

"BUILDING RELATIONSHIPS WITH A COMMITMENT TO CLIENT SATISFACTION THROUGH TRUST, QUALITY AND EXPERIENCE"

- CIVIL ENGINEERING
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- STRUCTURAL ENGINEERING
- LANDSCAPE ARCHITECTURE

MADISON REGIONAL OFFICE
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 VERONA, WISCONSIN 53593
 608.848.5060 PHONE / 608.848.2255 FAX
 MADISON | MILWAUKEE
 KENOSHA | APPLETON
 www.jsdinc.com

SERVICES PROVIDED TO:
SARA INVESTMENT REAL ESTATE LLC

6264 NESBITT ROAD
 MADISON, WI 53719

PROJECT:
KOMBUCHA TEA PRODUCTION

PROJECT LOCATION:
 CITY OF MADISON
 DANE COUNTY, WI

JSD PROJECT NO.: 08-3287

SCALE: AS SHOWN

ALTHOUGH EVERY EFFORT HAS BEEN MADE IN PREPARING THESE PLANS AND CHECKING THEM FOR ACCURACY, THE CONTRACTOR AND SUBCONTRACTORS MUST CHECK ALL DETAIL AND DIMENSIONS OF THEIR TRADE AND BE RESPONSIBLE FOR THE SAME.

DESIGNER:	JLF	02-05-13
DRAWN:	JLF	02-05-13
APPROVED:	MAS	02-11-13

PLAN MODIFICATIONS:	DATE:
CITY OF MADISON	02-12-13

DIGGERS HOTLINE
 Toll Free (800) 242-8511
 Milwaukee Area (414) 259-1181
 Hearing Impaired TDD (800) 542-2289
 www.DiggersHotline.com

SHEET TITLE:
LANDSCAPE PLAN

27

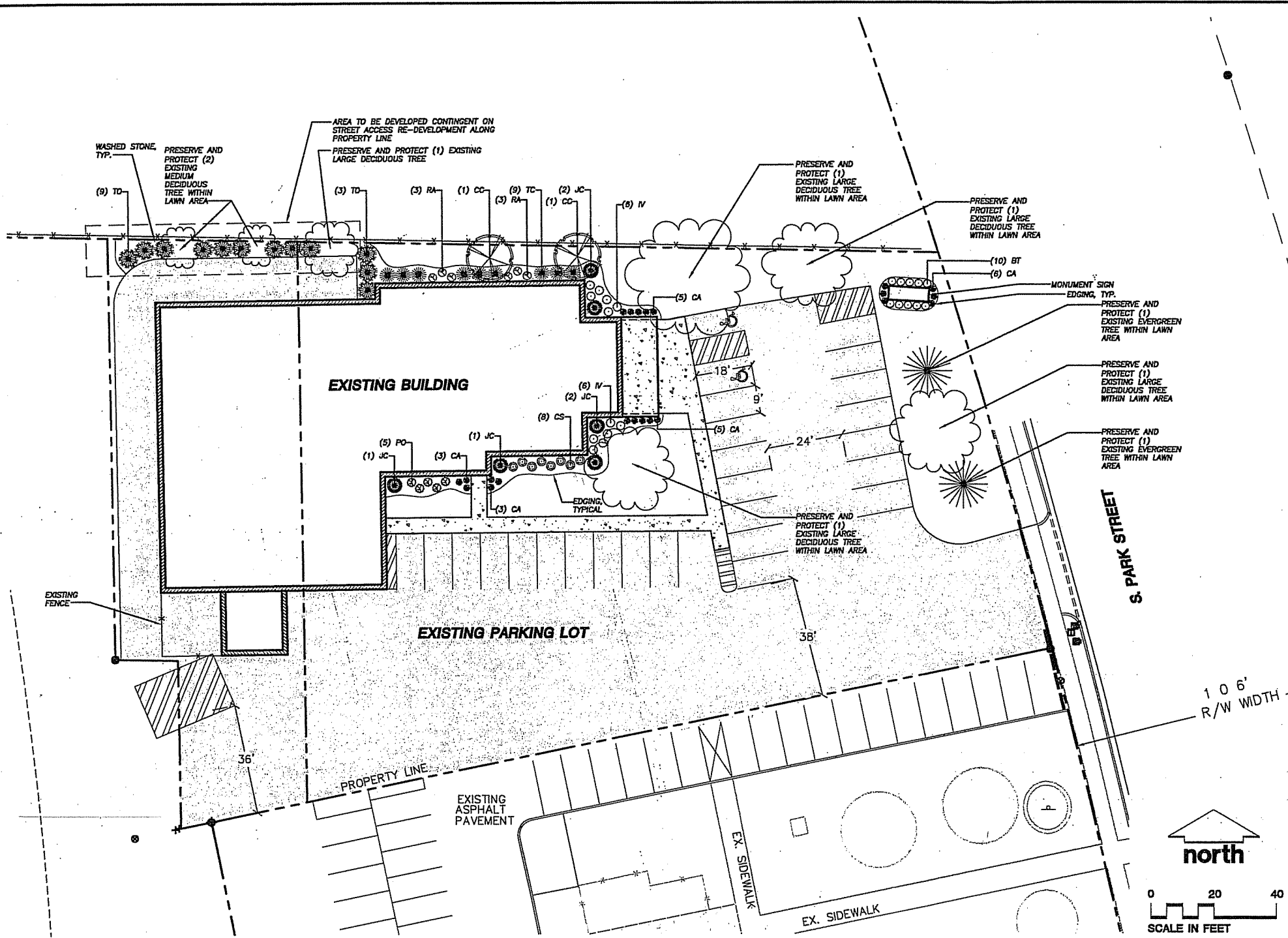
SHEET NUMBER:
L100

LEGEND (PROPOSED)

- PROPERTY LINE
- 18" CONCRETE CURB & GUTTER
- ASPHALT PAVEMENT
- CONCRETE PAVEMENT / SIDEWALK
- POLYETHYLENE LANDSCAPE EDGING
- EXISTING LARGE DECIDUOUS TREES (CANOPY TREES)
- EXISTING EVERGREEN TREES
- EXISTING MEDIUM DECIDUOUS TREES
- MEDIUM DECIDUOUS TREE
- EVERGREEN TREE
- MEDIUM DECIDUOUS SHRUBS
- MEDIUM EVERGREEN SHRUBS
- ORNAMENTAL GRASS

LANDSCAPE NOTES AND SPECIFICATIONS

- GENERAL: ALL WORK IN THE R-O-W AND PUBLIC EASEMENTS SHALL BE IN ACCORDANCE WITH DANE COUNTY AND CITY OF MADISON REQUIREMENTS. JSD SHALL BE HELD HARMLESS AND DOES NOT WARRANT ANY DEVIATIONS BY ANY OR ALL REGULATORY AGENCIES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION. THE BASE SITE PLAN DOES NOT INCLUDE UTILITY INFORMATION AND IS AN APPROXIMATION OF SITE LAYOUT BASED ON CURRENT AERIAL PHOTOGRAPHY AND ADJACENT PROPERTY SURVEY INFORMATION. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE DONE TO UTILITIES. CONTRACTOR MUST CALL 1-800-382-5544 FOR UTILITY LOCATIONS AT LEAST THREE DAYS PRIOR TO DIGGING. HAND DIG AND INSTALL ALL PLANTS THAT ARE NEAR EXISTING UTILITIES. PROTECT PREVIOUSLY INSTALLED WORK OF OTHER TRADES. CONTRACTOR IS RESPONSIBLE FOR STAKING THE PLANT MATERIALS FOR REVIEW BY OWNER PRIOR TO DIGGING AND PLACEMENT. THE LANDSCAPE CONTRACTOR SHALL COORDINATE ALL FINE GRADING AND RESTORATION WITH THE GRADING CONTRACTOR.
- DELIVERY AND HANDLING: DO NOT DELIVER MORE PLANT MATERIALS THAN CAN BE PLANTED IN ONE DAY. DELIVER PLANTS WITH LEGIBLE IDENTIFICATION LABELS. PROTECT PLANTS DURING DELIVERY AND DO NOT PRUNE PRIOR TO DELIVERY. ALL TREES AND SHRUBS SHALL BE PLANTED ON THE DAY OF DELIVERY; IF THIS IS NOT POSSIBLE, PROTECT THAT STOCK NOT PLANTED BY STORING STOCK IN A SHADED AREA PROTECTING THE ROOT MASS WITH WET SOIL MOSS OR OTHER SUITABLE MEDIA AND KEEPING WELL WATERED. DO NOT REMOVE CONTAINER GROWN STOCK FROM CONTAINERS BEFORE TIME OF PLANTING. DO NOT PICK UP CONTAINERS OR BALLED PLANTS BY STEM OR ROOTS. ALL PLANTS SHALL BE LIFTED AND HANDLED FROM THE BOTTOM OF THE BALL. PERFORM ACTUAL PLANTING ONLY WHEN WEATHER AND SOIL CONDITIONS ARE SUITABLE IN ACCORDANCE WITH LOCALLY ACCEPTED PRACTICES.
- GUARANTEE: THE CONTRACTOR SHALL GUARANTEE ALL PLANTS THROUGH ONE (1) YEAR AFTER ACCEPTANCE BY OWNER. PLANTS SHALL BE ALIVE AND IN GOOD HEALTHY AND FLOURISHING CONDITION AT THE END OF THE GUARANTEE PERIOD. THE CONTRACTOR SHALL REPLACE WITHOUT COST TO THE OWNER ANY PLANTS THAT ARE DEAD OR NOT IN A VIGOROUS THRIVING CONDITION. REPLACEMENT PLANTS SHALL BE OF THE SAME KIND AND SIZE AS ORIGINALLY SPECIFIED UNLESS OTHERWISE DIRECTED BY OWNER. RESTORE BEDS AS NECESSARY FOLLOWING PLANT REPLACEMENT, INCLUDING BUT NOT LIMITED TO BEDDING, EDGING, MULCH, GRASS, ETC. REPAIR DAMAGE TO OTHER PLANTS OR LAWNS DURING PLANT REPLACEMENT AT NO COST TO OWNER. CONTRACTOR SHALL PROVIDE A TWO (2)-YEAR STRAIGHTENING GUARANTEE FOR ALL TREES.
- MATERIALS - PLANTS: ALL PLANTS SHALL CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK ANSI Z60.1-2004. PLANTS SHALL BE TRUE TO SPECIES AND VARIETY SPECIFIED AND NURSERY GROWN IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICES UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT FOR AT LEAST 2 YEARS. PLANTS SHALL BE FRESHLY DUG (DURING THE MOST RECENT FAVORABLE HARVEST SEASON). PLANTS SHALL BE SO TRAINED IN DEVELOPMENT AND APPEARANCE AS TO BE UNQUESTIONABLY SUPERIOR IN FORM, COMPACTNESS, AND SYMMETRY. PLANTS SHALL BE SOUND, HEALTHY, VIGOROUS, WELL BRANCHED AND DENSELY FOLIATED WHEN IN LEAF, AND FREE OF DISEASE AND INSECTS (ADULT EGGS, PUPAE OR LARVAE). THEY SHALL HAVE HEALTHY, WELL-DEVELOPED ROOT SYSTEMS AND SHALL BE FREE FROM PHYSICAL DAMAGE OR OTHER CONDITIONS THAT WOULD PREVENT THRIVING GROWTH. PLANTS SHALL BE OF THE HIGHEST QUALITY, HAVE TYPICAL GROWTH HABITS FOR THEIR SPECIES, BE SOUND, HEALTHY, VIGOROUS AND FREE OF INJURY. PARKWAY TREES AND PARKING LOT TREES SHALL HAVE A MINIMUM BRANCHING HEIGHT OF SIX (6) FEET ABOVE THE GROUND TO ALLOW ADEQUATE VISUAL AND PHYSICAL CLEARANCE.
- MATERIALS - EDGING: EDGING SHALL BE 5" DEEP, BLACK, POLYETHYLENE EDGING EXCEPT FOR TREE RINGS. ALL DECIDUOUS TREES NOT WITHIN EDGED LANDSCAPE BEDS OR PARKING ISLANDS SHALL BE INSTALLED WITH A 6" DIAMETER TREE RING WITH SHOVEL-CUT EDGING.
- MATERIALS - MULCH: PLANTING FOUNDATION BEDS TO RECEIVE CLEAN, WASHED STONE SPREAD TO A CONSISTENT DEPTH OF FOUR INCHES OVER ENTIRE AREA. FERTILIZER SHALL BE IN ACCORDANCE WITH DANE COUNTY AND STATE OF WISCONSIN REQUIREMENTS. SIZE AND COLOR TO BE APPROVED BY OWNER PRIOR TO INSTALLATION.
- MATERIALS - WEED BARRIER FABRIC: ALL FOUNDATION PLANTING BEDS SHALL BE INSTALLED AN APPROVED WITH WEED BARRIER FABRIC. NO PLASTIC/IMPERVIOUS BARRIERS WILL BE PERMITTED. EXAMPLE: BLACK VISQUEEN.
- MATERIALS - MULCH: LARGE AND MEDIUM DECIDUOUS TREES WITHIN LAWN AREAS TO RECEIVE A MINIMUM 6" TREE RING. TREE RING TO BE MULCHED WITH FINELY SHREDDED, WEED FREE, CEDAR BARK MULCH (DYE-FREE) SPREAD TO A CONSISTENT DEPTH OF THREE INCHES OVER ENTIRE AREA. FERTILIZER SHALL BE IN ACCORDANCE WITH DANE COUNTY AND STATE OF WISCONSIN REQUIREMENTS. A SHOVEL-CUT EDGE TO BE INSTALLED AT A MINIMUM RADIUS OF 5' FROM CENTRAL LEADER OF TREE.
- SEED: ALL DISTURBED LAWN AREAS SHALL BE SEED WITH EARTH CARPET'S 'BOULEVARD' OR EQUIVALENT AS APPROVED BY THE OWNER'S REPRESENTATIVE, INSTALLED PER MANUFACTURER'S RECOMMENDATIONS. IN ADDITION TO LAWN SEED, ANNUAL RYE SHALL BE APPLIED TO ALL DISTURBED AREAS AT A RATE OF 1 1/2 LBS PER 1000 SQUARE FEET. FERTILIZE AND MULCH PER MANUFACTURER'S RECOMMENDATIONS.
- PRUNING: THE CONTRACTOR SHALL PRUNE ALL TREES AND REPAIR ANY INJURIES THAT OCCURRED DURING THE PLANTING PROCESS. DOUBLE LEADERS, DEAD BRANCHES, AND LIMBS DAMAGED OR BROKEN DURING THE PLANTING PROCESS SHALL BE PRUNED. THIS SHALL BE THE ONLY PRUNING ALLOWED AT PLANTING. PRUNING SHALL CONFORM TO AMERICAN STANDARD FOR TREE OPERATIONS, ANSI A300. PRUNE TREES IN ACCORDANCE WITH NAA GUIDELINES. DO NOT PRUNE TREES ACCORDING TO STANDARD HORTICULTURAL PRACTICES ON CUTS OVER 3/4" IN DIAMETER AND BRUISES OR SCARS ON BARK. TRACE THE INJURED CAMBIUM LAYER BACK TO LIVING TISSUE AND REMOVE. SMOOTH AND SHAPE WOUNDS SO AS NOT TO RETAIN WATER AND COAT THE TREATED AREA WITH AN APPROVED ANTISEPTIC TREE PAINT.
- CLEANUP: DISPOSED OF EXCESS SOIL, REMOVE ALL CUTTINGS AND WASTE MATERIALS. SOIL, BRANCHES, BINDING AND WRAPPING MATERIALS, REJECTED PLANTS, OR OTHER DEBRIS RESULTING FROM ANY PLANTING SHALL BE PROMPTLY CLEANED UP AND REMOVED. THE WORK AREA SHALL BE KEPT SAFE AND NEAT AT ALL TIMES UNTIL THE MAJOR OPERATION IS COMPLETED. UNDER NO CIRCUMSTANCES SHALL THE ACCUMULATION OF SOIL, BRANCHES OR OTHER DEBRIS BE ALLOWED UPON A PUBLIC PROPERTY IN SUCH A MANNER AS TO RESULT IN A PUBLIC HAZARD. LIKEWISE, UNDER NO CIRCUMSTANCES SHALL ANY DEBRIS OR INCIDENTAL MATERIALS BE ALLOWED UPON ADJACENT PRIVATE PROPERTY.
- MAINTENANCE: (CONTRACTOR) FOR ALL PLANTINGS, BUFFER AREAS AND SEEDING LAWN AREAS: THE CONTRACTOR SHALL MAINTAIN ALL PLANTINGS AND LAWN AREAS FOR AT LEAST A PERIOD OF 30 DAYS, OR UNTIL FINAL ACCEPTANCE FROM THE OWNER. THE CONTRACTOR IS RESPONSIBLE FOR ADEQUATELY WATERING PLANTS AND LAWN DURING THIS 30 DAY ESTABLISHMENT PERIOD. CONTRACTOR IS RESPONSIBLE FOR THE ESTABLISHMENT OF HEALTHY, VIGOROUS PLANTS AND LAWN/TURFGRASS. CONTRACTOR IS ALSO RESPONSIBLE FOR ANY PRUNING OF PLANT MATERIALS, AND SHAPING AND/OR REPLACEMENT OF DEFICIENT BARK MULCH DURING THIS PERIOD. LONG TERM PLANT MATERIALS AND LAWN/TURFGRASS MAINTENANCE AND ANY PROGRAM FOR SUCH IS THE RESPONSIBILITY OF THE OWNER. ALL PLANTINGS AND LAWN/TURFGRASS AREAS SHALL BE MAINTAINED IN A MANICURED CONDITION.
- MAINTENANCE: (OWNER) THE OWNER IS RESPONSIBLE FOR THE CONTINUED MAINTENANCE, REPAIR AND REPLACEMENT OF ALL LANDSCAPING MATERIALS AND BARRIERS AS NECESSARY FOLLOWING THE ONE (1) YEAR CONTRACTOR GUARANTEE PERIOD.



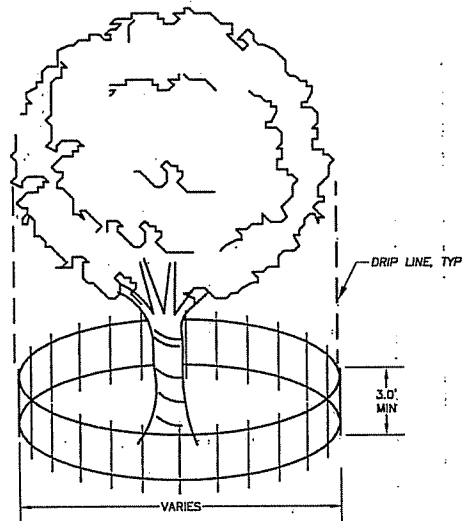
SITE INFORMATION BLOCK	
Site Address	1418 S. PARK ST. MADISON, WI
Site Square Footage	44,455
Site Developed Total Square Footage:	36,718
Number of Building Stories (above grade)	1
Building Height	<30 FT.
Total Square Footage of Building	APPROX. 11, 000
Use of property	COMMERCIAL
Number of employees	-
Existing Number of parking stalls:	
Large car	25
Accessible	2
Total	27

LANDSCAPE PLANT LIST						
SYN QTY.	COMMON NAME	BOTANICAL NAME	SIZE	ROOT	LS POINTS	TOTAL POINTS
LARGE DECIDUOUS TREES						
EX 2	Existing Deciduous Tree	Multiple Species	VARIES	VARIES	35	175
MEDIUM DECIDUOUS TREES						
EX 2	Existing Deciduous Tree	Multiple Species	VARIES	VARIES	15	30
CC 2	J.N. Strain Mazzardwood	CARPINUS caroliniana 'J.F. Strain'	1 1/2" Cal. B&B		15	30
EVERGREEN TREES						
EX 2	Existing Evergreen Tree	Multiple Species	VARIES	VARIES	15	30
TC 12	Holmstrup Arborvita	THUJA occidentalis 'Holmstrup'	40" Min. Hl. #3 Cont.		15	180
MEDIUM DECIDUOUS SHRUBS						
BT 10	Spring Fire Barbary	BERBERIS thunbergii 'Diabolik'	18" Min. Hl. #2 Cont.		2	20
GS 8	Katsey Dwarf Dogwood	CORNUS sericea 'Katsey'	18" Min. Hl. #2 Cont.		2	16
IV 12	Little Honey Sweetapple	ITEA virginica 'Little Honey'	18" Min. Hl. #2 Cont.		2	24
PO 6	Dwarf Common Ninebark	PHYSOCARPUS opulifolius 'Little Devil'	18" Min. Hl. #2 Cont.		2	10
RA 6	Alpine Currant	RIBES alpinum	18" Min. Hl. #2 Cont.		2	12
MEDIUM EVERGREEN SHRUBS						
JC 6	Mountain Juniper	JUNIPERUS chinensis 'Mountain'	40" Min. Hl. #3 Cont.		3	18
TC 9	Dwarf Japanese Yew (Brevifolia)	TAXUS canadensis 'Nana'	18" Min. Hl. #2 Cont.		3	27
ORNAMENTAL GRASSES						
CA 22	Karl Foerster Feather Reed Grass	CALAMAGROSTIS x acutiform Karl Foerster'	10-12" Hl. #1 Cont.		2	44
					TOTAL	616

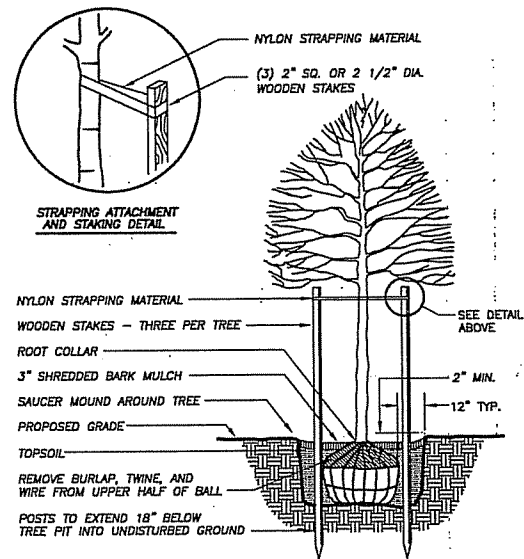
CITY OF MADISON LANDSCAPE REQUIREMENTS:			
Developed Area:	36,718 Sq. Ft.		
Requirement:	1 Landscape Unit provided for each 300 Sq. Ft. of developed area		
Calculation:	36,718 sq. ft./300 sq. ft./Landscape Unit = 122.39 Plant Units		
Requirement:	1 Landscape Unit consists of (6) Landscape Points		
Calculation:	122.39 Plant Units x 6 Landscape Points per unit = 616.00 Landscape Points		
Total Plant Units Required:	122.39		
Total Landscape Points Provided:	616.00		
Species: Common Name			
Existing Large Deciduous Trees	Multiple Species	5	35
Existing Deciduous Tree	Multiple Species	2	15
J.N. Strain Mazzardwood	CARPINUS caroliniana 'J.F. Strain'	2	15
Existing Evergreen Tree	Multiple Species	2	15
Holmstrup Arborvita	THUJA occidentalis 'Holmstrup'	12	180
Spring Fire Barbary	BERBERIS thunbergii 'Diabolik'	10	20
Katsey Dwarf Dogwood	CORNUS sericea 'Katsey'	8	16
Little Honey Sweetapple	ITEA virginica 'Little Honey'	12	24
Dwarf Common Ninebark	PHYSOCARPUS opulifolius 'Little Devil'	6	10
Alpine Currant	RIBES alpinum	6	12
Mountain Juniper	JUNIPERUS chinensis 'Mountain'	6	18
Dwarf Japanese Yew (Brevifolia)	TAXUS canadensis 'Nana'	9	27
Karl Foerster Feather Reed Grass	CALAMAGROSTIS x acutiform Karl Foerster'	22	44
		TOTALS =	616

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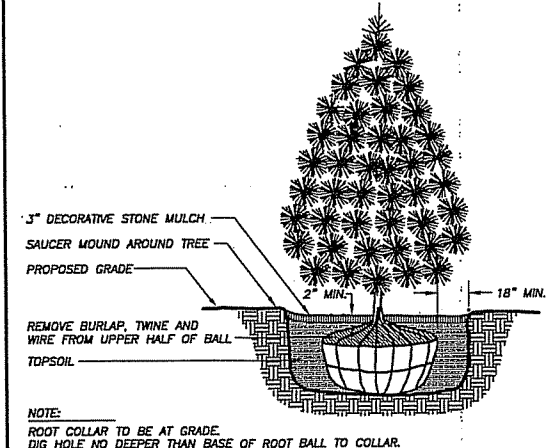
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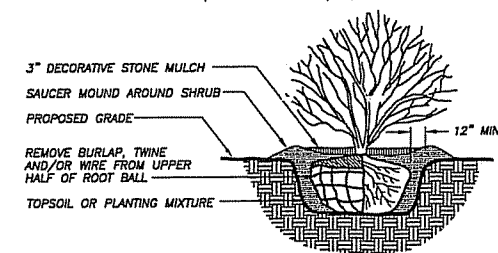
1 TREE PROTECTION DETAIL
L200 N.T.S.



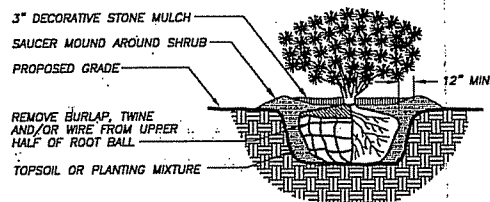
2 DECIDUOUS TREE PLANTING DETAIL
L200 N.T.S.



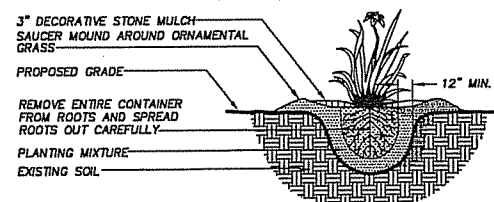
3 EVERGREEN TREE PLANTING DETAIL
L200 N.T.S.



4 DECIDUOUS SHRUB PLANTING DETAIL
L200 N.T.S.



5 EVERGREEN SHRUB PLANTING DETAIL
L200 N.T.S.



6 ORNAMENTAL GRASS PLANTING DETAIL
L200 N.T.S.

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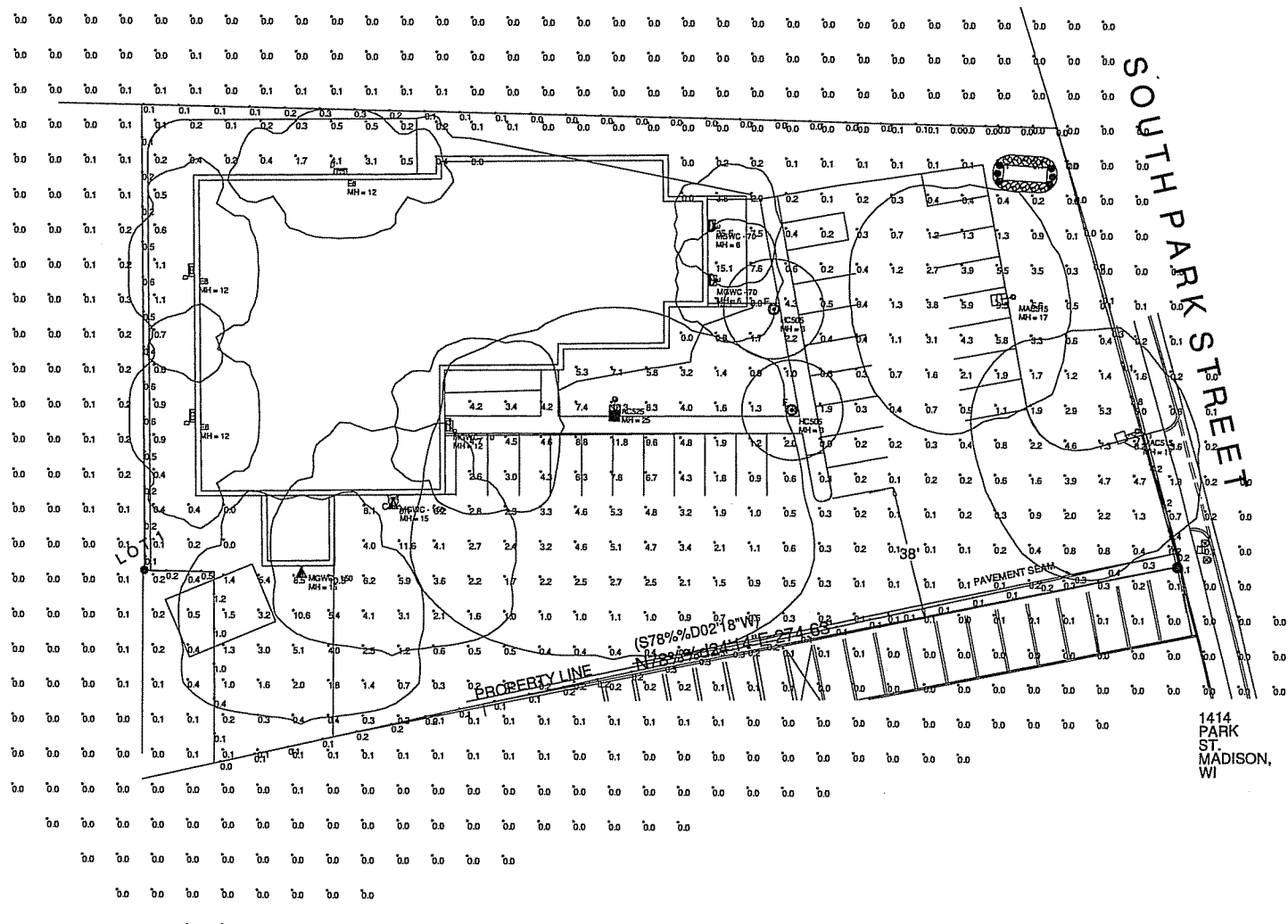
PLAN MODIFICATIONS:	DATE:
CITY OF MADISON	02-12-13

DIGGERS HOTLINE

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SHEET TITLE:
LANDSCAPE DETAILS

SHEET NUMBER:
L200

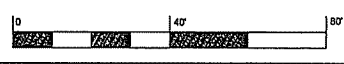


LOT
 Luminaire (Ft)
 Average = 1.78
 Maximum = 11.8
 Minimum = 0.1
 Avg/Min Ratio = 17.80
 Max/Min Ratio = 118.00

FIXTURE MOUNTING HEIGHT: AS SHOWN
 EXISTING POLES & LOCATIONS
 ISOLINES AT 3' FC
 PROPERTY LINE LIGHT LEVELS AT 4' AFG

Label	Avg	Max	Min	Avg/Min	Max/Min
PROPERTY LINE	0.38	7.1	0.0	N/A	N/A
SITE	1.60	25.5	0.0	N/A	N/A
LOT	1.78	11.8	0.1	17.80	118.00

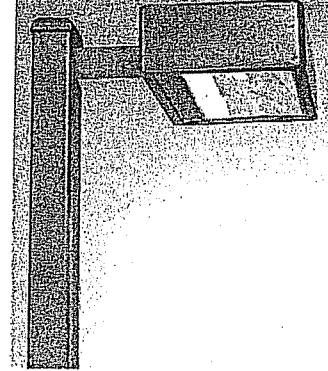
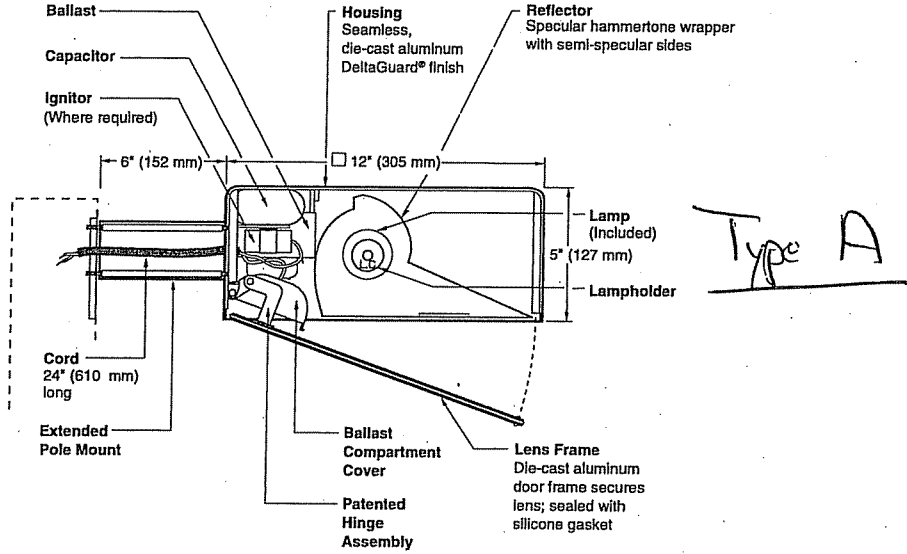
Symbol	Qty	Label	Arrangement	Lumens/Lamp	LLF	Description	Lum. Watts
+	2	MACS15	SINGLE	16000	0.800	MACS15-M (150W HPS)	188
-	1	AC2525	SINGLE	51000	0.800	AC2525-M (250W HPS)	300
o	2	HCS505	SINGLE	4000	0.800	HCS505-D (50W HPS)	66
	3	MSWC-70	SINGLE	8400	0.800	MSWC507-M (70W HPS)	50
←	2	MSWC-130	SINGLE	16000	0.800	MSWC515-M (150W HPS)	188
H	3	ES	SINGLE	6400	0.800	ES507-M (70W HPS)	86



6" EXTENDED POLE MOUNT

12" (305 mm) AREA CUTOFF LIGHT

AC2-12 SERIES



Notes

SPEC # WATTAGE CATALOG #

PULSE START METAL HALIDE

<input type="checkbox"/>	SPEC #	50W PSMH	MAC2405-(a)(b)
<input type="checkbox"/>	SPEC #	70W PSMH	MAC2407-(a)(b)
<input type="checkbox"/>	SPEC #	100W PSMH	MAC2410-(a)(b)
<input checked="" type="checkbox"/>	SPEC #	150W PSMH	MAC2615-(a)(b)

HIGH PRESSURE SODIUM

<input type="checkbox"/>	SPEC #	50W HPS	MAC2505-(a)(b)
<input type="checkbox"/>	SPEC #	70W HPS	MAC2507-(a)(b)
<input type="checkbox"/>	SPEC #	100W HPS	MAC2510-(a)(b)
<input checked="" type="checkbox"/>	SPEC #	150W HPS	MAC2515-(a)(b)

Specify (a) Voltage & (b) Options.

(a) VOLTAGE SUFFIX KEY

D	120/277V (Standard: 50W HPS)
M	120/208/240/277V (Standard: PSMH; 70 - 150W HPS)
T	120/277/347V (Canada Only) (Standard: PSMH; 70 - 150W HPS)
1	120V (Standard: 35W HPS)
2	277V
27	277V Reactor (150W PSMH Only)
3	208V
4	240V
5	480V (70 - 150W HPS)
6	347V (Canada Only)

For voltage availability outside the US and Canada, see Bulletin TD-9 or contact your Ruud Lighting authorized International Distributor.

(b) OPTIONS (factory-installed)

-(a)F	Fusing
-(a)P	Button Photocell
-5P	External Photocell (for 480V)
Q	Quartz Standby (Includes 100W quartz lamp) (N/A on 277V Reactor)

Specify (a) Single Voltage — See Voltage Suffix Key

GENERAL DESCRIPTION

60° forward throw sharp cutoff luminaire for HID lamp, totally enclosed. Housing is seamless, die-cast aluminum. Mounting consists of a 1.8" (44 mm) wide by 2.5" (64 mm) high by 6" (152 mm) long extruded aluminum arm. The arm is held in place with two 3/8" (9 mm) mounting rods fastened to a steel backing plate inside the pole, and by two nuts inside the fixture housing. Mounting rods are provided with sealing washers to prevent water leakage. Lens assembly consists of rigid aluminum frame and high-impact, clear-tempered glass.

ELECTRICAL

Fixture includes clear, medium-base lamp. Pulse-rated porcelain enclosed, 4kv-rated screw-shell-type lampholder. Lamp ignitor included where required. All ballast assemblies are high-power factor and use the following circuit types:

- 120V Reactor
50 - 150W HPS
- 277V Reactor
150W PSMH
- HX — High Reactance
50 - 150W PSMH; 50 - 150W HPS
- CWA — Constant Wattage Autotransformer
150W PSMH - 480V

FINISH

Exclusive Colorfast DeltaGuard® finish features an E-coat epoxy primer with medium bronze ultra-durable powder topcoat, providing excellent resistance to corrosion, ultraviolet degradation and abrasion. The finish is covered by our seven-year limited warranty.

PATENT

US 4,689,729

ACCESSORIES

FWG-12	Wire Guard
SBL-12	Backlight Shield

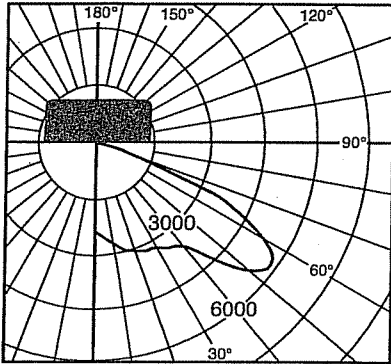
LABELS

ANSI lamp wattage label supplied, visible during relamping. UL Listed in US and Canada for wet locations and enclosure classified IP65 per IEC 529 and IEC 598

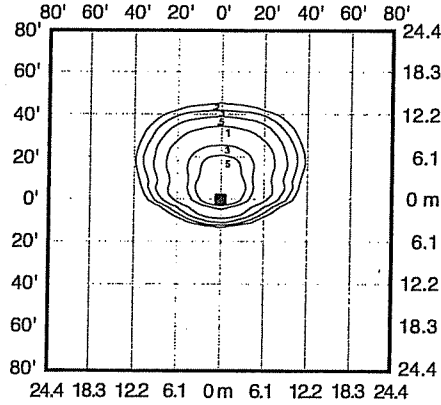
EPA RATING

EPA 0.60 for single fixture with 0° tilt (Consult factory for EPA rating on multiple units).

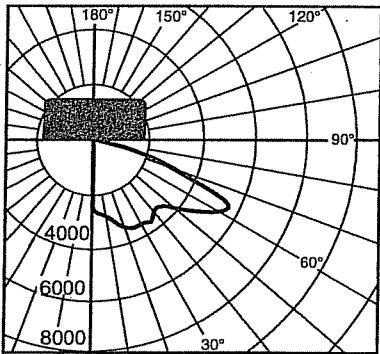
Isofootcandle plots show initial footcandles at grade. (Footcandles ÷ 0.0929 = Lux)



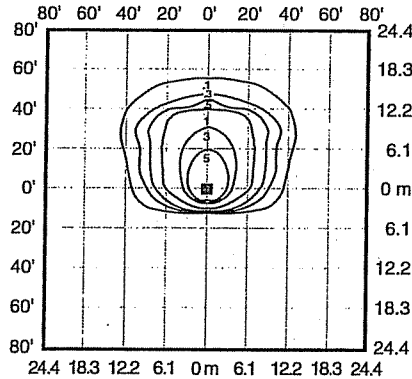
Lighting Sciences Inc.
Certified Test Report No. LSI 14227
Candlepower distribution curve of 150W PSMH
Rectangular Area Cutoff Floodlight, with back-
light shield located for backlight cutoff.



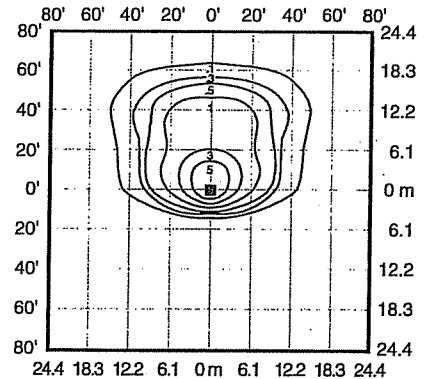
Isofootcandle plot of 150W PSMH Area
Cutoff Floodlight at 15' (4.6 m) mounting
height, 0° vertical tilt, with backlight shield
located for backlight cutoff.
(Plan view)



Lighting Sciences Inc.
Certified Test Report No. LSI 11233
Candlepower distribution curve of 150W HPS
Rectangular Area Cutoff Floodlight, with back-
light shield located for backlight cutoff.

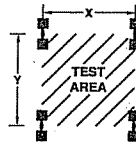


Isofootcandle plot of 150W HPS Area
Cutoff Floodlight at 15' (4.6 m) mount-
ing height, 0° vertical tilt, with backlight
shield located for backlight cutoff.
(Plan view)



Isofootcandle plot of 150W HPS Area
Cutoff Floodlight at 20' (6.1 m) mount-
ing height, 0° vertical tilt, with backlight
shield located for backlight cutoff.
(Plan view)

Pole-spacing Example Data



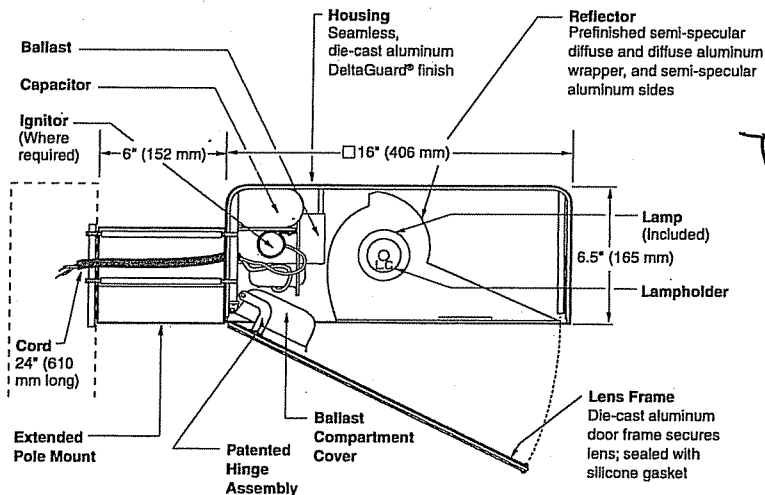
Test area is centered within a (16) pole layout.

Catalog #	Lamp Type	Lamp Lumens	Mounting Height	Max. Recommended Pole-spacing	Average Initial Light Levels at Grade (Footcandles ÷ 0.0929 = Lux)	
					Footcandles	Lux
MAC2410-M	100W PSMH	8,100	10' (3.0 m)	40' (12.1 m) x 55' (16.7 m)	4.92	53
			15' (4.6 m)	60' (18.3 m) x 85' (25.9 m)	2.04	22
MAC2510-M	100W HPS	9,500	10' (3.0 m)	40' (12.1 m) x 55' (16.7 m)	5.05	55
			15' (4.6 m)	60' (18.3 m) x 85' (25.9 m)	2.08	22
MAC2515-M	150W HPS	16,000	15' (4.6 m)	60' (18.3 m) x 85' (25.9 m)	3.51	38
			20' (6.1 m)	75' (22.9 m) x 110' (33.5 m)	2.11	23

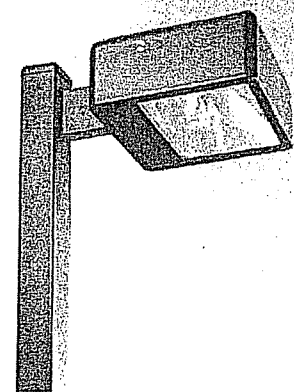
6" EXTENDED POLE MOUNT

16" (406 mm) AREA CUTOFF LIGHT

**AC2-16
SERIES**



Type
B



Notes

SPEC #	WATTAGE	CATALOG #
PULSE START METAL HALIDE		
<input type="checkbox"/> SPEC #	150W PSMH	AC2615-(a)(b)
<input type="checkbox"/> SPEC #	200W PSMH	AC2620-(a)(b)
<input type="checkbox"/> SPEC #	250W PSMH	AC2625-(a)(b)
<input type="checkbox"/> SPEC #	320W PSMH	AC2632-(a)(b)
<input type="checkbox"/> SPEC #	350W PSMH	AC2635-(a)(b)
<input type="checkbox"/> SPEC #	400W PSMH	AC2640-(a)(b)
HIGH PRESSURE SODIUM		
<input checked="" type="checkbox"/> SPEC #	250W HPS	AC2525-(a)(b)
<input type="checkbox"/> SPEC #	400W HPS	AC2540-(a)(b)

Specify (a) Voltage & (b) Options.
 Ⓢ Reduced envelope ED28 lamp.

(a) VOLTAGE SUFFIX KEY	
M	120/208/240/277V (Standard)
T	120/277/347V (Canada Only) (Standard)
1	120V
2	277V
27	277V Reactor (PSMH Only)
3	208V
4	240V
5	480V
6	347V (Canada Only)

For voltage availability outside the US and Canada, see Bulletin TD-9 or contact your Ruud Lighting authorized International Distributor.

(b) OPTIONS (factory-installed)	
-(a)F	Fusing
-(a)P	Button Photocell
-5P	External Photocell (for 480V)
Q	Quartz Standby (includes 100W quartz lamp) (N/A on 277V Reactor)

Specify (a) Single Voltage — See Voltage Suffix Key

GENERAL DESCRIPTION

60° forward throw sharp cutoff luminaire for HID lamp, totally enclosed. Housing is seamless, die-cast aluminum. Mounting consists of a 1.8" (44 mm) wide by 4.5" (114 mm) high by 6" (152 mm) long extruded aluminum arm. The arm is held in place with two 3/8" (9 mm) mounting rods fastened to a steel backing plate inside the pole, and by two nuts inside the fixture housing. Mounting rods are provided with sealing washers to prevent water leakage. Lens assembly consists of rigid aluminum frame and high-impact, clear-tempered glass.

ELECTRICAL

Fixture includes clear, mogul-base lamp; 320 – 400W PSMH utilize the ED28 reduced envelope lamp. Pulse-rated porcelain enclosed, 4kv-rated screw-shell-type lampholder with spring-loaded center contact and lamp grips. Lamp ignitor included. All ballast assemblies are high-power factor and use the following circuit type:

277V Reactor
150 – 400W PSMH

HX— High Reactance
150W PSMH

CWA — Constant Wattage Autotransformer
200 – 400W PSMH; 250 – 400W HPS

PATENTS

US 4,689,729; 4,709,312

FINISH

Exclusive Colorfast DeltaGuard® finish features an E-coat epoxy primer with medium bronze ultra-durable powder topcoat, providing excellent resistance to corrosion, ultraviolet degradation and abrasion. The finish is covered by our seven-year limited warranty.

LABELS

ANSI lamp wattage label supplied, visible during relamping. UL Listed in US and Canada for wet locations and enclosure classified IP65 per IEC 529 and IEC 598.

ACCESSORIES

FWG-16 Wire Guard
SBL-16 Backlight Shield

**AC2-16
SERIES**

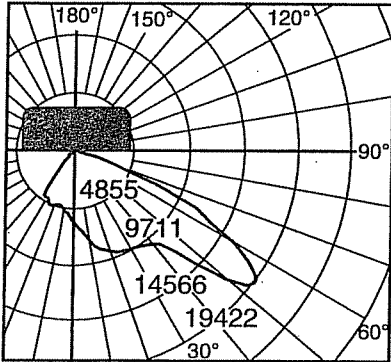
6" EXTENDED POLE MOUNT

16" (406 mm) AREA CUTOFF LIGHT

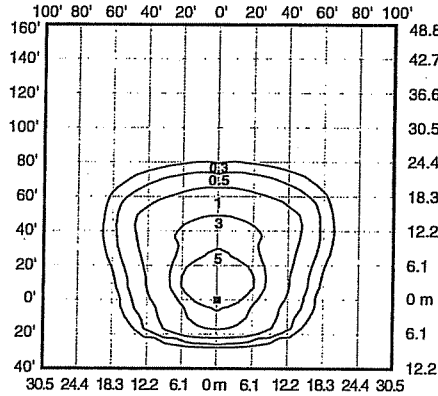
EPA RATING

Isofootcandle plots show initial footcandles at grade. (Footcandles ÷ 0.0929 = Lux)

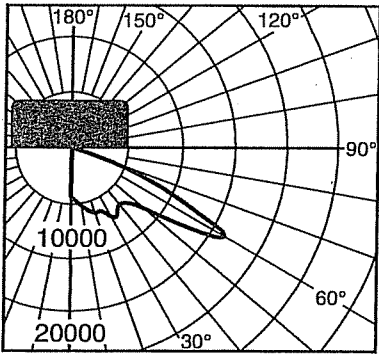
EPA 0.95 for single fixture with 0° tilt (Consult factory for EPA rating on multiple units).



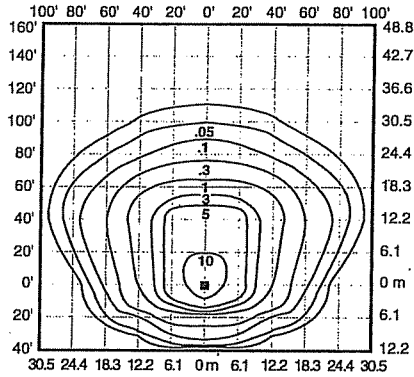
Candlepower distribution curve of 400W PSMH Area Cutoff Light without backlight shield.



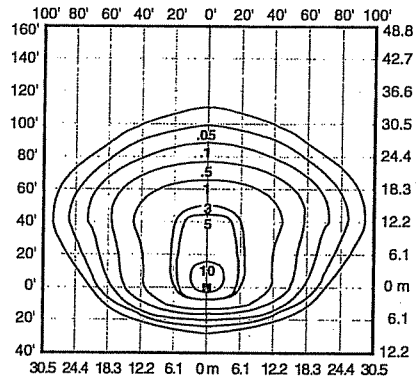
Isofootcandle plot of 400W PSMH Area Cutoff Light at 30' (9.1 m) mounting height, 0° vertical tilt, with backlight shield removed. (Plan view)



Lighting Sciences Inc. Certified Test Report No. LSI 10246
Candlepower distribution curve of 250W HPS Area Cutoff Light without backlight shield.

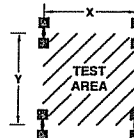


Isofootcandle plot of 400W HPS Area Cutoff Light at 25' (7.6 m) mounting height, 0° vertical tilt, with backlight shield removed. (Plan view)



Isofootcandle plot of 400W HPS Area Cutoff Light at 25' (7.6 m) mounting height, 0° vertical tilt, with backlight shield located for backlight cutoff. (Plan view)

Pole-spacing Example Data



Test area is centered within a (16) pole layout.

**Average Initial Light Levels at Grade
2 Fixtures per pole @ 180°**
(Footcandles ÷ 0.0929 = Lux)

Catalog #	Lamp Type	Lamp Lumens	Mounting Height	Max. Recommended Pole-spacing		Footcandles	Lux
				X	Y		
AC2615-M	150W PSMH	12,000	15' (4.6 m)	60' (18.3 m)	85' (25.9 m)	3.56	38
			20' (6.1 m)	75' (22.9 m)	11' (33.5 m)	2.11	23
AC2625-M	250W PSMH	22,000	20' (6.1 m)	75' (22.9 m)	110' (33.5 m)	3.86	42
			25' (7.6 m)	95' (29.0 m)	140' (42.7 m)	2.31	25
AC2640-M	400W PSMH	40,000	25' (7.6 m)	95' (29.0 m)	140' (42.7 m)	4.20	45
			30' (9.1 m)	115' (35.1 m)	165' (50.3 m)	2.86	31
AC2525-M	250W HPS	28,500	20' (6.1 m)	75' (22.9 m)	110' (33.5 m)	4.83	52
			25' (7.6 m)	95' (29.0 m)	140' (42.7 m)	2.89	31
AC2540-M	400W HPS	50,000	25' (7.6 m)	95' (29.0 m)	140' (42.7 m)	5.08	55
			30' (9.1 m)	115' (35.1 m)	165' (50.3 m)	3.37	36

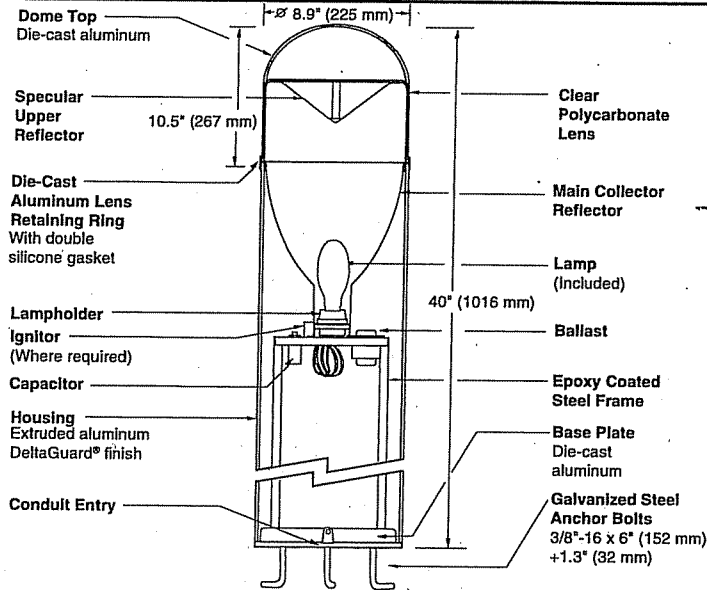


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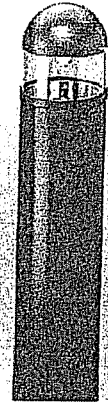
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CLEAR LENS — DOME TOP ROUND BOLLARD

**HCD
SERIES**



Type F



Notes

SPEC #	WATTAGE	CATALOG #
PULSE START METAL HALIDE		
<input type="checkbox"/> SPEC #	50W PSMH	HCD405-(a)(b)
<input type="checkbox"/> SPEC #	70W PSMH	HCD407-(a)(b)
<input type="checkbox"/> SPEC #	100W PSMH	HCD410-(a)(b)
HIGH PRESSURE SODIUM		
<input checked="" type="checkbox"/> SPEC #	50W HPS	HCD505-(a)(b)
<input type="checkbox"/> SPEC #	70W HPS	HCD507-(a)(b)
<input type="checkbox"/> SPEC #	100W HPS	HCD510-(a)(b)
FLUORESCENT		
<input type="checkbox"/> SPEC #	26/32/42W CFL	HCD242-(a)(b)

Specify (a) Voltage & (b) Options.

(a) VOLTAGE SUFFIX KEY	
D	120/277V (Standard: 50W HPS)
M	120/208/240/277V (Standard: PSMH; 70 – 100W HPS)
T	120/277/347V (Canada Only) (Standard: PSMH; 70 – 100W HPS)
1	120V
2	277V
3	208V
4	240V
6	347V (Canada Only; 50 HPS Only)
UL	120 – 277V Universal Voltage (Electronic Ballast)

For voltage availability outside the US and Canada, see Bulletin TD-9 or contact your Ruud Lighting authorized International Distributor.

(b) OPTIONS (factory-installed)	
A	180° Shielded Clear Lens
-(a)F	Fusing
J	Tamperproof Lens Fasteners
-(a)LP	CFL Photocell
-(a)P	HID Photocell

Specify (a) Single Voltage — See Voltage Suffix Key

GENERAL DESCRIPTION

Extruded aluminum housing supplied internally with a formed and channeled 16 gauge steel frame supports the electrical components and main reflector. Housing fastens to a die-cast aluminum base with four 1/4"-20 phillips flat head screws. Base is secured to concrete footing using provided masonite template and three 3/8"-16 x 6" (152 mm) galvanized steel anchor bolts with leveling nuts and washers. Suggested poured base: 2' (610 mm) deep x 12" (305 mm) dia., depending on soil types and frost line in your area. A 3" (76 mm) dia. conduit opening is provided in the base for ease of wiring. Injection molded clear polycarbonate lens with specular collecting reflector attaches to the top of the housing with an overlapping die-cast aluminum retaining ring, held by two stainless-steel allen flat head fasteners. Die cast aluminum dome is held to the top of the lens with two #8 screws. Two silicone lens seals prevent moisture from entering the lens, while a double lip silicone seal at the top of the reflector and sealed lampholder prevent insects, dirt and moisture from entering the optical chamber.

ELECTRICAL

Fluorescent bollard includes a triple tube compact fluorescent lamp. HID bollards include a clear, medium-base lamp and porcelain enclosed, 4kv-rated screw-shell-type lampholder with spring-loaded center contact. Lamp ignitor included where required. All ballast assemblies are high-power factor and use the following circuit types:

Electronic
26/32/42W CFL
HX — High Reactance
50 – 100W PSMH; 50 – 100W HPS

PATENT

US PAT RE40,934

LABELS

ANSI lamp wattage label supplied, visible during relamping. UL Listed in the US and Canada for wet locations and enclosure classified IP65 per IEC 529 and IEC 598.

FINISH

Exclusive Colorfast DeltaGuard® finish features an E-coat epoxy primer with medium bronze acrylic powder topcoat, providing excellent resistance to corrosion, ultraviolet degradation and abrasion. The finish is covered by our seven-year limited warranty.

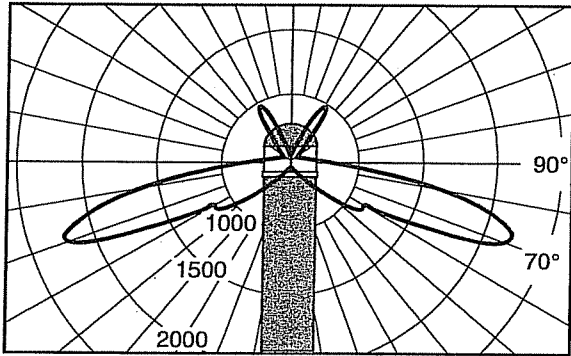
ACCESSORIES

HCL	Louwer
TPS-1	Tamperproof Screwdriver

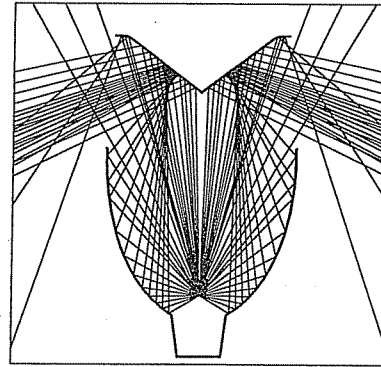
**HCD
SERIES**

**CLEAR LENS — DOME TOP
ROUND BOLLARD**

(Footcandles ÷ 0.0929 = Lux)



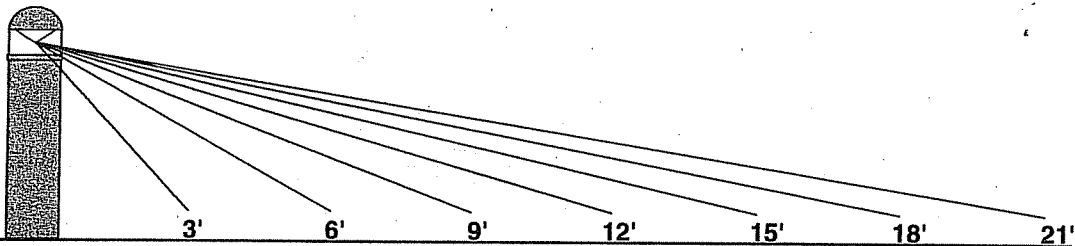
Lighting Sciences Inc.
Certified Test Report No. LSI 9728R
Candlepower distribution curve of 100W MH
Round Bollard with clear lens.



Ray Trace showing light distribution of
patented reflector system.

Type F

Use this chart to determine initial Footcandle levels at grade for the HCD Series Round Bollard with clear, dome top lens.



Lamp	Lumens	3'	6'	9'	12'	15'	18'	21'
50W PSMH	3400	1.79	4.38	2.33	0.90	0.36	0.17	0.09
70W PSMH	5600	2.95	7.22	3.85	1.47	0.59	0.28	0.15
100W PSMH	9000	4.74	11.60	6.18	2.37	0.95	0.45	0.24
50W HPS	4000	2.38	3.50	1.67	0.73	0.31	0.15	0.08
70W HPS	6400	3.81	5.60	2.67	1.17	0.50	0.24	0.13
100W HPS	9500	5.66	8.31	3.97	1.73	0.74	0.36	0.19
26W CFL	1710	1.42	0.84	0.34	0.16	0.08	0.04	0.03
32W CFL	2200	1.84	1.09	0.44	0.21	0.10	0.05	0.04
42W CFL	3200	2.67	1.58	0.64	0.30	0.15	0.08	0.06

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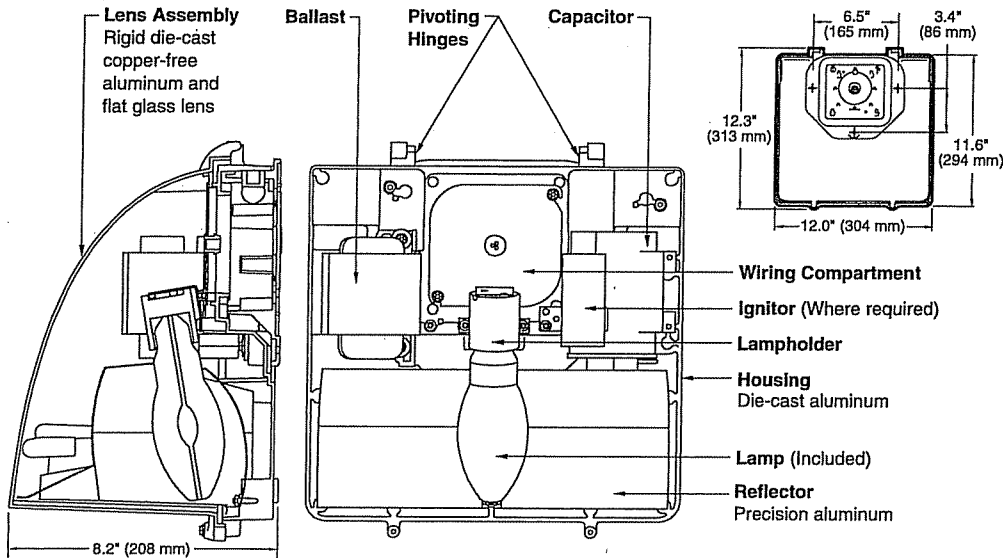
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Rev. 05/02/12

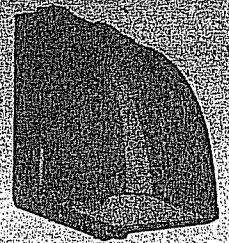
DIRECT MOUNT

12" FULL CUTOFF WALL PACK

**GWCO-12
SERIES**



Notes



SPEC # WATTAGE CATALOG #

PULSE START METAL HALIDE

<input type="checkbox"/>	SPEC #	50W PSMH	MGWC0405-(a)(b)
<input type="checkbox"/>	SPEC #	70W PSMH	MGWC0407-(a)(b)
<input type="checkbox"/>	SPEC #	100W PSMH	MGWC0410-(a)(b)
<input type="checkbox"/>	SPEC #	150W PSMH	MGWC0615-(a)(b)

HIGH PRESSURE SODIUM

<input type="checkbox"/>	SPEC #	50W HPS	MGWC0505-(a)(b)
<input checked="" type="checkbox"/>	SPEC #	70W HPS	MGWC0507-(a)(b)
<input type="checkbox"/>	SPEC #	100W HPS	MGWC0510-(a)(b)
<input type="checkbox"/>	SPEC #	150W HPS	MGWC0515-(a)(b)

Specify (a) Voltage & (b) Options.

GENERAL DESCRIPTION

Full Cutoff Wall Pack fixture for HID lamp, totally enclosed. Housing is seamless copper-free die-cast aluminum. Lens assembly consists of a hinged, rigid die-cast copper-free aluminum frame and clear borosilicate glass lens held securely inside. Lens frame is easily removable and allows for easy attachment and serviceability using top pivoting hinge. Complete silicone gasketing around lens and gasketing at mounting provide a watertight seal. A precision specular aluminum reflector provides forward throw with wide distribution to ensure wide fixture spacings and maximum light levels. Fixture design provides excellent IES Full Cutoff light distribution without glare. The optical chamber is sealed to reduce dirt and insect contamination. Furnished with e-coated, copper-free, lightweight mounting box designed for installation over standard 4-inch square or octagonal and single-gang J boxes and for conduit entry from top, sides and rear. Designed and approved for easy through-wiring. All fixtures use vertical-lamp position.

(a) VOLTAGE SUFFIX KEY

D	120/277V (Standard: 50W HPS)
M	120/208/240/277V (Standard: PSMH; 70 - 150W HPS)
T	120/277/347V (Canada Only) (Standard: PSMH; 70 - 150W HPS)
1	120V
2	277V
27	277V Reactor (150W PSMH Only)
3	208V
4	240V
5	480V (70 - 100W PSMH; 70 - 100W HPS)
6	347V (Canada Only)

For voltage availability outside the US and Canada, see Bulletin TD-9 or contact your Ruud Lighting authorized International Distributor.

ELECTRICAL

Fixture includes clear, medium-base lamp. Pulse-rated porcelain enclosed, 4kv-rated screw-shell-type lampholder. Lamp ignitor included where required. Fixtures require a minimum 90°C temperature feed wire. All ballast assemblies are high-power factor and use the following circuit types:

- 120V Reactor
50 - 150W HPS
- 277V Reactor
150W PSMH
- HX — High Reactance
50 - 150W PSMH; 50 - 150W HPS

LABELS

ANSI lamp wattage label supplied, visible during relamping. UL Listed in the US and Canada for wet locations.

(b) OPTIONS (factory-installed)

-(a)F	Fusing
-(a)P	Button Photocell
Q	Quartz Standby (includes 100W quartz lamp) (N/A on 277V Reactor)

Specify (a) Single Voltage — See Voltage Suffix Key

Type E

FINISH

Exclusive Colorfast DeltaGuard® finish features an E-coat epoxy primer with medium bronze ultra-durable powder topcoat, providing excellent resistance to corrosion, ultraviolet degradation and abrasion. The finish is covered by our seven-year limited warranty.

PATENTS

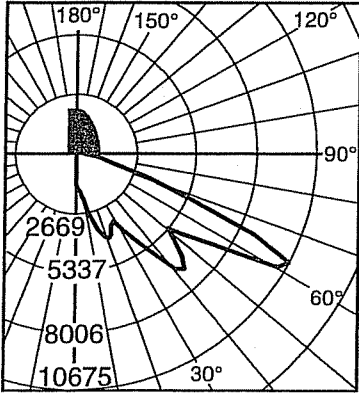
6,867,959; 7,354,177; D577,146; Patents Pending.

**GWCO-12
SERIES**

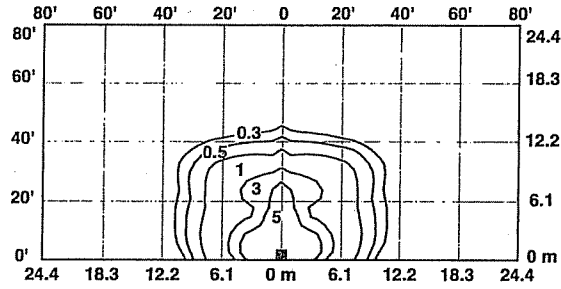
DIRECT MOUNT

12" FULL CUTOFF WALL PACK

Isofootcandle plots show initial footcandles at grade. (Footcandles ÷ 0.0929 = Lux)



Candlepower Distribution Curve of 150W PSMH 12" AeroDome Full Cutoff Wall Pack.



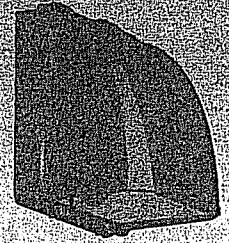
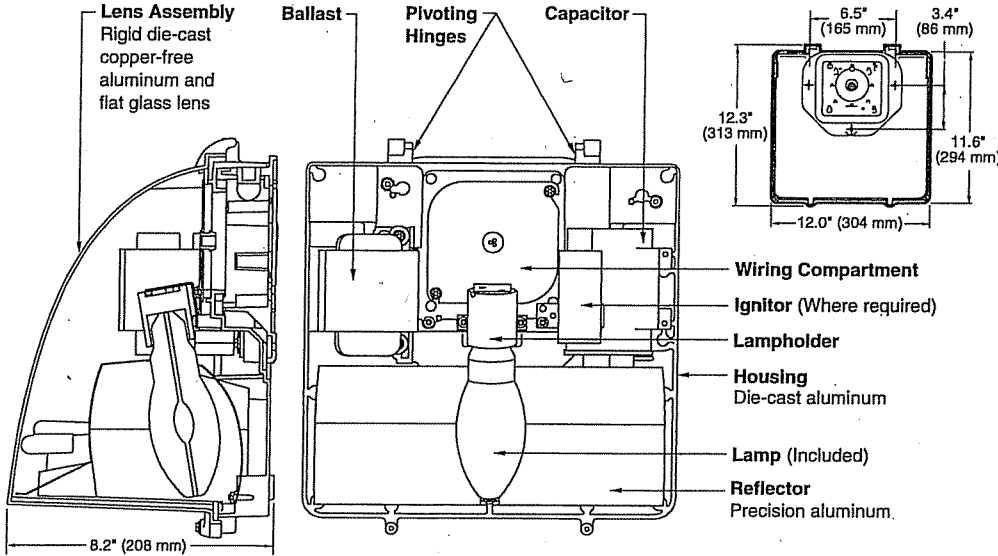
Isofootcandle plot of one 150W PSMH 12" AeroDome Full Cutoff Wall Pack at 15' (4.6 m) mounting height (plan view).

Type E

DIRECT MOUNT

12" FULL CUTOFF WALL PACK

**GWCO-12
SERIES**



Notes

SPEC #	WATTAGE	CATALOG #
PULSE START METAL HALIDE		
<input type="checkbox"/>	SPEC # 50W PSMH	MGWC0405-(a)(b)
<input type="checkbox"/>	SPEC # 70W PSMH	MGWC0407-(a)(b)
<input type="checkbox"/>	SPEC # 100W PSMH	MGWC0410-(a)(b)
<input type="checkbox"/>	SPEC # 150W PSMH	MGWC0615-(a)(b)
HIGH PRESSURE SODIUM		
<input type="checkbox"/>	SPEC # 50W HPS	MGWC0505-(a)(b)
<input type="checkbox"/>	SPEC # 70W HPS	MGWC0507-(a)(b)
<input type="checkbox"/>	SPEC # 100W HPS	MGWC0510-(a)(b)
<input checked="" type="checkbox"/>	SPEC # 150W HPS	MGWC0515-(a)(b)

Specify (a) Voltage & (b) Options.

(a) VOLTAGE SUFFIX KEY	
D	120/277V (Standard: 50W HPS)
M	120/208/240/277V (Standard: PSMH; 70 - 150W HPS)
T	120/277/347V (Canada Only) (Standard: PSMH; 70 - 150W HPS)
1	120V
2	277V
27	277V Reactor (150W PSMH Only)
3	208V
4	240V
5	480V (70 - 100W PSMH; 70 - 100W HPS)
6	347V (Canada Only)

For voltage availability outside the US and Canada, see Bulletin TD-9 or contact your Ruud Lighting authorized International Distributor.

(b) OPTIONS (factory-installed)	
-(a)F	Fusing
-(a)P	Button Photocell
Q	Quartz Standby (includes 100W quartz lamp) (N/A on 277V Reactor)

Specify (a) Single Voltage — See Voltage Suffix Key

Type C

GENERAL DESCRIPTION

Full Cutoff Wall Pack fixture for HID lamp, totally enclosed. Housing is seamless copper-free die-cast aluminum. Lens assembly consists of a hinged, rigid die-cast copper-free aluminum frame and clear borosilicate glass lens held securely inside. Lens frame is easily removable and allows for easy attachment and serviceability using top pivoting hinge. Complete silicone gasketing around lens and gasketing at mounting provide a watertight seal. A precision specular aluminum reflector provides forward throw with wide distribution to ensure wide fixture spacings and maximum light levels. Fixture design provides excellent IES Full Cutoff light distribution without glare. The optical chamber is sealed to reduce dirt and insect contamination. Furnished with e-coated, copper-free, lightweight mounting box designed for installation over standard 4-inch square or octagonal and single-gang J boxes and for conduit entry from top, sides and rear. Designed and approved for easy through-wiring. All fixtures use vertical-lamp position.

ELECTRICAL

Fixture includes clear, medium-base lamp. Pulse-rated porcelain enclosed, 4kv-rated screw-shell-type lampholder. Lamp ignitor included where required. Fixtures require a minimum 90°C temperature feed wire. All ballast assemblies are high-power factor and use the following circuit types:

- 120V Reactor
50 - 150W HPS
- 277V Reactor
150W PSMH
- HX — High Reactance
50 - 150W PSMH; 50 - 150W HPS

LABELS

ANSI lamp wattage label supplied, visible during relamping. UL Listed in the US and Canada for wet locations.

FINISH

Exclusive Colorfast DeltaGuard® finish features an E-coat epoxy primer with medium bronze ultra-durable powder topcoat, providing excellent resistance to corrosion, ultraviolet degradation and abrasion. The finish is covered by our seven-year limited warranty.

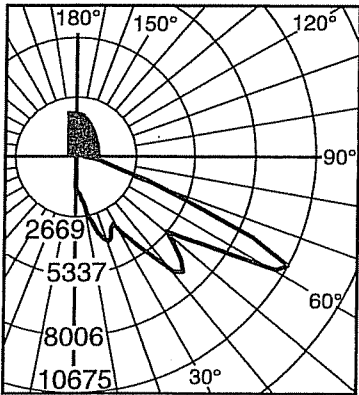
PATENTS

6,867,959; 7,354,177; D577,146; Patents Pending.

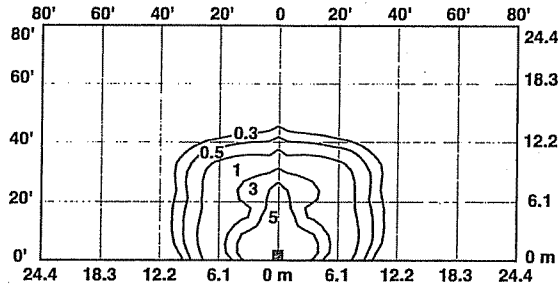
**GWCO-12
SERIES**

**DIRECT MOUNT
12" FULL CUTOFF WALL PACK**

Isofootcandle plots show initial footcandles at grade. (Footcandles ÷ 0.0929 = Lux)



Candlepower Distribution Curve of 150W PSMH 12" AeroDome Full Cutoff Wall Pack.

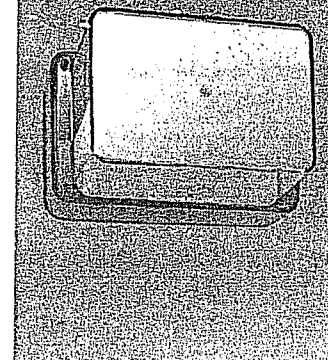
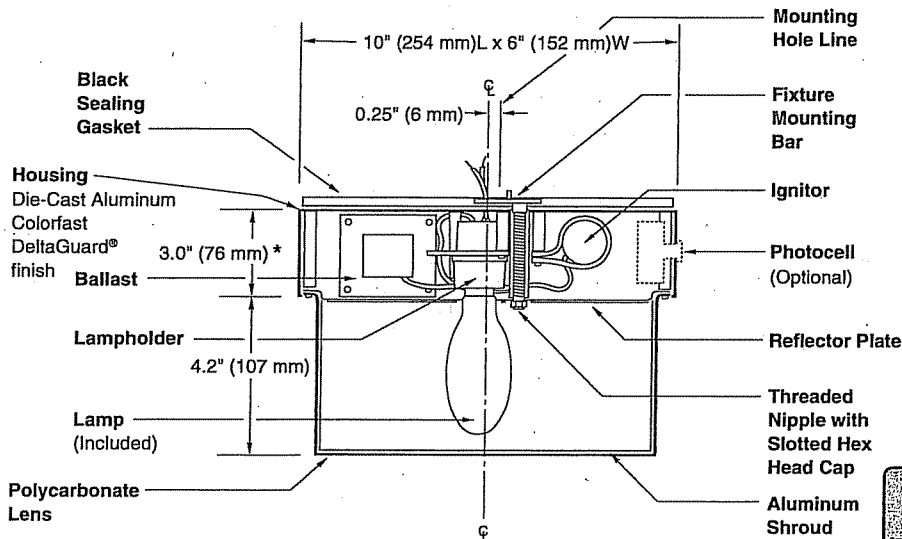


Isofootcandle plot of one 150W PSMH 12" AeroDome Full Cutoff Wall Pack at 15' (4.6 m) mounting height (plan view).

Type C

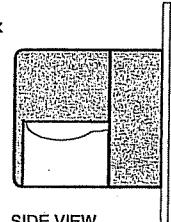
**RECTANGULAR HID WALL MOUNT
DEEP SHIELDED**

**E8-H
SERIES**



Notes

Type D



NOTE:

* For 50-100W HPS 120V, this dimension is 2.3" (57 mm)

SPEC # MOUNTING POSITION WATTAGE CATALOG #

PULSE START METAL HALIDE

<input type="checkbox"/>	SPEC #	Wall Downlight	50W PSMH	E8405-(a)(b)
<input type="checkbox"/>	SPEC #	Wall Downlight	70W PSMH	E8407-(a)(b)

HIGH PRESSURE SODIUM

<input type="checkbox"/>	SPEC #	Any	50W HPS	E8505-(a)(b)
<input checked="" type="checkbox"/>	SPEC #	Wall Downlight	70W HPS	E8507-(a)(b)
<input type="checkbox"/>	SPEC #	Wall Downlight	100W HPS	E8510-(a)(b)

Specify (a) Voltage & (b) Options.

GENERAL DESCRIPTION

Aluminum die-cast ballast housing features a thermal air isolation chamber separating the ballast core and coil from the other electrical components. Supplied with a neoprene sealing gasket for complete weatherproofing at the mounting surface. A silicone rubber seal is furnished between housing and lens to ensure a water- and insect-tight seal. Steel fixture mounting bar and threaded nipple provided for direct mounting to recessed junction box. Clear polycarbonate lens is fastened to housing with phillips-head captive stainless-steel screws. Combination of internal polished aluminum shroud (inside painted white and outside painted silver on 100W HPS) and diffuse reflector plate provides front brightness shielding without sacrificing wide light distribution.

(a) VOLTAGE SUFFIX KEY

D	120/277V (50W HPS)
M	120/208/240/277V (Standard: 50 - 70W PSMH) (50 - 100W HPS)
T	120/277/347V (Canada Only) (70W PSMH; 70 - 100W HPS)
1	120V (Standard: 50 - 100W HPS)
2	277V
3	208V
4	240V
6	347V (Canada Only) (50W HPS)

For voltage availability outside the US and Canada, see Bulletin TD-9 or contact your Ruud Lighting authorized International Distributor.

(b) OPTIONS (factory-installed)

BS	Bronze Color Shroud
GS	Gold Color Shroud (n/a on 100W HPS)
H	High Power Factor Ballast
J	Tamperproof Lens Fasteners
-(a)P	Photocell

Specify (a) Single Voltage — See Voltage Suffix Key

ELECTRICAL

Fixture includes clear, medium-base lamp and porcelain enclosed, 4kv-rated screw-shell-type lampholder with spring-loaded center contact. Lamp ignitor included where required. All ballast assemblies are normal power factor and use the following circuit types:

- Reactor (120V only)
50 - 100W HPS
- HX — High Reactance
50 - 70W PSMH; 50 - 100W HPS

LABELS

ANSI lamp wattage label supplied, visible during relamping. UL Listed in the US and Canada for wet locations and enclosure classified IP54 per IEC 529 and IEC 598.

FINISH

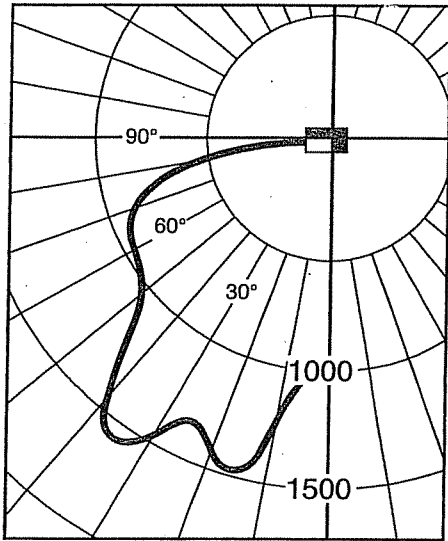
Exclusive Colorfast DeltaGuard® finish features an E-coat epoxy primer with medium bronze acrylic powder topcoat, providing excellent resistance to corrosion, ultraviolet degradation and abrasion. The finish is covered by our seven-year limited warranty.

ACCESSORIES

ESB-7	Surface Mounting Box
TPS-1	Tamperproof Screwdriver

**E8-H
SERIES**

**RECTANGULAR HID WALL MOUNT
DEEP SHIELDED**



Front View

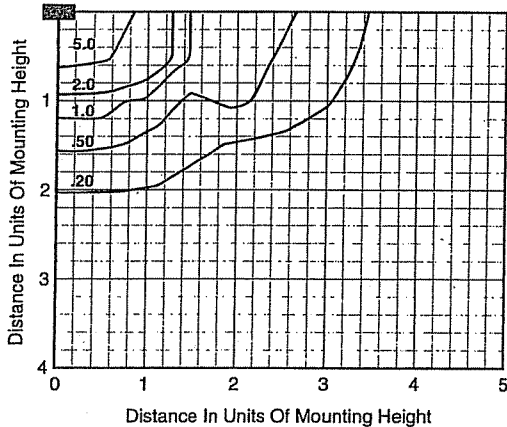
Lighting Sciences Inc.
Certified Test Report No. LSI 7361
Candlepower distribution curve of 70W HPS
Rectangular Deep Shielded Fixture.

Isofootcandle plots show initial footcandles at grade. (Footcandles ÷ 0.0929 = Lux)

ANGLE	MEAN CP	ANGLE	MEAN CP
0.0	853	60.0	491
5.0	1166	62.5	950
10.0	1264	65.0	1197
15.0	1605	67.5	903
20.0	1506	70.0	851
25.0	1610	72.5	831
30.0	1416	75.0	783
32.5	1758	77.5	766
35.0	1719	80.0	800
40.0	1540	82.5	806
45.0	1218	85.0	382
50.0	1293	87.5	205
52.5	906	90.0	8
55.0	500		
57.5	563		

Maximum Candlepower: 1758
Plane of Maximum CP: 105.0°
Vertical Angle of Maximum Candlepower: 32.5°
Lumen Rating: 6400

EFFICIENCY = 57.6%



$$\text{SPACING RATIO} = \frac{\text{DISTANCE ALONG}}{\text{MOUNTING HEIGHT}}$$

Isofootcandle plot of 70W HPS Rectangular Deep Shielded fixture at 10' (3 m) mounting height. (Plan view)

MOUNTING HEIGHT CONVERSION TABLE

Footcandle readings for mounting heights other than 10' (3 m) may be obtained by multiplying fc values by the following:

HEIGHT	MULTIPLIER
7.0' (2.1 m)	2.04
8.0' (2.4 m)	1.56
9.0' (2.7 m)	1.23
12.0' (3.7 m)	0.69
15.0' (4.6 m)	0.44
20.0' (6.1 m)	0.25

LAMP WATTAGE CONVERSION TABLE

Footcandle readings for wattages and lamp types other than 70W HPS may be obtained by multiplying fc values by the following:

LAMP/WATTAGE	MULTIPLIER
50W PSMH	0.48
70W PSMH	0.79
100W PSMH	1.27
50W HPS	0.63
100W HPS	1.49