid Start. Total Harmonic Distortion < 10% No. of Ballast 1 or 2 ER8_/PLUS=T8 Electronic Program Start. High Ballast Factor >1.13. No. of Ballast 1 or 2</p>	<p>Options RIF1=Radio Interference Suppressor 6-3/18 SJT-C&P-515P=Cord & Plug (120V) (15 AMP)⁽⁶⁾ 6-3/18 SJT-C&P-L715P=Cord & Plug (277V) (15 AMP)⁽⁶⁾ PI/CPI=Plug-In Option⁽⁶⁾ TILW=Tandem In-Line Wiring Option (Consult TILW Option Catalog Page)⁽⁶⁾</p> <p>Packaging U=Unit Pack 4B=4 Bulk Packing (48" and 96")</p>
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ACCESSORIES

- (Order Separately)
- A1B/Spacer-U=Spacer 1-1/2" to 2-1/2" from ceiling (Use 2 Per Fixture)
 - GRP-SSF=Gripper Hanger (Use 2 Per Fixture)
 - AYC-Chain/Set=36" Chain Hanger (Use 1 Set Per Fixture)
 - SCF=Fixed Stem Set (Specify Length)
 - SCS=Swivel Stem Set (Specify Length)
 - SCA=Adjustable 48" Stem Set
 - CLC-SSF=Long Channel Connector SSF
 - SSF-ASY-4⁽⁷⁾=3" Asymmetric Reflector (Specify 2', 3', or 4')
 - SSF-REV-4⁽⁸⁾=3" Asymmetric Reverse Reflector SSF (Specify 2', 3', or 4')
 - SSF-SYM-4⁽⁹⁾=6" Symmetric Reflector Specify (2', 3' or 4')
 - ICF-4FT-REFL=12" Symmetric Reflector
 - WG/SSF-2FT=2' Wire Guard
 - WG/SSF-3FT=3' Wire Guard
 - WG/SSF-4FT=4' Wire Guard
 - TOGGLE=Single Toggle NO. 2 (Specify Length)
 - Y-TOGGLE=Y Toggle NO. 2 (Specify Length)

(Additional Accessories Available. See Options and Accessories Section.)

- HPT8 Ballast**
HB8_L=T8 Electronic Instant Start. Low Ballast Factor .77
HB8_=T8 Electronic Instant Start. Ballast Factor .88
HB8_N=T8 Electronic Instant Start. Normal Ballast Factor 1.0
HB8_H=T8 Electronic Instant Start. High Ballast Factor 1.15-1.2
HR8_DIM=T8 Electronic Program Start Step Dimming. Ballast Factor .88
HR8_L=T8 Electronic Program Start. Low Ballast Factor .77 max.
HR8_=T8 Electronic Program Start. Ballast Factor .88
HR8_H=T8 Electronic Program Start. High Ballast Factor 1.15-1.2

NOTES: ⁽¹⁾ Available in 28T8 and 32 watt. Requires two ballasts for Tandem option. ⁽²⁾ Products also available in non-US voltages and frequencies for international markets. ⁽³⁾ For SilverLining reflector add SS in Catalog Number, Example: SSF-ASY-SS-4. ⁽⁴⁾ Not available for 2' version. ⁽⁵⁾ For other emergency options specify manufacturer part number and consult the factory for availability (example: EL-FBP240H). ⁽⁶⁾ Socket brackets left uninstalled. ⁽⁷⁾ When utilizing 28W T8 lamps, HPT8 Ballast must be specified. Other ballast restrictions may apply. Consult your Cooper Lighting Representative for availability and ordering information.

Specifications & dimensions subject to change without notice. Consult your Cooper Lighting Representative for availability and ordering information.



COOPER LIGHTING - METALUX®



DESCRIPTION

The SSF Series is a functional and multi-purpose standard strip family that incorporates premium performance and construction durability. Designed with our easy-to-use Flip-Up socket design, the SSF significantly reduces installation time. The performance and application versatility of this series can be increased by incorporating symmetrical or asymmetrical reflectors. The SSF Series can be installed using various mounting methods and numerous options and accessories are available. The SSF Series can be the illumination solution in commercial, industrial, retail and residential applications. Fixtures can be used in storage/utility areas, coves, display cases, shops, task and general area lighting.

Catalog #	8TSSSF232UNVEB	Type	81
Project	metro market	Date	
Comments	8 Ft STRIP		
Prepared by			

SPECIFICATION FEATURES

A... Construction

Channel die cold rolled steel with numerous KOs for ease of installation. Groove for Tong Hanger. End plate quickly converts to snap-in channel connector for continuous row alignment. Lamp holder bracket flips in place. Channel/wireway cover secured with quarter-turn fasteners.

B... Electrical*

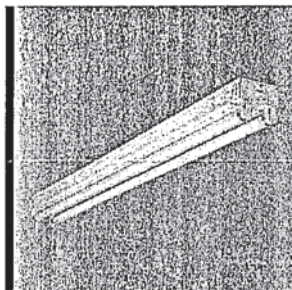
Ballasts are CBM/ETL Class "P" and are positively secured by mounting bolts. Rotor Lock lampholders. UL/CUL listed. Suitable for damp locations.

C... Finish

Multistage iron phosphate pretreatment ensures maximum bonding and rust inhibitor. Lighting upgrade, baked white enamel finish. Prepainted material is standard, PAF optional.

D... Channel/Wireway Cover

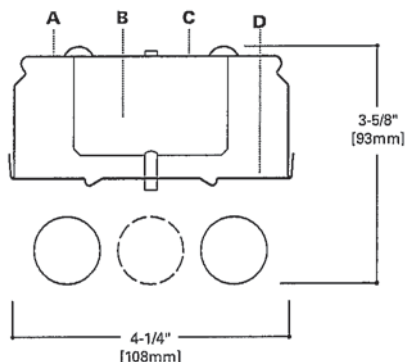
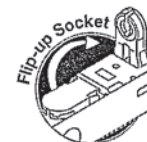
Die formed heavy gauge steel. Tight fit for ease of maintenance. Easily removed without use of tools. Optional reflector available incorporating silver technology enhancements (Silver Lining). Consult Pre Sales Technical Support.



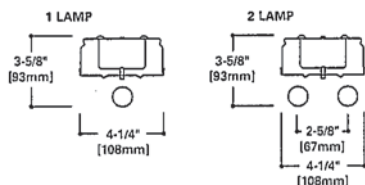
SSF
117, 125
128T8
132, 217, 225
228T8
232
328T8
332

2', 3' OR 4' STRIP
1, 2 OR 3 T8 LAMPS

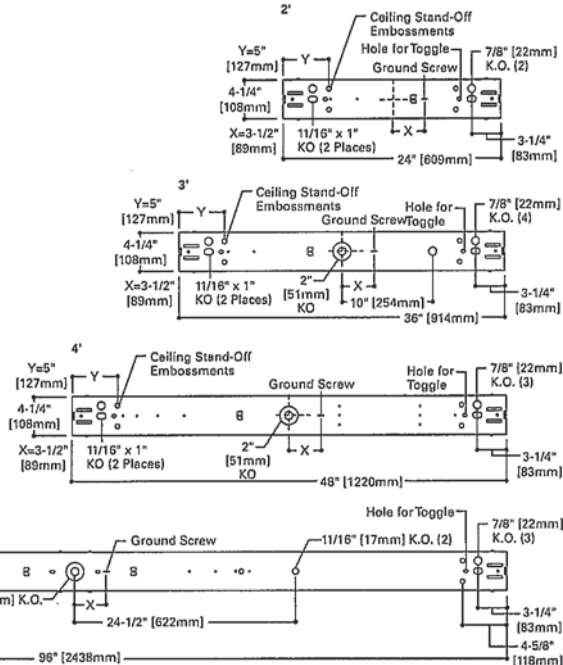
Standard Striplite



LAMP CONFIGURATIONS



MOUNTING DATA



ENERGY DATA

Input Watts:
EB Ballasts Normal Ballast Factor
117 (20), 217 (34), 125 (23), 225 (53),
128T8 (25), 228T8 (49), 328T8 (71),
132 (26), 232 (56), 332 (80)
EB Ballasts Low Ballast Factor
125 (21), 225 (40), 128T8 (22),
228T8 (44), 328T8 (64), 132 (25),
232 (46), 332 (72)

Luminaire Efficacy Rating
LER = FS-88
Catalog Number: SSF-232

Yearly Cost of 1000 lumens,
3000 hrs at .08 KWH = \$2.73

(*Reference the lamp/ballast data in the Technical Section for specific lamp/ballast requirements.)

LAMPS CONTAIN MERCURY. DISPOSE ACCORDING TO LOCAL, STATE OR FEDERAL LAWS

LINEAR DISCONNECT

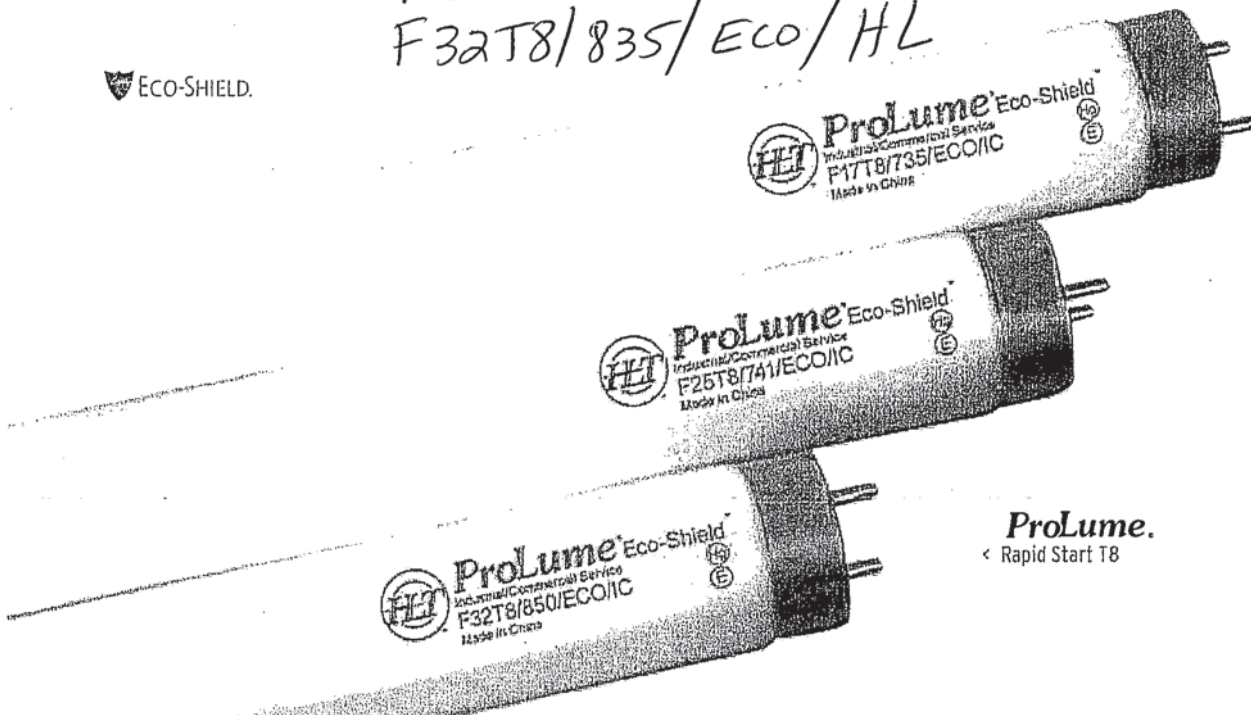
Safe and convenient means of disconnecting power.

ADF081661



metro market
F32T8/835/ECO/HL

ECO-SHIELD.



ProLume.
◀ Rapid Start T8

FLUORESCENT

ProLume Rapid Start T8

Halco
LIGHTING TECHNOLOGIES

Energy Efficient

- Saves up to 40% on energy costs compared to standard T12 lamps
- Tri-phosphor coating provides high lumen output and excellent color rendering, up to 86 CRI

Technical Data

- Cathode guard ensures maximum lumen output throughout lamp life by reducing end-blackening
- Brass pins

Broad Assortment

- F17, F25, F28, FB28, F32, and FB32 available in 700 and 800 Series
- 3000, 3500, 4100, 5000 and 6500K

Long Life

- 30,000 Hours Average Rated Commercial Life
- 2-Year Guarantee

Applications

- Use 700 Series lamps in any application where color rendering is not crucial: office buildings, schools, and manufacturing facilities
- Use 800 Series lamps for applications where color matching is critical: paint stores, hair salons, retail stores and print shops

The Eco-Shield® mark indicates this product is TCLP compliant.



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ProLume. Rapid Start T8



FLUORESCENT

Bulb Type	Watts	Base	Product #	Product Code	Description	Pkg/Qty	Color Temp	CRI	Initial Lumens	Mean Lumens	Avg Rated Life	Commercial Life**	Nom Length (in)
RAPID START													
T8	17	Bi-Pin	30101	F17T8/730/ECO/IC	730 Phosphor Eco-Shield®	25	3000	78	1350	1280	24000	30000	24"
T8	17	Bi-Pin	30102	F17T8/735/ECO/IC	735 Phosphor Eco-Shield®	25	3500	78	1350	1280	24000	30000	24"
T8	17	Bi-Pin	30103	F17T8/741/ECO/IC	741 Phosphor Eco-Shield®	25	4100	78	1350	1280	24000	30000	24"
T8	17	Bi-Pin	30104	F17T8/750/ECO/IC	750 Phosphor Eco-Shield®	25	5000	78	1350	1280	24000	30000	24"
T8	17	Bi-Pin	30105	F17T8/830/ECO/IC	830 Phosphor Eco-Shield®	25	3000	86	1400	1330	24000	30000	24"
T8	17	Bi-Pin	30112	F17T8/835/ECO/IC	835 Phosphor Eco-Shield®	25	3500	86	1400	1330	24000	30000	24"
T8	17	Bi-Pin	30106	F17T8/841/ECO/IC	841 Phosphor Eco-Shield®	25	4100	86	1400	1330	24000	30000	24"
T8	17	Bi-Pin	30113	F17T8/850/ECO/IC	850 Phosphor Eco-Shield®	25	5000	86	1400	1330	24000	30000	24"
T8	25	Bi-Pin	30140	F25T8/730/ECO/IC	730 Phosphor Eco-Shield®	25	3000	78	2150	2050	24000	30000	36"
T8	25	Bi-Pin	30107	F25T8/735/ECO/IC	735 Phosphor Eco-Shield®	25	3500	78	2150	2050	24000	30000	36"
T8	25	Bi-Pin	30108	F25T8/741/ECO/IC	741 Phosphor Eco-Shield®	25	4100	78	2150	2050	24000	30000	36"
T8	25	Bi-Pin	30141	F25T8/750/ECO/IC	750 Phosphor Eco-Shield®	25	5000	78	2150	2050	24000	30000	36"
T8	25	Bi-Pin	30109	F25T8/830/ECO/IC	830 Phosphor Eco-Shield®	25	3000	86	2250	2140	24000	30000	36"
T8	25	Bi-Pin	30110	F25T8/835/ECO/IC	835 Phosphor Eco-Shield®	25	3500	86	2250	2140	24000	30000	36"
T8	25	Bi-Pin	30111	F25T8/841/ECO/IC	841 Phosphor Eco-Shield®	25	4100	86	2250	2140	24000	30000	36"
μ T8	25	Bi-Pin	35162	F25T8ES/830/ECO	830 Phosphor Eco-Shield®	25	3000	86	2500	2380	24000	30000	48"
μ T8	25	Bi-Pin	35163	F25T8ES/835/ECO	835 Phosphor Eco-Shield®	25	3500	86	2500	2380	24000	30000	48"
μ T8	25	Bi-Pin	35164	F25T8ES/841/ECO	841 Phosphor Eco-Shield®	25	4100	86	2500	2380	24000	30000	48"
μ T8	25	Bi-Pin	35165	F25T8ES/850/ECO	850 Phosphor Eco-Shield®	25	5000	86	2500	2380	24000	30000	48"
T8	28	Bi-Pin	30158	F28T8/830/ECO/IC	830 Phosphor Eco-Shield®	25	3000	86	2800	2660	24000	30000	48"
T8	28	Bi-Pin	30155	F28T8/835/ECO/IC	835 Phosphor Eco-Shield®	25	3500	86	2800	2660	24000	30000	48"
T8	28	Bi-Pin	30156	F28T8/841/ECO/IC	841 Phosphor Eco-Shield®	25	4100	86	2800	2660	24000	30000	48"
T8	28	Bi-Pin	30157	F28T8/850/ECO/IC	850 Phosphor Eco-Shield®	25	5000	86	2800	2660	24000	30000	48"
T8	32	Bi-Pin	30150	F32T8/730/ECO/IC	730 Phosphor Eco-Shield®	25	3000	78	2850	2700	24000	30000	48"
T8	32	Bi-Pin	30151	F32T8/735/ECO/IC	735 Phosphor Eco-Shield®	25	3500	78	2850	2700	24000	30000	48"
T8	32	Bi-Pin	30152	F32T8/741/ECO/IC	741 Phosphor Eco-Shield®	25	4100	78	2850	2700	24000	30000	48"
T8	32	Bi-Pin	30153	F32T8/750/ECO/IC	750 Phosphor Eco-Shield®	25	5000	78	2850	2700	24000	30000	48"
T8	32	Bi-Pin	30154	F32T8/765/ECO/IC	765 Phosphor Eco-Shield®	25	6500	78	2850	2700	24000	30000	48"
T8	32	Bi-Pin	35150	F32T8/830/ECO/IC	830 Phosphor Eco-Shield®	25	3000	86	3050	2900	24000	30000	48"
T8	32	Bi-Pin	35151	F32T8/835/ECO/IC	835 Phosphor Eco-Shield®	25	3500	86	3050	2900	24000	30000	48"
T8	32	Bi-Pin	35152	F32T8/841/ECO/IC	841 Phosphor Eco-Shield®	25	4100	86	3050	2900	24000	30000	48"
T8	32	Bi-Pin	35153	F32T8/850/ECO/IC	850 Phosphor Eco-Shield®	25	5000	86	3050	2900	24000	30000	48"
T8	32	Bi-Pin	35154	F32T8/865/ECO/IC	865 Phosphor Eco-Shield®	25	6500	86	3050	2900	24000	30000	48"
T8	32	Bi-Pin	109360	F32T8/ULTRA950	950 Phosphor Ultra950®	25	5000	98	2000	1900	24000	30000	48"
T8	40	Bi-Pin	30160	F40T8/735/ECO	735 Phosphor Eco-Shield®	30	3500	76	3600	3420	24000	30000	60"
T8	40	Bi-Pin	30161	F40T8/741/ECO	741 Phosphor Eco-Shield®	30	4100	76	3600	3420	24000	30000	60"
T8	58	Bi-Pin	109374	F58T8/840	840 Phosphor	25	4000	86	5300	5000	24000	30000	60"
F32 HIGH LUMEN													
T8	32	Bi-Pin	35155	F32T8/830/ECO/HL	830 Phosphor Eco-Shield®	25	3000	86	3150	2995	24000	30000	48"
T8	32	Bi-Pin	35156	F32T8/835/ECO/HL	835 Phosphor Eco-Shield®	25	3500	86	3150	2995	24000	30000	48"
T8	32	Bi-Pin	35157	F32T8/841/ECO/HL	841 Phosphor Eco-Shield®	25	4100	86	3150	2995	24000	30000	48"
T8	32	Bi-Pin	35158	F32T8/850/ECO/HL	850 Phosphor Eco-Shield®	25	5000	86	3150	2995	24000	30000	48"
F32 EXTENDED LIFE*													
T8	32	Bi-Pin	35159	F32T8/835/ECO/XL	835 Phosphor Eco-Shield®	25	3500	86	2950	2800	40000	46000	48"
T8	32	Bi-Pin	35160	F32T8/841/ECO/XL	841 Phosphor Eco-Shield®	25	4100	86	2950	2800	40000	46000	48"
T8	32	Bi-Pin	35161	F32T8/850/ECO/XL	850 Phosphor Eco-Shield®	25	5000	86	2950	2800	40000	46000	48"



DESCRIPTION

The IMPACT Elite Trapezoid cutoff wall luminaire makes an ideal complement to site design. Rugged construction and full cutoff classified optics provide facade and security lighting for light restricted zones surrounding schools, office complexes, apartments, and recreational facilities. U.L. and cUL Listed for wet locations in down mount applications and damp locations in up mounted applications.

Catalog #	IST 64 CF EI 2S GM EMI40	Type	
Project	COPPS MADISON	Date	WA
Comments			
Prepared by			

SPECIFICATION FEATURES

Construction

Two-piece die-cast aluminum housing and removable hinged door frame nests securely for precise tolerance control and repeatability. Hinged door frame inset for clean mating with housing surface and secured via two [2] captive stainless steel fasteners. Optional tamper resistant torx-head fasteners [TR] offer vandal resistant access to the electrical compartment. 1/8" clear, heat and impact resistant tempered flat glass lens combine with molded silicone gasket to seal the integrated optical assembly, while ensuring peak optical performance.

Electrical

Integral hard mount electrical components are secured and grounded within the die-cast aluminum housing for optimal heat sinking and extended component life. Minimum starting temperatures are -40°C (-40°F) for HPS and -30°C (-22°F) for MP. Compact fluorescent luminaires

feature electronic universal 120-277V high efficiency 50/60Hz ballast with -18°C (-0°F) minimum starting temperature. Available in 50-175 HID or 26-84 CF. Emergency power pack available for 26-64 CF.

Optical

Premium anodized 95% reflective aluminum optical assemblies provide high efficiency Type II distribution. Optional silk screened house side flat glass shield provides decreased wall brightness. All Impact Elite Wall Series luminaires classify as IESNA full cutoff in downlight applications. Available with 10% or 50% uplight options for architectural highlighting of building details.

Mounting

Gasketed and zinc plated rigid steel mounting attachment fits directly to 4" j-box or wall with the Impact Elite "Hook-N-Lock" system for fast installation and mounting in both

traditional downlighting [wet location] or inverted uplighting [damp location] mounting positions. Secured via two [2] captive corrosion resistant allen head set screws concealed from view, but accessible from bottom of fixture.

Finish

Housing and door are protected with 5-stage premium TGIC polyester powder coat paint. Premium TGIC powder coat finishes withstand extreme climate changes while providing optimal color and gloss retention over the fixture's installed life. Standard colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available. Consult McGraw-Edison Architectural Colors Brochure for complete selection.



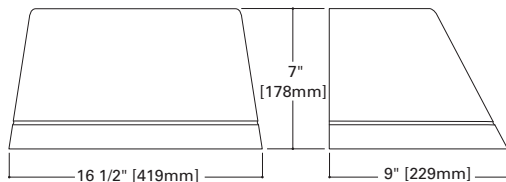
IST IMPACT ELITE TRAPEZOID

50 - 175W
Pulse Start Metal Halide
Metal Halide
High Pressure Sodium
26 - 84W
Compact Fluorescent

**FULL CUTOFF
WALL MOUNT LUMINAIRE**

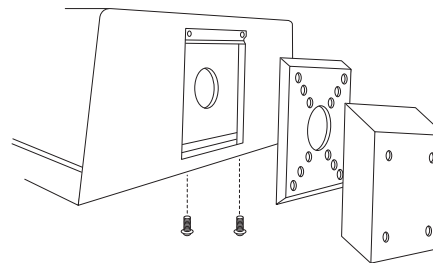
IMPACT™

STANDARD DIMENSIONS

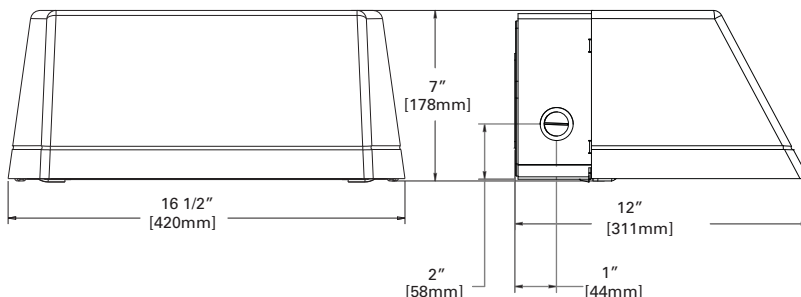


HOOK-N-LOCK MOUNTING

(Mounting attachment included. J-Box not included.)



DIMENSIONS WITH BACK BOX



**DARK SKY
COMPLIANT** **FCO**
Full Cutoff

NOTE: In downlight applications only.

TECHNICAL DATA

UL1598 Listed, CUL Listed
25°C Maximum Ambient Temperature
External Supply Wiring 90°C Minimum
Down Mounted—Wet Location
Up Mounted—Damp Location

ENERGY DATA

High Reactance Ballast Input Watts

50W HPS HPF (66 Watts)
50W MP HPF (72 Watts)
70W HPS HPF (91 Watts)
70W MP HPF (90 Watts)
100W HPS HPF (130 Watts)
100W MP HPF (129 Watts)
150W HPS HPF (190 Watts)
150W MP HPF (185 Watts)

Electronic Ballast Input Watts

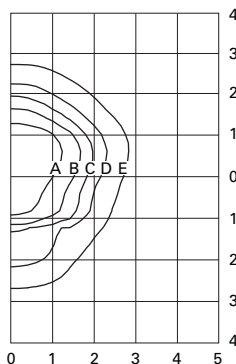
26W CF HPF (29 Watts)
32W CF HPF (36 Watts)
42W CF HPF (46 Watts)
52W CF HPF (55 Watts)

SHIPPING DATA

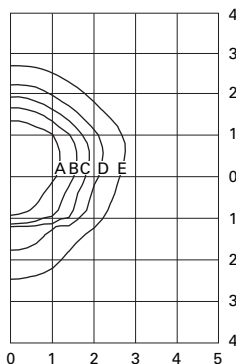
Approximate Net Weight:
18 lbs. (8 kgs.)



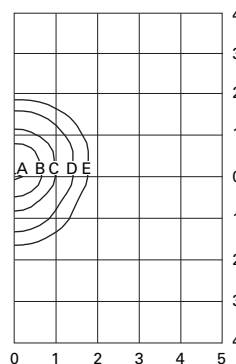
PHOTOMETRICS (Complete IES files available at www.cooperlighting.com)



IST-150-MP-XX-2S
150—Watt MP
14,000—Lumen Clear Lamp



IST-150-HPS-XX-2S
150—Watt HP
16,000—Lumen Clear Lamp



IST-42-CF-XX-2S
42—Watt CF
3,200—Lumen Lamp

Footcandle Table

Select mounting height and read across for footcandle values of each isofootcandle line. Distance in units of mounting height.

Mounting Height	Footcandle Values for Isofootcandle Lines				
	A	B	C	D	E
150-MP / 150-HPS					
10'	7.20	2.88	1.44	0.72	0.29
12'	5.00	2.00	1.00	0.50	0.20
14'	3.65	1.46	0.73	0.37	0.07
42-CF					
18'	2.46	1.23	0.62	0.25	0.12
20'	2.00	1.00	0.50	0.20	0.10
25'	1.28	0.64	0.32	0.13	0.06

ORDERING INFORMATION

Sample Number: IST-100-MP-120-2S-GM

IST	64	CF	E1	2S	GM	EMI40 277	
Product Family IST= Impact Elite Small Trapezoid	Lamp Wattage ¹ MP 50=50W ² 70=70W ² 100=100W 150=150W HPS 50=50W ² 70=70W ² 100=100W 150=150W MH 175=175W ¹ CF 26=(1)26W 32=(1)32W 42=(1)42W 52=(2)26W 64=(2)32W 84=(2)42W	Lamp Type MP =Pulse Start Metal Halide HPS =High Pressure Sodium MH =Metal Halide ¹ CF =Compact Fluorescent Voltage ³ 120=120V 208=208V 240=240V 277=277V 347=347V 480=480V DT =Dual-Tap ⁴ MT =Multi-Tap ⁴ TT =Triple-Tap ⁴ E1 =Electronic (120-277V) ⁵	Distribution 2S=Type II Segmented Colors [add as suffix] AP =Grey BZ =Bronze BK =Black DP =Dark Platinum GM =Graphite Metallic WH =White	Options F=Single Fuse, Specify Voltage (120, 277, or 347V) ⁶ FF=Double Fuse, Specify Voltage (208, 240 or 480V) ⁶ P=Button Photocontrol (120, 208, 240 or 277V) ⁶ L=Lamp Included TR=Tamper Resistant Fasteners UPL10=10% Uplight HS=House Side Shield Glass ⁵ PL=Polycarbonate Lens ^{5,7} Q=Quartz Restrike (1) T4 Lamp ⁸ EM= Emergency Quartz Restrike (1) T4 Lamp with Time Delay Relay ⁸ EM/SC=Emergency Separate Circuit (1) T4 Lamp ^{8,9} QMR=Quartz Restrike (1) MR16 Lamp ^{10,11} 2QMR=Quartz Restrike (2) MR16 Lamps ^{10,11} 2QMR/SC=Quartz Restrike (1) MR16 Lamp and (1) Emergency Separate Circuit MR16 Lamp ^{9,10,11} EMMR=Emergency Quartz Restrike (1) MR16 Lamp with Time Delay Relay ^{10,11} 2EMMR=Emergency Quartz Restrike (2) MR16 Lamps with Time Delay Relay ^{10,11} EM/SC/MR=Emergency Separate Circuit (1) MR16 Lamp ^{9,11,12} 2EM/SC/MR=Emergency Separate Circuit (2) MR16 Lamps ^{9,11,12} 2EMMR/SC=Emergency Quartz Restrike with Time Delay Relay (1) MR16 and (1) MR16 Emergency Separate Circuit Lamp ^{9,10,11} EM/SC/12V=Emergency Separate Circuit 12V Low Voltage (1) MR16 Lamp ^{9,13} 2EM/SC/12V=Emergency Separate Circuit 12V Low Voltage (2) MR16 Lamps ^{9,13} EMI40-XXX=Emergency Cold Temperature (UL924 Listed) Power Pack -18°C/0°F, (1) CF Lamp ¹⁴ CFEM-XXX=Emergency CF Power Pack (UL924 Listed) (1) CF Lamp. 0°C/32°F ¹⁵ 2EM140-XXX=Emergency Cold Temperature power pack (UL924 listed), -18°C/0°F, (2) CF Lamps, with Back Box matching housing finish ^{14,16} 2CFEM-XXX=Emergency CF power pack (UL924 listed) 0°C/32°F, (2) CF Lamps, with Back Box matching housing finish ^{15,17}	Accessories ¹⁸ MA1254-XX=Thruway back box - Impact Elite Trapezoid		

Notes:

- HID lamps are medium base. 175W MH is available for non-U.S. markets only.
- Not available with 480V.
- Products also available in non-US voltages and 50HZ for international markets. Consult your Cooper Representative for availability and ordering information.
- Dual-tap ballast is 120/277V wired 277V. Multi-tap is 120/208/240/277V wired 277V. Triple-tap ballast is 120/277/347V wired 347V.
- Available with CF Option only. In cold temperatures, compact fluorescent lamps produce lower illumination levels.
- Must specify voltage.
- Down lighting position only.
- (1) 120V Lamp, 100W maximum quartz lamp. Utility power may need to cycle to allow HID lamp to cool in warm climates. Not available with CF Option. Lamp supplied by others.
- Leads out of the back of the unit for auxiliary power.
- Not available with CF lamps.
- (1) or (2) 120V Lamps. GU10 base, 50W maximum each. Lamps supplied by others.
- Not Available with 52, 64, 84 CF wattages.
- (1) or (2) 12V bi-pin lamp, socket GU5.3 base, 35W maximum. Power supplied by low voltage DC source (supplied by others). Lamps supplied by others.
- Specify 120 or 277V, (-18°C) minimum temperature. Not available with UPL10.
- Specify 120 or 277V, (0°C) minimum temperature. Not available with UPL10.
- Not available in 84CF configuration.
- Available in 52CF only.
- Order separately. Replace "XX" with color designation.

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