Exterior Cladding

Cladding/Color Schedule

Material cut sheets

Colored Elevations

Contextual/Historical Reference (Brewery Building)

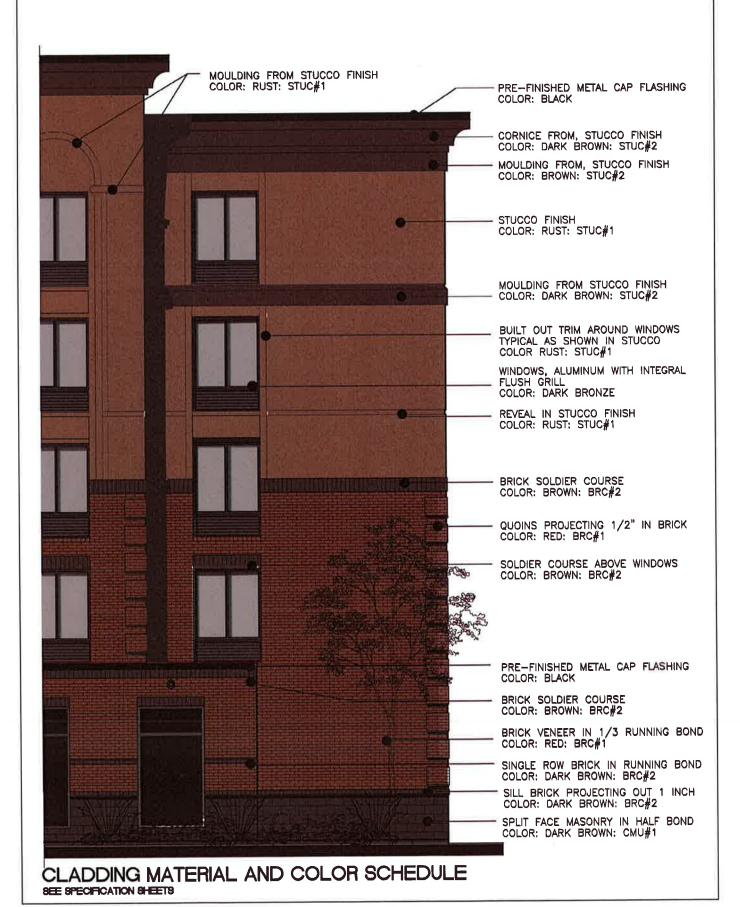
Hilton Garden Inn

Olympia, Wa ECEIVE MAR 3 1 2014

COMMUNITY PLANNING & DEVELOPMENT DEPT.

OLYMPIA HILTON GARDEN INN

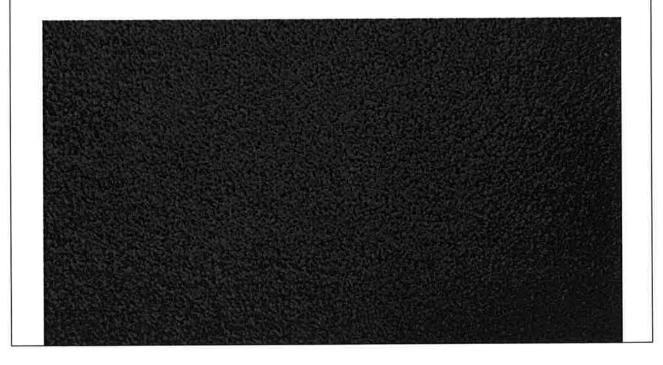
PARTIAL WALL ELEVATION



CONTROL #:	STUC#1
ITEM:	Stucco Field Color
MANUFACTURER:	Senergy
CONTACT INFORMATION:	Salmon Bay Sand & Gravel
	5228 Shilshole Avenue NorthWest
	Seattle, WA 98107
	P: 206.784.1234
	F: 206.781.0984
WEB ADDRESS:	http://www.senergy.basf.com
PRODUCT:	Synthetic Stucco
COLOR:	Terra Cotta: Sherwin Williams medium brown
SIZE:	N/A
Mortar:	N/A



CONTROL #:	STUC#2	
ITEM:	Stucco Cornice Color	
MANUFACTURER:	Senergy	
CONTACT INFORMATION:	Salmon Bay Sand & Gravel	
	5228 Shilshole Avenue NorthWest	
	Seattle, WA 98107	
	P: 206.784.1234	
	F: 206.781.0984	
WEB ADDRESS:	http://www.senergy.basf.com	
PRODUCT:	Synthetic Stucco	
COLOR:	Hopsack: Sherwin Williams dark brown	
SIZE:	N/A	
Mortar:	N/A	



CONTROL #:	BRC #1
ITEM:	Field Brick
MANUFACTURER:	Interstate Brick
CONTACT INFORMATION:	9780 South 5200 West
	West Jordan, UT 84081
	Toll Free: (800) 233-8654
WEB ADDRESS:	http://www.interstatebrick.com
PRODUCT:	Brick
COLOR:	Autumn Red
SIZE:	2 1/4" Modular
Mortar:	Dark Brown



CONTROL #:	BRC #2	
ITEM:	Accent Brick	
MANUFACTURER:	Interstate Brick	
CONTACT INFORMATION:	9780 South 5200 West	
	West Jordan, UT 84081	
	Toll Free: (800) 233-8654	
WEB ADDRESS:	http://www.interstatebrick.com	
PRODUCT:	Brick	
COLOR:	Walnut	
SIZE:	2 1/4" Modular	
Mortar:	Dark Brown	



CONTROL #:	Cmu#1
ITEM:	Concrete Masonry Unit
MANUFACTURER:	Willamette Greystone
CONTACT INFORMATION:	1690 Edgewater St. NW
	Salem, OR 97304
	Phone: (503)585-1323
	Fax: (503)585-4545
WEB ADDRESS:	http://www.willamettegraystone.com
PRODUCT:	Split face
COLOR:	Pinot w/ black aggregate
SIZE:	8"x8"x16"
Mortar:	Dark Brown







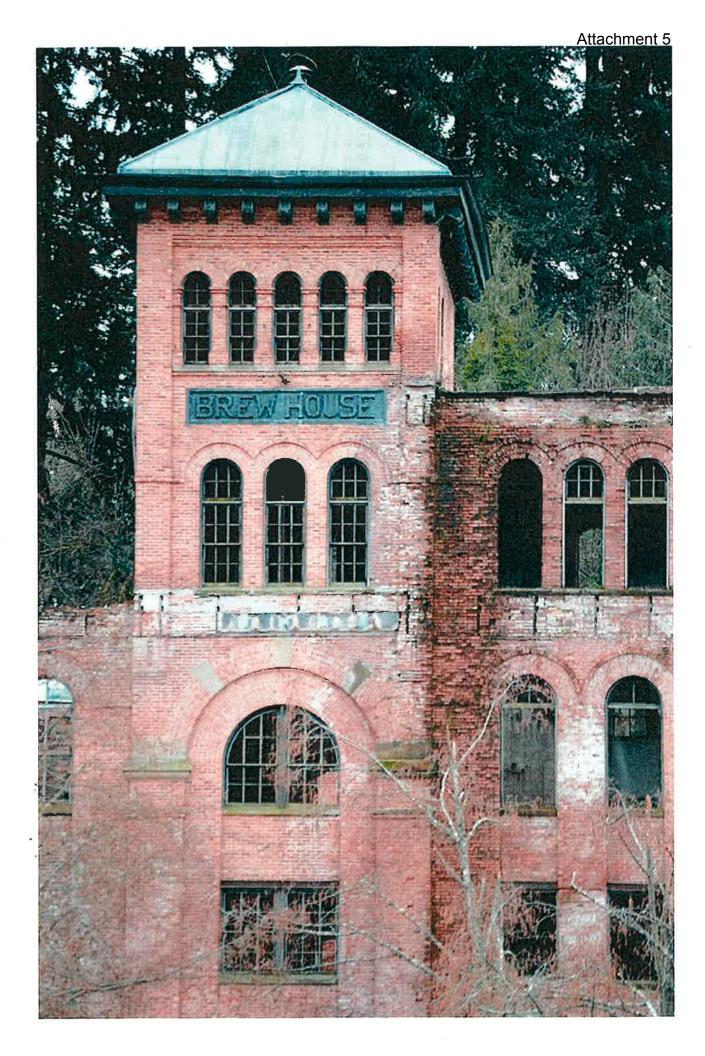


NORTH WEST ELEVATION
1/8" = 1"-0"









Landscape Plan

Area Development Plan

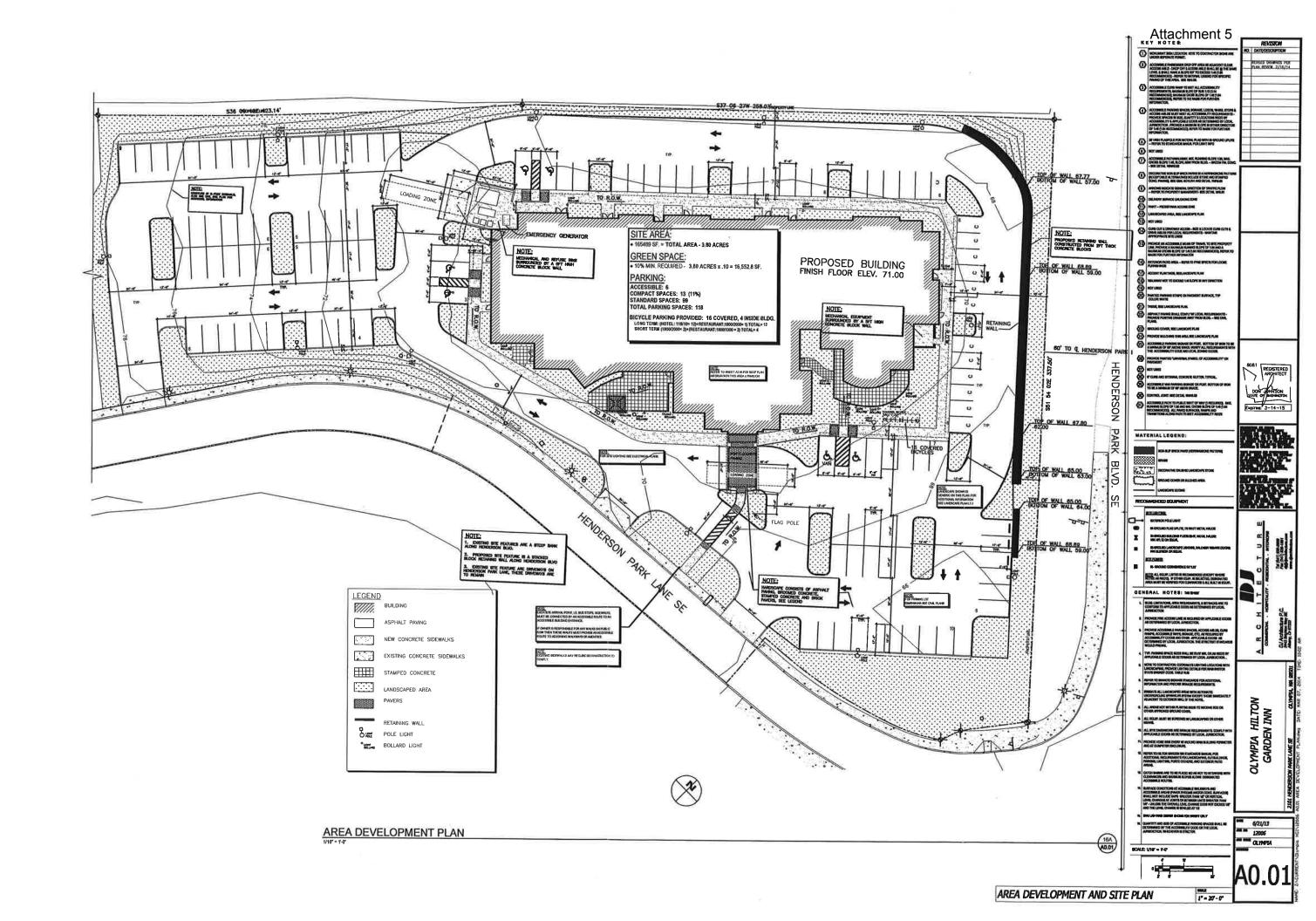
Site Plan (civil)

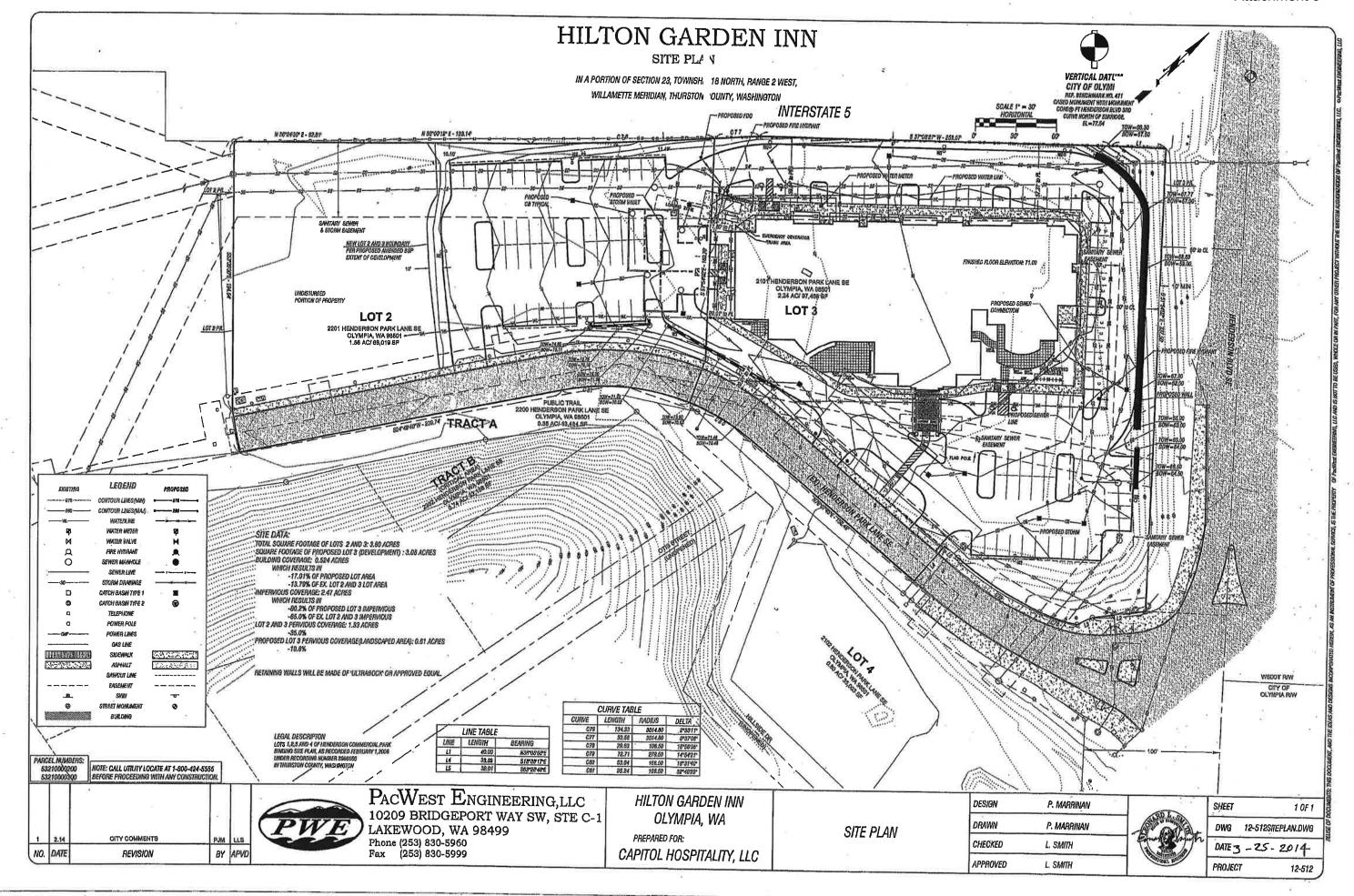
Landscape Plan

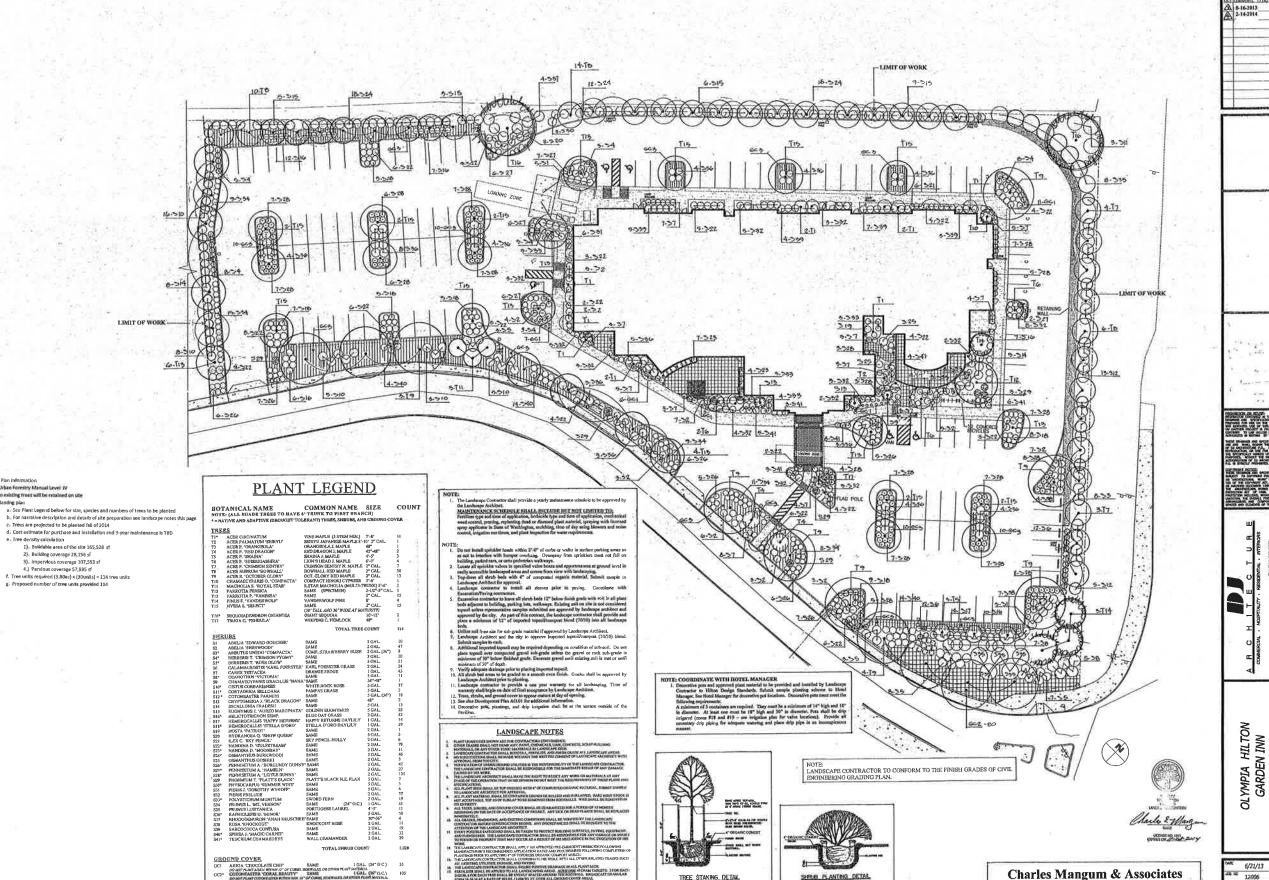
Planting schedule

Hilton Garden Inn









LANDSCAPE PLAN
SCALE: 1"=20'-0"

IZE NO 12006
IZE NAME OLYMPIA

Landscape Architecture
5144 36th Av. S.E. Salem, Oregon 97317 (503) 364-1240

L1.1





NAME	IMAGE	NAME	IMAGE	NAME	IMAGE
DECIDUOUS TREE Acer circinatum (3 stem min.) Vine Maple *native and adaptive	INACTE	Acer palmatum 'Seiryu' Seiryu Japanese Maple	IVIAGE	DECIDUOUS TREE Acer palmatum 'Shishigashira' Lion's head Japanese Maple	
DECIDUOUS TREE Acer platanoides 'Crimson Sentry' Crimson Sentry Norway Maple		DECIDUOUS TREE Acer palmatum 'Orangeola' Orangeola Japanese Maple		DECIDUOUS TREE Acer palmatum 'Red Dragon' Red Dragon Japanese Maple	Acer palmatum dissectum 'Red Dragon Copyright Kigi Nursary com
DECIDUOUS TREE Acer palmatum 'Shaina' ShainaJapanese Maple		DECIDUOUS TREE Acer rubrum 'Bowhall' Bowhall Red Maple		DECIDUOUS TREE Acer rubrum 'October glory' October Glory Red Maple	

TREES, SHRUBS AND GROUND COVER: (Pictures of Genus, species, and common names)

NAME	IMAGE	NAME	IMAGE	NAME	IMAGE
EVERGREEN TREE Chamaecyparis obtusa 'compacta' Compact Hinoki Cypress		Magnolia stellata Star Magnolia		DECIDUOUS TREE Parrotia persica Persian Ironwood	
DECIDUOUS TREE Parrotia persica 'vanessa' Vanessa Persian Ironwood		EVERGREEN TREE Pinus flexis 'Vanderwolf' Vanderwolf Pine		DECIDUOUS TREE Nyssa sylvatica 'Select' Tupelo/ Black gum 'select'	
EVERGREEN TREE Sequoiadendron giganteum Giant Sequoia		EVERGREEN TREE Tsuga c. 'pendula' Weeping Canadian Hemlock			

TREES, SHRUBS AND GROUND COVER: (Pictures of Genus, species, and common names)

[37.13.45]	TILLO, OTTIVODO AND ONO				
NAME	IMAGE	NAME	IMAGE	NAME	IMAGE
SEMI- EVERGREEN SHRUB Abelia 'Edward		SEMI-EVERGREEN SHRUB Abelia x. 'sherwoodi'		DECIDUOUS SHRUB Berberis t. 'crimson pygmy'	
Goucher' Abelia 'Edward		Abelia Sherwoodi		Crimson Pygmy Barberry	
Goucher'				*native and adaptive	
DECIDUOUS SHRUB		DECIDUOUS GRASS		DECIDUOUS GRASS	
Berberis t. 'rose glow'		Calamagrostis 'Karl Foerster'		Carex testacea Orange Sedge	
Rose Glow Barberry		Karl Foerster Grass		Orange Seage	
*natvive and adaptive					Mary Warren
EVERGREEN SHRUB		EVERGREEN SHRUB		EVERGREEN SHRUB	1
Ceanothus 'Victoria'		Chamaecyparis gracillis 'nana'		Cistus corbariensis White Rock Rose	
Ceanothus Victoria		Chamaecyparis g.		*native and	
*natvive and adaptive			(C) full(4-nesses 15-)	adaptive	
DECIDUOUS SHRUB/GRASS		EVERGREEN SHRUB		DECIDUOUS SHRUB	
Cortaderia selloana Pampass grass		Cotoneaster parneyi Cotoneaster parneyi		Cryptomeria j. 'Black Dragon'	
*native and adaptive		*native and adaptive		Cryptomeria j. 'Black Dragon'	

Page 3 of 6

TREES. SHRUBS AND GROUND COVER: (Pictures of Genus, species, and common names)

	TREES, SHRUBS AND GROU				n (ACE
NAME	IMAGE	NAME	IMAGE	NAME	IMAGE
EVERGREEN SHRUB		EVERGREEN SHRUB		EVERGREEN GRASS	S. S. C. C. L. W. M. C.
Escallonia fradesii		Euonymus j. 'areo- marginata'		Helictotrichon sempervirens	NAME OF THE PARTY
Escallonia fradesii		Golden Euonymus		Blue Oat Grass *native and adaptive	
DECIDUOUS SHRUB		DECIDUOUS SHRUB	STATE OF THE PARTY	DECIDUOUS SHRUB	
Hemerocallis 'stella d'roro'		Hosta 'Patriot'		Hydrangea q. 'Snow Queen'	
Stella daylily		Hosta Patriot	例例》	Hydrangea q. 'Snow Queen'	
EVERGREEN SHRUB Ilex crenata 'Sky Pencil'		EVERGREEN SHRUB Nandina domestica 'Gulfstream'		EVERGREEN SHRUB Nandina d. 'Moon Bay'	
Sky Pencil Holly		Gulfstream Nandina *native and adaptive		Moon Bay Nandina *native and adaptive	
					Walliple
EVERGREEN SHRUB	Y and I so	EVERGREEN SHRUB		EVERGREEN SHRUB	
Osmanthus h. 'burkwoodi'		Osmanthus h. 'Goshiki'		Phormium t. 'Platt's Black'	
Osmanthus burkwoodi		Osmanthus h. 'Goshiki'		Platt's Black New Zealand Flax	
*native and adaptive			reemail		

Page 4 of 6

TREES, SHRUBS AND GROUND COVER: (Pictures of Genus, species, and common names)

	TREES, SHRUBS AND GRU				
NAME	IMAGE	NAME	IMAGE	NAME	IMAGE
DECIDUOUS GRASS		DECIDUOUS GRASS		DECIDUOUS GRASS	
Pennisetum		Pennisetum	Secondary may say W.	Pennisetum	
alopecuriodes		alopecuriodes	E Marine Control of the Control of t	alopecuriodes 'little	
'Burgundy Bunny'		'hameln'		bunny'	
Burgundy Bunny		Dwarf fountain grass		Little bunny dwarf	
grass		*native and adaptive		fountain grass	
*native and		Hative and adaptive		*native and	Marian Park Const
adaptive			Washington and the same of the	adaptive	The state of the s
DECIDUOUS	The state of the s	EVERGREEN		EVERGREEN	
SHRUB		SHRUB		SHRUB	
Physocarpus		Pieris japonica	A CONTRACT OF THE PARTY OF THE	Pieris japonica	
'Summer Wine'		'Dorothy Wykoff'		'prelude'	
Physocarpus		Pieris Dorothy Wykoff		Pieris prelude	
'Summer Wine'					To be suit
*native and					
adaptive					
EVERGREEN		EVERGREEN		EVERGREEN	
SHRUB		SHRUB		SHRUB	
Polystichum		Prunus lusitanica	All the second s	Raphiolepis u.	The state of the s
munitum		Portugese Laurel	是 1975年,1976年第2000年1976年1976年1976年1976年1976年1976年1976年1976	'minor'	J. Santa Co.
Sword Fern		r ortugese Laurer		Dwarf Yeddo	3 74 XV 3
*native and		*native and adaptive	Company of the second	Hawthorn	
adaptive				*native and	The state of the s
				adaptive	12 12 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
EVERGREEN		DECIDUOUS		EVERGREEN	
SHRUB		GRASS	V V	SHRUB	The second second
Rhododendron		Rosa 'Knockout'		Sarcococca	
'Anah Kruschke'		- 1000 Tilloonout		confuse	
		Knockout Rose			
Anah Kruschke				Sweet Box	
Rhododendron			A STATE OF THE STA		
					A STATE OF THE STA
			Name of the state		
		1			

Page 5 of 6

TREES, SHRUBS AND GROUND COVER: (Pictures of Genus, species, and common names)

NAME	IMAGE	NAME	IMAGE	NAME	IMAGE
DECIDUOUS SHRUB Spirea japonica 'magic carpet' Magic Carpet Spirea *native and adaptive	IWAGE	DECIDUOUS SHRUB Teucrium chamaedrys Wall germander *native and adaptive	IIVIAOD	IVAIVIL	
EVERGREEN GROUND COVER Ajuga 'chocolate chip' 'Chocolate chip' Bugleweed		EVERGREEN GROUND COVER Cotoneaster dammeri 'Coral beauty' *native and adaptive		EVERGREEN GROUND COVER Fragaria chiloensis Wild strawberry *native and adaptive	ANTS EXPRESS
EVERGREEN GROUND COVER Prunus I. 'Mt. Vernon' Mt. Vernon Laurel *native and adaptive					

CHARLES MANGUM & ASSOCIATES

Page 6 of 6

Exterior Lighting

Foot candle calculations

Light fixture cut sheets

Hilton Garden Inn

Olympia, Wa ECEIVE MAR 3 1 2014 COMMUNITY PLANNING 8 DEVELOPMENT DEPT

- 24/7 driver assistance including alternate charging station locations. ö
- Access control to eliminate energy theft and improve safety. ပ
- Notifications to driver of charge status including completion or interruption of charge. ö
- Cord management system including long reach and storage.
- Enclosure must be corrosion and weather resistant and comply with NEMA 3R.
- Stations must be SAE J1772 compliant and meet all UL and NEC requirements.
- Signage must be provided designating parking space(s) for the electric vehicle charging stations. œί
- Stations must meet Hilton Worldwide and any applicable local or federal accessibility requirements.

2501.07 Flag Poles

One 30'-0"/9.15 m flag pole is required for the national flag. Optionally, one 35'-0"/10.67 m pole for the national flag and two 25'-0"/7.62 m poles, one for the state and one for the Brand flag, are permitted. When multiple poles are used, they must be spaced so that each flag cannot wrap itself around another pole. Flag pole finish must coordinate with exterior materials and color schemes.

Flag poles must be illuminated. Lighting must be in ground mounted up lighting aimed on the flags Pole mounted fixtures 8'-0"/2.4 m above the finished floor are allowed in climates susceptible to snow. മ്

しらい ナキニ のとうし

2501.08 Exterior Lighting/Electrical

Not applicable to this Brand

- Exterior lighting used to illuminate building surfaces (including elevations, canopies, roofs and grounds) must be controlled so that only the defined building surfaces are illuminated. Light must not shine beyond the building surfaces to adjacent areas or the sky
- All secondary guest entrances must be well lit and readily identifiable.
- All exterior light fixtures must be suitable for outdoor installation and must have coordinated color temperature and characteristics. ر ا
 - Not applicable to this Brand نس
- Fixtures for building uplighting must not be mounted to the building. Parking lot light fixtures must not be used for building uplighting.
 - G. Low level decorative lighting is required at the Pavilion terrace. A minimum of five fixtures are required
- Exterior lighting must be controlled by a photocell with a manual override switch, by time clock or by building automation system located in the back house area. The control system must switch all lights on and off simultaneously.
- Refer to Section 2514.08 for minimum light level requirements.
- Parking Lighting ر ج

CONFIDENTIAL

EXTERIOR LIGHTING, CONT.

- 1. The parking area must be illuminated.
- Parking lot and driveway lighting must be pole-mounted, high energy efficient and long life based upon fluorescent, metal halide, or SON (high pressure sodium) lamps. Other technology will be considered. i5 /
- Maximum pole height is 30'-0"/9.0 m. Cut off shields or similar devices must be used to prevent glare and annoyance. 20 pec. 3.
 - ✓ 4. Provide protective barriers for light fixtures that are subject to vehicular damage.
- K. Not applicable to this Brand
- Provide exterior outlets around the building perimeter at 200'-0"/61 m intervals. Outlets must be waterproof and GFI/RCD protected.
- 1. Provide all lighting and power circuits with GFCI/ELCB ground fault protection.

2502.00 Lobby Area

Refer to Sections 2514.00, Technical Criteria, and 2515.00, Furnishings, Fixtures, and Equipment, for requirements applicable to this Section.

2502.01 Vestibule

- A minimum 12'-0"/3.66 m deep vestibule is required at the entrance to the lobby. Doors must be automatic sliding with a breakaway feature and provide approximately a 6'-0"/1.8 m opening.
- Revolving doors are allowed. They must be a minimum 10'-0"/3 m diameter. Doors must be able to be locked.
- C. Not applicable to this Brand
- When automatic revolving doors are provided, a single 42"/1.07 m door must be provided directly adjacent to the revolving door. ď
- E. Any deadbolts on the doors must be disengaged
- lock entrance doors during off hours. Provide remote release at front desk. Primary entrance must be within line of sight of front desk or else a security When a fixed post is not provided at the primary entrance of hotels, provide magnetic locks, intercom with buzzer and card key access that will camera must be provided.
- G. Not applicable to this Brand
- H. Not applicable to this Brand
- . Finish Options
- Floor
- a. Porcelain tile
- 1. The pavilion tile shape and style must comply with the Brand Style Guide.
- b. Natural stone
- c. Not applicable to this Brand

2500 Design & Construction

Pe .	Foot Candles	Гих	
rface Parking Areas	· · · · · · · · · · · · · · · · · · ·	では、一般の一般の一般の一般の一般の一般の一般の一般の一般の一般の一般の一般の一般の一	_
Drive Entrances/Porte Cochere	10	100	
Drive Lanes	2	20	THICLES
italls	2	20	_

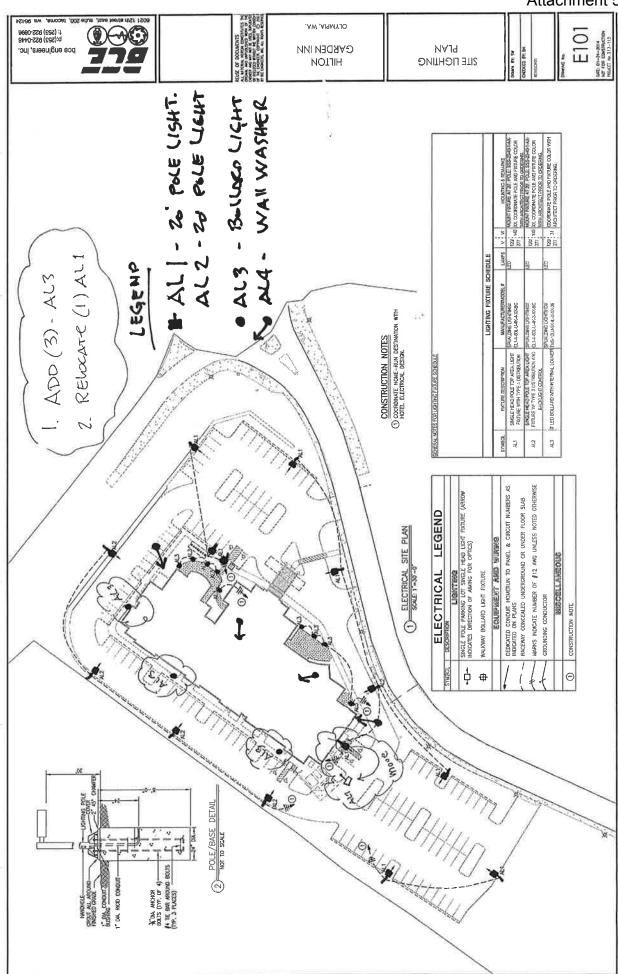
DESIGN STANDORD

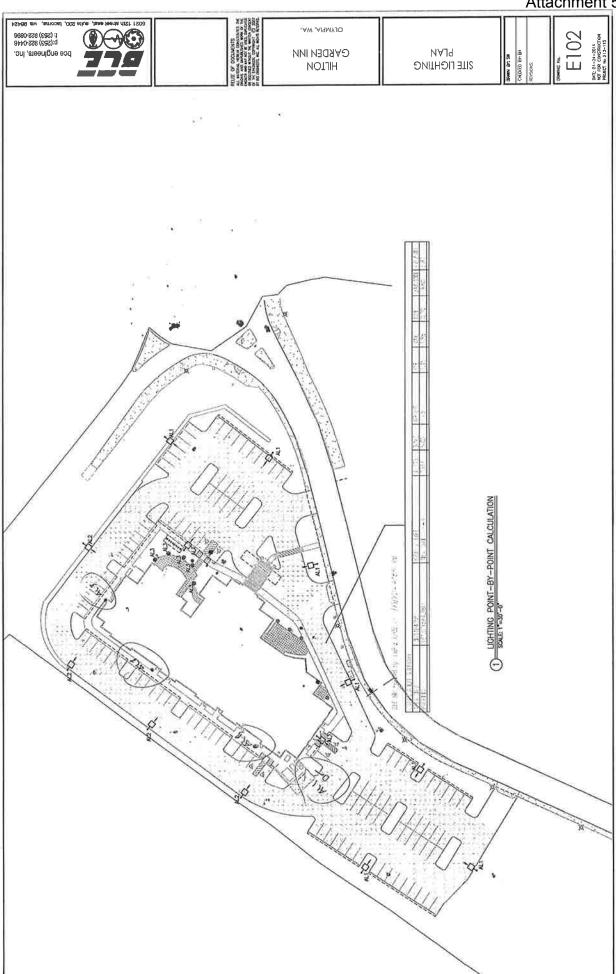
Surface Parking Areas		
Drive Entrances/Porte Cochere	10	100
Drive Lanes	2	20
Stalls	2	20
	\	(
Area	Foot Candles	7nx
Parking Structures		
Entrances	10	100
Drive Lanes	5	20
Parking Stalls	10	100

Area	Foot Candles	7mx
Guest Areas	THE PERSON NAMED IN	
Primary Entrance	20	200
Lobby	20	200
Service Desks (Registration, etc)	30	300
Guest Circulation	10	100
Guestroom Corridor at Guestroom Entrances 15	15	150
Restrooms	20	200
Restrooms (countertop)	30	300
Exit Stairs	20	200

ea	Foot Candles	Lux
od and Beverage Outlets		
Dining Area	20	200
serving Counter	20	200

Serving counted	OC.	nne
Area	Foot Candles	Тах
Commercial Facilities	日本教養 大学をある	
Sundries/Gift Shop (36"/900 mm AFF)	30	300
Business Center (Countertop)	20	200
Guest Laundry	30	300
Vending Room	30	300



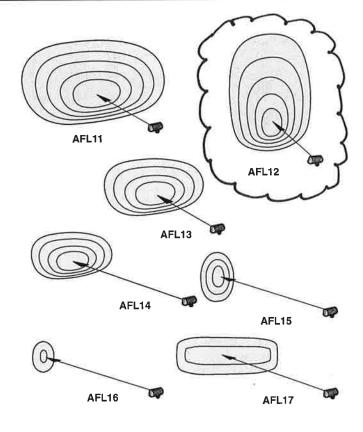


IN GROUND . BUILDING FLOOD LIGHT KIM AFL 12'

Important Features

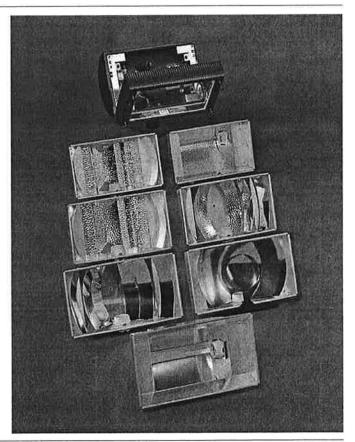
Seven Beam Patterns

The nature of floodlighting mandates versatility. The tremendous variety of surfaces and objects to be illuminated is further complicated by variables like fixture location and distance. The **AFL10** Series satisfies this need for flexibility: Seven available beam patterns can be used individually or in combinations to illuminate any object from distances of 3' to 100' - from the **AFL11** Wide Flood to the laser-like accuracy of the **AFL16** Narrow Spot reflector. The **AFL12** Vertical Flood has a unique optical design that is ideal for lighting both vertical and horizontal surfaces with very low brightness above the main beam. All seven beam patterns are the result of precision Kim reflector systems that generate high efficiencies and outstanding uniformity of illumination. See pages **38-39** for beam properties and application guidelines.



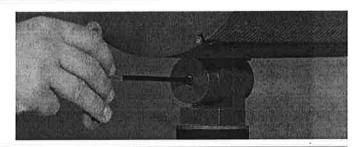
Die-Cast Housing with Interchangeable Optics

The AFL10 Series housing and door frame are precision die-castings with integral cooling ribs that dissipate heat allowing the electrical components to operate well below their allowable limits. A single housing will accept any of the seven optical systems which are easily interchangeable on the job. Because floodlighting is as much art as it is science - final adjustments to the lighting effect may occasionally require changes of the beam pattern. To accomplish this, the door frame is opened and removed with slip hinges allowing easy access to the reflector module. Each reflector module is a one-piece assembly held in place by four pressure fit retainers and easily removed without tools for access to the ballast compartment. Changing beam patterns is a simple task, and provides the AFL10 Series with flexibility for fine-tuning projects on the jobsite.



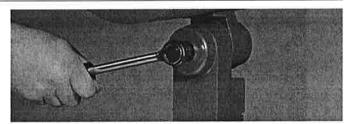
Standard Swivel with 1/2" NPSM Mount

The **AFL10** standard swivel is a complement to the housing design. The swivel is precision die-cast with concealed internal locking teeth. Locking adjustments are at 5° intervals. Adjustments are made by loosening the recessed allen head screw on the swivel. For added strength at the ½" NPSM mount, the aluminum swivel transitions to a heavy stainless steel nipple.



Optional Heavy Duty Swivel

Specifically designed for installations where the fixture is mounted close to the ground or susceptible to vandalism. The Heavy Duty Swivel is constructed of heavy cast low copper aluminum with locking teeth providing adjustability in 5° increments and a full 360° horizontal rotation. The swivel mounts directly to a 2″ pipe-size tenon, with heavy duty 3%″ stainless steel set screws provided to firmly lock the fixture in place. See page 46 for details.

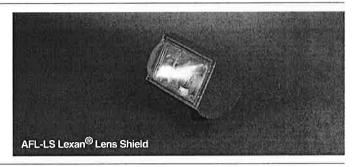


Vandal Protection

An optional Lexan $^{\circledR}$ vandal resistant lens shield is available for applications where vandalism is anticipated.

NOTE: The lens shield is made from an advanced polymer, Lexan[®] Resin from GE Advanced Materials. Lexan[®] dramatically reduces lens yellowing and becomes stable within the first 100 hours of operation. Lexan[®] offers significantly greater retained impact and vandal resistance during the life of the lens.

CAUTION: Use only when vandalism is anticipated.



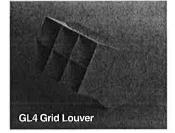
Optical Control

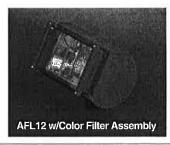
The AFL10 Series has a variety of optical accessories to control glare and increase the visual effectiveness of the lighting scheme. Shielding devices are carefully engineered to prevent shadows and preserve beam efficiency while reducing undesirable transient brightness. Barn Doors are a familiar accessory that allow for field-adjustable glare shielding. The Fixed Hood is a moderate shielding device and the Full Shield is a complete shielding device. Both are ideally suited for applications close to walkways, driveways, or roadways. The Grid Louver is engineered to maximize beam efficiency while minimizing glare and shadows from the internal vanes. The GL4 louver is available for use with the AFL15 and AFL16. The Lexan® Lens Shield is available for applications where vandalism is anticipated. The Color Filter Assembly is designed to be used alone or in conjunction with the Barn Doors, Fixed Hood, or Full Shield. Dynamic floodlighting effects are possible by utilizing any of the color filters specifically engineered for use in high temperature floodlighting applications. See page 47 for details.

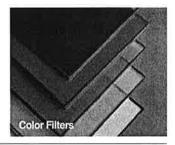






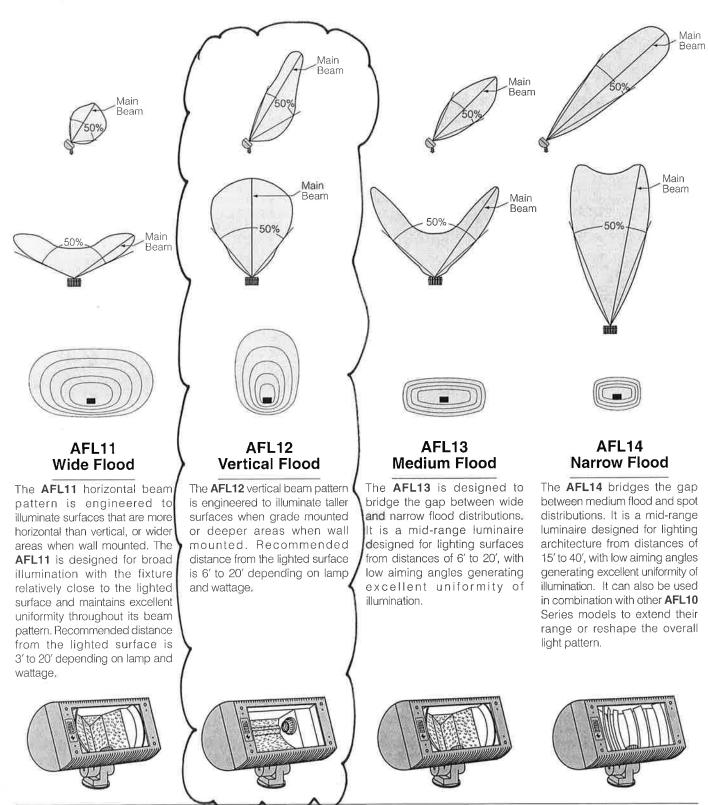




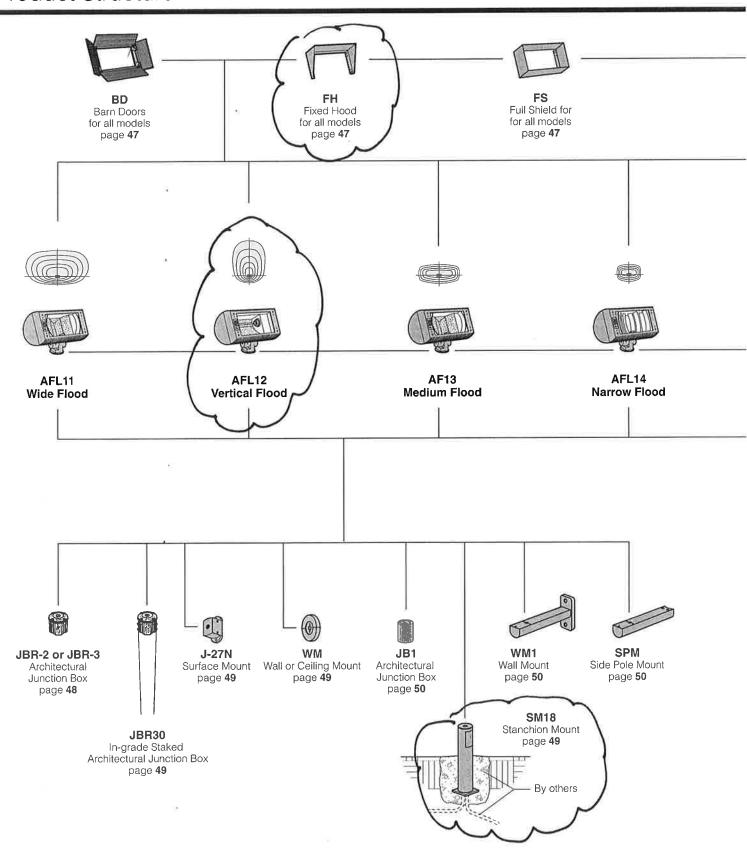


Beam Properties

These illustrations are representations of the beam spreads produced by each optical system. They are intended to help you visualize the performance differences between each model without having to analyze photometric charts. **AFL11** through **AFL15**, and the **AFL17** beam patterns are shown in identical scale. The **AFL16** beam pattern is shown at ½ scale due to page constrictions.



Product Structure



Ordering Information

Medium Base 70 to 175 Watt



	Ordering Example:	Fixture Electrical Module Finish Duty Swivel Photocell AFL11 / 150HPS277 / WH / HPS / A-30 1 2 3 4 5 Standard Fixture and Options Ordered Assembled with Fixture Pixture Optional Heavy Optional Photocell Options Options Options Options Draw Definition Pixture Options Draw Definition Pixture Optional Heavy Optional Fixture Options Draw Definition Pixture Optional Heavy Optional Photocell Photocell Photocell Options Draw Definition Pixture Options Draw Definitio
1	Fixture: Cat. No. designates AFL10 fixture and beam pattern. Single fixture EPA with standard swivel: 0,7 (45° tilt) 1.0 (Face on)	Beam Pattern: Wide Flood Vertical Flood Medium Flood Narrow Flood
		Cat. No.: AFL11 AFL12 AFL13 AFL14
		Beam Pattern: Spot Narrow Spot Horizontal Spot Cat. No.: AFL15 AFL16 AFL17
2	Electrical Module: HPS = High Pressure Sodium PMH = Pulse Start Metal Halide	70PMH120 100PMH120 150PMH120 70HPS120 100HPS120 150HPS120 NOTE: G-12 socket 70PMH208 100PMH208 150PMH208 150PMH208 150HPS208 150HPS208 150HPS208 150HPS208 available for T-6 bi-pin 70 70PMH277 100PMH277 150PMH277 70HPS277 100HPS277 150HPS277 150HPS277 Metal Halide lamps, Consult factory. 70PMH480 100PMH480 150PMH480 150HPS480 150HPS480 150HPS480 150HPS480
	See lamp and electrical data on pages 96-98 for ballast types and characteristics. Lamp Lamp Line Watts Type Volts 150 HPS 277	NOTE: Due to the Energy Independence and Security Act (EISA) of 2007, Kim Lighting can no longer supply probe start metal halide ballasts with its luminaires, effective January 1, 2009. Contact Kim Lighting for availability of replacement ballasts for warranty service claims. (Visit www.aboutlightingcontrols.org or the Library of Congress website for more details). KimNOW! Available Configurations: KN-AFL11/150PMH/HD/DB*, KN-AFL12/150PMH/HD/DB*, KN-AFL15/150PMH/HD/DB*, KN-AFL15/150PMH/HD/DB*, KN-BD/DB, KN-FH/DB, KN-AFL-LS, KN-JB1/DB, KN-SM2/DB, KN-SM7/DB, KN-SM7/DB, Wulti-tap ballast (120, 208, 240, or 277 volts)
3	Finish: Super TGIC powder coat paint over Titanated Zirconium conversion coating.	Color: Black Dark Bronze Light Gray Platinum Silver White Custom Colors Cat. No.: BL DB LG PS WH CC Consult representative for custom colors.
4	Optional Heavy Duty Swivel: Single fixture EPA with heavy duty swivel: 0.8 (45° tilt) 1.1 (Face on)	Cat. No.: HDS Finished to match fixture. Heavy Duty Swivel Heavy Duty Swivel Cat. No.: HDS Finished to match fixture. Recommended for vandal resistant requirements. Heavy cast low copper (<0.6% Cu) aluminum with locking teeth, aiming range of 200° vertical in 5° increments and 360° horizontal rotation. The swivel mounts directly to a 2″ pipe-size tenon, with heavy duty %′ stainless steel set point screws provided to firmly lock the fixture in place.
5	Optional Photocell:	Line Volts: 120V 208V 240V 277V 480V 347V Cat. No.: A-30 A-31 A-32 A-33 A-34 A-35 CAUTION: Use only in locations where adjacent lighting will not affect operation of photocell.
6	Optional Barn Doors:	Cat. No.: Specify finish: Example: BD/BL Extruded aluminum doors with anti-reflection baffles. Each door is hinged to a cast low copper (<0.6% Cu) aluminum frame, and locks by set screws. Doors are individually removable. Barn Door assembly mounts to predrilled door frame holes.
7	Optional Fixed Hood:	CAUTION: Not recommended for ground mounted fixtures in vandal prone areas. Cat. No.: FH Specify finish: Example: FH/BL CAUTION: Not recommended for ground mounted fixtures in vandal prone areas. Formed 1/16" thick aluminum. Mounts to predrilled door frame holes. Can be mounted along the top or bottom of the fixture to shield the lamp and lens from view.

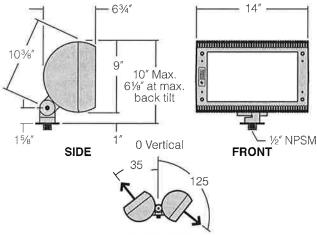
Luminaire Specifications

Dimensions

AFL10 Models 70 to 150 watt H.I.D. Medium Base Lamps

with **STANDARD SWIVEL**

EPA: 0.7 (45 tilt) 1.0 (Face on) Maximum weight: 24 lb



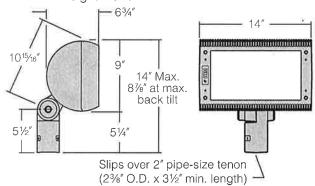
AIMING RANGE

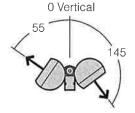
May be limited by selected mounting option as shown on pages 48-51

with OPTIONAL HEAVY DUTY SWIVEL

EPA: 0.8 (45 tilt) 1.1 (Face on)

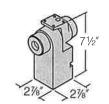
Maximum weight: 25 lb





SIDE





FRONT

HEAVY DUTY SWIVEL

Housing: One-piece die-cast, low copper (<0.6% Cu) aluminum in a cylindrical shape with integral cooling fins over the entire length, and ½" minimum wall thickness. One-piece silicone gasket between housing and door frame concealed when fixture is closed. Concealed integral cast slip hinges with stainless steel pins.

Door Frame: One-piece die-cast, low copper (<0.6% Cu) aluminum with integral cooling fins, %" minimum wall thickness, mates with housing to create a continuous cylindrical shape. Concealed integral cast slip hinges allow removal without tools. Stop-arm provided to limit door frame opening. %" thick clear tempered glass lens is sealed to the lens frame by a one-piece silicone gasket. Door frame secures to housing by four stainless steel recessed captive allen-head screws. Four tapped and plugged holes provided for attachment of options.

Standard Swivel: Die-cast aluminum with integral locking teeth providing 5° adjustment intervals. Stainless steel allen-head locking screw and $\frac{1}{2}$ " NPSM. Clear anodized prior to chromate conversion coating for added corrosion resistance.

Reflector Assemblies: Interchangeable in all seven AFL10 models. Specular Alzak[®] aluminum optical components mounted to aluminum frame. Reflector assembly snaps into fixture housing with spring clips. Sockets are 4KV porcelain medium base. (G-12 socket available for T-6 bi-pin 70 and 150 watt Metal Halide lamps. Consult factory.)

Electrical Components: All electrical components are UL and CSA recognized with leads extending out of the swivel. High power factor ballast rated -40°F starting for HPS and -20°F for MH lamp modes. Optional photocell mounted with sensor on side of housing, See lamp and electrical data on pages **96-98** for ballast types and characteristics.

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 and subject to additional charges, minimum quantities and longer lead times. Consult representative.

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.

Listings and	d Ratings
UL cUL 1598	
IP67 Rated	CE

Optional Heavy Duty Swivel (HDS): Ordered assembled with fixture.

Cast low copper (<0.6% Cu) aluminum with locking teeth providing 5° adjustment intervals. 36″ stainless steel locking bolt. Two 36″ stainless steel set point screws secure swivel to any 2″ pipe-size tenon (236″ O.D. x 31/2″ min. length). Clear anodized prior to chromate conversion coating for added corrosion resistance.

CAUTION: Recommended for vandal resistant requirements.

Optional Photocell (A30 - A35): Ordered assembled with fixture. Factory installed with flush sensor on side of housing. Select photocell with same line volts as fixture.

CAUTION: Use only in locations where adjacent lighting will not affect operation of photocell.

Ordered separately from fixture. See pages 42-45 for complete ordering information.

Fixture Option Specifications

Barn Doors (BD): Extruded aluminum doors with anti-reflection baffles. Each door is hinged to a cast low copper (<0.6% Cu) aluminum frame, and locks by set screws. Doors are individually removable. Barn Door assembly mounts to predrilled door frame holes.

CAUTION: Not recommended for ground mounted fixtures in vandal prone areas.

Fixed Hood (FH): Formed 1/16" thick aluminum. Mounts to predrilled door frame holes. Can be mounted along the top or bottom of the fixture to shield the lamp and lens from view.

Full Shield (FS): Formed 1/16" thick aluminum. Mounts to predrilled door frame holes.

can collect inside shield.

aluminum. Mounts to predrilled door frame holes. Provides glare control for AFL15 and AFL16 Spots while maintaining beam efficiency and uniformity.

lens shield with gasket. Mounts over lens to predrilled door frame holes and may be used with BD Barn Door, FH Fixed Hood, or FS Full Shield option.

CAUTION: Use only when vandalism is anticipated

Color Filter Assembly (CFA1-XX): Heavy wall aluminum extrusion with anti-reflection baffles and vertical channels that hold the color filter 2" away from the fixture lens. Quick change-out of the color filter is possible by the removal of two channel screws, Support mounts to predrilled holes in fixture door frame. May be used with BD Barn Door, FH Fixed Hood, or FS Full Shield option.

XX Filter # 2

15

05

27

69

Color Filter Assembly includes color filter.

Deep Straw

Rose Tint

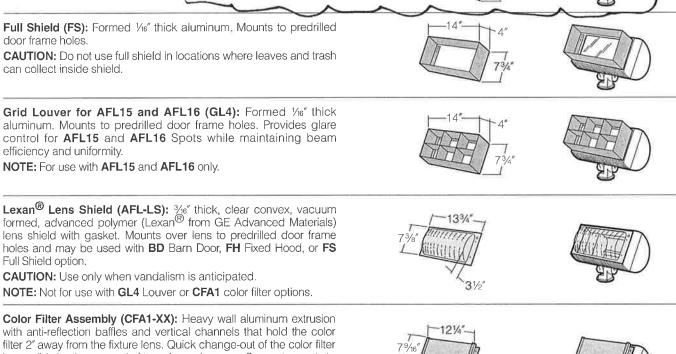
Medium Red

Brilliant Blue

Primary Green

Color¹

Sample



NOTE: Color samples shown for reference only and will not represent actual illumination color rendered by H.I.D. lamps. Exact color output is highly dependent on lamp used, (i.e. HPS vs. MH, specific lamp color temperature and other factors). 2XX Color filter number corresponds with Roscolux color filter numbers.

pressure sodium lamps.

Description

Warms metal halide color. Deepens high pressure sodium color to yellow/orange.

Warms metal halide color. Deepens high pressure sodium color to pink/orange.

Deep color accent. Blue shift with metal halide lamps. Yellow shift with high

Deep color accent. Best used with high pressure sodium lamps.

Deep color accent. Best used with metal halide lamps.

NOTE: Not recommended for high pressure sodium lamps.

NOTE: Very low output with metal halide lamps.

AFL₁₀

Ordered separately from fixture. See pages **42-45** for complete ordering information.

Mounting Option Specifications

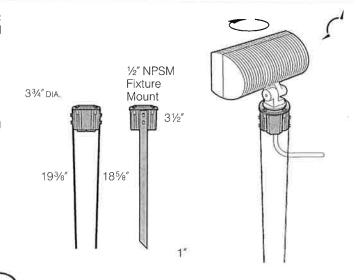
Brass In-grade Staked Architectural Junction Box (JBR30): Die-cast brass with $\frac{1}{2}$ " NPSM fixture mount and die-cast cover. Internal set screw provided for locking position. 21 cu in. internal volume.

Standard Swivel Mount

Application Notes

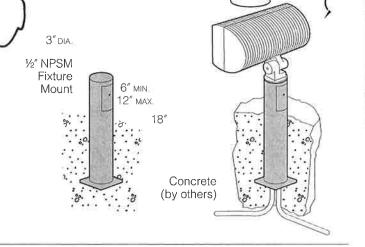
- · Creates a flush-mounted appearance.
- May be cast in concrete for increased stability.

CAUTION: Fixture stem and swivel must not contact soil or standing •water. Provide drainage away from Junction Box.



Stanchion Mount (SM18): 3" O.D. by .188" wall cast low copper (<0.6% Cu) aluminum with $\frac{1}{2}$ " NPSM fixture mount and hand hole with flush cover. Internal set screw fixture lock accessible through hand hole. Internal ground lug supplied with installed lead.

Standard Swivel Mount



Surface Mount (J-27N): Cast low copper (<0.6% Cu) aluminum with mounting ears for wood screw attachment to tree or wood structure. 5.5 cu in. splice compartment with gasketed cover. ½" NPSM fixture mount and ½" NPSM conduit or cord seal entry.

Standard Swivel Mount

NOTE: Surface mount can be connected to conduit or outdoor cord with a waterproof cord seal (by others).

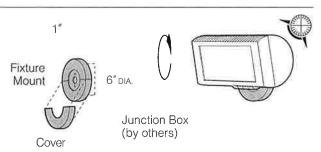
23/16"

1/2" NPSM 13/4"
Fixture Mount

1/2" NPSM Conduit Entry

Wall or Ceiling Mount (WM): Electro zinc steel mounting plate adapts to standard 4" square or octagonal Junction Boxes. Fixture mounts to cast aluminum upper cover which attaches to mounting plate. Lower cover half provides splice access. Dielectric sealing compound provided for wall interface.

Standard Swivel Mount



AFL11 Wide Flood Beam Spread Chart

Lamp		Lamp Watts	Initial Lumens¹	I.E.S. Type	Maximum Candlepower	Field Angle (10% of max.)	Beam Angle ² (50% of max.)	Test No.	Iso Pg.	
Н	IGH PRES	SURE SODIUM						11 (3)		
	70HPS	ED-17 clear medium base	70	6,300	7H x 7V	1,620 (47.5°H x -15.0°V)	160°H x 138.5°V	139.5°H x 94.5°V	KL00548	119
	100HPS	ED-17 clear medium base	100	9,500	7H x 7V	2,443 (47.5°H x -5.0°V)	160°H x 138.5°V	139.5°H x 94.5°V	KL00509	119
	150HPS	ED-17 clear medium base	150	16,000	7H x 6V	4,444 (47.5°H x -13.0°V)	148.8°H x 126°V	135.3°H x 80.3°V	KL00544	119
Ρl	JLSE STA	RT METAL HALIDE][بالارتب بياريك	والبياب وتدريتي	THE P	
	70PMH	ED-17 clear medium base	70	6,200	7H x 6V	1,887 (47.5°H x -15.0°V)	147.9°H x 125.5°V	131.5°H x 73.0°V	KL00546	119
•	100PMH	ED-17 clear medium base	100	9,300	7H x 6V	2,830 (47.5°H x -15.0°V)	147.9°H x 125.5°V	131.5°H x 73.0°V	KL00543	119
	150PMH	ED-17 clear medium base	150	14,000	7H x 6V	4,285 (47.5°H x -13.0°V)	148.5°H x 127.0°V	133.5°H x 79.6°V	KL00545	119

¹All **Initial Lumen** values shown are approximate and may vary from one manufacturer to another. Consult lamp manufacturer's data for exact lumen and life data

AFL12 Vertical Flood Beam Spread Chart

		Lamp	Lamp Watts	Initial Lumens ³	I.E.S. Type	Maximum Candlepower	Field Angle⁴ (10% of max.)	Beam Angle ^s (50% of max.)	Test No.	Iso Pg.
H	GH PRES	SURE SODIUM	BUW.,		The state					
	70HPS	ED-17 clear medium base	70	6,300	6H x 5V	3,182 (3.0°H x 11.0°V)	121.9°H x 96.2°V	77.3°H x 39.1°V	KL00491	125
	100HPS	ED-17 clear medium base	100	9,500	6H x 5V	4,799 (3.0°H x 11.0°V)	121.9°H x 96.2°V	77.3°H x 39.0°V	KL00403	125
	150HPS	ED-17 clear medium base	150	16,000	6H x 5V	7,586 (3.0°H x 13.0°V)	123.3°H x 98.9°V	79.2°H x 59.4°V	KL00515	125
P	ULSE STA	ART METAL HALIDE					W 1198. 9	1 12 12 13 11		
×	70PMH	ED-17 clear medium base	70	5,900	6H x 5V	3,041 (1.0°H x 11.0°V)	125.0°H x 99.2°V	82,9°H x 70.3°V	KL00489	125
7,	100PMH	ED-17 clear medium base	100	8,800	6H x 5V	4,536 (1.0°H x 11.0°V)	125.0°H x 99.2°V	82.9°H x 70.3°V	KL00391	125
	150PMH	ED-17 clear medium base	150	12,600	6H x 6V	5,415 (3.0°H x 7.0°V)	124.9°H x 100.8°V	84.7°H x 76.0°V	KL00400	125

³All **Initial Lumen** values shown are approximate and may vary from one manufacturer to another. Consult lamp manufacturer's data for exact lumen and life data.

AFL13 Medium Flood Beam Spread Chart

Lamp	Lamp Watts	Initial Lumens ⁶	I.E.S. Type	Maximum Candlepower	Field Angle (10% of max.)	Beam Angle ⁷ (50% of max.)	Test No.	Iso Pg.	
HIGH PRESSURE	SODIUM	ر ۱۷۸۰ نے	y state.	# # F 1111		THE YES THE			
70HPS ED-17	clear medium base	70	6,300	7H x 6V	1,854 (47.5°H x 13.0°V)	148.4°H x 125.2°V	133.9°H x 77.1°V	KL00554	131
100HPS ED-17	clear medium base	100	9,500	7H x 6V	2,795 (47.5°H x 13.0°V)	148.3°H x 125.2°V	133.9°H x 77.1°V	KL00508	131
150HPS ED-17	clear medium base	150	16,000	7H x 6V	7,384 (42.5°H x 0.0°V)	145.3°H x 116.9°V	111.7°H x 48.5°V	KL00369	131
PULSE START ME	TAL HALIDE							S162 201 K	1.00
70PMH ED-17	clear medium base	70	6,200	7H x 6V	1,941 (47.5°H x -15.0°V)	148.1°H x 126.2°V	132.2°H x 74.4°V	KL00552	131
100PMH ED-17	clear medium base	100	9,300	7H x 6V	2,911 (47.5°H x -15.0°V)	148.1°H x 126.1°V	132.2°H x 74.4°V	KL00417	131
150PMH ED-17	clear medium base	150	14,000	7H x 6V	3,965 (47.5°H x -11.0°V)	148.2°H x 127.1°V	131.5°H x 79.5°V	KL00551	131

⁶All Initial Lumen values shown are approximate and may vary from one manufacturer to another. Consult lamp manufacturer's data for exact lumen and life data.

NOTE: For lamp/ballast information outside of the U.S.A. and Canada, please consult your local Kim representative.

WARNING: All fixtures must be grounded in accordance with local codes or the National Electrical Code. Failure to do so may result in serious personal injury. Lamps by others.

²Beam Angle: Horizontal and vertical beam spreads interpolated due to no valid I.E.S. standard

Field Angle: Horizontal and vertical field spreads interpolated due to no valid I.E.S. standard.

Beam Angle: Horizontal and vertical beam spreads interpolated due to no valid I.E.S. standard.

⁷Beam Angle: Horizontal and vertical beam spreads interpolated due to no valid I.E.S. standard.

PARKING LOT POLE LIGHT

CIMARRON LED NEW Cat.# Job

OLYMPIA - HGI

Type ALIPZ

SPAULDING LIGHTING

Attachment 5

SPECIFICATIONS

Construction:

- Stylish vertically finned die-cast solid top housing for maximum heat dissipation;
 Stops collection of unsightly debris from gathering on top of the housing
- Rugged lower die-cast aluminum heat sink accelerates thermal management and optimizes PCB and optical performance
- Separate optical and electrical compartment for optimum component operation
- One piece die cut silicone gasket ensures weather proof seal around each individual LED for IP65 rating
- Backlight Control (BC) option available for 85% spill light reduction, doesn't change fixture appearance or EPA, recommended for Type III and Type IV distributions
- Stamped bezel provides mechanical compression to seal the optical assembly
- Complements the Hubbell Southwest series of outdoor fixtures
- Weight 45.0 pounds, EPA 1.3 ft2
- Features exclusive wiHUBB technology

 Wireless system for On/Off and
 O-10VDC full range dimming control
 Programmable autonomous operation

Optics

- Choice of 32 high brightness LED configurations with individual acrylic lenses specially designed for IES Type II, III, IV and V distributions
- CCT: 5000K standard, 3000K, 4000K and turtle friendly Amber LED options
- CRI: 70

Electrical:

- Universal input voltage 120-277 VAC, 50/60 Hz
- Integral step-down transformer for 347V
 & 480V
- \bullet Ambient operating temperature -30° C to 40° C
- · Automatic thermal self-protection

- Drivers have greater than 90% power factor and less than 10% THD
- Optional continuous dimming to 10% or dual circuitry available
- LED drivers have output power overvoltage, over-current protection and short circuit protection with auto recovery
- 1050 mA driver available with 90L configuration for increased lumen output
- LED electrical assembly, including PR devices, consumes no power in the 'off' state
- Surge protection of 10KA 8/20 µSec wave; clamping voltage of 320V & surge rating of 273.1

Lumen maintenance:

 L90 at 60,000 hours (Projected per IESNA TM-21-11)

Installation:

- Two die-cast aluminum arm designs are available providing maximum design flexibility
- The decorative arm offers a sleek upswept look while the straight arm follows the housing's contoured lines for continuity of
- Fixture ships with arm installed for ease of installation and mounts to #2 drill pattern
- Wall bracket, mast arm fitter and pole accessories are also available allowing easy mounting for virtually any application

Finish:

 TGIC thermoset polyester powder paint finish applied at nominal 2.5 mil thickness

Warranty

Five year limited warranty (for more information visit: http://www.hubbelloutdoor.com/resources/warranty/

Listings:

- Listed to UL1598 and CSA C22.2#250.0-24 for wet locations
- DLC listed IDA approved IP65

PRODUCT IMAGE(S)

Approvals





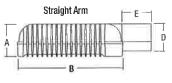


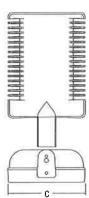


DIMENSIONS

60 LED

Upswept Arm G —





		-	- С	-1		
Α	В	C	D	E	F	G
6 3/4" 171mm	21 3/4" 552mm	16" 406mm	6 5/8" 168mm	6 5/16" 160mm	5 5/8" 143mm	6 1/8" 155mm

CERTIFICATIONS/LISTINGS









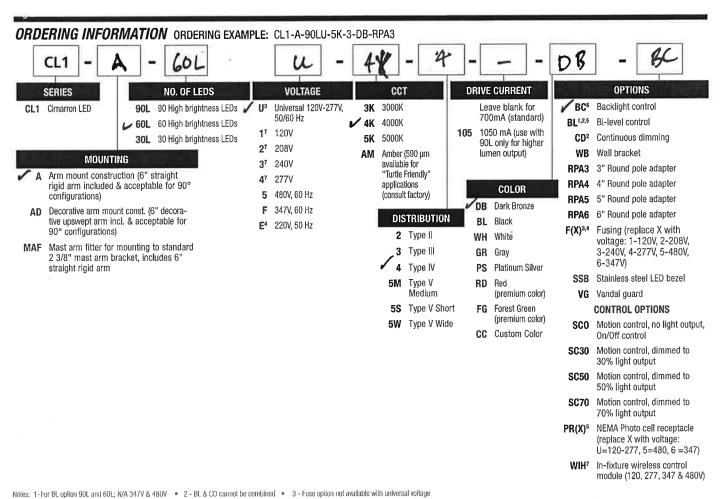






ORDERING INFORMATION SEE NEXT PAGE





4 - Select F3 fusing option for 220V • 5 - Phytocell receptacle not available with BL option • 6 - Recommended for Type III and IV distributions only • 7 - Select only when using voltage specific option (F or WIH)

ENERGY SAVING DATA

ENERGY DATA								
Power Factor	>.9							
Total Harmonic Distortion	<10%							

LIGHT	INPUT	WATTS		LUMENS DELIVERED							
ENGINE	120V-277V	347V-480V	TYPE 2	TYPE 3	TYPE 4	TYPE 5M	TYPE 5S	TYPE 5W			
30L-5K	70	87	6384	6164	6641	7108	6999	6619			
60L-5K	140	157	13300	12842	13125	13185	13675	12954			
90L-5K	210	227	19684	19006	19202	20592	19610	18973			
90L-5K-105	336	363	26974	25351	26548	25793	27445	25195			
30L-4K	70	87	6089	6109	6104	6417	6439	6046			
60L-4K	140	157	11583	11468	12036	12038	12581	11807			
90L-4K	210	227	17143	16973	17648	18521	20220	17394			
90L-4K-105	336	363	23896	23912	24199	24583	25357	23128			
30L-3K	70	87	4606	4668	4686	4858	4902	4601			
60L-3K	140	157	9013	9175	9216	9409	9461	8844			
90L-3K	210	227	13360	13601	13575	13923	14004	13902			
90L-3K-105	336	363	17645	17612	17469	17950	18271	17330			



ACCESSORIES

Catalog Number	Description
CR-RPA3-XX1	Round pole adapter for straight arm (31/4 - 39/4")
CR-RPA4-XX1	Round pole adapter for straight arm (3% - 41/2")
CR-RPA5-XX1	Round pole adapter for straight arm (5")
CR-RPA6-XX1	Round pole adapter for straight arm (6")
CRD-RPA2-XX1	Round pole adapter for upswept arm (2¾ - 3½")
CRD-RPA3-XX1	Round pole adapter for upswept arm (31/4 - 33/4")
CRD-RPA4-XX1	Round pole adapter for upswept arm (37/6 - 41/2")
CRD-RPA5-XX1	Round pole adapter for upswept arm (5")
CRD-RPA6-XX1	Round pole adapter for upswept arm (6")
WB-CR-XX'	Wall bracket
TPLB-XX ¹	Twin parallel luminaire bracket
MAF-CL-XX3	Horizontal mast arm fitter for 2 3/8" OD arm. Mounts to standard
	6" arm (ordered with fixture)

- 1 Replace XX with color choice, eg.; DB for Dark Bronze
- 2 When ordering poles, specify Pole Drill Pattern #2
- 3 Fixture must include standard 6" arm

TENON TOP POLE BRACKET ACCESSORIES

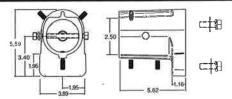
(2 3/8" OD tenon) (RSS version requires 4" round pole adapter)

Catalog Number	Description					
SETA-XX ¹	Square pole tenon adapter (4 at 90 degrees)					
RETA-XX ¹	Round pole tenon adapter (4 at 90 degrees)					
TETA-XX1	Hexagonal pole tenon adapter (3 at 120 degrees)					

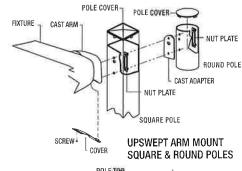
¹ Replace XX with color choice, eg.: DB for Dark Bronze

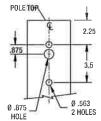
PHOTOCONTROL EQUIPMENT

Catalog Number	Description	
PTL-1	Photocontrol - twist-lock cell (120V)	
PTL-8	Photocontrol - twist-lock cell (120-277V)	
PTL-5	Photocontrol - twist-lock cell (480V)	
PTL-6	Photocontrol - twist-lock cell (347V)	
PSC	Shorting cap - twist-lock	



MAF - HORIZONTAL MAST ARM FITTER



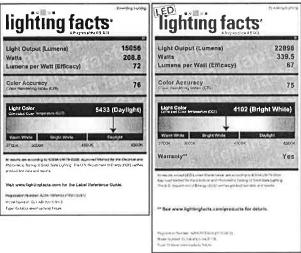


#2 DRILL PATTERN FOR POLES

LIGHTING FACTS







PEDESTRIAN BOLLAGO LIGHTATION 5

TEMPE



Approvals Cat. # Job OLYMPIA . HGI

<u>SPAULDING</u>

INTENDED USE:

· Tempe series bollards are designed to illuminate walkways and courtyards

CONSTRUCTION:

- · Extruded aluminum square or round housing, with tamper resistant hardware; Single screw access for top relamping Decorative Southwest series cast top with single access screw for maintenance
- · Sealed one-piece, clear acrylic lens; Specular, anodized aluminum optical systems; dual reflector, tube optics, or internal louvers (HID or CFL)
- · Concealed, galvanized steel anchor base; Four 1/2" x 10" anchor bolts
- Durable Lektrocote® TGIC thermoset polyester powder coat paint finish assures long life and maintenance-free service

ELECTRICAL:

HID

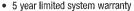
- . HPF ballast, starting rated at -20°F (-40°F for HPS); Pulse Start Metal Halide is CWA or Super CWA type HPS is CWA, HR, or Reactor type
- · Medium porcelain socket, pulse rated, with springloaded, nickel-plated center contact and reinforced lamp grip screw shell

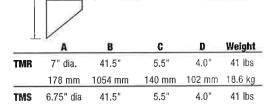
FLUORESCENT

- . Programmed Start electronic ballast with end of life protection and universal voltage: 26/32/42w
- One Lamp CFTR/GX24Q Triple Tube 4-Pin
- Universal voltage (120-277V) drivers with +/- 10% tolerance, starting temperature rated at -20°F
- . Optional continuous dimming to 10% (0-10V)
- · Rotatable LED assembly adjustment for ideal placement and aiming of asymmetric light pattern
- · 24 high brightness LEDs at 500 mA deliver symmetric distribution at 46w
- . 12 high brightness LEDs at 700 mA deliver asymmetric distribution at 31w
- · Available in two color correlated temperatures (3500K and 5100K)
- Long life 50,000 hour L70 rated at 25°C

LISTINGS:

· Listed to UL1598 for use in wet locations WARRANTY:









1054 mm



140 mm



102 mm 18.6 kg

LED - 24LU optics

DO - Dual reflector with cone (standard)

TO - Tube optics

IL - Internal louver







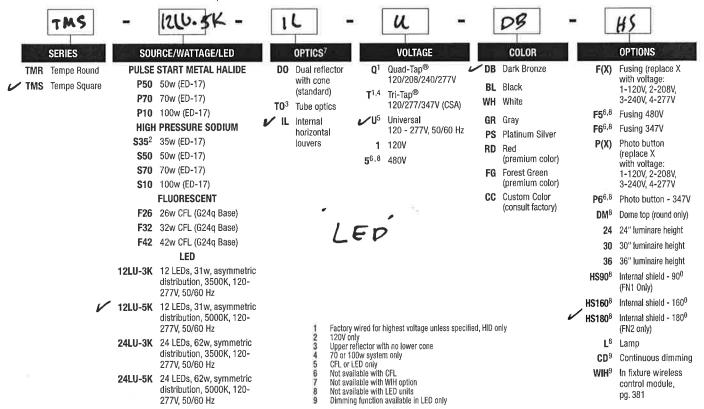
Features exclusive wiHUBB technology

171 mm

- Wireless system for On/Off and 0-10VDC full range dimming control
- Programmable autonomous operation

ORDERING INFORMATION

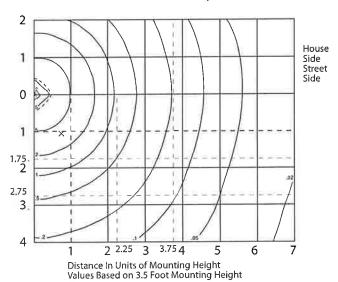
ORDERING EXAMPLES: TMR-P50-D0-Q-DB-L, TMS-12LU-5K-U-DB



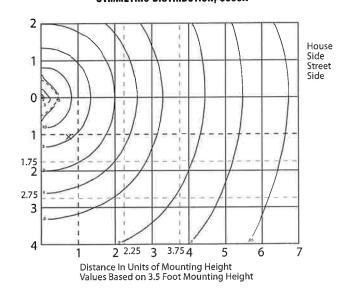
Due to our continued efforts to improve our products, product specifications are subject to change without notice.



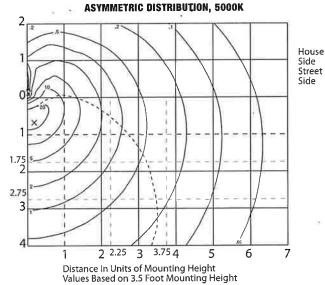
TMS-12LU-3K: 12LEDS
ASYMMETRIC DISTRIBUTION, 3000K



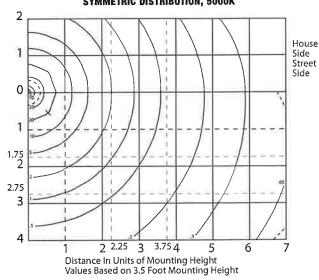
TMS-24LU-3K: 24LEDS SYMMETRIC DISTRIBUTION, 3000K



TMR-12LU-5K: 12LEDS



TMR-24LU-5K: 24LEDS SYMMETRIC DISTRIBUTION, 5000K



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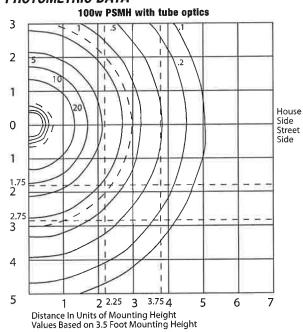
Spaulding Lighting • 701 Millennium Drive • Greenville, SC 29607 • PHONE: 864-678-1000

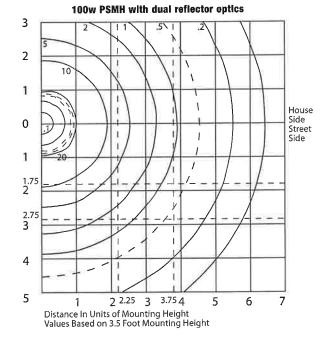
For more information visit our web site: www.spauldinglighting.com

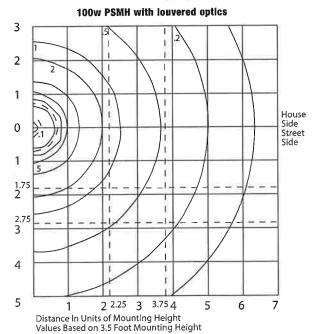
TECHNICAL DATA

TEMPE BOLLARD	Input Current (amps)							
Lamp/Watts	Input Wattage	120V	208V	240V	277V	347V	480V	
P50	69	1.20	0.68	0.59	0.51	NA	NA	
P70	94	1.90	1.00	0.90	0.80	0.70	NA	
P10	129	2.30	1.40	1.20	1.00	1.00	0.60	
\$35	46	1.40	NA	NA	NA	NA	NA	
\$50	62	1.00	0.57	0.50	0.45	NA	NA	
\$70	86	1.40	0.90	0.80	0.70	0.60	NA	
S10	115	2.20	1.30	1.10	0.90	0.70	0.60	
F42	46	.38	.22	,13	.11	NA	NA	

PHOTOMETRIC DATA







Due to our continued efforts to improve our products, product specifications are subject to change without notice.



ALLSCAPE

100 Craftway Drive Littlestown, PA 17340 Phone: 800 854 8277 Fax: 717 359 9545 allscape@philips.com www.allscape.net

SL-23 FLAG POLE IN-GROUND

Landscape Areas Wall Wash Flagpole Lighting **Building Accent Driveway Marker Sign Lighting**



Specifications











 ϵ

Certifications ETL and CETL listed for wet location, direct burial, and concrete pour. Certified to IP65 and IP67 to ensure protection against the harshest environments. IEC compliant versions available, consult factory.

Lamp/Ballast Housing

Compression molded Rhinolite™ composite material, structurally reinforced with glass fibers. Superior resistance to ultraviolet degradation and corrosion resistant in harsh environments. Trim Rng (TR) and Debris Cover (DC) supplied standard.

Splice Compartment Supplied with two 3/4" NPT conduit entrances. Connection to ballast compartment by way of anti-wicking device. Sealed with gasketed die cast aluminum cover plate. Suitable for through wiring.

Lens Standard 3/8" clear tempered flat borosilicate glass (F) or ADA anti slip and walkover clear tempered flat borosilicate glass (ADA). Flat lenses will withstand loads up to 200 PSI. Sealed to housing with high temperature injection molded silicone gasket. Optional linear spread lens also available.

Lens Frame Heavy duty die cast bronze lens frame is supplied as standard. Fastened to housing with six captive 10-24 stainless steel Allen cap screws.

Reflectors

Spun aluminum highly specular Alzak™ finish for either NEMA type 1 or 2 spot (SPT) or NEMA type 3 or 4 flood (FLD) distributions. Field adjustable up to 25° tilt and 360° horizontal rotation. NOTE: Tilt adjustment varies by lamp type. A segmented fluorescent reflector is available for up to 42W lamps.

Lamp Holder Porcelain 4kv pulse rated medium base for HID and Incandescent lamp sources.

Options

Cast aluminum Convex Rock Guard (CR), Directional Shield (DS), and Driveway Marker (DM). Internal Glare Shield (IGS), Internal Hex Cell Louver (HL), Glass Color Filter (GF), Grout Mask (GM), Die cast bronze Port Hole (PH).

Finish Housing Black (BK). Options can be painted in standard or custom colors. Powder Coat Standard.

Caution: Care should be taken when specifying fixtures for use in pedestrian walkways to avoid problems that may be caused by high lens temperatures. Consult factory for more information.

Warning

Caution: Care should be taken not to install in-ground fixtures in areas where water can stand for prolonged periods of time. Sufficient drainage must be provided to avoid problems. Consult factory for more information.



PROJECT
FIXTURE TYPE
CATALOG#

Some luminaires use fluorescent or high intensity discharge (HID) lamps that contain small amounts of mercury. Such lamps are labeled "Contains Mercury" and/or with the symbol "Hg," Lamps that contain mercury must be disposed of in accordance with local requirements. Information regarding lamp recycling and disposal can be found at www.lamprecycle.org

SL-23

Product Order Guide

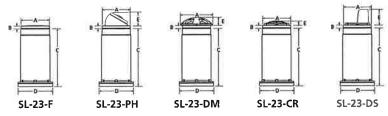
Produ	ct Order Guide	3									
Series	Max Watts	Lamp Type	Voltage	e ⁶	Optics	Lens		Finis	ih ⁶	Option	15
SL-23	Fluorescent										
	26CFT 32CFT	CFT ¹	120 : 208	SPT ¹	Spot	F ¹ ΔΠΔ ^{1,3}	Clear Flat ADA Walkover	BK ⁶ BZ ⁶	Black Bronze	DM¹ CR¹	Driveway Marker ^{2,5,7} Convex Rockguard ^{5,7}
	42CFT	CFT ¹		WW¹	Wallwash		Linear Spread	1V/He	White	DS ¹	Directional Shield ^{5,7}
	42CF1	CFI		FL ¹	Fluorescer		Linear Spreau	GR⁵	Green	PH⁴	Porthole
	High Pressure	Sodium	1					NA	Natural Alum	IGS ¹	Glare Shield
	50HPS	E171		NFLD ¹	Narrow Flo	ood		GY ⁶	Gray	HL	Hex Cell Louver
	70HPS	E17 ¹	I	MFLD ¹	Medium F	lood		CCe	Custom Color	GF GM	Glass Color Filter Grout Mask
	Metal Halide									AHOT	AIM-HOT™
	50MH	E171								LFSS1	Stainless Steel Lens Frame
										STA ¹	Square Top Adaptor ^{5,7}
	70MH	Par30 ^{1,8}								SIA	Square 10p Adaptor
	39MH	Par20 ⁸									
	70MH	E171									
	70MH	T6 or T4	.1								
	35MH	R111 ^{1,8}									
	20MH	BT5 ¹	120								
	20MH	T41	120/27	7							
	39MH	T6 or T4		•							
	ווויועוככ	10 01 14									
	Incandescent	/Halogei	n/Low V	/oltage	•						
	75INC	Par30 ^{1,8}		•							
	100INC	T4mini¹	120								
	50INC	Par20 ⁸	120								
	75INC		120/27	7/10							
			120/27 120/27								
	50INC	AKITI	120/27	//12							
	LED										
	1X5 5WLED	CUS ^{1,9}	120-27	7	10,35,45		(3050°K/ 4700°				
	Titan 25WW	CUS3 ^{1,9}	120-27	7	25,45	Warm	White (3050°K)				
	Titan 25CW	CUS3 ^{1,9}	120-27	7	25,45	Cool (Daylight) White	(4700	O°K)		

¹ Not available with the PH Porthole option, use Par20 or MR16 only.

Example: SL-23-70MH-T6-277-SPT-F-BK-DS

Luminaire Dimensions c D E Weight Luminaire lbs. Inch Inch mm Inch mm Inch mm kg Inch mm mm 8.6 8.50 19.0 SL-23-F 6.95 177 0.75 19 14.10 358 216 n/a n/a SL-23-PH 3.35 8.50 85 21.0 9.5 6.95 177 0.75 19 14.10 358 216 SL-23-DM SL-23-CR 2.00 21.0 9.5 358 8.50 216 51 8.00 203 0.75 19 14.10 0.75 358 216 8.50 25 177 19 14.10 1.00 19.5 8.8 6.95 6.95 0.75 SL-23-DS 177 19 14.10 358 8.50 216 3.85 98 20.0 9.1

CFT = triple biax



² The DM Driveway Marker can be used with any lamp option. Note: E17 Lamps 150W and below are medium base

³ Use HPBB version if greater than 39W.

⁴ The PH Porthole option is supplied as standard in die cast bronze.

⁵ These options are supplied in heavy wall cast aluminum with baked enamel painted finish.

⁶ Consult factory for other voltages and finishes. Powder Coat Standard.

⁷ Consult factory for cast bronze options.

⁸ Does not require internal optics.

⁹ The CUS version uses a 5W Atlas from Lamina. The CUS3 uses a 25W Titan from Lamina with no tilt.

YALL LIGHTS AT EXIT DOORS

Attachment 5 I UMARK®

DESCRIPTION

The patent pending Lumark Crosstour™ LED Wall Pack Series of luminaries provides an architectural style with super bright, energy efficient LEDs. The low-profile, rugged die-cast aluminum construction, universal back box, stainless steel hardware along with a sealed and gasketed optical compartment make the Crosstour impervious to contaminants. The Crosstour wall luminaire is ideal for wall/surface, inverted mount for façade/canopy illumination, post/bollard, site lighting, floodlight and low level pathway illumination including stairs. Typical applications include building entrances, multi-use facilities, apartment buildings, institutions, schools, stairways and loading docks.

Catalog #	Туре
Project	
Comments	Date
Prepared by	

SPECIFICATION FEATURES

Construction

Slim, low-profile LED design with rugged one-piece, die-cast aluminum hinged removable door and back box. Matching housing styles incorporate both a small and large design. The small housing is available in 10W and 20W. The large housing is available in the 30W model. Patent pending secure lock hinge feature allows for safe and easy tool-less electrical connections with the supplied push-in connectors. Back box includes three (3) half-inch, NPT threaded conduit entry points. The universal back box supports both the small and large forms and mounts to standard 3-1/2" to 4" round and octagonal, 4" square, single gang and masonry junction boxes. Key hole gasket allows for adaptation to junction box or wall. External fin design extracts heat from the fixture surface. Onepiece silicone gasket seals door and back box. Minimum 5" wide pole for site lighting application. Not recommended for car wash applications.

Optical

Silicone sealed optical LED chamber incorporates a custom engineered mirrored anodized reflector providing high-efficiency illumination. Optical assembly includes impact-resistant tempered glass and meets IESNA requirements for full cutoff compliance. Solid state LED Crosstour luminaries are thermally optimized with five (5) lumen packages in cool 5000K or neutral warm 3500K LED color temperature (CCT).

Electrical

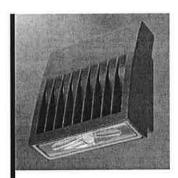
LED driver is mounted to the die-cast housing for optimal heat sinking, LED thermal management system incorporates both conduction and natural convection to transfer heat rapidly away from the LED source. 10W models operate in -40°C to 40°C [-40°F to 104°F]. 20W and 30W models operate in -30°C to 40°C [-22°F to 104°F]. High ambient 50°C models available, Crosstour luminaires maintain greater than 70% of initial light output after 72,000 hours of operation. Three (3) half-inch NPT threaded conduit entry points allow for thru-branch wiring. Back box is an authorized electrical wiring compartment. Integral LED electronic driver incorporates surge protection. 120-277V 50/60Hz or 347V 60Hz models.

Finish

Crosstour is protected with a Super durable TGIC carbon bronze or summit white polyester powder coat paint. Super durable TGIC powder coat paint finishes withstand extreme climate conditions while providing optimal color and gloss retention of the installed life.

Warranty

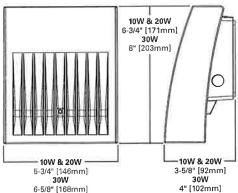
Five-year limited warranty.



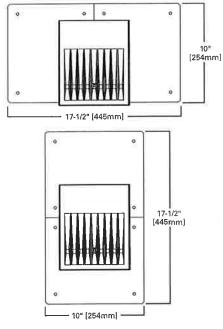
XTOR CROSSTOUR LED

APPLICATIONS: WALL / SURFACE POST / BOLLARD LOW LEVEL FLOODLIGHT INVERTED SITE LIGHTING

DIMENSIONS



ESCUTCHEON PLATES





CERTIFICATION DATA

UL/cUL Wet Location Listed LM79 / LM80 Compliant **ROHS Compliant** ARRA Compliant ADA Compliant NOM Compliant Models IP66 Ingressed Protection Rated Lighting Facts® Registered DesignLights Consortium® Qualified* Title 24 Compliant

TECHNICAL DATA

40°C Maximum Ambient Temperature External Supply Wiring 90°C Minimum

Effective Projected Area: (Sq. Ft.) XTOR1A/XT0R2A=0.34 XTOR3A = 0.45

SHIPPING DATA: Approximate Net Weight: 3.7 - 5.25 lbs. [1.7 - 2.4 kgs.]

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (72,000 Hours)	Theoretical L70 (Hours)
10W Model)	
25°C	> 91%	> 350,000
40°C	> 91%	> 340,000
50°C	> 91%	> 330,000
20W Model		
25°C	> 91%	> 340,000
40°C	> 90%	> 320,000
50°C	> 90%	> 300,000
30W Model		
25°C	> 91%	> 340,000
40°C	> 91%	> 320,000
50°C	> 90%	> 300,000

LUMENS - CRI/CCT TABLE

LED Information	XTOR1A	XTOR2A	XTOR2A-N	XTOR3A	XTOR3A-N			
Delivered Lumens (Wall Mount)	734	1432	1323	2649	2273			
Delivered Lumens (With Flood Accessory Kit)	713	1424	1315	2614	2243			
B.U.G. Rating*	B1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0			
CCT (Kelvin)	5000	5000	3500	5000	3500			
CRI (Color Rendering Index)	67	65	68	65	68			
Power Consumption (Watts)	8W	21W	21W	30W	30W			
B.U.G. Rating does not apply to floodlighting.								

CURRENT DRAW

	Model Series							
Voltage	10W	20W	30W					
120V	0.06A	0.21A	0.29A					
208V	0.04A	0.13A	0.18A					
240V	0.04A	0.12A	0.16A					
277V	0.03A	0.10A	0.14A					
347V	0.03A	0.08A	0.11A					

ORDERING INFORMATION

Sample Number: XTOR2A-N-WT-PC1

Series ¹	LED Kelvin Color ²	Housing Color	Options (Add as Suffix)	Accessories (Order Separately)
XTOR1A=Small Door, 10W XTOR2A=Small Door, 20W XTOR3A=Small Door, 30W	[Blank]=Bright White (Standard) 5000K N=Neutral Warm White, 3500K	(Blank]=Carbon Bronze (Standard) WT=Summit White	347V=347V ³ PC1=Photocontrol 120V ³ PC2=Photocontrol 208-277V ^{3,4} HA=50°C High Ambient ⁵	WG/XTOR=Wire Guard ⁶ XTORFLD-KNC=Knuckle Floodlight Kit ⁷ XTORFLD-TRN=Trunnion Floodlight Kit ⁷ XTORFLD-KNC-WT=Knuckle Floodlight Kit, White ⁷ XTORFLD-TRN-WT=Trunnion Floodlight Kit, White ⁷ EWP/XTOR=Escutcheon Wall Plate, Carbon Bronze EWP/XTOR-WT=Escutcheon Wall Plate, Summit White

NOTES: 1 DesignLights Consortium® Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details, 2 XTOR1A not available in 3500K. 3 Photocontrols are factory installed. 4 Order PC2 for 347V models. 5 Thru-branch wiring not available with HA option or with 347V. 6 Wire quard for wall/surface mount. Not for use with floodlight kit accessory. 7 Floodlight kit accessory supplied with knuckle (KNC) or trunnion (TRN)

STOCK ORDERING INFORMATION

10W Series	20W Series	30W Series
XTOR1A=10W, 5000K, Carbon Bronze	XTOR2A=20W, 5000K, Carbon Bronze	XTOR3A=30W, 5000K, Carbon Bronze
XTOR1A-WT=10W, 5000K, Summit White	XTOR2A-N=20W, 3500K, Carbon Bronze	XTOR3A-N=30W, 3500K, Carbon Bronze
XTOR1A-PC1=10W, 5000K, 120V PC, Carbon Bronze	XTOR2A-WT=20W, Summit White	XTOR3A-WT=30W, Summit White
	XTOR2A-PC1=20W, 120V PC, Carbon Bronze	XTOR3A-PC1=30W, 120V PC, Carbon Bronze



5-DAY QUICK SHIP ORDERING INFORMATION

10W Series	20W Series	30W Series
XTOR1A-WT-PC1=10W, 5000K, Summit White, 120V PC	XTOR2A-PC2=20W, 5000K, 208-277V PC, Carbon Bronze	XTOR3A-PC2=30W, 5000K, 208-277V PC, Carbon Bronze
	XTOR2A-WT-PC1=20W, 5000K, Summit White, 120V PC	XTOR3A-WT-PC1=30W, 5000K, Summit White, 120V PC
	XTOR2A-WT-PC2=20W, 5000K, Summit White, 208-277V PC	XTOR3A-WT-PC2=30W, 5000K, Summit White, 208-277V PC
	XTOR2A-N-WT=20W, 3500K, Summit White	XTOR3A-N-WT=30W, 3500K, Summit White
	XTOR2A-N-PC1=20W, 3500K, 120V PC, Carbon Bronze	XTOR3A-N-PC1=30W, 3500K, 120V PC, Carbon Bronze
· ·	XTOR2A-N-PC2=20W, 3500K, 208-277V PC, Carbon Bronze	XTOR3A-N-PC2=30W, 3500K, 208-277V PC, Carbon Bronze
	XTOR2A-N-WHT-PC1=20W, 3500K, Summit White, 120V PC	XTOR3A-N-WHT-PC1=30W, 3500K, Summit White, 120V PC
	XTOR2A-N-WT-PC2=20W, 3500K, Summit White, 208-277V PC	XTOR3A-N-WT-PC2=30W, 3500K, Summit White, 208-277V PC

Floodlighting Application

KIM ALW SERIES Attachment 5

System Approach

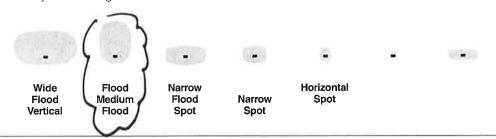
BUILDING ILLUMINATION USE KIM ALF 22

Kim Architectural Floodlighting Systems are engineered to produce the specific distributions required to illuminate horizontal and vertical surfaces from minimal set-back distances, or mounting heights. This differs greatly from sports fields, where long distances (tall mounting heights) and considerable distribution overlaps are utilized. In General Floodlighting, cut-off, control of glare and special effects are not considered important design criteria. Neither of these systems produce efficient illumination for the Architectural Environment.

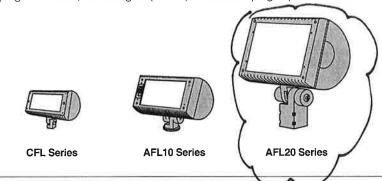
Architectural Floodlighting demands close luminaire-tosurface distances and minimal distribution overlap to reduce the number of fixtures required. Architectural features often dictate luminaire locations that are less than ideal, requiring special optical features.

To satisfy these requirements, **Architectural Floodlighting** demands a wide range of beam distributions. Further, the need to control unwanted lamp visibility, or to produce special architectural effects, such as streaking, and surface grazing, require specialized optical systems and accessories.

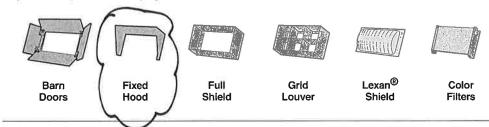
Seven Distinct Optical Distributions produce the required range to illuminate virtually any surface from very close to long distances.



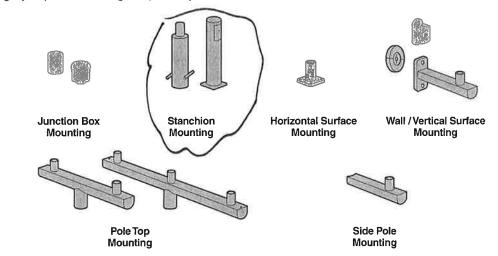
Four Luminaire Sizes provide a range of the most compact fixture scale for the requisite lamp. Fixture sizes range from the smallest (CFL) in Incandescent, Halogen, Compact Fluorescent and H.I.D. lampings to 70 watt, to the largest (AFL20) in H.I.D. lampings up to 400 watt.



Accessories, controlling unwanted lamp visibility, protecting the luminaire from vandalism, or reducing spill light in tight spotlighting distributions, make fine-tuning luminaires to special applications requirements possible. See pages 3-5 for additional details.



Kim provides the widest range of **Mounting Options** to assure that each luminaire can be mounted rigidly, to preserve aiming and provide years of trouble-free service.

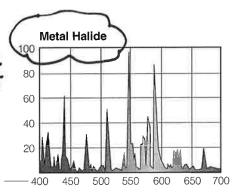


NOTE: Refer to individual series information for specific option and accessory availability.

Color Effects and Lamp Selection

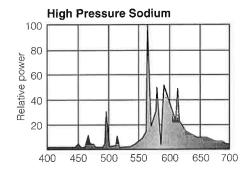
Lamp Selection

Lamp selection should be based on the coloration of the target surfaces being lighted. Where the target is predominantly warm in color, such as brick, stone, or earth-tone paint, High Pressure Sodium is appropriate. For whites, cool paint colors, exposed metals such as stainless steel, and for the greens in landscape, Metal Halide may be a more appropriate choice.



Wavelength in nanometers -

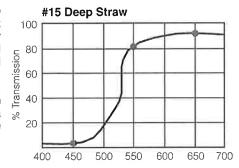
The spectral distribution chart at left shows where Metal Halide lamp output is greatest. Note that its output in the red zone, above 600nm, is very weak. This means that this lamp will not render red color well, and will tend to tint whites to appear blue and bluegreen, as this is where the lamps greatest energy is produced.



The spectral distribution chart at left shows where High Pressure Sodium lamp output is greatest. Note that its output below 550nm is very weak. The strong output in the 560nm to 625nm range is what gives this lamp its characteristic yellow-orange color appearance. These lamps will not render blue surface colors well, and will tend to tint whites to a yellow-orange color appearance.

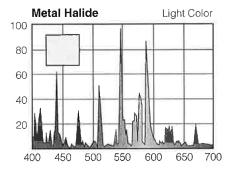
Color Filters

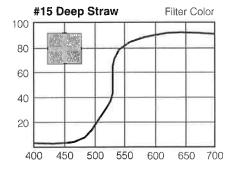
Color filters can be used to modify lamp coloration, or to add a dramatic color effect to a project. Color filters work simply by blocking some wavelengths of light, and transmitting others. Color filters cannot add color to the light passing through them. Therefore, when using color filters with H.I.D. sources, it is important to select an appropriate source, as it will have a dramatic impact on the appearance of the resulting light output.

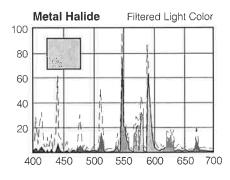


The color distribution shown for each filter is a representation of the amount of light transmitted at each wavelength. In this example; the filter will transmit approximately (•) 2% of the light passing through it at 450nm, 80% at 550nm, and 90% at 650nm.

Lamp spectral energy distribution will have a dramatic effect on the color transmitted by the color filter.







Raw Lamp Output

Filter Characteristics

Resulting Light Output

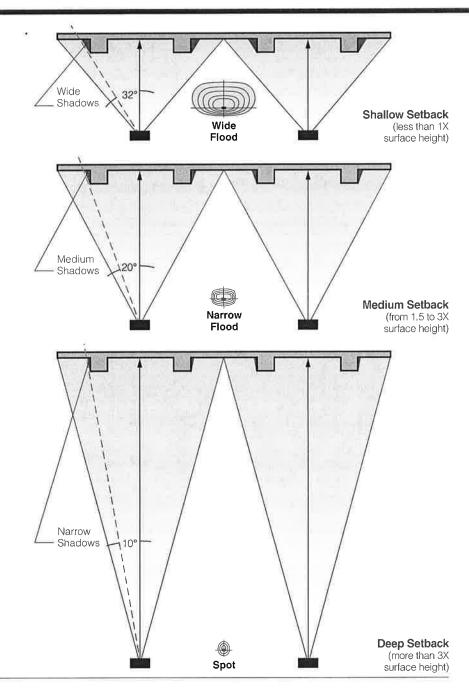
Floodlighting Effects

Setback Distance

The largest impact of setback distance is on how the surface details of the target will be modeled. The availability of a wide range of complementary optical systems means that the appropriate setback distance can be used to achieve desired shadowing and surface appearance.

Shadow Width and Setback Distance

Shadowing from surface relief is inversely proportional to setback distance. Shallow setback distances render deeper shadows. As setback distances increase, the depth of shadows is reduced.

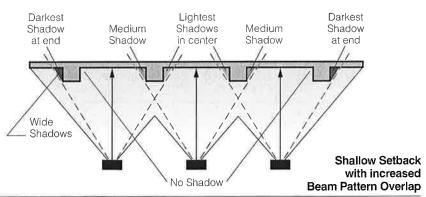


Shadows Define Shape and Depth

Shadowing defines the shape, surface texture and rendered depth of target surfaces. Elimination of all shadowing will produce a surface that appears flat. Conversely deeper, high contrast shadowing produces dramatic effects. Controlling setback distances, and the overlap of beam patterns is the key to producing a desired result.

Pattern Overlap

Increasing the overlap between adjacent beam patterns will reduce the contrast between illuminated areas and shadowing. However, shadow width will not be reduced, as this is a function of setback distance.

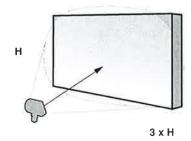


Floodlighting Effects

Flat Lighting

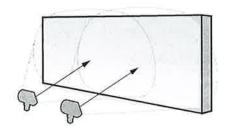
Flat lighting produces a surface that is uniformly illuminated and renders minimal surface texture and shadowing from surface relief. To achieve the best results, maximize setback distances and keep aiming angles to a minimum. For large surfaces, increase pattern overlap to reduce shadowing effects and maintain a Uniformity Ratio of between 3:1 to 4:1. Watch out for window locations, as this effect can produce offensive glare to building occupants. Additionally, reflected glare from luminaires may be visible in windows located at the same elevation as the observer.

Single Fixtures



Maximize Setback Distances and minimize aiming angles.

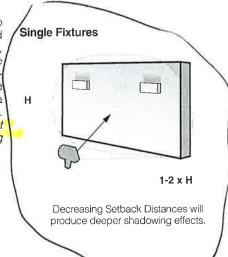
Multiple Fixtures



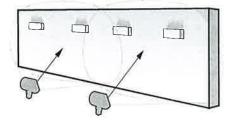
Maximize Pattern Overlap to attain a 3:1 Uniformity Ratio.

Surface Modeling

Surface modeling produces subtle to dramatic modeling of surface detail and texture. For surfaces with deep relief, increase setback distances. Use moderate lateral fixture spacings to control crosslighting. For large surfaces, use moderate spacings between fixtures to attain a uniformity ratio of between 5:1 and 7:1. Watch out for window locations, as this effect can produce offensive glare to building occupants.



Multiple Fixtures

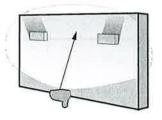


Utilize moderate fixture spacing to control cross-lighting and attain a minimum **6:1 Uniformity Ratio**.

Surface Texturing

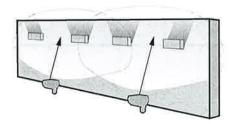
Grazing is used when the desired effect is to dramatically accentuate surface texture and detail. Grazing is accomplished by placing fixtures very close to the surface to be lighted and utilizing very high aiming angles. Kim Horizontal Spot reflectors are specifically designed for this application. To soften the effect, increase setback distances slightly. For large areas, use moderate spacings between fixtures to attain a uniformity ratio of between 5:1 and 7:1. Watch out for deep reliefs and surface detailing, which can create undesirable shadows on the building surface. Consider using fixed hoods to reduce visibility of the fixture lens(es).

Single Fixtures



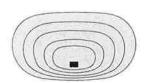
Minimize Setback Distances and maximize aiming angles. The closer the fixtures are to the surface, the greater the surface texture will be accentuated

Multiple Fixtures



Utilize moderate fixture spacing to control cross-lighting and attain a minimum 6:1 Uniformity Ratio.

Application Guide



Wide Flood CFL1 AFL11 AFL21



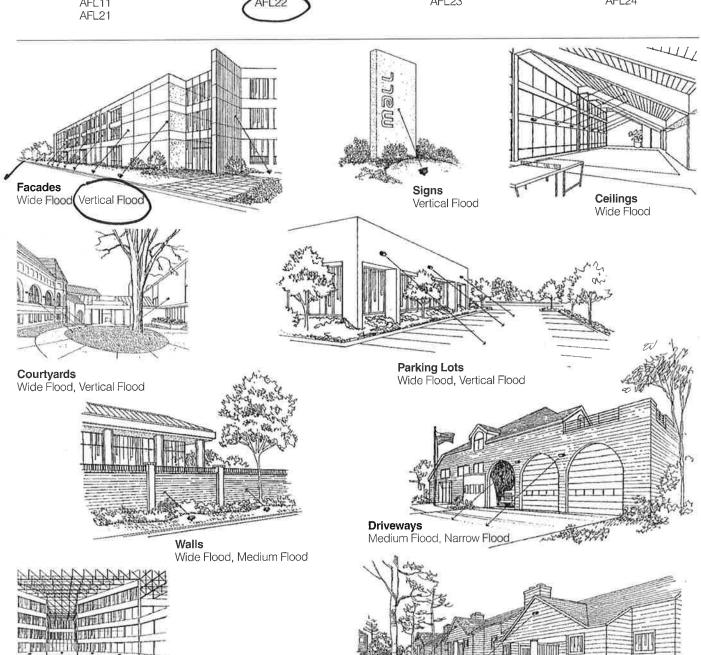
Vertical Flood AFL22



Medium Flood AFL13 AFL23



Narrow Flood AFL14 AFL24





Atriums Medium Flood



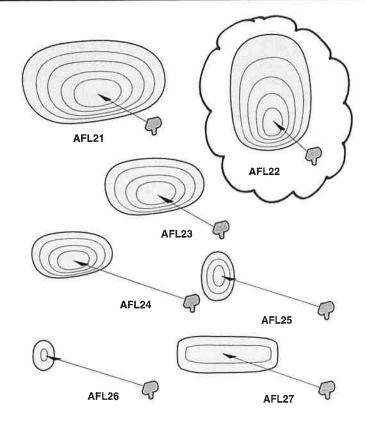
WALL WASHER LIGHTS

Important Features

Seven Beam Patterns

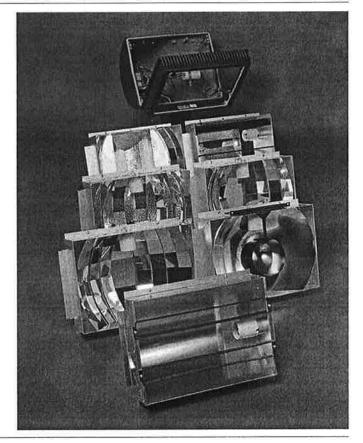
The nature of floodlighting mandates versatility. The tremendous variety of surfaces and objects to be illuminated is further complicated by variables like fixture location and distance. The AFL20 Series satisfies this need for flexibility: Seven available beam patterns can be used individually or in combinations to illuminate any object from distances of 10' to 150' - from the AFL21 Wide Flood to the laser-like accuracy of the AFL26 Narrow Spot reflector. The AFL22 Vertical Flood has a unique optical design that is ideal for lighting both vertical and horizontal surfaces with very low brightness above the main beam. All seven beam patterns are the result of precision Kim reflector systems that generate high efficiencies and outstanding uniformity of illumination.

See pages 60-61 for beam properties and application guidelines.



Die-Cast Housing with Interchangeable Optics

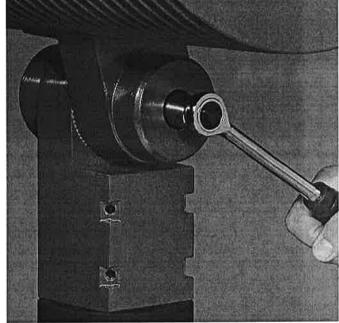
The AFL20 Series housing and door frame are precision die-castings with integral cooling ribs that dissipate heat allowing the electrical components to operate well below their allowable limits. A single housing will accept any of the seven optical systems which are easily interchangeable on the job. Because floodlighting is as much art as it is science - final adjustments to the lighting effect may occasionally require changes of the beam pattern. To accomplish this, the door frame is opened and removed with slip hinges allowing easy access to the reflector module. Each reflector module is a one-piece assembly retained by four captive screws around a perimeter flange. Changing beam patterns is a simple task, and provides the AFL20 Series with flexibility for fine-tuning projects on the jobsite.



Multi-Function Swivel

The **AFL20** swivel is constructed of heavy cast aluminum with locking teeth, and accomplishes three tasks: First it allows fixture aiming in the vertical plane by loosening a single recessed stainless steel bolt and setting locking teeth with 5° intervals. Second, it provides a field-splice compartment accessible through the opposite knob from the aiming adjustment. Third, the swivel slipfits a standard 2" tenon (see page **68**), and is secured with four heavy duty stainless steel socket head set screws.





Field-splice compartment integrated into swivel design.

Vandal Protection

An optional Lexan[®] vandal resistant lens shield is available for applications where vandalism is anticipated.

NOTE: The lens shield is made from an advanced polymer, Lexan[®] Resin from GE Advanced Materials. Lexan[®] dramatically reduces lens yellowing and becomes stable within the first 100 hours of operation. Lexan[®] offers significantly greater retained impact and vandal resistance during the life of the lens.

CAUTION: Use only when vandalism is anticipated.

Optical Control

The AFL20 Series has a variety of optical accessories to control glare and increase the visual effectiveness of the lighting scheme. Shielding devices are carefully engineered to prevent shadows and preserve beam efficiency while reducing undesirable transient brightness. Barn Doors are a familiar accessory that allow for field-adjustable glare shielding. The Fixed Hood is a moderate shielding device and the Full Shield is a complete shielding device. Both are ideally suited for applications close to walkways, driveways, or roadways. Grid Louvers are engineered to maximize beam efficiency while minimizing glare and shadows from the internal vanes. Two types of louvers are available, one for use with the AFL24, and the other for use with the AFL25 and AFL26. The Lexan[®] Lens Shield is available for applications where vandalism is anticipated. The Color Filter Assembly is designed to be used alone or in conjunction with the Barn Doors, Fixed Hood, or Full Shield. Dynamic floodlighting effects are possible by utilizing any of the color filters specifically engineered for use in high temperature floodlighting applications. See page 69 for details.











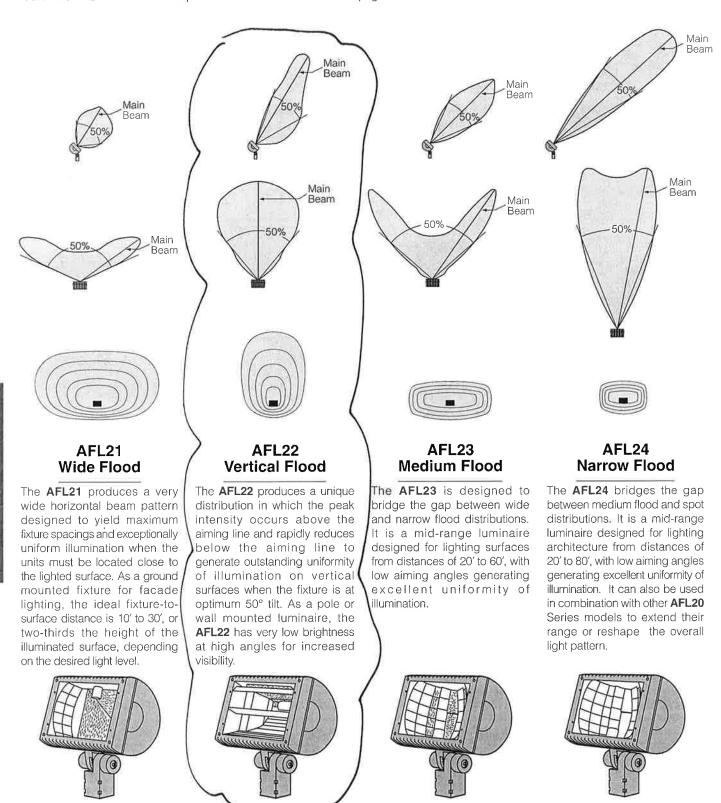




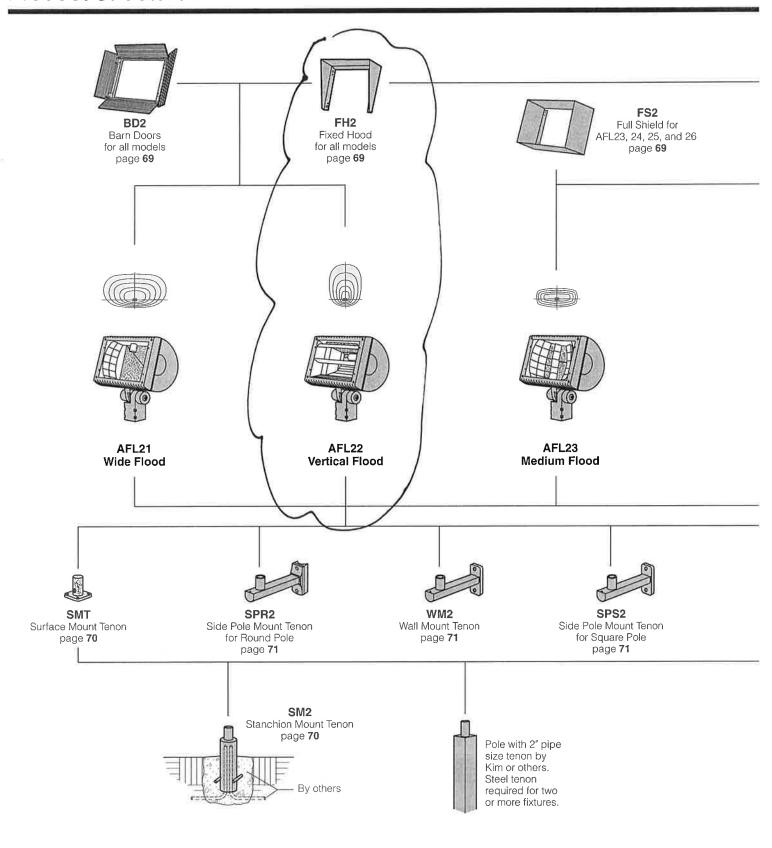


Beam Properties

These illustrations are representations of the beam spreads produced by each optical system. They are intended to help you visualize the performance differences between each model without having to analyze photometric charts. **AFL21** through **AFL25**, and the **AFL27** beam patterns are shown in identical scale. The **AFL26** beam pattern is shown at ½ scale due to page constrictions.



Product Structure

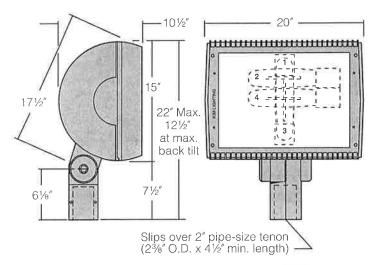


Luminaire Specifications

Dimensions

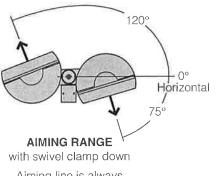
AFL20 Models 250 to 400 watt H.I.D. Mogul Base Lamps

EPA: 1.3 (45° tilt) 2.3 (Face on) Maximum weight: 49 lb



SIDE

FRONT



- ¹ **AFL21** lamp position (base up)
- ² **AFL22** lamp position
- ³ **AFL23, 24, 25, 26** lamp position (base down)
- ⁴**AFL27** lamp position

Aiming line is always perpendicular to front face of fixture

Housing: One-piece die-cast, low copper (<0.6% Cu) aluminum in a cylindrical shape with integral cooling fins over the entire length, and 1/8" minimum wall thickness. One-piece extruded and vulcanized silicone gasket between housing and door frame concealed when fixture is closed. Concealed integral cast slip hinges with stainless steel pins...

Door Frame: One-piece die-cast, low copper (<0.6% Cu) aluminum with integral cooling fins, ½" minimum wall thickness, mates with housing to create a continuous cylindrical shape. Concealed integral cast slip hinges allow removal without tools. Removable stop-arm provided to limit door frame opening. ¾6" thick clear tempered glass lens is sealed to the lens frame by a one-piece molded silicone gasket. Door frame secures to housing by four stainless steel recessed captive allen-head screws. Four tapped and plugged holes provided for attachment of options.

Swivel: Heavy cast aluminum twin knob configuration with integral field-splice compartment, and mounts to a 2" pipe size tenon (2%" O.D. x 4½" min, length). One stainless steel bolt, recessed in knob, locks swivel teeth at 5° increments. Opposite knob is removable for access to the field-splice compartment. Swivel is fully gasketed. Clear anodized prior to chromate conversion coating for added corrosion resistance.

Reflector Assemblies: Interchangeable in all seven AFL20 models. Specular Alzak[®] aluminum optical components rigidly mounted in a clear anodized aluminum frame which attaches to housing as a one-piece assembly. Sockets are 4KV porcelain mogul base.

Electrical Components: All electrical components are UL and CSA recognized with leads extending out of the swivel splice compartment. High power factor ballast rated -40°F starting for HPS and -20°F for MH lamp modes. See lamp and electrical data on pages **96-98** for ballast types and characteristics.

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 and subject to additional charges, minimum quantities and longer lead times. Consult representative.

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.

Listings and Ratings					
UL cUL 1598	_				
IP66 Rated	CE				

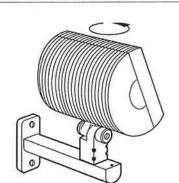
Optional Photocell (A30 - A35): Ordered assembled with fixture, Factory installed with flush sensor on side of housing. Select photocell with same line volts as fixture.

CAUTION: Use only in locations where adjacent lighting will not affect operation of photocell.

Aiming Ranges



Reference symbol for fixture aiming range when mounted on the option as shown. This range is in the vertical plane and does not necessarily apply to all conditions. See page **68** for full aiming range without mounting options.





Swivel

The standard heavy duty swivel mounted on either the SM2, SMT, WM2, SPS2, SPR2-X, MTM-2B, MTM-3E, or pole top tenon, provides aiming between -120° to 75° off horizontal.

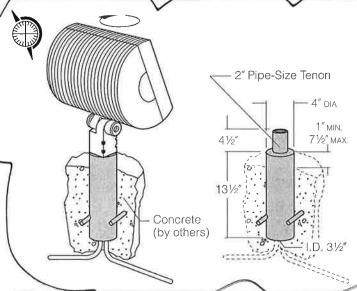
Mounting Option Specifications

Ordered separately from fixture.

See pages 64-67 for complete ordering information.

Stanchion Mount Tenon (SM2): 4" O.D. cast low copper (<0.6% Cu) aluminum stanchion with 2" pipe-size tenon (2%" O.D., 1%" I.D.) for mounting a single fixture or multiple top-mounts.

CAUTION: Multiple top-mounts must not be used in locations where people can climb on fixtures and mounting arms. To assure a rigid installation, Stanchion must be set in concrete (by others).



Surface Mount Tenon (SMT): 2'' pipe-size tenon (2%'' O.D., 2'' I.D.) welded to a cast aluminum plate. Plate has four $\frac{1}{2}''$ mounting holes, and tenon has one $\frac{1}{2}''$ NPT for side conduit entry.

NOTE: Not for use with **MTM-2B** or **MTM-3E** options. May be wall mounted if horizontal fixture adjustment is not required. For wall mounting with horizontal fixture adjustment, use **WM2** (see page **66**).

AFL21 Wide Flood Beam Spread Chart

Lamp	Lamp Watts	Initial Lumens¹	I.E.S. Type	Maximum Candlepower	Field Angle (10% of max.)	Beam Angle ² (50% of max.)	I.T.L. Test No.	Iso Pg.
HIGH PRESSURE SODIUM		, st. 1, 40	N. Tari			AN 16 M 45 5TH		
250HPS E-18 clear mogul base	250	30,000	7H x 6V	11,580 (55.0°H x 15.0°V)	146.8°H x 124.0°V	132.0°H x 93.0°V	34659	161
400HPS E-18 clear mogul base	400	50,000	7H x 6V	17,596 (56.3°H x 12.8°V)	147.8°H x 128.0°V	136.0°H x 100.0°V	34660	161
PULSE START METAL HALIDE							14.03	
250PMH ED-28 clear mogul base	250	20,500	7H x 6V	8,074 (55.0°H x 15.0°V)	146.6°H x 126.0°V	126.0°H x 87.0°V	34661	161
400PMH ED-28 clear mogul base	400	36,000	7H x 6V	14,021 (55.0°H x 15.0°V)	147.1°H x 126.0°V	136.0°H x 101.0°V	34662	161

¹All Initial Lumen values shown are approximate and may vary from one manufacturer to another. Consult lamp manufacturer's data for exact lumen

AFL22 Vertical Flood Beam Spread Chart

Lamp	Lamp Watts	Initial Lumens³	I.E.S. Type	Maximum Candlepower	Field Angle (10% of max.)	Beam Angle⁴ (50% of max.)	I.T.L. Test No.	Iso Pg.
HIGH PRESSURE SODIUM	Source:	a di Nasi		The state of the s		ASSESSMENT OF THE PARTY.	والبلالات	بالملاج
250HPS E-18 clear mogul base	250	30,000	6H x 4V	20,000 (14.7°H x 15.8°V)	118.0°H x 71.0°V	80.0°H x 16.0°V	34535	167
400HPS E-18 clear mogul base	400	50,000	6H x 5V	32,192 (11.6°H x 16.1°V)	116.0°H x 71.0°V	80.0°H x 28.0°V	34541	167
PULSE START METAL HALIDE							ë .	HE YOU
250PMH ED-28 clear mogul base	250	19,500	6H x 5V	12,567 (18.0°H x 14.5°V)	128.0°H x 80.8°V	76.0°H x 33.0°V	34543	167
400PMH ED-28 clear mogul base	400	36,000	6H x 5V	19,896 (21.8°H x 14.7°V)	128.0°H x 80.0°V	86.0°H x 42.0°V	34697	167

³All Initial Lumen values shown are approximate and may vary from one manufacturer to another. Consult lamp manufacturer's data for exact lumen

AFL23 Medium Flood Beam Spread Chart

	Lamp	Lamp Watts	Initial Lumens⁵	I.E.S. Type	Maximum Candlepower	Field Angle (10% of max.)	Beam Angle (50% of max.)	I.T.L. Test No.	Iso Pg.
HIGH PRES	SURE SODIUM	tuo erg							
250HPS	E-18 clear mogul base	250	30,000	7H x 5V	22,808 (41.6°H x -9.0°V)	135.4°H x 99.9°V	98.0°H x 43.0°V	46389	173
400HPS	E-18 clear mogul base	400	51,000	7H x 6V	35,215 (38.9°H x -8.9°V)	137.1°H x 107.0°V	100.0°H x 48.0°V	46390	173
	RT METAL HALIDE							Salivelins	AYO:
250PMH	ED-28 clear mogul base	250	21,000	7H x 5V	18,251 (39.2°H x 0.3°V)	132.3°H x 87.8°V	96.0°H x 40.0°V	46387	173
400PMH	ED-28 clear mogul base	400	36,000	7H x 5V	30,468 (39.3°H x -1.6°V)	134.1°H x 98.6°V	96.0°H x 38.0°V	46388	173

⁵All **Initial Lumen** values shown are approximate and may vary from one manufacturer to another. Consult lamp manufacturer's data for exact lumen and life data.

NOTE: For lamp/ballast information outside of the U.S.A. and Canada, please consult your local Kim representative.

WARNING: All fixtures must be grounded in accordance with local codes or the National Electrical Code. Failure to do so may result in serious personal injury. Lamps by others.

²Beam Angle: Horizontal and vertical beam spreads interpolated due to no valid I.E.S. standard.

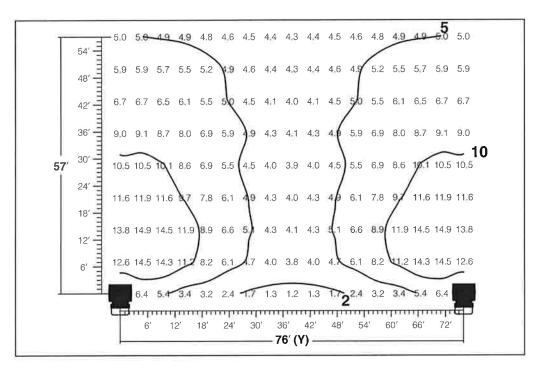
Beam Angle: Horizontal and vertical beam spreads interpolated due to no valid I.E.S. standard.



Architectural Floodlights Photometrics

50 - 400 Watt





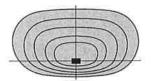


AFL Beam Properties at a Glance

System Approach

Wide Flood

CFL₁ pages 101-109 AFL11 pages 119-123 AFL21 pages 161-165



Beam Shape

At 1 Fc, ratio of W to H at the indicated aiming angles

@ 10° Aiming Angle

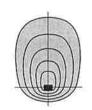
Ratio 1W:.68H

Applications

For illumination of walls and building facades that are wider than they are tall. Well suited for wall lighting from medium setback distances. Also, excellent for area lighting from perimeter pole or wall mount locations.

Vertical Flood

AFL12 pages 125-129 AFL22 pages 167-171



Beam Shape

@ 40° Aiming Angle Ratio

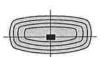
1W: 1.63H

Applications

For illumination of walls and building facades that are taller than they are wide. Well suited for wall lighting from medium setback distances, Also, excellent for area lighting from perimeter pole or wall mount locations.

Medium Flood

AFL13 pages 131-135 AFL23 pages 173-177



Beam Shape

@ 10° Aiming Angle

Ratio 1W:.72H

Applications

For illumination of walls and building facades that are short in height and wide laterally. Well suited for wall and sign lighting from medium setback distances.

Narrow Flood

AFL14

pages 137-141

AFL24 pages 179-183



Beam Shape

@ 10° Aiming Angle

Ratio

1W:.85H

Applications

For illumination of surfaces from deeper setback distances. Well suited for highlighting signage and illumination of atriums from high ceiling locations, as well as large areas from high building mounted installation.

Spot

AFL15

pages 143-147

AFL25

pages 185-189



Beam Shape

@ 5° Aiming Angle

Ratio

1W:1.1H

Applications

For accent and highlighting of architectural features. Also, used for illumination of facades from great distances or extreme setback distances.

Narrow Spot

CFL6

pages 110-116

AFL16 AFL26

pages 149-153 pages 191-195

Beam Shape

@ 0° Aiming Angle

Ratio

1W: 1.2H

Applications

For highlighting and key spotlighting of selected architectural and landscape features. Well suited for illuminating very tall structures, grazing columns, and highlighting small objects from great distances.

Horizontal Spot

AFL17

pages 155-159

AFL27

pages 197-201



Beam Shape

@ 0° Aiming Angle

Ratio

1W:.33H

Applications

Wide lateral and very narrow vertical pattern is specifically designed for grazing wall surfaces, as well as highlighting linear architectural detail.

CFL

Photometric System Design

Illuminance level required

Charts below show I.E.S. recommended illuminance in Average Maintained Footcandles. These values correspond to the values on each Isofootcandle diagram on the following "Isofootcandle Diagram" pages. Refer to the beam spread charts on page **26**.

Floodlig	į F	Parking Lot Lighting			
Surface Material Examples	Surroundir	ng Light Level	Lavial of	Vehicular	Pedestrian
See page 244 for average surface	Bright	Dark	Level of Activity	Traffic	Security
reflectance values.	Avg. Maintair	Activity	Avg. Maintained Footcandle		
Light marble, white or cream terra cotta, white plaster	15	5	Low	0.5	0.8
Concrete, tinted stucco, light gray and buff limestone, buff face brick	20	10	Medium	0.5	0.0
Common tan brick, sandstone, medium gray limestone	30	15	High	2	4
Common red brick, stained wood, dark gray brick	50	20	$\gamma \sim$	mark.	
~~~~	<u> </u>			-	

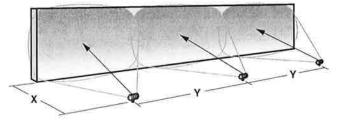
#### **Uniformity of Illumination**

Dimension  $\mathbf{X}$  is obtained directly from the isofootcandle diagram. Listed  $\mathbf{X}$  dimensions represent the optimum range for that lamp and wattage. Dimension  $\mathbf{Y}$  (fixture spacing) is simply a multiple of  $\mathbf{X}$  obtained by figuring the longitudinal distance to the next fixture. The next fixture is located where its light pattern intersects the previous fixture as illustrated above.

Refer to individual lateral spacing information for specific fixtures for details on determining spacing Y for various mounting distances X.

**NOTE:** All areas of uniformity are based on a lighting system, not individual fixtures. Therefore areas of uniformity are calculated assuming contributions from adjacent fixtures.

Facade, Wall, or Sign

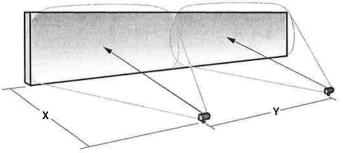


For facade, wall, or sign lighting, optimum visual uniformity is achieved when the maximum-to-minimum illumination is no greater than **3:1**.

Example:

If X = 10', Y would = 30'





For facade, wall, or sign lighting where a slight noticeable drop in illumination between fixtures is acceptable, use **6:1** uniformity.

Example:

If X = 10', Y would = 60'



If X = 10', Y would = 120'

All Initial Lumen values shown are approximate and may vary from one manufacturer to another. Consult lamp manufacturer's data for exact lumen and life data.

Beam Angle: Horizontal and vertical beam spreads interpolated due to no valid I.E.S. standard.

## Isocandela Diagrams

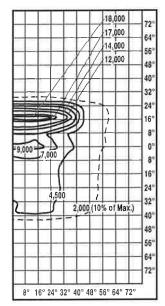
## Vertical Flood

#### 250 watt High Pressure Sodium

E-18 clear mogul base I.T.L. Test No. 34535 30,000 initial lumens ANSI Code S-50

I.E.S.Type:  $6H \times 4V$ Field Angle: 118.0°H x 71.0°V

Beam Angle²: 80.0° H x 16.0° V (50% max.)



#### 400 watt High Pressure Sodium

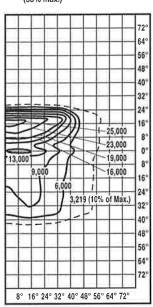
E-18 clear mogul base I.T.L. Test No. 34541 50,000 initial lumens ANSI Code S-51

I.E.S. Type:  $6H \times 5V$ Field Angle: 116.0°H x 71.0°V

(10% max.)

Beam Angle²: 80.0° H x 28.0° V

(50% max.)



#### 250 watt Metal Halide

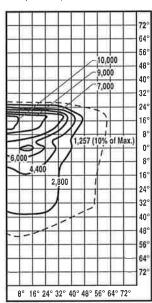
BT-28 clear mogul base I.T.L. Test No. 34543 19,500 initial lumens ANSI Code M-58

I.E.S. Type: 6H x 5V

Field Angle: 128.0° H x 80.8° V (10% max.)

Beam Angle²: 76.0° H x 33.0° V

(50% max.)



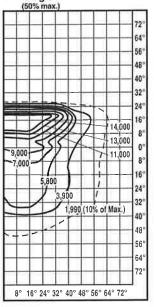
#### 400 watt Metal Halide

ED-28 clear mogul base "reduced outer

I.T.L. Test No. 34697 36,000 initial lumens ANSI Code M-59

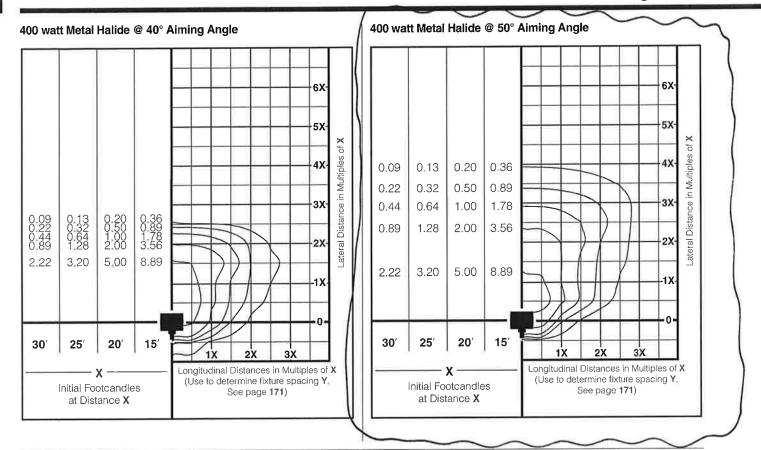
**I.E.S. Type:** 6H x 5V Field Angle: 128.0° H x 80.0° V (10% max.)

Beam Angle²: 86.0° H x 42.0° V

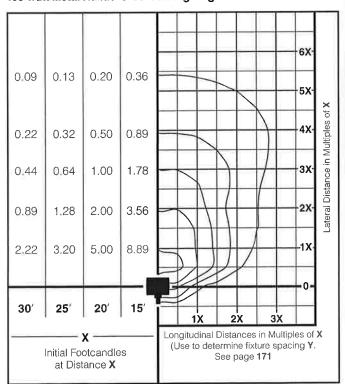


## **Vertical Flood**

## 400MH Isofootcandle Diagrams



#### 400 watt Metal Halide @ 60° Aiming Angle

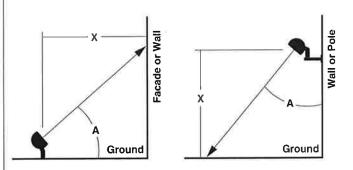


#### PRORATING CHART

Isofootcandle diagrams shown with 400 watt Metal Halide lamp use the following prorating multipliers for other wattages:

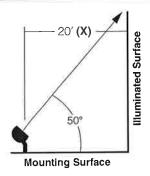
Lamp	Initial Lumens	Factor		
400MH	36,000	1.000		
250MH	19,500	0.542		

#### Aiming Angle (A) see individual diagrams



## 400MH Lateral Spacing

## **Vertical Flood**



#### AFL22/400MH

ED-17 clear medium base I.T.L. Test No. 34547 36,000 initial lumens ANSI Code M-59

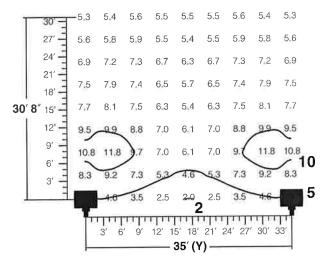
To calculate spacing **(Y)** for Setback Distances other than 20' shown, multiply actual Setback Distance **(X)** by the following:

<b>Uniformity Ratio</b>	Factor
3:1	1.30
6:1	1.75
12:1	2.20

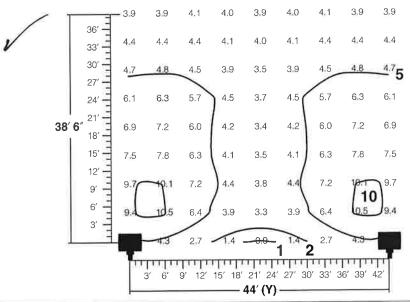
Example: 21' Setback, **6:1** desired uniformity,  $Y = 21' \times 1.75$  or **36.75' (36' 9')** 

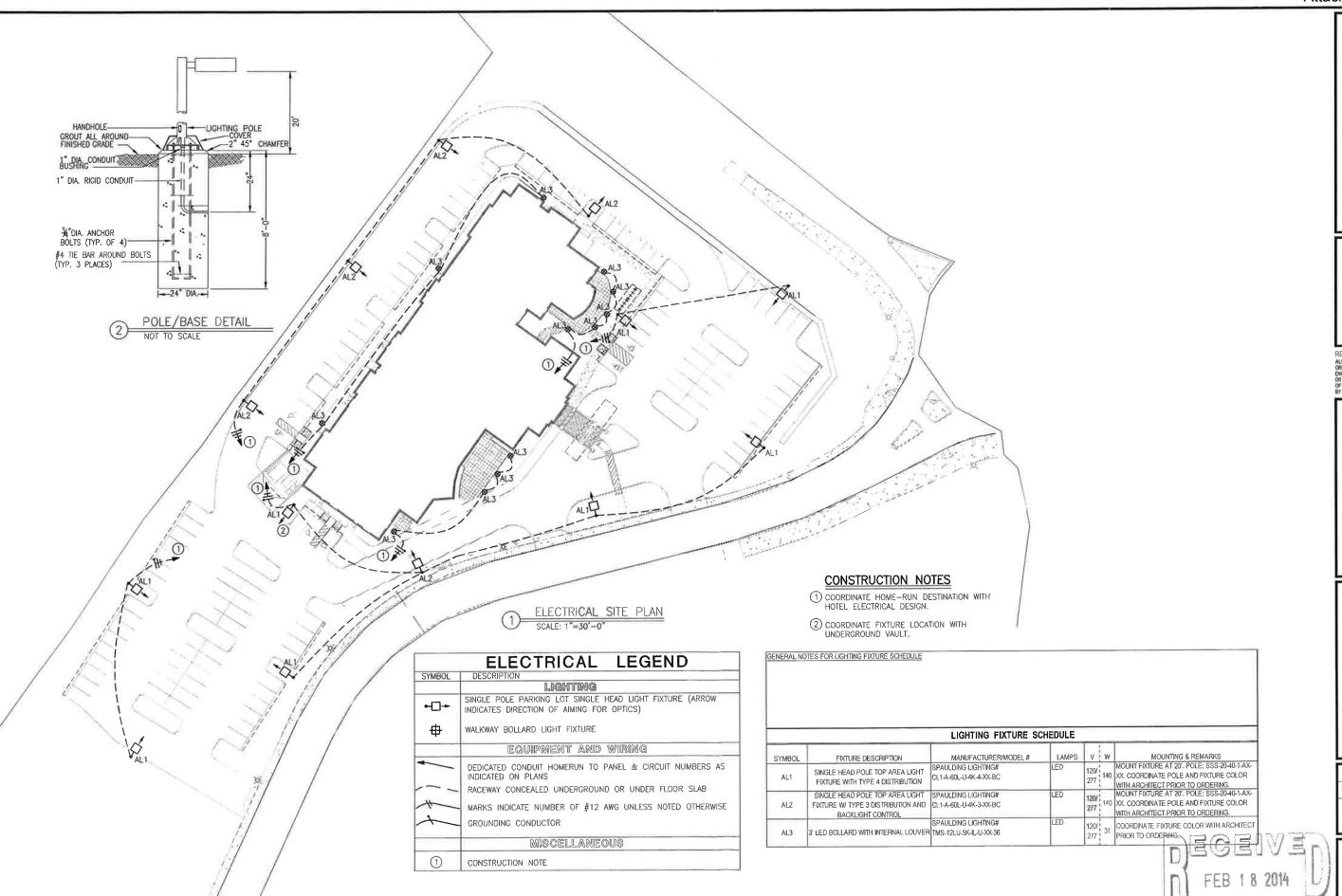
3:1 Use for optimum visual uniformity on facades, walls or signs 8.5 9.4 8.6 21' 9.6 10,0 8.9 8.9 18' 9.1 15' 10.4 10.4 **Q8 10** 9.8 12 11.7 11.2 22' 9" 11,2 11.7 10.7 9' 13.0 12,3 12.3 13.0 11.0 12.010 12,0 12.8 7.4 3' 7.4 7.6 5 6' 9' 12' 15' 18' 21' 24' - 26′ (Y) -

Use where a slightly noticeable drop in uniformity is acceptable 6:1



Use for area lighting where maximum spacing is desired 12:1





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HILTON GARDEN INN

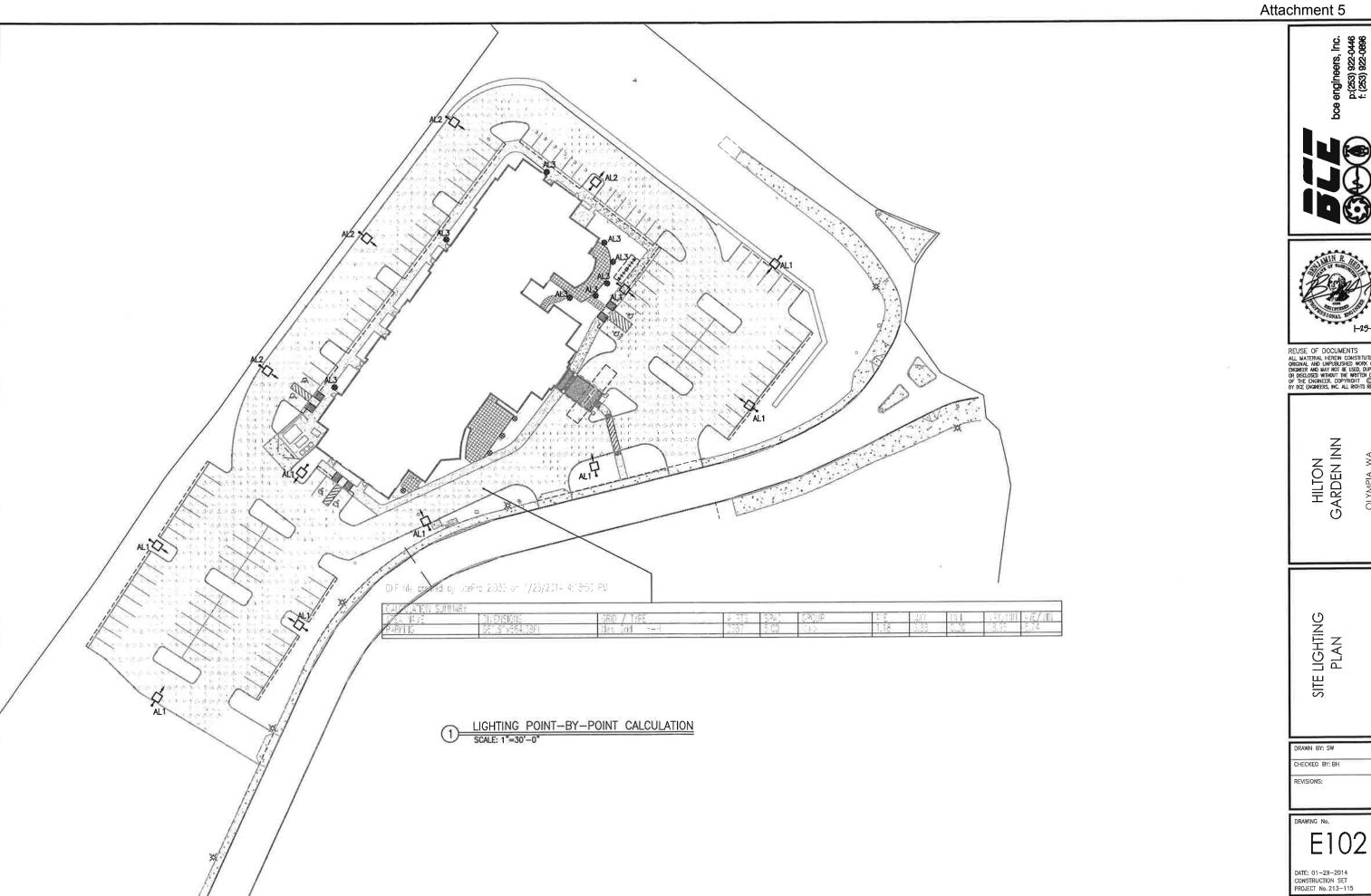
SITE LIGHTING PLAN

DRAWN BY: SW
CHECKED BY: BH
REVISIONS:

E101

DATE: 01-29-2014 CONSTRUCTION SET PROJECT No. 213-115

COMMUNITY PLANNING AND DEVELOPMENT DEPT

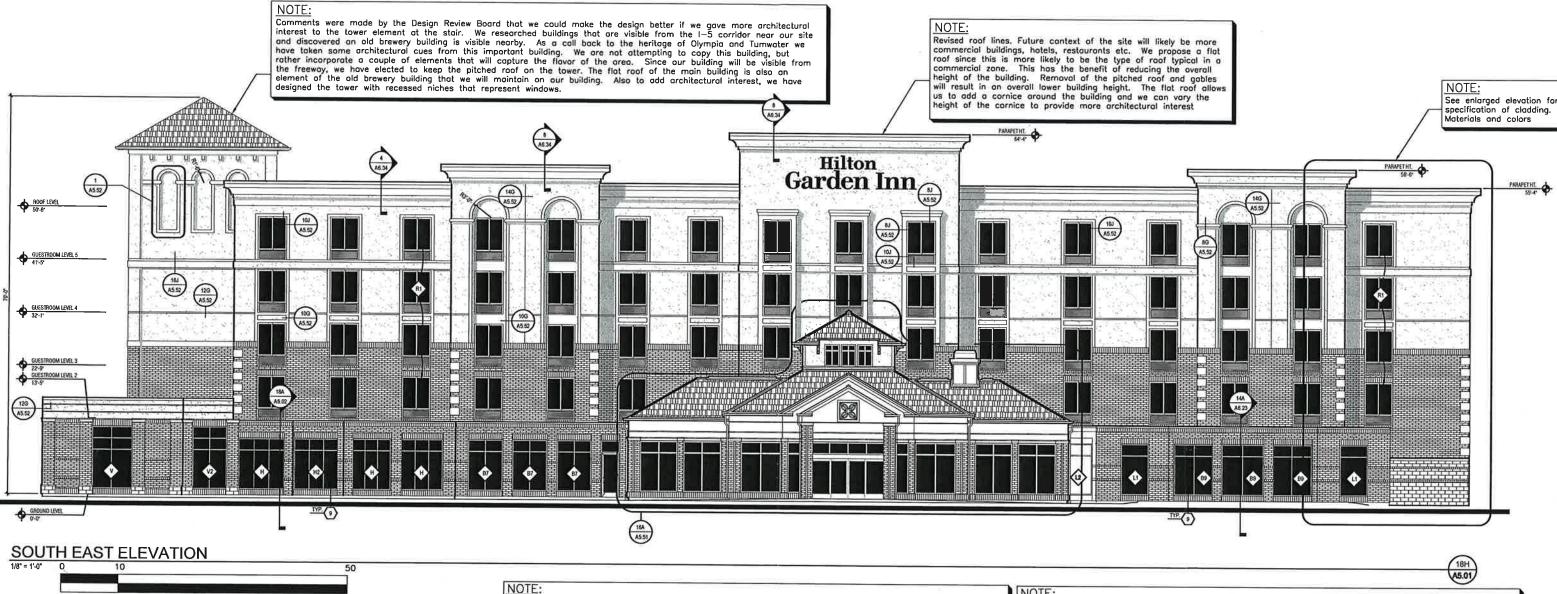




## Reduced (11x17 plans)

Hilton Garden Inn Olympia, Wa





We propose to use brick veneer on the base of the building. The brick will extend to a height of 2 ½ stories. Above the brick we propose to use stucco finishes. By using stucco, we have the opportunity to add architectural trim around the windows. Building out around the windows allows us to add elements that are similar to the windows in the old brewery building. Stucco gives us more opportunity to add arches and other elements that are difficult to do with wood siding.

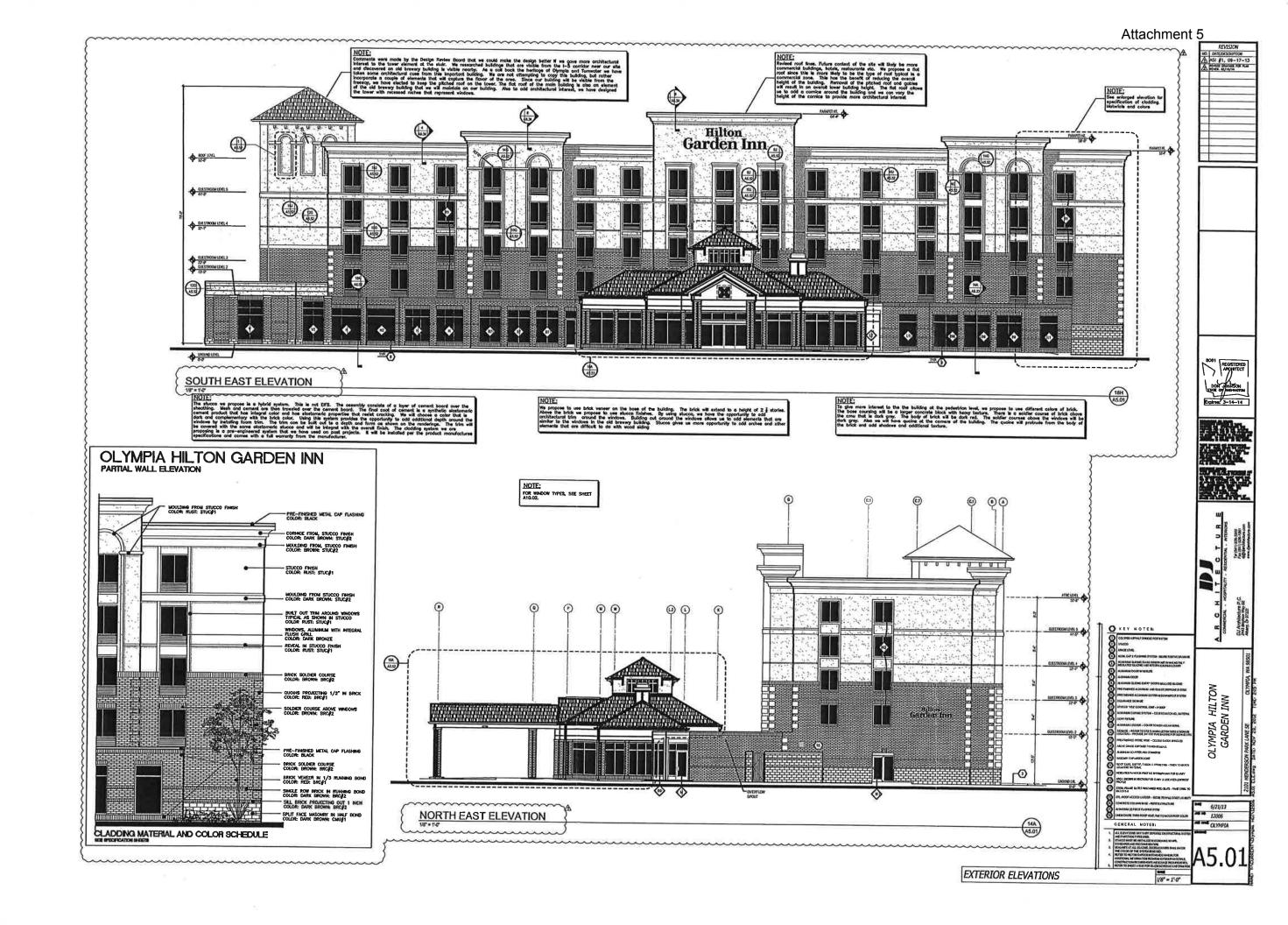
#### NOTE:

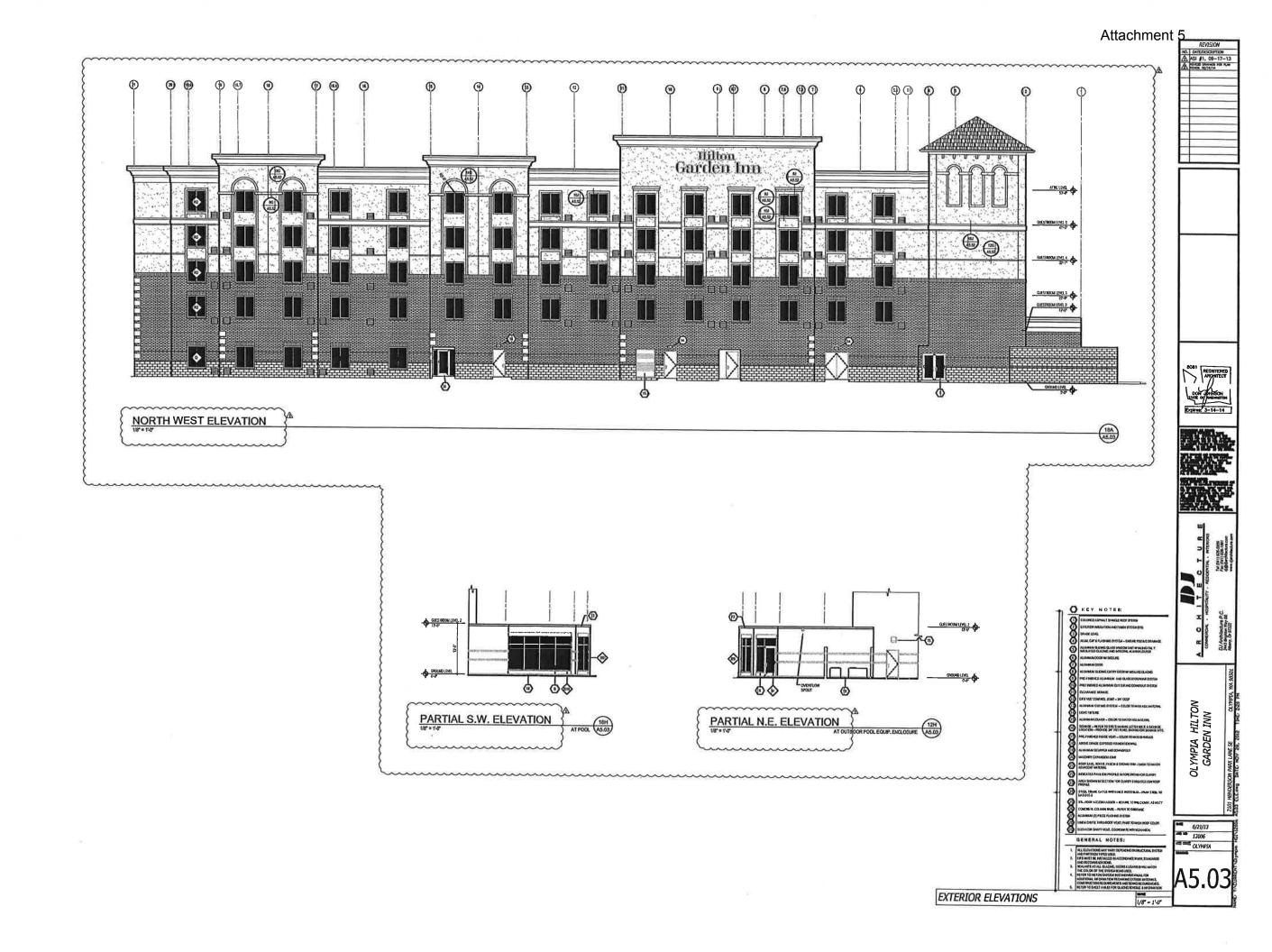
The stucco we propose is a hybrid system. This is not EIFS. The assembly consists of a layer of cement board over the sheathing. Mesh and cement are then troweled over the cement board. The final coat of cement is a synthetic elastomeric cement product that has integral color and has elastomeric properties that resist cracking. We will choose a color that is dark and complementary with the brick color. Using this system provides the apportunity to add additional depth around the windows by installing from trim. The trim can be built out to a depth and form as shown on the renderings. The trim will be covered with the same elastomeric stucco and will be integral with the overall finish. The cladding system we are proposing is a pre-engineered system that we have used on past projects. It will be installed per the product manufactures specifications and comes with a full warranty from the manufacturer.

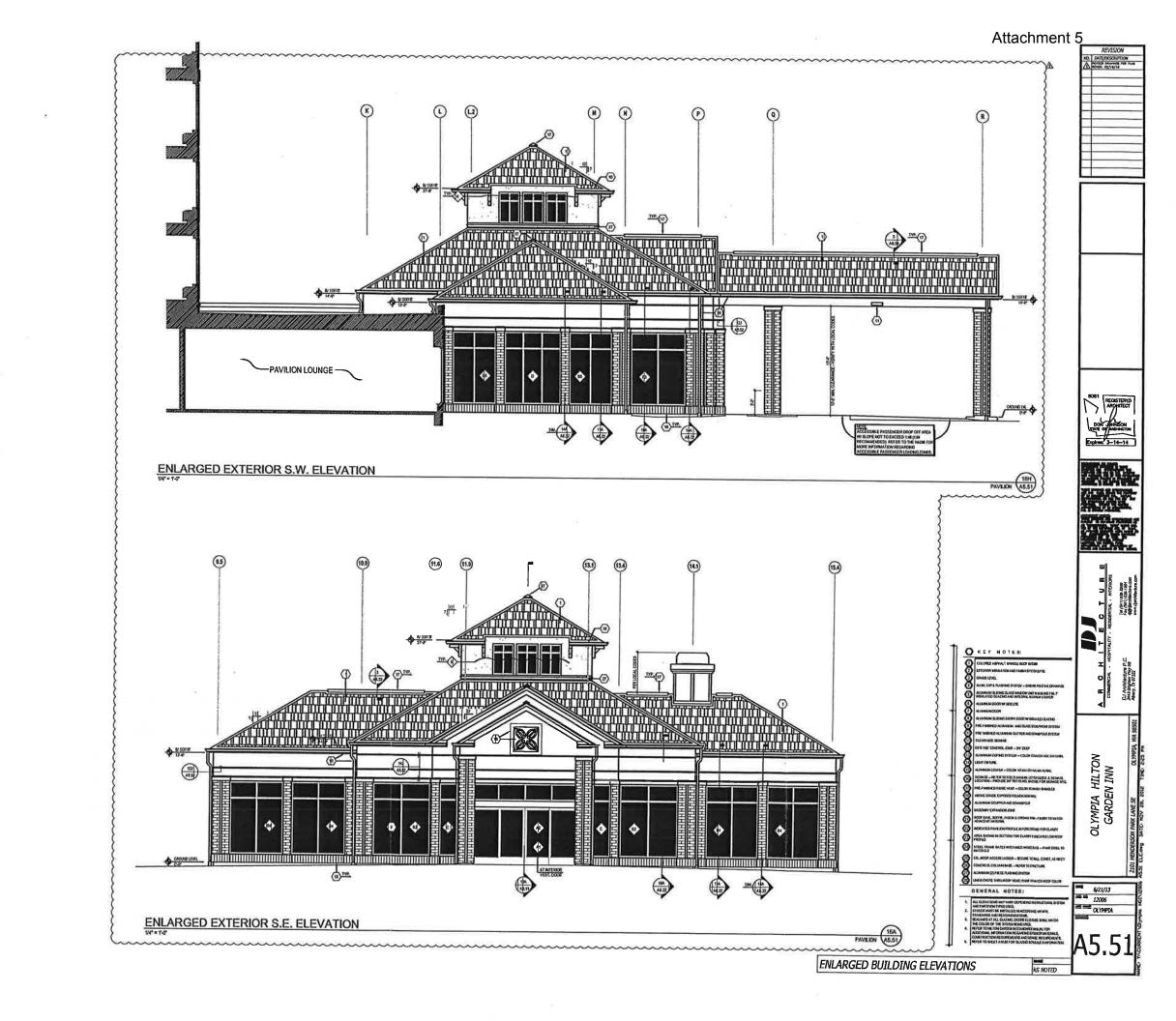


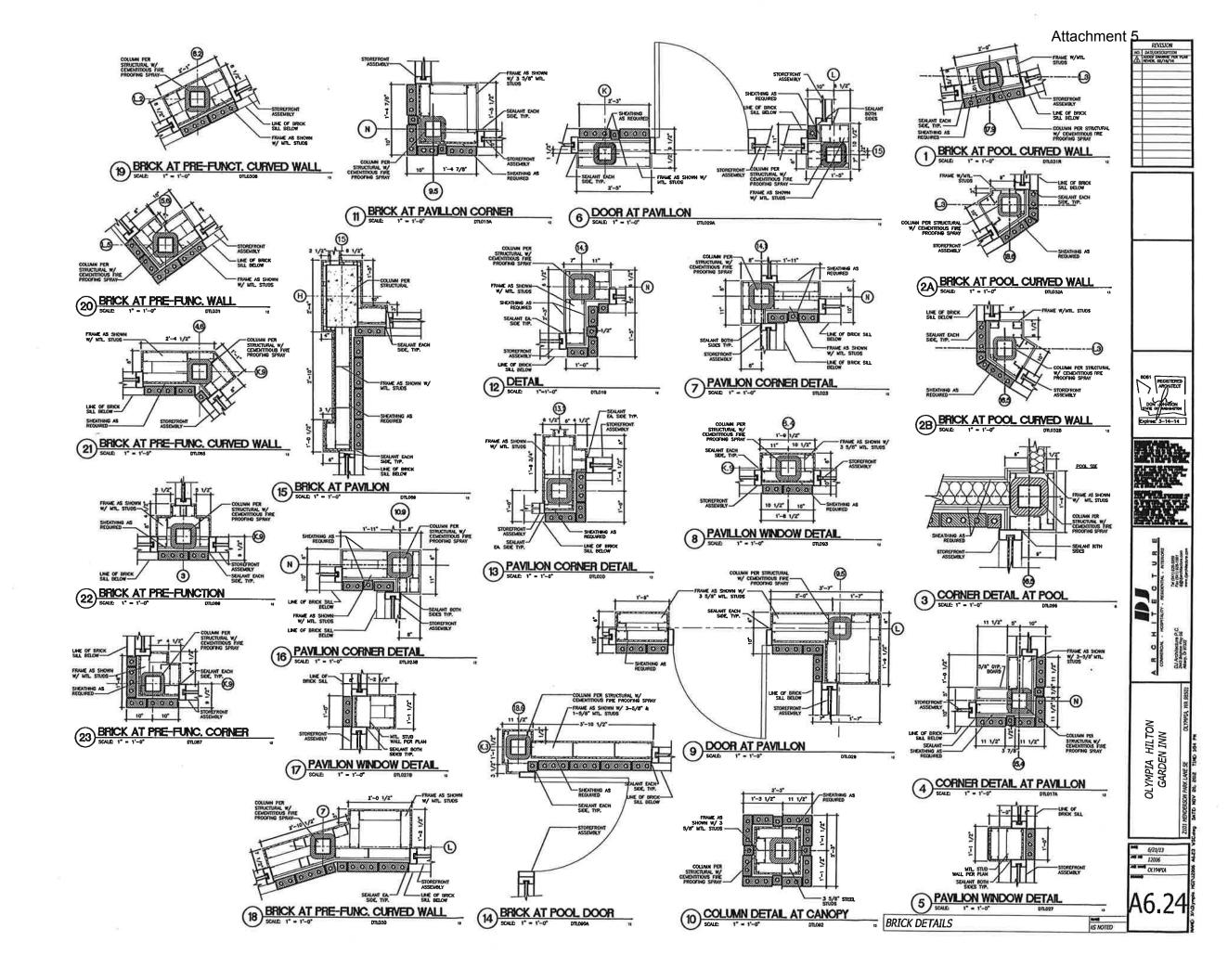
To give more interest to the the building at the pedestrian level, we propose to use different colors of brick. The base coursing will be a larger concrete block with heavy texture. There is a soldier course of brick above the cmu that is dark grey. The body of brick will be dark red. The soldier courses above the windows will be dark grey. Also we will have quoins at the corners of the building. The quoins will protrude from the body of the brick and add shadows and additional texture.

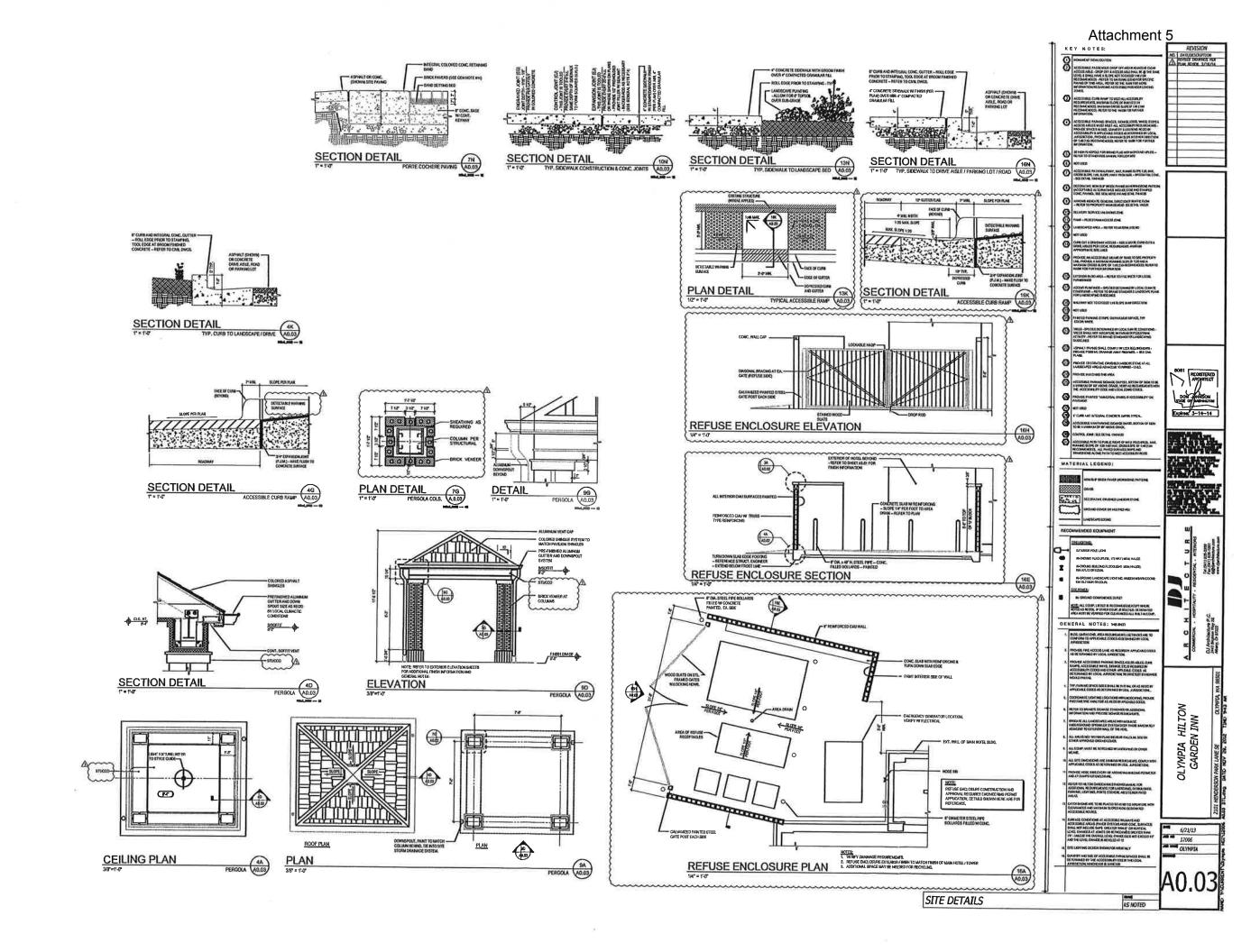


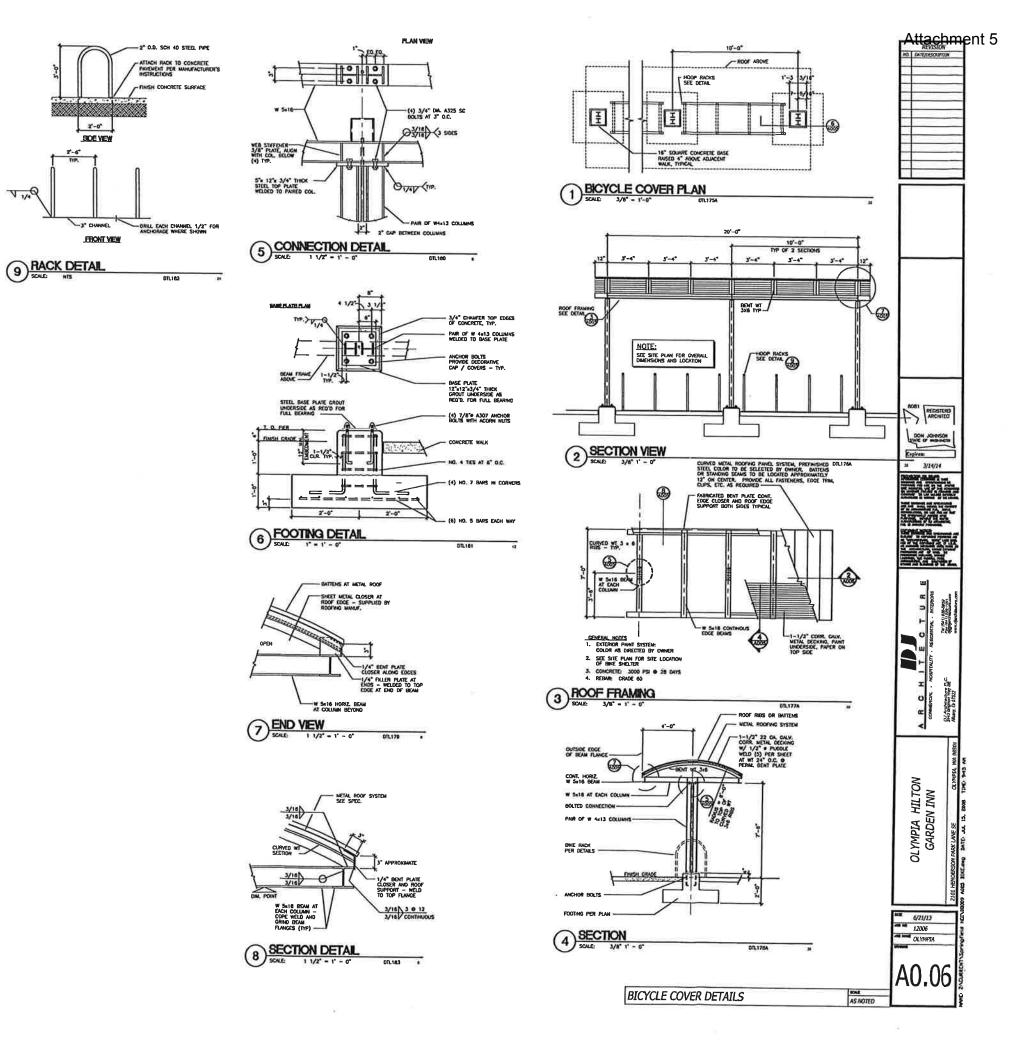










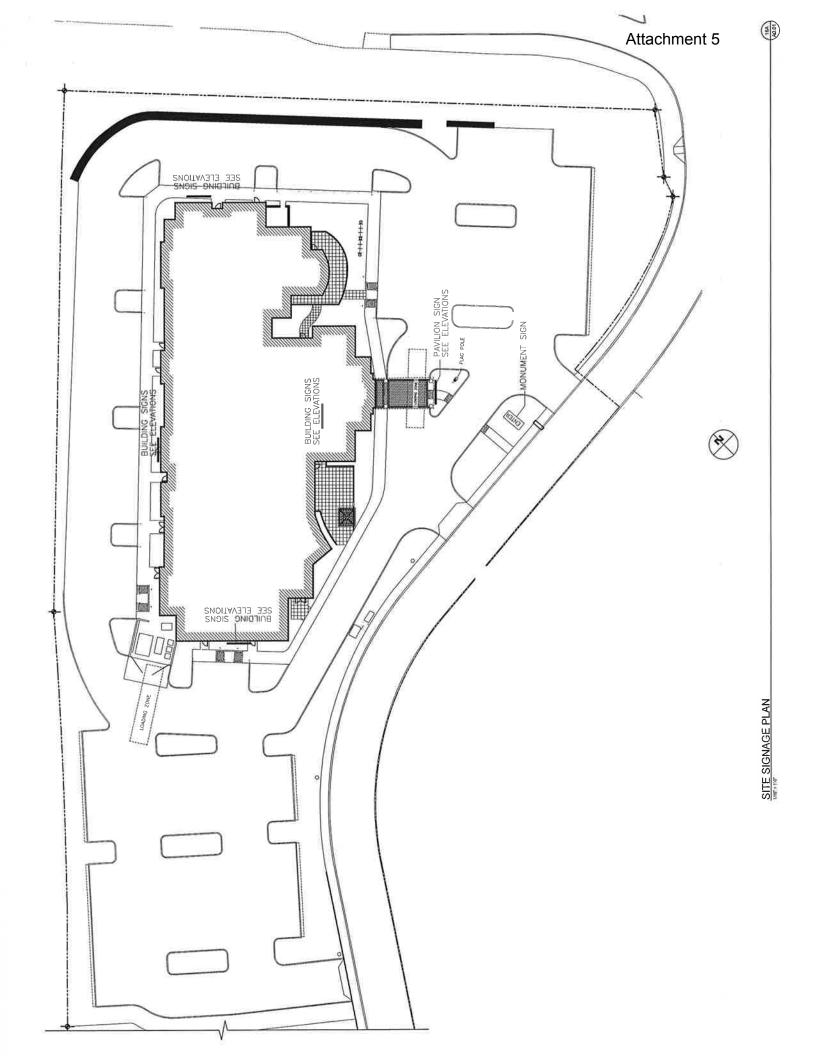


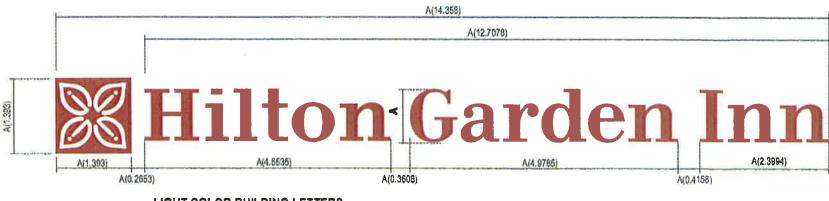
# Signage

Sign location plan
Signage details

Hilton Garden Inn Olympia, Wa







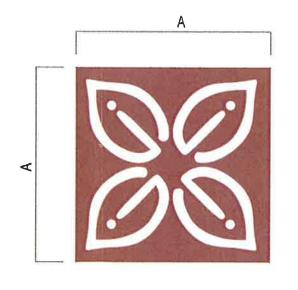
LIGHT COLOR BUILDING LETTERS
LIGHT COLORED BUILDING-RED DAY/RED NIGHT

**BUILDING SIGN** 

One on Front Elevation and one on Rear Elevation.
See Building Elevations.



MONUMENT SIGN One at Entry. See Site Plan.







**END VIEW** 

**PAVILION SIGN** 

Located on Front Gable of Pavilion. See Building Elevations.

Hilton Garden Inn, Olympia Building Sign Selections

29.93 SQUARE FEET (2.78.50 M)