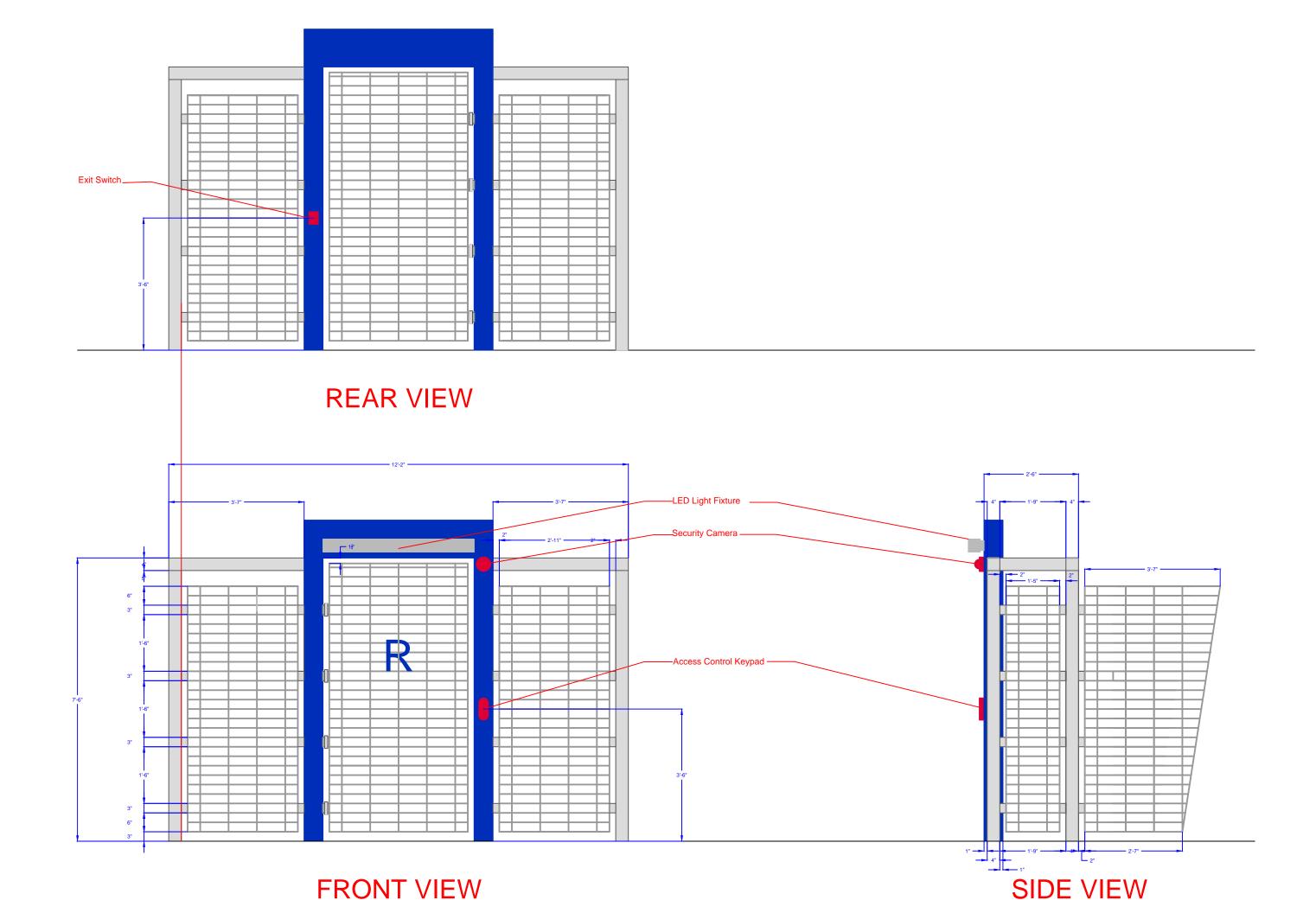
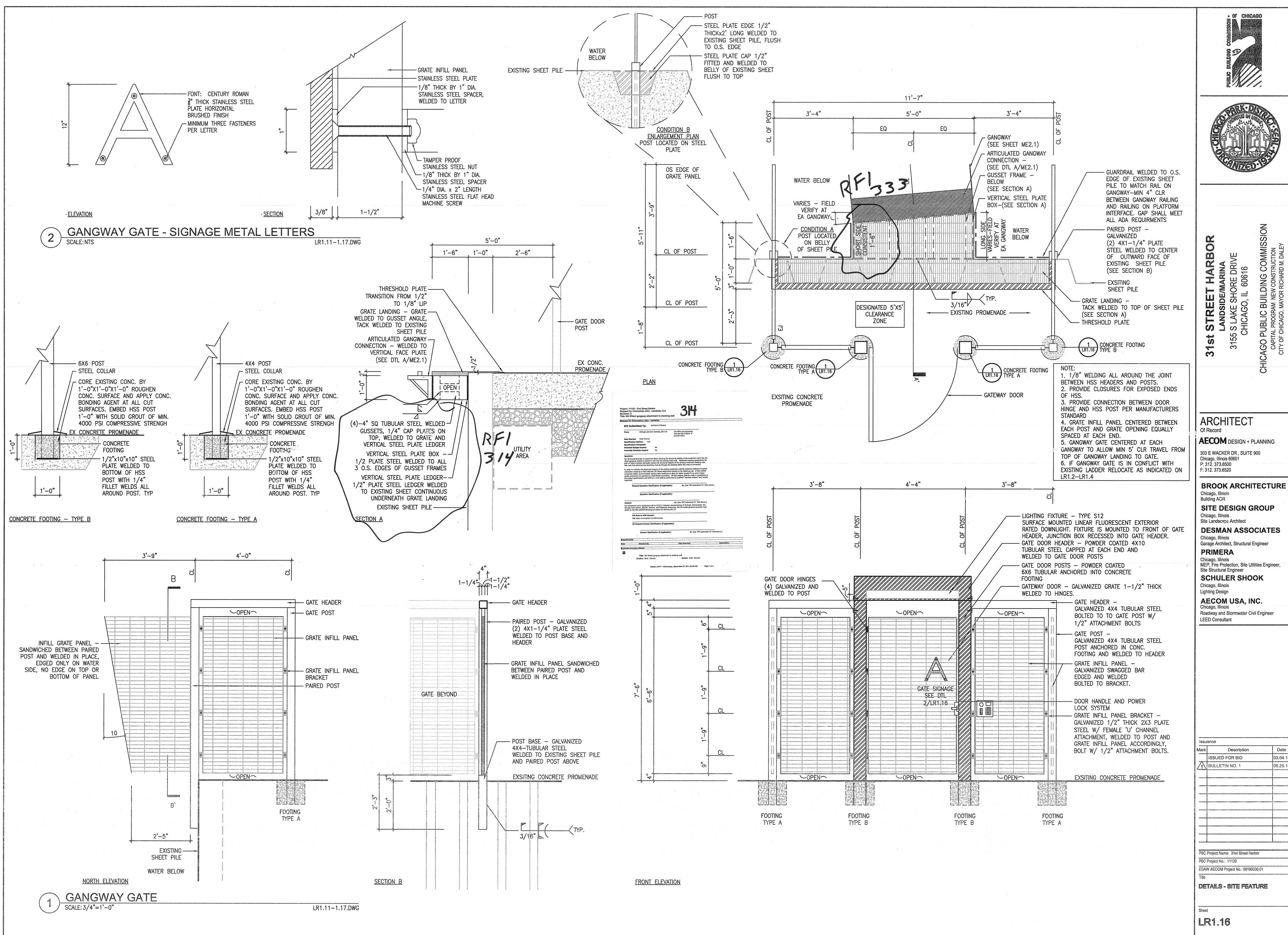
WESTREC MARINA MANAGEMENT, INC. ON BEHALF OF THE CHICAGO PARK DISTRICT

INVITATION FOR BID (IFB) FOR CONSTRUCTION OF BURNHAM HARBOR DOCK GATES

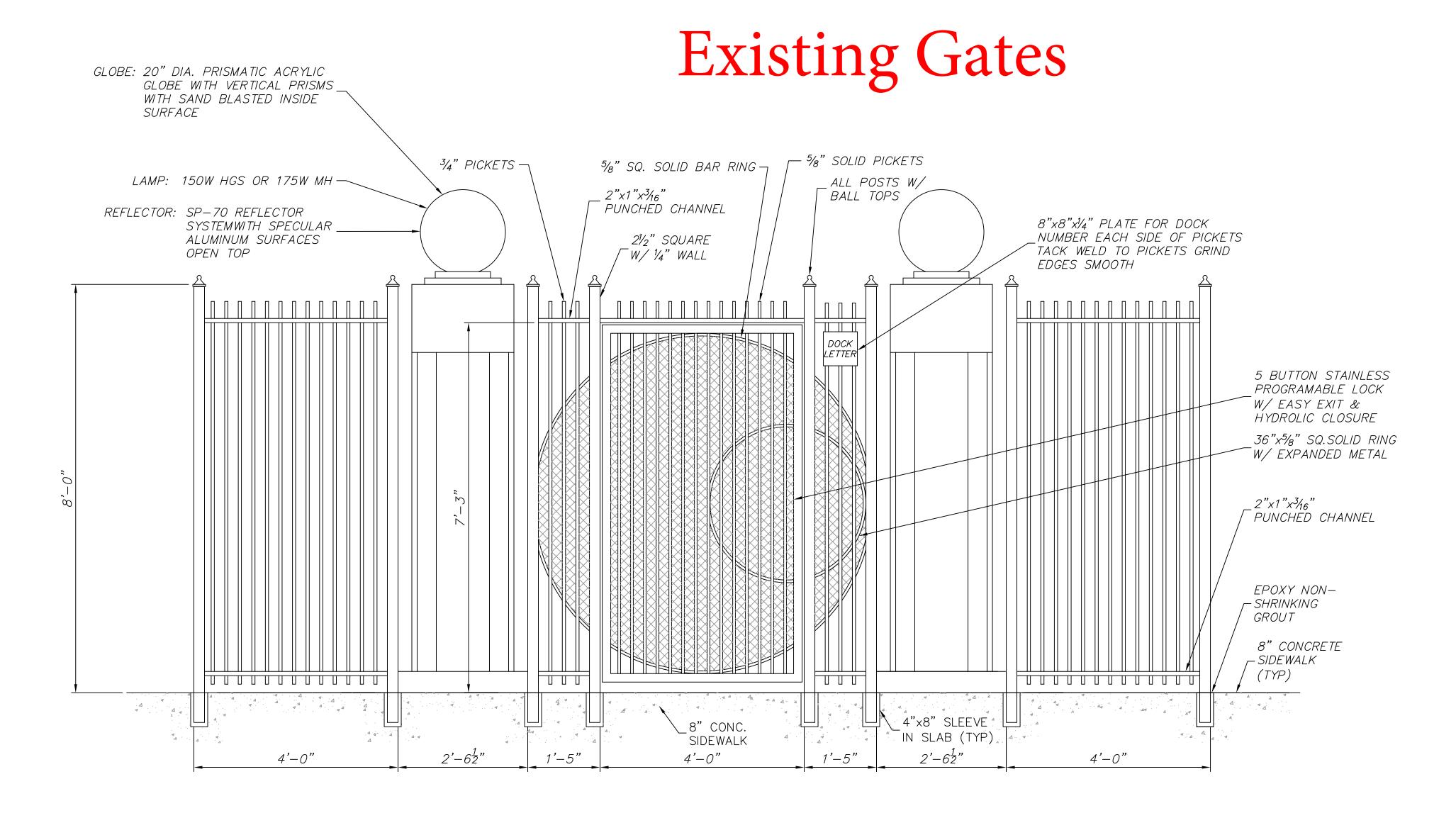
W-20003 TECHNICAL SPECIFICATIONS



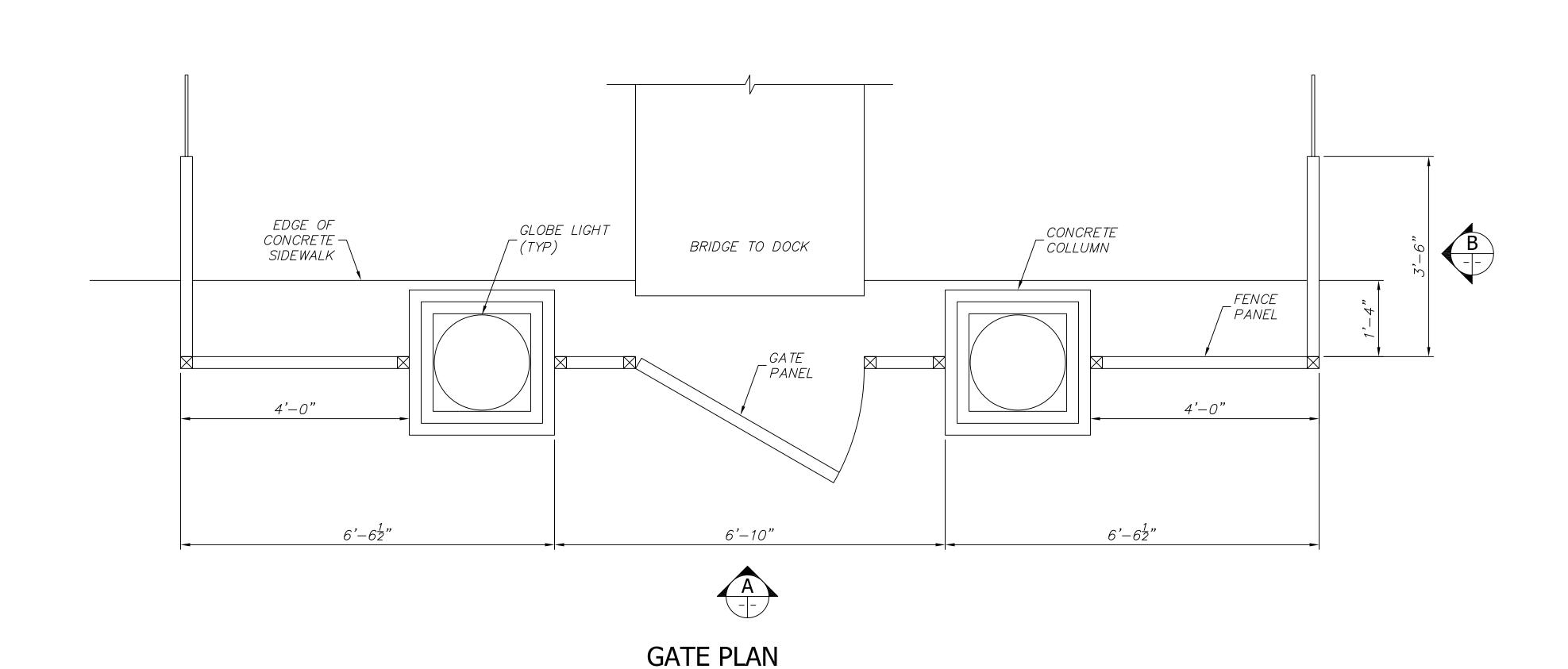




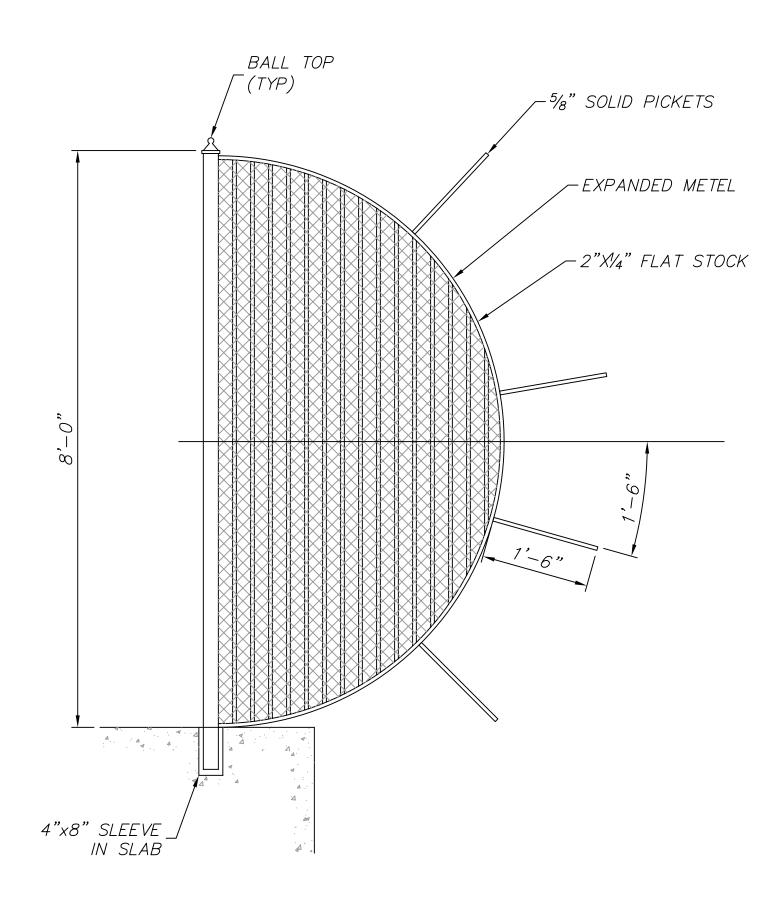
Date 03.04.10 06.25.10



ELEVATION 'A' SCALE: 3/4" = 1'-0"



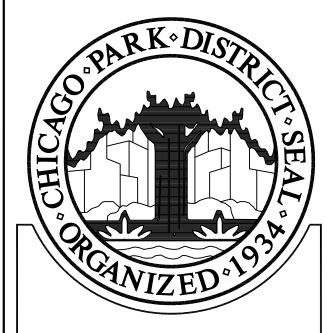
SCALE: $\frac{3}{4}$ " = 1'-0"



ELEVATION 'B'

SCALE: 3/4" = 1'-0"

1 GATE DETAILS
SCALE: 3/4"=1'-0"



CHICAGO PARK DISTRICT

541 N. Fairbanks Ct. Chicago, Illinois 60611 Ph. 312-742-8520

E
D
C
B

REVISIONS DATE

PROJECT MANAGER:
WESTREC MARINA
MANAGEMENT, INC.
541 N. FAIRBANKS CT.,
SUITE 1020
CHICAGO, IL 60611
(312) 747-0737
westrec
@westrecchicago.com

DRAWN:

CHECKED:

SCALE: SEE DWG

DATE:

SPEC. NO.:

W.O. NO.:

| SHEET INFORMATION

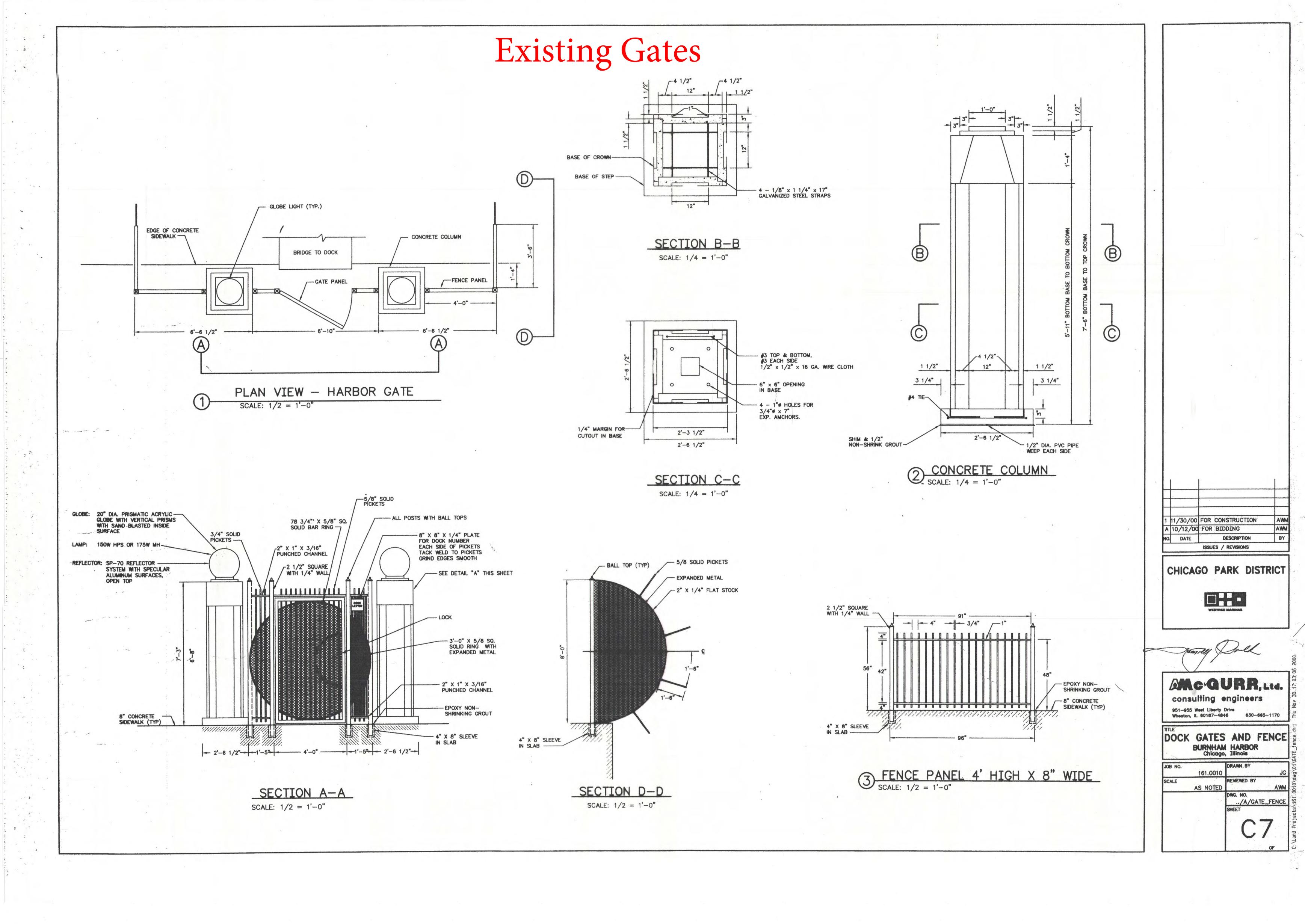
BURNHAM
HARBOR
MARINA
EXTENSIONS

PARK NO./PROJECT NO.

G-1.0

DRAWING NO.

© CHICAGO PARK DISTRICT



UGN-30081

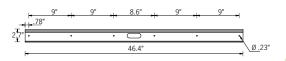
Gini 1 Downlight





72w LED 4984 Lumens IP65 • Suitable For Wet Locations IK07 • Impact Resistant Weight 30.6 lbs





Mounting Detail



Construction

Aluminum Less than 0.1% copper content – Marine Grade 6060 extruded & LM6 Aluminum High Pressure die casting provides excellent mechanical strength , clean detailed product lines and excellent heat dissipation.

Pre paint

8 step degrease and phosphate process that includes deoxidizing and etching as well as a zinc and nickel phosphate process before product painting.

Memory Retentive -Silicon Gasket

Provided with special injection molded "fit for purpose" long life high temperature memory retentive silicon gaskets. Maintains the gaskets exact profile and seal over years of use and compression.

Thermal management

I M6 Aluminum is used for its excellent mechanical strength and thermal dissipation properties in low and high ambient temperatures. The superior thermal heat sink design by Ligman used in conjunction with the driver, controls thermals below critical temperature range to ensure maximum luminous flux output, as well as providing long LED service life and ensuring less than 10% lumen depreciation at 50,000 hours.

<u>Surge Suppression</u> Standard 10kv surge suppressor provided with all fixtures.

BUG Rating

All Ligman products go through an extensive finishing process that includes fettling to improve paint adherence.

UV Stabilized 4.9Mil thick powder coat paint and baked at 200 Deg C. This process ensures that Ligman products can ithstand harsh environments. Rated for use in natatoriums.

Inspired by Nature Finishes

The Inspired by nature Finishing is a unique system of decorative powder coating. Our metal decoration process can easily transform the appearance of metal or aluminum product into a wood grain finish

This patented technology enables the simulation of wood grain, and even marble or granite finish through the use of decorative

The wood grain finish is so realistic that it's almost undistinguishable from real wood, even from a close visual inspection. The system of coating permeates the entire thickness of the coat and as a result, the coating cannot be removed by normal rubbing, chipping, or scratching.

<u>The Coating Process</u>
After pre-treatment the prepared parts are powder coated with a specially formulated polyurethane powder. This powder provides protection against wear, abrasion, impact and corrosion and acts as the relief base color for the finalized metal

The component is then wrapped with a sheet of non-porous film with the selected decoration pattern printed on it using special high temperature inks.

This printed film transfer is vacuum-sealed to the surface for a complete thermo print and then transferred into a customized oven. The oven transforms the ink into different forms within the paint layer before it becomes solid. Finally, the film is removed, and a vivid timber look on aluminum remains

Wood grain coating can create beautiful wood-looking products of any sort. There are over 300 combinations of designs currently in use. Wood grains can be made with different colors, designs, etc.

Our powder coatings are certified for indoor and outdoor applications and are backed by a comprehensive warranty. These coatings rise to the highest conceivable standard of performance excellence and design innovation.

Added Benefits

- Resistance to salt-acid room, accelerated aging Boiling water, lime and condensed water resistant
- Anti-Graffiti, Anti-Slip, Anti-Microbial, Anti-Scratch Super durable (UV resistant)
- TGIC free (non-toxic)

Hardware

Provided Hardware is Marine grade 316 Stainless steel.

Anti Seize Screw Holes

Tapped holes are infused with a special anti seize compound designed to prevent seizure of threaded connections, due to electrolysis from heat, corrosive atmospheres and moisture.

Crystal Clear Low Iron Glass Lens

Provided with tempered, impact resistant crystal clear low iron glass ensuring no green glass tinge.

Optics & LED

Precise optic design provides exceptional light control and precise distribution of light. LED CRI > 80

<u> Lumen - Maintenance Life</u>

L80 /B10 at 50,000 hours (This means that at least 90% of the LED still achieve 80% of their original flux)

Slimline, surface wall-fixtures with up-downlight distribution. Clean, unique, minimalistic and flexible, the perfect tool for surface wall

A range of modular top quality decorative linear surface mount luminaires. This small profile decorative wall sconce with upward, downward or up/down light distributions is available in 4 sizes, namely 12", 23" 35" and 47" standard lengths. (Contact factory for longer runs)

This luminaire has a unique feature where the extruded aluminum mounting bracket is secured onto the wall and the luminaire are then attached to the mounting bracket.

This modular feature allows for extended lengths of extruded mounting bracket to be installed onto the wall and then multiple luminaires can be attached end-on-end to provide a continu ous row of luminaires with even light distribution. The Gini has been designed with integral drivers and lightly frosted low glare tempered glass lenses. A single gang in wall junction box, horizontally mounted is to be provided by contractor to facilitate ease of installation.

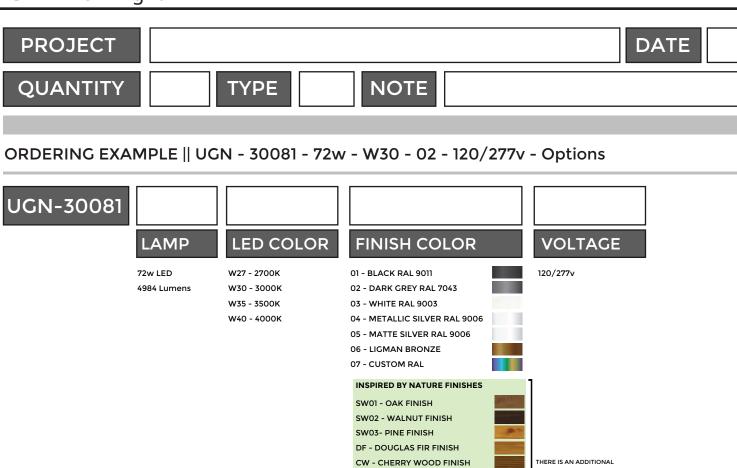
This IP65 luminaire can be used for indoor, as well as outdoor applications. Ideally suited to illuminate wall surfaces and light accents.



UGN-30081

Gini 1 Downlight





ADDITIONAL OPTIONS

NAT - Natatorium Rated DIM - 0-10v Dimming

More Custom Finishes Available Upon Request Consult factory for pricing and lead times



Pine



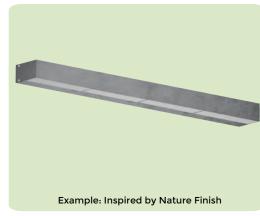
Mahogany





Steel

NW - NATIONAL WALNUT FINISH SU01 - CONCRETE FINISH SU02 - SOFTSCAPE FINISH SU03 - STONE FINISH SU04 - CORTEN FINISH



COST FOR THESE FINISHES



Gini Product Family



Gini 1/2 - 11.8"

• UGN-30021-18w-1246lm - Down • UGN-30031-2x12w-2x992lm - Up/Down



Gini 1/2 - 23.4"

• UGN-30041-36w-2492lm - Down • UGN-30051-2x25w-2x1985lm - Up/Down



Gini 1/2 - 35.1"

UGN-30061-54w-3738lm - Down
 UGN-30071-2x37w-2x2977lm - Up/Down



Gini 1/2 - 47"

- UGN-30081-72w-4984lm Down
- UGN-30091-2x50w-2x3970lm Up/Down



EK4036S

Fix Mount Button Electronic Photo Control



The EK4036S is an electronic photo control that fits in a standard outlet box, post lamp or light fixture. It is made within dimensional guidelines in ANSI C136-24 to assure fit within a large variety of fixtures and features a silicon light sensor with zero-crossing circuit to provide a long service life.

Project: Location: Product Type: Contact/Phone: Model #:

Features

- · Dusk-to-dawn control of outdoor lighting
- · Floodlights and security lighting
- Ideal for LED fixtures totaling 1650 W @ 277 VAC
- Non-drifting silicon light sensor IR filtered for human eye response
- Zero-cross technology helps device withstand severe inrush current and extends relay life
- Exceeds 10,000 ON/OFF operations at full load to match life expectancy of LED fixtures
- All components meet 15-year life requirements

Regulatory Listings

- ANSI C136.24 compliant
- UL certified to U.S. (UL773A) & CSA certified to Canadian (C22.2 No. 55-M1986/ TIL A-15) safety standards

Operating Specifications

- Voltage: 105-305 VAC, 50/60Hz
- Dielectric strength: 2500 VAC
- Operating ambient temperature range: -40°F to 158°F (-40°C to 70°C)
- Instant turn ON light level 1.5 fc
- OFF light level: 2.25 fc
- Turn OFF to ON ratio 1.5:1 with 2-5 second delay
- Fail mode: ON
- Power consumption <.5W @ 277 VAC
- 255 Joule MOV surge protection component
- 9" long, 18 awg wire leads

Warranty

• Limited 8-year manufacturer's warranty

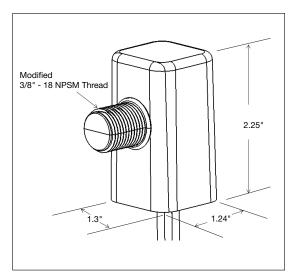
Compatible with

















Model Number	Max VAC	Tungsten (Watts)	Ballast (VA)	Electronic Ballast (LED)	Turn ON Foot Candles (fc)	Turn OFF to ON Ratio	Fail Mode
EK4036S	105-305	1000	1800	6 Amps	1.5	1.5:1 with 2-5 second delay (2.25 fc OFF)	ON

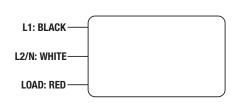


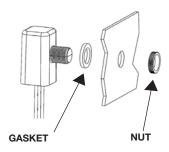


Specification

The photo control shall be an electronic control based on a solid-state photo sensor and relay switch circuit. Switch operation shall have a rating of 1000 Watts tungsten and 1800 Watts ballast at 105-305 VAC. For high inrush LED type fixtures, the photo control switch operation shall have a 6 Amp Electronic Ballast rating at 105-305 VAC. The photo control shall fail in an ON state. The photo control operating voltage shall be clearly identified on the control housing. The photo control shall be equipped with inherent delay action eliminating activation by light flashes. The photo control overall dimensions should meet guidelines in ANSI C136.24 and have 9" long, 18 awg wire leads. The photo control shall consist of industrial grade electronic components; 255 Joule MOV, solid state light sensor, and silver alloy relay contacts. The photo control shall be 100% factory tested and function within specified light levels. The photo control shall be agency certified and tested accordingly. The photo control shall meet agency standards and all other requirements of ANSI C136.24. The photo control shall operate over a temperature range of -40°F to 158°F (-40°C to 70°C). The photo control shall have a manufacturer's limited warranty of 8 years minimum. The photo control shall be the electronic dusk-to-dawn type, Intermatic model EK4036S.

Diagrams





Limited Product Warranty

(1) What is Covered By This Limited Warranty?

Intermatic Incorporated ("Intermatic") warrants Intermatic's EK4036S ("Product") to be free from defects in material or workmanship for a period of eight (8) years from date of purchase. This warranty is extended to the owner of the light fixture on which the photo control is installed only and it is not transferable ("purchaser"). If the purchaser discovers a defect in material or workmanship, the purchaser must promptly submit a warranty claim. Upon a determination by Intermatic that the Product is defective, Intermatic shall correct any defect in material or workmanship by replacing the Defective Product. Any repair to Product, including both parts and labor, shall be at Intermatic's expense. The foregoing remedy is the purchaser's exclusive remedy for a breach of warranty. The product must be installed in the appropriate application in complete accordance with the installation instructions. The Product must not be opened, modified, exposed to extreme heat or cold, submerged or subjected to abnormal use or service. Product failures due to damage by accident, dropping, or abuse in handling, acts of God, or any negligent use, are not covered by this warranty. Intermatic shall determine, in its sole discretion, whether any Product returned by a purchaser has been used in accordance with its instructions, is an appropriate model for the purchaser's use thereof, and whether the Product is defective.

(2) Disclaimer of Warranty

THE FOREGOING WARRANTIES ARE IN LIEU OF ALL OTHER EXPRESSED WARRANTIES. TO THE EXTENT ALLOWED BY LAW, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED IN DURATION OF THIS LIMITED WARRANTY.

(3) Limitation of Remedies

IN NO CASE SHALL INTERMATIC BE LIABLE FOR ANY SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES BASED UPON BREACH OF WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, STRICT TORT, OR ANY OTHER LEGAL THEORY. SUCH EXCLUDED DAMAGES INCLUDE, BUT ARE NOT LIMITED TO, DAMAGE TO SOFTWARE, LOSS OF DATA, LOSS OF PROFITS, LOSS OF SAVINGS OR REVENUE, LOSS OF USE OF THE PRODUCT OR ANY ASSOCIATED EQUIPMENT, COST OF CAPITAL, COST OF ANY SUBSTITUTE EQUIPMENT, FACILITIES OR SERVICES, DOWNTIME, THE CLAIMS OF THIRD PARTIES INCLUDING CUSTOMERS, DAMAGE TO PROPERTY AND PERSONAL INJURY. SOME STATES DO NOT ALLOW LIMITS ON WARRANTIES OR ON REMEDIES FOR BREACH IN CERTAIN TRANSACTIONS, IN SUCH STATES, THE LIMITS IN THIS PARAGRAPH AND IN PARAGRAPH (2) MAY NOT APPLY.

(4) Time Limit for Bringing Suit

No action arising out of any claimed breach of warranty may be brought more than one year after the cause of action has occurred.

(5) No Other Warranties

Unless modified in writing signed by both parties, this agreement is understood to be the complete and exclusive agreement between the parties, superseding all prior agreements, oral or written, and all other communications between the parties relating to the subject matter of this agreement. No employee of Intermatic or any other party is authorized to make any warranty in addition to those made in this agreement. This warranty is made by: Intermatic Incorporated/After Sales Service, 7777 Winn Rd., Spring Grove, IL. 60081-9698/815-675-7000 http://www.intermatic.com

(6) Claim Procedure

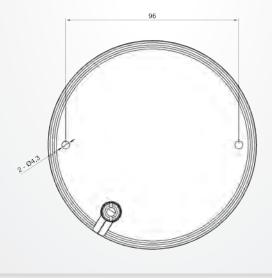
The warranty service is available by either (a) returning the product to the dealer from whom the unit was purchased, or (b) mailing the product, along with proof of purchase, postage prepaid, to the authorized service center listed below.

Address all communications and products returns to:

Intermatic Warranty Coordinator

7777 Winn Road Spring Grove, Illinois 60081-9698, Fax: 815-675-7055

1080p HD IR Compact Camera 2.1 Megapixel IP Micro Dome with IR



 $Amano\ reserves\ the\ right\ to\ change\ specifications\ without\ prior\ notice.\ Revision\ 1012$

Amano warrants this product against defects in material and workmanship under normal use and service for 36 months from the date of shipment. Full warranty statement available on request.

SPECIFICATIONS

CAMERA	
Image Sensor	SONY EXMOR 1/2.9" 1080p CMOS
Effective Pixels	1920 x 1080
AGC Control	Auto
Minimum Illumination	Color: 0.5 Lux / B/W: 0 Lux (IR LED On)
Lens	3.6mm, F2.0
Field of View	Horizontal: approx. 87°; Vertical: approx. 47°
Shutter Time	1/10,000s to 1/2s
Noise Filter	Supported (0 - 3)
Day & Night	True day & night (removable IR-cut filter)
Focus Assist	Supported
BLC	On (possible to designate zone) / off
Wide Dynamic Range	Digital WDR
Exposure Adjustment	+1.0, +0.6, +0.3, 0, -0.3, -0.6, -1.0 EV
IR LEDs	IR LED x 8 (850nm)
IR Range	10m (30IRE)
SMART IR	Supported
ONVIF Compliance	Profile S, Profile G

Video Security

VIDEO	
Compression Format	H.264 baseline, main, high profile (MPEG-4 Part 10/AVC), MJP (Motion JPEG)
Number of Streams	Dual stream, configurable streams in H.264, MJPEG
Resolution 16:9 mode	1920 x 1080, 1280 x 720, 1120 x 630, 960 x 540, 800 x 450, 640 x 360, 480 x 270, 320 x 180
Resolution 4:3 mode	SXGA(1280x960), XGA(1024x768), SVGA(800x600), PAL(720x576), NTSC(720x480), VGA(620x480), QVGA(320x240)
Frame Rate	Max 30fps in all resolution
Smart Bitrate Control	Supported (works in VBR mode)
Orientation Control	Flip/mirror/corridor mode(-90°, +90°)
Burnt-in Text (Digital)	Time stamp and text caption overlay
Privacy Mask	4 configurable regions
Flicker Control	Normal, 50Hz, 60Hz
Analog Output	None
AUDIO	
Input/Output	None
PERIPHERAL	
Digital Input/Output	None
Ethernet Standard	10/100 BaseT
IP	IPv4, IPv6
Protocol	OoS Layer 3 DiffServ, TCP/IP, UDP/IP, HTTP, HTTPS, FTP, RTSP, RTCP, RTP/UDP, RTP/TCP, mDNS, UPnP™, SMTP, DHCP, DNS, DynDNS, NTP, SNMPv1/v2c/v3(MIB-II), IGMP, ICMP, SSLv2/v3, TLSv1, SRTP, RTM
Security	HTTPS(SSL), IP filtering, multi-level access with password protection
EDGE STORAGE	
Storage	1x MircoSD/MicroSDHC memory card slot (card not included)*
Recording Types	Continuous recording: instant recording; search & download Event recording: search of event logs; playback; download
ELECTRICAL	
Power Source	DC 12V, PoE
Power Consumption	4.2W @ DC 12V
ENVIRONMENTAL	
Operating Temperature	-20°C - 50°C (-4°F - 122°F)
Operating Humidity	Up to 85% RH (non-condensing)
MECHANICAL	•
Material	Aluminum Die-Casting
Color	Ivory
Weight	300g (0.66 lbs)
VIDEO ANALYTICS (II	NCLIDED)
Analytics Engine	VCA Technology's advanced tracking algorithm with rich library of detection behaviors; some engines require additional licensing
User Interface	Web browser interface
Detection Zones	40 zones, multi-segment polygons and lines, 60 rules in tota
ORDERING INFORMA	TION
CAO-EDH-62-11IR	1080p HD IR Compact Dome Camera
MOUNTING HARDWA	RE OPTIONS
PMC-362	Pendant Mount Cap
WMB-3000P	Wall Mount Bracket
CMP-3000P	Ceiling Mount Bracket

1080p HD IR Compact Camera 2.1 Megapixel IP Micro Dome with IR

Video Security

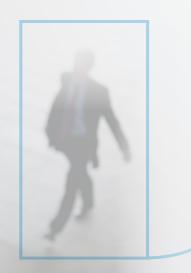


Amano high-definition indoor cameras offer a superior solution to every day surveillance needs.

The latest design with an advanced feature set, embedded Video Analytics and infrared illumination in a small form factor provide uncompromised security in a reliable and cost-effective package.

Features

- Full HD 1080p 30fps
- · H.264 and MJPEG compression
- True day/night and WDR
- · Built-in IR illuminator with 10m (33ft) viewing distance
- Embedded VCA technology Video Analytics
- · MicroSD/SDHC memory card slot
- Power over Ethernet (IEEE 802.3af)



Amano WMK

Wiegand Metal Keypad Reader

KEY FEATURES

- Communications distance of up to 500 feet (150 m).
- Suitable for OEM developments.
- Multiple Wiegand output formats (26-bit and 44-bit).
- Read capability from various tag types: Slim Tags, Omega Tags, Amano Trinary Tags (1074 and 2074) and HID Tags (H10301, H10302 and H10304).
- A single tri-colored Red, Green or Amber Status LED.
- A 4 kHz piezo-electric Buzzer.
- 12-Button alphanumeric keypad
- An external Wiegand communications bus interface.
- Dual input voltage types supported (5 V DC and 12 V DC).
- Programmable facility code for use with PIN-code entry.



Amano WMK Metal Keypad Reader

PHYSICAL SPECIFICATIONS

Dimensions (H x W x D)	5.59" x 2.99" x 1.06" (142mm x 76mm x 27mm)
Weight	18 oz (513g)
Housing Material	Die-cast Zinc Alloy.
Color	Satin Nickel powder coated

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-13°F to +140°F (-25°C to +60°C)
Storage Temperature	-40°F to +176°F (-40°C to +80°C)
Humidity Range	0 to 95% relative humidity at +104°F (+40°C) non-condensing.
CE Approval	EN301 489-3, EN301 489-1 and EN300 330-1.
FCC Approval	Pending.
Dust & Splash Resistance	Designed to work in harsh (industrial) indoor or outdoor environments similar to IP53.



ELECTRICAL SPECIFICATIONS

POWER

Input Voltage Rating	5 V DC to 16 V D	C, polarity sensitive.
Power Requirements	Current (mA)	Power (W)
Supply Voltage 5 V DC all indicators on	50	0.25
Supply Voltage 12 V DC all indicators on	50	0.60
Permissible Input Supply Ripple Voltage (Max)	1 V pp at 50 Hz	
Power Input Protection	Reverse polarity p	protection is provided on the Reader.

PIN-CODES

Туре	5 Digit codes in the range 00000 to 65535.
	4 Digit codes in the range 0000# to 9999#.

WIEGAND BUS

Electrical Interface	'0' and '1' data streams.
Tag Information Data Format	44-bit Wiegand or 26-bit Wiegand.
Key Information Data Format	26-bit Wiegand only.

INPUTS

Quantity	4
Туре	Dry Contact.
Function	Operation of the Buzzer, LED and Scanner Inhibit.

USER INTERFACES

BUZZER

Status LED

Volume & Tone	4 kHz piezo-electric, single volume, single tone.
KEYPAD	
Keys	12 Alphanumeric keys.
STATUS INDICATOR	

AMANO®

ORDERING INFORMATION

WMK900-1-0-AC Amano Metal Keypad Proximity Card Reader (Multi-mode)

Tri-colored Red, Green or Amber (Default) (externally visible).

Amano reserves the right to change specifications without prior notice.

AMANO WMK-900 Mounting Plate 1817-0000 2 ARCHITECT 4 U.S.STD



























