

## APPENDIX 9

New Private Primary Underground Service Installation –Rev. 12/1/2023-PFC

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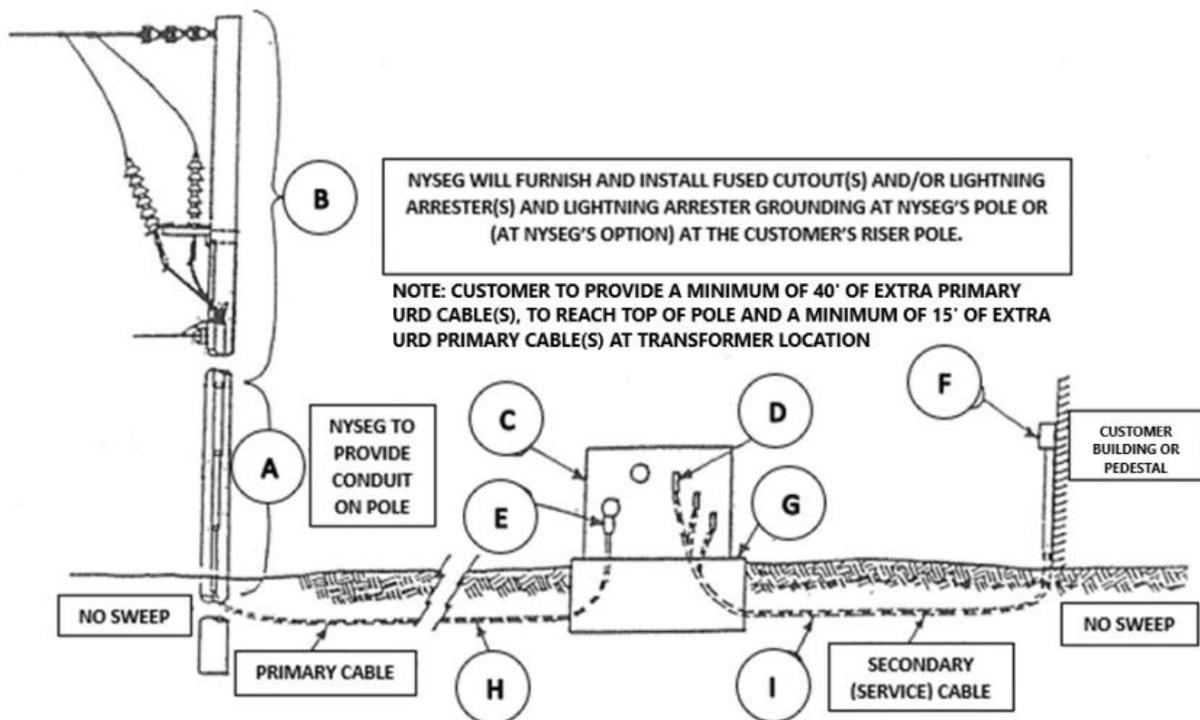
## NEW PRIVATE PRIMARY UNDERGROUND SERVICE INSTALLATION SPECS

### NYSEG to provide:

1. Riser pole if pole is not available on customer side of street.
2. Construct entire riser installation with customer provided primary underground wire.
3. Primary connections at pole.
4. Primary and secondary connections at transformer.
5. Pad mounted transformer.

### CUSTOMER to provide:

1. **Vault pad** – Fiberglass or concrete can be used. Must be level with 6” of #2 crushed stone. See pages 7 through 16 for specs on fiberglass and concrete vault pad specs (single phase and three phase).  
**\*\*VAULT PAD MUST BE NO MORE THAN 10 FT OFF ROAD/DRIVEWAY\*\***
2. **Trench** – 36” deep with clean back fill. Wire should be placed in 6” of sand on bottom then 6” on top or in conduit. Trench up to two feet from proposed riser pole/stake. See pages 22 & 24.
3. **Aluminum wire** (must be NYSEG approved) – NYSEG prefers 15kV rated, 175 mils insulation with concentric neutral primary underground wire. Semi-conductive jacketing recommended. There should be enough wire for the length of the service and to reach the top of the riser pole plus an extra 15 ft at the vault pad per phase. See pages 21 through 26 for primary underground wire specs. Customer is required to submit a “Customer Primary Voltage Cable Acceptance” form to NYSEG engineering department before customer provided URD cable is purchased.
4. **Grounding at vault pad** – #2 copper is to be used. See pages 9, 11, and 14 for grounding specs.
5. **Bumper Protections** – See pages 19 and 20.
6. **Meter location** – Consult meter location with NYSEG engineering department for approval. If a meter pedestal is to be installed, NYSEG requires a minimum of 10 ft from pad mounted transformer and no more 200 ft. See pages 3 through 6 for meter specs. For all meter pan specs/information, please see NYSEG’s Electric Services & Meters manual PDF located on NYSEG’s webpage ([www.nyseg.com](http://www.nyseg.com)) under Account, Moving, Building and Remodeling.
7. **# of wires** – Confirm with NYSEG engineering department for system voltage, to determine how many primary underground URD cables will be needed by customer. See below.
  - 4.8kV – requires 2 wires – see pages 20 through 25 for specs
  - 7.62kV – requires 1 wire – see pages 20 through 25 for specs
  - Three phase primary service will require 3 wires for either 13.2kV or 4.8Kv

**DRAWING 1**

On a Customer Owned Riser Pole – Items “A” and “B” to be furnished and installed by customer.

OR

On a NYSEG Owned Riser Pole – Items “A” and “B” to be furnished and installed by NYSEG.

NOTE: If proposed riser pole is located along a public road, rigid steel conduit is **HIGHLY** recommended

**Items furnished and Installed by NYSEG:**

“C” – Pad mount Transformer (single or three phase)

“D” – Secondary Connectors

“E” – Primary Cable Terminations

**Items Furnished and Installed by Customer:**

“F” – Meter pan

“G” – Vault Pad Foundation – See pages 9 through 13 for single phase and pages 14 through 16 for three phase pad foundation specifications. Clearances from fences, shrubs, and structures see pages 17 & 18.

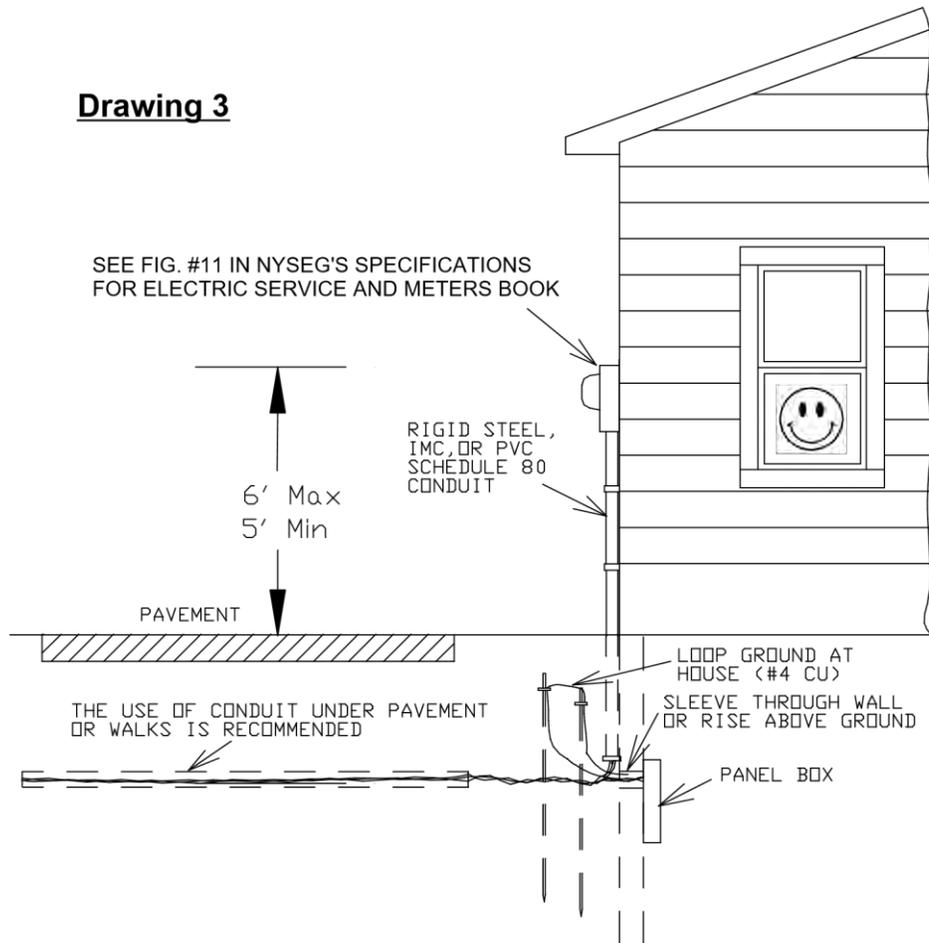
“H” – Trench, primary cable, and conduit (if used). NOTE – Customer to trench up to two feet from proposed NYSEG riser pole or stake. **\*\*NO SWEEPS** at riser pole\*\*

For direct buried cable installations, the bottom of the trench shall be 2” to 4” in depth. The first 6” of cover backfill shall be sand and or loam (with no stones larger than 1”). The remainder of the backfill shall be cleared of any rocks, stones, or other materials which could damage the cable. The minimum covering between the top of direct buried cables to the grade shall be **30” for 15kV and 36” for 35kV.**

“I” – Trench, secondary (service) cable, and conduit (if used). Minimum depth of cable shall be **24” below grade when direct buried or 18” when in conduit.**

UNDERGROUND SERVICE CONNECTIONS  
FROM OVERHEAD LINES  
SECT. 4, PARA. 18-26  
  
IN NYSEG'S SPECIFICATIONS FOR ELECTRIC  
SERVICE AND METERS BOOK

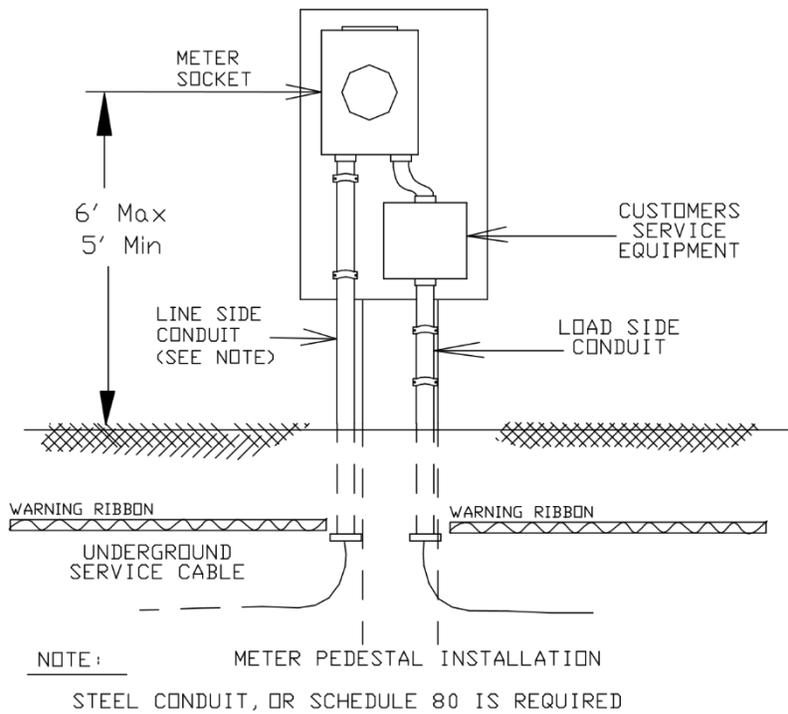
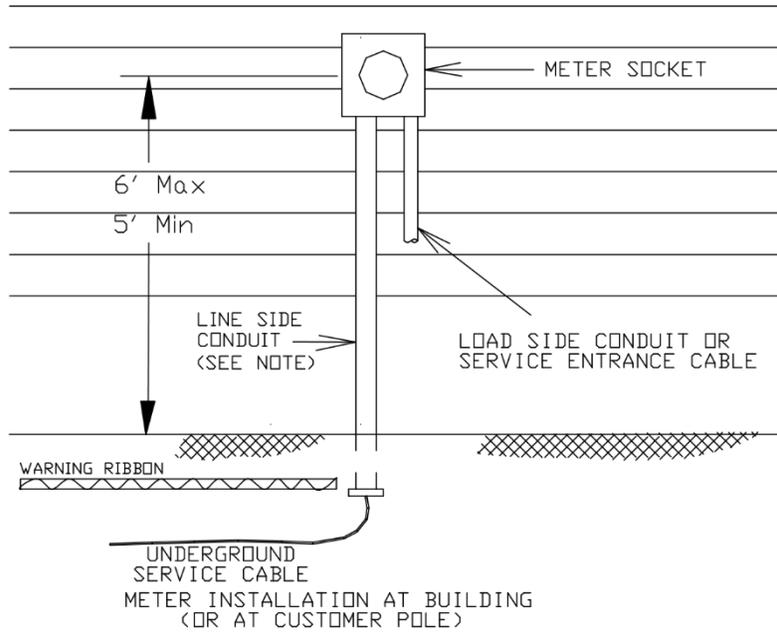
**Drawing 3**



WHERE NECESSARY TO PREVENT PHYSICAL DAMAGE TO DIRECT BURIED CONDUCTORS FROM ROCKS, SLATE, ETC., OR FROM VEHICULAR TRAFFIC ETC., DIRECT BURIED CONDUCTORS SHALL BE PROVIDED WITH SUPPLEMENTARY PROTECTION SUCH AS SAND, SAND AND SUITABLE RUNNING BOARDS, SUITABLE SLEEVES OR OTHER APPROVED MEANS.

**DRAWING 2**

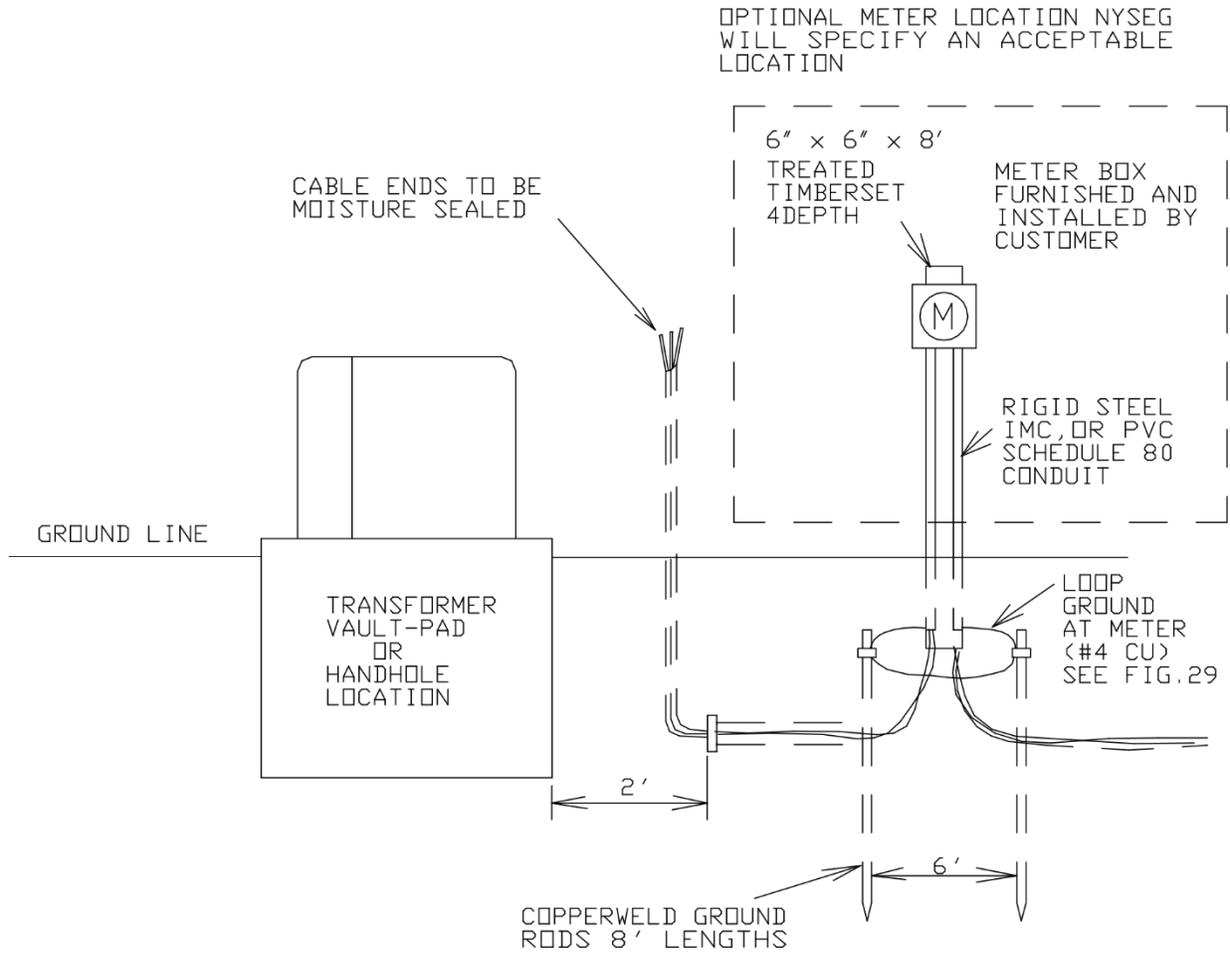
APPLICATION OF RIGID NON-METALLIC  
CONDUIT FOR LOW VOLTAGE SERVICE  
(UNDERGROUND)



UNDERGROUND SERVICE CONNECTION  
FOR RESIDENTIAL DEVELOPMENTS  
SECT. 4, PARA. 34-36

THE SERVICE CABLE AND CONDUIT (IF USED) ARE NOT TO BE INSTALLED CLOSER THAN TWO (2) FEET FROM THE TRANSFORMER OR HANDHOLE LOCATION.

**DRAWING 4**

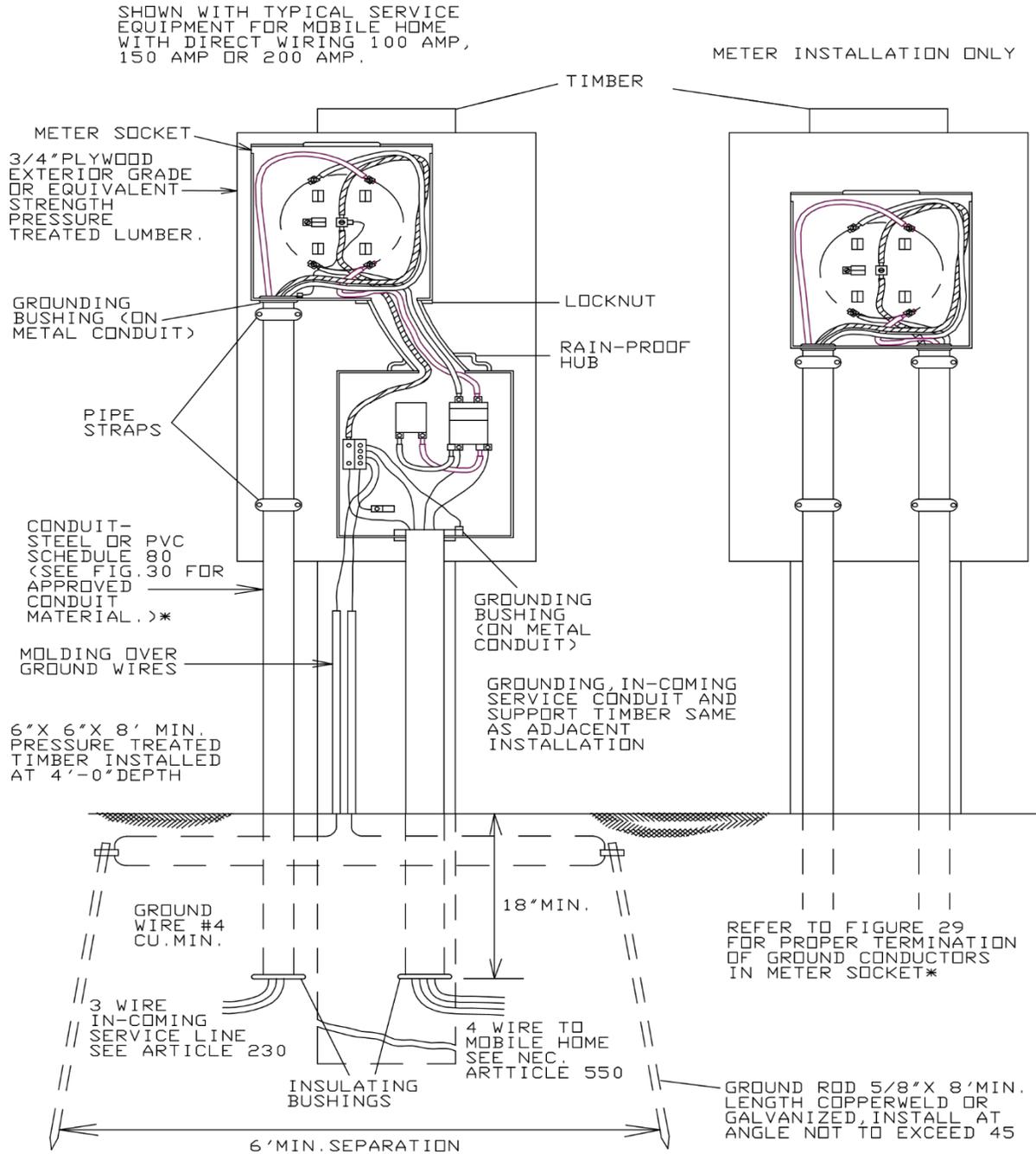


**Secondary (service URD cable between meter and building)**

- Minimum of 15' extra cable is required at the transformer or hand hole location
- Minimum secondary cover requirements
  - 24" direct buried
  - 18" in PVC

**DRAWING 5**

**INSTALLATION OF CUSTOMER CONSTRUCTED PEDESTAL**



\*"SPECIFICATIONS FOR ELECTRIC INSTALLATIONS"

**SIZES AND WEIGHTS OF SINGL**

THE DIMENSIONS AND WEIGHTS SHOWN BELOW ARE BASED ON THE LARGEST AND HEAVIEST FOR THE RESPECTIVE KVA SIZE REPRESENTING THE FOLLOWING 1Ø MANUFACTURERS:

KUHLMAN	COOPER
HEVI-DUTY	HOWARD
GENERAL ELECTRIC	ABB

**1Ø PADMOUNT TRANSFORMER**

KVA	SIZE IN INCHES			WEIGHT IN POUNDS (INCLUDES OIL)
	(A)	(B)	(C)	
(SEE DWG "A" ON PAGE 8)				
25	34	X 36	X 32	1075
50	34	X 36	X 34	1287
100	34	X 36	X 38	1598
187	34	X 36	X 48	2200

THE DIMENSIONS AND WEIGHTS SHOWN BELOW ARE BASED ON THE LARGEST AND HEAVIEST FOR THE RESPECTIVE KVA SIZE REPRESENTING THE FOLLOWING 3Ø MANUFACTURERS:

PAUWELS	COOPER
GENERAL ELECTRIC	ABB
HOWARD	

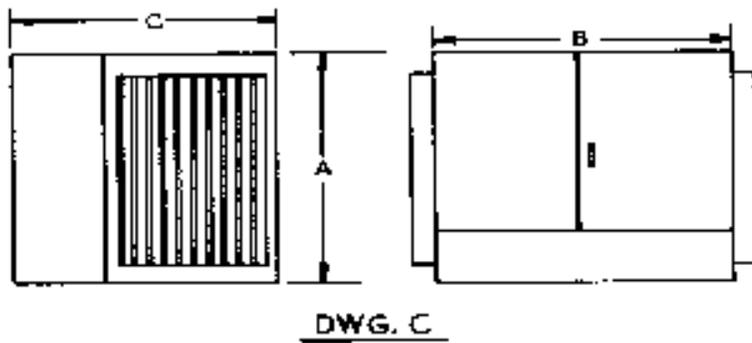
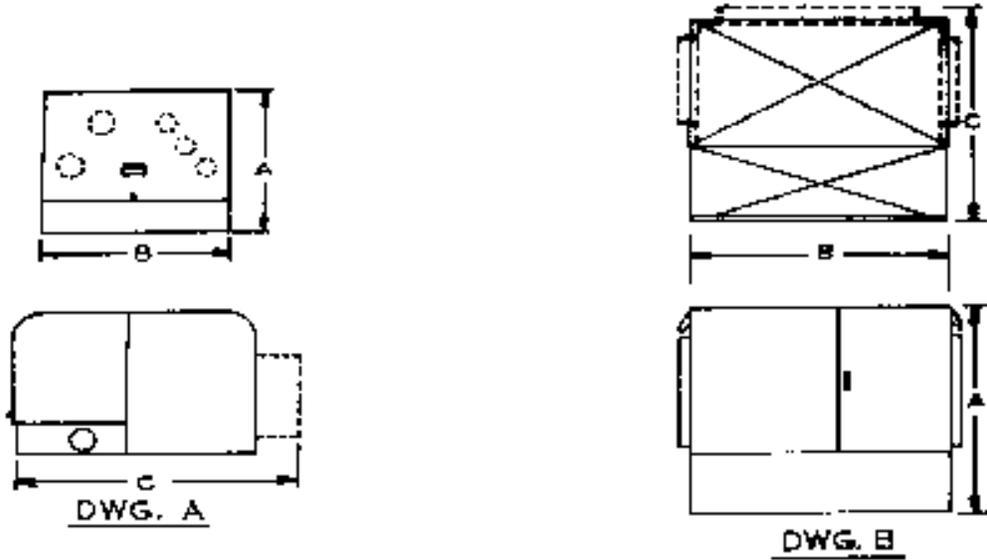
**3Ø PADMOUNT TRANSFORMERS (UP TO 35KV)**

KVA	SIZE IN INCHES			WEIGHT POUNDS (INCLUDES OIL)
	(A)	(B)	(C)	
(SEE DWGS B, C ON PAGE 8)				
150	52	66	64	4700
300	55	69	69	5400
500	56	71	69	6700
750	65	72	71	9400
1000	68	78	72	11000
1500	70	80	72	13000
2000	76	85	84	15500
2500	80	95	92	18000

**3Ø PADMOUNT STEP TRANSFORMER**

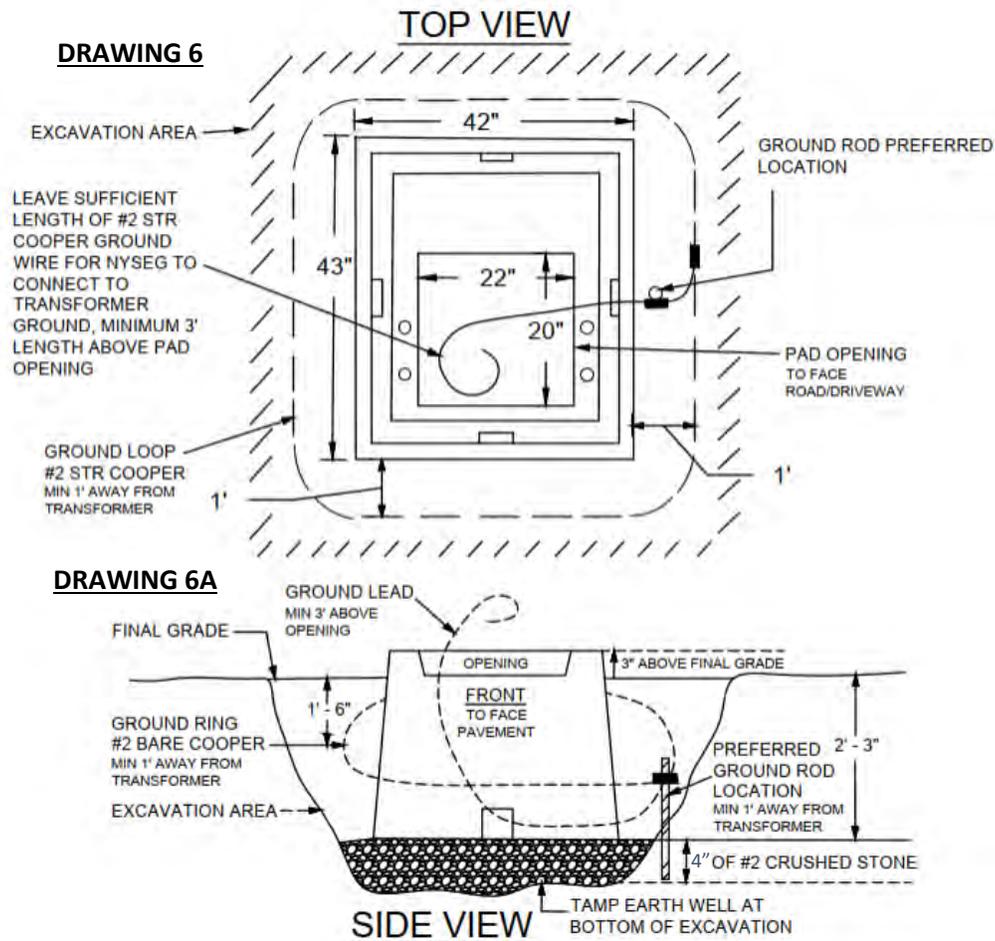
KVA	SIZE IN INCHES			WEIGHT POUNDS (INCLUDES OIL)
	(A)	(B)	(C)	
(SEE DWGS B, C ON PAGE 8)				
500	60	76	62	8700
750	69	82	66	11500
1000	76	89	68	13600
1500	80	95	70	17200
2000	85	95	80	18000
2500	89	95	86	22000

**SIZES AND WEIGHTS OF SINGLE AND THREE-PHASE PADMOUNTED TRANSFORMERS**  
**(CONTINUED)**



**REFERENCE PAGE 7 FOR DIMENSIONS**

## INSTALLATION OF FIBERGLASS BOXPAD FOR SINGLE PHASE TRANSFORMERS

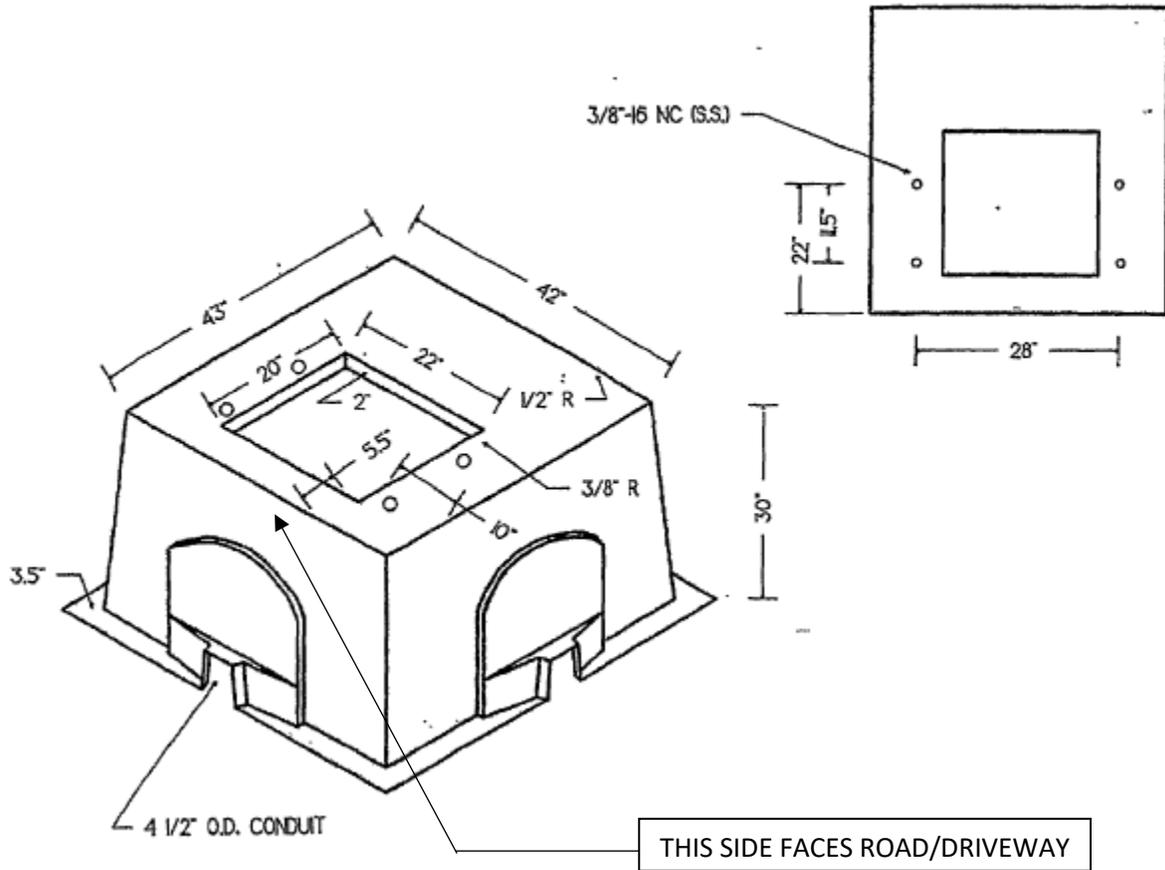


### Notes:

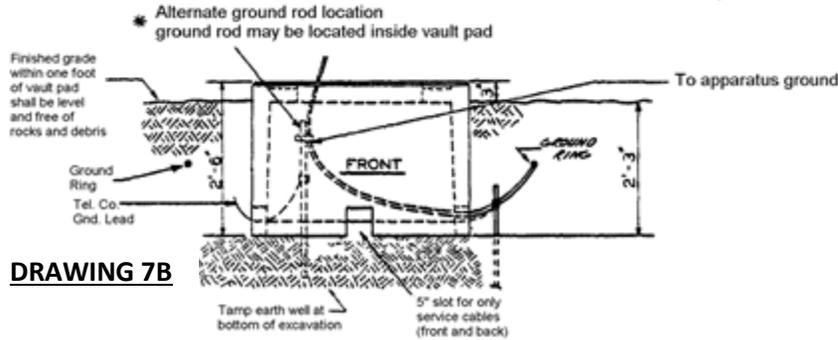
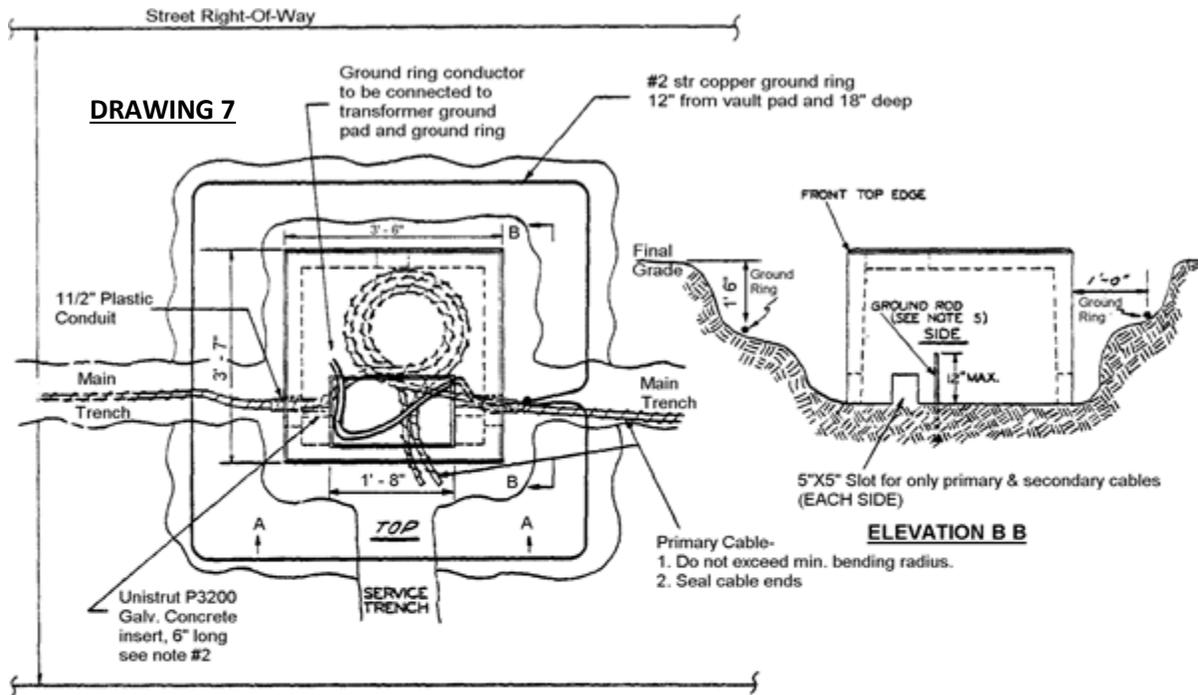
1. **\*\*BOX PAD MUST BE NO MORE THAN 10 FT OFF ROAD/DRIVEWAY\*\***
  - Vault pad shall be located a minimum of 4 ft. from a building and 10 ft. from doors and windows
2. Vault pad shall be installed level and placed on #2 crushed stone (4" minimum depth)
3. Grounding – One ground rod is to be installed, 1' away from pad with #2 bare copper loop, 1' away all around from pad is required. See above drawings 6 & 6A and drawings 7 & 7B on page 11 for preferred ground rod locations.
4. The transformer shall be secured to the foundation by hold-down cleats with a galvanized 9/16" steel washer, a galvanized 1/2" steel lock washer and a 3/8" x 1/2" long galvanized steel bolt

The vault pad will accommodate single phase pad mount transformers up to and including 100KVA transformers. For larger transformers, actual tank measurements must be verified with NYSEG before installation.

**INSTALLATION OF FIBERGLASS BOXPAD FOR SINGLE PHASE TRANSFORMERS**  
**(CONTINUED)**



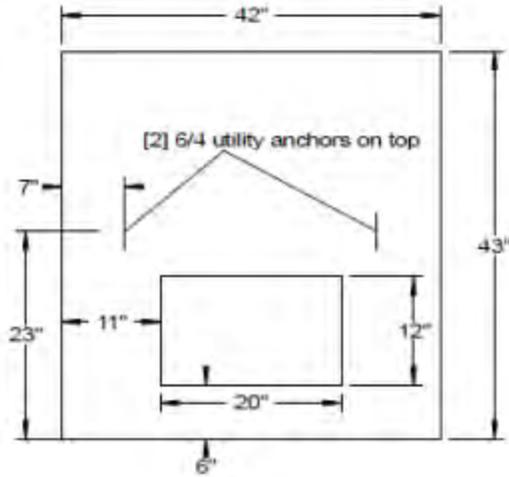
**INSTALLATION OF CONCRETE VAULTPADS FOR SINGLE PHASE TRANSFORMERS  
(CONTINUED)**



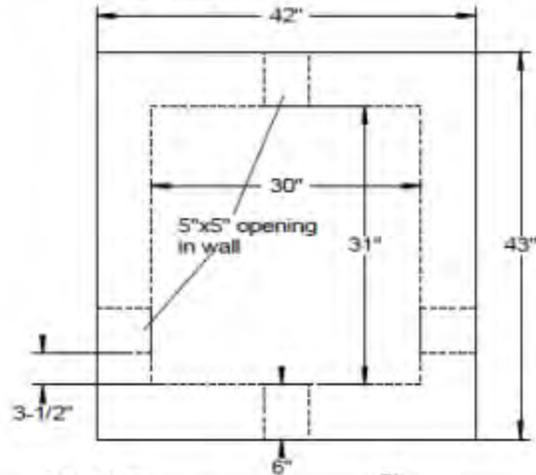
**INSTALLATION OF CONCRETE VAULTPADS FOR SINGLE PHASE TRANSFORMERS**  
**(CONTINUED)**

**DRAWING 8**

**Top View**



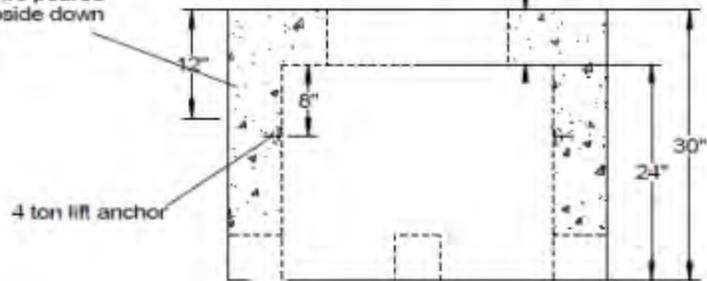
**Top View of Wall**



Concrete: Roof = 0.20 Yards Roof Weight = 805 lbs Base Walls = 0.45 Yards Base Weight = 1,800 lbs
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to be poured upside down

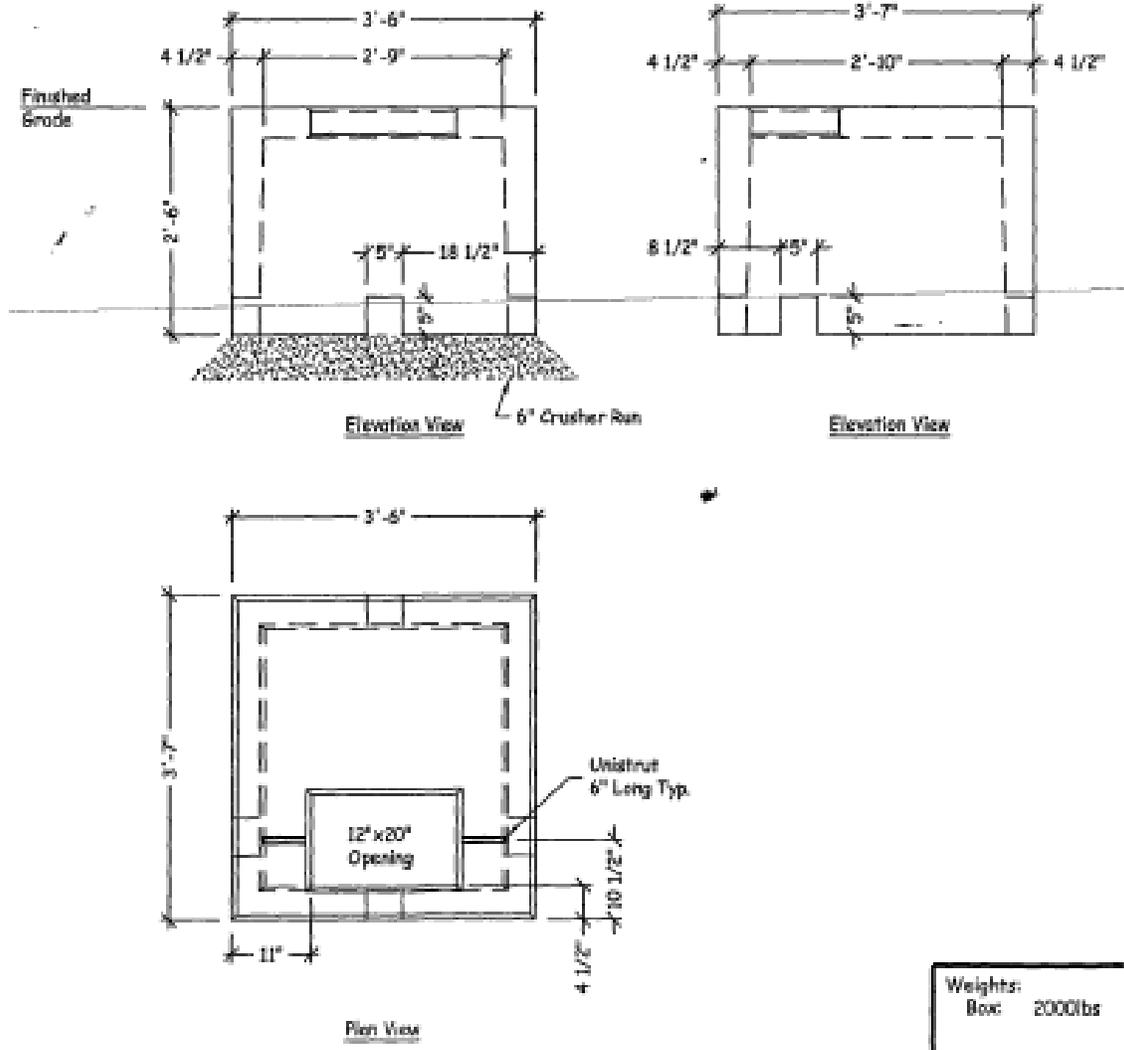
**Side View**



SPECIFICATIONS
Concrete Min. Strength: 4,000 psi at 28 days Reinforcement: #4 bar / ASTM A615 Air Entrainment: 6% Weight: 2,600 lbs

**INSTALLATION OF CONCRETE VAULT PADS FOR SINGLE PHASE TRANSFORMERS**  
**(CONTINUED)**

**DRAWING 9**

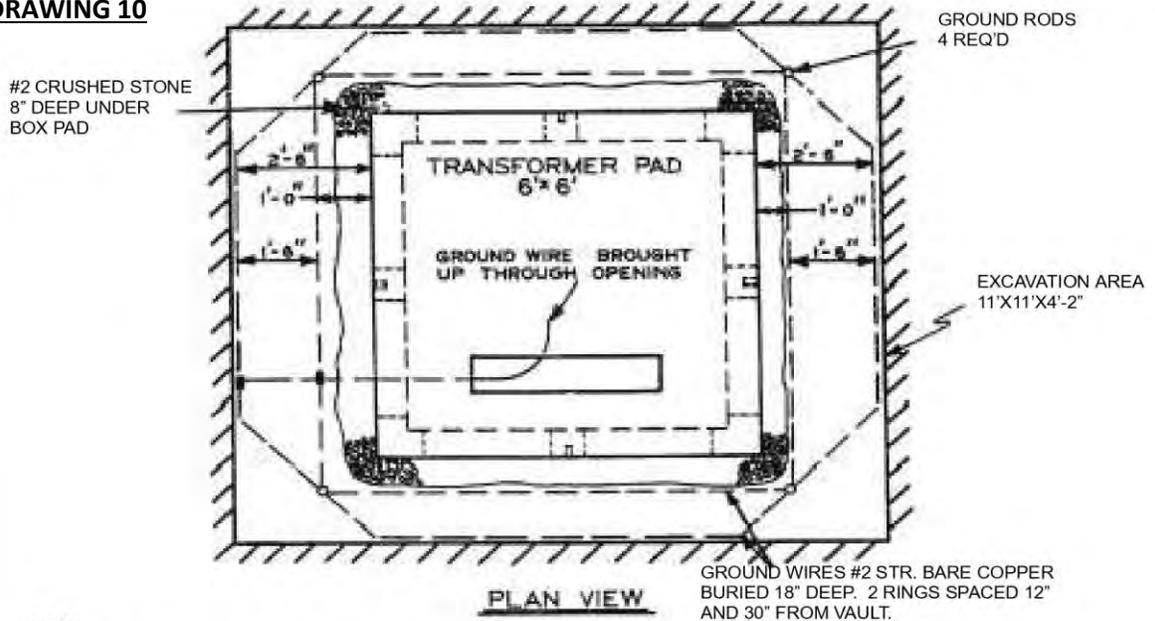


**INSTALLATION OF THREE PHASE PADMOUNTED TRANSFORMERS ON VAULT PAD**  
**(CONTINUED)**

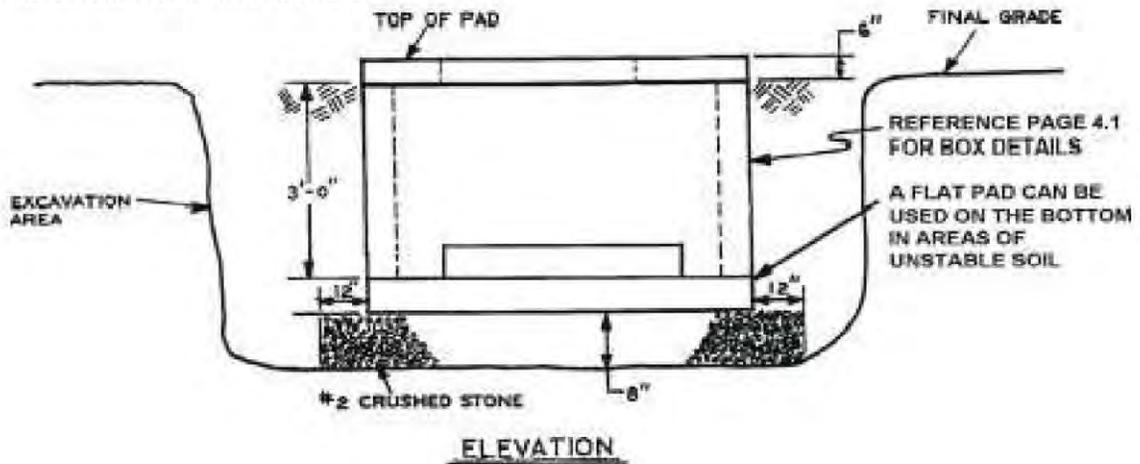
6'X6'X3' BOX PAD

6'X6' FLAT PAD - (can be used as bottom)

**DRAWING 10**

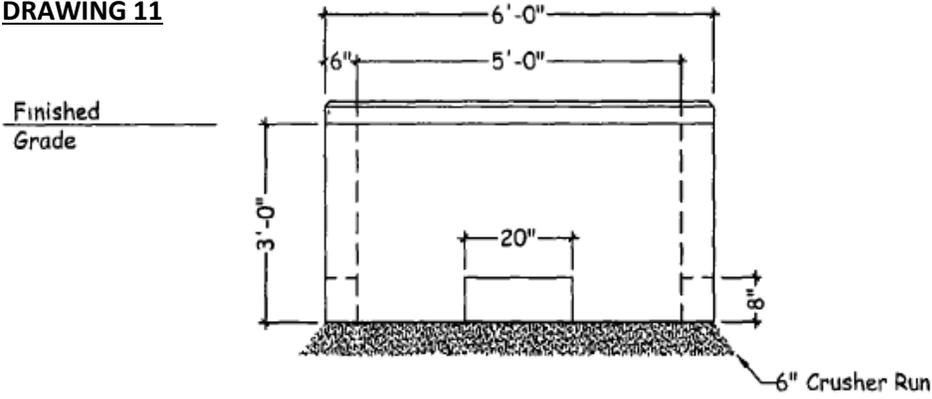


NOTE:  
USE STEEL OR CONCRETE BUMPER  
PROTECTORS WHEN IN TRAFFIC AREA'S

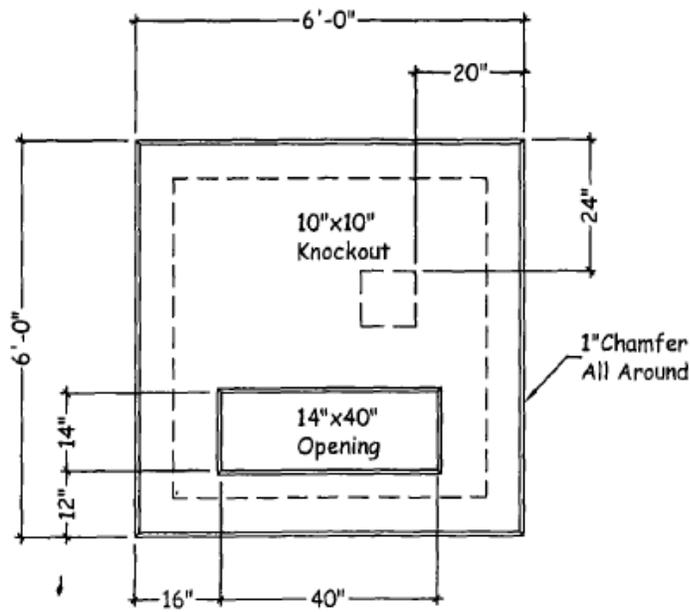


**INSTALLATION OF THREE PHASE PADMOUNTED TRANSFORMERS ON PRECAST FOUNDATIONS (CONTINUED)**

**DRAWING 11**



**Elevation View**

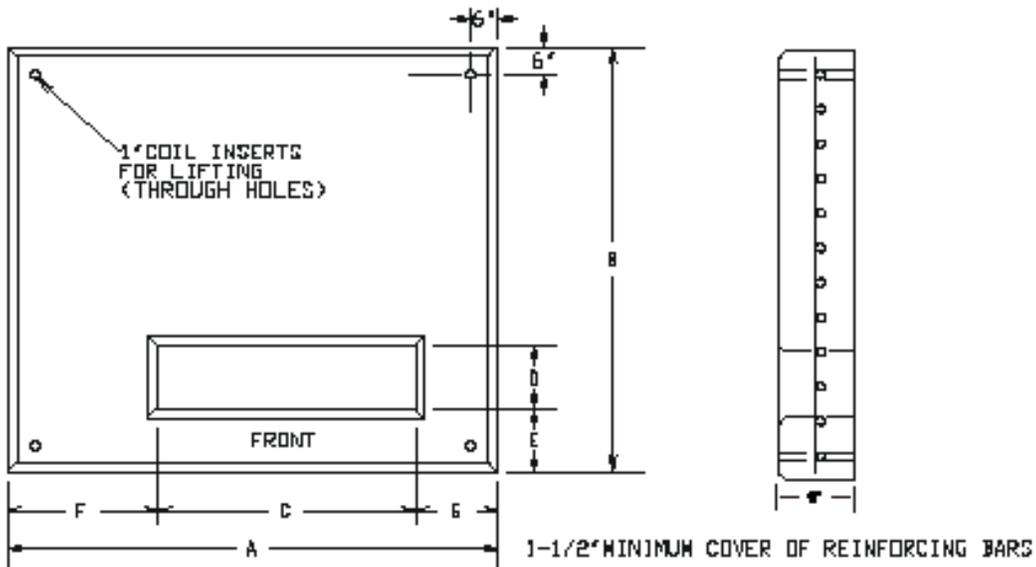


**Plan View**

<b>Weights.</b>	
Box:	4800lbs
Cover:	2370lbs

**DIMENSIONS OF POURED OR PRECAST CONCRETE PADS FOR THREE PHASE  
PADMOUNTED UTILIZATION TRANSFORMERS (CONTINUED)**

**DRAWING 12**



DIMENSIONS OF POURED OR PRECAST CONCRETE PADS												
TYPE	TRANSFORMER RATING			DIMENSIONS IN INCHES							WEIGHT	SS#
	KV	PHASE	KVA	A	B	C	D	E	F	G		
Util	15/35	1	25-167*	50	50	24	12	7	13	13	750	262-803-00
Util	15	3	75-500	72	72	40	16	12	16	16	2367	262-776-00
Util	15	3	750-2500	89	75	50	17	14	21	18	3100	262-781-00
Util	35	3	75-1500	89	75	50	17	14	21	18	3100	262-781-00
Util	35	3	2500	96	96	60	24	12	24	12	4300	262-782-00
Step		1/3	250-500	76	71	30	15	22.5	23	23	2600	262-790-00
Step		3	500-1500	95	89	43	17	20	26	26	4100	262-791-00
Step		3	1500-2500	96	96	62	17	20	17	17	4300	262-792-00
Step		3	3750-5000	120	120	80	24	20	20	20	6500	262-793-00

\* Used for conversion of a submersible transformer installation to a padmounted installation. This unit is 4" thick, not 6".

**Notes**

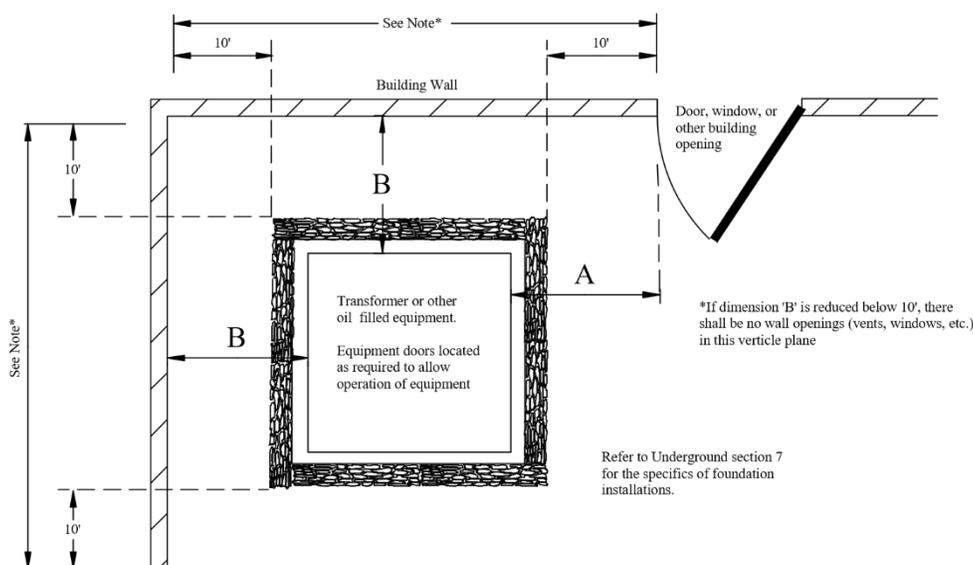
1. Reinforce with grade 60 #4 bars on 6" centers both ways
2. 4000 PSI concrete at 28 days
3. Top and Bottom to be smooth finish

**FLAT PADS**

### Clearance of Oil Filled Equipment from Structures

The NESC recommends the minimizing of fire hazards when installing oil filled equipment by utilizing a less flammable liquid, space separation, absorption beds, fire resistant barriers, etc. The code does not provide specific minimum footages or the reductions that can be obtained by using these methods. Therefore, based on NYSEG's operating history, and NFPA and other industry references the following recommendations have been developed for the installation of oil filled pad mounted equipment.

Item	Description	Footage
A	Clearance from doors and windows	10'
B	Clearance from structure walls	10'
B (reduced)	Reduced Clearance from walls (*see notes below)	4'



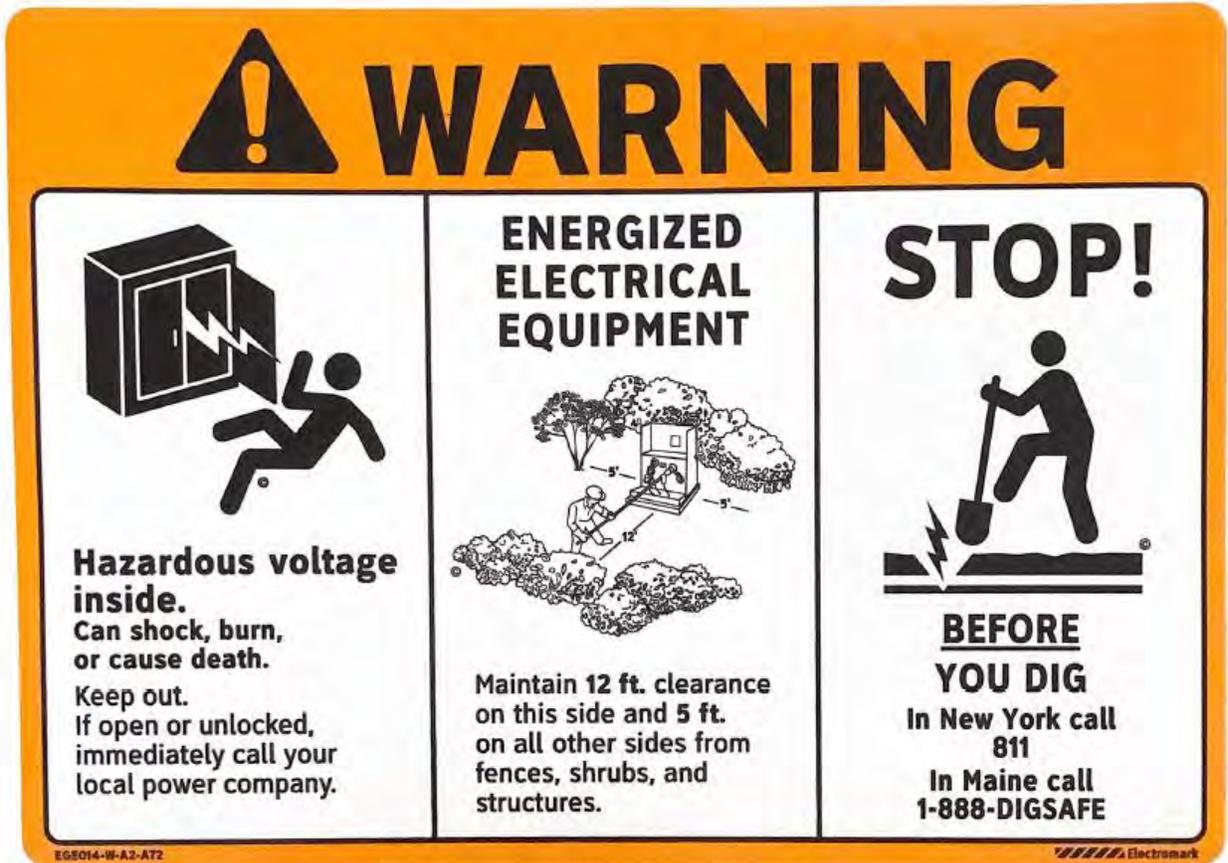
#### Notes:

- The reduced clearance on 'B' from 10' to 4' is based on the use of oil containment (using vaults under mini pads and gravel containment on larger units) to remove and capture oil in the event of rupture and fire. To provide sufficient volume for oil containment, the depth of gravel under a flat pad installation must be increased to 3'.
- NYSEG bases the above clearances on the following - Standard mineral oil, 5 MVA maximum size to minimize oil capacity, all standard building materials are acceptable.
- The 'A' clearance from doors and windows of 10' should provide sufficient separation for access and egress.
- While not a standard NYSEG practice, clearances may also be reduced using fire walls or low flammability insulating fluid. These decisions would be made on a case-by-case basis.

**Clearance of Oil Filled Equipment from Fences, Shrubs, and All Other Structures (Continued)**

Maintain **12 ft.** clearance on front side of transformer and **5 ft.** on all other sides of transformer from fences, shrubs, and all other structures. See WARNING sticker below that is put on all NYSEG pad mounted transformers.

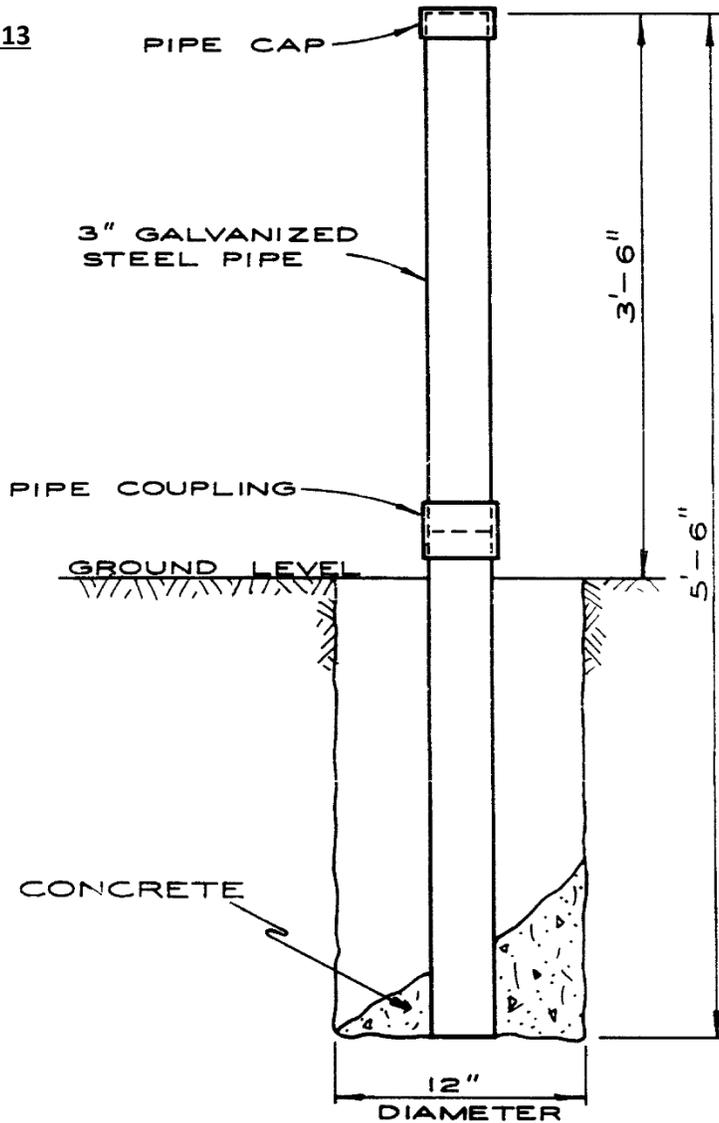
NOTE: ANY OBSTRUCTIONS MAY BE DAMAGED OR REMOVED AT NYSEG'S DISCRETION DURING SERVICE RETORATION OR MAINTENANCE



**BUMPER PROTECTIONS**

DETAIL OF BUMPER PROTECTION

**DRAWING 13**



BUMPERS TO BE  
 INSTALLED TO BE  
 FROM TRAFFIC 4 FT.  
 SIDES OF TRAZS ALL  
 TRAFFIC PEZ TO  
 TRAFFIC.  
 BUMPERS TO BE  
 CONCRETE TO BE  
 REPAIRS TO BE  
 AS  
 REQ'D.

MATERIAL REQ'D - 2 PCS. 3" PIPE (OR RIGID CONDUIT)  
 WITH 1-PIPE CAP AND COUPLING.

**NOTE**

3" STEEL BEAMS OR RAILROAD RAILS OF THE  
 SAME HEIGHT ARE ACCEPTABLE.

FOR CUSTOMER INSTALLATIONS SEE SP-1099

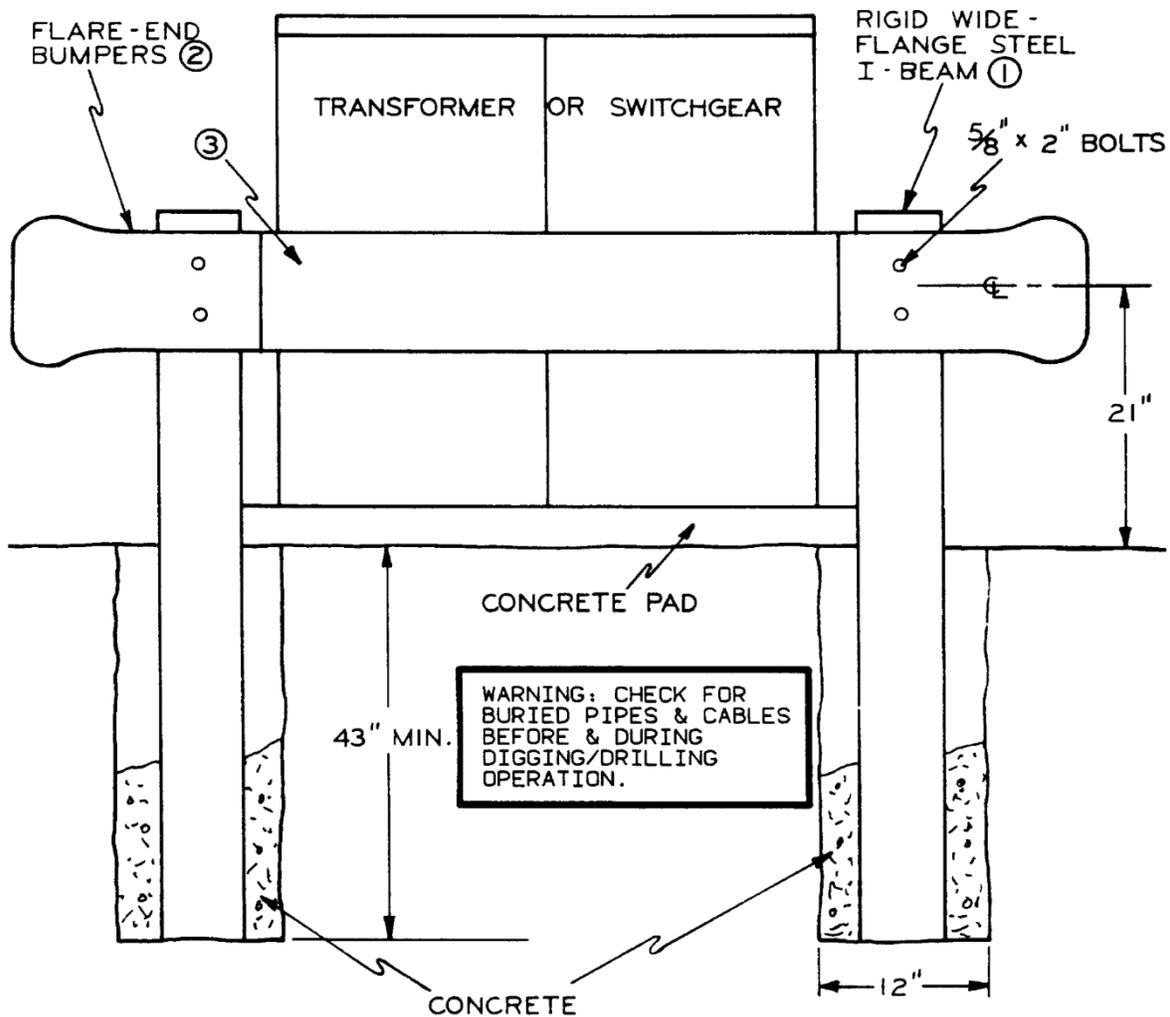
**BUMPER PROTECTIONS (CONTINUED)**

DETAIL OF BUMPER PROTECTION

NOTES

- ① W 6 x 8.5 I BEAM IN 5'-9" LENGTHS.
- ② 12 GAUGE FLARED-END IN 20" LENGTHS.
- ③ 12 GAUGE GALVANIZED W-BEAM IN 12'-6" LENGTHS-MAY NEED TO CUT TO FIT APPLICATION.

**DRAWING 14**



NOTE: ALLOW ENOUGH DISTANCE BETWEEN BUMPER PROTECTION AND EQUIPMENT IN ORDER TO OPEN DOORS AND OPERATE EQUIPMENT.

## CUSTOMER OWNED MEDIUM VOLTAGE CABLES

Customers that require 15kV and 35kV URD or medium voltage power cable, frequently have trouble in obtaining Kerite or Okanite cables and have had trouble in finding another manufacturer.

Prysmian, Kerite and Okonite are the major manufacturers supplied on our system; however, customers may purchase the other manufacturers listed for installation in their own private facilities.

These cable manufacturers are accepted by NYSEG at this time:

Alcoa*	Prysmian (formerly Pirelli)	Anaconda*
Reynolds*	Nehiring	Essex
Olex	Condumex	Gaon Cable ((formerly Heesung), formerly Kutje))
Kerite	Okonite	Southwire - Furakowa*
GPT	BICC	Nexans
Daewon	Daesung***	American Insulated Wire (EPR insulated)

\* These are former manufacturers of medium voltage cables

\*\* Confirm cable supplied by Daewon has compressed stranding, not compact stranding. NYSEG's normal connectors do not fit compact stranding. Do not accept compact stranded cable from any supplier without special arrangements.

\*\*\* Daesung offers semiconducting tape as an option for the conductor shield. This cable would not be acceptable with that option. Only extruded shields will be allowed for new installations.

The cable manufacturers **NOT** accepted by NYSEG at this time:

Viakon	Hetna	Canada Wire
Cablec	Habirline	Crown Wire
Aetna	Huston Wire	Columbia Wire
Kew Cable (Korean)		

This letter is not to be considered as a blanket acceptance. It is only a list of possible suppliers. We will want a sample of the proposed wire to determine identification markings, strip ability and conformance to industry standards. No sample is required from Kerite or Okonite, or if the cable has the same specifications that have been previously accepted from that manufacturer.

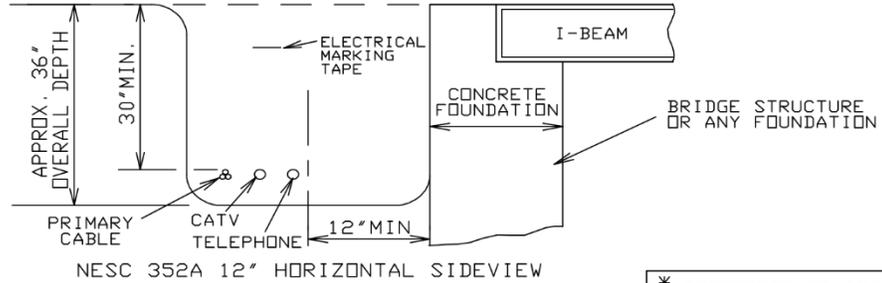
King Wire, Omnicable and Futronix are supply houses and not manufacturers. Be sure to determine the manufacturer of cable from either of these suppliers.

**\*\*PLEASE NOTE THAT THE INSPECTION AGENCIES MAY REQUIRE A "UL" LABEL ON THE CABLE\*\***

**CONDUCTOR CLEARANCE FROM OTHER UNDERGROUND STRUCTURES**

**DRAWING 15**

①



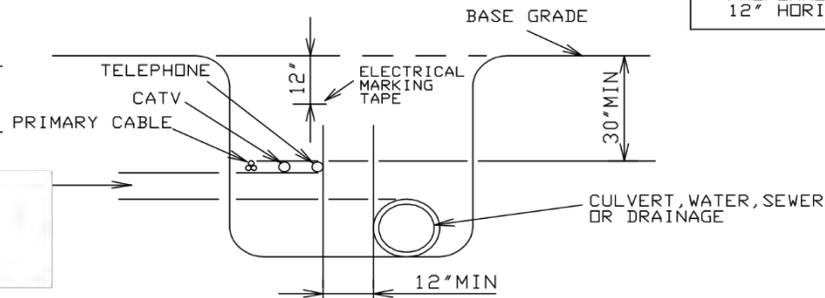
NESC 352A 12" HORIZONTAL SIDEVIEW

\* PREFERRED PRACTICE  
12" HORIZONTAL

②

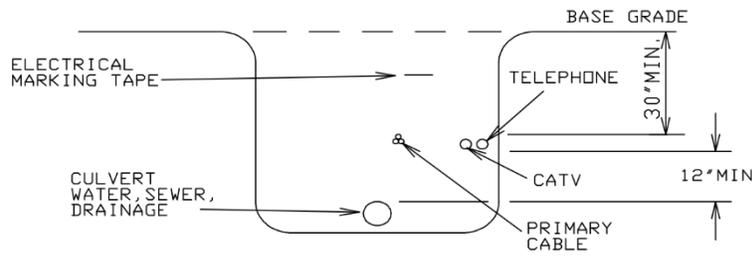
IN RANDOM SEPARATION IN ALL EXAMPLES

NO VERTICAL SEPARATION REQ'D BY CODE



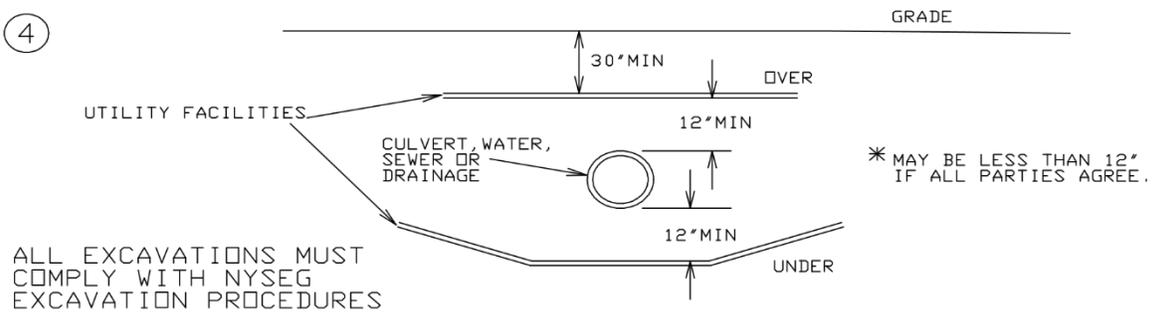
NESC 352A 12" HORIZONTAL SIDEVIEW

③



NESC 352C 12" VERTICAL SIDEVIEW

④



NESC 352B CROSSING 12" SIDEVIEW

ALL EXCAVATIONS MUST COMPLY WITH NYSEG EXCAVATION PROCEDURES

## PRIMARY CABLE – REQUIREMENTS AND CONSTRUCTION

**NOTE: Only those cables meeting NYSEG current internal cable specification (SP4294) will be suitable for takeover by NYSEG at a future date. If the CUSTOMER will be retaining ownership of the cable, see the minimum requirements below.**

The following is NYSEG's minimum requirements for solid dielectric insulated cable suitable for use on **CUSTOMER** electric power systems at voltages of 15kV or 35kV. The **CUSTOMER** shall supply NYSEG with the selected manufacturer's specifications and receive approval prior to ordering cable.

The cables shall be manufactured in accordance with the most recent applicable Insulated Cable Engineers Association (ICEA) and Association of Edison Illuminating Companies (AEIC) standards or be a NYSEG approved equivalent. AEIC shall take preference over ICEA in cases of conflicts

The voltage rating of the cable shall be as required by the system with the minimum acceptable voltage class being 15kV. **The minimum required conductor size is, #2 AWG concentric or compressed stranded copper or aluminum for 15kV**, and 1/0 AWG concentric or compressed stranded copper or aluminum for 35kV. All conductors shall be stranded, annealed copper or "EC" grade aluminum as per current ICEA and National Electric Manufacturers Association (NEMA) standards.

The cable shall have an extruded strand shield.

The Cable shall have an extruded insulation layer of cross-linked polyethylene (XLPE), tree retardant crosslinked polyethylene (TRXLPE), or an ethylene propylene rubber (EPR) based compound suitable for use at conductor temperatures listed in the current AE-IC standard CS6.

Insulation thickness shall be as follows:

<u>Cable Voltage Rating</u>	<u>Minimum Average Thickness</u>
<b>15kV</b>	<b>175 mils</b>
35kV	345 mils

The insulation shall be covered with an extruded insulation shield of a design as dictated by the appropriate current AEIC standard.

## Underground Construction:

**NOTE:** In accordance with industrial code #53, the **CUSTOMER** shall notify NYSEG and other utilities prior to digging.

**CUSTOMERS** who will be installing the primary cable in a common trench with telephone or cable TV cables (commonly referred to as joint trench) should adhere to the requirements of the NESC article 354. To paraphrase, if bare concentric neutral or semiconducting jacketed cables are direct buried, they can be installed in the trench with no intentional separation from the other facilities (random-lay). If the primary cable is installed in conduit, or an insulating jacket is used, the NESC may require either a one-foot separation between the primary cable and the other facilities, or the addition of a bare grounding conductor adjacent to the primary cable. Contact NYSEG for additional details prior to installing cable under these circumstances.

The **CUSTOMER'S** privately-owned underground system will commence at a **CUSTOMER** owned riser on a NYSEG designated pole, or at a NYSEG furnished and installed enclosure. The **CUSTOMER** can extend the single phase or three phase primary system using either a direct buried, or a conduit and manhole underground system. The **CUSTOMER** will install all primary cable, trench, conduit, and manholes (if necessary) between the interface point and the NYSEG installed transformer. The voltage class of the cable shall be in accordance with the operating voltage of the area to be served with 15kV being the minimum acceptable. In those area's designated for future conversion to a higher voltage, NYSEG may have additional requirements. The **CUSTOMER'S** primary cable specifications must be submitted to and accepted by NYSEG prior to ordering. The **CUSTOMER** may be required to supply NYSEG with a primary cable sample to assist in reviewing the acceptance of the cable, and to provide sizing information for terminations. **CUSTOMERS** installing unacceptable cable may be charged for the installation of terminations.

For direct buried primary cable installations, the minimum depth of burial shall be 30 inches for 15,000-volt cable and 36 inches for 35,000-volt cable. Depth of burial may be reduced as per the National Electric Code article 710-4b. The cable shall be protected above and below with back-fill free from stones or other material that will damage the cable. The remainder of the trench will also be back filled with select fill. The ends of all **CUSTOMER** installed cable shall be sealed by the **CUSTOMER** to prevent contamination of the cable with dirt or moisture. NYSEG reserves the right to inspect a **CUSTOMER'S** primary cable installation prior to back filling. Where a **CUSTOMER'S** cable may be used to serve additional future **CUSTOMERS**, NYSEG may impose more stringent design and equipment requirements.

**PRIMARY URD CABLE EXAMPLE**



**Product Data**  
Section 2: Sheet 36

**Okoguard® URO-J**  
**15kV Underground Primary Distribution Cable-Jacketed**  
**Red Identification Stripes**  
Filled Strand Aluminum Conductor/105°C Rating  
100% and 133% Insulation Levels



- A Conductor-Stranded Aluminum with Filled Strand
- B Strand Screen - Extruded Semiconducting EPR
- C Insulation-Okoguard EPR
- D Insulation Screen - Extruded Semiconducting EPR
- E Concentric Conductor-Bare Copper Wires
- F Encapsulating Jacket-Okolene with Extruded ID Stripes & NESC lightning bolt

**Insulation**

Okoguard is Okonite's registered trade name for its exclusive ethylene-propylene rubber (EPR) based, thermosetting compound, whose optimum balance of electrical and physical properties is unequalled in other solid dielectrics. Okoguard insulation, with the distinctive red color and a totally integrated EPR system, provides the optimum balance of electrical and physical properties for long, problem free service.

The triple tandem extrusion of the screens with the insulation provides optimum electrical characteristics.

The compressed conductors are filled with a water swellable agent. This construction slows the migration of water through the strands in the event of a mechanical dig-in followed by external exposure to water.

An insulation screen of ethylene-propylene rubber is extruded over the insulation. The copper concentric wires are uniformly spaced around the insulation screen. The overall polyethylene jacket provides protection against mechanical damage and corrosion.

Product identification is provided through the use of three red stripes placed 120° apart in the black jacket, with an NESC lightning bolt.

**Applications**

Okoguard URO-J cables provide maximum circuit longevity in underground residential distribution systems. They can be buried directly or installed in underground ducts or conduits.

**Specifications**

**Central Conductor:** Aluminum per ASTM B-609, Class B stranded per B-231.

**Filled Strand:** Water swellable agent meets or exceeds ICEA T-31-610 water penetration resistance and ANS/NEMA class A connectability requirements.

**Conductor Screen:** Extruded semiconducting ethylene-propylene rubber meets or exceeds the requirements of ICEA S-94-649, AEIC CS8, and CSA C68.5.

**Insulation:** Extruded Okoguard meets or exceeds the requirements of ICEA S-94-649, AEIC CS8, and C68.5.

**Insulation Screen:** Extruded semiconducting ethylene-propylene rubber meets or exceeds the requirements of ICEA S-94-649, AEIC CS8, and CSA C68.5.

**Concentric Conductor:** Bare copper wires.  
**Jacket:** Black Okolene with red extruded stripes meets or exceeds the requirements of ICEA S-94-649, AEIC CS8, and CSA C68.5 for polyethylene jackets.

**Product Features**

- \* Triple tandem extruded, all EPR system.
  - \* Okoguard cables meet or exceed ICEA standards.
  - \* Meets RUS 1728.204 for cables with filled strand or solid conductor and 133% insulation level.
  - \* 105°C continuous operating temperature.
  - \* 140°C emergency rating.
  - \* 250°C short circuit rating.
  - \* Excellent corona resistance.
  - \* Low dielectric constant and power factor.
  - \* Screens are clean stripping.
  - \* Exceptional resistance to "treeing".
  - \* Filled strand conductor.
  - \* Moisture resistant.
  - \* Overall jacket provides extended life.
  - \* Excellent resistance to most chemicals.
  - \* Can be listed by UL as Type MV-90 on Special Orders.
  - \* CSA C68.5 listed, LTGG (-40°C), SR.
  - \* Design Options:
    - Additional conductor sizes
    - Copper central conductor
    - Copper flat strap concentric neutral
    - Product identification via colored jackets.
    - Semiconducting jackets.
  - \* Improved Temperature Rating.
- Okoguard insulation system has been tested and qualified for operation at 105°C continuous and 140°C emergency operating temperature.
- \* Minimum installation temperature of -40°C.

**PRIMARY URD CABLE EXAMPLE (CONTINUED)**

**Okoguard URO-J**  
**15kV Underground Primary Distribution Cable-Jacketed**  
**Red Identification Stripes**  
 Filled Strand Aluminum Conductor/105°C Rating  
 100% Insulation Level

**Product Data**  
**Section 2: Sheet 36**



**Okoguard Insulation: 175 mils 100% Insulation Level**

Catalog Number	Conductor Size AWG/kcmil	Nominal Dia. over Insulation (in.)	Insulation Screen Thickness (mils)	Nominal Dia. over Insulation Screen (in.)	Copper Neutral, No. x AWG (1)	Nominal O.D. (in.)	Approx. Net Weight lbs./1000'	Approx. Ship Weight lbs./1000'	90°C Ampacity Direct Burial (2)	105°C Ampacity Direct Burial (2)	105°C Ampacity Duct (2)	
<b>FULL NEUTRAL</b>												
▲ 163-23-2060	2(7x)	0.68	30	0.75	10x14	0.99	517	626	170	125	185	135
163-23-2066	1(19x)	0.72	30	0.79	13x14	1.03	588	698	195	145	210	155
▲ 163-23-2072	1/0(19x)	0.76	30	0.83	16x14	1.07	667	778	220	160	235	175
163-23-2075	2/0(19x)	0.80	30	0.87	13x12	1.14	793	910	250	185	270	205
163-23-2078	3/0(19x)	0.85	30	0.92	16x12	1.19	910	1029	285	210	310	230
163-23-2081	4/0(19x)	0.90	30	0.98	14x10	1.29	1131	1238	320	240	350	260
163-23-2084	250(37x)	0.97	30	1.04	16x10	1.35	1270	1418	350	270	380	295
163-23-2090	350(37x)	1.07	40	1.17	18x.1078	1.50	1603	1793	425	310	460	340

← NYSEG PREFERRED CABLE

## APPENDIX 10

### Luminaire Schedule

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Luminaire Schedule

**GENERAL NOTES:**

- Provide luminaire shop drawings for Lighting Consultant, Architect, and Owner approval prior to fabrication. For all continuous run luminaires, including track, manufacturer shall submit a layout drawing for run lengths specified on architectural drawings during submittal review for Lighting Designer and Architect approval prior to fabrication.
- Architect shall verify all luminaire body, trim, flange, pole, track and any other visible accessories/hardware finishes. All visible conduit, junction boxes, canopy plates, hardware, gear containers, etc. shall be painted to match adjacent surfaces (Architect to verify).
- Refer to electrical drawings for voltage information. Electrical contractor shall verify all voltages with Electrical Engineer before placing any orders or proceeding with any work.
- Electrical contractor shall verify emergency operation of all luminaires with Electrical Engineer before placing any orders or proceeding with any work. Refer to electrical drawings for all emergency or code-related requirements.
- Contractor shall verify and coordinate recessed luminaire installation and mounting with architectural details, housing type, field conditions, and ceiling system details including grid type and flange requirements such that there are no light leaks between luminaire and ceiling system and luminaire can accommodate ceiling thickness.
- Contractor to verify and coordinate all other luminaire installation and mounting with architectural details and field conditions.
- Contractor shall verify mounting details with architect and/or architectural drawings and order all mounting components necessary for installation of luminaire at no additional cost, even if such components are not specifically called for in the contract documents.
- Provide adequate and sturdy support for each luminaire. Contractor shall be responsible for verifying weight and mounting method of all luminaires and furnish and install suitable supports. Luminaire mounting assemblies shall comply with all local seismic codes and regulations.
- Provide all luminaires as shown complete with all light sources, completely wired, controlled and securely attached to supports.
- Where both narrative and/or pictorial luminaire descriptions are provided, the written description shall take precedence and prevail. Contractor to confirm via RFI process with lighting designer and architect.
- Locations of luminaires are shown diagrammatically. Verify exact location and spacing with architectural drawings and designer at the site during installation. Notify Owner about field conditions at variance with Contract Documents before commencing installation.
- At the completion of construction, clean lenses and reflectors of all luminaires so as to render them free of any material, substance or film foreign to the luminaire. Blemished, damaged, or unsatisfactory luminaires shall be replaced in a satisfactory manner.

- When applicable, contractor shall review existing circuiting, verify new loads and panel capacity. Contractor shall notify Owner if a conflict between design documents and field conditions occur.
- Contractor shall refer to electrical drawings for information on controls and dimming requirements, and coordinate luminaire and control accessories required for a fully functioning system.
- Contractor to provide line item pricing at bid phase or earlier as requested by lighting designer or architect per type with labor and installation shown as separate line items.
- All 0-10V dimming gear provided shall be isolated to avoid AC interference on the dimming line.
- All LED sources within the same luminaire Type shall be within two (2) MacAdam ellipses/steps of each other.
- For all adjustable luminaires provide labor and materials for final aiming and locking of all adjustable luminaires under the Architect's supervision. Aiming shall take place immediately before building is turned over to Owner, after regular working hours where required. Contractor shall coordinate necessary personnel and equipment
- All luminaires shall have a minimum 3-year warranty.
- All lighting systems shall be ordered with necessary gear, power feeds and mounting accessories as required for installation of a complete system.
- Locate remote gear in a secure, concealed, accessible and well-ventilated location in compliance with manufacturer's directions.
- All luminaires and workmanship shall be guaranteed free of defects and fully operational for a minimum of one year after the acceptance of the project by the Owner unless otherwise indicated in the specifications. Any luminaires or workmanship found to be defective during the warranty period shall either be fixed or replaced by the Contractor at no cost to the Owner.
- The luminaires and workmanship must be in accordance with and meet the standards and regulations of the following: Underwriters Laboratories, National Electric Code, & Local Building and Life Safety Code Agencies.
- Replace all burned-out or inoperative sources and gear in all luminaires before the building is accepted by the Owner so that all luminaires will be in first class operating condition.
- For pendant mounted luminaires provide adequate cord length to suspend luminaires at heights shown on architectural drawings or indicated in the lighting fixture schedule.
- Electrical contractor shall field-verify each run length of continuous fixtures prior to ordering.
- Provide luminaire samples per type as requested in the Fixture Schedule. Supply a completely operable luminaire with cord and plug for standard 120 Volt service.
- Code required accessories and controls such as but not limited to motion sensors, photocell controls, dimming controls, etc. to be specified and coordinated by Electrical Engineer.
- Contractor shall follow all manufacturer installation instructions and inform the Architect if there is a conflict with design documents.

TYPE	LOCATION	DESCRIPTION	FIXTURE FINISH	LAMPS/SOURCE	POWER SUPPLY/ DRIVER	INPUT WATTS	INPUT WATT UNITS	LISTING	MANUFACTURER	NOTES
<b>INTERIOR LUMINAIRES</b>										
F1	Bedford House Throughout, Carriage Barn Exhibits 102	Ceiling mounted 2" aperture round adjustable LED monopoint with 2.75" diameter micro-canopy, 40-degree optic, 360-degree rotation, 90-degree tilt, black cross baffle, and 1100 delivered lumens. Fixture shall be line voltage with die-cast aluminum housing and powder-coated finish.  Dimensions: Fixture: 2" Dia x 3 1/4" H Canopy: 2 3/4" Dia x 2 3/8" H recessed (1/16" H visible)	White Architect shall verify	LED 3000K 80+ CRI L70 @ 50,000 Hours 1100 LM Delivered	Integral DIM ELV	14.0W	EA	UL Listed for Dry Location	Luminaire T50 Track Heads  T50-30K-1100-40-W-MC + Accessories: T50-CB	- Fixture finish to be verified by Architect. - Contractor shall verify and coordinate luminaire installation and mounting with architectural details, housing type, field conditions, and ceiling system details including ceiling thickness, grid type, flange and insulation clearance requirements. - Electrical Engineer/Contractor to verify compatibility of light source, gear and dimming system. - Electrical Engineer shall confirm all EM requirements. - Fixture shall have a minimum 5-year warranty.
F1A	Carriage Barn Exhibits 101, 101A, 102	Same as F1, except fixture shall be mounted to track.  Dimensions: 2" Dia x 3 1/4" H	White Architect shall verify	LED 3000K 80+ CRI L70 @ 50,000 Hours 1100 LM Delivered	Integral DIM ELV	14.0W	EA	UL Listed for Dry Location	Luminaire T50 Track Heads  T50-30K-1100-40-W-J + Accessories: T50-CB	- Fixture finish to be verified by Architect. - F1B track and F1A luminaires shall be compatible. Contractor to provide all necessary lengths, feeds, connectors, supports, and other components for complete and code compliant installation. - Electrical Engineer/Contractor to verify compatibility of light source, gear and dimming system. - Electrical Engineer shall confirm all EM requirements. - Fixture shall have a minimum 5-year warranty.
F1B	Carriage Barn Exhibits, Gift Shop 105B	Ceiling surface-mounted two-circuit J-type line voltage track system with 40 amp capacity, solid copper conductors with insulators in 14-gauge extruded field-cutttable aluminum channels. Track shall have power feeds and connection accessories constructed of polycarbonate with galvanized steel back plates.  Dimensions: Length Per Drawing x 1 3/8" W x 13/16" H	Black Architect shall verify	N/A	N/A	N/A	N/A	UL Listed for Dry Location	Luminaire JT 2-Circuit Line Voltage Track  JT-Length Per Drawing-B  Mounting and Power Accessories as Required	- Fixture finish to be verified by Architect. - F1B track and F1A and F1C luminaires shall be compatible. Contractor to provide all necessary lengths, feeds, connectors, supports, and other components for complete and code compliant installation. Track shall be equipped with Wattage-limiting circuit breaker equipment for each run of track. - Track shall be equipped with wattage-limiting circuit breaker equipment for each run of track. Allow for twice the wattage of fixtures shown on the electrical drawings/maximum Wattage as allowed by code. - Electrical Engineer/Contractor to verify compatibility of light source, gear and dimming system. - Electrical Engineer shall confirm all EM requirements. - Fixture shall have a minimum 5-year warranty.
F1C		NOT USED								
F1D	Bedford House Discovery Zone Kitchen (B-6)	Same as F1, except ceiling mounted with deep canopy collar over surface mounted j-box.  Dimensions: Fixture: 2" Dia x 3 1/4" H Canopy: 4 5/8" Dia x 2" H	White Architect shall verify	LED 3000K 80+ CRI L70 @ 50,000 Hours 1100 LM Delivered	Integral DIM ELV	14.0W	EA	UL Listed for Dry Location	Luminaire T50 Track Heads  T50-30K-1100-40-W-SC-JA-18-JA-18-W-Cover + Accessories: T50-CB	- Fixture finish to be verified by Architect. - Luminaire shall be mounted over a surface-mounted junction box (by electrician). - Electrical Engineer/Contractor to verify compatibility of light source, gear and dimming system. - Electrical Engineer shall confirm all EM requirements. - Fixture shall have a minimum 5-year warranty.
F2		NOT USED								

TYPE	LOCATION	DESCRIPTION	FIXTURE FINISH	LAMPS/SOURCE	POWER SUPPLY/ DRIVER	INPUT WATTS	INPUT WATT UNITS	LISTING	MANUFACTURER	NOTES
F3	Bedford House Ballroom, Porch	Recess mounted 2" aperture round adjustable LED downlight in die-cast aluminum housing with powder-coated finish and knife edge trim with 35-degree tilt. Fixture shall have 60-degree optic and 1600 delivered lumens.  Dimensions: Fixture: 3 3/4" Dia x 4 7/8" H Housing: 11" L x 8" W x 5" H	White Architect shall verify	LED 3000K 80+ CRI L70 @ 50,000 Hours 1600 LM Delivered	Integral DIM 0-10V	17.0W	EA	UL Listed for Damp Location	Lumiture DLA60 2" Adjustable Downlights  DLA60-30K-60-W-W-R-Z-400-C	- Fixture finish to be verified by Architect. - Contractor shall verify and coordinate luminaire installation and mounting with architectural details, housing type, field conditions, and ceiling system details including ceiling thickness, grid type, flange and insulation clearance requirements. - If required based on existing field conditions, provide IC and/or Airtight housing as required for installation in an insulated ceiling. Contractor to provide as required based on ceiling type and local codes. - Electrical Engineer/Contractor to verify compatibility of light source, gear and dimming system. - Electrical Engineer shall confirm all EM requirements. - Fixture shall have a minimum 5-year warranty.
F3A	Carriage Barn Entrance, Ticketing, Gift Shop	Same as F3, except fixture shall have 950 delivered lumens.  Dimensions: Fixture: 3 3/4" Dia x 4 7/8" H Housing: 11" L x 8" W x 5" H	White Architect shall verify	LED 3000K 80+ CRI L70 @ 50,000 Hours 950 LM Delivered	Integral DIM 0-10V	8.5W	EA	UL Listed for Damp Location	Lumiture DLA60 2" Adjustable Downlights  DLA60-30K-60-W-W-R-Z-200-C	- Fixture finish to be verified by Architect. - Contractor shall verify and coordinate luminaire installation and mounting with architectural details, housing type, field conditions, and ceiling system details including ceiling thickness, grid type, flange and insulation clearance requirements. - If required based on existing field conditions, provide IC and/or Airtight housing as required for installation in an insulated ceiling. Contractor to provide as required based on ceiling type and local codes. - Electrical Engineer/Contractor to verify compatibility of light source, gear and dimming system. - Electrical Engineer shall confirm all EM requirements. - Fixture shall have a minimum 5-year warranty.
F4	Mechanical 222, Stair 218	4'-0" L surface-mounted LED strip light with wraparound lens. Housing is die and brake-formed, cold gauge steel housing and ends with knockouts and frosted extruded micro-grooved round polycarbonate lens. Fixture shall have integrated occupancy sensor and 1948 delivered lumens.  Dimensions: 44 7/8" L x 2 1/16" W x 2 7/8" H	White Architect shall verify	LED 3000K 80+ CRI L80 @ 50,000 Hours 1948 LM Delivered	Integral DIM 0-10V	13.7W	EA	UL Listed for Damp Location	Visioneering LCOMN  LCOMN48-LED830K020LUNV-B39-V68	- Fixture finish to be verified by Architect. - Luminaire shall be mounted over a recessed junction box (by electrician). - Electrical Engineer/Contractor to verify compatibility of light source, gear and dimming system. - Electrical Engineer shall confirm all EM requirements. - Fixture shall have a minimum 5-year warranty.
F4A	Bedford House Stairs	Same as F4, except fixture shall be 2'-0" length with 1927 delivered lumens.  Dimensions: 22 7/8" L x 2 1/16" W x 2 7/8" H	White Architect shall verify	LED 3000K 80+ CRI L80 @ 50,000 Hours 1927 LM Delivered	Integral DIM 0-10V	14.4W	EA	UL Listed for Damp Location	Visioneering LCOMN  LCOMN24-LED830K020LUNV-B39-V68	- Fixture finish to be verified by Architect. - Luminaire shall be mounted over a recessed junction box (by electrician). - Electrical Engineer/Contractor to verify compatibility of light source, gear and dimming system. - Electrical Engineer shall confirm all EM requirements. - Fixture shall have a minimum 5-year warranty.
F4B		NOT USED								
F5		NOT USED								
F6	Bedford House Ballroom	Surface mounted linear LED cove light with asymmetrical 25-degree optic, 624 delivered lumens per foot and side feed and external mounting clip. Housing is one-piece extruded aluminum channel with cast aluminum end caps and powder coated finish, extruded high transmission optic lens, and 8% transmission loss. Fixtures shall have CREE LEDs mounted on robust platform.  Dimensions: Length Per Drawing x 1" W x 0.48" H	Matte Black Architect shall verify	LED 3000K 90+ CRI L70 @ 50,000 Hours 624 LM/FT Delivered	Remote DIM 0-10V	4.8W	LFT	UL Listed Rated IP20 for Dry Location	Scout Optic  SS-O-6-M-30-B-5Fx-1-E-Y-Wire Length-S-Length Per Drawing + Driver: SDRVCC01075  Mounting and Power Accessories as Required	- Fixture finish to be verified by Architect. - Modular units to be installed for a continuous run condition as shown on drawing. Refer to architectural drawings for length of continuous runs, contractor shall provide an optimal combination of luminaire lengths to provide a continuous run as shown on architectural drawings. Luminaire shall stop from a minimum of 3" to a maximum of 8" from the corner or end of wall. - Luminaire shall be concealed in architectural cove. Refer to architectural drawings for details. - Electrical Engineer/Contractor to verify compatibility of light source, gear and dimming system. - Luminaire shall be ordered with necessary gear, control interfaces, power feed cables/terminators and mounting accessories as required for a complete system. - Locate remote gear in a secure, concealed, accessible and well-ventilated location in compliance with manufacturer's directions. Contractor/Manufacturer to coordinate remote gear size, location and wire gauge for <2% Voltage drop over entire length of run. - Provide manufacturer's dimensioned shop drawings showing all materials, finishes and components for Lighting Designer and Architect review prior to final fixture approval and fabrication. - Fixture shall have a minimum 5-year warranty.
F7	Bedford House Corridor 108	3" diameter pendant-mounted LED cylinder downlight with 50-degree optic and 1168 delivered lumens. Extruded aluminum house with machined aluminum canopy and powder-coated finish and high-efficiency textured diffuse lens. Fixture shall be mounted using 4'-0" field cuttable swivel rigid stem and have a ball-joint canopy for use in slopped ceiling installations where required.  Dimensions: Fixture: 3 9/16" Dia x 8 5/8" H Canopy: 5" Dia x 1/4" H Stem 1: 52 1/8" H Stem 2: 26 9/16" H	White Architect shall verify	LED 3000K 80 CRI L70 @49,500 Hours 1168 LM Delivered	Integral DIM 0-10V	11.0W	EA	UL Listed for Damp Location	Alphabet Beta 3  BETA-3R-SW-10LM-30K-80-50HET-Accessory-NL-WH-WH-RP-UNV-DIM10-Electrical Options	- Fixture finish to be verified by Architect. - Refer to architectural drawings for mounting height AFF. Stem length to be cut in field to keep the bottom of the fixture height AFF constant at 11'-2" for flat and sloped ceiling locations. Luminaire shall be mounted over a recessed junction box (by electrician). - Electrical Engineer/Contractor to verify compatibility of light source, gear and dimming system - Electrical Engineer shall confirm all EM requirements. - Fixture shall have a minimum 5-year warranty.
F8		NOT USED								

TYPE	LOCATION	DESCRIPTION	FIXTURE FINISH	LAMPS/SOURCE	POWER SUPPLY/ DRIVER	INPUT WATTS	INPUT WATT UNITS	LISTING	MANUFACTURER	NOTES
F9		NOT USED								
F10	Carriage Barn Exhibits 103, 104, Gift Shop, Circulation	Track mounted 1.5" aperture round adjustable LED track head with 40-degree optic 360-degree rotation, 90-degree tilt, Solite lens, and 600 delivered lumens. Fixture shall be line voltage with die-cast aluminum housing and powder-coated finish and be compatible with F1B track.  Dimensions: 1 5/8" Dia x 2 5/8" H	White Architect shall verify	LED 3000K 90+ CRI L70 @ 50,000 Hours 600 LM Delivered	Integral DIM ELV	7.0W	EA	UL Listed for Dry Location	Lumeture T40 Track Heads  T40-30H-600-40-W-J + Accessories: SOL-38	- Fixture finish to be verified by Architect. - F1B track and F10 luminaires shall be compatible. Contractor to provide all necessary lengths, feeds, connectors, supports, and other components for complete and code compliant installation. - Electrical Engineer/Contractor to verify compatibility of light source, gear and dimming system. - Electrical Engineer shall confirm all EM requirements. - Fixture shall have a minimum 5-year warranty.
F10A	Bedford House Circulation	Same as F10, except fixture shall be micro-canopy mounted with linear spread lens.  Dimensions: Fixture: 1 5/8" Dia x 2 5/8" H Canopy: 4 3/4" Dia x 3/8" H	White Architect shall verify	LED 3000K 90+ CRI L70 @ 50,000 Hours 600 LM Delivered	Integral DIM ELV	7.0W	EA	UL Listed for Dry Location	Lumeture T40 Track Heads  T40-30H-600-40-W-MC + Accessories: LS-38	- Fixture finish to be verified by Architect. - Contractor shall verify and coordinate luminaire installation and mounting with architectural details, housing type, field conditions, and ceiling system details including ceiling thickness, grid type, flange and insulation clearance requirements. - Electrical Engineer/Contractor to verify compatibility of light source, gear and dimming system. - Electrical Engineer shall confirm all EM requirements. - Fixture shall have a minimum 5-year warranty.
F10B	Bedford House Exit Signs	Same as F10, except fixture shall be micro-canopy mounted with 22-degree beam spread and honeycomb louver.  Dimensions: Fixture: 1 5/8" Dia x 2 5/8" H Canopy: 4 3/4" Dia x 3/8" H	White Architect shall verify	LED 3000K 90+ CRI L70 @ 50,000 Hours 600 LM Delivered	Integral DIM ELV	7.0W	EA	UL Listed for Dry Location	Lumeture T40 Track Heads  T40-30H-600-22-W-MC + Accessories: HL-38	- Fixture finish to be verified by Architect. - Fixture shall be mounted 1'-6" o.c. setback from the front face of the historic exit signs to the center of the j-box. - Contractor shall verify and coordinate luminaire installation and mounting with architectural details, housing type, field conditions, and ceiling system details including ceiling thickness, grid type, flange and insulation clearance requirements. - Electrical Engineer/Contractor to verify compatibility of light source, gear and dimming system. - Electrical Engineer shall confirm all EM requirements. - Fixture shall have a minimum 5-year warranty.
F10C		NOT USED								
F11	Bedford House Restrooms, Office, Elevator Vestibule, Corridor, Carriage Barn Restroom	Recess mounted 2" round aperture fixed LED downlight in die-cast aluminum housing with powder-coated finish and knife edge trim. Fixture shall be line voltage and have 60-degree optic and 950 delivered lumens.  Dimensions: Fixture: 3 3/4" Dia x 3 3/8" H Housing: 11" L x 8" W x 5" H	White Architect shall verify	LED 3000K 80+ CRI L70 @ 50,000 Hours 950 LM Delivered	Integral DIM 0-10V	8.5W	EA	UL Listed for Damp Location	Lumeture DLA60 2" Fixed Downlights  DL60-30K-60-W-W-R-Z-200-C	- Fixture finish to be verified by Architect. - Contractor shall verify and coordinate luminaire installation and mounting with architectural details, housing type, field conditions, and ceiling system details including ceiling thickness, grid type, flange and insulation clearance requirements. - If required based on existing field conditions, provide IC and/or Airtight housing as required for installation in an insulated ceiling. Contractor to provide as required based on ceiling type and local codes. - Electrical Engineer/Contractor to verify compatibility of light source, gear and dimming system. - Electrical Engineer shall confirm all EM requirements. - Fixture shall have a minimum 5-year warranty.
F12		NOT USED								
F12A		NOT USED								
F13		NOT USED								
F14		NOT USED								
F15	Bedford House Staircase	Recess mounted 3" round aperture adjustable LED downlight in die-cast aluminum housing with powder-coated finish and knife edge trim with 35-degree tilt. Fixture shall be line voltage and have 25-degree optic and 1050 delivered lumens.  Dimensions: Fixture: 3 3/4" Dia x 5" H Housing: 11" L x 8" W x 5" H	White Architect shall verify	LED 3000K 90+ CRI L70 @ 50,000 Hours 1050 LM Delivered	Integral DIM 0-10V	11.0W	EA	UL Listed for Damp Location	Lumeture DLA75 3" Adjustable Downlights  DLA75-30H-25-W-W-R-U-250-C	- Fixture finish to be verified by Architect. - Contractor shall verify and coordinate luminaire installation and mounting with architectural details, housing type, field conditions, and ceiling system details including ceiling thickness, grid type, flange and insulation clearance requirements - If required based on existing field conditions, provide IC and/or Airtight housing as required for installation in an insulated ceiling. Contractor to provide as required based on ceiling type and local codes. - Electrical Engineer/Contractor to verify compatibility of light source, gear and dimming system. - Electrical Engineer shall confirm all EM requirements. - Fixture shall have a minimum 5-year warranty.
F16	Bedford House Bedroom 3	Surface-mounted square LED backlit assembly, edge-lit from 2 sides delivering 260 lumens per square foot, with opal diode imaging-free PMMA diffuser. Fixture shall be magnet-mounted using manufacturer provided 18-gauge galvanized steel backplate. Fixture shall be provided with long whip to be located at the corner of the fixture and reach the remote driver connection. Fixture shall be mounted within architectural detail to appear flush with the adjacent wall surfaces.  Dimensions: 34" L x 21" W x 0.81" H (1.05" H total with magnetic mounting assembly)	N/A	LED 3000K 80+ CRI L70 @ 50,000 Hours 260 LM/SF Delivered	Remote DIM 0-10V	27.0W	EA	UL Listed for Dry/Damp Location	Nanometer Lighting NanoFloat Square  NFL-SQ-SU-M-S-30-8-MO-2-34"x21"-10-U-S-Options + Driver: HLG-60H-24  Mounting and Power Accessories as Required	- Refer to architectural drawings/narrative for detail. - Fixture to be concealed in recessed niche of faux window, no wiring to be visible. - Provide manufacturer's dimensioned shop drawings showing all materials, finishes and components for Lighting Designer and Architect review prior to final approval and fabrication. - Locate remote gear in a secure, concealed, accessible and well-ventilated location in compliance with manufacturer's directions. Contractor/Manufacturer to coordinate remote gear size, location and wire gauge for <2% Voltage drop over entire length of run. - Electrical Engineer/Contractor to verify compatibility of light source, gear and dimming system. - Fixture shall have a minimum 5-year warranty.

TYPE	LOCATION	DESCRIPTION	FIXTURE FINISH	LAMPS/SOURCE	POWER SUPPLY/ DRIVER	INPUT WATTS	INPUT WATT UNITS	LISTING	MANUFACTURER	NOTES
F17	Carriage Barn Reception Desk	Surface mounted linear LED task light with 120-degree optic, 204 delivered lumens per foot and side/rear feed and external mounting clip. Housing is one-piece extruded aluminum channel with cast aluminum end caps and powder coated finish, extruded high transmission milky acrylic flat lens with no LED imaging and 50% transmission loss. Fixtures shall have CREE LEDs mounted on robust platform.  Dimensions: Length Per Drawing x 0.63" W x 0.41" H	Architect to confirm finish and select from standard finishes	LED 3000K 90+ CRI L70 @ 50,000 Hours 204 LM/FT Delivered	Remote DIM 0-10V	2.8W	LFT	UL Listed Rated IP20 for Dry Location	Scout FlexDuo Straight  FD-S-FM-L-30-Finish-Feed-1-E-N-Wire Length-S-Length Per Drawing + Driver: SDRVCC01075  Mounting and Power Accessories as Required	- Fixture finish to be verified by Architect. - Fixture to be concealed in undercounter millwork, no wiring to be visible. - Electrical Engineer/Contractor to verify compatibility of light source, gear and dimming system. - Luminaire shall be ordered with necessary gear, control interfaces, power feed cables/terminators and mounting accessories as required for a complete system. - Locate remote gear in a secure, concealed, accessible and well-ventilated location in compliance with manufacturer's directions. Contractor/Manufacturer to coordinate remote gear size, location and wire gauge for <2% Voltage drop over entire length of run. - Provide manufacturer's dimensioned shop drawings showing all materials, finishes and components for Lighting Designer and Architect review prior to final fixture approval and fabrication. - Fixture shall have a minimum 5-year warranty.
<b>DECORATIVE LUMINAIRES</b>										
D1	Bedford House Conservatory	Surface-mounted semi-decorative linear LED wall sconce in elongated aluminum housing with white finish and hand-blown 3-ply opal glass. Fixture shall have 3311 lumen output.  Dimensions: 4" Dia x 5 3/8" W x 24" H	White Architect shall verify	LED 3000K 80+ CRI L70 @ 60,000 Hours 3311 LM Delivered	Integral DIM 0-10V	30.0W	EA	NRTL Listed for Dry Location	BEGA Limburg Opal Glass  B19537-K3	- Fixture finish to be verified by Architect. - Luminaire shall be U.L. (or equivalent approved agency) listed. - Refer to architectural drawings for mounting height AFF. Luminaire shall be mounted over a recessed junction box (by electrician). - Electrical Engineer/Contractor to verify compatibility of light source, gear and dimming system. - Fixture shall have a minimum 5-year warranty.
D2	Bedford House Restroom	Surface-mounted slim linear LED wall vanity light with a co-extrusion of clear and white acrylic diffuser, aluminum hardware, and line-voltage AC LED. Fixture shall include 1" slim junction box and have 4874 lumen output.  Dimensions: 97" L x 2" W x 1 1/4" H	Brushed Aluminum Architect shall verify	LED 3000K 90+ CRI L70 @ 54,000 Hours 4874 LM Delivered	Integral DIM ELV	88W	EA	ETL Listed for damp location	Modern forms Lightstick WS-47997-AL	- Fixture finish to be verified by Architect. - Luminaire shall be U.L. (or equivalent approved agency) listed. - Refer to architectural drawings for mounting height AFF. Luminaire shall be mounted over a recessed junction box (by electrician). - Electrical Engineer/Contractor to verify compatibility of light source, gear and dimming system. - Fixture shall have a minimum 5-year warranty.
D3	Bedford House Conservatory	Existing decorative pendant to be taken down, refurbished, safely stored and reinstalled with retrofit LED lamps.		LED Retrofit		Allow 100W	EA	UL or Similar		- Luminaire shall be U.L. (or equivalent approved agency) listed. - Fixture shall have a minimum 5-year warranty.

TYPE	LOCATION	DESCRIPTION	FIXTURE FINISH	LAMPS/SOURCE	POWER SUPPLY/ DRIVER	INPUT WATTS	INPUT WATT UNITS	LISTING	MANUFACTURER	NOTES
<b>EXTERIOR LUMINAIRES</b>										
FX1	Bedford House East Roadway, Security Gate	<p>Pole Top Luminaire: Pole mounted LED pole top in two piece die-cast aluminum construction, slip fitting a 3" O.D. round pole top. Marine-grade, copper-free A360.0 aluminum alloy die casting. Clear acrylic diffuser with optical texture and reflector made of pure anodized aluminum held in place by die-cast aluminum frame and stainless steel rods. Fully gasketed for weather tight operation using a molded silicone rubber O-ring gasket. Powder coat finish with minimum 3 mil thickness. Asymmetric flat beam optic.</p> <p>Pole: 12-foot extruded aluminum 4" diameter round non-tapered pole shaft with fixed A356 aluminum alloy anchor base heat treated to T6 temper, with anchor bolts conforming to ASTM F1554 Grade 55, with 2 hex nut anchor bolts and 2 flat washers, aluminum nut covers, and covered handhole with hardware and grounding provisions, 3" welded tenon, with 0.125" wall thickness and 26 lbs of structural weight. Matte textured powder coat finish with minimum 3 mil thickness.</p> <p>Dimensions: Fixture: 10 1/4" Dia x 25 3/4" H Pole: 4" Dia x 12'-0" H (Base: 8 7/8" L x 8 7/8" W)</p>	Architect to confirm finish and select from standard finishes	LED 3000K 80+ CRI L70 @ 60,000 Hours 3134 LM Delivered	Integral DIM 0-10V	36.0W	EA	CSA Listed IP65 Rated for Wet Location	Bega 77165  77165-K3 + Bega 12 RFNS1  B12RFNS1-AB-Color	<ul style="list-style-type: none"> <li>- Fixture finish to be verified by Architect.</li> <li>- Provide 12'-0" tall aluminum round pole.</li> <li>- Refer to base and anchorage detail by Architect / Civil Engineer. Provided pole shall meet local and AASHTO requirements for EPA of luminaire configuration. Architect / Civil Engineer shall coordinate pole anchorage detail to concrete base.</li> <li>- Provide detailed shop drawings noting aiming configurations, fixture heights on pole, hand hole locations, base &amp; anchorage detail and pole specifications conforming to all applicable codes, electrical requirements and photometric characteristics prior to final approval and fabrication.</li> <li>- Adequate drainage must be provided in concrete foundation for pole and pole base.</li> <li>- Code required accessories and controls such as but not limited to motion sensors, photocell controls, etc. to be specified and coordinated by Electrical Engineer.</li> <li>- Fixture shall have a minimum 5-year warranty.</li> </ul>
FX2	Parking Lots	<p>Pole Top Luminaire: Pole mounted LED top in rectangular housing with integral fitter in extruded 6061 aluminum with T6 temper, invisible welds, and stainless steel hardware, mounted to tenon on pole and secured with four socket head cap screws to top of housing. LED arrays shall be four high-power LEDs mounted on field replaceable aluminum core PCBs enclosed in single-piece molded optical quality acrylic lens and sealed with one-piece weather-tight silicon gasket. Type II light distribution with B2-U0-G2 BUG Rating.</p> <p>Pole: 15-foot rectangular pole shaft constructed from seamless 6061 aluminum tubing and heat treated with T6 temper, 0.236" wall thickness, with 1/8" radiused corners for the sides of the shaft. Flush mounted handhole cover plasma cut with kerf not to exceed 1/8" with triangular tamper-resistant locking device. Two-piece base cover in fabricated aluminum. Pole shall have finely textured matte finish and IP65 ingress protection rating.</p> <p>Dimensions: Fixture: 4.2" L x 4.2" W x 43.5" H Pole: 6.3" L x 3.9" W x 15-ft H</p>	Architect to confirm finish and select from standard finishes	LED 3000K 80+ CRI L70 @ 50,000 Hours 3593 LM Delivered	Integral DIM 0-10V	36.0W	EA	CSA Listed IP65 Rated for Wet Location	Hess Linea 450 G2  LN450G-1-30K-DIM-UNV-T2-15-A-BC-MK-Finish-Option	<ul style="list-style-type: none"> <li>- Fixture finish to be verified by Architect.</li> <li>- Provide 15'-0" tall aluminum round pole.</li> <li>- Refer to base and anchorage detail by Architect / Civil Engineer. Provided pole shall meet local and AASHTO requirements for EPA of luminaire configuration. Architect / Civil Engineer shall coordinate pole anchorage detail to concrete base.</li> <li>- Provide detailed shop drawings noting aiming configurations, fixture heights on pole, hand hole locations, base &amp; anchorage detail and pole specifications conforming to all applicable codes, electrical requirements and photometric characteristics prior to final approval and fabrication.</li> <li>- Adequate drainage must be provided in concrete foundation for pole and pole base.</li> <li>- Code required accessories and controls such as but not limited to motion sensors, photocell controls, etc. to be specified and coordinated by Electrical Engineer.</li> <li>- Fixture shall have a minimum 5-year warranty.</li> </ul>
FX2A	Parking Lots	<p>Same as FX2, except pole shall be modified with welded aluminum arm for mounting security camera by others.</p> <p>Dimensions: Fixture: 4.2" L x 4.2" W x 43.5" H Pole: 6.3" L x 3.9" W x 15-ft H</p>	Architect to confirm finish and select from standard finishes	LED 3000K 80+ CRI L70 @ 50,000 Hours 3593 LM Delivered	Integral DIM 0-10V	36.0W	EA	CSA Listed IP65 Rated for Wet Location	Hess Linea 450 G2  LN450G-2-30K-DIM-UNV-T2-S-15-A-BC-MK-Finish-MOD(CAM)	<ul style="list-style-type: none"> <li>- Fixture finish to be verified by Architect.</li> <li>- Provide 15'-0" tall aluminum round pole.</li> <li>- Refer to base and anchorage detail by Architect / Civil Engineer. Provided pole shall meet local and AASHTO requirements for EPA of luminaire configuration. Architect / Civil Engineer shall coordinate pole anchorage detail to concrete base.</li> <li>- Custom camera mounting arm shall be mounted 13'-0" AFF, to be confirmed by Architect.</li> <li>- Security cameras provided by others.</li> <li>- Provide detailed shop drawings noting aiming configurations, fixture heights on pole, camera mounting arm location, hand hole locations, base &amp; anchorage detail and pole specifications conforming to all applicable codes, electrical requirements and photometric characteristics prior to final approval and fabrication.</li> <li>- Adequate drainage must be provided in concrete foundation for pole and pole base.</li> <li>- Code required accessories and controls such as but not limited to motion sensors, photocell controls, etc. to be specified and coordinated by Electrical Engineer.</li> <li>- Fixture shall have a minimum 5-year warranty.</li> </ul>

TYPE	LOCATION	DESCRIPTION	FIXTURE FINISH	LAMPS/SOURCE	POWER SUPPLY/ DRIVER	INPUT WATTS	INPUT WATT UNITS	LISTING	MANUFACTURER	NOTES
FX3	Pedestrian Walkway	Slender shielded LED bollard in die-cast and extruded marine grade, copper-free A360.0 aluminum alloy housing, with clear safety glass, pure anodized aluminum reflector, high temperature silicone gasket, mechanically captive stainless steel fasteners, and mounting plate constructed of heavy cast aluminum. Fixture shall have asymmetric light distribution and be suitable for wet location with IP65 ingress protection rating, have textured polyester powder coat finish with minimum 3 mil thickness, and have 1475 lumen output.  Dimensions: 7 1/2" Dia x 39 3/8" H	Bronze Architect shall verify	LED 3000K 80+ CRI L70 @ 60,000 Hours 1475 LM Delivered	Integral DIM 0-10V	14.5W	EA	NRTL Listed IP65 Rated for Wet Location	Bega 99058  99058-K3 (EXPRESS)-BRZ-Mounting-Options	- Fixture finish to be verified by Architect. - Luminaire shall be U.L. (or equivalent approved agency) listed and labeled "Suitable for wet locations." - Refer to base and anchorage detail by Architect / Civil Engineer. - Provide detailed shop drawings noting base & anchorage detail and bollard specifications conforming to all applicable codes, electrical requirements and photometric characteristics. - Refer to base and anchorage detail by Architect / Civil Engineer. - Fixture shall have a minimum 5-year warranty.
FX4		NOT USED								
FX5		NOT USED								
FX6	Carriage Barn Façade	Fixture: Stake-mounted landscape LED flood light with 111.8 x 83.8-degrees wall wash optic with adjustable barn door accessory in cylindrical copper-free 6061-T6 aluminum housing with water-proof enclosed wireway with machined end caps gasketed for water-tight seal, and shock-resistant, hermetically sealed tempered glass lens with StarGuard Class A TGIC polyester powder-coat finish. Fixture shall be adjustable 180-degrees via LOCK knuckle integral to body, with high temperature silicone O-ring, and 1/2" pipe thread for mounting, and have 485 lumen output.  Power Pipe: Stake shall be constructed from fully machined copper-free aluminum, with high temperature silicone O-ring seals, 60-degree angled bottom, stainless steel hardware, and polyester powder-coated finish, and have integral line voltage driver enclosed within the stake housing.  Dimensions: Fixture: 2 5/8" Dia x 4 1/2" H Power Pipe: 3 1/4" Dia x 17 1/2" H	Satin Bronze Architect shall verify	LED 3000K 80+ CRI L70 @ 50,000 Hours 485 LM Delivered	Integral DIM 0-10V	10.0W	EA	UL Listed IP66 Rated for Wet Location	BK Lighting Saratoga LED  SA-LED-x53-WW-BZP-13-BD-360SL + Stake/Driver: PPII-S12-010-BZP-B-MT-SF + Power and Mounting Accessories as Required	- Fixture finish to be verified by Architect. - Luminaire shall be U.L. (or equivalent approved agency) listed and labeled "Suitable for wet locations." - Contractor shall verify and coordinate fixture installation, mounting and conduit entry with landscape details, housing type and field conditions. - Provide outdoor rated junction box. - Fixture to be stake-mounted. Landscape Architect to review mounting details. - Contractor to coordinate with the architect on the exact location for the stone wall facade. - Electrical Engineer to confirm fixture voltage, circuits, dimming and emergency requirements. - Fixtures require aiming by lighting consultant after installation. Contractor to coordinate personnel and equipment necessary for aiming session. - See Landscape/Architect details for mounting information. - Fixture shall have a minimum 5-year warranty.
FX6A	Bedford House Façade	Same as FX6, except location. Fixture shall be used for façade uplighting.  Dimensions: Fixture: 2 5/8" Dia x 4 1/2" H Power Pipe: 3 1/4" Dia x 17 1/2" H	Satin Bronze Architect shall verify	LED 3000K 80+ CRI L70 @ 50,000 Hours 485 LM Delivered	Integral DIM 0-10V	10.0W	EA	UL Listed IP66 Rated for Wet Location	BK Lighting Saratoga LED  SA-LED-x53-WW-BZP-13-BD-360SL + Stake/Driver: PPII-S12-010-BZP-B-MT-SF + Power and Mounting Accessories as Required	- Fixture finish to be verified by Architect. - Luminaire shall be U.L. (or equivalent approved agency) listed and labeled "Suitable for wet locations." - Contractor shall verify and coordinate fixture installation, mounting and conduit entry with landscape details, housing type and field conditions. - Provide outdoor rated junction box. - Fixture to be stake-mounted. Landscape Architect to review mounting details. - Contractor to coordinate with the architect on the exact location for the stone wall facade. - Electrical Engineer to confirm fixture voltage, circuits, dimming and emergency requirements. - Fixtures require aiming by lighting consultant after installation. Contractor to coordinate personnel and equipment necessary for aiming session. - See Landscape/Architect details for mounting information. - Fixture shall have a minimum 5-year warranty.
FX6B	Entry Signage	Same as FX6, except fixture shall have 50-degree wide flood optic, honeycomb baffle shielding, and rectilinear lens.  Dimensions: Fixture: 2 5/8" Dia x 4 1/2" H Power Pipe: 3 1/4" Dia x 17 1/2" H	Satin Bronze Architect shall verify	LED 3000K 80+ CRI L70 @ 50,000 Hours 1365 LM Delivered	Integral DIM 0-10V	10.0W	EA	UL Listed IP66 Rated for Wet Location	BK Lighting Saratoga LED  SA-LED-x53-WFL-BZP-13-11-BD-360SL + Stake/Driver: PPII-S12-010-BZP-B-MT-SF + Power and Mounting Accessories as Required	- Fixture finish to be verified by Architect. - Luminaire shall be U.L. (or equivalent approved agency) listed and labeled "Suitable for wet locations." - Contractor shall verify and coordinate fixture installation, mounting and conduit entry with landscape details, housing type and field conditions. - Provide outdoor rated junction box. - Fixture to be stake-mounted. Landscape Architect to review mounting details. - Contractor to coordinate with the architect on the exact location for the stone wall facade. - Electrical Engineer to confirm fixture voltage, circuits, dimming and emergency requirements. - Fixtures require aiming by lighting consultant after installation. Contractor to coordinate personnel and equipment necessary for aiming session. - See Landscape/Architect details for mounting information. - Fixture shall have a minimum 5-year warranty.

TYPE	LOCATION	DESCRIPTION	FIXTURE FINISH	LAMPS/SOURCE	POWER SUPPLY/ DRIVER	INPUT WATTS	INPUT WATT UNITS	LISTING	MANUFACTURER	NOTES
FX6C	Entry Stone Pier	Same as FX6, except location. Fixture shall be used for entry stone wall uplighting.  Dimensions: Fixture: 2 5/8" Dia x 4 1/2" H Power Pipe: 3 1/4" Dia x 17 1/2" H	Satin Bronze Architect shall verify	LED 3000K 80+ CRI L70 @ 50,000 Hours 485 LM Delivered	Integral DIM 0-10V	10.0W	EA	UL Listed IP66 Rated for Wet Location	BK Lighting Saratoga LED  SA-LED-x53-WW-BZP-13-BD-360SL + Stake/Driver: PPII-S12-010-BZP-B-MT-SF + Power and Mounting Accessories as Required	- Fixture finish to be verified by Architect. - Luminaire shall be U.L. (or equivalent approved agency) listed and labeled "Suitable for wet locations." - Contractor shall verify and coordinate fixture installation, mounting and conduit entry with landscape details, housing type and field conditions. - Provide outdoor rated junction box. - Fixture to be stake-mounted. Landscape Architect to review mounting details. - Contractor to coordinate with the architect on the exact location for the stone wall facade. - Electrical Engineer to confirm fixture voltage, circuits, dimming and emergency requirements. - Fixture shall be programmed on site to a maximum of 50% output with further dimming in the field as required. - Fixtures require aiming by lighting consultant after installation. Contractor to coordinate personnel and equipment necessary for aiming session. - See Landscape/Architect details for mounting information. - Fixture shall have a minimum 5-year warranty.
FX6D	Entry Stone Wall	Same as FX6, except fixture shall have 20-degree spot optic, honeycomb baffle shielding, and rectilinear lens.  Dimensions: Fixture: 2 5/8" Dia x 4 1/2" H Power Pipe: 3 1/4" Dia x 17 1/2" H	Satin Bronze Architect shall verify	LED 3000K 80+ CRI L70 @ 50,000 Hours 946 LM Delivered	Integral DIM 0-10V	10.0W	EA	UL Listed IP66 Rated for Wet Location	BK Lighting Saratoga LED  SA-LED-x53-SP-BZP-13-11-BD-360SL + Stake/Driver: PPII-S12-010-BZP-B-MT-SF + Power and Mounting Accessories as Required	- Fixture finish to be verified by Architect. - Luminaire shall be U.L. (or equivalent approved agency) listed and labeled "Suitable for wet locations." - Contractor shall verify and coordinate fixture installation, mounting and conduit entry with landscape details, housing type and field conditions. - Provide outdoor rated junction box. - Fixture to be stake-mounted. Landscape Architect to review mounting details. - Contractor to coordinate with the architect on the exact location for the stone wall facade. - Electrical Engineer to confirm fixture voltage, circuits, dimming and emergency requirements. - Fixture shall be programmed on site to a maximum of 50% output with further dimming in the field as required. - Fixtures require aiming by lighting consultant after installation. Contractor to coordinate personnel and equipment necessary for aiming session. - See Landscape/Architect details for mounting information. - Fixture shall have a minimum 5-year warranty.
FX7		NOT USED								
FX8	Bedford House Façade	Wall-mounted LED sconce in marine-grade copper-free A360.0 aluminum alloy housing with clear safety glass lens, captive stainless steel fasteners, and matte textured powder-coated finish with minimum 3 mil thickness in RAL color per Architect. Fixture shall be line voltage and include narrow opening wiring box and have 204 lumen output.  Dimensions: 2 1/8" L x 2 3/8" W x 7 7/8" H	White Architect shall verify	LED 3000K 80+ CRI L80 @ 60,000 Hours 204 LM Delivered	Integral DIM 0-10V	7.0W	EA	NRTL Listed IP64 Rated for Wet Location	Bega B33514  B33514-K3-WHT + Wiring Box: B19545	- Fixture finish to be verified by Architect. - Luminaire shall be U.L. (or equivalent approved agency) listed and labeled "Suitable for wet locations." - Refer to architectural drawings for mounting height AFF. Luminaire shall be mounted over a recessed junction box (by electrician). - Electrical Engineer/Contractor to verify compatibility of light source, gear and dimming system. - Fixture shall have a minimum 5-year warranty.
FX9	Feature Trees	Fixture: Stake-mounted adjustable LED monopoint. Unibody 6061-T6 copper-free aluminum housing with integral heat sink, adjustable 180-degrees vertical via LOCK Knuckle integral to the body and waterproof enclosed wireway, StarGuard Class A TGIC polyester powder coated finish and tamper-resistant stainless steel hardware and fully machined cap that can accommodate up to two lens or louver. Fixture shall have 25-degree medium flood optic, and interchangeable shock-resistant tempered 1/8" thick soda lime glass lens with soft focus and honeycomb baffle shielding. Fixture shall be provided with 5" diameter machined canopy with 1/2" pipe thread for mounting, and have 468 lumen output.  Power Pipe: Stake shall be constructed from fully machined copper-free aluminum, with high temperature silicone O-ring seals, 60-degree angled bottom, stainless steel hardware, and polyester powder-coated finish. Compatible remote 0-10V 12VDC dimming driver shall be provided.  Dimensions: Fixture: 1-5/8" Dia x 4-1/2" H Power Pipe: 2 1/4" Dia x 19 5/8" H	Architect to confirm finish and select from standard finishes	LED 3000K 80 CRI L70 @ 50,000 Hours 468 LM Delivered	Remote DIM 0-10V	7.0W	EA	UL Listed for Wet Location	B-K Lighting Micro Night Star  MN-LED-e68-MFL-Finish-12-11-C-360SL + Stake: PP-A18-Finish-B + Driver: QTL QOM-eLED-PS-60W-UNV-12VDC-0-10V-BK + Power and Mounting Accessories as Required	- Fixture finish to be verified by Architect. - Luminaire shall be U.L. (or equivalent approved agency) listed and labeled "Suitable for wet locations." - Fixture to be stake-mounted, Landscape Architect to review mounting details. When installed under a tree, place landscape uplights nominally 3'-0" from base of trunk. Final mounting location to be field verified based on type of tree. - Contractor shall verify and coordinate fixture installation, mounting and conduit entry with landscape details, housing type and field conditions. - Provide outdoor rated junction box. - Architect to confirm mounting requirements. - Electrical Engineer to confirm fixture voltage, circuits, dimming and emergency requirements. - Locate remote gear in a secure, concealed, accessible and well-ventilated location in compliance with manufacturer's directions. Contractor/Manufacturer to coordinate remote gear size, location and wire gauge for <2% Voltage drop over entire length of run. - Fixtures require aiming by lighting consultant after installation. Contractor to coordinate personnel and equipment necessary for aiming session. - See Landscape/Architect details for mounting information. - Fixture shall have a minimum 5-year warranty.
FX10		NOT USED								
FX11	Bedford House Porch	Recess mounted 2" round aperture fixed LED downlight in die-cast aluminum housing with powder-coated finish and knife edge wet-rated trim. Fixture shall be line voltage and have 60-degree optic and 700 delivered lumens.  Dimensions: Fixture: 3 3/4" Dia x 3 3/8" H Housing: 11" L x 8" W x 5" H	White Architect shall verify	LED 3000K 80+ CRI L70 @ 50,000 Hours 700 LM Delivered	Integral DIM 0-10V	6.5W	EA	UL Listed for Wet Location	Luminaire DLA60 2" Fixed Downlights  DL60-30K-60-W-W-RW-Z1-150-C	- Fixture finish to be verified by Architect. - Luminaire shall be U.L. (or equivalent approved agency) listed and labeled "Suitable for wet locations." - Contractor shall verify and coordinate luminaire installation and mounting with architectural details, housing type, field conditions, and ceiling system details including ceiling thickness, grid type, flange and insulation clearance requirements. - If required based on existing field conditions, provide IC and/or Airtight housing as required for installation in an insulated ceiling. Contractor to provide as required based on ceiling type and local codes. - Electrical Engineer/Contractor to verify compatibility of light source, gear and dimming system. - Fixture shall have a minimum 5-year warranty.

TYPE	LOCATION	DESCRIPTION	FIXTURE FINISH	LAMPS/SOURCE	POWER SUPPLY/ DRIVER	INPUT WATTS	INPUT WATT UNITS	LISTING	MANUFACTURER	NOTES
FX12	Bedford House Under Porch	Surface-mounted outdoor wet-rated cylindrical LED downlight in aluminum housing and lens diffuser. Fixture shall have integral driver concealed within the fixture and have 545 lumen output.  Dimensions: 5" Dia x 7 1/8" H	White Architect shall verify	LED 3000K 90 CRI L70 @50,000 Hours 545 LM Delivered	Integral DIM 0-10V	11.0W	EA	ETL Listed IP65 Rated for Wet Location	WAC Lighting Caliber  FM-W36607-3000K-WT	- Fixture finish to be verified by Architect. - Luminaire shall be U.L. (or equivalent approved agency) listed and labeled "Suitable for wet locations." - Luminaire shall be mounted over a recessed junction box (by electrician). - Electrical Engineer/Contractor to verify compatibility of light source, gear and dimming system. - Fixture shall have a minimum 5-year warranty.
FX13		NOT USED								
FX14		NOT USED								
FX15		NOT USED								
FX16	Bedford House Façade	Wall-mounted LED sconce in marine grade copper free A360.0 aluminum alloy housing with clear safety glass lens with optical texture, captive stainless steel fasteners, and matte textured powder-coated finish with minimum 3 mil thickness. Fixture shall be line voltage, have asymmetric beam distribution, and have 618 lumen output  Dimensions: 4 3/8" L x 4 3/8" W x 7 1/2" H	Custom RAL # TBD Architect shall verify	LED 3000K 80+ CRI L80 @ 60,000 Hours 618 LM Delivered	Integral DIM 0-10V	11.0W	EA	NRTL Listed IP64 Rated for Wet Location	Bega B33815  B33815-K3-RAL	- Fixture RAL finish to be verified by Architect. Contractor to coordinate with manufacturer to match color with Benjamin Moore Carrington Beige (HC-93) on wood substrate. - Luminaire shall be U.L. (or equivalent approved agency) listed and labeled "Suitable for wet locations." - Refer to architectural drawings for mounting height AFF. Bottom of luminaire shall be a minimum of 6'-8" AFF to comply with ADA Standards (ADAAG 4.4). Luminaire shall be mounted over a recessed junction box (by electrician). - Electrical Engineer/Contractor to verify compatibility of light source, gear and dimming system. - Fixture shall have a minimum 5-year warranty.
FX16A	Bedford House Façade	Same as F16, except finish shall be bronze.  Dimensions: 4 3/8" L x 4 3/8" W x 7 1/2" H	Bronze Architect shall verify	LED 3000K 80+ CRI L80 @ 60,000 Hours 618 LM Delivered	Integral DIM 0-10V	11.0W	EA	NRTL Listed IP64 Rated for Wet Location	Bega B33815  B33815-K3-BRZ	- Fixture finish to be verified by Architect. - Luminaire shall be U.L. (or equivalent approved agency) listed and labeled "Suitable for wet locations." - Refer to architectural drawings for mounting height AFF. Bottom of luminaire shall be a minimum of 6'-8" AFF to comply with ADA Standards (ADAAG 4.4). Luminaire shall be mounted over a recessed junction box (by electrician). - Electrical Engineer/Contractor to verify compatibility of light source, gear and dimming system. - Fixture shall have a minimum 5-year warranty.

## APPENDIX 11

### Light Fixture Product Data Sheets

# Appendix

## Product Data Sheets

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The logo consists of the letters 'HLB' in a bold, white, sans-serif font, centered within a solid green square.

John Jay Homestead

230042.000

**BID Submission**

10 JULY, 2024

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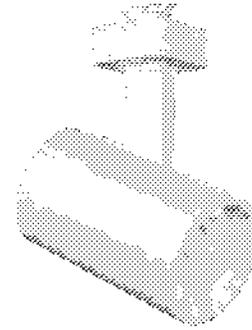
# LUMENTURE®

## T50 TRACK HEADS

TYPE: .....

PROJECT: .....

The T50 track cylinder is designed to blend seamlessly into a wide range of environments - including retail, commercial, restaurant and hospitality settings. Coming standard with Lumenture's patent-pending, low-profile Infinity Adapter™ - the T50 has the ability to rotate continuously for effortless aiming. Specification level details - including no exposed hardware, special attention to finish and the ability to integrate a number of accessories make the T50 one of the leading-edge track heads on the market.



<b>DIMMING</b> Triac, ELV	<b>WEIGHT</b> 12 oz.	<b>WATTAGE</b> 14W	<b>EFFICACY</b> up to 1100lm up to 79lm/W	<b>INPUT</b> 120V AC	<b>FINISH</b> Die-cast aluminum housing, Powdercoat	<b>ACCESSORIES</b> Field-replaceable optics & accessories	<b>MOVEMENT</b> Infinite rotation, 90° tilt

### ORDERING



#### JAB-TITLE 24

Available combinations indicated by shading in the chart below.

FIXTURE	CCT/CRI <sup>1)</sup>	LUMENS	BEAM SPREAD	FINISH	MOUNTING TYPE	ACCESSORIES <sup>2)</sup>
T50	22H - 2200K, CRI 90+	1100	15 - 15°*	W - White	J - J Type (Standard)	SN - Standard Tapered Snoot
	27H - 2700K, CRI 90+		22 - 22°	B - Black	G - G Type / 2C2H	SNC - Cylinder Snoot
	30H - 3000K, CRI 90+		40 - 40°	S - Silver	H - H Type	JA-1B - Standard Mono-Point
	30B - 3000K, CRI 95+			C - Custom	L - L Type	JA-2L - Duo-Point Adapter
	30K - 3000K, CRI 80+				SC - Slim Canopy	JA-1B-[Finish]-Cover - Deep Canopy Collar
	30D - 3000K, CRI 90+, Dim-to-Warm				MC - Micro Canopy	
	35H - 3500K, CRI 90+					
	40H - 4000K, CRI 90+					

#### NOTES

1. Custom options available. Please consult factory.
2. See page (3) and (4) for a full list of accessories and canopy accessories.
3. Not available with 30D Dim-to-Warm option. See page (2) for photometrics.

#### ORDERING EXAMPLE:



#### LISTINGS

Certified to UL standard 1574 and CSA C22.2 No. 9.0 for dry locations



T50 Track Head Specifications p. 1/4  
Custom options available, please consult factory  
Product specifications are subject to change  
info@lumenture.com | P: 203.864.3333

**LUMENTURE®**  
www.lumenture.com  
www.2023.07.12



John Jay Homestead

230042.000  
**BID Submission**  
10 JULY, 2024

Type:  
F1 Series

# T50 TRACK HEADS

## PHOTOMETRICS

### LUMEN OUTPUT

Values fluctuate based on CCT/CRI. To estimate delivered lumen output of the various CCT/CRI options, multiply nominal lumens (1100 lumens) by the multiplier below.

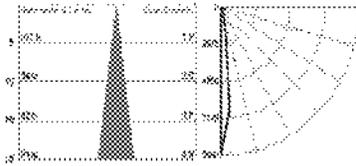
CODE	CCT	CRI	RA	TECHNICAL ORDER	12"	22"	40"
22H	2200K	90+	60+	Standard	0.75	0.75	0.75
27H	2700K	90+	60+	Standard	0.85	0.85	0.85
30H	3000K	90+	60+	Standard	0.90	0.90	0.90
30B	3000K	95+	60+	Standard	0.80	0.80	0.80
30K	3000K	80+	0+	Standard	1.00	1.00	1.00
30D	3000K	90+	60+	Dim-to-Warm™	N/A <sup>1)</sup>	0.80 <sup>R)</sup>	0.80 <sup>R)</sup>
35H	3500K	90+	60+	Standard	0.95	0.95	0.95
40H	4000K	90+	60+	Standard	0.95	0.95	0.95

### NOTES

Luminaire maintains a lumen output tolerance of +/-7.5%  
 1. Dim-to-Warm dims from 3000K to 1800K

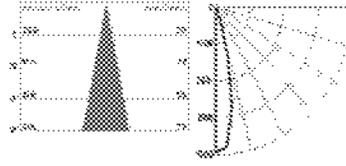
### T50 - 15 Degree

Delivered Light Output: 1083 Lumens  
 Total Watts @120V: 14;  
 Lumens Per Watt: 77  
 Center Beam Candle Power: 9434  
 Spacing Criteria: 0.3



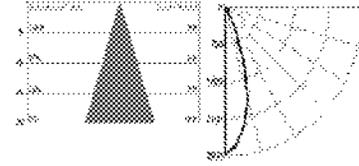
### T50 - 22 Degree

Delivered Light Output: 1097 Lumens  
 Total Watts @120V: 14;  
 Lumens Per Watt: 78  
 Center Beam Candle Power: 5142  
 Spacing Criteria: 0.4



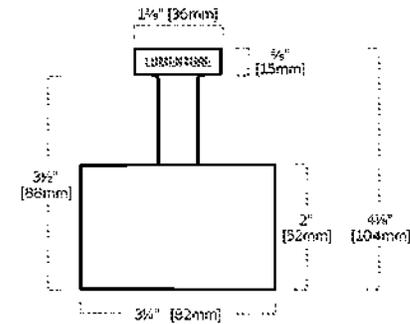
### T50 - 40 Degree

Delivered Light Output: 1132 Lumens  
 Total Watts @120V: 14;  
 Lumens Per Watt: 81  
 Center Beam Candle Power: 2749  
 Spacing Criteria: 0.7



## DIMENSIONS

Standard option shown with our J-Type InfinityAdapter™



T50 Track Head Specifications p. 2/4  
 Custom options available, please consult factory  
 Product specifications are subject to change  
 info@luminaire.com | R. 2023.064.3333

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 www.luminaire.com  
 version 20230712



John Jay Homestead

230042.000  
**BID Submission**  
 10 JULY, 2024

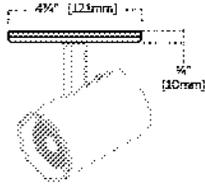
Type:  
**F1 Series**

# T50 TRACK HEADS

## INTEGRAL CANOPY (Factory Installed)

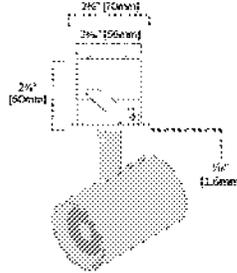
### 5C (Slim Canopy)

The slim canopy mounts directly over a standard junction box - resulting in an elegant and clean install of Lumenture's award-winning T-Series track fixtures. Finish: B, S, W



### MC (Micro Canopy)

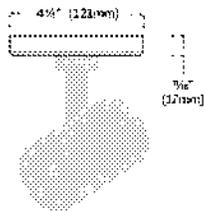
With a minimal 2.75" trim, the Lumenture micro-canopy virtually "disappears" into the ceiling - offering an even more refined look for the most high-end applications. Finish: B, S, W | Max ceiling thickness: 3/4"



## STANDARD CANOPY & ACCESSORIES (Ordered Separately)

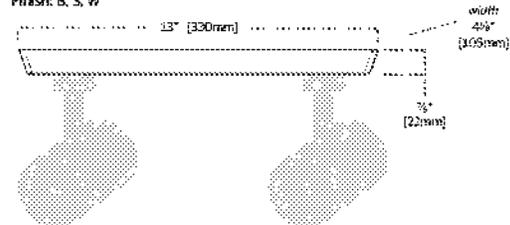
### JA-18 (Standard Mono-Point)

The JA-18 canopy mounts directly over a standard junction box and includes a "female" connector that works with Lumenture and other "J-Type" track fixtures. Finish: B, S, W



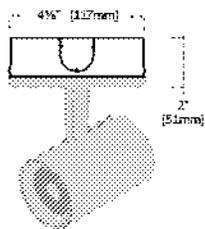
### JA-21 (Duo-Point Adapter)

Accepts two line voltage track heads to mount to a single outlet box. Compatible with Lumenture and other "J-Type" track fixtures. Finish: B, S, W



### JA-18-[Finish]-Cover (Deep Canopy Collar)

The JA-18 Cover helps shield unsightly surface mount J-Boxes and blends seamlessly with the Lumenture JA-18 or 5C Slim Canopy (sold separately). Finish: B, W



#### Finish Codes:

- B - Black
- S - Silver
- W - White

Ordering Example: JA-18-B-Cover

T50 Track Head Specifications p. 3/4  
Custom options available, please consult factory  
Product specifications are subject to change  
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230042.000  
**BID Submission**  
10 JULY, 2024

Type:  
F1 Series

# T50 TRACK HEADS

## DIMMING

Dimming is standard and allows for smooth illumination below 1% with certain dimmers. Compatible with most Triac (forward phase) and ELV (reverse phase) dimmers. For dimmer compatibility, refer to the Fixture Dimming Compatibility document on our website.

## TRACK COMPATIBILITY

Luminaire I-Type track adapters are designed for use with Luminaire's track systems, as well as Juno® & Contact® track. Our H-Type adapter is compatible with Halo® track, G-Type is compatible with Global Trac 2C/2N track and L-Type adapter is compatible with Lightolier® one-circuit track. Registered trademarks are property of their respective owners.

## ACCESSORIES

### T50-SN-x

(Standard Tapered Snoot)

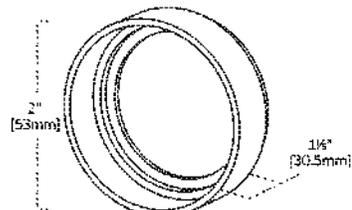
Will accept up to two (2) accessories.  
Finish: W, B, S. The inside surface is black.



### T50-SNC-x

(Cylinder Snoot)

Will accept up to two (2) accessories.  
Finish: W, B, S. The inside surface is black.



### T50-X

Lens Accessories

Y Yellow

G Green

LB Light Blue

R Red

RO Rose

CR Concentric Ring Baffle™

LS Linear Spread

SOL Solite

HL Black Honeycomb Louver™

CS Black Cross Baffle™

### NOTES

Field-replaceable optics and accessories available. Please consult factory.  
1. Accessory requires a snoot.

T50 Track Head Specifications p. 4-6  
Custom options available, please consult factory.  
Product specifications are subject to change.  
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230042.000

**BID Submission**

10 JULY, 2024

Type:

F1 Series

Page 4 of 119



# JT 2-CIRCUIT LINE VOLTAGE TRACK

TYPE: .....

PROJECT: .....

## SPECIFICATIONS/FEATURES

### Track

Many configurations are possible with this two-circuit, 120V rated commercial grade track section. 40 amp capacity; 20 amps per circuit. Two hot conductors and one common neutral. Adjust lighting effects by applying fixtures to desired circuits and utilize separate switching.

Track has solid copper conductors with insulators placed in heavy 14-ga. extruded aluminum channels.

Mechanical polarity with a visual indicator simplifies installation and mounting of fixtures while assuring proper electrical connections.

Toggle bolts are supplied for simple surface installation. Track suitable for suspension mount via cable or threaded rod.

Nominal length track sections can be cut in the field for exact fit. All track sections are supplied with two insulated end caps. Replacement caps available.

### Power Feeds and Connection Accessories

Power feeds and connection accessories are constructed of polycarbonate with galvanized steel back plates. Every electrical component is polarized and has a grounding capability to ensure safe usage. Visual polarity indicators simplify proper electrical installation. Twelve gauge insulated wire is used for internal connections. Solid copper track contacts provide good electrical conductivity for years of trouble free operation.

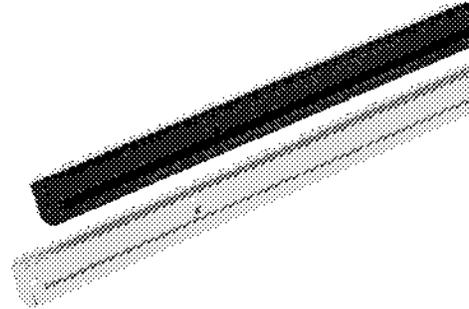
Maximum power rating is 2400 Watts per circuit (4800W total):  
20A per circuit (40A total capacity) at 120V, 60Hz. NEC allows 80% of full capacity or 1920 Watts per circuit (3840W total).

### Warranty

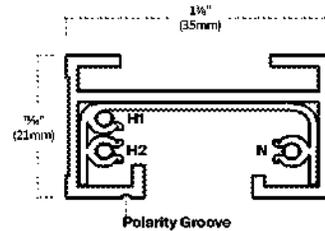
This fixture is covered by Lumenture's full one (1) year replacement guarantee after date of purchase.

### Listing

All track and track components are cULus listed. Installations are suitable for dry locations only.



Track Section End View



## ORDERING

EXAMPLE ORDER:

JT - 28 - B

JT - (Two-Circuit Section Length) - (Finish)

24 - 4' (48") nominal length; 44 1/4" actual length  
28 - 8' (96") nominal length; 92 1/4" actual length

B - Black  
W - White

24-28" end caps are supplied with all track sections and may be ordered separately as needed. 4' sections supplied with (2) toggle bolts. 8' sections supplied with (8) toggle bolts.

JT 2-Circuit Line Voltage Track Specifications p. 1/3  
Product specifications are subject to change.  
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version 20230624



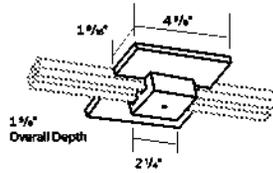
John Jay Homestead

230042.000  
BID Submission  
10 JULY, 2024

Type:  
F1B

# JT 2-CIRCUIT LINE VOLTAGE TRACK

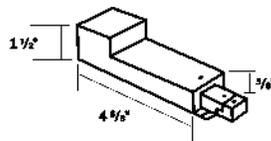
## POWER FEEDS, STEMS & EXTENSIONS



### Floating Feed Point

**JA-207**

Can be installed anywhere along track. Kit includes square I-Box Canopy Cover, I-Box Mounting Bracket, Track Adapter, and one JA-11 Series End Cap. Finish: B, W



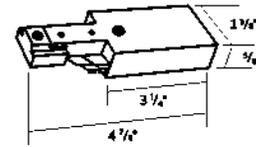
### Surface Conduit End Feed

**JA-208**

End Feed. (1) 1/2" top K.O. and (1) 1/2" end K.O. for surface conduit. Finish: B, W

**JA-208A**

Reverse Polarity End Feed. (1) 1/2" top K.O. and (1) 1/2" end K.O. for surface conduit. Finish: B, W



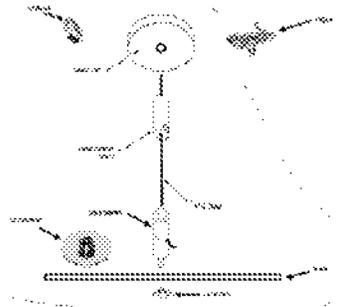
### Top Access End Feed

**JA-210**

Power Feed. (1) 1/2" top K.O. for standard electrical conduit. Finish: B, W

**JA-210A**

Reverse Polarity Power Feed. (1) 1/2" top K.O. for standard electrical conduit. Finish: B, W



### Cable Mounting Kit

**JAC-150**

150" galvanized aircraft cable. 1/2"-20 internally threaded socket cup. Combination wood/machine anchor post. T-Grid dip-standard ceiling. Toggle/loop ferrule plate. 2" diameter trim canopy. Side exit cable glider with nut. 1/4" Diameter backing/button plate.

\* 2 kits per 4" track section. 1 kit per 1" track section



### Line Voltage Fixture Extensions

**JA-1012**

12" stem length. Finish: B, W, S

**JA-1018**

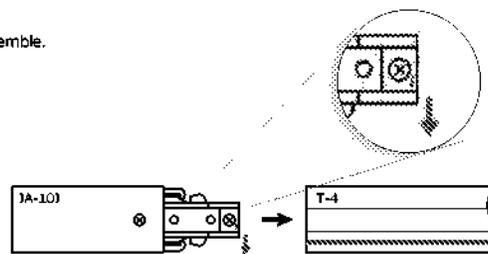
18" stem length. Finish: B, W, S

### Finish Codes:

- B - Black
- W - White
- S - Silver

## SAMPLE SYSTEM INSTALLATION

Line up Polarity arrows with grooves.  
Insert connectors into track sections to assemble.



JT 2-Circuit Line Voltage Track Specifications p. 2/3  
Product specifications are subject to change  
Info@luminaire.com P: 203.894.3333

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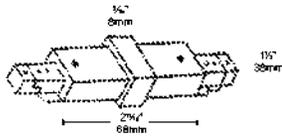
John Jay Homestead

230042.000  
**BID Submission**  
10 JULY, 2024

Type:  
F1B

# JT 2-CIRCUIT LINE VOLTAGE TRACK

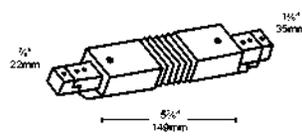
## 2-CIRCUIT TRACK POWER FEEDS



### Mini-Connectors

#### JA-202

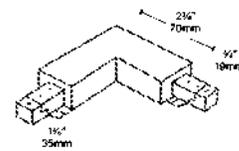
Conductive end-to-end connector. Finish: B, W



### Flexible Connector

#### JA-203

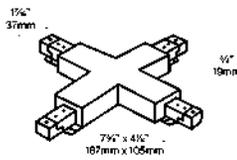
Versatile connector allows wall to ceiling or pitched ceiling applications. 35°-325°. Finish: B, W



### 3-Way Joiner

#### JA-212

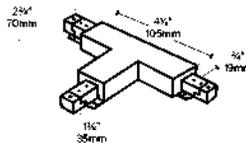
Use as standard or reverse polarity "L". Includes optional straight cover. May be used as power feed. Finish: B, W



### "X" Connector

#### JA-215

Wired as two separate "L" sections. Finish: B, W



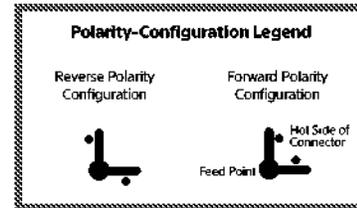
### "T" Connectors

#### JA-213

May be used as feed point. Finish: B, W

#### JA-214

Reverse polarity "T" Connector. May be used as feed point. Finish: B, W

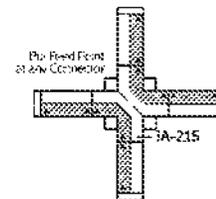
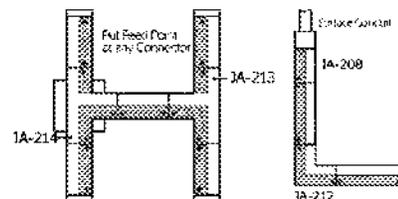
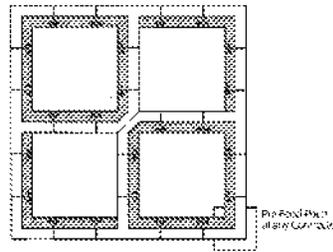
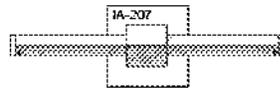


## SAMPLE LAYOUTS WITH POLARITY

Floor view of track on ceiling. All straight sections are JT Series Track.

**Dot** = Connector Polarity Arrow Location

**Shaded Area** = Hot Side of Connection / Track Section



JT 2-Circuit Line Voltage Track Specifications p. 3/3  
Product specifications are subject to change  
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version 26230824



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10 JULY, 2024

Type:  
F1B

Not Used



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10 JULY, 2024

Type:  
F1C

Not Used



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**BID Submission**  
10 JULY, 2024

Type:  
F2

Page IX of CXIX

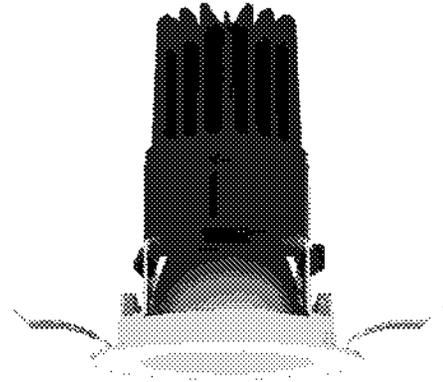
# LUMENTURE®

## DLA60 2" ADJUSTABLE DOWNLIGHTS

TYPE: .....

PROJECT: .....

With a discreet 2" aperture, knife-edge trim and excellent visual cutoff - Lumenture's DLA60 blends discreetly in any environment. These recessed modules offer 35 degrees of tilt and deliver high lumens without glare. The result is superior brightness and quality from an unobtrusive fixture. DLA60 is available both in remodel with an attached junction box or with optional rough-in housings to fit any construction needs.



<b>DIMMING</b> Trac, ELY & 0-10V	<b>WEIGHT</b> 11 oz. (module only)	<b>WATTAGE</b> 8.5W-17W	<b>EFFICACY</b> up to 1600lm up to 113lm/W	<b>AC DRIVER INPUT</b> 120-277V	<b>HOUSING</b> Open, Closed, Retrofit, Pan	<b>FINISH</b> Aluminum module & trim, Powdercoat	<b>ACCESSORIES</b> Field replaceable optics & accessories	<b>MOVEMENT</b> 35° tilt

### ORDERING

**IA8-TITLE 24**  
Available combinations indicated by shading in the chart below.

FIXTURE	CCV/CRI*	BEAM SPREAD**	CONE COLOR	TRIM COLOR	TRIM TYPE	DRIVER**	OUTPUT (mA)	Housing Availability**	
								IC-Rated	Non-IC-Rated
DLA60	22H - 2200K, CRI 90+	15 - 15°	W - White	W - White	R - Round	T - Trac/ELY	200 - 8.5W	✓	✓
	30H - 2700K, CRI 90+	25 - 25°	B - Black	B - Black	S - Square		275 - 12W	✓	✓
	30H - 3000K, CRI 90+	40 - 40°	S - Silver	S - Silver			350 - 15W	✓	✓
	30B - 3000K, CRI 90+	60 - 60°	C - Custom	C - Custom			250 - 11W	✓	✓
	30K - 3010K, CRI 90+					U - Universal Dimming Driver (Trac, ELY & 0-10V)	275 - 12W	✓	✓
	30D - 3000K, CRI 90+ DIN-UL-Menu						300 - 12.5W	✓	✓
	35H - 3500K, CRI 90+						350 - 15W	✓	✓
	40H - 4000K, CRI 90+						400 - 17W	✓	✓
					Z - 0-10V	250 - 11W	✓	✓	
						300 - 12.5W	✓	✓	
						350 - 15W	✓	✓	

- NOTES**
1. Custom options available. Please consult factory.
  2. EM battery backup option available. Please consult factory.
  3. Check marks represent Housing/mA availability. All IA-8 Title 24 options are IC-Rated. All other options are Non-IC-Rated. Housing availability chart is for informational purposes only. Do not include in ordering.

**ORDERING EXAMPLE:**  
DLA60-30H-3000K-CRI90+ - 35° - W - W - R - U - 350 - 15W - Z

**LISTINGS**  
Certified to UL standard 1598 and CSA C22.2 No. 250.0-08 for damp locations.

DLA60 2in Adjustable Downlight Specifications p. 1/4  
Custom options available, please consult factory  
Product specifications are subject to change  
info@lumenture.com | P. 203.964.3333



John Jay Homestead  
230042.000  
**BID Submission**  
10 JULY, 2024

Type:  
**F3 Series**

# DLA60 2" ADJUSTABLE DOWNLIGHTS

## PHOTOMETRICS

### LUMEN OUTPUT

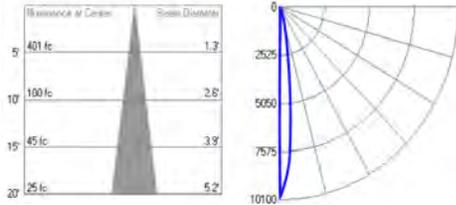
Values fluctuate based on CCT and CRI. To estimate delivered lumen output of various CCT/CRI options, multiply nominal lumens by the multiplier below.

OUTPUT (mA)	WATTAGE	NOMINAL LUMENS	CODE	CCT	CRI	TECHNOLOGY	15°	25°	40°	60°
200	8.5W	950	22H	2200K	90+	Standard	0.65	0.70	0.70	0.65
250	11W	1050	27H	2700K	90+	Standard	0.75	0.85	0.85	0.80
275	12W	1150	30H	3000K	90+	Standard	0.80	0.90	0.90	0.85
300	12.5W	1200	30B	3000K	95+	Standard	0.75	0.80	0.80	0.75
350	15W	1450	30K	3000K	80+	Standard	0.95	1.05	1.05	1.00
400	17W	1600	30D	3000K	90+	Dim-to-Warm	N/A	0.80	0.80	0.75
			35H	3500K	90+	Standard	0.85	0.95	0.95	0.90
			40H	4000K	90+	Standard	0.85	0.95	0.95	0.90

Luminaire maintains a lumen output tolerance of +/-7.5%  
 \*\*Dim-to-Warm dims from 3000K to 1800K

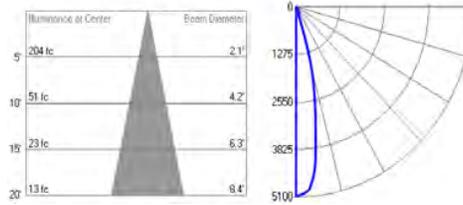
### DLA60 - 15 Degree

Delivered Light Output: 1037 Lumens  
 Total Watts @120V: 12;  
 Lumens Per Watt: 86  
 Center Beam Candle Power: 10029  
 Spacing Criteria: 0.5



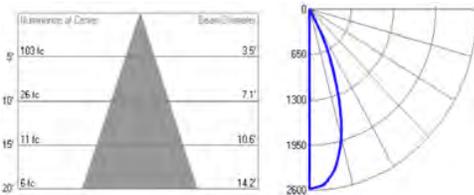
### DLA60 - 25 Degree

Delivered Light Output: 1173 Lumens  
 Total Watts @120V: 12;  
 Lumens Per Watt: 98  
 Center Beam Candle Power: 5090  
 Spacing Criteria: 0.6



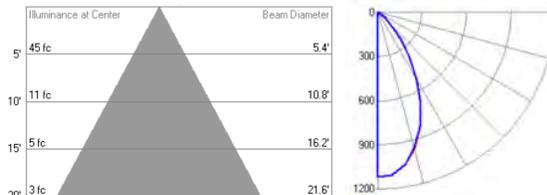
### DLA60 - 40 Degree

Delivered Light Output: 1179 Lumens  
 Total Watts @120V: 12;  
 Lumens Per Watt: 98  
 Center Beam Candle Power: 2581  
 Spacing Criteria: 0.8



### DLA60 - 60 Degree

Delivered Light Output: 1120 Lumens  
 Total Watts @120V: 12;  
 Lumens Per Watt: 93  
 Center Beam Candle Power: 1121  
 Spacing Criteria: 0.9



DLA60 2in Adjustable Downlight Specifications p. 2/4  
 Custom options available, please consult factory  
 Product specifications are subject to change  
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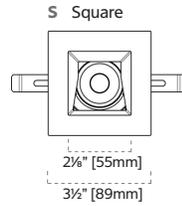
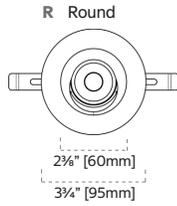
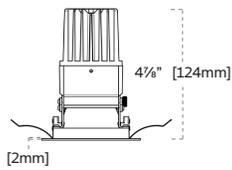
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230042.000  
**BID Submission**  
 10 JULY, 2024

Type:  
**F3 Series**

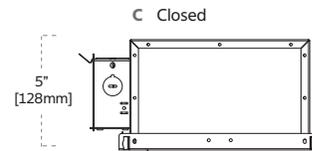
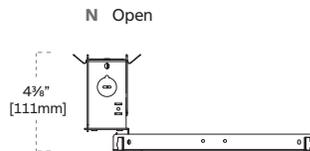
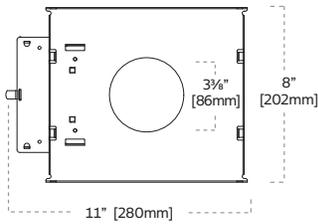
# DLA60 2" ADJUSTABLE DOWNLIGHTS

## DIMENSIONS

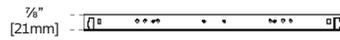
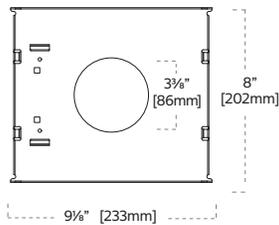


Max Ceiling Thickness = 1"

## OPEN AND CLOSED HOUSING DIMENSIONS

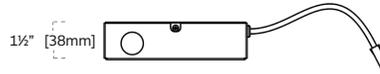


## PAN HOUSING DIMENSIONS



Supplied with (R) Remodel Housing (Loose Junction Box)

## REMODEL DIMENSIONS (Loose Junction Box)



DLA60 2in Adjustable Downlight Specifications p. 3/4  
 Custom options available, please consult factory  
 Product specifications are subject to change  
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**HLB**

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230042.000  
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 10 JULY, 2024

Type:  
**F3 Series**

# DLA60 2" ADJUSTABLE DOWNLIGHTS

## DIMMING

Dimming is standard and allows for smooth illumination below 1% with certain dimmer/driver combinations. The "U" (Universal) driver accepts 120-277V AC Input and is compatible with 0-10V Triac (forward phase) and ELV (reverse phase) dimmers. The "T" (Triac/ELV) driver is 120V AC Input only and compatible with Triac and ELV dimmers. The "Z" (0-10V) driver accepts 120-277V AC Input and is compatible with 0-10V dimmers. For dimmer compatibility, refer to the Fixture Dimming Compatibility document on our website.

## ACCESSORIES

### DLX

Lens Accessories

 Y (Yellow)

 G (Green)

 LB (Light Blue)

 R (Red)

 RO (Rose)

 HL (Black Honeycomb Louver)

 LS (Linear Spread)

 SOL (Solite)

Field replaceable optics, accessories, and emergency backup options available. Please consult factory.

DLA60 2in Adjustable Downlight Specifications p. 4/4  
Custom options available, please consult factory.  
Product specifications are subject to change.  
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**BID Submission**

10 JULY, 2024

Type:

F3 Series

Page 13 of 19

# LCOMN

LED - Commercial Luminaire Type N



Project:	Catalogue #:	Type:
Notes:		

**Product Description:**

Commercial grade, LED strip luminaire. Ideal for many applications requiring a low cost, small profile, lighting solution.

**Applications:**

Ceaves, enclosed parking garages, Retail Shelving, Industrial Racks, Utility Areas



**Features:**

- Shallow design
- Surface or suspension mountable
- Available in nominal lengths of 24, 45, & 96 inches
- Continuous raceway and row-mounting capability
- 80+ CRI
- Standard low voltage dimming (0-10V)

**Featured Options:**

- Speedy hangers
- Aircraft cable set
- Emergency lighting battery pack

**Optical System:**

Standard units are supplied with frosted extruded micro-grooved round polycarbonate lens.

**Mounting:**

Mounting holes are provided. This product can be surface or suspension mounted.

**Construction:**

Die and brake formed, cold gauge, steel housing and ends. Knockouts are provided for conduit attachment.

**Finish:**

White, pre-painted housing.

**Electrical:**

Long life LEDs coupled with high efficiency drivers provide quality illumination. Rated to deliver L80 performance > 50,000 hours. Supplied with dimmable drivers (0-10V).

**Warranty:**

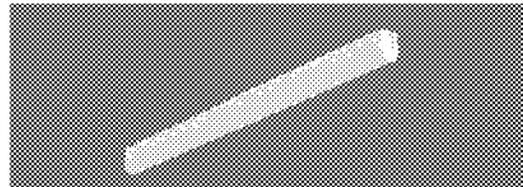
5 year limited warranty. For complete warranty, click here:



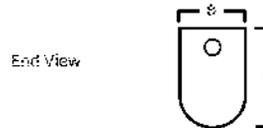
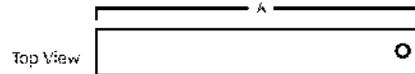
**Approvals:**

- Approved to CSA and UL standards.
- Tested in accordance to IESNA LM-79.
- Suitable for damp locations.
- DesignLights Consortium® Qualified.

All configurations may not be DLC qualified. Check [www.designlight.org/DLC](http://www.designlight.org/DLC) for qualified configurations.



**Dimensions:**



Length	A	B	C
24"	22 7/8"	2 1/16"	2 7/8"
45"	44 7/8"	2 1/16"	2 7/8"
96"	94 1/4"	2 1/16"	2 7/8"

Consult installation guide for exact dimensions.



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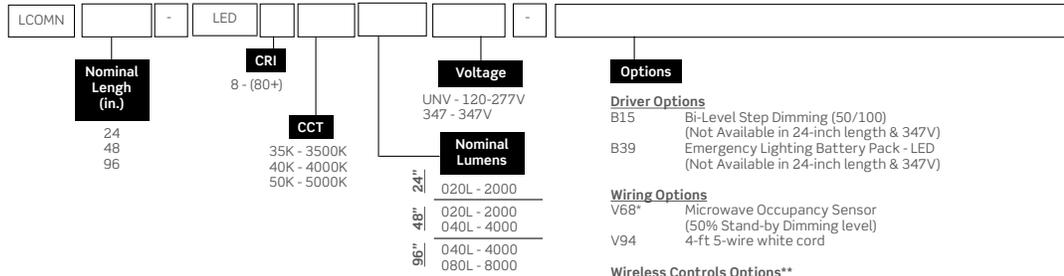
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 10 JULY, 2024

Type:  
**F4 Series**

Project:	Catalogue #:	Type:
Notes:		

**Order Key**

**EXAMPLE: LCOMN96-LED835K040LUNV**



\* Not to be used with step dimming (B15). Integrated sensor adds 2.5 inches to standalone fixture length.

\*\* Some controls may impact on standalone fixture length. Consult factory for exact dimensions.

Other options may be available, consult factory. Specifications and data subject to change without notice.

**Performance Data**

LED Performance Data				
Size	Nominal Lumens	Delivered Lumens	Watts	Lumens per Watt
24	2000	2037	14.4	141.2
48	2000	2059	13.7	150.8
	4000	4274	30.5	140.2
96	4000	4407	29.4	150.1
	8000	7982	56.4	150.1

Values based on 840K with standard lens at 25C

**Performance Scaling Factor**

	50K	40K	35K	30K
80CRI	1.000	1.000	0.960	0.946
90CRI	0.875	0.875	0.836	0.809

Mounted Accessories (Ordered Separately)	
KIT00001	Chain Set (2) 4ft w/ S-hooks.M10
KIT00002	Speedy Hangers (2).M23
KIT00003	Stem & Canopy Set 3/8"IP (2) 4ft.M26
KIT00043	Aircraft Cable & Canopy Set (2) 4ft.M48 (Cord not included with the kit)
KIT00044	Stem & Canopy Set Sloped Ceilings (2) 3ft.M29
KIT00045	Stem & Canopy Set Sloped Ceilings (2) 4ft.M29
KIT00046	Stem & Canopy Set Sloped Ceilings (2) 6ft.M29
KIT00047	Stem & Canopy Set 3/8"IP (2) 2ft.M26
KIT00048	Stem & Canopy Set 3/8"IP (2) 1ft.M26
KIT00050	Stem & Canopy Set 3/8"IP (2) 3ft.M26
KIT00053	Stem & Canopy Set 3/8"IP (2) 6ft.M26



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Type:  
F4 Series



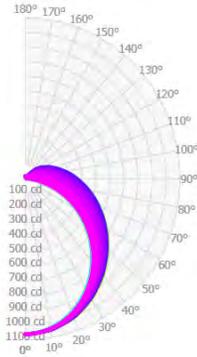
# LCOMN

LED - Commercial Luminaire Type N

Project:	Catalogue #:	Type:
Notes:		

### Photometrics

IES File: LCOMN48-LED840K040LUNV  
 Lumens: 4179  
 Wattage: 31  
 Eff cacy: 135



### Zonal Lumen Summary

Zone	Lumens	%Fixture
0.0° - 30.0°	827	19.8%
0.0° - 40.0°	1364	32.6%
0.0° - 60.0°	2488	59.5%
0.0° - 90.0°	3641	87.1%
0.0° - 110.0°	3989	95.5%
0.0° - 130.0°	4137	99.0%
0.0° - 150.0°	4166	99.7%
0.0° - 170.0°	4177	100.0%
0.0° - 180.0°	4179	100.0%

### Coefficients of Utilization

ρc	80%			70%			50%		
	70%	50%	30%	70%	50%	30%	70%	50%	30%
0	116	116	116	112	112	112	104	104	104
1	103	97	92	99	94	89	91	87	83
2	93	84	76	89	81	73	82	75	69
3	84	73	64	81	70	62	74	65	58
4	77	64	55	73	62	53	67	58	50
5	70	57	47	67	55	46	62	51	44
6	65	51	42	62	49	41	57	46	39
7	60	46	37	58	45	36	53	42	34
8	56	42	33	54	41	32	49	38	31
9	52	38	30	50	37	29	46	35	28
10	49	35	27	47	34	27	43	32	26

### Average Luminance Table (cd/m2) CP Summary

	0.00°	45.00°	90.00°
0.00°	18257	18257	18257
45.00°	16045	13336	13218
55.00°	14944	12320	12531
65.00°	13292	11448	12054
75.00°	10377	10871	11884
85.00°	4558	10900	12249

Effective Floor Cavity Reflectance: 20%



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Type:  
**F4 Series**

Not Used

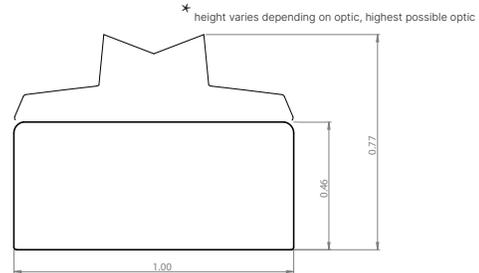


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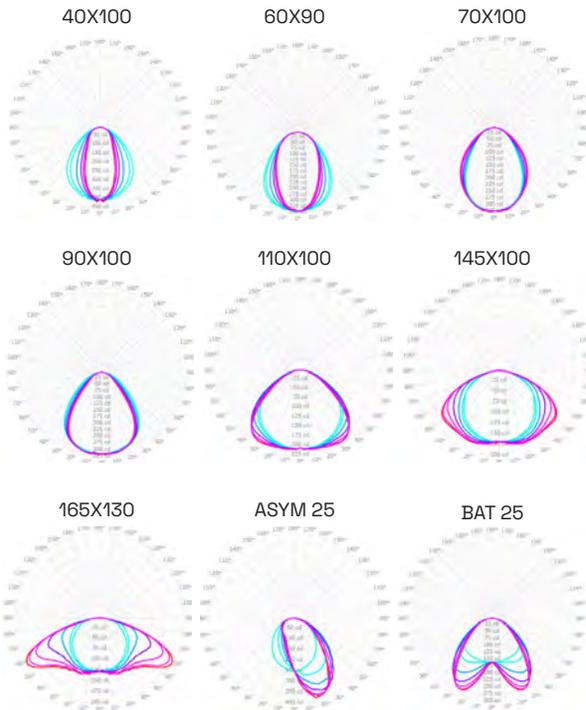
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10 JULY, 2024

Type:  
F5

## Dimensions



## Optics



## Spec Lock

- LED specially binned through forward voltage within a 3-step MacAdam ellipse for increased CCT fidelity and smooth lower end dimming.
- Mechanically fastened Rigid PCB set within an extruded aluminum channel for simple installation and total serviceability.
- Pressure fit metal pin connection for solderless in-field connection between LED boards for a seamless appearance.
- Flexible power feed injections maintain LED pitch consistency for a plethora of mounting options.
- Never a shadow, hotspot nor break in light no matter the output and run length.
- No double-sided adhesion (tape) or soldering during installation.

S



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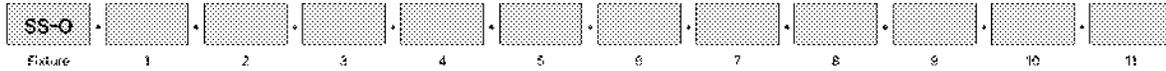


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 10 JULY, 2024

Type:  
 F6

### Part # Builder



Fixture	1: Lens	2: Intensity <sup>1</sup>	3: Color Temp
SS-0: Optic	1: 60 × 90 2: 110 × 100 3: 40 × 100 4: 70 × 100 5: BAT 25 6: ASYM 25 7: 145 × 100 8: 90 × 100 9: 165 × 130	SL: Super Low (212lm/1.6w per ft) L: Low (376lm/2.3w per ft) M: Medium (624lm/4.8w per ft) H: High (1058lm/8.3w per ft) SH: Super High (1232lm/9.8w per ft) LD: LumenDial (Consult Factory)	22: 2200K 27: 2700K 30: 3000K 35: 3500K 40: 4000K 50: 5000K TW2235: 22K-35K TW2750: 27K-50K
4: Finish <sup>2</sup>	5: Feed <sup>3</sup>	6: Control	7: Mounting
M: Mill Finish W: Gloss White (Cost Adder) B: Matte Black (Cost Adder) C: Custom RAL# (Cost Adder - Consult Factory)	EF: End Feed RF: Rear Feed SF1: Side Feed 1 SF2: Side Feed 2	G: None 1: 0-10 -1% Dimming 2: 0-10 -0.1% Dimming 3: DMX/ DALI 4: POE 5: ELV / MLV / Phase 6: 0-10 Tuneable White 7: 0-10 Warm Dim 8: Lutron Hi-Lume 1% Ecosystem W/ SO-FT8 9: Lutron Hi-Lume 1% 3 Wire + G 10: Lutron Athena Wireless Node - RF Only 11: Casambi 12: nLyte 13: Enlighted 14: Other - Consult Factory	N: None E: External EM: External Magnetic T1: Tiltable Stand ELV: Elevated Mounting Clip W: Wall Clip Custom: Consult Factory
8: Blind Cove <sup>4</sup>	9: Wire Length	10: Shape	11: Fixture Length
Y: Yes N: No	12" 22" 48" 98" Custom - (Consult Factory)	S - Straight U - U Shape L - L Shape R - Rectangle P - Pattern (Consult Factory)	X' Y'

### Optic Lens - Visible Diodes - 8% Light Loss

Output	EL	L	M	H	SH
Lumens/Foot	212	376	624	1058	1232
Watts/Foot	1.6	2.9	4.8	8.3	9.8
Lumens/Watt	135	133	131	127	125



Wiring



Installation

S

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Type:  
**F6**

## Specification Details

	LENS	LIGHT LOSS	VISIBLE DIODES	SUPER LOW	LOW	MEDIUM	HIGH	SUPER HIGH
Watts / Foot	N/A			1.6	2.8	4.8	8.3	9.8
mA / Foot	N/A			50	89	149	256	300
Optic Lens: Lumens / Foot	Optic	8%	Yes	212	376	624	1058	1232
Optic Lens: Lumens / Watt <sup>1</sup>	Optic	8%	Yes	135	133	131	127	125
0-10 / Lutron Athena Node	Max Output 2000mA			40 Feet	20 Feet	12 Feet	6 Feet	4 Feet
Phase	Max Output 700mA			14 Feet	7 Feet	4 Feet	2 Feet	1 Foot
DMX/DALI	Consult Factory							
POE	Consult Factory							
Lutron Drivers	LDE1 Hi-Lume 1% EcoSystem. Soft On Fade to Black			L3DA3W Hi-Lume 1% 3 WIRE+G				
Color Temperatures (K) + Flux	2200 (82%), 2700 (100%), 3000 (100%), 3500 (115%), 4000 (118%), 5000 (106%)							
CRI	90+							
R9	50+							
MacAdams Ellipses	3 Steps							
Beam Angle <sup>2</sup>	120 Degrees							
IP Rating	IP20 - Dry Location							
Lamp Life	50,000 Hours							
Dimming / Control <sup>3</sup>	0-10 / POE / DMX / DALI / PHASE / LUTRON / LUTRON WIRELESS							
Operating Temperature	-13°F to 122°F							

### FINISH

Standard Mill Aluminum Finish.  
Powder Coating to any RAL# available upon specification  
Increased pricing for powder coating.

### Warranty

2 Year Limited Warranty - Covers all Scout manufactured products.  
Default to manufactures warranty for all 3rd party components. Does not cover labor.

### ORDER DETAILS

- All fixtures come standard with starter end cap feed unless otherwise specified.
- All Scout Select Fixtures come preassembled up to 8 feet long with 8" power feed.
- Any Fixture length under 8 feet long will be made as a complete fixture.
- Any Fixture length over 8 feet long will be broken into 6 foot lengths + the balance length. A 10 Foot Fixture will be broken into 1 length @ 6 Feet and 1 @ 4 Feet.
- Fixtures daisy chain together with Scout\_Lock™ Technology.
- In situations where fixtures are longer then the maximum wattage load new power will be injected from either the side or rear. Standard Injection is side Feed 1.
- All orders come with an approval drawing. Fabrication will not begin until drawing has been signed off or waived.

<sup>1</sup>Lumens / Watt accounts nominal driver efficacy at full load  
<sup>2</sup> Finish: Mill Finish comes standard. Cost Adder for Power Coating. Contact Factory for Custom RAL#  
<sup>3</sup>Feed: See Feed Details on page 4

### LED SYSTEM

Proprietary linear LED Scout Engine incorporates premium Cree LEDs on a robust platform to achieve excellent thermal management. LEDs are placed to promote a uniform appearance.  
Available in 2200K, 2700K, 3000K, 3500K, 4000K or 5000K in 90+ CRI. LED modules and drivers are replaceable.  
Color accuracy <3 SDCM

### CONSTRUCTION

One piece extruded aluminum housing. Cast aluminum end caps.

### OPTICS

Extruded High Transmission Milky Acrylic Lens with No LED imaging. Extruded High Transmission Frosted Acrylic Lens with LED imaging.

### ELECTRICAL

Fixture comes reassembled with 8" whip.  
All Drivers are installed in remote location.  
All drivers are Universal input 120-277 VAC.  
Standard Constant Current drivers include 0-10V dimming preinstalled in enclosure.

### LABELS

Conforms To UL STD 2108 Certified To CSA STD C22.2 # 250.0  
Suitable for Dry or Damp Locations, indoor use only.  
ETL Control # 5011600

S

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Page 3 of 4



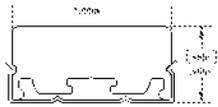
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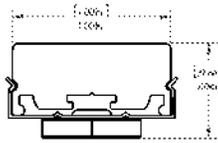
Type:  
F6

Page 20 of 119

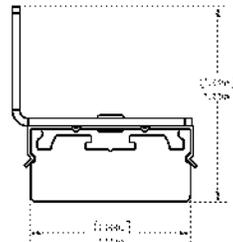
## Mounting Clips



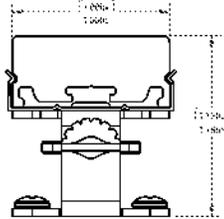
External Clip



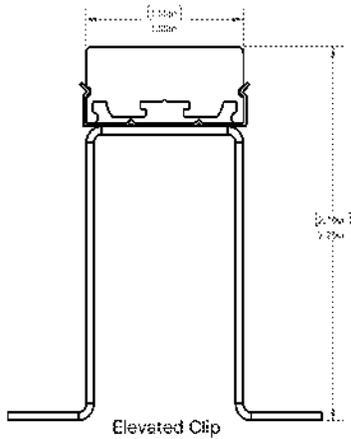
External Magnetic



Wall Clip



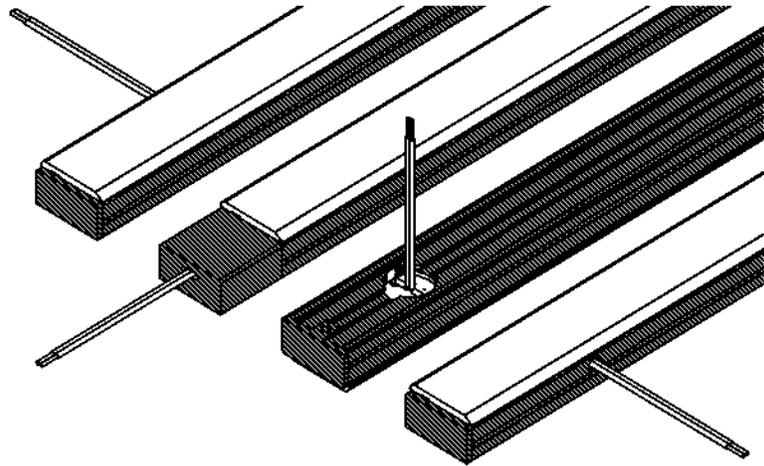
Tilttable Stand



Elevated Clip

S

## Feed Points



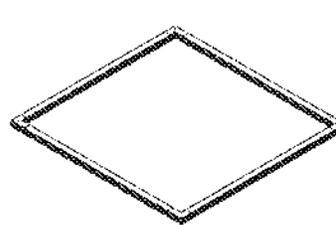
Side Feed 1

End Feed

Rear Feed

Side Feed 2

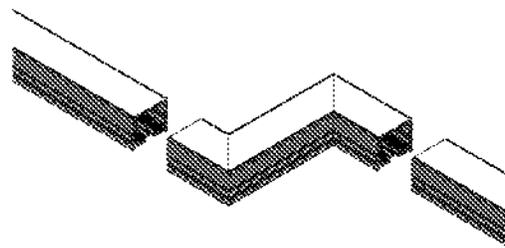
## Patterns



Coplanar surfaces



Changing elevations



Custom patterns

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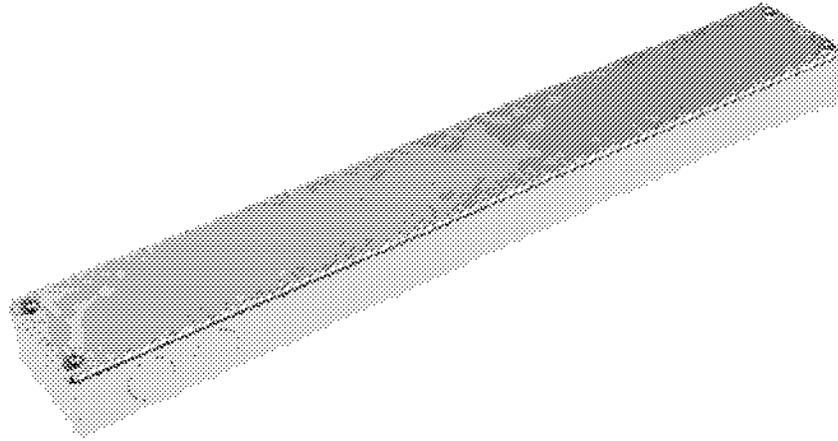


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Type:  
**F6**

Project : \_\_\_\_\_ Firm : \_\_\_\_\_ Type : \_\_\_\_\_ Quantity: \_\_\_\_\_



**Quick Specs**

Driver Type	Constant Current
Dimming Control	0-10 : 1%
# of Channels	1
DC Voltage Range	27-54 VDC
AC Input Voltage	120 - 277
Class	2
mA	2000
Wattage	75
Warranty	5 years
Efficiency	>90%

**Max Load (2000mA)**

Super Low (150mA)	40 Feet
Low (89mA)	22 Feet
Medium (149mA)	13 Feet
High (250mA)	8 Feet
Super High (300mA)	5 Feet

**Max Distance**

20 AWG	20 Feet
18 AWG	40 Feet
16 AWG	60 Feet
14 AWG	100 Feet
12 AWG	150 Feet

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New York, NY  
1.833.SCOULD  
www.ScoutLighting.com  
Mfg@ScoutLighting.com

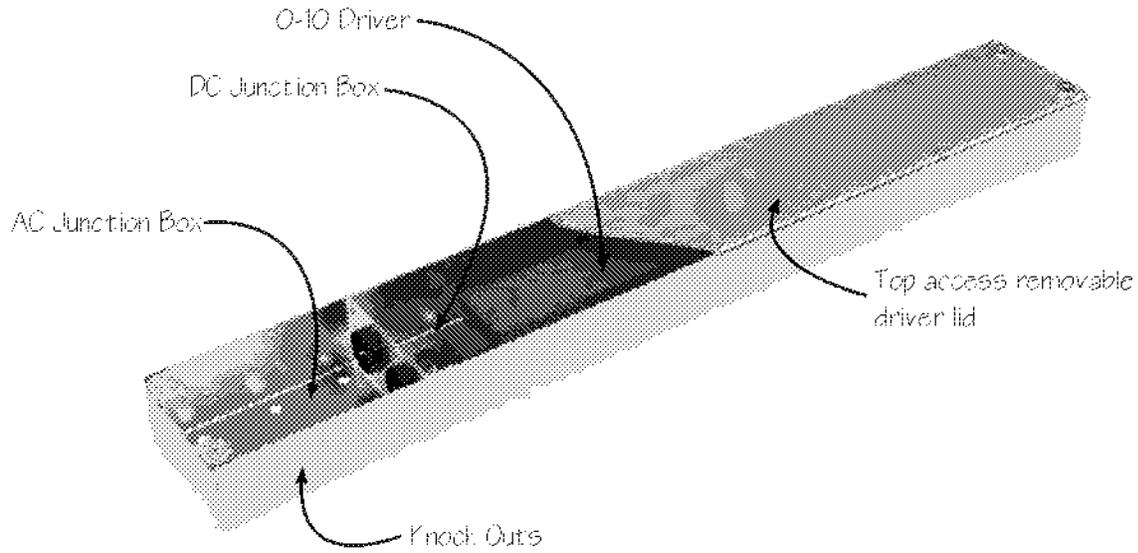


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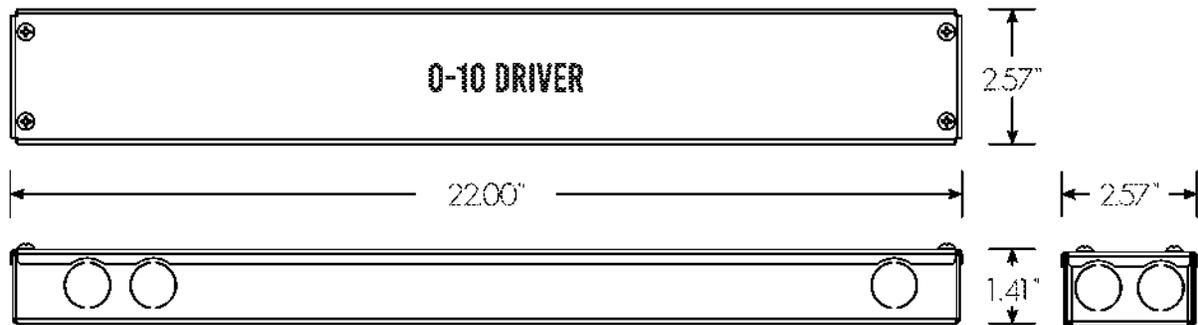
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Type:  
**F6**

Driver Anatomy



Dimensions



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New York NY  
 1633 COLONIA  
 www.ScoutLighting.com  
 info@ScoutLighting.com

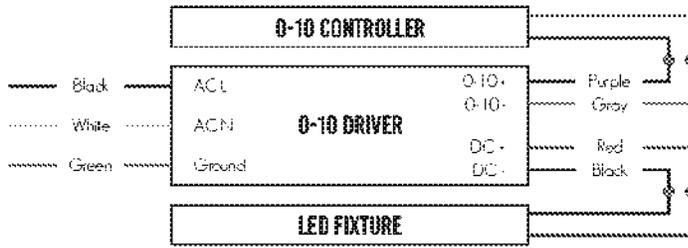



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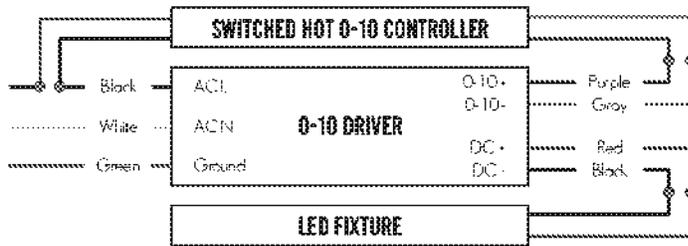
230042.000  
**BID Submission**  
 10 JULY, 2024

Type:  
**F6**

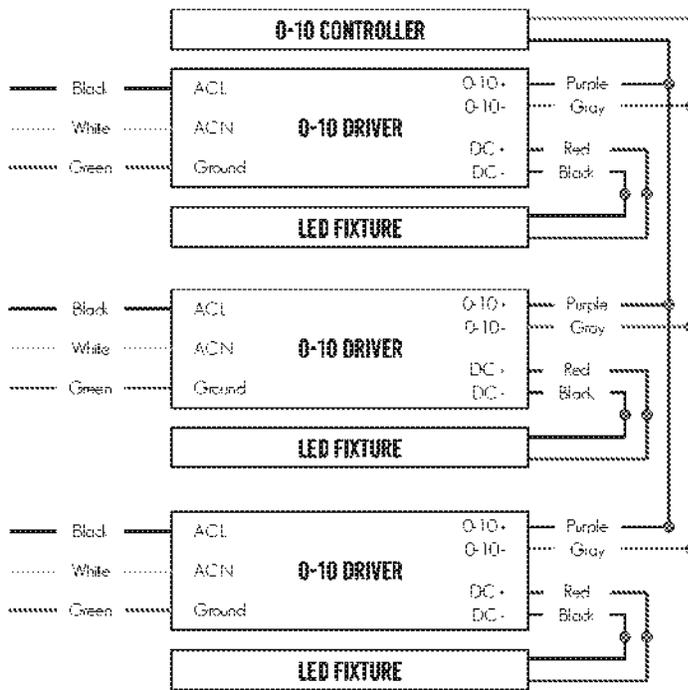
Wiring



Single 0-10 wiring



Switched Hot 0-10 Wiring



Multiple fixture wiring to single 0-10 Dimmer

Scout Lighting reserves the right to modify this specification without prior notice. Updated 10/02/21.

New York, NY  
 1-800-552-0810  
 www.ScoutLighting.com  
 info@ScoutLighting.com



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Type:  
**F6**

# alphabet

PROJECT INFORMATION		
JOB NAME		TYPE
ORDERING CODE		

## BETA 3

### 3" Cylinder Standard White



15° - 60° BEAM (Note: Specifications are subject to change without notice)		
14mm COB PERFORMANCE DATA		
LED LIGHT ENGINE	NOMINAL DELIVERED LUMENS	SYSTEM WATTAGE
10LM	1180LM @30K/80CRI	11W
15LM	1370LM @30K/80CRI	13W
20LM	1770LM @30K/80CRI	17W
10LM	1180LM @30K/90CRI	11W
15LM	1370LM @30K/90CRI	13W
20LM	1770LM @30K/90CRI	17W
Notes	Delivered lumens based on 40C, 3000K (see page 2)	



#### FEATURES

- Seamless extrusion with powder coated finish for clean aesthetics
- Thermally optimized for longevity
- 15° - 60° beam spread
- UGR < 19
- Micro slim canopy options at 1/4"-3/8" depth plus 1/2" diameter stem.
- Multiple mounting, glare control options, trims and finishes available

#### LED

- 90 CRI: SDCM = 2-step MacAdam Ellipse, Lumen Maintenance: L<sub>70</sub> > 66,000 hrs
- 80 CRI: SDCM = 2-step MacAdam Ellipse, Lumen Maintenance: L<sub>70</sub> > 66,000 hrs

#### DIMMING AND CONTROLS

- Flicker free 0-10V dimming to 1%
- Leading & trailing edge (Triac/ELV) dimming to 1%
- Lutron Hi-lume 2-Wire (Eco System) dimming to 0.1%
- Casambi bluetooth dimming to 1%

#### LISTING

- ULus Listed to UL1598 & UL2108; cUL Listed to CSA C22.2 #250.0
- Suitable for dry and damp locations
- 5 Year Limited warranty

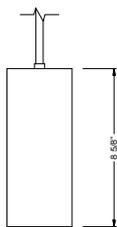
#### CONSTRUCTION

- Extruded aluminum housing
- Lexan™ (PC) Optimal connectivity for wireless control signal
- Machined aluminum canopy
- SVT pendant cord

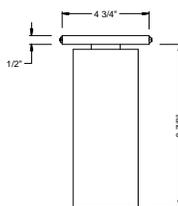
#### ELECTRICAL

- 120V-277V, 120 only Triac / ELV
- Power factor ≥ 0.9
- 2kV driver input surge protection
- Remote emergency test switch
- 7 W, 10W (T20 CEC) and 12W EM 90min battery

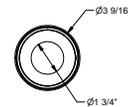
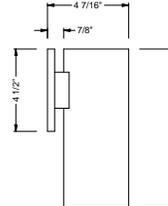
#### PENDANT



#### SURFACE MOUNT



#### WALL MOUNT



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In a continuing effort to offer the best product possible we reserve the right to change, without notice, specifications or materials that in our opinion will not alter the function of the product.

v.10.18.23 | Beta3R | Page 1 of 7

100032



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**BID Submission**  
 10 JULY, 2024

Type:  
 F7

Page 25 of 119



# alphabet

PROJECT INFORMATION		
JOB NAME	TYPE	
ORDERING CODE		

## BEZEL OPTIONS

### BEZEL COLORS



## OPTICAL OPTIONS

- UGR calculation based on CIE 117-1995; room size: 4H X 8H, reflectance: 70/50/20;
- UGR calculation based on 15LM fixtures.



**CL**  
Clear Lens

OPTIC	BEAM ANGLE	UGR
15C	16.2	17.1
20C	20.6	17.3
25C	23.5	17.5
40C	37.4	18
55C	55.8	18.6



**DL**  
Diffused Lens

OPTIC	BEAM ANGLE	UGR
40D	42.6	21.9
45D	45.2	22.2
50D	52.4	22.9
60D	58.9	23.6



**HET**  
High Efficiency Textured Lens

OPTIC	BEAM ANGLE	UGR
20HET	19.5	17.7
25HET	24.4	18
30HET	27	18.6
40HET	38.5	19.1
50HET	49.5	19.4



**NL**  
No Lens

OPTIC	BEAM ANGLE	UGR
15C	14	17.2
20C	21	16.6
25C	25	16.8
40C	39	17.7
55C	55	18



**ACCESSORY**  
Honeycomb Louver

OPTIC	BEAM ANGLE	UGR
15C	12	≤5
20C	16	≤5
25C	20	≤5
40C	32	≤5
55C	44	≤5

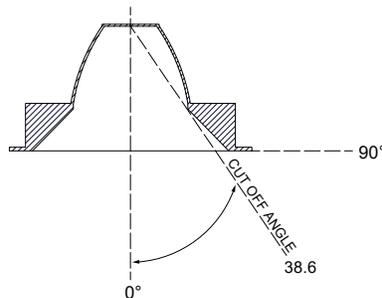
## GLARE CONTROL

### CUT-OFF ANGLE

Visual comfort is achieved with a lower cut-off angle due to improved glare control. The smaller the cut-off angle, the easier it is on the eye.

Alphabet downlights have been thoughtfully engineered to eliminate glare while still delivering functional illumination.

- Cutoff angle of CL is 38.6 degrees;



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Page 3 of 7

10032

**HLB**

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**BID Submission**

10 JULY, 2024

Type:

F7

Page 27 of 119

# alphabet

## PROJECT INFORMATION

JOB NAME		TYPE	
ORDERING CODE			

## PHOTOMETRIC DATA

10LM CCT MULTIPLIERS		
	80CRI	90CRI
2700K	0.96	0.81
3000K	1	0.85
3500K	1.03	0.88
4000K	1.06	0.91

FC Formula = CBCP / Distance<sup>2</sup>

20C 20° REFLECTOR WITH CLEAR LENS	
Throw Distance (ft)	Beam Diameter (ft)
6	2.2
8	2.9
10	3.6
12	4.4
14	5.1
Illuminance at Center (fc)	
WATTS: 8.6	LPW: 109.6
LUMENS: 942	CCT: 3000K
INTENSITY	
DEGREE	CANDELA
0	4291
5	3694
15	1004
25	380
35	242
45	7

25C 24° REFLECTOR WITH CLEAR LENS	
Throw Distance (ft)	Beam Diameter (ft)
6	2.5
8	3.3
10	4.2
12	5
14	5.8
Illuminance at Center (fc)	
WATTS: 8.6	LPW: 110.2
LUMENS: 948	CCT: 3000K
INTENSITY	
DEGREE	CANDELA
0	3159
5	2764
15	1117
25	503
35	239
45	7

40C 38° REFLECTOR WITH CLEAR LENS	
Throw Distance (ft)	Beam Diameter (ft)
6	4.1
8	5.4
10	6.8
12	8.1
14	9.5
Illuminance at Center (fc)	
WATTS: 8.6	LPW: 110.1
LUMENS: 947	CCT: 3000K
INTENSITY	
DEGREE	CANDELA
0	1857
5	1787
15	1204
25	591
35	262
45	8

55C 56° REFLECTOR WITH CLEAR LENS	
Throw Distance (ft)	Beam Diameter (ft)
6	6.4
8	8.5
10	10.6
12	12.7
14	14.8
Illuminance at Center (fc)	
WATTS: 8.6	LPW: 109.8
LUMENS: 944	CCT: 3000K
INTENSITY	
DEGREE	CANDELA
0	1260
5	1240
15	1105
25	746
35	268
45	9

20LM CCT MULTIPLIERS		
	80CRI	90CRI
2700K	0.96	0.81
3000K	1	0.85
3500K	1.03	0.88
4000K	1.06	0.91

FC Formula = CBCP / Distance<sup>2</sup>

20C 20° REFLECTOR WITH CLEAR LENS	
Throw Distance (ft)	Beam Diameter (ft)
6	2.2
8	2.9
10	3.6
12	4.4
14	5.1
Illuminance at Center (fc)	
WATTS: 16.5	LPW: 106.7
LUMENS: 1761	CCT: 3000K
INTENSITY	
DEGREE	CANDELA
0	8021
5	6905
15	1877
25	711
35	452.3
45	13

25C 24° REFLECTOR WITH CLEAR LENS	
Throw Distance (ft)	Beam Diameter (ft)
6	2.5
8	3.3
10	4.2
12	5
14	5.8
Illuminance at Center (fc)	
WATTS: 16.5	LPW: 107.4
LUMENS: 1771	CCT: 3000K
INTENSITY	
DEGREE	CANDELA
0	5904
5	5167
15	2088
25	939
35	447
45	12

40C 38° REFLECTOR WITH CLEAR LENS	
Throw Distance (ft)	Beam Diameter (ft)
6	4.1
8	5.4
10	6.8
12	8.1
14	9.5
Illuminance at Center (fc)	
WATTS: 16.5	LPW: 107.3
LUMENS: 1770	CCT: 3000K
INTENSITY	
DEGREE	CANDELA
0	3471
5	3340
15	2250
25	1104
35	490
45	15

55C 56° REFLECTOR WITH CLEAR LENS	
Throw Distance (ft)	Beam Diameter (ft)
6	6.4
8	8.5
10	10.6
12	12.7
14	14.8
Illuminance at Center (fc)	
WATTS: 16.5	LPW: 107
LUMENS: 1765	CCT: 3000K
INTENSITY	
DEGREE	CANDELA
0	2356
5	2318
15	2065
25	1394
35	501
45	17



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Type:  
**F7**

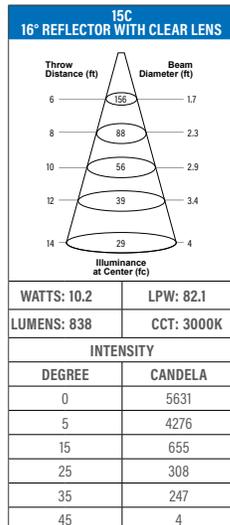
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PROJECT INFORMATION		
JOB NAME		TYPE
ORDERING CODE		

## PHOTOMETRIC DATA

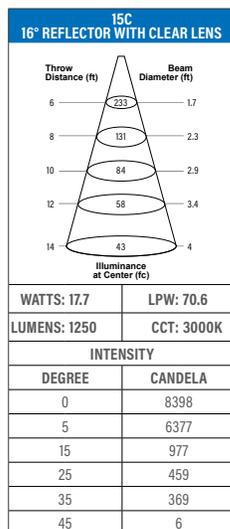
10LM CCT MULTIPLIERS		
	80CRI	90CRI
2700K	0.96	0.81
3000K	1	0.85
3500K	1.03	0.88
4000K	1.06	0.91

FC Formula = CBCP / Distance<sup>2</sup>



15LM CCT MULTIPLIERS		
	80CRI	90CRI
2700K	0.96	0.81
3000K	1	0.85
3500K	1.03	0.88
4000K	1.06	0.91

FC Formula = CBCP / Distance<sup>2</sup>



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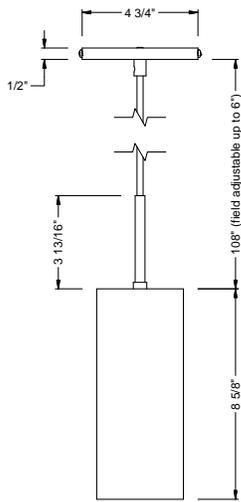
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10 JULY, 2024

Type:  
F7

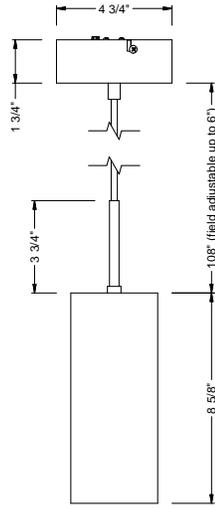
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PROJECT INFORMATION		
JOB NAME	TYPE	
ORDERING CODE		

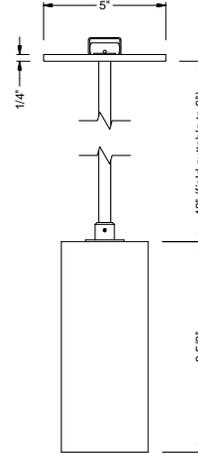
## MOUNTING OPTIONS



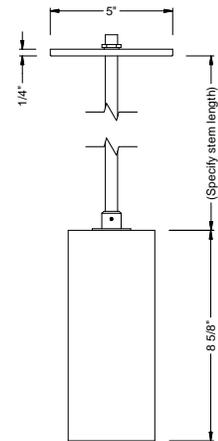
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ELV1 / CAS



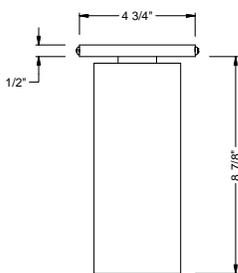
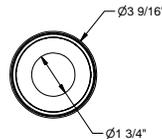
PENDING  
DIM10 / LUTP



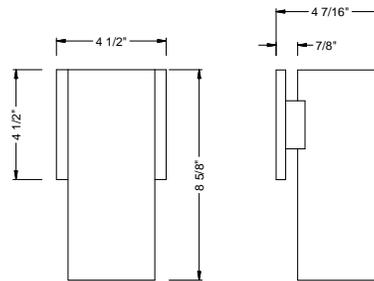
RP SWIVEL  
DIM10 / ELV1 / CAS



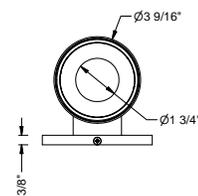
RPF FIXED  
DIM10 / ELV1 / CAS



SURFACE MOUNT  
DIM10 / ELV1 / CAS



WALL MOUNT  
DIM10 / ELV1 / CAS



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v.10.18.23 | Beta3R | Page 6 of 7

100032



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 10 JULY, 2024

Type:  
 F7

Page 30 of 119

PROJECT INFORMATION		
JOB NAME	TYPE	
ORDERING CODE		

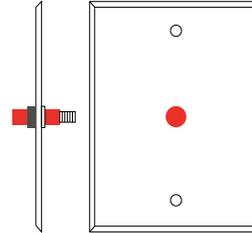
## BATTERY OPTIONS

### EMERGENCY BATTERY

IOTA's ILB battery backups are UL Listed LED emergency drivers that allow the same LED fixture to be used for both normal and emergency operation. In the event of a power failure, the ILB switches to the emergency mode and operates the existing fixture for 90 minutes. The unit contains a battery, charger, and converter circuit in a single can. The constant power design of the ILB maintains the output wattage to the LED array even as the system voltage diminishes. UL 924 Listed for U.S. and Canada. UL 1310 Certified, output class 2 compliant. Includes single-piece TBTS test switch and charge indicator accessory kit. For use with switched and unswitched fixtures, and includes two-wire universal AC input. Meets or exceeds all National Electric Code and Life Safety Code Emergency Lighting requirements. Rated for use in plenum, damp location, recessed type IC, and enclosed and gasketed luminaires.

### REMOTE TEST SWITCH

The remote test switch may be mounted adjacent to the LED Fixture by others.



Remote Test Switch

### EMERGENCY BATTERY ACCESS

Above ceiling access is recommended for ease of service.

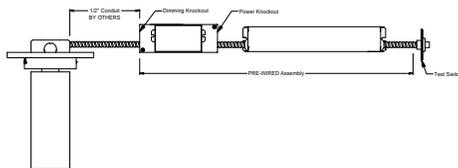
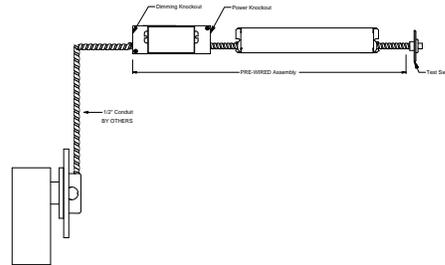
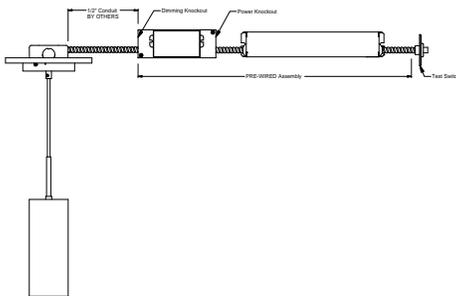
### REMOTE LOCATION

Maximum remote mounting distance of the emergency driver shall be 50 feet. Remote location wiring provided by others. Follow all local and national electric/building codes.

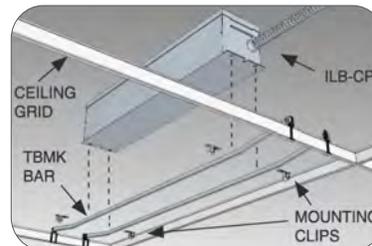
EM MODE OUTPUT (DELIVERED LUMENS)			
LUMEN ORDERING CODE	EM7	EM10	EM12
ALL OPTIONS (10LM TO 20LM)	880LM	1280LM	1480LM

Notes: Based on 30K, 80CRI

### REMOTE BATTERY



#### Accessory 76066 Optional T-Grid Mounting Kit<sup>1</sup>



1. Can be used with any of the Emergency Battery Backups. Must be ordered as a separate line item.

# HLB

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Type:

F7

Page 31 of 119

Not Used



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10 JULY, 2024

Type:  
F8

Not Used



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**BID Submission**  
10 JULY, 2024

Type:  
F9

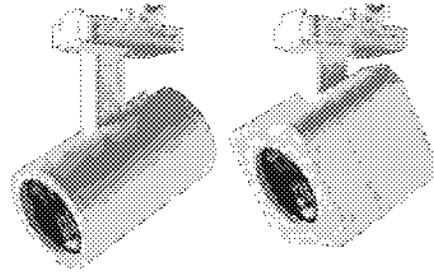
# LUMENTURE®

## T40 TRACK HEADS

The T40 track cylinder is designed to blend seamlessly into a wide range of environments - including retail, commercial, restaurant and hospitality settings. The T40 comes standard with Lumenture's patent-pending, low-profile mini track adapter and is available in both round and square designs. Specification level details - including no exposed hardware, special attention to finish and the ability to integrate a number of accessories - make the T40 one of the leading-edge track heads on the market.

TYPE: .....

PROJECT: .....



<b>DIMMING</b> Trac, ELV	<b>WEIGHT</b> 4.5 oz.	<b>WATTAGE</b> 7W	<b>EFFICACY</b> up to 90lm up to 125lm/W	<b>INPUT</b> 120V AC	<b>FINISH</b> Cold forged aluminum housing, Powdercoat	<b>ACCESSORIES</b> Field replaceable optics & accessories	<b>MOVEMENT</b> 90° tilt 350° rotation

### ORDERING

FIXTURE	CCT/CRI <sup>1</sup>	LUMENS	BEAM SPREAD <sup>2</sup>	FINISH	MOUNTING TYPE <sup>3</sup>	ACCESSORIES <sup>4,5</sup>
T40 - Round	22H - 2200K, CRI 90+	800	22 - 22°	W - White	J - J Type (Standard)	SN - Standard Tapered Snoot <sup>6</sup>
T40S - Square	27H - 2700K, CRI 90+		40 - 40°	B - Black	L - L Type	SNC - Cylinder Snoot <sup>6</sup>
	30H - 3000K, CRI 90+			S - Silver	MC - Micro Canopy	JA-18-[Finish]-Cover - Deep Canopy Collar
	30B - 3000K, CRI 95+				SC - Slim Canopy	
	30D - 3000K, CRI 90+ (Dim-to-Warm)					
	35H - 3500K, CRI 90+					
	40H - 4000K, CRI 90+					

#### NOTES

1. Custom options available. Please consult factory.
2. Mini Adapter is for single-circuit only.
3. See page (3) for a full list of accessories and canopy accessories.
4. Available for T40S (square) only.
5. Available for T40 (round) only.

#### ORDERING EXAMPLE:

T40 - 30H - 3000 - 40 - W - J - SN

#### LISTINGS

Certified to UL standard 1574 and CSA C22.2 No. 9.0 for dry locations



**T40 Track Head Specifications** p. 1/4  
 Custom options available, please consult factory.  
 Product specifications are subject to change.  
 info@lumenture.com R: 203.964.3333



John Jay Homestead

230042.000  
**BID Submission**  
 10 JULY, 2024

Type:  
**F10 Series**

# T40 TRACK HEADS

## PHOTOMETRICS

### LUMEN OUTPUT

Values fluctuate based on CCT/CRI. To estimate delivered lumen output of the various CCT/CRI options, multiply nominal lumens (600 lumens) by the multiplier below.

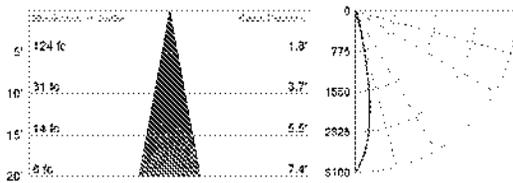
Model	CCT	CRI	LED Package	27°	40°
22H	2200K	90+	Standard	0.75	0.75
27H	2700K	90+	Standard	0.85	0.85
30H	3000K	90+	Standard	1.00	1.00
30B	3000K	95+	Standard	0.80	0.80
30D	3000K	90+	Dim-to-Warm*	0.80*	0.80*
35H	3500K	90+	Standard	1.05	1.05
40H	4000K	90+	Standard	1.05	1.05

### NOTES

- Luminaire maintains a lumen output tolerance of +/-75%
- 1. Dim-to-Warm dims from 3000K to 1800K

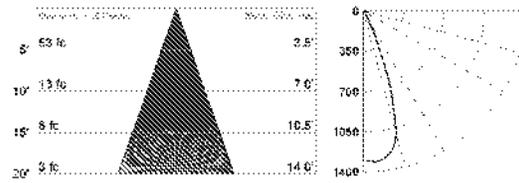
### T40 - 22 Degree

Delivered Light Output: 590 Lumens  
 Total Watts @120V: 7  
 Lumens Per Watt: 84  
 Center Beam Candie Power: 3442  
 Spacing Criteria: 0.4



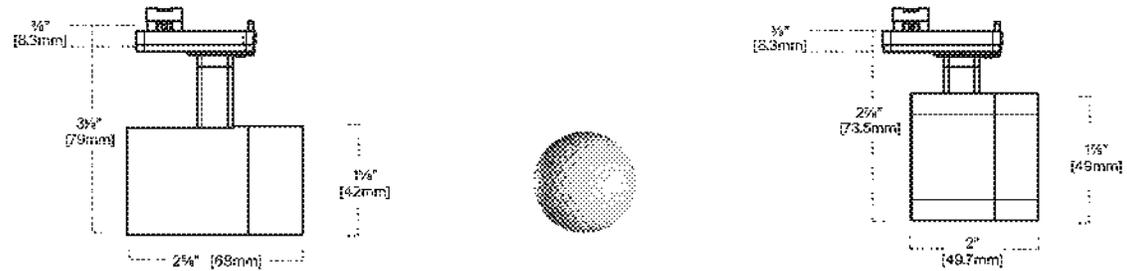
### T40 - 40 Degree

Delivered Light Output: 610 Lumens  
 Total Watts @120V: 7  
 Lumens Per Watt: 87  
 Center Beam Candie Power: 1375  
 Spacing Criteria: 0.6



## DIMENSIONS

Standard option shown with our J-Type mini track adapter.



T40 Track Head Specifications p. 2/4  
 Custom options available, please consult factory  
 Product specifications are subject to change  
 info@luminaire.com P: 203.264.3333

**LUMENTURE**  
 www.luminaire.com  
 TEL: 203.264.3333



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**BID Submission**  
 10 JULY, 2024

Type:  
**F10 Series**

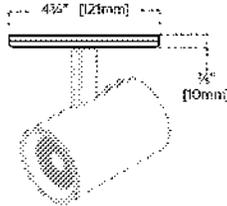
# T40 TRACK HEADS

## INTEGRAL CANOPY (Factory Installed)

### SC (Slim Canopy)

The slim canopy mounts directly over a standard junction box - resulting in an elegant and clean install of Lumenture's award-winning T-Series track fixtures.

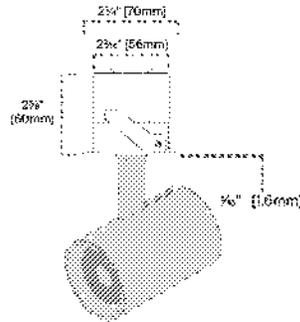
Finish: B, S, W



### MC (Micro Canopy)

With a minimal 2.75" trim, the Lumenture micro-canopy virtually "disappears" into the ceiling - offering an even more refined look for the most high-end applications.

Finish: B, S, W

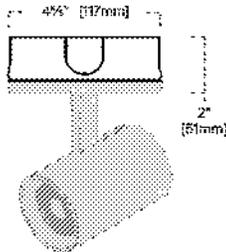


## CANOPY ACCESSORIES (Ordered Separately)

### JA-18-[Finish]-Cover (Deep Canopy Collar)

The JA-18 Cover helps shield unsightly surface mount J-Boxes and blends seamlessly with the Lumenture JA-18 or SC Slim Canopy (sold separately).

Finish: B, W



Ordering Example: JA-18-B-Cover

#### Finish Codes:

- B - Black
- S - Silver
- W - White

T40 Track Head Specifications p. 3/4  
 Custom options available, please consult factory  
 Product specifications are subject to change  
 info@lumenture.com P: 203.864.3333

**LUMENTURE**  
 www.lumenture.com  
 ver: Jan 2024 0103



John Jay Homestead

230042.000  
**BID Submission**  
 10 JULY, 2024

Type:  
**F10 Series**

# T40 TRACK HEADS

## DIMMING

Dimming is standard and allows for smooth illumination below 1% with certain dimmers. Compatible with most Triac (forward phase) and ELV (reverse phase) dimmers. For dimmer compatibility, refer to the Fixture Dimming Compatibility document on our website.

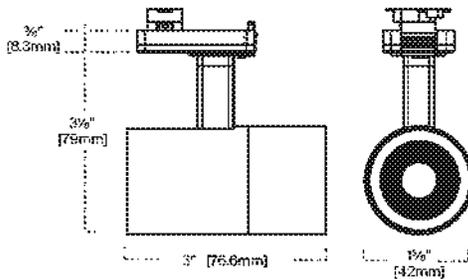
## TRACK COMPATIBILITY

Luminaire J-Type Mini Adapters are designed for use with Luminaire's track systems, as well as Juno® & Contech® track. Our L-Type adapter is compatible with Lightolier® track. Due to its patent-pending small form factor, the Mini Adapter is single circuit only.

## ACCESSORIES

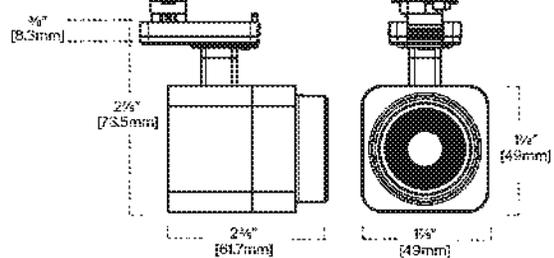
### SNC (Cylinder Shoot)

Will accept up to two (2) accessories.  
Finish: W, B, S. The inside surface is black.  
Available for T40 Round only.



### SN (Standard Tapered Shoot)

Will accept up to two (2) accessories.  
Finish: W, B, S. The inside surface is black.  
Available with T40S Square only.



### LENS ACCESSORIES

Field-replaceable optics available. Please consult factory.

● Lens-Yellow-38

● Lens-Green-38

● Lens-Blue-38  
(Light Blue)

● Lens-Red-38

● Lens-Rose-38

● HL-38™  
(Black Honeycomb Louver)

● LS-38  
(Linear Spread)

● SOL-38  
(Spot)

### NOTES

Field-replaceable optics and accessories available. Please consult factory.  
1. Accessory requires a shoot.

T40 Track Head Specifications p. 4/4  
Custom options available, please consult factory.  
Product specifications are subject to change.  
info@luminaire.com P: 203.864.3333

**LUMENTURE**  
www.luminaire.com  
Tel: 203.864.3333



John Jay Homestead

230042.000  
**BID Submission**  
10 JULY, 2024

Type:  
F10 Series

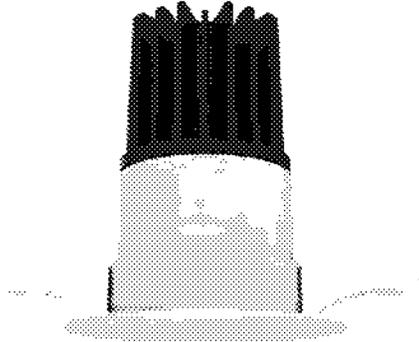
# LUMENTURE®

## DL60 2" FIXED DOWNLIGHTS

TYPE: .....

PROJECT: .....

With a 2" aperture, knife-edge trim and excellent visual cutoff - Lumenture's DL60 blends discreetly in any environment. These recessed modules deliver high lumens without glare. The result is superior brightness and quality from an unobtrusive fixture. The DL60 is available both in remodel with an attached junction box or with optional rough-in housings to fit any construction needs.



<b>DIMMING</b> Triac, ELV & 0-10V	<b>WEIGHT</b> 13.5 oz. (module only)	<b>WATTAGE</b> 6.5W-15W	<b>EFFICACY</b> up to 1450lm up to 111lm/W	<b>AC DRIVER INPUT</b> 120-277V	<b>HOUSING</b> Open, Closed, Remodel, Pan	<b>FINISH</b> Aluminum module & trim, Powdercoat or anodized	<b>ACCESSORIES</b> Field replaceable optics & accessories

### ORDERING

**AIR TIGHT** **IC-RATED** **1A8-TITLE 24**  
Available combinations indicated by shading in the chart below.

FIXTURE	CCT/CRI <sup>1</sup>	BEAM SPREAD <sup>2</sup>	CONE COLOR	TRIM COLOR	TRIM TYPE <sup>3</sup>	DRIVER <sup>4</sup>	OUTPUT (mA)	HOUSING AVAILABILITY					HOUSING
								C	N	D	P	CP	
DL60	22H - 2200K, CRI 90+	15 - 15°	W - White	W - White	R - Round	T - Triac/ELV	200 - 6.5W	✓	✓	✓	✓	✓	C - Closed
	27H - 2700K, CRI 90+	25 - 25°	B - Black	B - Black	RF - Round Rangeless		275 - 12W	✓	✓	✓	✓	✓	N - Open
	30H - 3000K, CRI 90+	40 - 40°	S - Silver	S - Silver	RW - Round Wet		350 - 15W	✓	✓	✓	✓	✓	P - Pan
	30B - 3000K, CRI 95+	60 - 60°	C - Custom	C - Custom	RPW - Round Rangeless Wet		250 - 11W	✓	✓	✓	✓	✓	R - Remodel
	30K - 3000K, CRI 80+				S - Square		275 - 12W	✓	✓	✓	✓	✓	CP - Chicago Plenum
	30D - 3000K, CRI 90+ (Dim-to-Warm)				SF - Square Rangeless	300 - 12.5W	✓	✓	✓	✓	✓		
	30W - 3000K, CRI 90+				SW - Square Wet	250 - 15W	✓	✓	✓	✓	✓		
	30F - 3000K, CRI 90+				SFW - Square Rangeless Wet	250 - 11W	✓	✓	✓	✓	✓		
						Z - 0-10V	300 - 12.5W	✓	✓	✓	✓	✓	
							350 - 15W	✓	✓	✓	✓	✓	

- NOTES**
1. Custom options available. Please consult factory.
  2. When "wet" trim is added, the fixtures are Wet Location Rated.
  3. EM battery backup option available. Please consult factory.
  4. Check marks represent Housing/mA availability. All 1A-0 Title 24 options are IC-Rated. All other options are Non-IC-Rated. Housing availability chart is for informational purposes only. Do not include in ordering.

**ORDERING EXAMPLE:**

**LISTINGS**  
 Certified to UL standard 1598 and CSA C22.2 No. 250.0-08 for damp locations. Airtight (AT) certified less than 2 cfm leakage @ 1.57PSI per ASTM E283.

**DL60 2in Fixed Downlight Specifications p. 1/4**  
 Custom options available, please consult factory  
 Product specifications are subject to change  
[info@lumenture.com](mailto:info@lumenture.com) P: 203.964.3333

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 version 20231012



John Jay Homestead

230042.000  
**BID Submission**  
 10 JULY, 2024

Type:  
 F11

# DL60 2" FIXED DOWNLIGHTS

## PHOTOMETRICS

### LUMEN OUTPUT

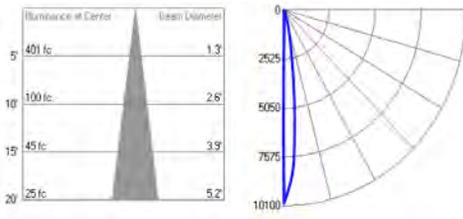
Values fluctuate based on CCT and CRI. To estimate delivered lumen output of various CCT/CRI options, multiply nominal lumens by the multiplier below.

OUTPUT (mA)	WATTAGE	NOMINAL LUMENS	CODE	CCT	CRI	TECHNOLOGY	15°	25°	40°	60°
200	8.5W	950	22H	2200K	90+	Standard	0.65	0.70	0.70	0.65
250	11W	1050	27H	2700K	90+	Standard	0.75	0.85	0.85	0.80
275	12W	1150	30H	3000K	90+	Standard	0.80	0.90	0.90	0.85
300	12.5W	1200	30B	3000K	95+	Standard	0.75	0.80	0.80	0.75
350	15W	1450	30K	3000K	80+	Standard	0.95	1.05	1.05	1.00
			30D	3000K	90+	Dim-to-Warm	N/A	0.80	0.80	0.75
			35H	3500K	90+	Standard	0.85	0.95	0.95	0.90
			40H	4000K	90+	Standard	0.85	0.95	0.95	0.90

Luminaire maintains a lumen output tolerance of +/-7.5%  
 \*\*Dim-to-Warm dims from 3000K to 1800K

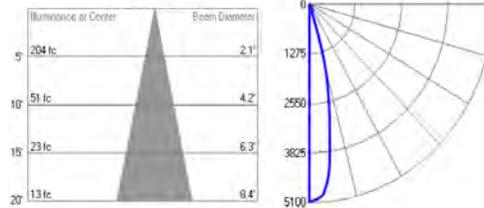
#### DL60 - 15 Degree

Delivered Light Output: 1037 Lumens  
 Total Watts @120V: 12;  
 Lumens Per Watt: 86  
 Center Beam Candle Power: 10029  
 Spacing Criteria: 0.5



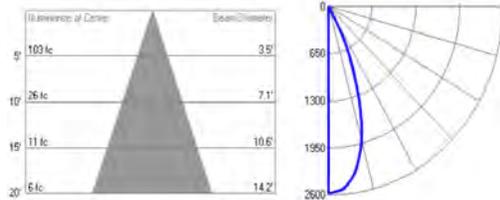
#### DL60 - 25 Degree

Delivered Light Output: 1173 Lumens  
 Total Watts @120V: 12;  
 Lumens Per Watt: 98  
 Center Beam Candle Power: 5090  
 Spacing Criteria: 0.6



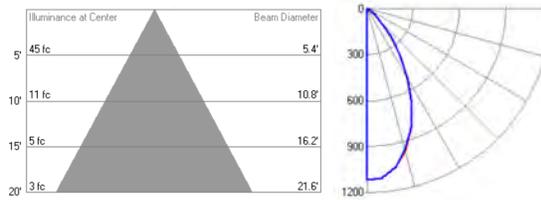
#### DL60 - 40 Degree

Delivered Light Output: 1179 Lumens  
 Total Watts @120V: 12;  
 Lumens Per Watt: 98  
 Center Beam Candle Power: 2581  
 Spacing Criteria: 0.8



#### DL60 - 60 Degree

Delivered Light Output: 1120 Lumens  
 Total Watts @120V: 12;  
 Lumens Per Watt: 93  
 Center Beam Candle Power: 1121  
 Spacing Criteria: 0.9



DL60 2in Fixed Downlight Specifications p. 2/4  
 Custom options available, please consult factory  
 Product specifications are subject to change  
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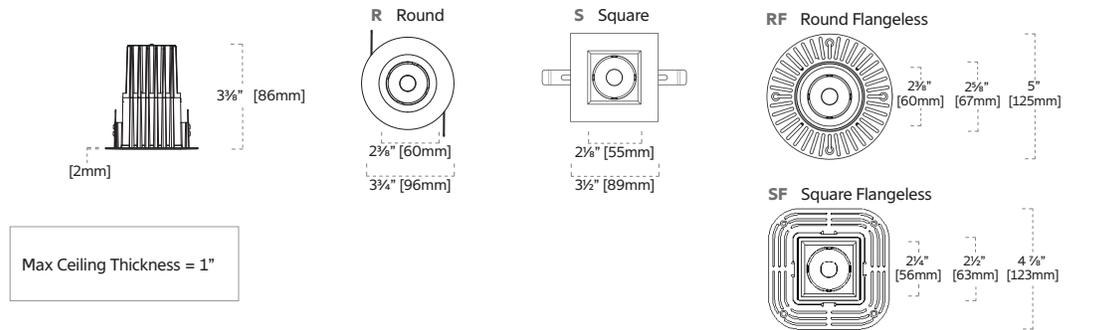
John Jay Homestead

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 10 JULY, 2024

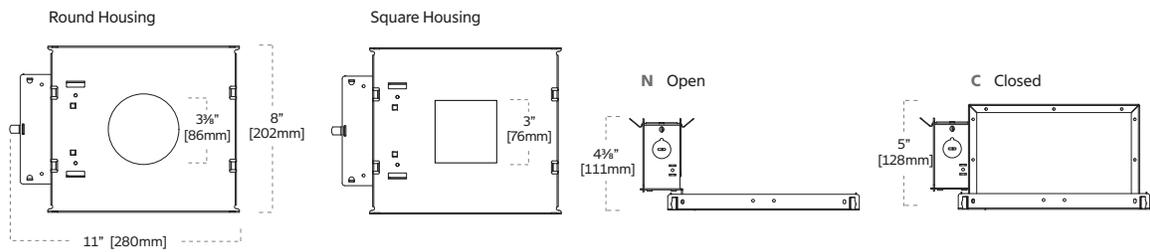
Type:  
 F11

# DL60 2" FIXED DOWNLIGHTS

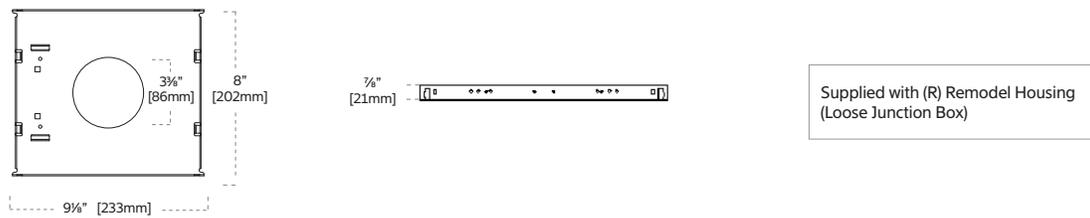
## DIMENSIONS



## OPEN AND CLOSED HOUSING DIMENSIONS



## PAN HOUSING DIMENSIONS



## REMODEL DIMENSIONS (Loose Junction Box)



DL60 2in Fixed Downlight Specifications p. 3/4  
 Custom options available, please consult factory  
 Product specifications are subject to change  
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Type:  
 F11

# DL60 2" FIXED DOWNLIGHTS

## DIMMING

Dimming is standard and allows for smooth illumination below 1% with certain dimmer/driver combinations. The "U" (Universal) driver accepts 120-277V AC Input and is compatible with 0-10V Triac (forward phase) and ELV (reverse phase) dimmers. The "T" (Triac/ELV) driver is 120V AC Input only and compatible with Triac and ELV dimmers. The "Z" (0-10V) driver accepts 120-277V AC Input and is compatible with 0-10V dimmers. For dimmer compatibility, refer to the Fixture Dimming Compatibility document on our website.

## ACCESSORIES

### DL-X

Lens Accessories

 Y (Yellow)

 G (Green)

 LB (Light Blue)

 R (Red)

 RO (Rose)

 HL (Black Honeycomb Louver)

 LS (Linear Spread)

 SOL (Solite)

Field replaceable optics accessories, and emergency backup options available. Please consult factory. For wet location, only LS (Linear Spread) and SOL (Solite) lenses can be added.

DL60 2in Fixed Downlight Specifications p. 4/4  
Custom options available, please consult factory.  
Product specifications are subject to change.  
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**BID Submission**

10 JULY, 2024

Type:

F11

Page 41 of 119

Not Used



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**BID Submission**  
10 JULY, 2024

Type:  
F12

Page 42 of 119

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10 JULY, 2024

Type:  
F12A

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10 JULY, 2024

Type:  
F13

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10 JULY, 2024

Type:  
F14

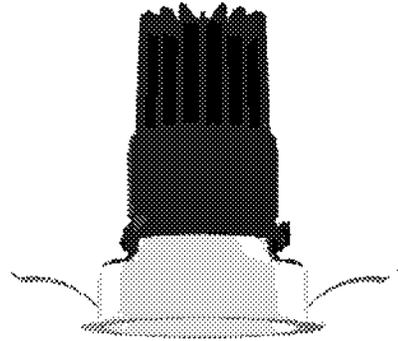
# LUMENTURE®

## DLA75 3" ADJUSTABLE DOWNLIGHTS

TYPE: \_\_\_\_\_

PROJECT: \_\_\_\_\_

With a discreet 3" aperture, knife-edge trim and excellent visual cutoff - Lumenture's DLA75 blends discreetly into any environment. These recessed modules offer 35 degrees of tilt and deliver high lumens without glare. The result is superior brightness and quality from an unobtrusive fixture. DLA75 is available both in remodel with an attached junction box or with optional rough-in housings to fit any construction needs.



<b>DIMMING</b> Trac, ELY, 0-10V, DALI & LEDcode	<b>WEIGHT</b> 11 oz. (module only)	<b>WATTAGE</b> 6.5W-17W	<b>EFFICACY</b> up to 1500lm up to 111lm/W	<b>AC DRIVER INPUT</b> 120-277V	<b>HOUSING</b> Closed, Open, Fan, Remodel, Chicago Plenum	<b>FINISH</b> Aluminum module & trim, Powdercoat	<b>ACCESSORIES</b> Risk-replaceable optics & accessories	<b>MOVEMENT</b> 35° tilt

### ORDERING

FIXTURE	CCT/CRI (1)	BEAM SPREAD (2)	CONE COLOR (3)	TRIM COLOR (4)	TRIM TYPE	DRIVER (5)	OUTPUT (lm) (6)	Housing Availability (7)	HOUSING/J-BOX
DLA75	22H - 2700K, CRI 90+	15 - 15°	W - White	W - White	R - Round	U - Universal Dimming Driver (Trac, ELY & 0-10V)	150 - 8.5W	✓	C - Closed
	27H - 2700K, CRI 90+	25 - 25°	B - Black	B - Black	RF - Round Flangeless		200 - 8.5W	✓	N - Open
	30H - 3000K, CRI 90+	40 - 40°	S - Silver	S - Silver	S - Square	D1 - EdoLED DALI/LEDcode (0.1% dimming)	250 - 11W	✓	P - Pan
	30B - 3000K, CRI 95+	60 - 60°			SF - Square Flangeless		300 - 12.5W	✓	R - Remodel
	30C - 3000K, CRI 90+					Z1 - EdoLED 0-10v (0.1% dimming)	350 - 15W	✓	CP - Chicago Plenum
	35H - 3500K, CRI 90+						400 - 17W	✓	
40H - 4000K, CRI 90+									

#### NOTES

1. Custom options available. Please consult factory.
  2. EM battery backup option available. See page (4).
  3. Housing availability chart is for informational purposes only. Do not include in ordering.
- \* Optional butterfly brackets available. See accessories on page (4).  
Butterfly brackets and factory installed brackets are required for acoustical ceiling tile (ACT) ceilings.

#### KEY

- ✓ Available, Not IC Rated
- ⊗ Available, C-Rated, Title 24 Compliant
- ⊘ Available, C-Rated
- ⊖ Not available

#### ORDERING EXAMPLE:



#### LISTINGS

Certified to UL standard 1596 and CSA C22.2 No. 250.0-08 for damp locations.



DLA75 3in Adjustable Downlight Specifications p. 14  
Custom options available, please consult factory.  
Product specifications are subject to change.  
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John Jay Homestead

230042.000  
**BID Submission**  
10 JULY, 2024

Type:  
F15

# DLA75 3" ADJUSTABLE DOWNLIGHTS

## PHOTOMETRICS

### LUMEN OUTPUT

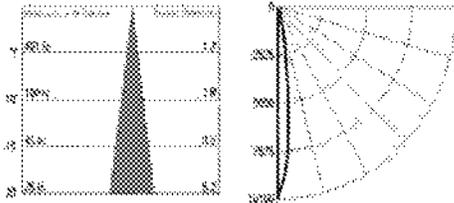
Values fluctuate based on CCT and CRI. To estimate delivered lumen output of various CCT/CRI options, multiply nominal lumens by the multiplier below.

OUTPUT (lm-ft)	WATTAGE (W)	DELIVERED LUMENS	MODEL	CCT	CRI	TECHNOLOGY	0.7'	1.1'	4.0'	6.7'
150	6.5W	700	22H	2200K	90+	Standard	0.70	0.75	0.75	0.70
200	8.5W	950	27H	2700K	90+	Standard	0.80	0.90	0.90	0.85
250	11W	1050	30H	3000K	90+	Standard	0.85	0.95	0.95	0.90
300	12.5W	1200	30B	3000K	95+	Standard	0.90	0.95	0.95	0.90
350	16W	1450	30D	3000K	90+	Dim-to-Warm	N/A	0.85	0.85	0.80
400	17W	1600	35H	3500K	90+	Standard	0.90	1.00	1.00	0.95
			40H	4000K	90+	Standard	0.90	1.00	1.00	0.95

LumenKite maintains a lumen output tolerance of  $\pm 7.5\%$   
 \*Dim-to-Warm time from 3000K to 1800K

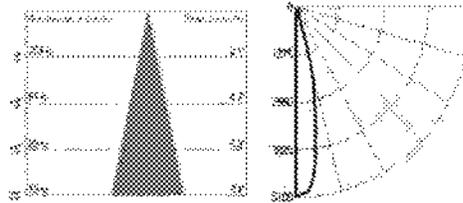
### DLA75 - 15 Degree

Delivered Light Output: 1037 Lumens  
 Total Watts @120V: 12.5  
 Lumens Per Watt: 86  
 Center Beam Candle Power: 10029  
 Spacing Criteria: 0.5



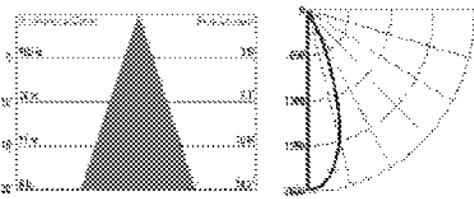
### DLA75 - 25 Degree

Delivered Light Output: 1173 Lumens  
 Total Watts @120V: 12.5  
 Lumens Per Watt: 98  
 Center Beam Candle Power: 5090  
 Spacing Criteria: 0.6



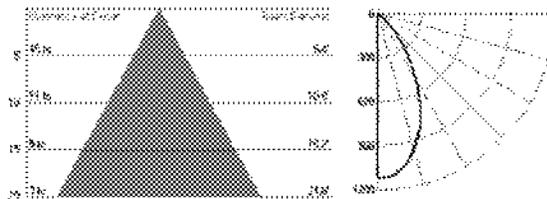
### DLA75 - 40 Degree

Delivered Light Output: 1179 Lumens  
 Total Watts @120V: 12.5  
 Lumens Per Watt: 98  
 Center Beam Candle Power: 2581  
 Spacing Criteria: 0.8



### DLA75 - 60 Degree

Delivered Light Output: 1120 Lumens  
 Total Watts @120V: 12.5  
 Lumens Per Watt: 93  
 Center Beam Candle Power: 1121  
 Spacing Criteria: 0.9



DLA75 3in Adjustable Downlight Specifications p. 2/4  
 Custom options available, please consult factory  
 Product specifications are subject to change  
 info@luminaire.com P: 203.034.3333

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John Jay Homestead

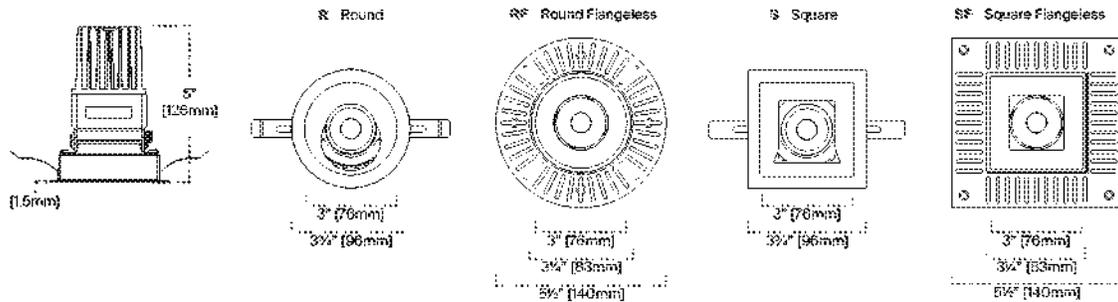
230042.000  
**BID Submission**  
 10 JULY, 2024

Type:  
**F15**

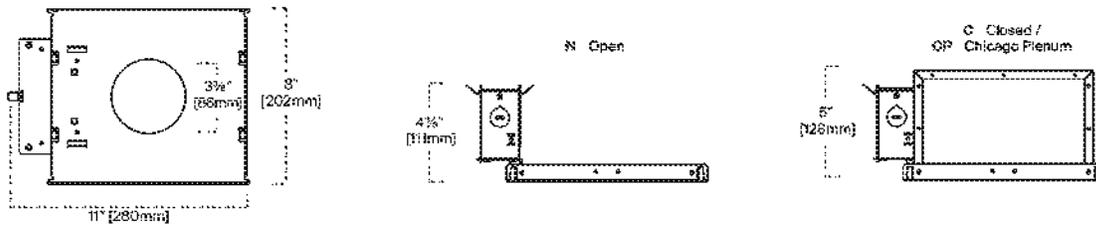
# DLA75 3" ADJUSTABLE DOWNLIGHTS

**Max Ceiling Thickness = 1"**  
Please consult factory for thicker ceiling options

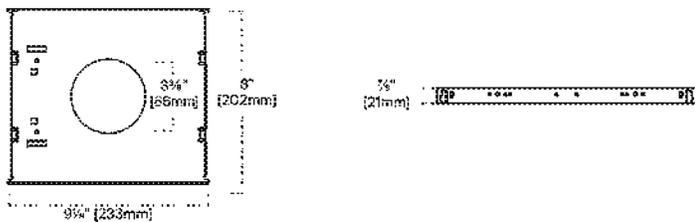
## DIMENSIONS



## OPEN (N), CLOSED (C), AND CHICAGO PLENUM (CP) HOUSING DIMENSIONS



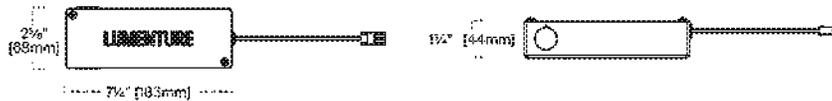
## PAN (P) HOUSING DIMENSIONS



Supplied with (2) 24" adjustable hanger bars with nails. Butterfly brackets for C-Channel available upon request.

Supplied with (R) Remodel Housing (Loose Junction Box)

## REMODEL (R) DIMENSIONS (Loose Junction Box)



DLA75 3in Adjustable Downlight Specifications p. 3/4  
Custom options available, please consult factory  
Product specifications are subject to change  
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www.203.4275



John Jay Homestead

230042.000  
**BID Submission**  
10 JULY, 2024

Type:  
F15

# DLA75 3" ADJUSTABLE DOWNLIGHTS

## DIMMING

Dimming is standard and allows for smooth illumination below 0.1% with certain dimmer/driver combinations. The "U" (Universal) driver dims to 1%, accepts 120-277V AC input and is compatible with 0-10V, Triac (forward phase) and ELV (reverse phase) dimmers. The "Z1" (0-10V) driver dims to 0.1%, accepts 120-277V AC input and is compatible with 0-10V dimmers. The "D1" (DALI) driver dims to 0.1%, accepts 120-277V AC input and is compatible with DALI dimmers. For dimmer compatibility, refer to the Dimming Compatibility document on our website.

## ACCESSORIES

### LENS ACCESSORIES

-  **Lens-Yellow-38**
-  **Lens-Green-38**
-  **Lens-Blue-38**  
(Light Blue)
-  **Lens-Red-38**
-  **Lens-Rose-38**
-  **HL-38**  
(Black Honeycomb Louver)
-  **LS-38**  
(Linear Spread)
-  **SOL-38**  
(Solite)

### NOTES

Field replaceable optics and accessories available. Please consult factory. Lens accessories can not be combined with any Wed Trim.



### BUTTERFLY BRACKET KIT

Contains two (2) butterfly brackets and two (2) wing nuts. Butterfly brackets and factory installed brackets are required for acoustical ceiling tile (ACT) ceilings.

## EMERGENCY BACKUP



<b>Output Power:</b>	6W (initial)
<b>Emergency Operation:</b>	90 minutes
<b>Battery Type:</b>	nickel-cadmium
<b>Input Voltage:</b>	120-277 VAC
<b>Output Voltage:</b>	20-60 VDC
<b>Class 2 Output:</b>	Yes
<b>Diagnostic Type:</b>	Manual
<b>Title-20 Compliant:</b>	Yes
<b>Life Expectancy:</b>	7-10 years
<b>Dimensions:</b>	13.4 x 2.4 x 1.6"
<b>Mounting Type:</b>	Remote In-line (metal conduit)
<b>Maximum Distance:</b>	25 ft
<b>Weight:</b>	2.8 lbs
<b>Cost:</b>	\$\$\$

### NOTES

Access panel is required for service of remote emergency backup battery.

DLA75 3in Adjustable Downlight Specifications p. 4/4  
 Custom options available, please consult factory.  
 Product specifications are subject to change.  
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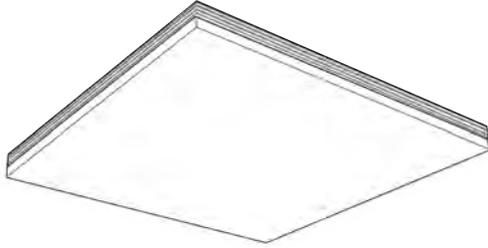
Type:  
**F15**

TYPE

PROJECT NAME

**nano**float

**NanoFloat Square**



The NanoFloat Square, available in multiple dimensions and with a minimum depth of 0.81" is an elegant, edgelit lighting solution for any space, from corporate to commercial to hospitality. In addition to size options, a broad range of kelvin temperatures and 80+ or 90+ CRI are available, and the opal PMMA diffuser ensures uniform, even lighting free of LED imaging. Multiple dimming options are available.



**CONFIGURATION** SAMPLE ORDER CODE: NFL-SQ-SU-M-S-40-9-MO-4-3x3-DA-U-S-IP-EC

CATALOG NUMBER	MOUNTING	MOUNTING OPTIONS	LED TYPE	CCT	CRI	OUTPUT/WATTAGE
NFL-SQ-	SU SURFACE	C SURFACE CLIP	S STATIC	27 2700K	8 80+	SO STANDARD 2.8 W/FT.  MO MEDIUM 4.5 W/FT.  HO HIGH 6.1 W/FT.
		M MAGNETIC		30 3000K		
	P RIGID STEM	48 SHORT 48"		35 3500K	9 90+	
		96 LONG 96"		40 4000K		
AC CABLE	48 SHORT 48"	T TUNABLE WHITE	27-40 2700-4000K <small>others available</small>	Leave blank if color-changing		
	96 LONG 96"		50 5000K			
R RECESSED	DRYWALL	TM TRIMLESS MUD-IN	C3 RGB	40 RGBW, 4000K WHITE		
		T-GRID	C4 RGBW			
		TC T-GRID CLIP				

ILLUMINATED SIDES	SIZE (in.)	DIMMING	VOLTAGE	PROFILE SIZE	OPTIONS
2 2 SIDES	LENGTH	10 0-10V <small>for Static only</small>	U 120V-277V	S SLIM FRAME	EC EMERGENCY CIRCUIT
4 4 SIDES		DX DMX			
x	WIDTH	DA DALI	2 347V	P PLUS FRAME	EI REMOTE EMERGENCY INVERTER
		10X DUAL 0-10V <small>for Tunable only. Apply 0.5 light loss factor for tuning algorithm.</small>	3 220V, 50HZ	IP IP67	CS CUSTOM SHIELD <small>See diagram (page 7) for details.</small>
		WD WARM-DIM <small>for Tunable only</small>			AEB or AEW ARCHITECTURAL ENCLOSURE <small>Available with surface magnetic, rigid stem, or aircraft table mounting. Available in black (AEB) or white (AEW) finish. Contact factory for more finish options.</small>
		EV PHASE <small>for Static only</small>			AEB-DL or AEW-DL ARCHITECTURAL ENCLOSURE WITH DROPPED LENS <small>Available with surface magnetic, rigid stem, or aircraft table mounting. Available in black (AEB) or white (AEW) finish. Contact factory for more finish options.</small>
		POE PoE			
		LAT LUTRON ATHENA <small>Static and Tunable only</small>			
		0 OTHER <small>Contact manufacturer for more options</small>			

**nanometer**

lighting 57-10 49th place, maspeth, ny, 11378 | 718.497.0394 | nanoltg.com 10/23/2023



John Jay Homestead

230042.000  
**BID Submission**  
10 JULY, 2024

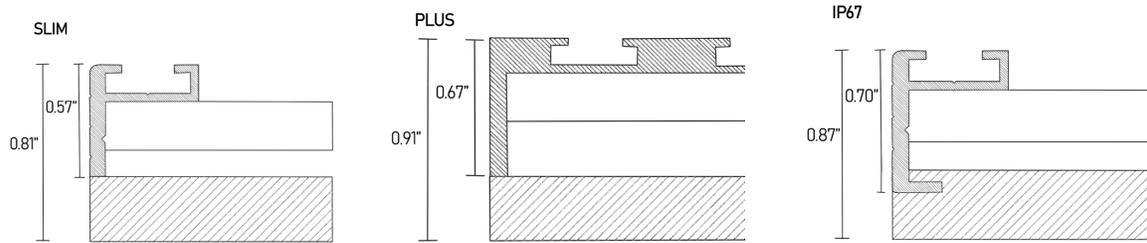
Type:

F16

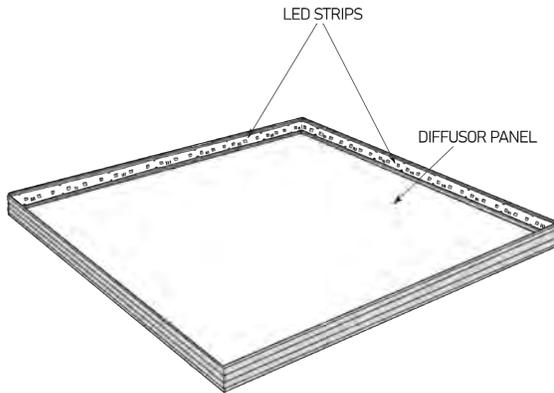
### TECHNICAL SPECS

Weight	5 lbs / sq ft
Luminous Output	80-1400 LM/sq ft
Input Voltage	120 to 277VAC
Min/Max Operating Temperature	-10°F to 110°F

### PROFILE DEPTH



### INTERIOR VIEW



### DELIVERED LUMENS BY SIZE

#### STANDARD OUTPUT (2.8 W)

Length	12								24							
	2 Sides				All Sides				2 Sides				All Sides			
	W/Fixture	LM/Fixture	W/SF	LM/SF												
12	5.6	323	5.6	323	11.2	646	11	646	5.6	323	3	162	16.8	968	8	484
24	11.2	646	5.6	323	16.8	968	8	484	11.2	646	3	162	22.4	1291	6	323
36	16.8	968	5.6	323	22.4	1291	7	431	16.8	968	3	162	28	1613	5	269
48	28	1613	12	1482	28	1613	7	404	22.4	1291	3	162	33.6	1936	4	242
60	33.6	1936	5.6	323	33.6	1936	7	388	28	1613	3	162	39.2	2258	4	226
72	39.2	2258	5.6	323	39.2	2258	7	377	33.6	1936	3	162	44.8	2581	4	216
84	44.8	2581	5.6	323	44.8	2581	6	369	39.2	2258	3	162	50.4	2904	4	208
96	50.4	2904	5.6	323	50.4	2904	6	363	44.8	2581	3	162	56	3226	4	202
108	56	3226	5.6	323	56	3226	6	359	50.4	2904	3	162	61.6	3549	3	198
120	61.6	3549	5.6	323	61.6	3549	6	355								

Length	36								48							
	2 Sides				All Sides				2 Sides				All Sides			
	W/Fixture	LM/Fixture	W/SF	LM/SF												
12	5.6	323	2	108	22.4	1291	7	431	5.6	323	1	81	25.01333	1441	6	361
24	11.2	646	2	108	28	1613	5	269	11.2	646	1	81	27.62667	1592	3	199
36	16.8	968	2	108	33.6	1936	4	216	16.8	968	1	81	30.24	1742	3	166
48	22.4	1291	2	108	39.2	2258	3	189	22.4	1291	1	81	44.8	2581	3	162
60	28	1613	2	108	44.8	2581	3	173	28	1613	1	81	35.46667	2043	2	103
72	33.6	1936	2	108	50.4	2904	3	162	33.6	1936	1	81	38.08	2194	2	92
84	39.2	2258	2	108	56	3226	3	156	39.2	2258	1	81	40.69333	2344	1	180
96	44.8	2581	2	108	61.6	3549	3	148								

#### MEDIUM OUTPUT (4.5 W)

Length	12								24							
	2 Sides				All Sides				2 Sides				All Sides			
	W/Fixture	LM/Fixture	W/SF	LM/SF												
12	9	519	9	519	18	1037	18	1037	9	519	5	260	27	1556	14	778
24	18	1037	9	519	27	1556	14	778	18	1037	5	260	36	2074	9	519
36	27	1556	9	519	36	2074	12	692	27	1556	5	260	45	2592	8	432
48	48	2765	12	922	45	2592	11	648	36	2074	5	260	54	3111	7	389
60	45	2592	9	519	54	3111	11	623	45	2592	5	260	63	3629	6	363
72	54	3111	9	519	63	3629	11	605	54	3111	5	260	72	4148	6	346
84	63	3629	9	519	72	4148	10	593	63	3629	5	260	81	4666	6	334
96	72	4148	9	519	81	4666	10	584	72	4148	5	260	90	5184	6	324
108	81	4666	9	519	90	5184	10	576	81	4666	5	260	99	5703	6	317
120	90	5184	9	519	99	5703	10	571								

Length	36								48							
	2 Sides				All Sides				2 Sides				All Sides			
	W/Fixture	LM/Fixture	W/SF	LM/SF												
12	9	519	3	173	36	2074	12	692	9	519	2	130	42.75	2463	11	616
24	18	1037	3	173	45	2592	8	432	18	1037	2	130	49.5	2852	6	357
36	27	1556	3	173	54	3111	6	346	27	1556	2	130	56.25	3240	5	270
48	36	2074	3	173	63	3629	5	303	36	2074	2	130	72	4148	5	260
60	45	2592	3	173	72	4148	5	277	45	2592	2	130	69.75	4018	3	201
72	54	3111	3	173	81	4666	5	260	54	3111	2	130	76.5	4407	3	184
84	63	3629	3	173	90	5184	4	247	63	3629	2	130	83.25	4796	3	229
96	72	4148	3	173	99	5703	4	238								



### DELIVERED LUMENS BY SIZE

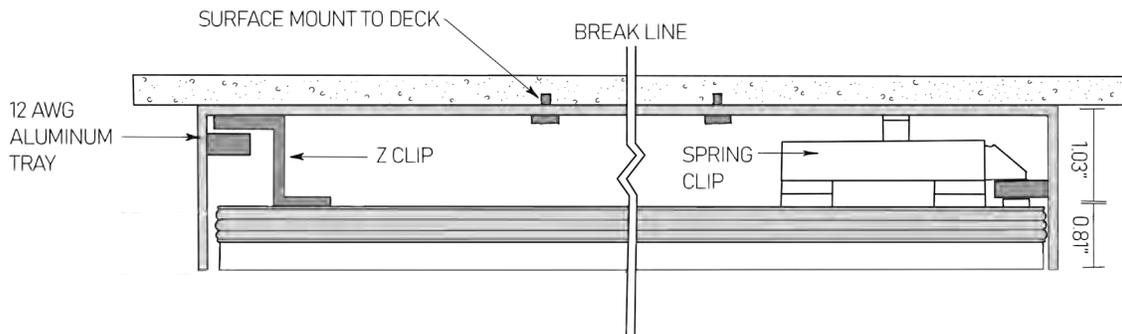
HIGH OUTPUT (6.1 W)

Length	Width															
	12				24				36				48			
	2 Sides		All Sides		2 Sides		All Sides		2 Sides		All Sides		2 Sides		All Sides	
	W/Fixture	LM/Fixture	W/SF	LM/SF												
6.1	12.2	703	12.2	703	24.4	1406	24.4	1406	36.6	2109	36.6	2109	48.8	2811	48.8	2811
12	12.2	703	12.2	703	24.4	1406	24.4	1406	36.6	2109	36.6	2109	48.8	2811	48.8	2811
24	24.4	1406	12.2	703	36.6	2109	18	1055	24.4	1406	6	352	48.8	2811	12	703
36	36.6	2109	12.2	703	48.8	2811	16	937	36.6	2109	6	352	61	3514	10	586
48	48	2765	12	680	61	3514	15	879	48.8	2811	6	352	73.2	4217	9	528
60	61	3514	12.2	703	73.2	4217	15	844	61	3514	6	352	85.4	4920	9	492
72	73.2	4217	12.2	703	85.4	4920	14	820	73.2	4217	6	352	97.6	5622	8	469
84	85.4	4920	12.2	703	97.6	5622	14	804	85.4	4920	6	352	109.8	6325	8	452
96	97.6	5622	12.2	703	109.8	6325	14	791	97.6	5622	6	352	122	7028	8	440
108	109.8	6325	12.2	703	122	7028	14	781	109.8	6325	6	352	134.2	7730	7	430
120	122	7028	12.2	703	134.2	7730	13	773								

### MOUNTING OPTIONS

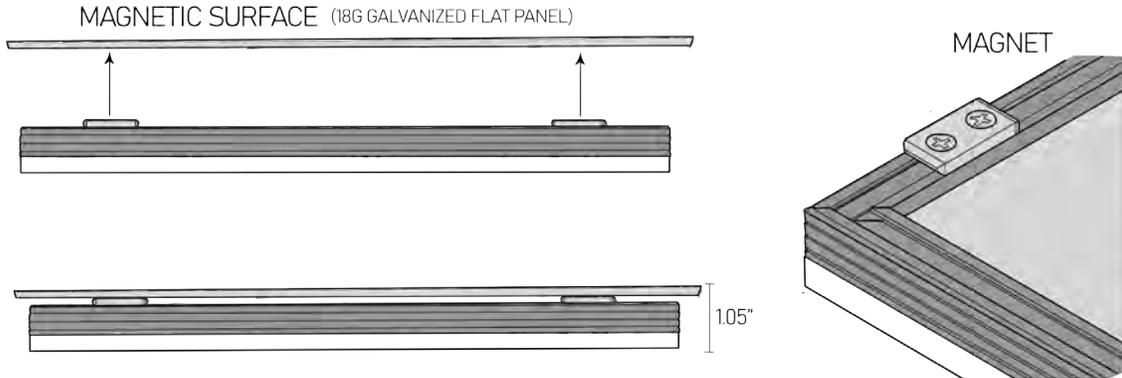
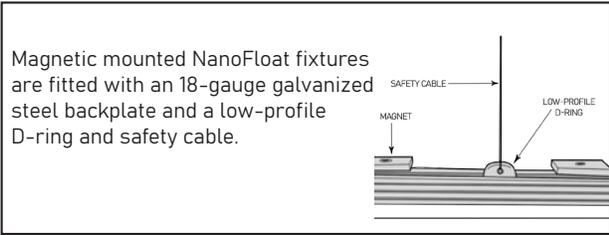
SURFACE

SURFACE CLIP

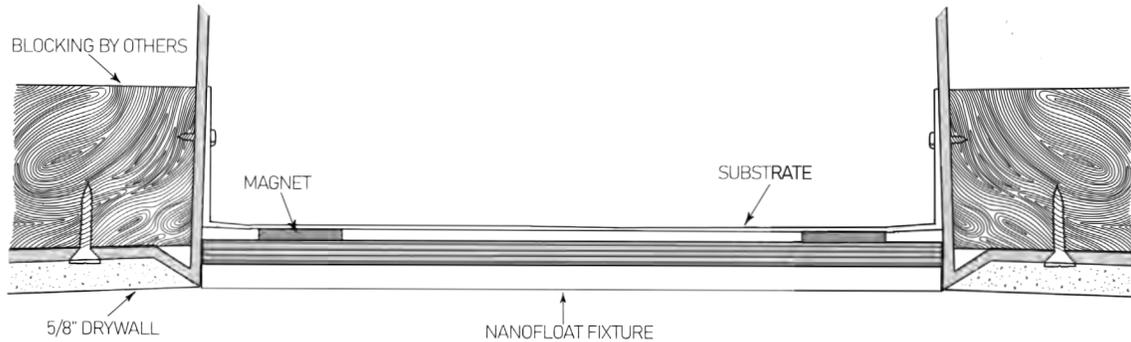


### MOUNTING OPTIONS, CONT'D

#### MAGNETIC

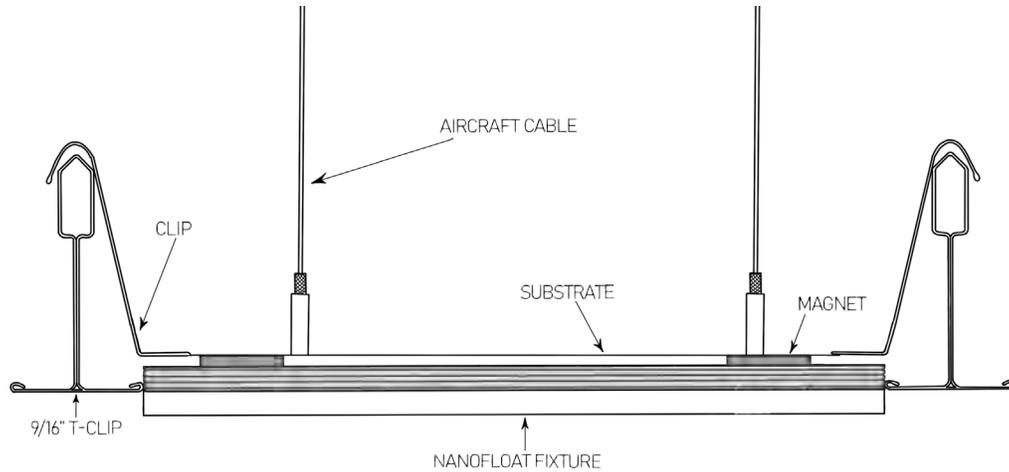


#### RECESSED TRIMLESS MUD-IN

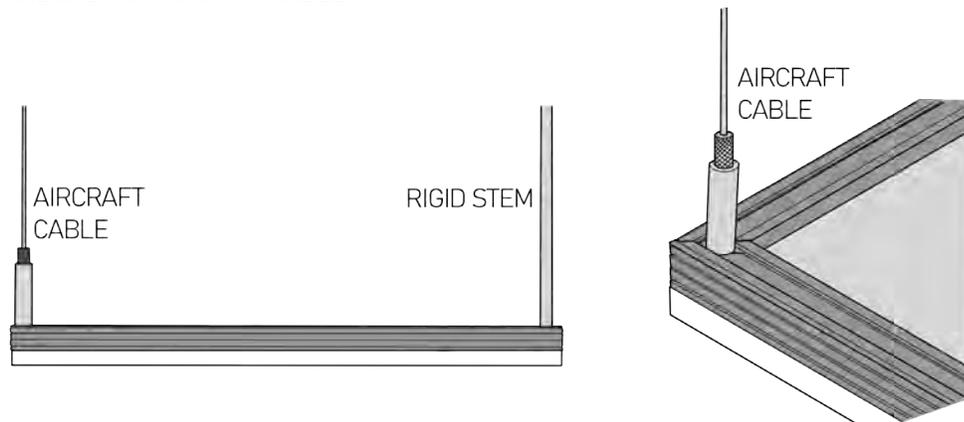


### MOUNTING OPTIONS, CONT'D

#### 9/16" T-GRID CLIP



#### PENDANT (RIGID STEM OR AIRCRAFT CABLE)

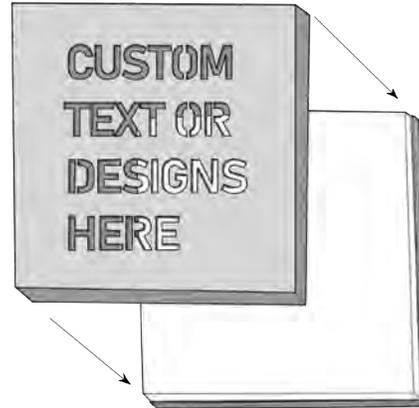


### OPTIONAL ADDITIONS

#### CUSTOM SHIELD

The Custom Shield is a bespoke metal shield crafted for the NanoFloat, and includes the option for custom etched text or graphics, making it perfect for unique, backlit signage. It fits snugly and securely over the fixture, and can be removed for easy maintenance.

Please attach image details and specifications.



#### ARCHITECTURAL ENCLOSURE

The Architectural Enclosure, shown here with a pendant mount sample, provides a seamless exterior for the NanoFloat fixture. It is available with Rigid Stem, Adjustable Aircraft, or Surface Magnetic mounting options. The Dropped Lens Architectural Enclosure does not obstruct the side of the PMMA.



PENDANT/AAC MOUNTING



MAGNETIC MOUNTING

#### ARCHITECTURAL ENCLOSURE WITH DROPPED LENS



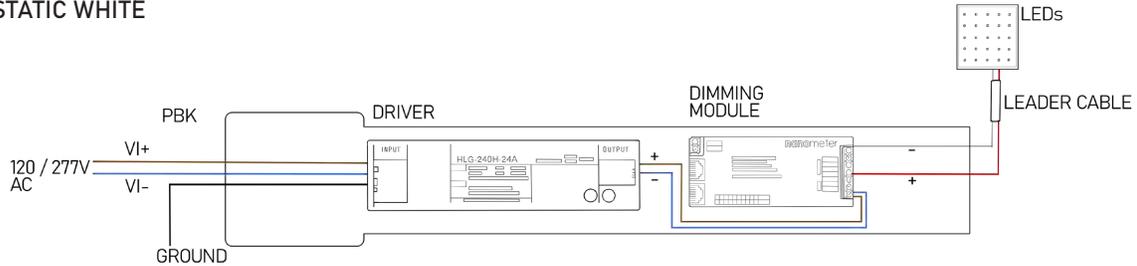
PENDANT/AAC MOUNTING



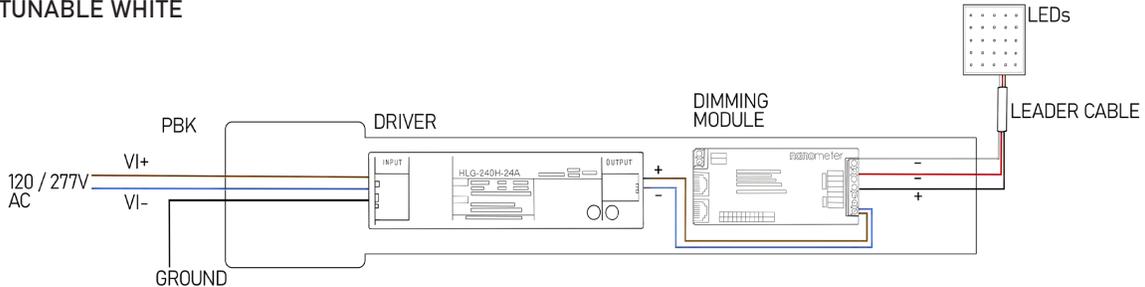
MAGNETIC MOUNTING

### WIRING DIAGRAMS

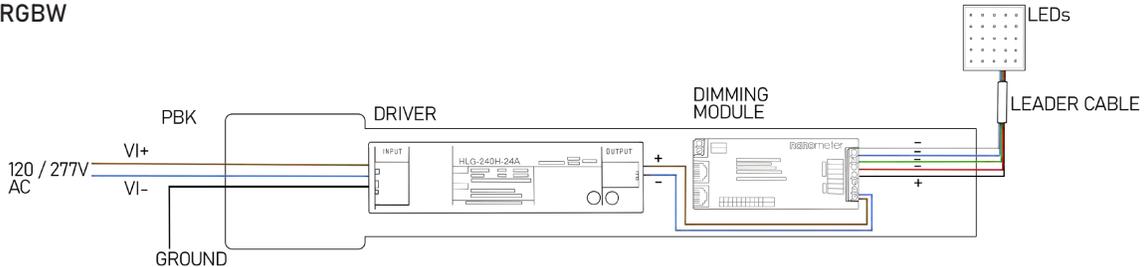
#### STATIC WHITE



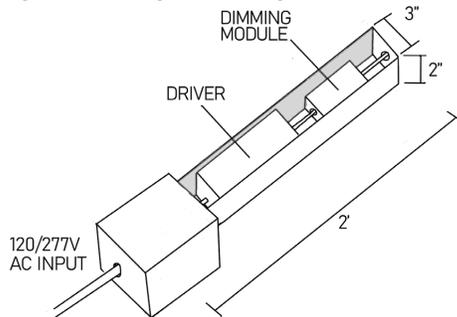
#### TUNABLE WHITE



#### RGBW



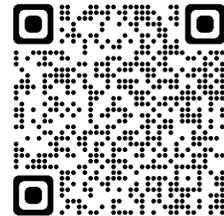
### POWERBOX DIAGRAM



Wire Size (AWG)	Distance (ft.)
18	25
14	50
10	100

Data based on a Class 2 load.

Provided standard 10' 18 AWG leader.  
Driver can be remoted at various maximum distance.  
Distance will vary with load; please verify before release.



Learn more about the NanoFloat product family at [nanoltg.com](http://nanoltg.com).

**nanometer**  
lighting

57-10 49th place, maspeth, ny, 11378 | 718.497.0394 | [nanoltg.com](http://nanoltg.com) 10/23/2023

**HLB**

John Jay Homestead

230042.000  
**BID Submission**  
10 JULY, 2024

Type:

F16



Features

- Constant Voltage + Constant Current mode output
• Metal housing with class I design
• Built-in active PFC function
• Class 2 power unit
• IP67 / IP65 rating for indoor or outdoor installations
• Function options: output adjustable via potentiometer; 3 in 1 dimming; Timer dimming
• Typical lifetime > 62000 hours
• 7 years warranty

Applications

- LED street lighting
• LED high-bay lighting
• Parking space lighting
• LED fishing lamp
• LED greenhouse lighting
• Type "HL" for use in Class I, Division 2 hazardous (Classified) location.

Description

HLG-60H series is a 60W AC/DC LED driver featuring the dual mode constant voltage and constant current output. HLG-60H operates from 90 ~305VAC and offers models with different rated voltage ranging between 15V and 54V. Thanks to the high efficiency up to 90.5%, with the fanless design, the entire series is able to operate for -40 °C ~ +80 °C case temperature under free air convection. The design of metal housing and IP67/IP65 ingress protection level allows this series to fit both indoor and outdoor applications. HLG-60H is equipped with various function options, such as dimming methodologies, so as to provide the optimal design flexibility for LED lighting system.

Model Encoding

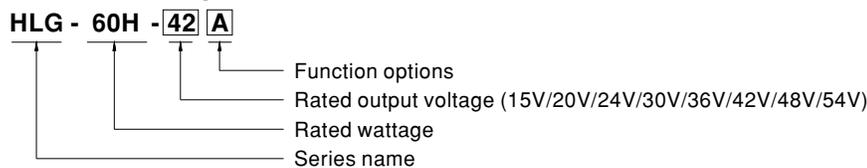


Table with 4 columns: Type, IP Level, Function, Note. Rows include Blank, A, B, AB, D with their respective specifications and stock status.

File Name:HLG-60H-SPEC 2018-05-29



John Jay Homestead

230042.000
BID Submission
10 JULY, 2024

Type:
F16



SPECIFICATION

MODEL	HLG-60H-15	HLG-60H-20	HLG-60H-24	HLG-60H-30	HLG-60H-36	HLG-60H-42	HLG-60H-48	HLG-60H-54	
OUTPUT	DC VOLTAGE	15V	20V	24V	30V	36V	42V	48V	54V
	CONSTANT CURRENT REGION <small>Note.4</small>	9 - 15V	12 - 20V	14.4 - 24V	18 - 30V	21.6 - 36V	25.2 - 42V	28.8 - 48V	32.4 - 54V
	RATED CURRENT	4A	3A	2.5A	2A	1.7A	1.45A	1.3A	1.15A
	RATED POWER	60W	60W	60W	60W	61.2W	60.9W	62.4W	62.1W
	RIPPLE & NOISE (max.) <small>Note.2</small>	150mVp-p	150mVp-p	150mVp-p	200mVp-p	200mVp-p	300mVp-p	300mVp-p	300mVp-p
	VOLTAGE ADJ. RANGE	Adjustable for A/AB-Type only (via built-in potentiometer)							
		13.5 - 17V	17 - 22V	22 - 27V	27 - 33V	33 - 40V	40 - 46V	44 - 53V	49 - 58V
	CURRENT ADJ. RANGE	Adjustable for A/AB-Type only (via built-in potentiometer)							
		2.4 - 4A	1.8 - 3A	1.5 - 2.5A	1.2 - 2A	1 - 1.7A	0.87 - 1.45A	0.78 - 1.3A	0.69 - 1.15A
	VOLTAGE TOLERANCE <small>Note.3</small>	± 2.0%	± 1.0%	± 1.0%	± 1.0%	± 1.0%	± 1.0%	± 1.0%	± 1.0%
LINE REGULATION	± 0.5%	± 0.5%	± 0.5%	± 0.5%	± 0.5%	± 0.5%	± 0.5%	± 0.5%	
LOAD REGULATION	± 1.5%	± 1.0%	± 0.5%	± 0.5%	± 0.5%	± 0.5%	± 0.5%	± 0.5%	
SETUP, RISE TIME <small>Note.6</small>	500ms,80ms/115VAC 500ms,80ms/230VAC								
HOLD UP TIME (Typ.)	16ms / 115VAC, 230VAC								
INPUT	VOLTAGE RANGE <small>Note.5</small>	90 - 305VAC 127 - 431VDC (Please refer to "STATIC CHARACTERISTIC" section)							
	FREQUENCY RANGE	47 - 63Hz							
	POWER FACTOR (Typ.)	PF ≥ 0.98/115VAC, PF ≥ 0.95/230VAC, PF ≥ 0.92/277VAC @ full load (Please refer to "POWER FACTOR (PF) CHARACTERISTIC" section)							
	TOTAL HARMONIC DISTORTION	THD < 20% (@ load ≥ 60% / 115VAC, 230VAC; @ load ≥ 75% / 277VAC) (Please refer to "TOTAL HARMONIC DISTORTION (THD)" section)							
	EFFICIENCY (Typ.)	87.5%	89%	89.5%	90%	90%	90%	90.5%	90.5%
	AC CURRENT (Typ.)	0.64A / 115VAC	0.32A / 230VAC	0.3A / 277VAC					
	INRUSH CURRENT (Typ.)	COLD START 55A (width=265µs measured at 50% Ipeak) at 230VAC; Per NEMA 410							
	MAX. No. of PSUs on 16A CIRCUIT BREAKER	9 units (circuit breaker of type B) / 16 units (circuit breaker of type C) at 230VAC							
LEAKAGE CURRENT	< 0.75mA / 277VAC								
PROTECTION	OVER CURRENT <small>Note.4</small>	95 - 108% Constant current limiting, recovers automatically after fault condition is removed							
	SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed							
	OVER VOLTAGE	18 - 24V	23 - 30V	28 - 35V	35 - 43V	41 - 49V	48 - 58V	54 - 65V	59 - 68V
	OVER TEMPERATURE	Shut down o/p voltage, re-power on to recover							
	ENVIRONMENT	WORKING TEMP.	Tcase = -40 - +80°C (Please refer to "OUTPUT LOAD vs TEMPERATURE" section)						
	MAX. CASE TEMP.	Tcase = +80°C							
	WORKING HUMIDITY	20 - 95% RH non-condensing							
	STORAGE TEMP., HUMIDITY	-40 - +80°C, 10 - 95% RH							
	TEMP. COEFFICIENT	± 0.03%/°C (0 - 60°C)							
	VIBRATION	10 - 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes							
SAFETY & EMC	SAFETY STANDARDS <small>Note.8</small>	UL8750(type"HL"), CSA C22.2 No. 250.0-08, EN/AS/NZS 61347-1, EN/AS/NZS 61347-2-13 independent, GB19510.1, GB19510.14, EAC TP TC 004, IP65 or IP67 approved ,optional models for J61347-1, J61347-2-13 ; design refer to UL60950-1, TUV EN60950-1, EN60335-1							
	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC	I/P-FG:2KVAC	O/P-FG:1.5KVAC					
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C / 70% RH							
	EMC EMISSION <small>Note.8</small>	Compliance to EN55015, EN61000-3-2 Class C (@ load ≥ 60%); EN61000-3-3, GB17743 and GB17625.1, EAC TP TC 020							
EMC IMMUNITY	Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11; EN61547, light industry level (surge immunity Line-Earth 4KV, Line-Line 2KV), EAC TP TC 020								
OTHERS	MTBF	1132K hrs min. Telcordia SR-332 (Bellcore); 338K hrs min. MIL-HDBK-217F (25°C)							
	DIMENSION	171*61.5*36.8mm (L*W*H)							
	PACKING	0.73Kg; 20pcs/15.6Kg/0.9CUFT							
NOTE	<ol style="list-style-type: none"> <li>All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25°C of ambient temperature.</li> <li>Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1µf &amp; 47µf parallel capacitor.</li> <li>Tolerance : includes set up tolerance, line regulation and load regulation.</li> <li>Please refer to "DRIVING METHODS OF LED MODULE".</li> <li>De-rating may be needed under low input voltages. Please refer to "STATIC CHARACTERISTIC" sections for details.</li> <li>Length of set up time is measured at first cold start. Turning ON/OFF the driver may lead to increase of the set up time.</li> <li>The driver is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.</li> <li>To fulfill requirements of the latest ErP regulation for lighting fixtures, this LED driver can only be used behind a switch without permanently connected to the mains.</li> <li>This series meets the typical life expectancy of &gt;62,000 hours of operation when Tcase, particularly (C) point (or TMP, per DLC), is about 70°C or less.</li> <li>Please refer to the warranty statement on MEAN WELL's website at <a href="http://www.meanwell.com">http://www.meanwell.com</a>.</li> <li>The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).</li> </ol>								

File Name:HLG-60H-SPEC 2018-05-29

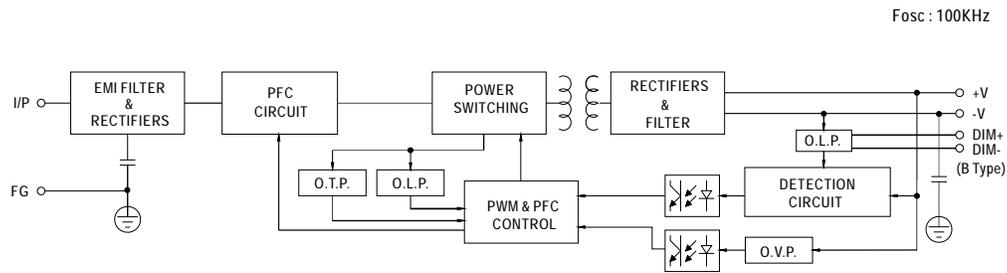


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230042.000  
**BID Submission**  
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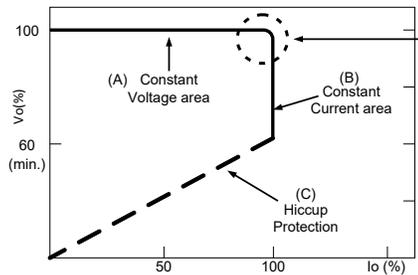
Type:  
**F16**

■ BLOCK DIAGRAM



■ DRIVING METHODS OF LED MODULE

※ This series is able to work in either Constant Current mode (a direct drive way) or Constant Voltage mode (usually through additional DC/DC driver) to drive the LEDs.



Typical output current normalized by rated current (%)

In the constant current region, the highest voltage at the output of the driver depends on the configuration of the end systems.

Should there be any compatibility issues, please contact MEAN WELL.

File Name: HLG-60H-SPEC 2018-05-29

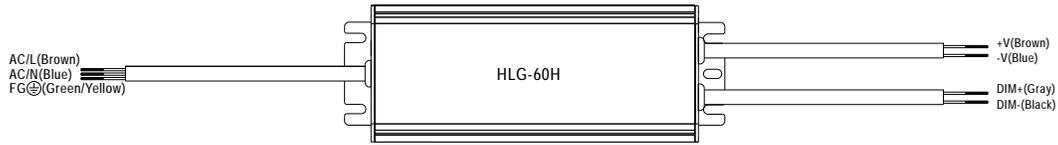


John Jay Homestead

230042.000  
**BID Submission**  
 10 JULY, 2024

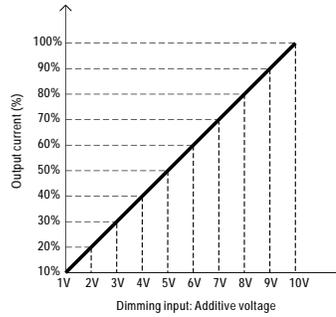
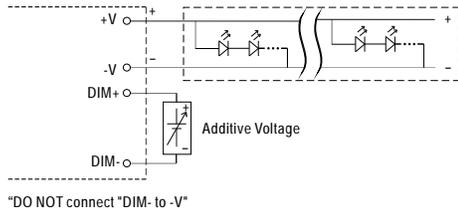
Type:  
 F16

■ DIMMING OPERATION

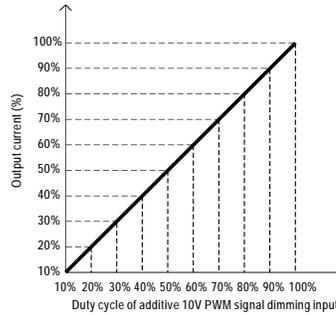
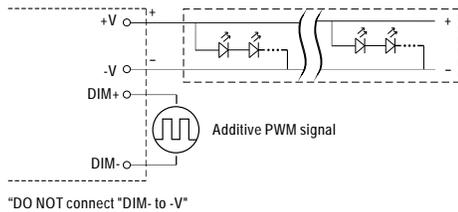


- ※ 3 in 1 dimming function (for B/AB-Type)
- Output constant current level can be adjusted by applying one of the three methodologies between DIM+ and DIM-:
  - 1 - 10VDC, or 10V PWM signal or resistance.
- Direct connecting to LEDs is suggested. It is not suitable to be used with additional drivers.
- Dimming source current from power supply: 100 $\mu$ A (typ.)

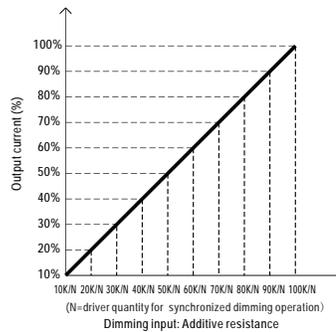
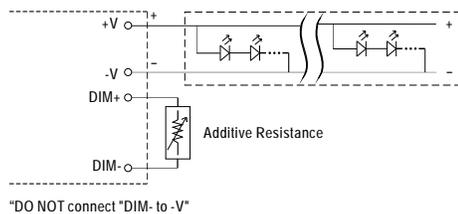
◎ Applying additive 1 - 10VDC



◎ Applying additive 10V PWM signal (frequency range 100Hz - 3KHz):



◎ Applying additive resistance:



File Name:HLG-60H-SPEC 2018-05-29

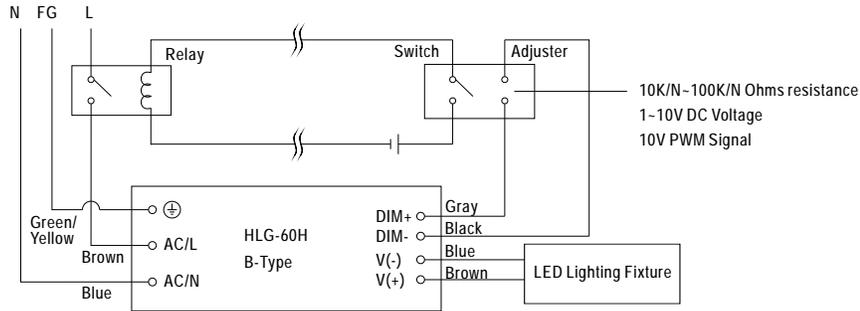


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Type:  
**F16**

Note: In the case of turning the lighting fixture down to 0% brightness, please refer to the configuration as follow, or please contact MEAN WELL for other options.



Using a switch and relay can turn ON/OFF the lighting fixture.

File Name:HLG-60H-SPEC 2018-05-29

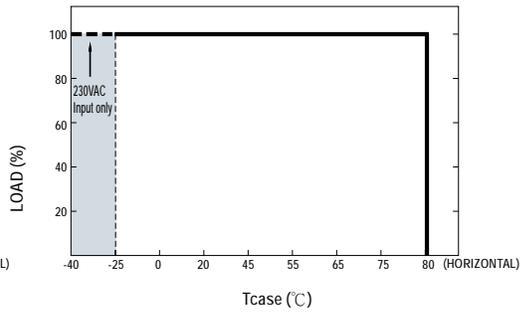
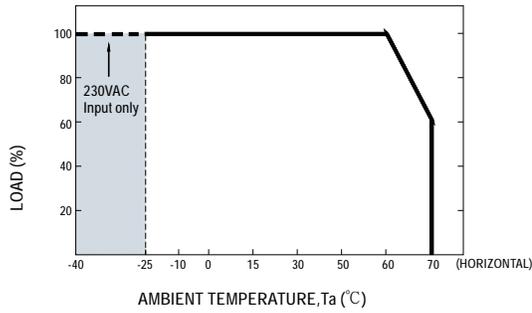


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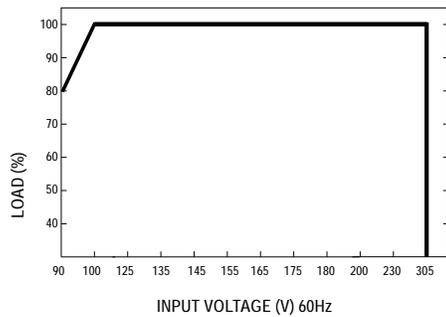
230042.000  
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 10 JULY, 2024

Type:  
 F16

■ OUTPUT LOAD vs TEMPERATURE(Note.10)



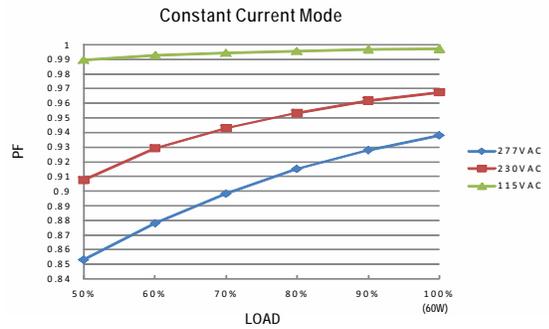
■ STATIC CHARACTERISTICS



※ De-rating is needed under low input voltage.

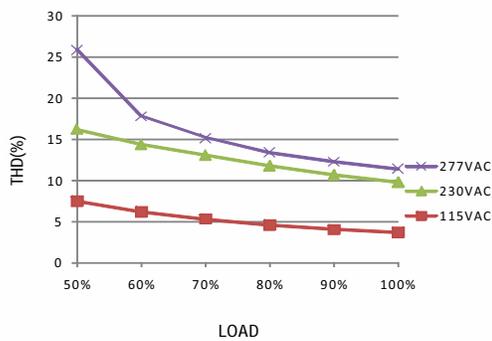
■ POWER FACTOR(PF) CHARACTERISTIC

※ Tcase at 70°C



■ TOTAL HARMONIC DISTORTION (THD)

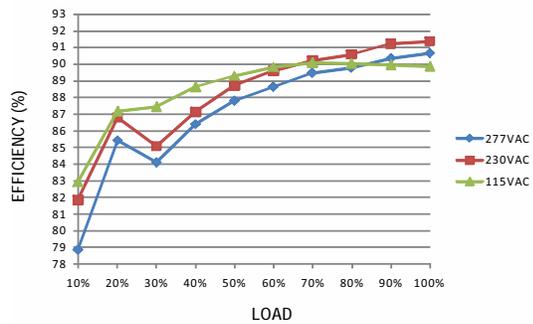
※ 48V Model, Tcase at 70°C



■ EFFICIENCY vs LOAD

HLG-60H series possess superior working efficiency that up to 90.5% can be reached in field applications.

※ 48V Model, Tcase at 70°C



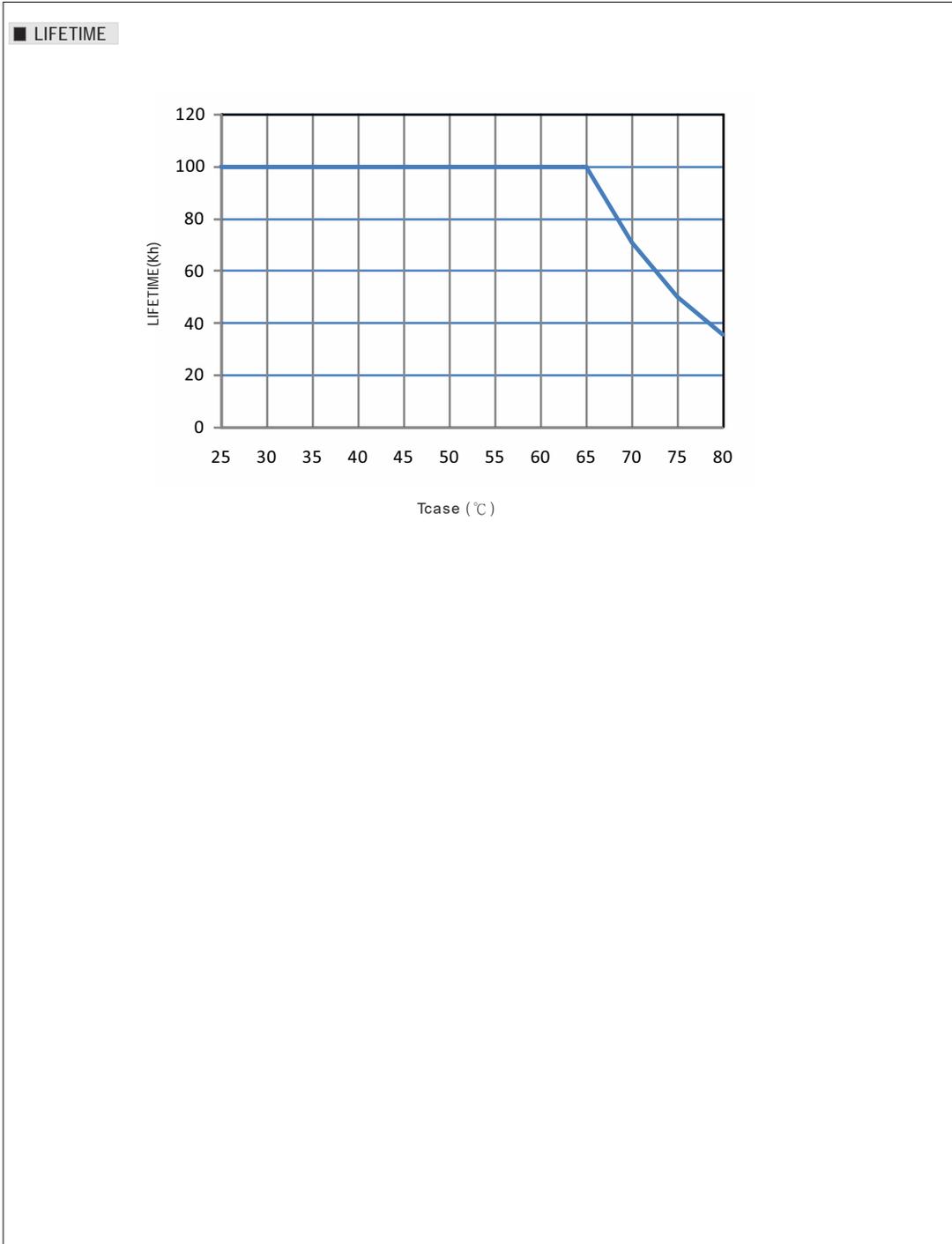
File Name:HLG-60H-SPEC 2018-05-29



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File Name:HLG-60H-SPEC 2018-05-29



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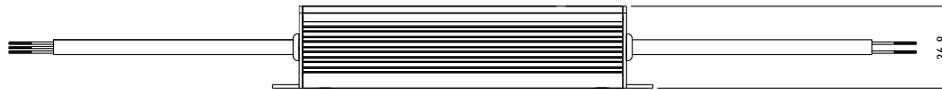
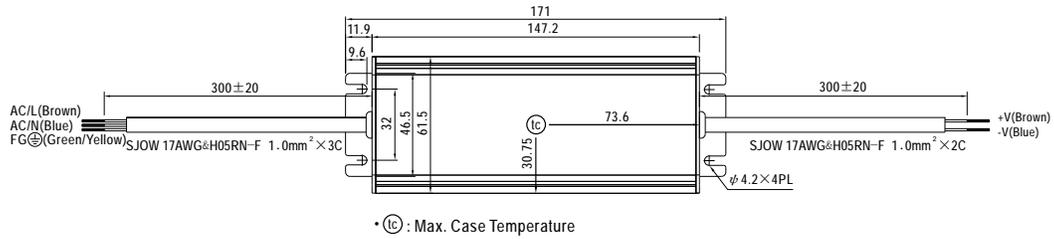
230042.000  
**BID Submission**  
10 JULY, 2024

Type:  
F16

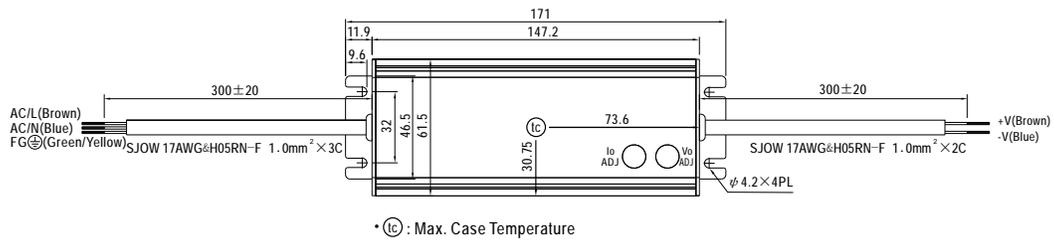
MECHANICAL SPECIFICATION

Case No.957B Unit:mm

※Blank/D-Type



※A-Type



File Name:HLG-60H-SPEC 2018-05-29

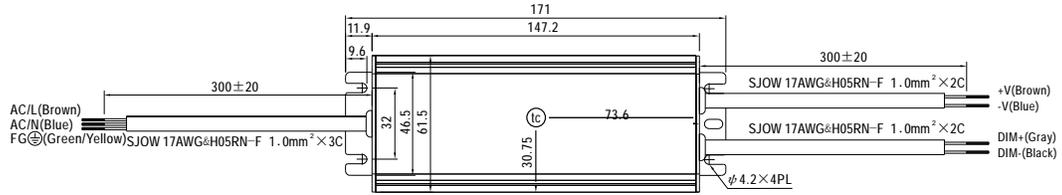


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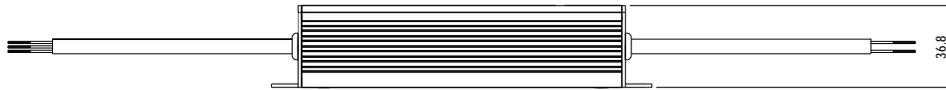
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**BID Submission**  
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Type:  
 F16

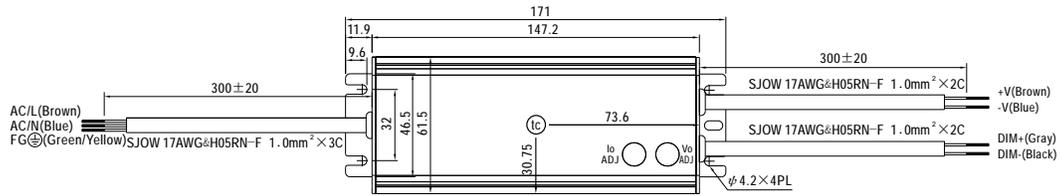
※B-Type



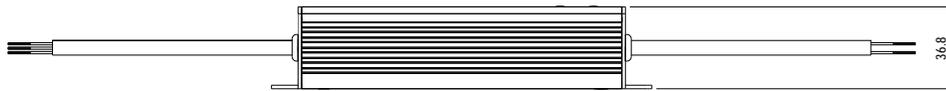
• (IC) : Max. Case Temperature



※AB-Type



• (IC) : Max. Case Temperature



File Name:HLG-60H-SPEC 2018-05-29



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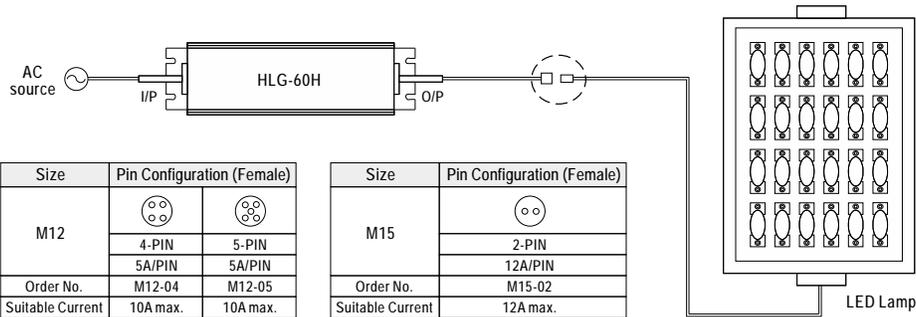
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**BID Submission**  
 10 JULY, 2024

Type:  
 F16

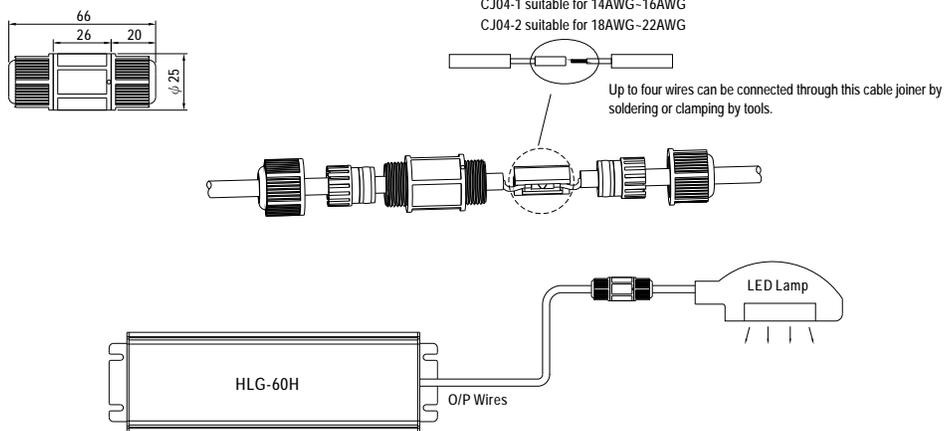
**■ WATERPROOF CONNECTION**

※ Waterproof connector

Waterproof connector can be assembled on the output cable of HLG-60H to operate in dry/wet/damp or outdoor environment.



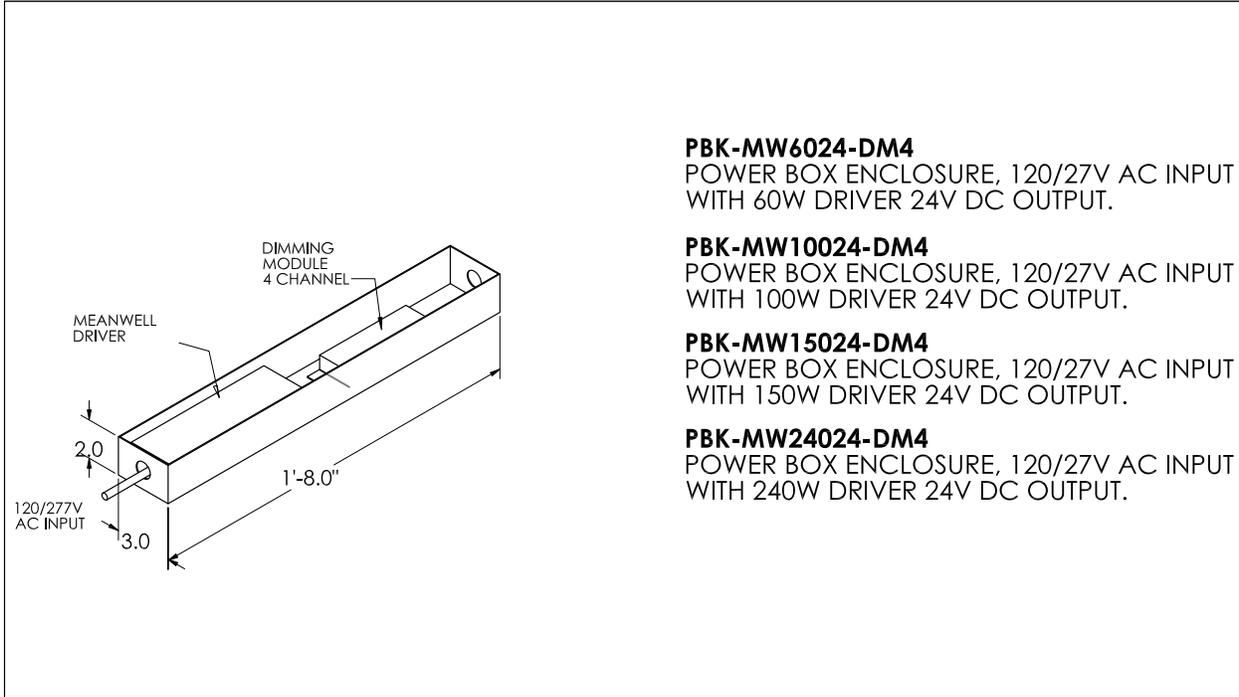
※ Cable Joiner



© CJ04 cable joiner can be purchased independently for user's own assembly.  
MEAN WELL order No. : CJ04-1, CJ04-2.

**■ INSTALLATION MANUAL**

Please refer to : <http://www.meanwell.com/manual.html>



**PBK-MW6024-DM4**  
POWER BOX ENCLOSURE, 120/277V AC INPUT WITH 60W DRIVER 24V DC OUTPUT.

**PBK-MW10024-DM4**  
POWER BOX ENCLOSURE, 120/277V AC INPUT WITH 100W DRIVER 24V DC OUTPUT.

**PBK-MW15024-DM4**  
POWER BOX ENCLOSURE, 120/277V AC INPUT WITH 150W DRIVER 24V DC OUTPUT.

**PBK-MW24024-DM4**  
POWER BOX ENCLOSURE, 120/277V AC INPUT WITH 240W DRIVER 24V DC OUTPUT.

<p><b>PROPRIETARY AND CONFIDENTIAL</b> This print is the property of Nanometer Lighting and is issued upon the condition that it will not be used directly or indirectly, in any way detrimental to our interests, and that it will not be used to our interests, and that it will not be disclosed to a third party without the prior written consent of Nanometer Lighting, 57-10 49th Place, Maspeth, NY 11378 Phone (718) 497-0394 Fax (718) 821-9316</p>	NOTES:	UNLESS OTHERWISE SPECIFIED:	NAME	DATE	nanometer lighting 57-10 49th place maspeth, ny 11378 p.718.497.0394 1.718.821.9316
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ± ANGULAR: MACH BEND ± TWO PLACE DECIMAL ± THREE PLACE DECIMAL ±	DRAWN	CS	11/06/2017
		INTERPRET GEOMETRIC TOLERANCING PER:	CHECKED		
		MATERIAL	ENG APPR.		
		FINISH	MFG APPR.		
		DO NOT SCALE DRAWING	Q.A.		
			COMMENTS:		
					SIZE: DWG. NO REV
					<b>A</b>
					SCALE: 1:1 SHEET 3 OF 3



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10 JULY, 2024

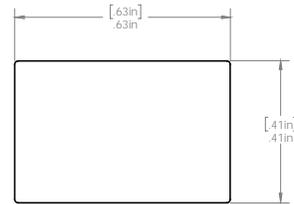
Type:  
F16

# FlexDuo Straight

SCOUT

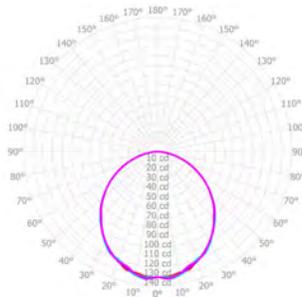


## Dimensions



## Optics

Flat Milky



## Spec Lock

- LED specially binned through forward voltage within a 3-step MacAdam ellipse for increased CCT fidelity and smooth lower end dimming.
- Mechanically fastened Rigid PCB set within an extruded aluminum channel for simple installation and total serviceability.
- Pressure fit metal pin connection for solderless in-field connection between LED boards for a seamless appearance.
- Flexible power feed injections maintain LED pitch consistency for a plethora of mounting options.
- Never a shadow, hotspot nor break in light no matter the output and run length.
- No double-sided adhesion (tape) or soldering during installation.

S



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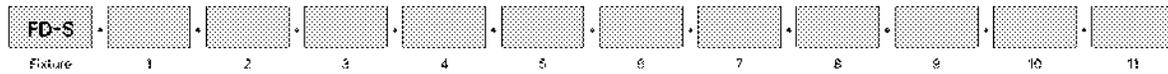
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**BID Submission**  
10 JULY, 2024

Type:  
F17

# FlexDuo Straight

SCOUT

Part # Builder



Fixture	1: Lens	2: Intensity <sup>1</sup>	3: Color Temp
FD-S: Zip Straight	FM: Flat Milky	L: Low (385lm/2.8w per ft) H: High (6093lm/8.2w per ft)	27: 2700K 30: 3000K 35: 3500K
4: Finish <sup>2</sup>	5: Feed <sup>3</sup>	6: Control	7: Mounting
M: Milk W: Gloss White B: Matte Black C: Custom RAL	EF: End Feed RF: Rear Feed SFI: Side Feed 1	0: None 1: 0-10 -1% Dimming 2: 0-10 -0.1% Dimming 3: DMX/ DALI 4: POE 5: ELV / MLV / Phase 6: 0-10 Tuneable White 7: 0-10 Warm Dim 8: Lutron Hi-Lume 1% Ecosystem W/ SO-FTB 9: Lutron Hi-Lume 1% 3 Wire + G 10: Lutron Athena Wireless Node - RF Only 11: Casambi 12: nLyle 13: Enlighted 14: Other - Consult Factory	N: None E: External
8: Blind Cove <sup>4</sup>	9: Wire Length	10: Shape	11: Fixture Length
N: No	12" 24" 48" 96" Custom - (Consult Factory)	S - Straight U - U Shape L - L Shape R - Rectangle P - Pattern (Consult Factory)	X Y

Flat Milky : No Imaging - 50% Light Loss

Output	12"	24"	48"	96"
Lumens/Foot	115	204	399	575
Watts/Foot	1.6	2.8	4.8	8.8
Lumens/Watt	73	72	71	68



Driver Wiring



Installation Guide

S

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**BID Submission**  
 10 JULY, 2024

Type:  
 F17

## Specification Details

	LENS	LIGHT LOSS	VISIBLE DIODES		LOW	High		
Watts / Foot		N/A			2.2	4.4		
mA / Foot		N/A			92	184		
Lumens / Watt		N/A			136	136		
No Lens: Lumens / Foot	None	0%	No		288	576		
0-10 / Lutron Athena Node	Max Load @ 96 Watts				40 Feet	20 Feet		
DMX / DALI	Max Load @ 96 Watts				40 Feet	20 Feet		
Phase	Max Load @ 96 Watts				40 Feet	20 Feet		
POE	Consult Factory							
Lutron Drivers	LDE1 Hi-Lume 1% EcoSystem. Soft On Fade to Black				L3DA3W Hi-Lume 1% 3 WIRE+G			
Color Temperatures (K) + Flux	2700 (100%), 3000 (100%), 3500 (115%)							
Max Run Length	20 Feet							
CRI	90+							
R9	50+							
MacAdams Ellipses	3 Steps							
Beam Angle <sup>2</sup>	120 Degrees							
IP Rating	IP20 - Dry Location							
Lamp Life	50,000 Hours							
Dimming / Control <sup>3</sup>	0-10 / POE / DMX / DALI / PHASE / LUTRON / LUTRON WIRELESS							
Operating Temperature	-13°F to 122°F							

### FINISH

Standard Mill Aluminum Finish.  
Powder Coating to any RAL# available upon specification  
Increased pricing for powder coating.

### Warranty

2 Year Limited Warranty - Covers all Scout manufactured products.  
Default to manufactures warranty for all 3rd party components. Does not cover labor.

### ORDER DETAILS

- All fixtures come standard with starter end cap feed unless otherwise specified.
- All Scout Select Fixtures come preassembled up to 8 feet long with 8" power feed.
- Any Fixture length under 8 feet long will be made as a complete fixture.
- Any Fixture length over 8 feet long will be broken into 6 foot lengths + the balance length. A 10 Foot Fixture will be broken into 1 length @ 6 Feet and 1 @ 4 Feet.
- Fixtures daisy chain together with Scout\_Lock™ Technology.
- In situations where fixtures are longer than the maximum wattage load new power will be injected from either the side or rear. Standard Injection side Feed 1.
- All orders come with an approval drawing. Fabrication will not begin until drawing has been signed off or waived.

<sup>1</sup>Lumens / Watt accounts nominal driver efficacy at full load  
<sup>2</sup>Finish: Mill Finish comes standard. Cost Adder for Power Coating. Contact Factory for Custom RAL#  
<sup>3</sup>Feed: See Feed Details on page 4

### LED SYSTEM

Proprietary linear LED Scout Engine incorporates premium Cree LEDs on a robust platform to achieve excellent thermal management. LEDs are placed to promote a uniform appearance.  
Available in 2200K, 2700K, 3000K, 3500K, 4000K or 5000K in 90+ CRI. LED modules and drivers are replaceable.  
Color accuracy <3 SDCM

### CONSTRUCTION

One piece extruded aluminum housing. Cast aluminum end caps.

### OPTICS

Extruded High Transmission Milky Acrylic Lens with No LED imaging. Extruded High Transmission Frosted Acrylic Lens with LED imaging.

### ELECTRICAL

Fixture comes reassembled with 8" whip.  
All Drivers are installed in remote location.  
All drivers are Universal input 120-277 VAC.  
Standard Constant Voltage drivers include 0-10V dimming preinstalled in enclosure.

### LABELS

Conforms To UL STD 2108 Certified To CSA STD C22.2 # 250.0  
Suitable for Dry or Damp Locations, indoor use only.  
ETL Control # 5011600

S

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Page 3 of 4



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**BID Submission**

10 JULY, 2024

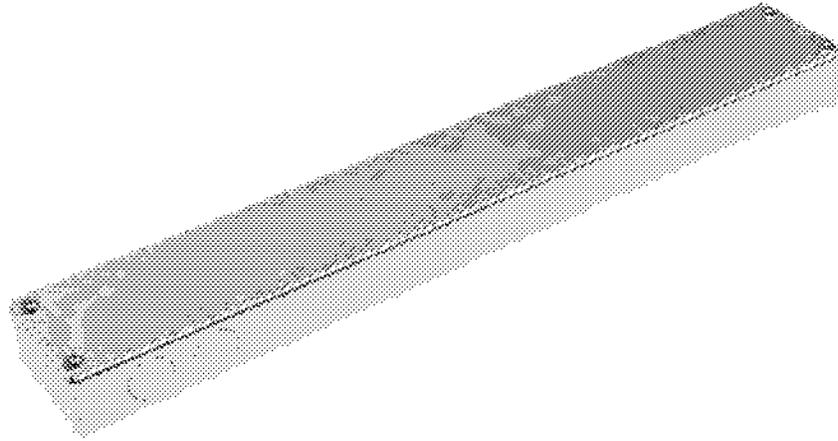
Type:

F17

Page 71 of 119



Project : \_\_\_\_\_ Firm : \_\_\_\_\_ Type : \_\_\_\_\_ Quantity: \_\_\_\_\_



**Quick Specs**

Driver Type	Constant Current
Dimming Control	0-10 : 1%
# of Channels	1
DC Voltage Range	27-54 VDC
AC Input Voltage	120 - 277
Class	2
mA	2000
Wattage	75
Warranty	5 years
Efficiency	>90%

**Max Load (2000mA)**

Super Low (150mA)	40 Feet
Low (89mA)	22 Feet
Medium (149mA)	13 Feet
High (250mA)	8 Feet
Super High (300mA)	5 Feet

**Max Distance**

20 AWG	20 Feet
18 AWG	40 Feet
16 AWG	60 Feet
14 AWG	100 Feet
12 AWG	150 Feet

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New York, NY  
1.833.SCOULD  
www.ScoutLighting.com  
Mfg@ScoutLighting.com

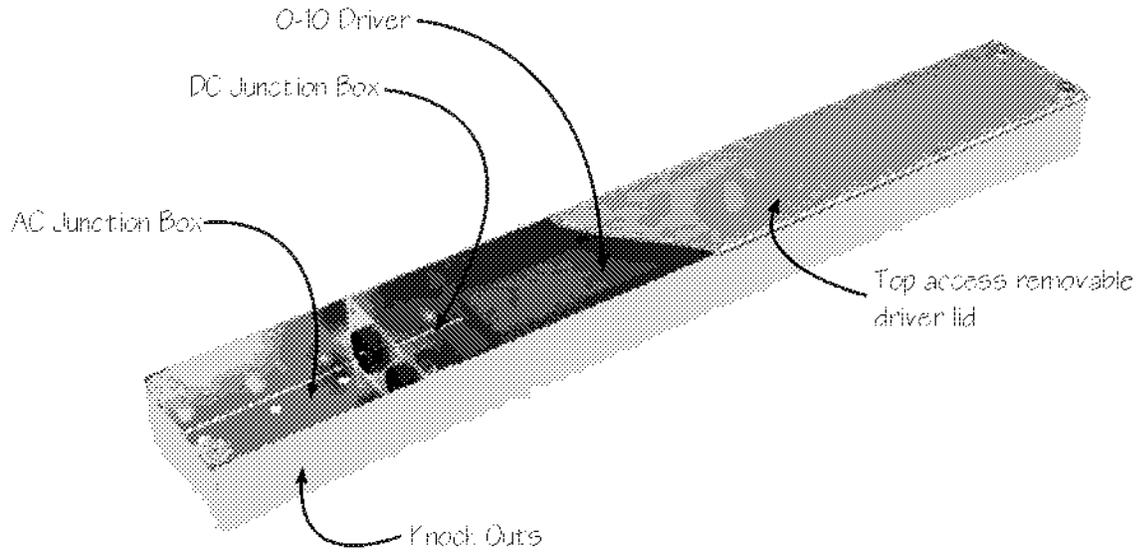


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10 JULY, 2024

Type:  
F17

Driver Anatomy



Dimensions



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New York NY  
 1633 COLUMBIA  
 www.ScoutLighting.com  
 info@ScoutLighting.com

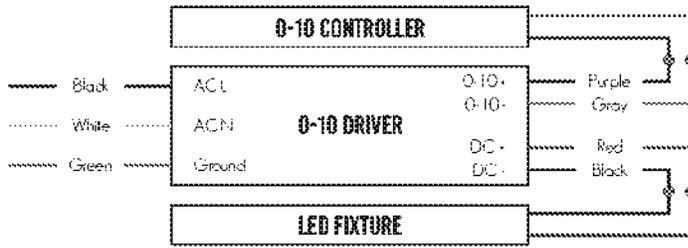



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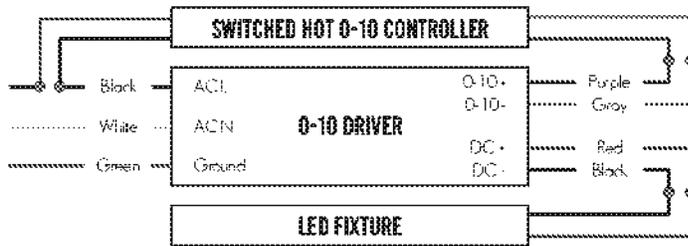
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Type:  
**F17**

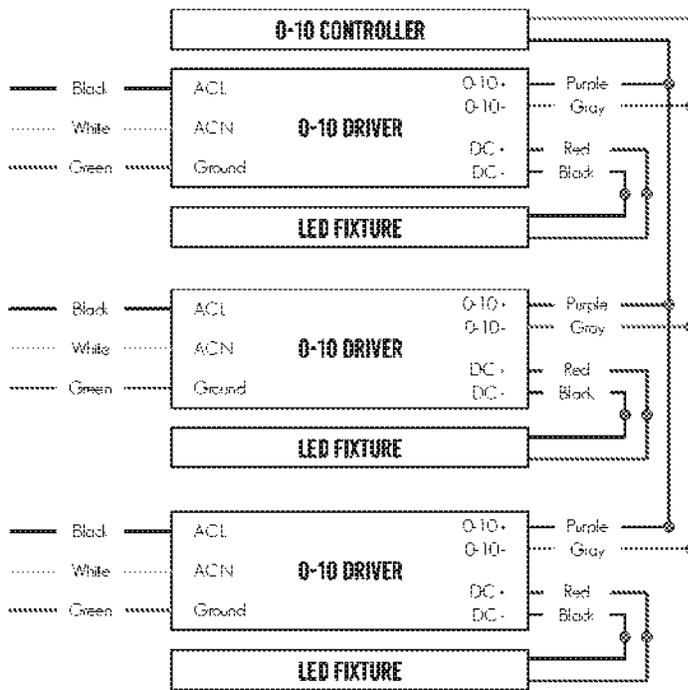
Wiring



Single 0-10 wiring



Switched Hot 0-10 Wiring



Multiple fixture wiring to single 0-10 Dimmer

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New York, NY  
 1-800-552-0810  
[www.ScoutLighting.com](http://www.ScoutLighting.com)  
[Info@ScoutLighting.com](mailto:Info@ScoutLighting.com)



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230042.000  
**BID Submission**  
 10 JULY, 2024

Type:  
 F17

**Application**

Open wall luminaires with a high level of efficiency, characterized by an elongated design. As solid and reliable lighting tools with modern lamp technology and high-quality workmanship, they will provide very cost-effective service over long operating periods.

**Materials**

Hand-blown three-ply opal glass  
Aluminum housing

**NRTL** listed to North American Standards, for interior use only

**Weight:** 6.6 lbs.

**Electrical**

Operating voltage	120-277V AC
Minimum start temperature	-20° C
LED module wattage	30.0W
System wattage	35.6W
Controllability	0-10V dimming down to 0.1%
Color rendering index	Ra > 80
Luminaire lumens	3311 lm
LED service life (L70)	60000 hrs

**LED color temperature**

- 4000K (K4)
- 3500K (K35)
- 3000K (K3)
- 2700K (K27)

**BEGA** can supply you with suitable LED replacement modules for up to 20 years after the purchase of LED luminaires - see website for details

**Finish**

White finish. Custom colors not available.

Type:

BEGA Product:

Project:

Modified:

**Included (available for pre-shipment)**

- B19537 Narrow opening wiring box



Linear wall luminaire - Opal glass

	LED	A	B	C
<b>B50084</b>	30.0W	4	24	5 <sup>3</sup> / <sub>8</sub>



**BEGA** 1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 info@bega-us.com

Due to the dynamic nature of lighting products and the associated technologies, luminaire data on this sheet is subject to change at the discretion of BEGA North America. For the most current technical data, please refer to bega-us.com Updated 05/09/23 © copyright BEGA 2024



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230042.000

**BID Submission**

10 JULY, 2024

Type:

D1

Project:

Location:

Fixture Type:

Catalog Number:

**AVAILABLE FINISHES:**



## Lightstick

WS-47997

**PRODUCT DESCRIPTION**

Modern and ultra-minimal, Lightstick is a slim LED vanity luminaire designed perfectly for residential, hospitality and commercial powder rooms. A slender bar of light constructed from co-extrusion of clear and white acrylic affords the luxurious dimensional look of cased glass but durable enough for its dramatic proportions. The versatile design allows it to be placed horizontally or vertically or even at angles on walls and ceilings.

**FEATURES**

- ACLED driverless technology
- Co-extruded acrylic diffuser
- 1" slim junction box included and can be ordered separately (model# JB-0501)
- 0-10V dimming option available (special order), unit dimensions: 3.4" x 1.2" x 0.5" (model#LDS065M010AFE-LO1)
- Conversion plate included for 4" junction box
- Trimless spackle cover available for 4" square junction box recessed in drywall thicknesses of 1/2", 5/8", 1", and 1-1/4"; accessory not included and can be ordered separately (model# MKCP-3040-WT)

**SPECIFICATIONS**

Rated Life	54000 Hours
Standards	ETL, cETL, Damp Location Listed, Title 24 JA8: 2019 Compliant, ADA
Input	120 VAC, 50/60Hz
Dimming	ELV
Mounting	Can be mounted on ceiling or wall in all orientations
Color Temp	3000K
CRI	90
Construction	Aluminum hardware, co-extruded acrylic diffuser

**REPLACEMENT PARTS**

JB-0501 - 1" Slim Junction Box



Model & Size	Color Temp	Finish	LED Watts	LED Lumens	Delivered Lumens
<input checked="" type="radio"/> WS-47997	<input checked="" type="radio"/> 3000K <input type="radio"/> 3000K	<input checked="" type="radio"/> AL - Brushed Aluminum <input type="radio"/> WT - White	<input checked="" type="radio"/> 88W <input type="radio"/> 88W	<input checked="" type="radio"/> 6342 <input type="radio"/> 6342	<input checked="" type="radio"/> 4874 <input type="radio"/> 4874



Example: **WS-47997-WT**  
For custom requests please contact [customs@modernforms.com](mailto:customs@modernforms.com)

ModernForms.com | Phone: (866) 810-6615 | Fax: (800) 526-2585  
Central Distribution Center: 1600 Distribution Ct, Lithia Springs, GA 30122  
Western Distribution Center: 1750 Archibald Avenue, Ontario, CA 91760

**MODERN FORMS**



John Jay Homestead  
  
230042.000  
**BID Submission**  
10 JULY, 2024

Type:  
D2

Pole top luminaires with asymmetric flat beam light distribution

**Housing/fitter:** Two piece die-cast aluminum construction. The fixture slip fits a 3" O.D. pole top or tenon and is secured by six (6) socket head stainless steel set screws threaded into stainless steel inserts. Die castings are marine grade, copper free ( $\leq 0.3\%$  copper content) A360.0 aluminum alloy.

**Enclosure:** Clear acrylic diffuser with optical texture and reflector made of pure anodized aluminum held in place by die-cast aluminum frame and stainless steel rods. Fully gasketed for weather tight operation using a molded silicone rubber O-ring gasket.

**Electrical:** 31.0W LED luminaire, 36.0 total system watts, -30°C start temperature. Integral 120V through 277V electronic LED driver, 0-10V dimming. LED module(s) are available from factory for easy replacement. Standard LED color temperature is 4000K with a  $>80$  CRI. Available in 3000K ( $>80$  CRI); add suffix K3 to order.

**Note:** LEDs supplied with luminaire. Due to the dynamic nature of LED technology, LED luminaire data on this sheet is subject to change at the discretion of BEGA-US. For the most current technical data, please refer to [www.bega-us.com](http://www.bega-us.com).

**Finish:** All BEGA standard finishes are polyester powder coat with minimum 3 mil thickness. Available in four standard BEGA colors: Black (BLK); White (WHT); Bronze (BRZ); Silver (SLV). To specify, add appropriate suffix to catalog number. Custom colors supplied on special order.

**CSA** certified to U.S. and Canadian standards, suitable for wet locations. Protection class IP65

**Weight:** 11.0 lbs.

**EPA (Effective projection area):** 1.1 sq. ft.

**Luminaire Lumens:** 3134

Type:  
 BEGA Product:  
 Project:  
 Voltage:  
 Color:  
 Options:  
 Modified:



Pole-top luminaires · asymmetric flat beam			
	Lamp	A	B
<b>77 165</b>	31.0W LED	10 <sup>1</sup> / <sub>4</sub>	25 <sup>3</sup> / <sub>4</sub>

\* recommended for use with 12' to 18' poles

**BEGA** 1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 FAX (805) 566-9474 [www.bega-us.com](http://www.bega-us.com)  
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John Jay Homestead

230042.000  
**BID Submission**  
 10 JULY, 2024

Type:  
 FX1

**Application**

A round, non-tapered, aluminum pole with a fixed base. Useful for mounting pole-top luminaires, floodlights, banners, or other accessories. Consult a licensed structural engineer when specifying. Poles must be unwrapped when delivered and should not be allowed to sit in their packaging.

**Materials & Specifications**

Extruded aluminum pole shaft  
 A356 aluminum alloy anchor base heat-treated to T6 temper  
 Anchor bolts conform to ASTM F1554 Grade 55 with L bend on one end and galvanized minimum 12" on threaded end  
 Anchor bolts provided with (2) hex nuts and (2) flat washers  
 Aluminum nut covers  
 Covered handhole with hardware and grounding provisions provided  
 3" welded tenon  
 Wall thickness: 0.125"  
 Structural weight: 26 lbs

**Maximum Luminaire Weight:** 62 lbs

**Finish**

All BEGA standard finishes are a matte, textured powder coat with a minimum 3 mil thickness. BEGA Unidure® finish, a fluoropolymer technology, provides superior fade protection in Black, Bronze, and Silver. BEGA standard White, as well as optionally available RAL and custom colors, are a polyester powder.

Available colors  Black (BLK)  White (WHT)  RAL:  
 Bronze (BRZ)  Silver (SLV)  CUS:

**Disclaimer**

BEGA North America warrants the specific anchor bolts and pole combination according to the product number(s) and description(s) indicated on the submittal sheet. Structural changes to the pole requested by the customer, including changes to pole length, may affect the compatibility of the anchor bolts and corresponding poles. BEGA North America is not responsible for the incompatibility of the anchor bolts and poles resulting from such structural changes without review by the BEGA North America engineering department. This includes, but is not limited to, any labor charges, charges for replacement materials and shipping. For safety reasons, do not mount more than 50 lbs. to hinged poles and more than 62 lbs. to fixed poles. Pole capacities are based upon the provisions of AASHTO 2013 (LTS-6) and assume a max vertical eccentricity to the fixture of 2'-0" above the pole top. Adequate drainage must be provided in concrete foundation or grout. Do not seal the base of the pole. Due to structural reasons, do not install pole without fixture or other appropriate weight on the top.



Aluminum pole · Round fixed non-tapered

	A	B	C	D	E	Anchorage
<b>12 RFNS1</b>	3"	12'	8 7/8"	4"	4"	<b>B12RFNS1-AB</b>

Pole wind load rating

MPH	85	90	100	110	120	130	140	150
EPA"	5.1	4.4	3.2	2.4	1.8	1.4	1.2	1.0

\*Height is rounded to the nearest foot, for precise measurements see submittal drawing.  
 \*\*Data above assumes grade level installation and a maximum luminaire weight of 62 lbs.

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Type:  
 BEGA Pole:  
 Location:  
 Quote or Sales Order:  
 Date:  
 Specifier:  
 Representative:  
 BEGA Luminaire:  
 Total Mounted EPA:  
 Total Mounted Weight:



John Jay Homestead

230042.000  
**BID Submission**  
 10 JULY, 2024

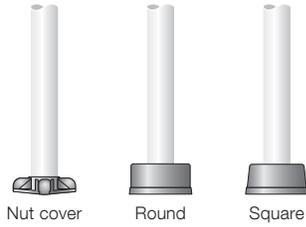
Type:  
 FX1

**Accessories**

**Base Cover**

Standard pole is provided with nut covers.  
See alternate base cover options below.

- Round
- Square

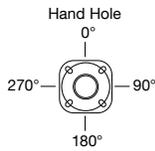


**Options**

**Power Receptacle - Standard Location**

GFCI covers provided are intended for portable tools or other portable equipment connected to the outlet when attended. Wet location listed when cover is closed. Handhole must be 18" from GFCI.

- GFCI at default location
  - Orientation: 180°; Height: 36" A.F.G.
  - In-use cover



**Modifications**

Any changes or additions to BEGA North America's standard pole offering that are not listed as accessories or options are considered modifications. Should a modification be required, the below section is intended to help streamline the process during the initial design and specification. All modifications will need to be quoted and approved by BEGA North America prior to order placement.

**Modified Pole Height:**

**Power Receptacle - Nonstandard Location**

- GFCI at custom location
  - Orientation:
  - Height (min. 18" A.F.G.):
  - In-use cover

**Handhole**

Unless otherwise specified handhole will be located 18" A.F.G. between two anchor bolts.

- Handhole at custom location
  - Orientation:
  - Height:

**Vibration Dampener**

- Vibration dampener
  - Solution provided will vary depending on needs.

**Still not finding what you need?** Additional modifications may be available. Please contact your local BEGA representative to learn more about our modification capabilities.

**Note:** Accessories, options, and modifications may require additional lead-time and increase cost. All details must be quoted and approved by BEGA North America prior to order placement.

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John Jay Homestead

230042.000  
**BID Submission**  
10 JULY, 2024

Type:  
FX1

DESCRIPTION

The LINEA G2® leverages the latest in LED technology with distinctive design and exceptional versatility to perceptively capture today's minimalist design philosophy. The well-proportioned reduced form continues retain its validity far into the future. Available in single or twin mounting configurations, the pedestrian-scale model is 15' tall, with complementary models in intermediate and taller heights of 20' and 26' for proper scale in a variety of applications. A selection of LED illuminating bollards for performance or ambience complements the product family. All hardware is stainless steel. CSA Listed for Wet Locations.



Date: ..... Type: ..... Catalog Number: .....

Project Name: .....

ORDERING INFORMATION

LUMINAIRE AND POLE																
MODEL	LED MODULE	CCT	CONTROL	VOLT	DISTRIBUTION	MOUNTING	POLE HEIGHT	POLE MATERIAL	BASE COVER	MOUNTING KIT	FINISH	OPTION				
LN450G	1	30K	DIM	UNV	12	S	15	A	BC	MK	BL	3PR				
		1 Module	3000K		0-10v Dimming	Type II	Single	15' Straight Rectangular				Aluminum	Base Cover	Mounting Kit (Anchor bolts + Template)	Black	3-pin NEMA Photocell Receptacle
	2	40K			13	D	XX*	S							DB	7PR
		2 Modules	4000K			Type III	Double					Steel			Dark Bronze	7-pin NEMA Photocell Receptacle
					14						DG	GFCI				
					Type IV						Dark Grey	GFCI Receptacle				
					15						GG	HSS				
					Type V						Graphite Grey	House Side Shield				
								*Other (Specify in feet)			SG	MS				
											Silver Grey	Motion Sensor				
											CC	TVSS20				
											Custom RAL Color	20KV Surge Suppressor				

BANNER ARM ACCESSORY				
BANNER ARM TYPE	BANNER WIDTH	BANNER LENGTH	ORIENT <sup>1</sup>	HEIGHT TOP OF BANNER
BA-S Single Banner Arm Set	18 18 inches	30 30 inches	0 0°	XX <sup>1</sup>
BA-D Double Banner Arm Set	24 24 inches	48 48 inches	90 90°	
		60 60 inches	180 180°	
		72 72 inches	270 270°	
		72 72 inches	270 270°	



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1/6

Rev. 2022/04



John Jay Homestead

230042.000  
BID Submission  
10 JULY, 2024

Type:  
FX2 Series

**SPECIFICATIONS**

**HOUSING**

Rectangular luminaire housing with integral filter is extruded 6061 aluminum with T6 temper and shows no visible welds. Individual LED arrays are sealed by the lens and a one-piece silicone gasket making a weather tight modular assembly. Luminaire mounts to ferron on pole and secured with four socket head cap screws on top of the housing. Luminaire is available in single or twin back-to-back mounting configurations. All hardware is stainless steel.

**OPTICS**

Optics consist of 1 or 2 LED light engines. Each light engine consists of a field replaceable aluminum core PCB with four high-power LEDs and a single piece lens molded from optical quality acrylic. Light distributions include a choice of Type II, III, or IV optics. Luminaire emits zero uplight at 90 degrees horizontal and above and is suitable for use in all LEED lighting zones. Optional house side shields for the individual modules are available on request.

**LED DELIVERED LUMEN OUTPUT / BUG RATING**

2 Modules: 72 watts

Type II - 3000k: 7185 lms / B2-U0-G2	Type II - 4000k: 7789 lms / B2-U0-G2
Type III - 3000k: 7186 lms / B2-U0-G2	Type III - 4000k: 7800 lms / B2-U0-G2
Type IV - 3000k: 6813 lms / B2-U0-G2	Type IV - 4000k: 7405 lms / B2-U0-G2

2 Modules w/ House Side Shield: 72 watts

Type II - 3000k: 6814 lms / B1-U0-G1	Type II - 4000k: 7386 lms / B1-U0-G2
Type III - 3000k: 6805 lms / B2-U0-G1	Type III - 4000k: 7377 lms / B2-U0-G1
Type IV - 3000k: 6407 lms / B1-U0-G2	Type IV - 4000k: 6945 lms / B1-U0-G2

NOTE: Due to rapid and continuous advances in LED technology, LED luminaire data is subject to change without notice and at the discretion of HessAmerica. Consult factory for current technical data.

**ELECTRICAL**

Each LED module is driven by an independent electronic driver. Input voltage range is 120v through 277v at 50/60Hz. Each driver supplies 700mA drive current to its respective LED module. Power consumption for single driver is 36 watts and 72 watts for models with two LED light engines. Optional 0-10v DC dimming is available on request.

**LUMINAIRE WEIGHT:** 22 lbs

**LUMINAIRE EPA:** 1.3 sq. ft

**ALUMINUM:**

Straight rectangular pole is 6.3" x 3.9" nominal and manufactured from seamless 6061 aluminum tubing and heat treated to produce a T6 temper. Nominal wall thickness is 0.236". Sides of the shaft are flat with 1/8" radiused corners. Flush mounted hand hole cover is plasma cut with kerf not to exceed 1/8" and includes triangular tamper-resistant locking device. Two-piece base cover is fabricated aluminum. Nominal pole height is 15'.

**STEEL:**

Straight rectangular pole is 6.3" x 3.5" nominal and manufactured from cold drawn over mandrel, electric weld, mechanical steel tubing with nominal wall thickness of 0.197". Sides of shaft are flat with 3/8" radiused corners. Pole shall show no seam along the shaft. Flush mounted hand hole cover is plasma cut with kerf not to exceed 1/16" and includes triangular tamper-resistant locking device. Pole is hot-dip galvanized with coating inside and out, then lightly sanded prior to painting. Two-piece base cover is fabricated aluminum. Nominal pole height is 15'.

**FINISH:**

Standard finishes are finely textured matte silver grey metallic, dark grey, graphite grey, matte black, or dark bronze. Special colors available on request.

**CERTIFICATION:** CSA Certified for Wet Locations

**INGRESS PROTECTION:** IP65

**WARRANTY**

Limited product warranty period including LEDs is five years. Driver shall carry the manufacturer's limited warranty.



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2/6

Rev 2023004



John Jay Homestead

230042.000

**BID Submission**

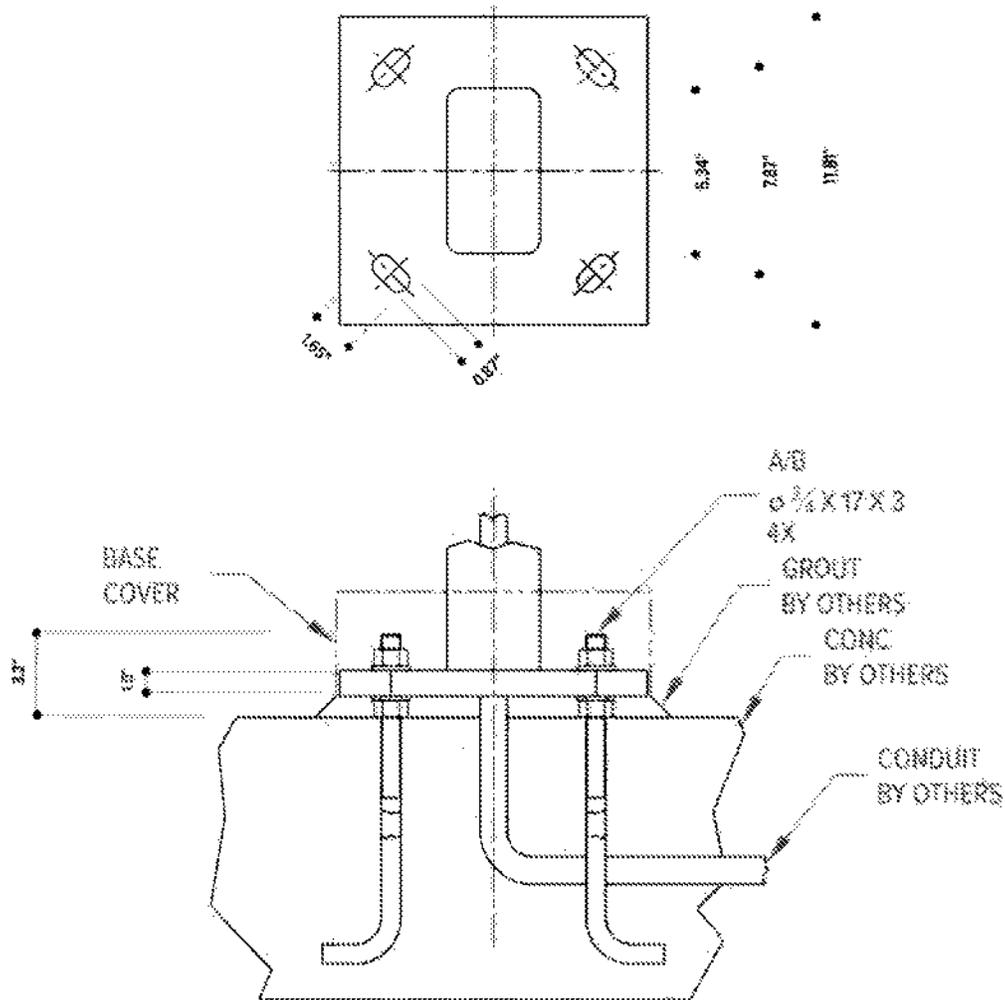
10 JULY, 2024

Type:  
FX2 Series

Page 81 of 119

MOUNTING DETAILS

All dimensions are shown in inches unless otherwise noted.



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Rev 20231004



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230042.000  
**BID Submission**  
10 JULY, 2024

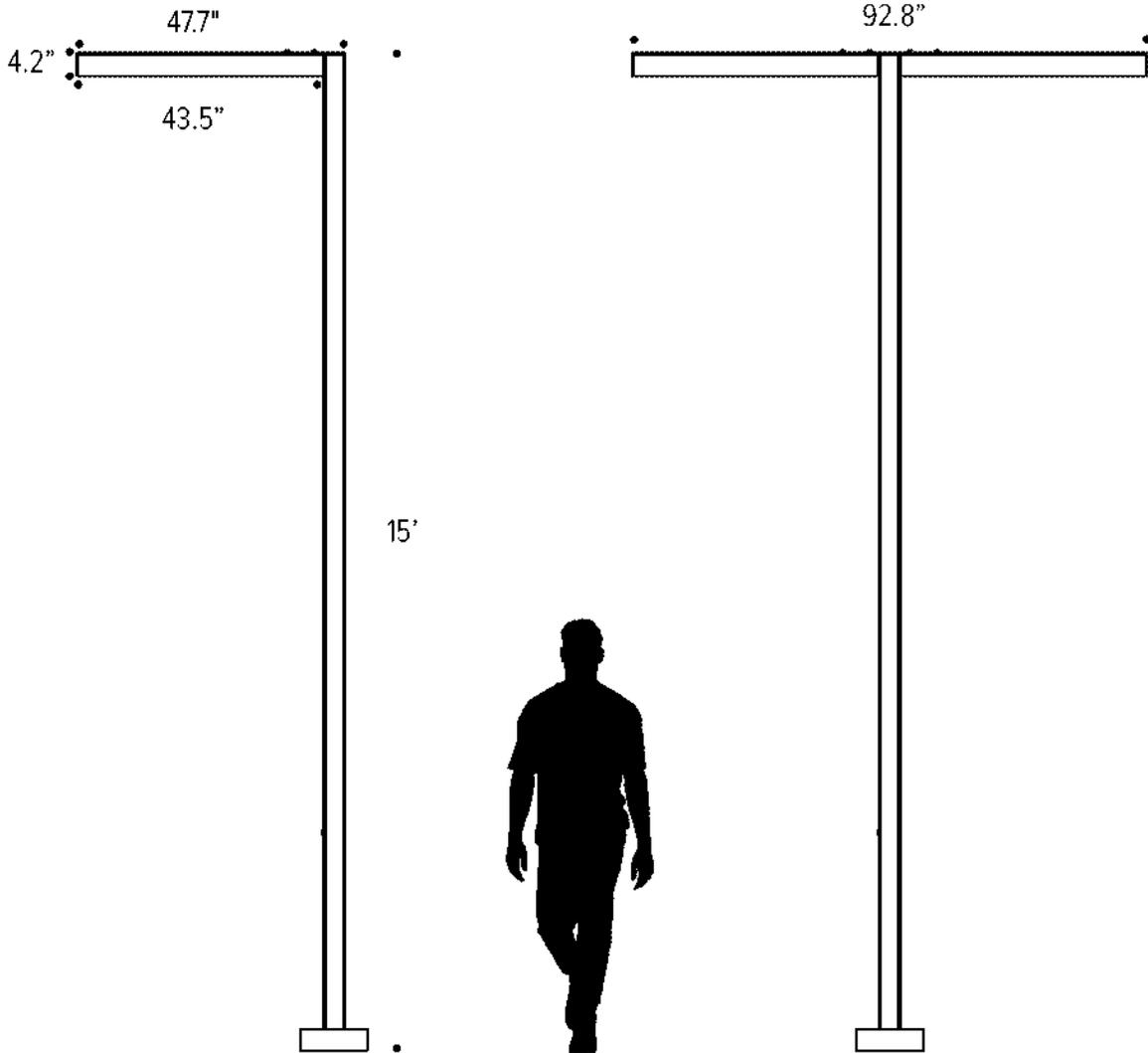
Type:  
FX2 Series

LINEA 450 G2®  
Pole Mounted Luminaire

.hess

DIMENSIONS

All dimensions are shown in inches unless otherwise noted.



**EXPERIENCE**  
BRANDS

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Rev 20231004



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230042.000

**BID Submission**

10 JULY, 2024

Type:

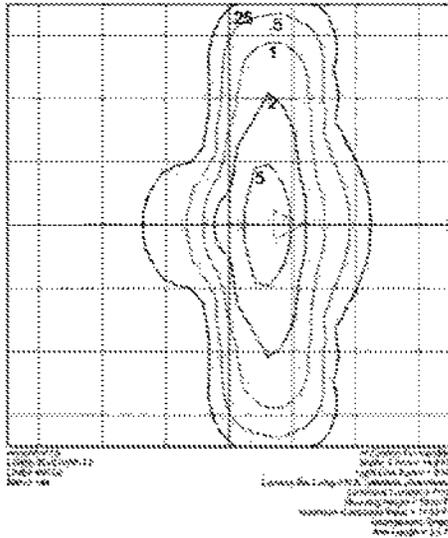
FX2 Series

Page 83 of 119

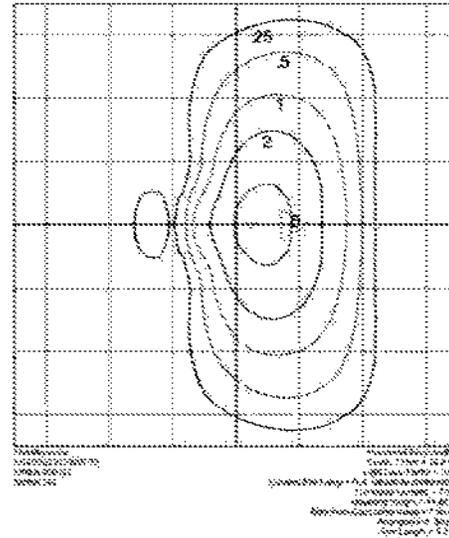
PHOTOMETRICS (3000K)

Mounting Height: 1' / Scale: Each square = 14.8'

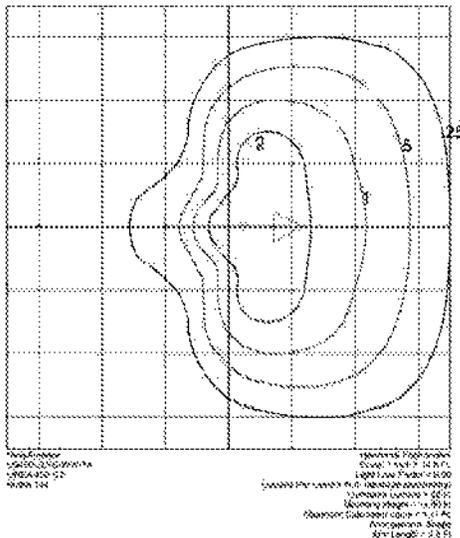
Type II - Standard Optics



Type III - Standard Optics



Type IV - Standard Optics



ISOLINES LEGEND:

- Black = 0.25 FC
- Red = 0.50 FC
- Green = 1.0 FC
- Blue = 2.0 FC
- Purple = 5.0 FC

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Rev 20231004



John Jay Homestead

230042.000

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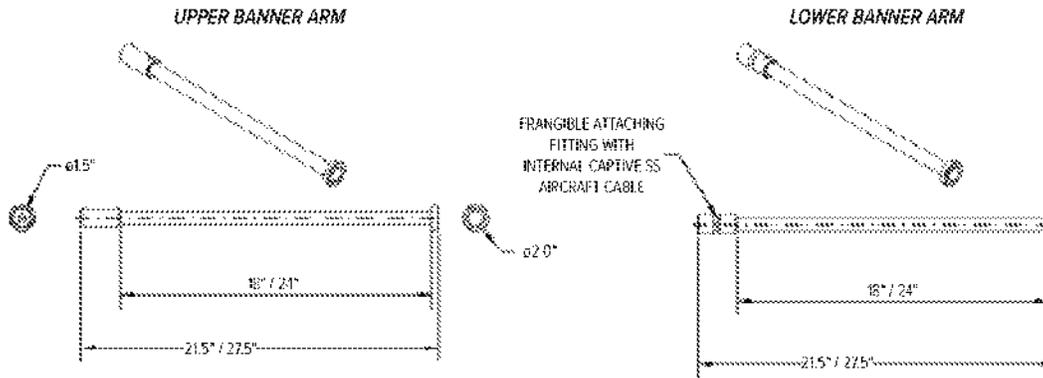
10 JULY, 2024

Type:

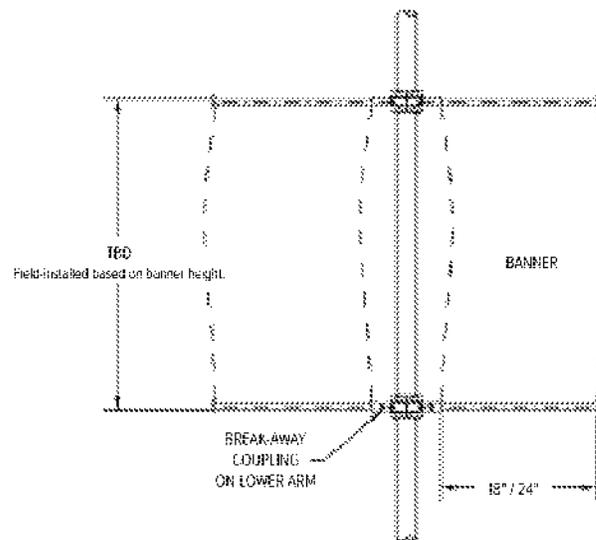
FX2 Series

BANNER ARM DETAILS

All dimensions are shown in inches unless otherwise noted.



NOTE: Frangible attachments for banner arms are designed to break at 60% to 70% of the rated load of the pole.



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Rev 20231004



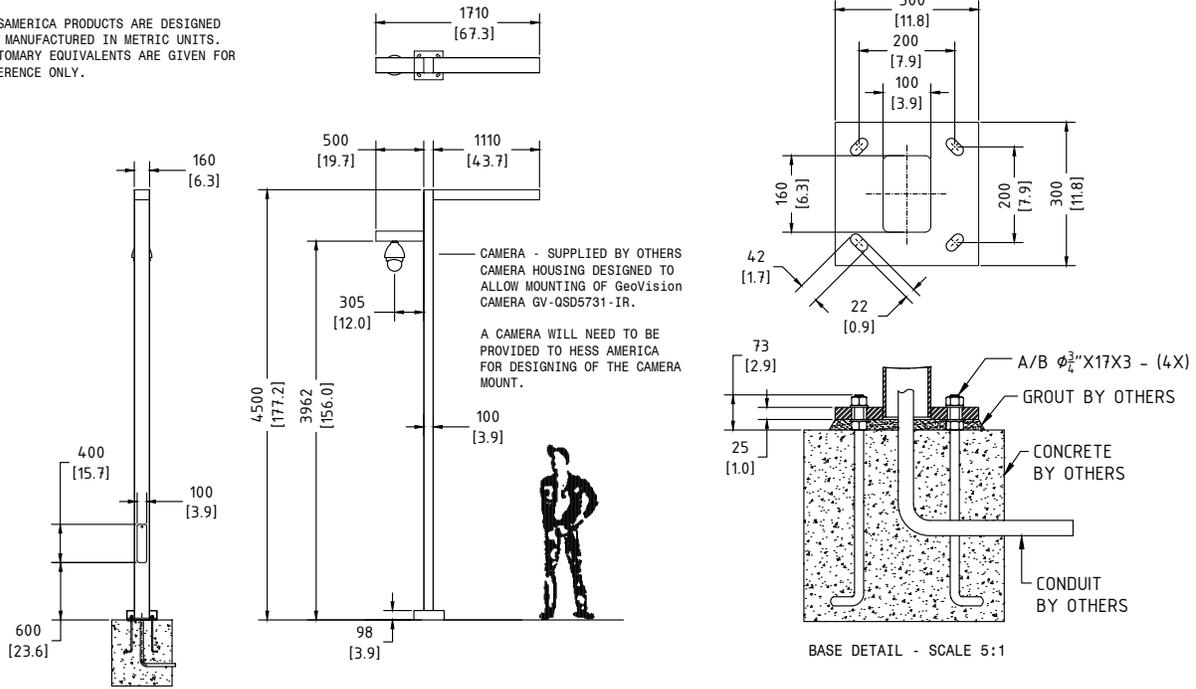
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**BID Submission**  
10 JULY, 2024

Type:  
FX2 Series

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NOTES:

1. ELECTRICAL: 72W, 120-277V
2. OPTICS: 2x TYPE 2, 3, 4 OR 5 DISTRIBUTION
3. LED: 2x LEVO C LED ARRAY /CCT: 3000K OR 4000K
4. HOUSING: FABRICATED ALUMINUM
5. BASE COVER: FABRICATED ALUMINUM
6. DRIVER: 2x 36W, DIMMABLE
7. POLE: HIGH STRENGTH ALUMINUM ALLOY
8. ANCHOR BOLTS: STEEL GALVANIZED
9. HARDWARE: STAINLESS STEEL
10. FINISH: TBD
11. CONTROLS: 0-10V DIM
12. CAMERA MOUNTING ARM: FABRICATED ALUMINUM

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DRAWING TITLE

LINEA 450G 2 LEVO-C (TYPE LN-CAM)  
LN450G-2-(X)K-DIM-UNV-T(X)-S-15-A-BC-MK-xx (FINISH)-MOD(CAM)

DRAWN BY	JW
DATE	10.3.2022
APPROVED	
SCALE	NTS

HessAmerica

PO BOX 28  
GAFFNEY, SC 29342  
864.687.3535

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SHEET 1 of 1

DRAWING NUMBER	REV
- .01.91422	A



John Jay Homestead

230042.000  
**BID Submission**  
10 JULY, 2024

Type:  
FX2A

**Application**

An LED bollard with shielded asymmetric light distribution. Designed for effective lighting of landscapes, pathways, and open spaces. The fully shielded design provides visual comfort while illuminating ground surfaces. Provided with mounting system that allows the luminaire to be adjusted independent of anchor bolt orientation.

**Materials**

Luminaire housing constructed of die-cast and extruded marine grade, copper free (≤0.3% copper content) A360.0 aluminum alloy  
 Clear safety glass  
 Reflector made of pure anodized aluminum  
 High temperature silicone gasket  
 Mechanically captive stainless steel fasteners  
 Mounting plate constructed of heavy cast aluminum

**NRTL** listed to North American Standards, suitable for wet locations  
 Protection class IP65  
 Weight: 14.5lbs

**Electrical**

Operating voltage 120-277VAC  
 Minimum start temperature -30° C  
 Maximum ambient temperature 90° C  
 LED module wattage 11.6W  
 System wattage 14.5W  
 Controllability 0-10V  
 Color rendering index Ra > 80  
 Luminaire lumens 1475 lumens (4000K)  
 LED service life (L70) 60,000 hours

**LED color temperature**

- 4000K - Product number + **K4 (EXPRESS)**
- 3500K - Product number + **K35**
- 3000K - Product number + **K3 (EXPRESS)**
- 2700K - Product number + **K27**

**Wildlife friendly amber LED - Optional**

Luminaire is optionally available with a narrow bandwidth, amber LED source (585-600nm) approved by the FWAC. This light output is suggested for use within close proximity to sea turtle nesting and hatching habitats. Electrical and control information may vary from standard luminaire.

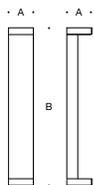
LED module wattage 17.6W (Amber)  
 System wattage 22.0W (Amber)  
 Luminaire lumens 574 lumens (Amber)

**BEGA** can supply you with suitable LED replacement modules for up to 20 years after the purchase of LED luminaires - see website for details

**Finish**

All BEGA standard finishes are matte, textured polyester powder coat with minimum 3 mil thickness.

- Available colors  Black (BLK)  White (WHT)  RAL:  
 Bronze (BRZ)  Silver (SLV)  CUS:



Shielded LED bollard - asymmetric				
	LED	A	B	Anchorage
<b>99058</b>	11.6W	7 1/2"	3 9/16"	<b>79817</b>

Type:  
 BEGA Product:  
 Project:  
 Modified:

**Mounting Accessories**

- 79817** Anchorage Kit
- 70895** Direct burial anchorage

**Available options**

- FSC** Fusing
- AMB** Amber LED
- FPRO** Factory Programmed Reduced output
- EMPK** Integral Emergency Battery Pack
- AWB** Asymmetric Wide Beam

See individual accessory spec sheet for details.



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230042.000  
**BID Submission**  
 10 JULY, 2024

Type:  
**FX3**

Not Used



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**BID Submission**  
10 JULY, 2024

Type:  
FX4

Not Used



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**BID Submission**  
10 JULY, 2024

Type:  
FX5

DATE: PROJECT: TYPE:

CATALOG NUMBER LOGIC:



**Driver housing required. Configure separately.**

*\*Standard with Wall Wash Optic.*

*\*\*Not available with Wall Wash Optic.*

*\*\*\*The 360SL cost is already included in the price of UPM, UPM dual, and Power Canopy.*

<b>CATALOG NUMBER LOGIC</b>
Example: SA - LED - x52 - WW - BLP - 9 - 11 - CV - 360SL
<b>MATERIAL</b>
Aluminum
<b>SERIES</b>
SA - Saratoga
<b>SOURCE</b>
LED - Chip on Board Technology
<b>LED TYPE</b>
x52 - 10W LED/2700K x53 - 10W LED/3000K x54 - 10W LED/4000K
<b>OPTICS</b>
SP - Spot (20°) WFL - Wide Flood (50°) WW - Wall Wash
<b>FINISH (See page 2 for full-color swatches)</b>
Standard Finishes (BZP, BZW, BLP, BLW, WHP, WHW, SAP, VER)
Premium Finish (ABP, AMG, AQW, BCM, BGE, BPP, CAP, CMG, CRM, HUG, NBP, OCP, RMG, SDS, SMG, TXF, WCP, WIR)
Also available in RAL Finishes
<b>LENS TYPE</b>
9 - Clear (Standard)
13 - Rectilinear*
<b>SHIELDING</b>
11 - Honeycomb Baffle**
<b>ACCESSORIES</b>
CV - Cutoff Visor
CS - Cutoff Snoot
BD - Adjustable Barn Doors
<b>OPTIONS</b>
360SL - Knuckle Mounting System***

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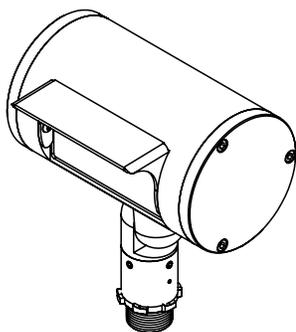
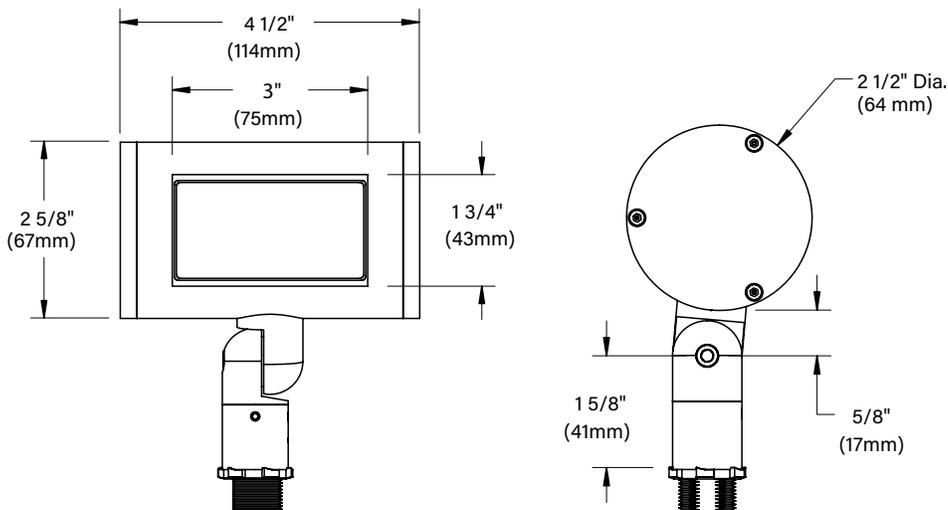


John Jay Homestead

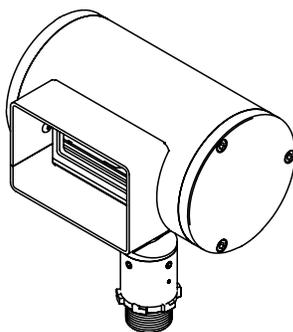
230042.000  
**BID Submission**  
 10 JULY, 2024

Type:  
 FX6 Series

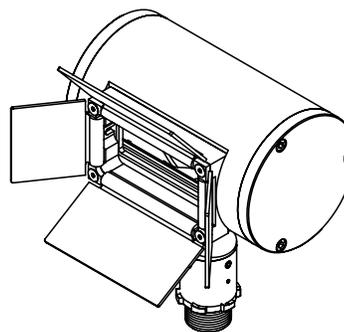
DATE: PROJECT: TYPE:



Cutoff Visor



Cutoff Snoot



Adjustable Barn Doors

STANDARD FINISHES



PREMIUM FINISHES



[Click Here](#) to view larger, full-color swatches of all available finishes on our website.

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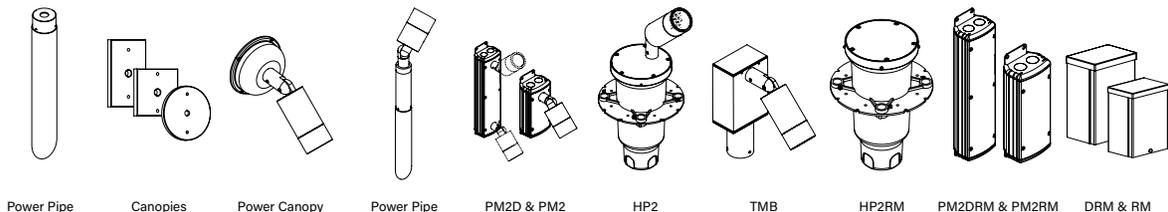
John Jay Homestead

230042.000  
**BID Submission**  
 10 JULY, 2024

Type:  
 FX6 Series

DATE: PROJECT: TYPE:

Accessories (Configure separately)



SPECIFICATIONS

<p>ELECTRICAL</p>	<p>WATTAGE WIRING REMOTE DRIVER</p>	<p>10W LED 18GA, Stranded, XLPE, 300V, 150° C rated. For use with remote LED driver. See remote driver submittal to determine remote distance and wiring requirements prior to detailing field installation of any remote wiring.</p>
<p>PHYSICAL</p>	<p>MATERIALS BODY KNUCKLE LENS LED COLOR MANAGEMENT OPTICS ACCESSORIES HARDWARE FINISH WARRANTY CERTIFICATION &amp; LISTING</p>	<p>Furnished in copper-free aluminum (6061-T6). Enclosed, water-proof wireway with machined end caps gasketed to create a water-tight seal for optical compartment. LOCK Knuckle is integral to the body and features an interior taper machined from solid billet and a second, reverse angle taper allowing full 180° vertical adjustment without the use of aim-limiting serrated teeth. High temperature, silicone 'O' Ring provides water-tight seal and compressive resistance to maintain fixture position. Design withstands 73 lbs. static load prior to movement for optical alignment with a ½" pipe thread for mounting. Optional 360SL provides biaxial source control with 360° horizontal rotation in addition to vertical adjustment. Shock-resistant, tempered glass lens is factory adhered to fixture cap and provides hermetically sealed optical compartment. Integrated solid state system and modular design with electrical disconnects allow for easy field upgrade and maintenance. LM-80 certified. Minimum 50,000 hour rated life at 70% of initial lumens (L70). LED technology provides long life, significant energy reduction and exceptional thermal management. Chip on board technology delivers natural white light. Exact color point conformity exceeds ANSI C78.377 standard. Module exceeds 80 CRI (RA&gt;80, R916). Color point uniformity 2 SDCM color control for 2700K-4000K CCT. Interchangeable optics permit optical field changes. Three (3) accessory options for optimum lighting control. Tamper-resistant, stainless steel hardware. LOCK hardware is black oxide treated for additional corrosion resistance. StarGuard, our 15-stage chromate-free process cleans and conversion coats aluminum components prior to application of Class 'A' TGIC polyester powder coating and is RoHS compliant. 5-year limited warranty. ITL tested to IESNA LM-79. UL Listed. Certified to CAN/CSA/ANSI Standards. RoHS compliant. Suitable for indoor or outdoor use, in wet locations, and for installation within 4' of the ground. IP66 Rated. Made in the USA with sustainable processes.</p>



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**BID Submission**  
10 JULY, 2024

Type:  
FX6 Series

# LAMP & DRIVER DATA (x52, x53, x54)

DATE: PROJECT: TYPE:

## DRIVER ELECTRICAL DATA

Type	AC Input Range	Frequency Hz	Power Factor At Full Load (Efficiency)	THD	InRush Current	Operating Current	Operation Ambient Temperature	Dimmer Type	Dimmer Range
INC	120-277VAC	50/60	> 0.9	<20%	n/a	350mA	-30° C ~ 90°C	TRIAC/ELV (120V)	1-100%
0-10	120-277VAC	50/60	> 0.9	<20%	n/a	350mA	-30° C ~ 90°C	0-10V Dimming	1-100%

### LM79 DATA

BK No.	CCT (Typ.)	CRI (Typ.)	Input Watts (Typ.)
x52	2700K	80	10W
	2700K	80	10W
	2700K	80	10W
x53	3000K	80	10W
	3000K	80	10W
	3000K	80	10W
x54	4000K	80	10W
	4000K	80	10W
	4000K	80	10W

### L70 DATA

Minimum Rated Life (hrs.) 70% of initial lumens (L <sub>70</sub> )
50,000
50,000
50,000
50,000
50,000
50,000
50,000
50,000
50,000
50,000

### OPTICAL DATA

Angle	Delivered Lumens
20°	904.9
50°	1306.1
111.8 x 83.8	479.4
20°	945.5
50°	1364.8
111.8 x 83.8	484.8
20°	1016.7
50°	1467.5
111.8 x 83.8	538.7

### OPTICS

Optic	Angle
Spot	20°
Flood	50°
Wall Wash	111.8 x 83.8

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John Jay Homestead

230042.000  
**BID Submission**  
 10 JULY, 2024

Type:  
 FX6 Series

DATE:	PROJECT:	TYPE:
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CATALOG NUMBER LOGIC:



*\*For use with incandescent dimmer. 120V only for dimming.*

**CATALOG NUMBER LOGIC**

Example: PPII - S12 - 010 - BZW - B - MT - SF

**MATERIAL**

Aluminum

**SERIES**

PPII - Power Pipe II System

**TYPE\***

S12 - 12" Stake

S18 - 18" Stake

J12 - 12" Junction Box

J18 - 18" Junction Box

**CONTROL TYPE**

INC - 10W TRIAC/ELV Dimming 1-100%, 120V Only

010 - 10W Dimming Driver 0-10V Dimming 1-100%

**FINISH**

Standard Finishes (BZP, BZW, BLP, BLW, WHP, WHW, SAP, VER)

Premium Finish (ABP, AMG, AQW, BCM, BGE, BPP, CAP, CMG, CRM, HUG, NBP, OCP, RMG, SDS, SMG, TXF, WCP, WIR)

(Also available in RAL Finishes. See submittal SUB-1439-00)

**CAP STYLE**

B - Single Hole Cap

**INPUT VOLTAGE**

MT - 120-277 VAC

**OPTIONS**

SF - Stability Flange

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 10 JULY, 2024

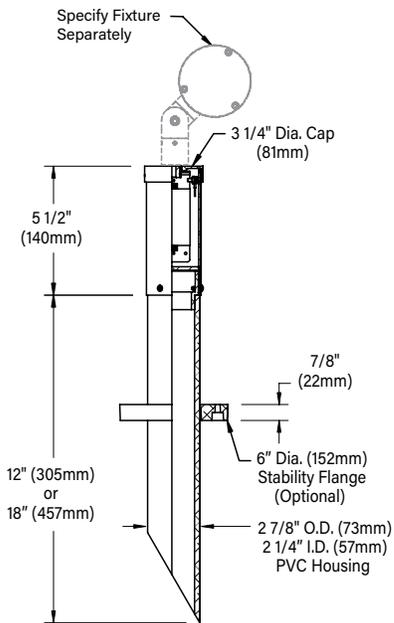
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 FX6 Series

DATE:

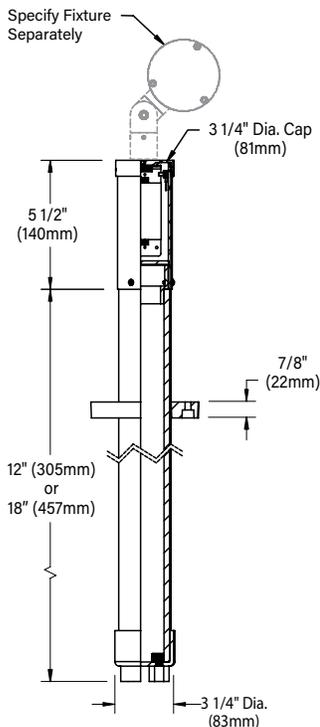
PROJECT:

TYPE:

**STAKE (S)**

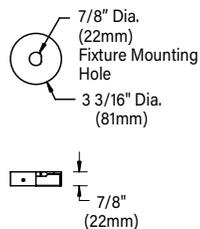


**JUNCTION (J)**

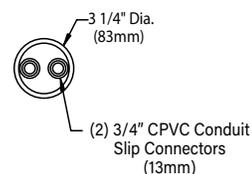


**CAP STYLE**

**'B' Cap (Single Hole)**



**Bottom View of 'J'**



**STANDARD FINISHES**



**PREMIUM FINISHES**



[Click Here](#) to view larger, full-color swatches of all available finishes on our website.

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John Jay Homestead

230042.000  
**BID Submission**  
 10 JULY, 2024

Type:  
 FX6 Series

DATE:	PROJECT:	TYPE:
-------	----------	-------

Accessories (Configure separately)

## SPECIFICATIONS

Electrical	WIRING / CONNECTORS DRIVER	18GA, Stranded, XLPVC, 300V, 150° C rated. Pre-wired and labeled terminal strip(s). One (1) 350mA, Class A, constant current driver. 120-277VAC (nominal) primary input voltage. 50/60Hz. >0.9 Power Factor, 0.25A input current, .20%THD (nominal at 120VAC full load). Output over-voltage, over-current, and short circuit protection with auto recovery. INC Driver - For use with Incandescent Standard TRIAC or ELV dimmers. 1-100% range, 120V Only. 010 Driver - For use with 0-10V dimmers. 1-100% range, external controls by others.
PHYSICAL	INSTALLATION	Provides a clean, architectural transition from wiring system to fixture. 2" Schedule 80 PVC pipe. For direct burial in soil or concrete. Available in 12" and 18" lengths. Available in three installation types:
	STAKE (TYPE S)	60° angled bottom designed for use with conduit or direct burial low voltage cable.
	JUNCTION BOX (TYPE J)	Includes two (2) 3/4" PVC slip connectors for branch circuit wiring.
	STABILITY FLANGE	Optional 6" diameter, molded stability flange simplifies installation and projects into substrate to simplify installation and reinforce housing stability.
	CAP STYLE	Machined from copper-free aluminum.
	DRIVER HOUSING	Fully machined from copper-free aluminum. Stainless steel hardware. High temperature, silicone 'O' Ring provides watertight seal.
	HARDWARE	Tamper-resistant, stainless steel hardware.
	FINISH	StarGuard, our 15-stage, chromate-free process cleans and conversion coats aluminum components prior to application of Class 'A' TGIC polyester powder coating and is RoHS compliant.
	WARRANTY	5-year limited warranty.
	CERTIFICATION & LISTING	Certified to CAN/CSA/ANSI Standards. UL Listed. RoHS compliant. Made in USA with sustainable processes.



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230042.000  
**BID Submission**  
10 JULY, 2024

Type:  
FX6 Series

Not Used



John Jay Homestead

230042.000  
**BID Submission**  
10 JULY, 2024

Type:  
FX7

**Application**

As an individual luminaire with low mounting heights, it can be used for marking danger areas or in rows for illuminating corridors and passageways. With high mounting heights it can be used as a wall luminaire next to doors or for lighting small wall areas.

**Materials**

Clear safety glass with matte finish  
 Marine grade, copper free (≤0.3% copper content) A360.0 aluminum alloy  
 High temperature silicone gasket  
 Mechanically captive stainless steel fasteners

**NRTL** listed to North American Standards, suitable for wet locations  
 Protection class IP 64

**Weight:** 1.1 lbs.

**Electrical**

Operating voltage 120-277V AC  
 Minimum start temperature -30° C  
 LED module wattage 3.0W  
 System wattage 7.0W  
 Controllability 0-10V dimmable  
 Color rendering index Ra > 80  
 Luminaire lumens 204lm  
 LED service life (L70) 60000hrs

**LED color temperature**

- 4000K (K4)
- 3500K (K35)
- 3000K (K3)
- 2700K (K27)

**BEGA** can supply you with suitable LED replacement modules for up to 20 years after the purchase of LED luminaires - see website for details

**Finish**

All BEGA standard finishes are matte, textured powder coat with minimum 3 mil thickness. BEGA Unidure® finish, a fluoropolymer technology, provides superior fade protection in Black, Bronze, and Silver. BEGA standard White is a super durable polyester powder. Optionally available RAL and custom color finishes provided in either polyester powder or liquid paint.

**Available colors**

- Black (BLK)
- Silver (SLV)
- RAL:
- Bronze (BRZ)
- White (WHT)
- CUS:

Type:

BEGA Product:

Project:

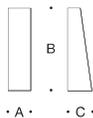
Modified:

**Available options**

- CUS Custom finish
- FSC Fusing
- MGU Marine grade undercoat
- RAL RAL finish

**Included (available for pre-shipment)**

- B19545 Narrow opening wiring box



Wall luminaire - Directed light

	LED	A	B	C
<b>B33514</b>	<b>ADA</b> 3.0W	2 <sup>1</sup> / <sub>8</sub>	7 <sup>7</sup> / <sub>8</sub>	2 <sup>3</sup> / <sub>8</sub>



**BEGA** 1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 info@bega-us.com

Due to the dynamic nature of lighting products and the associated technologies, luminaire data on this sheet is subject to change at the discretion of BEGA North America. For the most current technical data, please refer to bega-us.com Updated 01/16/24



John Jay Homestead

230042.000

**BID Submission**

10 JULY, 2024

Type:

FX8

DATE:

PROJECT:

TYPE:

CATALOG NUMBER LOGIC:



*\*Designed for use with LED transformer. Requires magnetic low voltage dimmer.*

*\*\*The 360SL cost is already included in the price of UPM, UPM dual, and Power Canopy.*

**CATALOG NUMBER LOGIC**

Example: B - MN - LED - e68 - SP - WHP - 12 - 11 - A - 360SL

**MATERIAL**

(Blank) - Aluminum B - Brass

**SERIES**

MN - Micro Nite Star

**SOURCE**

LED - with Integral Dimming Driver (25W min. load when dimmed)\*

**LED TYPE**

e67 - 7W LED/2700K	e82 - 7W/2700K 90 CRI
e68 - 7W LED/3000K	e83 - 7W/3000K 90 CRI
e69 - 7W LED/4000K	e84 - 7W/3500K 80 CRI
e75 - 7W LED/Amber	

**OPTICS**

SP - Spot (17°) MFL - Medium Flood (25°) FL - Flood (30°)

**FINISH (See page 2 for full-color swatches)**

Standard Finishes (BZP, BZW, BLP, BLW, WHP, WHW, SAP, VER)

Premium Finish (ABP, AMG, AQW, BCM, BGE, BPP, CAP, CMG, CRM, HUG, NBP, OCP, RMG, SDS, SMG, TXF, WCP, WIR)

Also available in RAL Finishes

Brass Finishes (MAC, POL, MIT)

**LENS TYPE**

12 - Soft Focus 13 - Rectilinear

**SHIELDING**

11 - Honeycomb Baffle

**CAP STYLE**

A - 45°  
 B - 90°  
 C - Flush Lens  
 D - 45° Less Weephole (Interior use only)  
 E - 90° Less Weephole (Interior use only)

**OPTIONS**

360SL - Knuckle Mounting System\*\*

**MOD OPTIONS**

5 - 5 Ft Leads  
 25 - 25 Ft Leads

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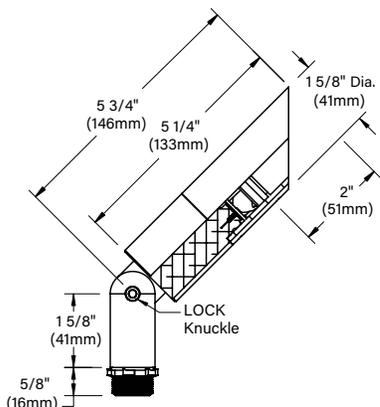
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**BID Submission**  
 10 JULY, 2024

Type:  
**FX9**

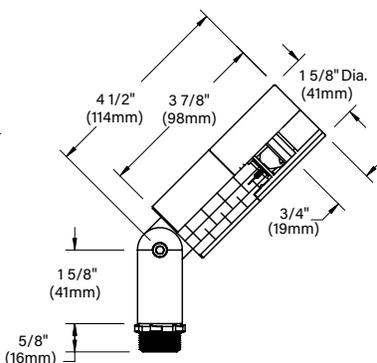
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PROJECT:

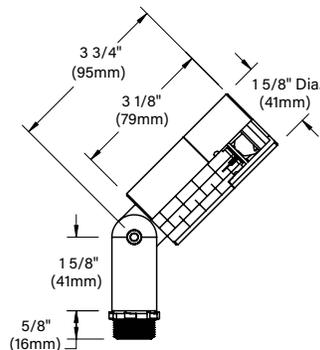
TYPE:



"A/D" CAP



"B/E" CAP



"C" CAP

STANDARD FINISHES



PREMIUM FINISHES



[Click Here](#) to view larger, full-color swatches of all available finishes on our website.

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12/06/2022 SKU-737 SUB000927



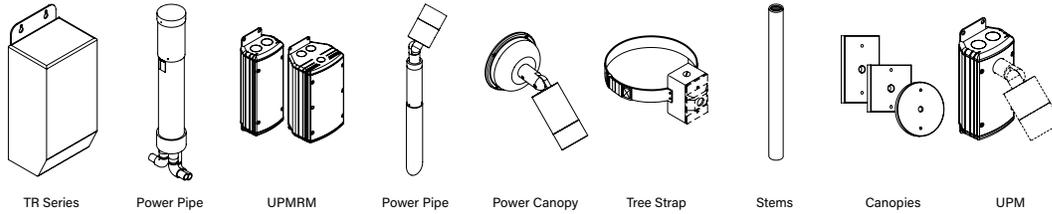
John Jay Homestead

230042.000  
**BID Submission**  
 10 JULY, 2024

Type:  
 FX9

DATE: PROJECT: TYPE:

Accessories (Configure separately)



SPECIFICATIONS

ELECTRICAL	WATTAGE WIRING REMOTE TRANSFORMER	7W LED XLPE, 18GA,150C, 600V, rated and certified to UL3321. For use with 12VAC remote transformer or magnetic transformers only. B-K Lighting cannot guarantee performance with third party manufacturers' transformers.
PHYSICAL	MATERIALS BODY KNUCKLE  CAP LENS LED  DIMMING OPTICS HARDWARE FINISH WARRANTY CERTIFICATION & LISTING	Furnished in copper-free aluminum (6061-T6) or brass (360). Unibody design with enclosed, water-proof wireway and integral heat sink is fully machined from solid billet. LOCK Knuckle is integral to the body and features an interior taper machined from solid billet and a second, reverse angle taper allowing full 180° vertical adjustment without the use of aim-limiting serrated teeth. High temperature, silicone 'O' Ring provides water-tight seal and compressive resistance to maintain fixture position. Design withstands 73 lbs. static load prior to movement for optical alignment with a ½" pipe thread for mounting. Optional 360SL provides biaxial source control with 360° horizontal rotation in addition to vertical adjustment. Fully machined and accommodates two (2) lens or louver media. Shock-resistant, tempered glass lens is factory adhered to fixture cap and provides hermetically sealed optical compartment. Integrated solid state system and modular design with electrical disconnects allow for easy field upgrade and maintenance. High power, forward throw source complies with ANSI C78.377 binning requirements and exceeds ENERGY STAR® lumen maintenance requirements. LM-80 certified components. Integral, constant current driver. 12VAC/VDC input. 50/60Hz. Proprietary input control scheme achieves power factor correction and eliminates inrush current (limited to <250mA non-dimming). Output, overvoltage, open-circuit, and short circuit protected. Conforms to Safety Std. C22.2 No. 250.13-12. Line voltage dimmable via magnetic low voltage dimmer with dedicated neutral conductor. Remote magnetic transformer with LED loads should be loaded to 25% of the transformer VA (watts) rated value. Interchangeable OPTIKIT modules permit optical field changes. Color-code: Narrow Spot (NSP) = red; Spot (SP) = green; Medium Flood (MFL) = yellow; Wide Flood (WFL) = blue. Tamper-resistant, stainless steel hardware. LOCK aiming screw is black oxide treated for additional corrosion resistance. StarGuard, our 15-stage chromate-free process cleans and conversion coats aluminum components prior to application of Class 'A' TGIC polyester powder coating and is RoHS compliant. Powder coat or metal finish options available for brass material. 5-year limited warranty. ITL tested to IESNA LM-79. UL Listed. Certified to CAN/CSA/ANSI Standards. RoHS compliant. Suitable for indoor or outdoor use, in wet locations, and for installation within 4' of the ground. IP66 Rated. Made in the USA with sustainable processes.



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John Jay Homestead

230042.000  
**BID Submission**  
10 JULY, 2024

Type:  
FX9

## LAMP & DRIVER DATA (e67, e68, e69, e75)

DATE: \_\_\_\_\_ PROJECT: \_\_\_\_\_ TYPE: \_\_\_\_\_

DRIVER DATA	Input Volts	InRush Current	Operating	Dimmable	Operation Ambient Temperature
	12VAC/DC 50/60Hz	<250mA (non-dimmed)	500mA	Magnetic Low Voltage Dimmer	-22°F-194°F (-30°C - 90°C)

LM79 DATA				L70 DATA		OPTICAL DATA		
BK No.	CCT (Typ.)	CRI (Typ.)	Input Watts (Typ.)	Minimum Rated Life (hrs.) 70% of initial lumens (L <sub>70</sub> )		Angle	CBCP	Delivered Lumens
e67	2700K	80	7	50,000		17°	3632	459
	2700K	80	7	50,000		25°	1708	435
	2700K	80	7	50,000		30°	1337	438
e68	3000K	80	7	50,000		17°	3871	489
	3000K	80	7	50,000		25°	1821	464
	3000K	80	7	50,000		30°	1425	467
e69	4000K	80	7	50,000		17°	3991	504
	4000K	80	7	50,000		25°	1877	478
	4000K	80	7	50,000		30°	1469	481
e75	Amber (590nm)	~	7	50,000		~	~	~

### OPTICS

Optic	Angle
SP - Spot	17°
MFL - Medium Flood	25°
FL - Flood	30°

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**HLB**

John Jay Homestead

230042.000  
**BID Submission**  
 10 JULY, 2024

Type:  
**FX9**

Page 102 of 119

DATE: PROJECT: TYPE:

CATALOG NUMBER LOGIC:



*\*Includes stake, not available with Junction Box or transformer. Not compatible with fixtures that has 360HD knuckle.*

*\*\*For use with MR16 LED Lamps and Halogen Lamps.*

*\*\*\*For use with 3W-7W LED fixtures. 105-300 VAC. 50/60 Hz. non-dimming.*

*\*\*\*\*Non-dimming.*

**CATALOG NUMBER LOGIC**

Example: PP - S12 - TRSS75 - BZW - B - 120 -SF

**MATERIAL**

(Blank) - Aluminum B - Brass S - Stainless Steel

**SERIES**

PP - Power Pipe System

**TYPE**

- S12 - 12" Stake
- S18 - 18" Stake
- J12 - 12" Junction Box
- J18 - 18" Junction Box
- A18 - 18" Adjustable Stem\*

**TRANSFORMER HOUSING**

- (Blank) - Less Transformer Housing
- TRSS75 - 75VA Electronic Transformer with Housing\*\*
- TRe20 - TRe20 Electronic Transformer with Housing\*\*\*

**FINISH (See page 2 for full-color swatches)**

- Standard Finishes (BZP, BZW, BLP, BLW, WHP, WHW, SAP, VER)
- Premium Finish (ABP, AMG, AQW, BCM, BGE, BPP, CAP, CMG, CRM, HUG, NBP, OCP, RMG, SDS, SMG, TXF, WCP, WIR)
- (Also available in RAL Finishes. See submittal SUB-1439-00)

- Brass Finishes (MAC, POL, MIT)
- Stainless Steel Finishes (MAC, POL)

**CAP STYLE**

- (Blank) - Less Cap (Adjustable stem only)
- B - Single Hole Cap
- C - Solid Cap

**INPUT VOLTAGE**

- (Blank) - For use with TRe20 Electronic Transformer\*\*\*
- 120 - 120 VAC (For use with TRSS75)
- 230 - 230 VAC\*\*\*\* (Electronic only, for use with TRSS75)
- 277 - 277 VAC\*\*\*\* (For use with TRSS75)

**OPTIONS**

- SF - Stability Flange



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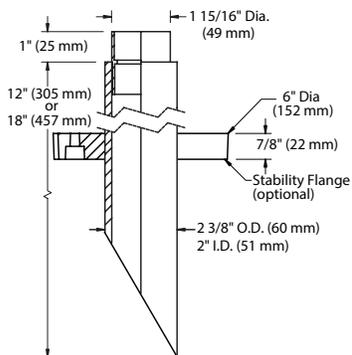
Type:  
 FX9

DATE:

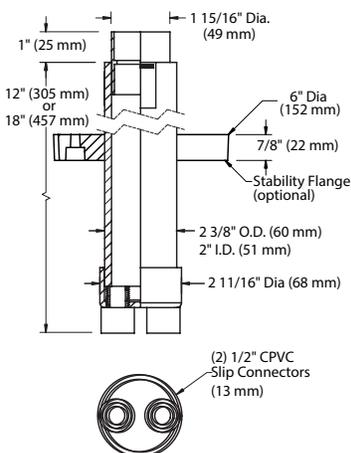
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TYPE:

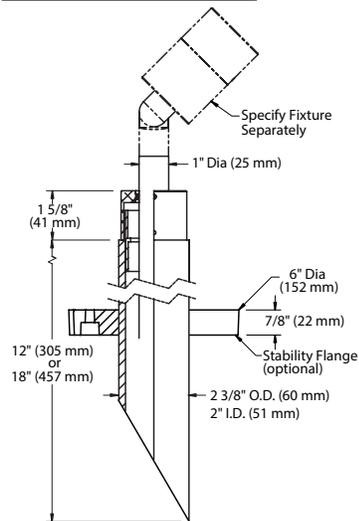
**STAKE (S)**



**JUNCTION (J)**

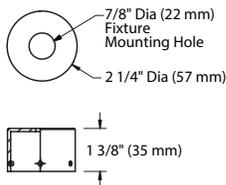


**ADJUSTABLE STEM (A)**

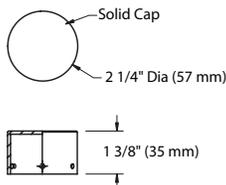


**CAP STYLES**

**'B' Cap (Single Hole)**

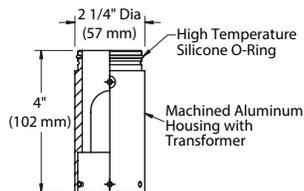


**'C' Cap (Solid Cap)**



**TRANSFORMER**

**Transformer with Housing**



**STANDARD FINISHES**



**PREMIUM FINISHES**



[Click Here](#) to view larger, full-color swatches of all available finishes on our website.

**B-K LIGHTING**

MADE IN THE USA

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**BID Submission**  
 10 JULY, 2024

Type:  
 FX9

DATE:	PROJECT:	TYPE:
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Accessories (Configure separately)

SPECIFICATIONS

Electrical	WIRING	Teflon® coated wire, 18AWG, 600V, 250° C rated and certified to UL 1659 standard. Adjustable stem mount additionally includes 24" or 36" 12/2 direct burial low voltage cable.
	TRANSFORMER HOUSING	Fully machined from copper-free aluminum, solid machined brass or stainless steel. Stainless steel hardware. High temperature, silicone 'O' Ring provides watertight seal.
	ELECTRONIC TRANSFORMER	For use with halogen lamps. 120V, 230V, and 277V primary voltage. 120V is fully dimmable (40W minimum load). 50/60Hz. 11.6V secondary voltage. 10W minimum load (halogen) non-dimmed. 75 watt maximum load. >0.93 Power Factor. <20% THD. Operating frequency >10kHz. Soft start circuitry to extend lamp life.
	TRe20 ELECTRONIC TRANSFORMER	For use with solid state 12V systems. 105-300VAC primary voltage. 50/60Hz. Non-dimming. 20VA maximum load.
PHYSICAL	INSTALLATION	Provides a clean, architectural transition from wiring system to fixture. 2" Schedule 80 PVC pipe. For direct burial in soil or concrete. Available in 12" and 18" lengths. Available in three installation types:
	STAKE (TYPE S)	60° angled bottom designed for use with conduit or direct burial low voltage cable.
	JUNCTION BOX (TYPE J)	Includes two (2) 1/2" PVC slip connectors for branch circuit wiring.
	ADJUSTABLE STEM (TYPE A18)	18" field adjustable stem accommodates future landscape growth. Unused stem length remains hidden inside housing. Delrin bushing and stainless steel set screws lock mounting height.
	STABILITY FLANGE	Optional 6" diameter, molded stability flange simplifies installation and projects into substrate to simplify installation and reinforce housing stability.
	CAP STYLE	Machined from copper-free aluminum or machined brass.
	HARDWARE	Tamper-resistant, stainless steel hardware.
	FINISH	StarGuard, our 15-stage, chromate-free process cleans and conversion coats aluminum components prior to application of Class 'A' TGIC polyester powder coating and is RoHS compliant.
	WARRANTY	5-year limited warranty.
	CERTIFICATION & LISTING	Certified to CAN/CSA/ANSI Standards. UL Listed. RoHS compliant. Made in USA with sustainable processes.



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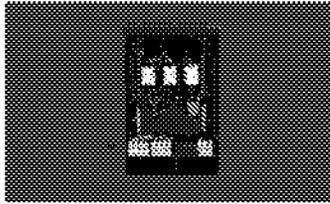
Type:  
 FX9



**QOM-eLED+0-10V-PS**  
LED POWER SUPPLY 60W-300W



Declares.



- Surface mount, exterior rated LED power supply center
- Utilizes Advance Titanium drivers with optional 0-10V dimming module
- Designed for powering 12VDC or 24VDC constant voltage products
- Suitable for 0-10V dimming or on/off applications
- 0-10V dimming provides PWM to the fixture for smooth dimming
- UL listed enclosure can accommodate 1-3 drivers and 1-3 dimming modules

1	2	3	4	5	6
PRODUCT	WATTAGE	PRIMARY VOLTAGE	SECONDARY VOLTAGE	CONTROL	COLOR
QOM-eLED-PS		UNV		0-10V	

Example Part Number: QOM-eLED-PS-60W-UNV-12VDC-0-10V-BK

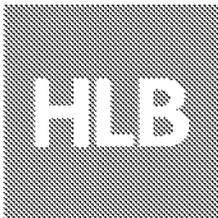
1	2	3	4
PRODUCT	WATTAGE	PRIMARY VOLTAGE	SECONDARY VOLTAGE
QOM-eLED-PS	60W 120W 180W	UNV Universal (20-277V)	12VDC
	100W 200W 300W	UNV Universal (20-277V)	24VDC

5	6
CONTROL	COLOR
0-10V	BK Black Powder Coat Finish (Standard) SS 316 Marine Grade Stainless Steel

**PRODUCT INFORMATION**

- Limited output voltage and current, plus isolation for safe operation
- Dimmable 0.1% - 100% w/ additional 0-10V dimming module
- Fully potted drivers for moisture resistance
- Suitable for dry, damp, and wet locations
- Surface mount only
- Suitable for use with submersible luminaire
- Suitable for pool and spa application
- Primary voltage - universal (120-277V)
- Wide operating temperature range, -40°F to 104°F
- Fits up to (3) 60W 12VDC or (3) 100W 24VDC driver(s) and (1) 0-10V dimming module
- 5 year warranty
- Driver has Class A sound rating
- Class 2 output
- CSA #233924
- Low Voltage Lighting Systems
  - CSA Class 3425-15 and Class 3425-95
  - CSA Standard C22.2 No. 250.0-06 - Luminaires
  - ANSI/UL Standard 2108 - Low Voltage Lighting System
- ANSI/UL Standard 8750 - Light Emitting Diode (LED) Equipment for Use in Lighting Products
- CSA Std C22.2 No 250.13-14 - Light Emitting Diode (LED) Equipment for Lighting Applications
- Landscape Lighting Systems
  - CSA Class 3402-15 and Class 3402-95
  - CSA Standard C22.2 No. 250.7-07 - Extra-Low-Voltage Landscape Lighting Systems
  - ANSI/UL Standard 1838 - Low Voltage Landscape Lighting Systems
  - ANSI/UL Standard 8750 - Light Emitting Diode (LED) Equipment for Use in Lighting Products
  - CSA Std C22.2 No 250.13-14 - Light Emitting Diode (LED) Equipment for Lighting Applications
- Hydromassage (Pool and Spa)
  - CSA Class 3425-46 and class 3425-96
  - UL Standard 379 - Power Unit for Fountain, Swimming Pool and Spa Luminaires
  - CSA STD C22.2 NO 89-15- Swimming Pool Luminaire, Submersible Luminaires and Accessories



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10 JULY, 2024

Type:  
FX9



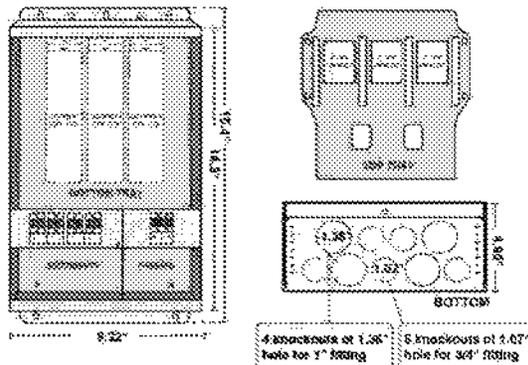
**QOM-eLED+0-10V-PS**  
LED POWER SUPPLY 60W-300W

**VOLTAGE DROP CHART**

This product must be installed in accordance with the applicable installation code by a person familiar with the construction and operation of the product and the hazards involved. If dimming with optional 0-10V dimming module, use a dimmer rated for 0-10.

VDC	Load Wattage (W)	Distance from PS in PS Voltage Drop									
		10 AWG	12 AWG	14 AWG	16 AWG	18 AWG	20 AWG	22 AWG	24 AWG	26 AWG	
12	15	145'	168'	192'	216'	240'	264'	288'	312'	336'	
	25	115'	138'	162'	186'	210'	234'	258'	282'	306'	
	50	72'	87'	103'	119'	135'	151'	167'	183'	199'	
24	17	89'	107'	125'	143'	161'	179'	197'	215'	233'	
	25	66'	79'	93'	107'	121'	135'	149'	163'	177'	
	40	43'	52'	61'	70'	79'	88'	97'	106'	115'	
	60	32'	38'	45'	52'	59'	66'	73'	80'	87'	
	100	21'	25'	30'	35'	40'	45'	50'	55'	60'	

**1 PRODUCT - DIMENSIONS**



**2 TECHNICAL INFORMATION**

Wattage	Max Input Voltage	Recommended Voltage	Max Power Factor @ 120V	Max Power Factor @ 277V
60W	1-60V	17VDC	0.995	0.995
120W	60-120V	17VDC	0.995	0.995
180W	60-120V	17VDC	0.995	0.995
240W	60-120V	17VDC	0.995	0.995
300W	60-120V	17VDC	0.995	0.995

**HOUSING**

- 18 gauge welded steel enclosure: 15.4"L x 9.22"W x 4.90"D
- Door: 14.5"L x 9.27"W
- Knockouts: 9
- Built-in support bracket incorporated to secure housing for surface mounting

**PERFORMANCE**

- Rated for surface mount or outdoor use
- Fully rated to operate low voltage load at listed wattage (No derating required)
- Voltage regulation to 2% or less of rated output voltage
- The ability to be dimmed using 0-10V dimming
- Universal input range of 120-277 Vrms
- Low Voltage Lighting Systems
  - CSA Class 3425-15 and Class 3425-95
- LED Landscape Lighting System Components
  - CSA Class 3402-15 and Class 3402-95
- Hydromassage (Pool & Spa)
  - CSA Class 3425-46 and Class 3425-96
  - Short circuit protection (SCP)
  - Over voltage protection (OVP)
  - Over current protection (OCP)
  - Live tested by the manufacturer to ensure proper operation
- Terminal blocks are made of tin plated copper with a voltage rating of 300V and a current rating of 40A



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**BID Submission**  
10 JULY, 2024

Type:  
**FX9**



**QOM-eLED+0-10V-PS**  
LED POWER SUPPLY 60W-300W

**SPECIFICATIONS**

Input	12VDC			24VDC		
Input Voltage (Vrms)	120	120	277	120	120	277
Input Current, max (Arms)	0.59	0.28	0.28	0.30	0.15	0.15
Input Current, max (Apk)	-	-	-	80	30	30
Input Frequency (Hz)	50/60			50/60		
Input Power (Wmax)	70			117		

Output	12VDC	24VDC
Output Voltage, nom (V)	12	24
Output Current (A)	5.0	4.2
Output Power (Wmax)	60	100
Regulation (0-100% load)	±0.5%	

Environmental	Min	Typ	Max	Min	Typ	Max
THB (%)	-	-	25	-	-	25
PF (cos)	0.95	-	0.98	-	-	-
Case Temp (°C)	-	-	80	-	-	80

20kV surge

**PROTECTIONS**

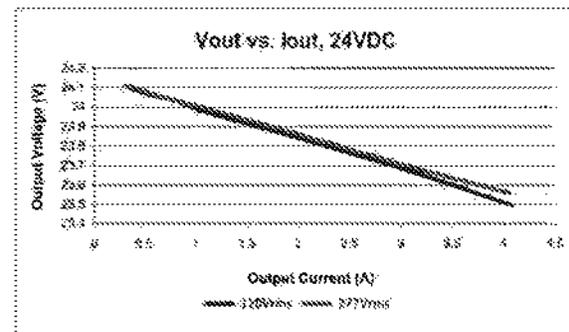
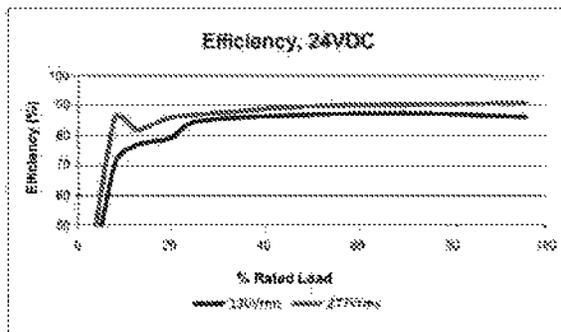
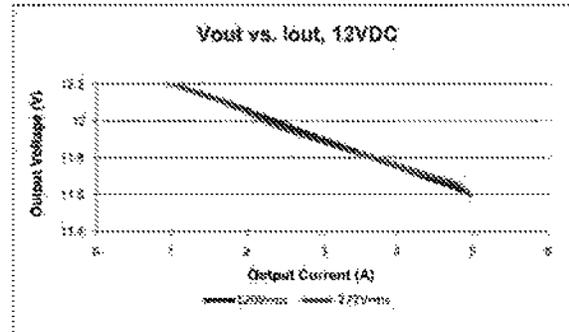
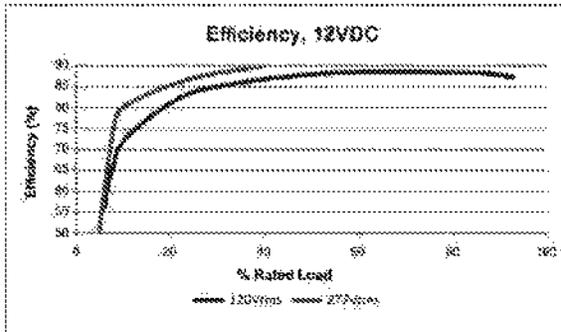
- Short Circuit Protection (SCP)
- Over Voltage Protection (OV)
- Over Current Protection (OC)
- Class 2 Output

**COLOR**



**COMPLIANCE**

- EMI Spec
  - FCC 47 Part 15
  - EN61000-3-2
- CSA Certified
  - UL-2108
  - UL-1838
  - UL-8750
  - UL-379
  - CSA C22.2 No 250.7-07
  - CSA C22.2 No 250.0-08
  - CSA C22.2 No 250.13-14
  - CSA C22.2 No 89-15



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10 JULY, 2024

Type:  
FX9



Not Used



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10 JULY, 2024

Type:  
FX10

Page 110 of 119

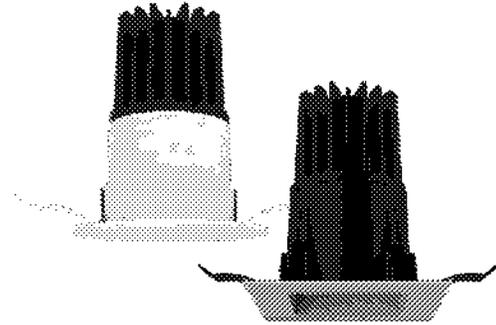
# LUMENTURE®

## DL60 2" FIXED DOWNLIGHTS

With a 2" aperture, knife-edge trim and excellent visual cutoff - Lumenture's DL60 blends discreetly in any environment. These recessed modules deliver high lumens without glare. The result is superior brightness and quality from an unobtrusive fixture. The DL60 is available both in remodel with an attached junction box or with optional rough-in housings to fit any construction needs.

TYPE: \_\_\_\_\_

PROJECT: \_\_\_\_\_



<b>DIMMING</b> Triac, ELY, 0-10V, DALI & LEDcde	<b>WEIGHT</b> 11 oz. (module only)	<b>WATTAGE</b> 6.5W-17W	<b>EFFICACY</b> up to 1900lm up to 111lm/W	<b>AC DRIVER INPUT</b> 120-277V	<b>HOUSING</b> Closed, Open, Pan, Remodel, Chicago Plenum	<b>FINISH</b> Aluminum module & trim, Powdercoat	<b>ACCESSORIES</b> Field replaceable optics & accessories

### ORDERING

FIXTURE	CCT/CRI <sup>(1)</sup>	BEAM SPREAD <sup>(2)</sup>	COBE COLOR <sup>(3)</sup>	TRIM COLOR <sup>(3)</sup>	TRIM TYPE <sup>(2)</sup>	DRIVER <sup>(1,4)</sup>	OUTPUT (mA) <sup>(5)</sup>	Housing (width x H)	HOUSING/J-BOX
DL60	22H - 2700K, CRI 90+	15° - 15°	W - White	W - White	R - Round	U - Universal Dimming Driver (Triac, ELY & 0-10V)	150 - 65W	2.2" x 2.2" x 1.2"	C - Closed
	27H - 3000K, CRI 90+	25° - 26°	B - Black	B - Black	RF - Round Flangeless	D1 - EtoLED DALI/LEDrude (0% dimming)	200 - 9.5W	2.2" x 2.2" x 1.2"	N - Open
	30H - 3000K, CRI 95+	40° - 40°	S - Silver	S - Silver	RP - Round Pinhole	D1 - EtoLED DALI/LEDrude (0% dimming)	250 - 11W	2.2" x 2.2" x 1.2"	P - Pan
	30B - 3000K, CRI 95+	60° - 60°			RW - Round Wet	Z1 - EtoLED 0-10V (0.1% dimming)	300 - 12.5W	2.2" x 2.2" x 1.2"	R - Remodel
	30B - 3000K, CRI 95+ (Dim-to-Warm)				RFW - Round Flangeless Wet		350 - 15W	2.2" x 2.2" x 1.2"	CP - Chicago Plenum
	35H - 3500K, CRI 90+				S - Square		400 - 17W	2.2" x 2.2" x 1.2"	
40H - 4000K, CRI 90+				SF - Square Flangeless					
				SW - Square Wet					
				SFW - Square Flangeless Wet					

#### NOTES

- Custom options available. Please consult factory.
- When "wet" trim is added, the fixtures are Wet Location Rated. Above ceiling access is required for Flangeless Trim options. Flangeless Trim options are only available with C (Closed), N (Open), and CP (Chicago Plenum).
- EM battery backup option available. See page (4)
- Housing availability chart is for informational purposes only. Do not include in ordering.
  - \* Optional butterfly brackets available. See accessories on page (4).
  - Butterfly brackets and factory installed brackets are required for acoustical ceiling tile (ACT) ceilings.

#### KEY

- Available, Non-IC Rated
- Available, IC-Rated, Title 24 Compliant
- Available, IC-Rated
- Not available

#### ORDERING EXAMPLE:

BLACK - 27H - 15° - W - W - R - U - 200 - C

#### LISTINGS

Certified to UL standard 1598 and CSA C22.2 No. 250.0-08 for damp locations. Airtight (AT) certified less than 2 cfm leakage @ 1.57PSI per ASTM E283.



**DL60 2in Fixed Downlight Specifications p. 1/4**  
 Custom options available, please consult factory.  
 Product specifications are subject to change.  
 info@lumenture.com | P: 203.954.3233

**LUMENTURE®**  
 www.lumenture.com  
 version: 20240208



John Jay Homestead

230042.000  
**BID Submission**  
 10 JULY, 2024

Type:  
**FX11**

# DL60 2" FIXED DOWNLIGHTS

## PHOTOMETRICS

### LUMEN OUTPUT

Values fluctuate based on CCT and CRI. To estimate delivered lumen output of various CCT/CRI options, multiply nominal lumens by the multiplier below.

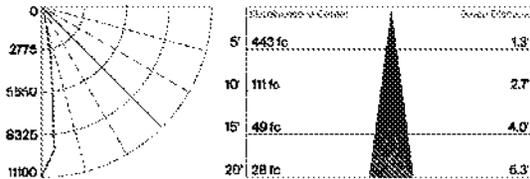
OUTPUT (lm)	WATTAGE	LUMENS PER WATT
150	6.5W	23.1
200	6.5W	30.8
250	11W	22.7
300	12.5W	24.0
350	15W	23.3
400	17W	23.5

CODE	CCT	CRI	Factor (DL60+)	17"	19"	21"	23"
22H	2200K	90+	Standard	0.65	0.70	0.70	0.65
27H	2700K	90+	Standard	0.75	0.80	0.85	0.80
30H	3000K	90+	Standard	0.80	0.80	0.80	0.85
30B	3000K	95+	Standard	0.75	0.80	0.80	0.75
30D	3000K	90+	Dim-to-Warm	N/A	0.80	0.80	0.75
35H	3500K	90+	Standard	0.85	0.95	0.95	0.90
40H	4000K	90+	Standard	0.85	0.95	0.95	0.90

Luminaire maintains a lumen output tolerance of +/-7.5%  
 \*\*Dim-to-Warm dims from 3000K to 1800K.

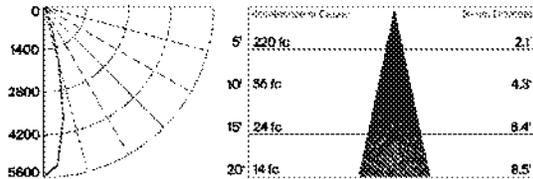
### DL60 - 15 Degree

Delivered Light Output: 1159 Lumens  
 Total Watts @120V: 13.5;  
 Lumens Per Watt: 86  
 Center Beam Candle Power: 10993  
 Spacing Criteria: 0.26



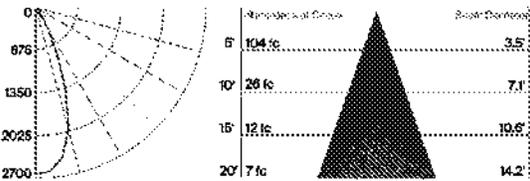
### DL60 - 25 Degree

Delivered Light Output: 1248 Lumens  
 Total Watts @120V: 12.5;  
 Lumens Per Watt: 100  
 Center Beam Candle Power: 5480  
 Spacing Criteria: 0.42



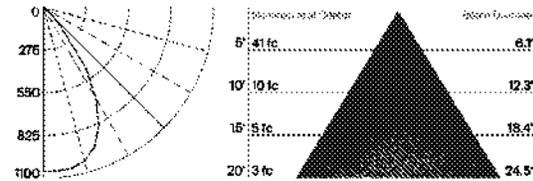
### DL60 - 40 Degree

Delivered Light Output: 1225 Lumens  
 Total Watts @120V: 12.5;  
 Lumens Per Watt: 98  
 Center Beam Candle Power: 2597  
 Spacing Criteria: 0.62



### DL60 - 60 Degree

Delivered Light Output: 1100 Lumens  
 Total Watts @120V: 12.5;  
 Lumens Per Watt: 88  
 Center Beam Candle Power: 1029  
 Spacing Criteria: 0.92



DL60 2in Fixed Downlight Specifications p. 2/4  
 Custom options available, please consult factory  
 Product specifications are subject to change  
 info@luminaire.com P: 203.034.3333

**LUMENTURE**  
 www.luminaire.com  
 version: 20240206



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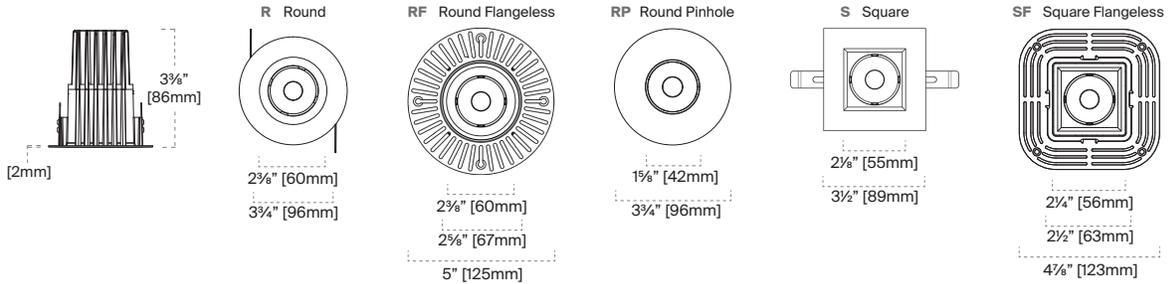
230042.000  
**BID Submission**  
 10 JULY, 2024

Type:  
**FX11**

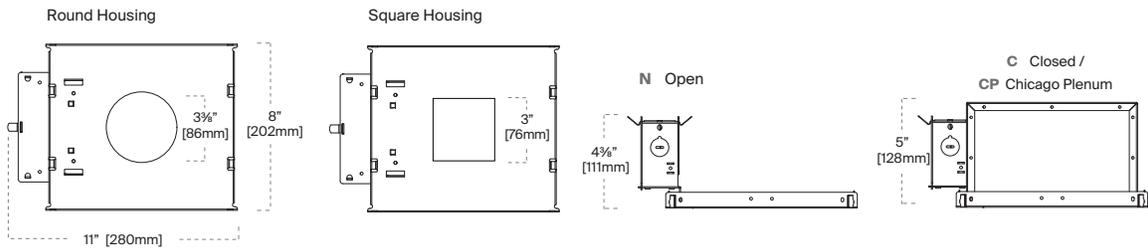
# DL60 2" FIXED DOWNLIGHTS

**Max Ceiling Thickness = 1"**  
Please consult factory for thicker ceiling options

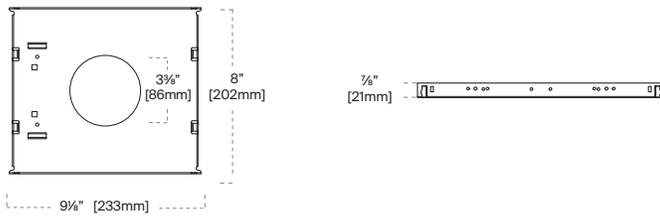
## DIMENSIONS



## OPEN (N), CLOSED (C) AND CHICAGO PLENUM (CP) HOUSING DIMENSIONS



## PAN (P) HOUSING DIMENSIONS



Supplied with (2) 24" adjustable hanger bars with nails. Butterfly brackets for C-Channel available upon request.

Supplied with (R) Remodel Housing (Loose Junction Box)

## REMODEL (R) DIMENSIONS (Loose Junction Box)



**DL60 2in Fixed Downlight Specifications** p. 3/4  
Custom options available, please consult factory  
Product specifications are subject to change  
info@lumature.com P. 203.864.3333

**LUMENTURE®**  
www.lumature.com  
version 20240306



John Jay Homestead

230042.000  
**BID Submission**  
10 JULY, 2024

Type:  
FX11

# DL60 2" FIXED DOWNLIGHTS

## DIMMING

Dimming is standard and allows for smooth illumination below 0.1% with certain dimmer/driver combinations. The "U" (Universal) driver dims to 1%, accepts 120-277V AC input and is compatible with 0-10V, Triac (forward phase) and ELV (reverse phase) dimmers. The "Z1" (0-10V) driver dims to 0.1%, accepts 120-277V AC input and is compatible with 0-10V dimmers. The "D1" (DALI) driver dims to 0.1%, accepts 120-277V AC input and is compatible with DALI dimmers. For dimmer compatibility, refer to the Dimming Compatibility document on our website.

## ACCESSORIES

### LENS ACCESSORIES

 Lens-Yellow-50

 Lens-Green-50

 Lens-Blue-50  
(Light Blue)

 Lens-Red-50

 Lens-Rose-50

 HL-50  
(Black Honeycomb Louver)

 LS-50  
(Linear Spread)

 SOL-50  
(Solite)

### NOTES

Field replaceable optics and accessories available. Please consult factory.  
Lens accessories cannot be combined with any Wet Trim.



### BUTTERFLY BRACKET KIT

Contains two (2) butterfly brackets and two (2) wing nuts.  
Butterfly brackets and factory installed brackets are required for acoustical ceiling tile (ACT) ceilings.

## EMERGENCY BACKUP

Emergency Backup	
Output Power:	2W (initial)
Emergency Operation:	90 minutes
Battery Type:	nickel-cadmium
Input Voltage:	120-277 VAC
Output Voltage:	20-50 VDC
Class 2 Output:	Yes
Diagnostic Type:	Manual
Title 20 Compliant:	Yes
Life Expectancy:	7-10 years
Dimensions:	13.4 x 2.4 x 1.6"
Mounting Type:	Removes in-line metal conduit
Maximum Distance:	25 ft
Weight:	2.8 lbs
Cost:	\$\$\$

### NOTES

Access panel is required for service of remote emergency backup battery.

DL60 2in Fixed Downlight Specifications p. 44  
Custom options available, please consult factory.  
Product specifications are subject to change.  
info@luminaire.com P: 203.034.3333

**LUMENTURE**  
www.luminaire.com  
version: 20240206



John Jay Homestead

230042.000

**BID Submission**

10 JULY, 2024

Type:

FX11

Page 114 of 115

# WAC LIGHTING

## Caliber

Outdoor Ceiling Mount

Fixture Type: \_\_\_\_\_

Catalog Number: \_\_\_\_\_

Project: \_\_\_\_\_

Location: \_\_\_\_\_

Model & Size	Color Temp	Finish	LED Watts	LED Lumens	Delivered Lumens
<input type="radio"/> FM-W36607 7"	3000K	<input type="radio"/> AL Brushed Aluminum <input type="radio"/> BK Black <input type="radio"/> BZ Bronze <input type="radio"/> WT White	11W	855	545

Example: **FM-W36607-WT**

For custom requests please contact [customs@wacighting.com](mailto:customs@wacighting.com)

### DESCRIPTION

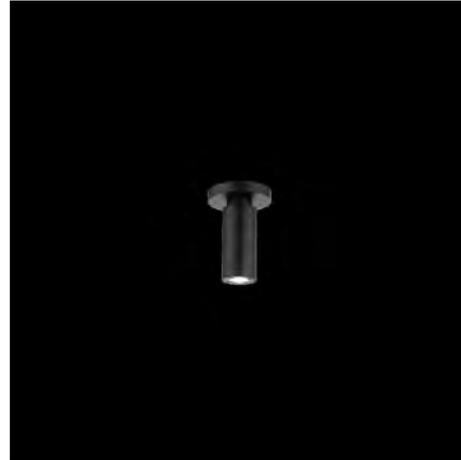
Light projection tuned with precision.

### FEATURES

- Driver concealed within the fixture
- 5 year warranty

### SPECIFICATIONS

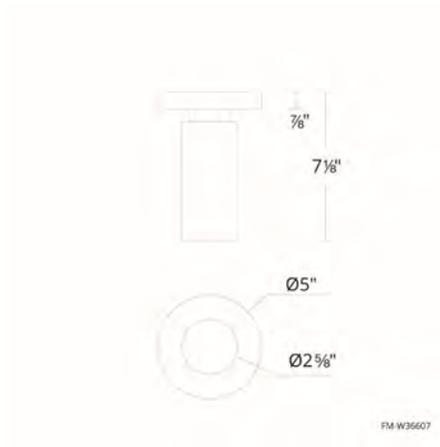
Color Temp:	3000K
Input:	120-277V,50/60Hz
CRI:	90
Dimming:	ELV: 100-5% , 0-10V: 100-5%,TRIAC: 100-10%
Rated Life:	50000 Hours
Standards:	ETL, cETL,IP65 Wet Location Listed
Construction:	Aluminum hardware with lens diffuser



### FINISHES:



### LINE DRAWING:



wacighting.com | Phone (800) 526.2588 | Fax (800) 526.2585 | Headquarters/Eastern Distribution Center 44 Harbor Park Drive Port Washington, NY 11050

WAC Lighting retains the right to modify the design of our products at any time as part of the company's continuous improvement program. January 2024

1



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 10 JULY, 2024

Type:  
**FX12**

Page 115 of 119

Not Used



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**BID Submission**  
10 JULY, 2024

Type:  
FX13

Page 116 of 119

Not Used



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**BID Submission**  
10 JULY, 2024

Type:  
FX14

Not Used



John Jay Homestead

230042.000

**BID Submission**

10 JULY, 2024

Type:

FX15

Page 118 of 119

**Application**

This wall mounted luminaire features a forward throw light distribution and is designed for the general illumination of pathways and walkways from various mounting heights. Downlight applications only.

**Materials**

Clear safety glass with optical texture  
 Marine grade, copper free (≤0.3% copper content) A360.0 aluminum alloy  
 High temperature silicone gasket  
 Mechanically captive stainless steel fasteners

**NRTL** listed to North American Standards, suitable for wet locations  
 Protection class IP 64

**Weight:** 2.7 lbs.

**Electrical**

Operating voltage	120-277V AC
Minimum start temperature	-30° C
LED module wattage	7.9W
System wattage	11.0W
Controllability	0-10V, TRIAC, and ELV dimmable
Color rendering index	Ra > 80
Luminaire lumens	618lm
LED service life (L70)	60000 hrs

**LED color temperature**

- 4000K (K4)
- 3500K (K35)
- 3000K (K3)
- 2700K (K27)

**BEGA** can supply you with suitable LED replacement modules for up to 20 years after the purchase of LED luminaires - see website for details

**Finish**

All BEGA standard finishes are matte, textured powder coat with minimum 3 mil thickness. BEGA Unidure® finish, a fluoropolymer technology, provides superior fade protection in Black, Bronze, and Silver. BEGA standard White is a super durable polyester powder. Optionally available RAL and custom color finishes provided in either polyester powder or liquid paint.

**Available colors**

- |                                       |                                       |
|---------------------------------------|---------------------------------------|
| <input type="checkbox"/> Black (BLK)  | <input type="checkbox"/> Bronze (BRZ) |
| <input type="checkbox"/> Silver (SLV) | <input type="checkbox"/> White (WHT)  |
| <input type="checkbox"/> RAL:         | <input type="checkbox"/> CUS:         |

Type:

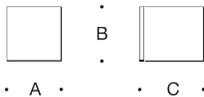
BEGA Product:

Project:

Modified:

**Available options**

- |                              |                        |
|------------------------------|------------------------|
| <input type="checkbox"/> CUS | Custom finish          |
| <input type="checkbox"/> FSC | Fusing                 |
| <input type="checkbox"/> MGU | Marine grade undercoat |
| <input type="checkbox"/> RAL | RAL finish             |



Wall luminaire - Asymmetric

	LED	A	B	C
<b>B33815</b>	7.9W	4 <sup>3</sup> / <sub>8</sub>	7 <sup>1</sup> / <sub>2</sub>	4 <sup>3</sup> / <sub>8</sub>



**BEGA** 1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 info@bega-us.com

Due to the dynamic nature of lighting products and the associated technologies, luminaire data on this sheet is subject to change at the discretion of BEGA North America. For the most current technical data, please refer to bega-us.com Updated 03/08/24



John Jay Homestead

230042.000  
**BID Submission**  
 10 JULY, 2024

Type:

FX16 Series

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APPENDIX 12  
Control Narrative

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## APPENDIX C – LIGHTING CONTROL NARRATIVE

### 1.1 GENERAL

- A. Lighting Control Systems: John Jay Homestead Site and Building Enhancements is following 2020 Energy Conservation Construction Code of New York State which is based on IECC 2018 and requires interior lighting be dimmable and controlled by automated photocell, timeclock, and/or occupancy sensing controls. Exterior lighting will be dimmable per lighting fixture schedule and controlled by automated photocell, astronomical timeclock, and/or occupancy sensing controls. Lighting will be connected to the building energy management system for timeclock activation. Localized control stations will be designed for areas where individual usage and occupant controls are desired.
- B. For John Jay Homestead Site and Building Enhancements, the lighting controls will be designed to meet the energy code requirements and project standards. The electrical engineer will provide those compliant systems and HLB will coordinate with them to ensure the luminaires will be controlled by those systems. The spaces described below are those requiring lighting controls above and beyond these standard requirements. The enhanced lighting control will provide improved functionality of the spaces.

### 1.2 ENHANCED LIGHTING CONTROLS

- A. BEDFORD HOUSE / Exhibit Spaces
  - 1. Automatic Controls
    - a. Architect and Owner shall confirm hours of operation.
    - b. Engineer shall confirm emergency requirements.
    - c. Allow for up to (3) recorded presets to be controlled by timeclock.
  - 2. Manual Controls
    - a. Allow for manual dimming override via wireless tablet(s) or phone(s). Tablet(s) to be located in back of house location(s).
  - 3. Zones
    - a. The minimum requirement is to allow one zone of dimming control per fixture type in each location.
  - 4. Sequence
    - a. All lighting shall be triggered to Full On scene via timeclock at sunrise/or opening of facility.
    - b. All lighting shall be triggered to Closed scene via timeclock at preset time (by Owner).
    - c. Allow for up to (3) scenes to be determined by Owner.
    - d. Cleaning (100% on) and Closed scenes shall be triggered manually by staff.

- B. BEDFORD HOUSE / Event Spaces (Ballroom, Porch, Conservatory)
1. Automatic Controls
    - a. Architect and Owner shall confirm hours of operation.
    - b. Allow for up to (4) recorded presets.
  2. Manual Controls
    - a. Allow for manual dimming override via wireless tablet(s) or phone(s). Tablet(s) to be located in back of house location(s).
    - b. Override local preset station shall be located at the ballroom entrances and other areas as designated by the Architect and Owner.
  3. Zones
    - a. The minimum requirement is to allow one zone of dimming control per fixture type in each location.
  4. Sequence
    - a. All lighting shall be triggered to Full On scene via timeclock at sunrise.
    - b. All lighting shall be triggered to Closed scene via timeclock at preset time (by Owner).
    - c. Allow for up to (4) scenes to be determined by Owner.
    - a. Cleaning (100% on) and Closed scenes shall be triggered manually by staff.
- C. BEDFORD HOUSE / Office Spaces
1. Automatic Controls
    - a. Vacancy sensors.
    - b. Engineer shall confirm emergency requirements.
  2. Manual Controls
    - a. Allow for manual override by staff via switch at room entrance. Location to be determined by the Architect and Owner.
  3. Zones
    - a. The minimum requirement is to allow one zone of dimming control per fixture type in each location.
  4. Sequence
    - a. Vacancy sensors will turn lights off automatically when 20 minutes if no occupancy has been detected. Wall-mounted sensors integrated into switches may be used for small rooms where coverage of device is sufficient.
- D. BEDFORD HOUSE / Storage
1. Automatic Controls
    - a. Occupancy Sensors.
    - b. Engineer shall confirm emergency requirements.

2. Manual Controls
    - a. Allow for manual override by staff via switch at room entrance. Location to be determined by the Architect and Owner.
  3. Zones
    - a. The minimum requirement is to allow one zone of dimming control per fixture type in each location.
  4. Sequence
    - a. Allow for manual All-ON override by switch.
    - b. During regular operation, occupancy sensor shall switch lighting in the following sequence:
      - 1) Lighting shall turn on to preset level if motion is detected.
      - 2) Lighting shall turn off if no motion is detected after 20 minutes or the code-required maximum delay time, whichever is longer.
- E. BEDFORD HOUSE / Egress Staircase
1. Automatic Controls
    - a. Occupancy Sensors.
    - b. Engineer shall confirm emergency requirements.
  2. Zones
    - a. The minimum requirement is to allow one zone of dimming control per fixture type in each location.
  3. Sequence
    - a. During regular operation, occupancy sensor shall switch lighting in the following sequence:
      - 1) Lighting shall turn on to preset level if motion is detected.
- F. CARRIAGE BARN / Entrance, Ticketing, Gift Shop
1. Automatic Controls
    - a. Architect and Owner shall confirm hours of operation.
    - b. Engineer shall confirm emergency requirements.
    - c. Allow for up to (3) recorded presets to be controlled by timeclock.
  2. Manual Controls
    - a. Allow for manual dimming override via wireless tablet(s) or phone(s). Tablet(s) to be located in back of house location(s).
  3. Zones
    - a. The minimum requirement is to allow one zone of dimming control per fixture type in each location.

4. Sequence
  - a. All lighting shall be triggered to Full On scene via timeclock at sunrise.
  - b. All lighting shall be triggered to Closed scene via timeclock at preset time (by Owner).
  - c. Allow for up to (3) scenes to be determined by Owner.
  - d. Cleaning (100% on) and Closed scenes shall be triggered manually by staff.

G. CARRIAGE BARN / Exhibits

1. Automatic Controls
  - a. Architect and Owner shall confirm hours of operation.
  - b. Engineer shall confirm emergency requirements.
  - c. Allow for up to (4) recorded presets to be controlled by timeclock.
2. Manual Controls
  - a. Allow for manual dimming override via wireless tablet(s) or phone(s). Tablet(s) to be located in back of house location(s).
3. Zones
  - a. The minimum requirement is to allow one zone of dimming control per fixture type in each location.
4. Sequence
  - a. All lighting shall be triggered to Full On scene via timeclock at sunrise.
  - b. All lighting shall be triggered to Closed scene via timeclock at preset time (by Owner).
  - c. Allow for up to (4) scenes to be determined by Owner.
  - d. Cleaning (100% on) and Closed scenes shall be triggered manually by staff.

H. BEDFORD HOUSE & CARRIAGE BARN / Façade

1. Automatic Controls
  - a. Astronomical Timeclock
  - b. Architect and Owner shall confirm hours of operation.
2. Manual Controls
  - a. Allow for manual dimming override via wireless tablet and touchscreen(s). Touchscreen(s) to be located in back of house location(s).
  - b. c
3. Zones
  - a. Bedford House South Porch (FX11)
  - b. Bedford House South Façade (FX16)
  - c. Bedford House East Entry (FX16A)
  - d. Bedford House Ballroom Porch Entry (FX16A)
  - e. Bedford House Conservatory Entry (FX8)
  - f. Bedford House Stone Wall (FX6A)

- g. Carriage Barn Stone Wall (FX6)
- 4. Sequence
  - a. Provide manual override control to turn on/off fixtures per zone.
  
- I. BEDFORD HOUSE & CARRIAGE BARN / Restrooms
  - 1. Automatic Controls
    - a. Occupancy Sensors.
    - b. Engineer shall confirm emergency requirements.
  - 2. Manual Controls
    - a. Allow for manual override by staff via switch at room entrance. Location to be determined by the Architect and Owner.
  - 3. Zones
    - a. The minimum requirement is to allow one zone of dimming control per fixture type in each location.
  - 4. Sequence
    - a. Allow for manual All-ON override by switch.
    - b. During regular operation, occupancy sensor shall switch lighting in the following sequence:
      - 1) Lighting shall turn on to preset level if motion is detected.
      - 2) Lighting shall turn off if no motion is detected after 20 minutes or the code-required maximum delay time, whichever is longer.
  
- J. BEDFORD HOUSE & CARRIAGE BARN / Circulation, Breezeway, Elevator Lobby
  - 1. Automatic Controls
    - a. Occupancy Sensors.
    - b. Engineer shall confirm emergency requirements.
  - 2. Manual Controls
    - a. Allow for manual override by staff via switch at room entrance. Location to be determined by the Architect and Owner.
  - 3. Zones
    - a. The minimum requirement is to allow one zone of dimming control per fixture type in each location.
  - 4. Sequence
    - a. Allow for manual All-ON override by switch.
    - b. During regular operation, occupancy sensor shall switch lighting in the following sequence:
      - 1) Lighting shall turn on to preset level if motion is detected.

- 2) Lighting shall dim to 50% if no motion is detected after 15 minutes or the code-required maximum delay time, whichever is longer.

K. SITE / Site Entrance Piers and Wall

1. Automatic Controls
  - a. Astronomical Timeclock
  - b. Photocell override for inclement weather
  - c. Architect and Owner shall confirm hours of operation.
  - d. Allow for up to (4) recorded presets to be triggered by timeclock.
2. Manual Controls
  - a. Allow for manual dimming override via wireless tablet and touchscreen(s). Touchscreen(s) to be located in back of house location(s).
3. Zones
  - a. Entrance Piers (FX6D)
  - b. Left Wall (FX6C)
  - c. Right Wall (FX6C)
4. Sequence
  - a. Allow for up to (4) recorded presets to be triggered by timeclock during Owner-identified times of day. Provide manual override control to select different presets, and/or turn off fixtures per zone.

L. SITE / Entrance Signage

1. Automatic Controls
  - a. Astronomical Timeclock
  - b. Photocell override for inclement weather
  - c. Architect and Owner shall confirm hours of operation.
  - d. Allow for up to (3) recorded presets to be triggered by timeclock.
2. Manual Controls
  - a. Allow for manual dimming override via wireless tablet and touchscreen(s). Touchscreen(s) to be located in back of house location(s).
3. Zones
  - a. Entrance Signage (FX6B)
4. Sequence
  - a. Allow for up to (3) recorded presets to be triggered by timeclock during Owner-identified times of day. Provide manual override control to select different presets, and/or turn off fixtures per zone.

M. SITE / Pathways

1. Automatic Controls
  - a. Astronomical Timeclock
2. Manual Controls
  - a. Allow for manual switch override via wireless tablet and touchscreen(s). Touchscreen(s) to be located in back of house location(s).
3. Zones
  - a. Garden Pathway (FX3)
  - b. Parking Lot to Bedford House Pathway (FX3)
  - c. Bedford House Pathway (FX3)
  - d. Entrance to Laundry Building, Coachman’s Cottage, Brick Cottage (FX3)
4. Sequence
  - a. Provide manual override control to turn on/off fixtures per zone.

N. SITE / Parking Lots, Security Gate

1. Automatic Controls
  - a. Astronomical Timeclock
  - b. Photocell override for inclement weather
  - c. Architect and Owner shall confirm hours of operation.
  - d. Allow for up to (3) recorded presets to be triggered by timeclock.
2. Manual Controls
  - a. Allow for manual switch override via wireless tablet and touchscreen(s). Touchscreen(s) to be located in back of house location(s).
3. Zones
  - a. Main Parking Lot (FX2, FX2A)
  - b. Bedford House Gravel Parking (FX1)
  - c. Security Gate (FX1)
4. Sequence
  - a. Provide manual override control to turn on/off fixtures per zone.

O. SITE / Trees

1. Automatic Controls
  - a. Astronomical Timeclock
  - b. Photocell override for inclement weather
2. Manual Controls
  - a. Allow for manual dimming override via wireless tablet and touchscreen(s). Touchscreen(s) to be located in back of house location(s).

3. Zones
  - a. Bedford House West 60” Linden Tree (FX9)
  - b. Bedford House West 24” Tree (FX9)
  - c. Bedford House East 60” Linden Tree (FX9)
  - d. Carriage Barn 60” Magnolia Tree (FX9)
4. Sequence
  - a. Allow for up to (3) recorded presets to be triggered by timeclock during Owner-identified times of day. Provide manual override control to select different presets, and/or turn off fixtures per zone.

## APPENDIX 13

### IT Cable and Conduit Guidelines

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## Section 1 – Inside Data and Voice Network Cabling Guidelines

### Overview

This document is intended as a reference for specifying, designing, and installing individual inside cabling for data network and phone connections including, but not limited to:

- PCs
- Printers
- Telephones
- Wi-Fi Access Points

It can also be referenced to plan and budget for network cabling.

### Using the Guidelines

1. Determine the size of the cabling effort using the Equipment Location (typical) and Cable Qty. columns in [Table 1 – Data Network Equipment Sizing Reference](#). If the number of cables in the Cable Qty. column exceeds the maximum number of cables for the Equipment Location, use the row for the appropriate Cable Qty.
2. The data network equipment will require:
  - a. Power
  - b. UPS power backup for short term outages
  - c. Data network equipment rack for mounting cables and equipment(see [Illustration 1 – Example of Utility Room Data Network Equipment Rack](#))
  - d. Patch panels for terminating individual cables
  - e. Modular data jack inserts for terminating cables in the patch panels

These elements are listed in each row of [Table 1 – Data Network Equipment Sizing Reference](#) according to Equipment Location and Cable Qty.

3. Endpoint device types have differing cable and cabling component type requirements. PCs, printers, and phones typically require CAT6 cable and cabling components. Wi-Fi access points require CAT6A cable and cabling components noted in [Table 1 – Data Network Equipment Sizing Reference](#) in the CAT6A Jack Insert column and in [Table 2 – Data Cable and Jack Reference](#) in the Endpoint Device row labeled “Wi-Fi Access Point”.
4. [Table 1 – Data Network Equipment Sizing Reference](#) and [Table 2 – Data Cable and Jack Reference](#) contain hyperlinks to products and components that are representative of actual products and components that are required for inside cable and data rack installations. Price and availability subject to change.
5. All cabling listed and referenced in hyperlinks contained in [Tables 1 & 2](#) below are for standard PVC jacketed cable. Other cable compositions may be required depending on application such as plenum rated cable for placement in plenum ceilings or wall assemblies and direct burial cable for outdoor installations. Verify cabling application requirements prior to purchase and installation.
6. See [Section 2 - Generalized Local Area Network Cabling Specifications](#) and [Illustration 2 – Example of Network Equipment Room size Data network equipment Rack](#) for additional cabling and electrical instruction and specifications.
7. Other communication cabling types, not covered in this document, include, but not limited to fiber optic, outside cable, copper distribution cabling, and backbone cabling.

Table 1 – Data Network Equipment Sizing Reference

Equipment Location (typical)	Size	Cable Qty.	Power	UPS	Equipment Rack	Patch Panel	CAT6 Jack Insert	CAT6A Jack Insert
Tollbooth	Small	1 to 24	120V, 15-amp dedicated, single duplex	<a href="#">600W</a>	<a href="#">4U Enclosed Wall Rack</a>	<a href="#">One 24-Port Blank Patch Panel</a>	<a href="#">CAT6 RJ-45 Module</a>	<a href="#">CAT6A RJ-45 Module</a>
Park Office	Medium	25 to 48	120V, 15-amp dedicated, single duplex	<a href="#">900W</a>	<a href="#">6U Enclosed Wall Rack</a>	<a href="#">Two 24-Port Blank Patch Panels</a>	<a href="#">CAT6 RJ-45 Module</a>	<a href="#">CAT6A RJ-45 Module</a>
Utility Room	Large	49 to 96	120V, 20-amp dedicated, NEMA L5-20R	<a href="#">1600W</a>	<a href="#">12U Wall Rack</a>	<a href="#">Four 24-Port Blank Patch Panels</a>	<a href="#">CAT6 RJ-45 Module</a>	<a href="#">CAT6A RJ-45 Module</a>
Network Equipment Room	Extra Large	> 96	Custom Design Required	Custom Design Required	<a href="#">7' x 19" Free-standing Rack</a>	Custom Design Required	Custom Design Required	Custom Design Required

Table 2 – Data Cable and Jack Reference

Endpoint Device	Cable Type	Surface Jack	Wall Jack	Jack Insert	Patch Cables - 1'	Patch Cables - 3'
PC/Printer/Phone	<a href="#">CAT6 Cable - Green</a>	<a href="#">2-port Jack</a>	<a href="#">2-port Wall Plate</a>	<a href="#">CAT6 RJ-45 Module</a> (2 required per wall plate)	<a href="#">CAT6 1' - Green</a>	<a href="#">CAT6 3' - Green</a>
Wi-Fi Access Point	<a href="#">CAT6A Cable - Green</a>	<a href="#">1-port Jack</a>	<a href="#">1-port Wall Plate</a>	<a href="#">CAT6A RJ-45 Module</a> (2 required per wall plate)	<a href="#">CAT6A 1' - Green</a>	<a href="#">CAT6A 3' - Green</a>

Illustration 1 – Example of Utility Room size Data Network Equipment Rack



## Section 2 - Generalized Local Area Network Cabling Specifications

### **Structured Copper Cabling**

- All structured cabling should be installed to meet [EIA/TIA Category 6 and 6A industry standard](#).
- Green sheath cable should be utilized for new installations. When adding to existing infrastructure the existing cable manufacturer should be matched for consistency wherever possible.
- All data network equipment locations should have uniform lighting throughout, consistent air exchange or cooling to maintain 72-degree ambient temperature.
- All Wireless Access Points should be cabled with category 6A cable, jacks, and patch panels. A modular RJ-45 jack should be installed at the access point end of the cable.
- Modular RJ-45 wall, or face plates should match the wall or modular furniture opening.
- Overhead cables should be supported by J-hooks or cable saddles spaced at 48" intervals above the dropped ceiling. Cable support apparatus may be connected to building steel or connected to wall structures.
- Cabling shall be routed to run along established walkways, where feasible to do so, to avoid working over desks.
- All cables will be labeled at both ends with a corresponding cable identification number.
- Patch panels and data jacks should be machine labeled with a cable ID number that meets [EIA/TIA Category 6 and 6A industry standard](#).
- All LAN cables should be tested to the established [EIA/TIA Category 6 and 6A industry standard](#). Test reports should be generated (paper or electronic) and include, but not limited to:
  - Cable ID number
  - Near end and far end cross talk attenuation
  - Wire mapping
  - Cable length

### **Network Equipment Room Layout** (where applicable)

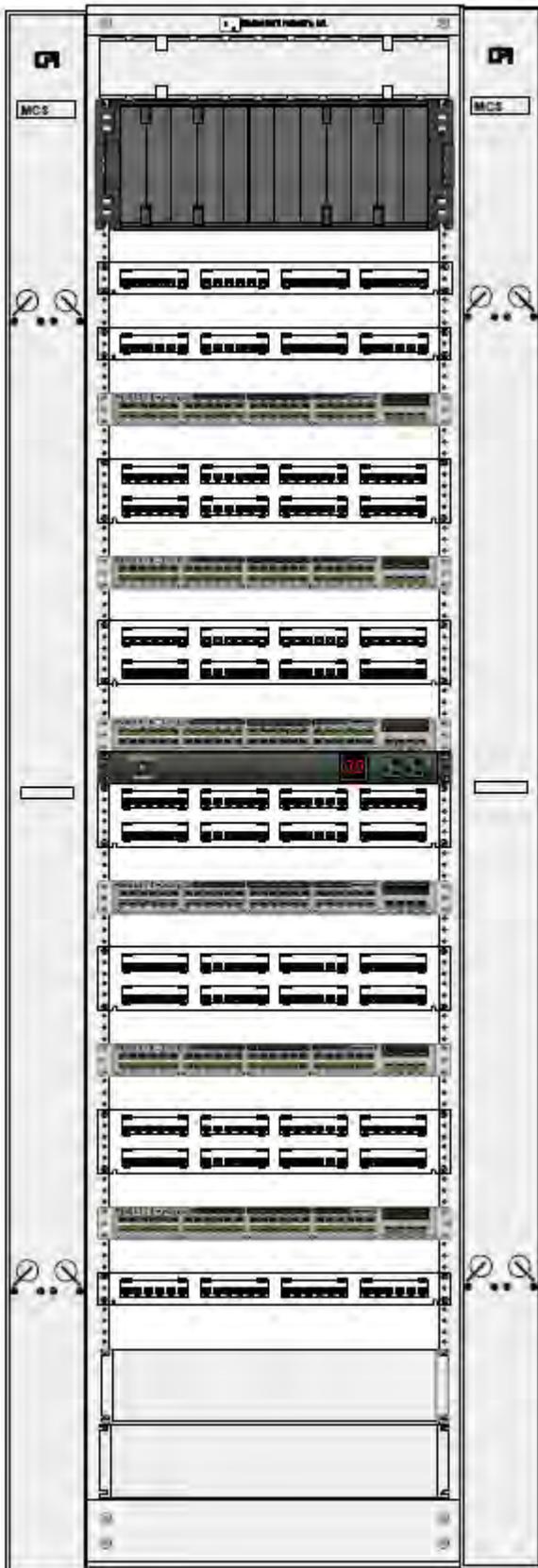
- Network equipment rooms to be sized with a minimum of 36" clearance between equipment and any other fixed part of the building structure (I.E. walls, door swing, support columns).
- Provide and install Telco-Style Cable Runway and all associated hardware to attach to the wall, within all Tel/Data closets. Runway is required to properly route the cable entering the closets over to the network racks. The cable runway should be installed over the network racks and be positioned in a manner as to provide 36 – 48 inches of space behind the network rack
- Provide and install network racks and wire management. Racks should be positively secured to the floor and the ladder rack to prevent any lateral movement.
- Fire rated, painted, plywood should be used to accommodate the securing of ladder rack, wall mounted equipment, and vendor needs. It is generally recommended to cover (3) walls of the room to provide for multiple possibilities.

- No equipment, panels, or wall fields should be installed immediately behind data racks. This area should remain clear of obstructions to access racked equipment.

**Network Room Electrical** (where applicable)

- In addition to electrical receptacles placed along walls, according to the current version of the National Electrical Code (NEC), dedicated electrical service shall be installed for network equipment where specified.
- All network rack assemblies shall be grounded to building steel or other ground source, as specified in the current version of the National Electrical Code (NEC), with a #6 AWG copper ground wire.

Illustration 2 – Example of Network Equipment Room size Data Network Equipment Rack



## Recommended Network/Data Rack Layout

(design can accommodate 288 cables divided between workstations and wireless access points)

Data Rack: standard 7' tall, 19" wide (Black)

Dual sided vertical wire managers on either side to allow for easy cable management in front and rear of rack.

2U Horizontal Manager at the top of each rack to allow protected transition from rack to rack and from side to side.

Fiber connector housing. Size determined by need. located only in the primary rack.

CAT6a patch panel for wireless access points located near the top. Wireless access point connections to be distributed equally among the network switches to share the load. (WAPs not to be consolidated to only one switch)

Cabling distribution to start with a 24-port CAT6 patch panel followed by a standard 1U gap, 48-port network switch, standard 1U gap, 48-port CAT6 patch panel, standard 1U gap, 48-port network switch, etc.

These 1U gaps allow for easier maintenance down the road and allows for a clean 1' patch cord distribution.

\*patch panels should have unpopulated ports distributed throughout to accommodate WAP cables from above. The corresponding ports on the switch will be connected to the ports on the CAT6a panel.

Optional power distribution units can be incorporated to provide convenient access to power. Alternatively placing quad box, 20A circuits at the top of the rack (attached to ladder rack or nearby wall) can provide direct access.

It is recommended to leave roughly 6U+ of space along the bottom of the rack and opt for an additional rack if more patch panels are needed. Recommend placing the same horizontal wire manager at the top of subsequent racks to allow for easy cable transitions and adding a vertical wire manager at the end for additional cable management support.

## ITS Physical Plant underground conduit guideline overview

Telecommunications pathways shall be specified to support the initial and anticipated wireline telecommunications needs of the total area served. Accommodation should be made for diverse Access Points.

In determining the total number of pathways required, the planner shall consider:

- a) type and use of building.
- b) growth.
- c) difficulty of adding pathways in the future.
- d) alternate entrance; and
- e) type and size of cables likely to be installed.

**Note: ITS requests a minimum size of 2" conduit placed with a minimum of two (2) installed in all OSP excavations for redundancy. This is based on a 70% new construction fill capacity and increases nominally with the size and number of installed cables.**

Examples of conduit types include:

- a) EB-20 – For encasement in concrete.
- b) EB-35 – For encasement in concrete.
- c) DB-60 – For direct burial or encasement in concrete.
- d) DB-100 – For direct burial or encasement in concrete.
- e) DB-120 – For direct burial or encasement in concrete.
- f) **Rigid Nonmetallic Conduit Schedule 40 – For direct burial or encasement in concrete; Note: ITS Preferred**
- g) **Rigid Nonmetallic Conduit Schedule 80 – For direct burial or encasement in concrete; Note: ITS Preferred**
- h) Multiple Plastic Duct (MPD) – For direct burial or installation in conduit.
- i) Rigid Metal Conduit (RMC) – For direct burial or encasement in concrete.
- j) Intermediate Metal Conduit (IMC) – For direct burial or encasement in concrete.
- k) Fiberglass Duct – For direct burial or encasement in concrete.
- l) Innerduct Polyethylene (PE) – For direct burial or installation in conduit.
- m) Innerduct Polyvinyl Chloride (PVC) – For direct burial or installation in conduit.
- n) PVC coated steel conduit (PSC), NEMA RN-1; galvanized rigid steel conduit with factory applied external 40 mil PVC coating and urethane interior coating.

Non-metallic conduits shall be encased in concrete of minimum 17225 kPa (2500 lb./in<sup>2</sup>) compressive strength where vehicular traffic (i.e., automotive, railway) is above the pathway, or where a bend or sweep in excess of 15 degrees is placed.

The section length of conduit shall not exceed 183 m (600 ft.) between pulling points on a straight pathway.

Where bends are required, manufactured bends should be used whenever possible. Bends made manually shall not reduce the internal diameter of the conduit. All bends shall be sweeps with a minimum radius of six times the internal diameter for conduits up to 2 inch and ten times the internal diameter for all conduits larger than 2 inches. Bend types include:

- a) **90-Degree Bend:** any radius bend in a piece of pipe that changes direction of the pipe 90-degrees.
- b) **Kick:** a bend in a piece of pipe, usually less than 45-degrees, made to change the direction of the pipe.
- c) **Offset:** two bends, usually having the same degree of bend, made to avoid an obstruction blocking the run of the pipe.

No section of conduit shall contain more than two 90-degree bends, or equivalent between pull points (e.g. handholes, maintenance holes, and vaults). Back-to-back 90-degree bends shall be avoided. Underground conduit should be installed such that a slope exists at all points of the run to allow drainage and prevent the accumulation of water. A drain slope of no less than 10 mm per meter (.125 in per foot) is desirable when extending conduit away from building structures. Where conduit extends between maintenance holes, a slope of 10 mm per meter (.125 in per foot) should extend from the middle of the span to each maintenance hole.

**All excavations for ITS require a minimum depth of 30 inches (below winter frost line) unless conditions simply do not accommodate such burial depth. When installing non-metallic cabling (i.e. Fiber Optic), ITS requires a tracer wire be placed in all conduit runs for future locating situations. Ducts shall be sealed to resist liquid and gas infiltration at all maintenance holes and building entrance point locations.**

## **ITS Physical Plant underground conduit guideline overview -continued**

For an installation consisting of twin 2" Schedule 40 conduits (recommended), direct buried, we recommend a standard open bottom 24" w x 36" l x 30" d pull box. The box should be installed in accordance with the manufacturer's instructions and the cover of the box shall be flush with the ground surface to facilitate safe mowing without damaging the structure. The cover should be a tier 22 rated for 22,500 lbs. to protect the structure in the case of incidental drive over by vehicle traffic. The Quazite structure should not be placed in a roadway or sidewalk where consistent vehicle traffic is expected. Extensions for the box can be purchased as needed to achieve certain depths. The area where the box is located should have adequate drainage. We recommend excavating 12" deeper than the box and placing a bed of #2 stone to facilitate drainage. This following link will take you to the Hubble web site and the specification page for this structure. Hex head bolts should be utilized to maintain security on the structures and a tool for opening the boxes should be maintained by the Parks Office for future access. Conduits shall be brought into the structure through the mouse holes provided with the box. <http://www.hubbellpowersystems.com/enclosures/below-ground/straight/24x36/pg-quazite.asp>

Conduits running under roadways should be at a depth of 30" or more and it is recommended that they be encased in a flowable fill concrete with installation no less than 6" above, below and on either side of the conduits. The attached link will take you to a page detailing what flowable fill is. <http://www.nrmca.org/aboutconcrete/cips/17p.pdf>. The duct bank shall have a marker tape installed 12" above the conduit to denote the duct bank location to future excavators. An economy grade tape indicating telephone cable below will suffice. The link to a manufacturer us listed below. <http://www.terram.com/products/underground-tapes/utilitape-underground-warning-tape.html>

#12 Tracer wire can follow the conduit run and can be taped to a conduit. 4 – 6 'of tracer wire shall be coiled in each pull box and it shall extend into the buildings where the conduits terminate. This cable will help future locaters mark out the location of the conduit. The following link specifies a brand of tracer wire that can be used. <http://www.southwire.com/products/tracer-wire-water-well.htm>

All conduits must be threaded with a poly rope or mule tape to facilitate the installation of cable facilities.

NOTE: Fiber optic cable should have at least 40 feet coiled in every other handhole to provide additional length for future expansion/splicing. Additionally, each fiber cable should have a 15 foot service loop at each termination location.

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## APPENDIX 14

John Jay Homestead - Bedford House Fireplaces

Site Survey and Historic Photos

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PART I



PART I



PART III



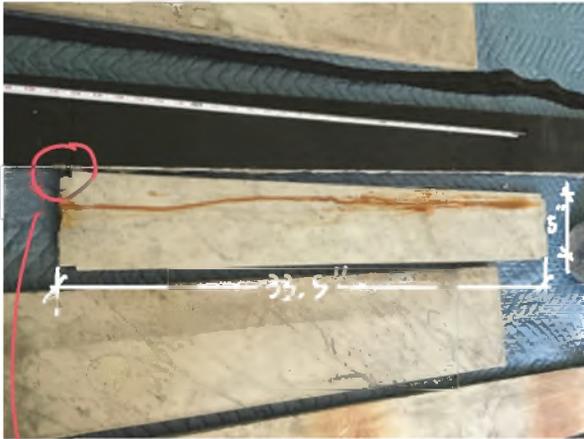
PART IV

PART I.

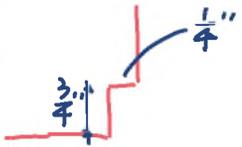


JOHN JAY HOMESTEAD - BEDFORD HOUSE  
FIREPLACES SITE SURVEY PHOTOS  
BBB PROJECT #3003

A.



THICKNESS:  $\frac{7}{8}$ "



B.



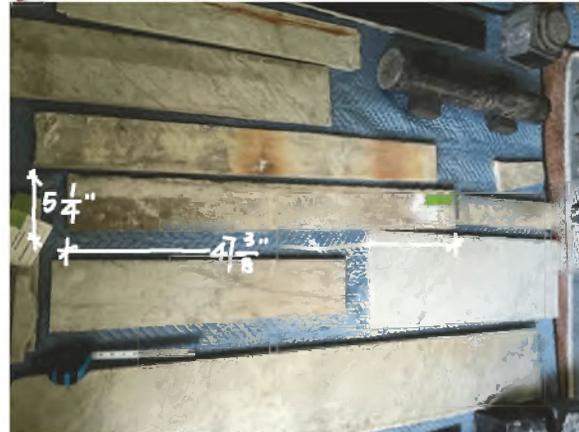
T:  $\frac{7}{8}$ "

C.



T:  $\frac{7}{8}$ "

D.



T:  $\frac{7}{8}$ "

E.



T:  $\frac{7}{8}$ "

PART I.



JOHN JAY HOMESTEAD - BEDFORD HOUSE  
FIREPLACES SITE SURVEY PHOTOS  
BBB PROJECT #3003

F.



T: 1"

G-1



T: 1 1/2"

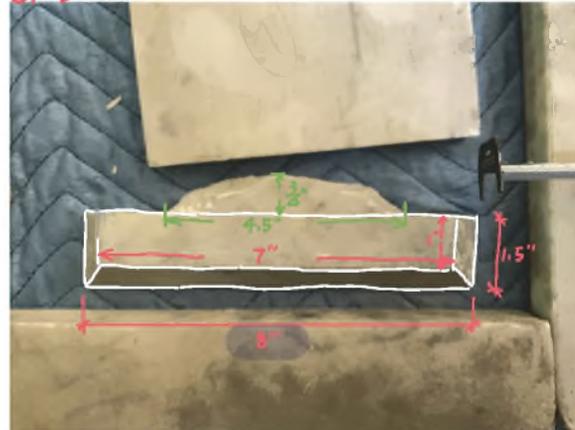
H-1



T: 1 1/2"



G-2



T: 1 1/8"

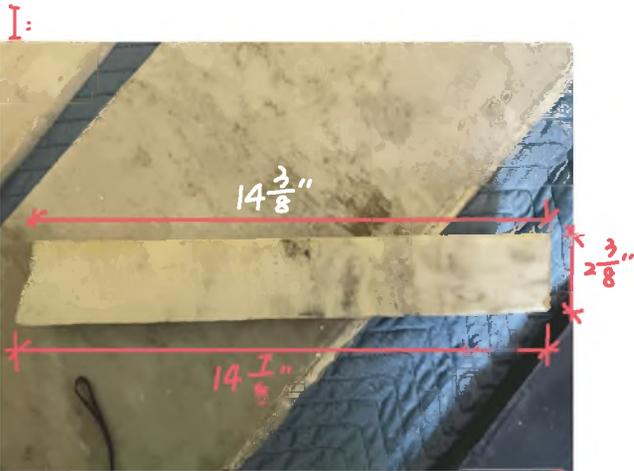
H-2. same with G-2.





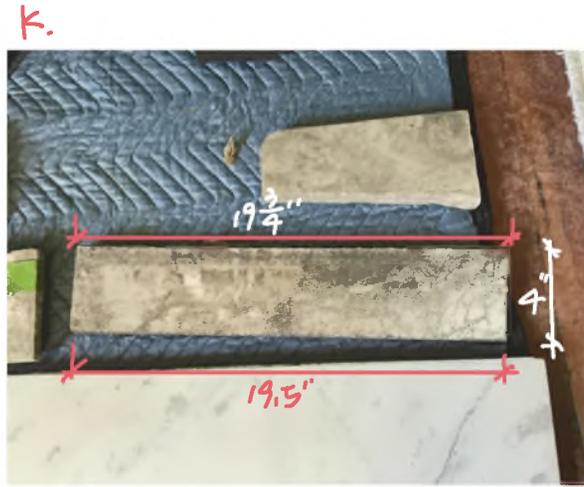
PART I.

JOHN JAY HOMESTEAD - BEDFORD HOUSE  
 FIREPLACES SITE SURVEY PHOTOS  
 BBB PROJECT #3003



I:

T: 1 1/2"



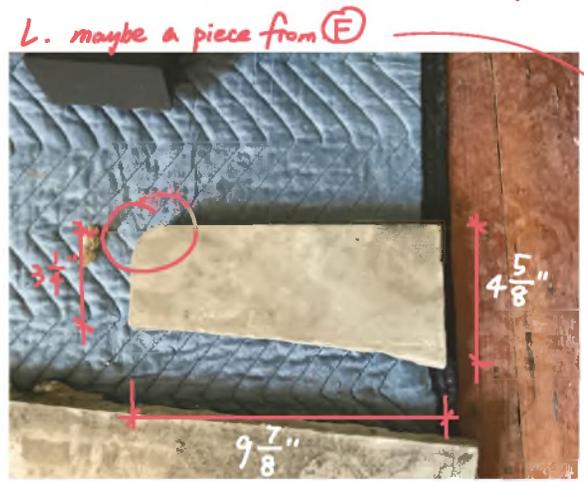
K.

T: 1"



J.

T: 7/8"



L. maybe a piece from (E)

T: 1"

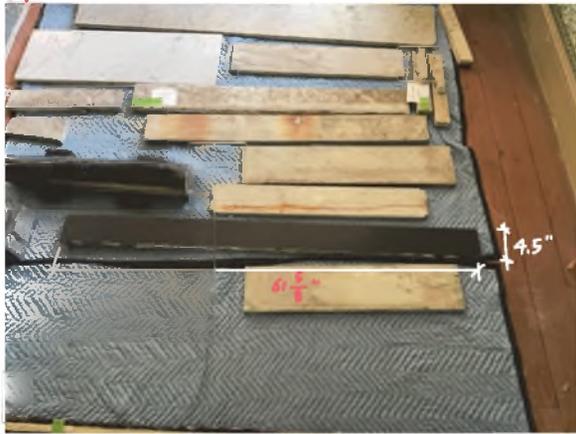




PART I.

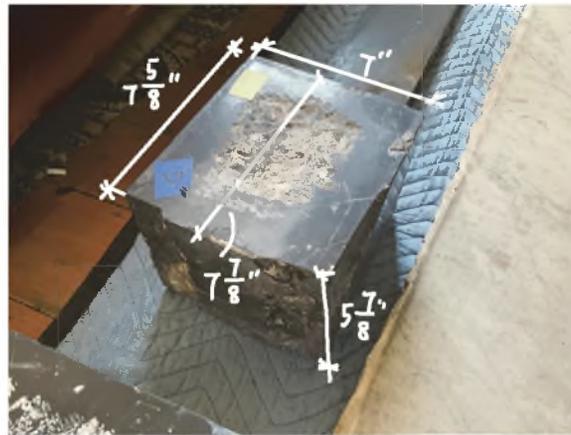
JOHN JAY HOMESTEAD - BEDFORD HOUSE  
 FIREPLACES SITE SURVEY PHOTOS  
 BBB PROJECT #3003

M.



T: 1 1/4"

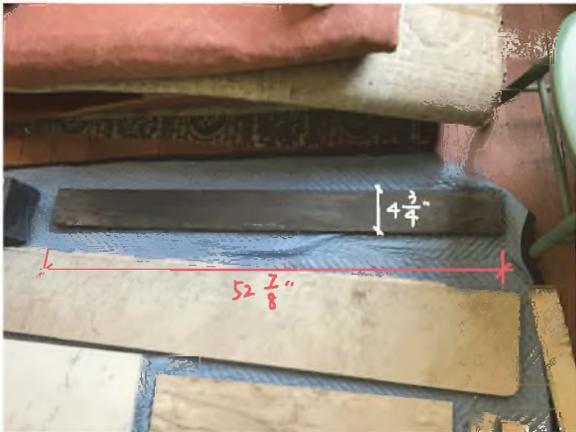
O-1



P. column.

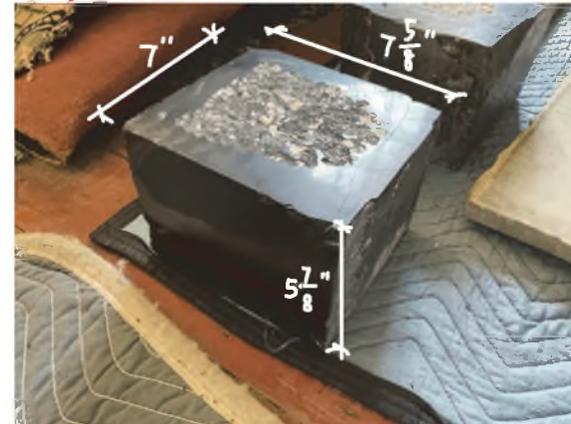


N.



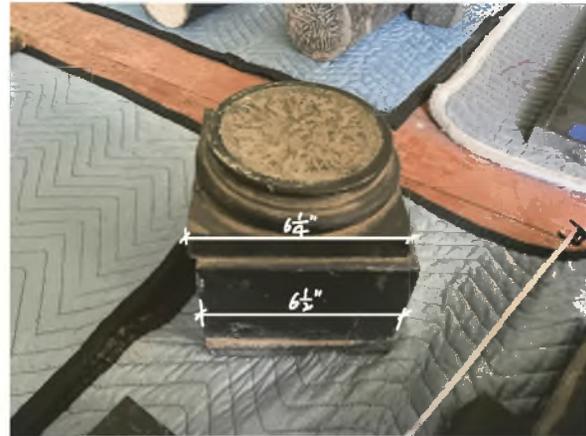
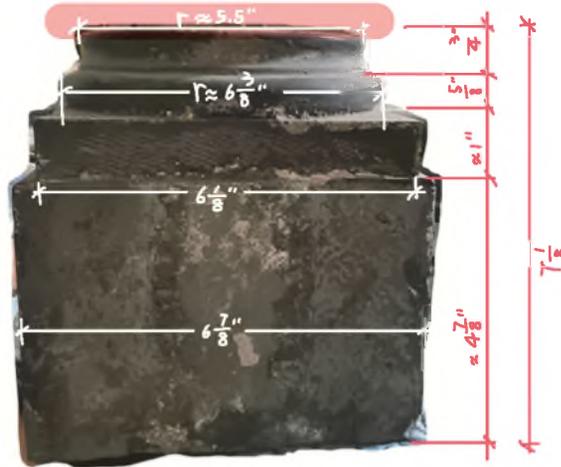
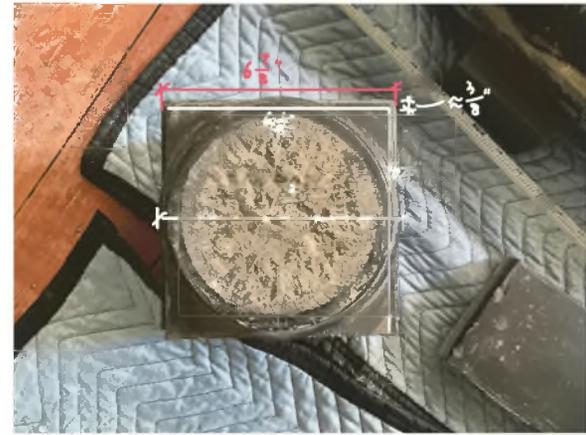
T: 1"

O-2.



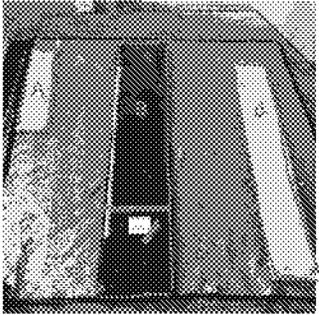


PART I.

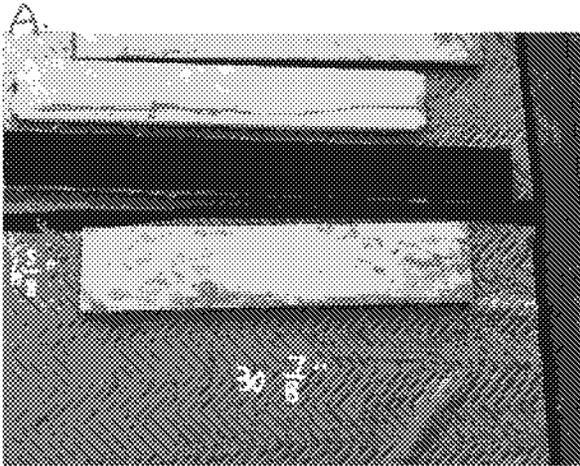


JOHN JAY HOMESTEAD - BEDFORD HOUSE  
FIREPLACES SITE SURVEY PHOTOS  
BBB PROJECT #3003

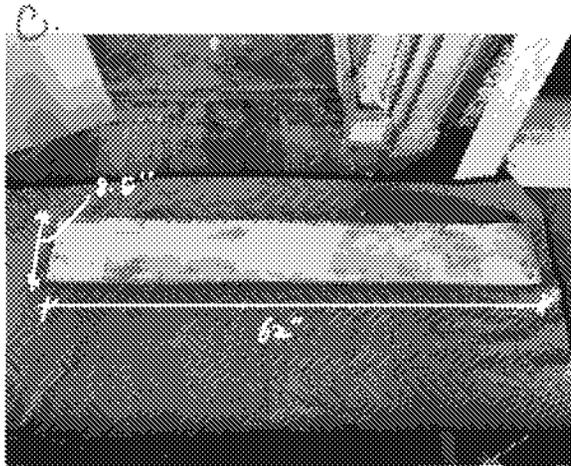
PART 3.



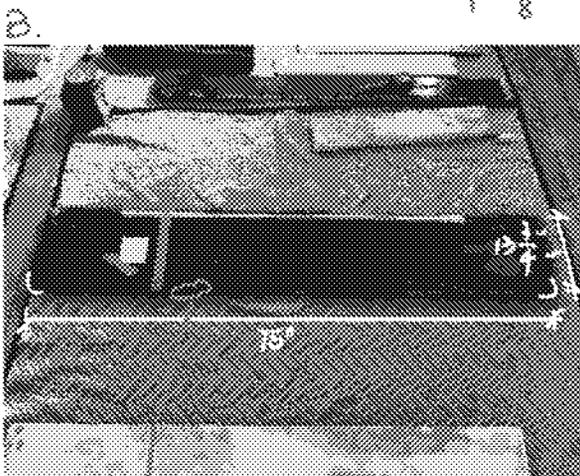
JOHN JAY HOMESTEAD - BEDFORD HOUSE  
FIREPLACES SITE SURVEY PHOTOS  
BBB PROJECT #3003



T.  $\frac{7}{8}$ "

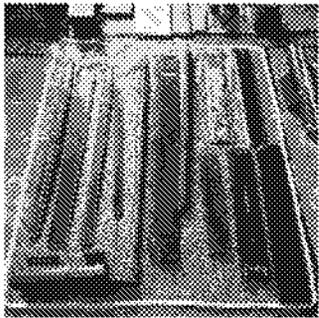


T.  $1 \frac{3}{8}$ "



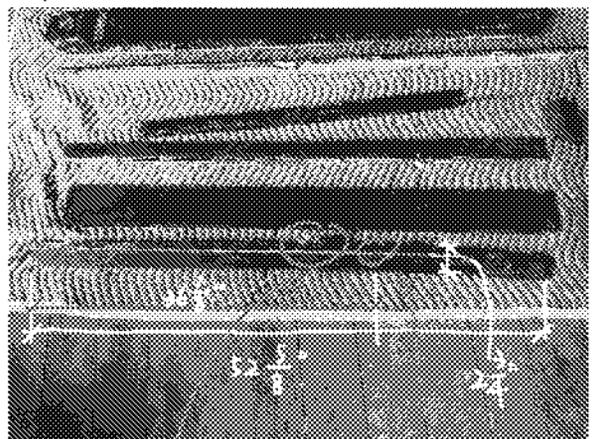
T.  $1 \frac{1}{8}$ "

PART B.

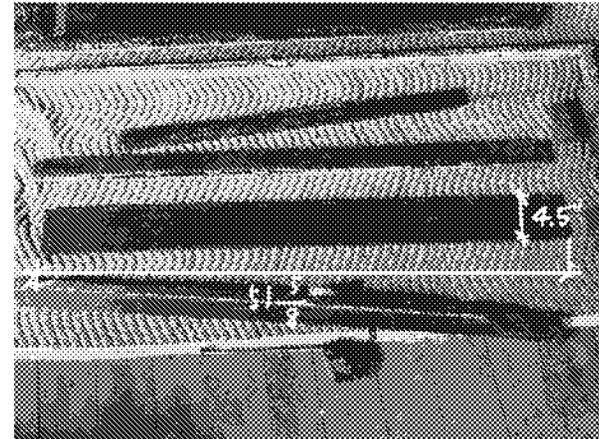


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FIREPLACES SITE SURVEY PHOTOS  
BBB PROJECT #3003

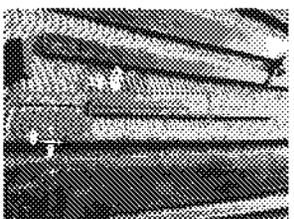
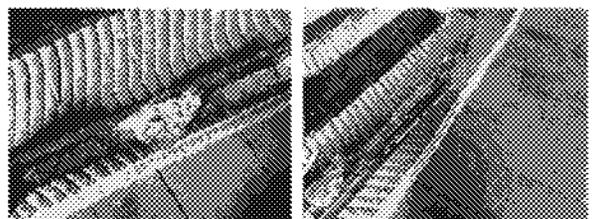
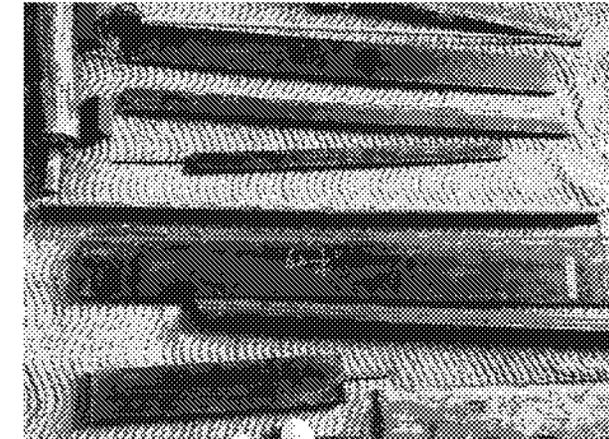
A.



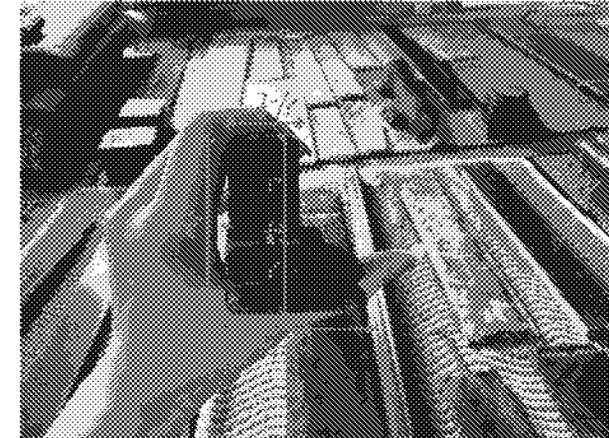
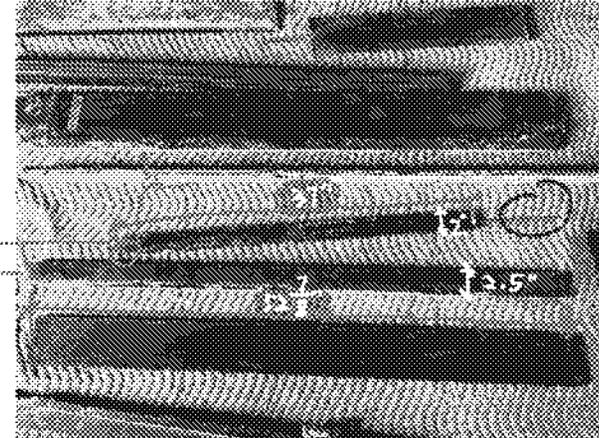
B.



E.

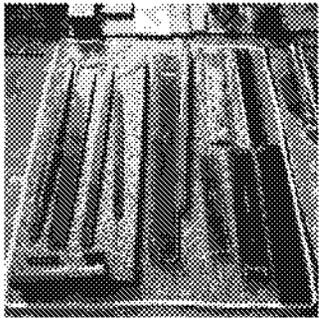


C.D.



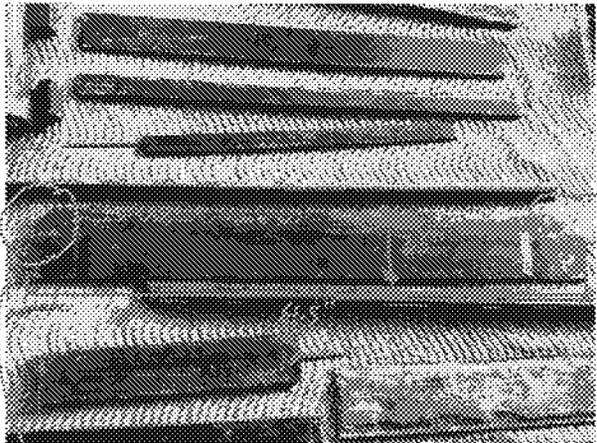
TC: 1" TD: 3/4"

PART B.



JOHN JAY HOMESTEAD - BEDFORD HOUSE  
FIREPLACES SITE SURVEY PHOTOS  
BBB PROJECT #3003

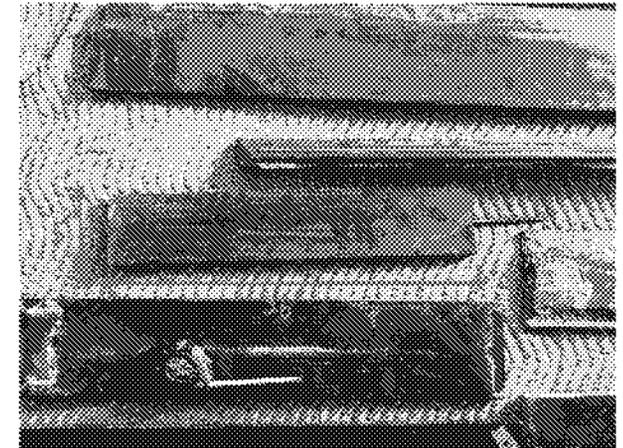
F.



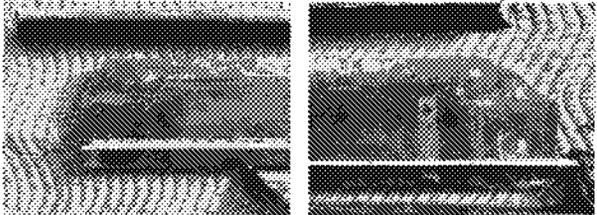
G.



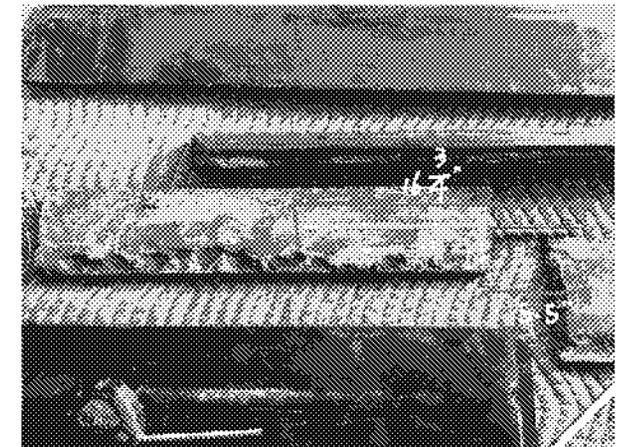
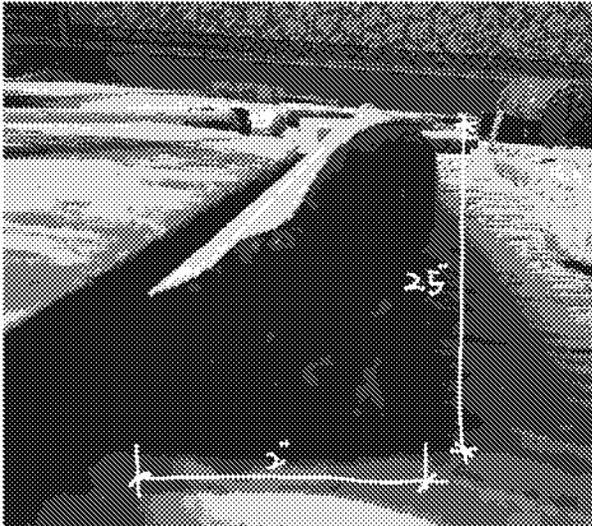
H.



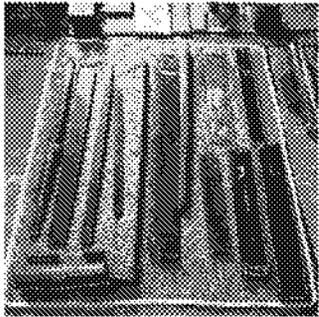
V.



T. 4"

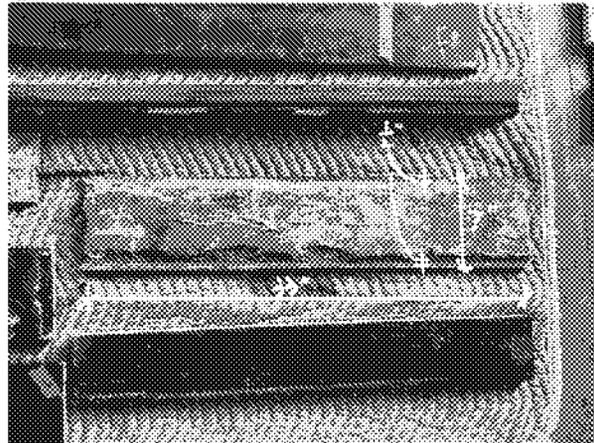


PART B.



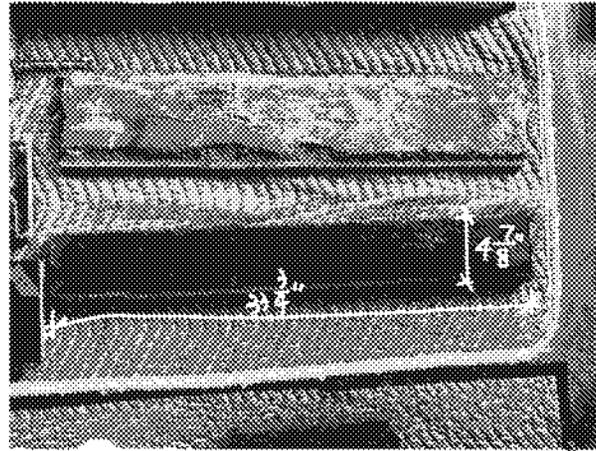
JOHN JAY HOMESTEAD - BEDFORD HOUSE  
FIREPLACES SITE SURVEY PHOTOS  
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J.



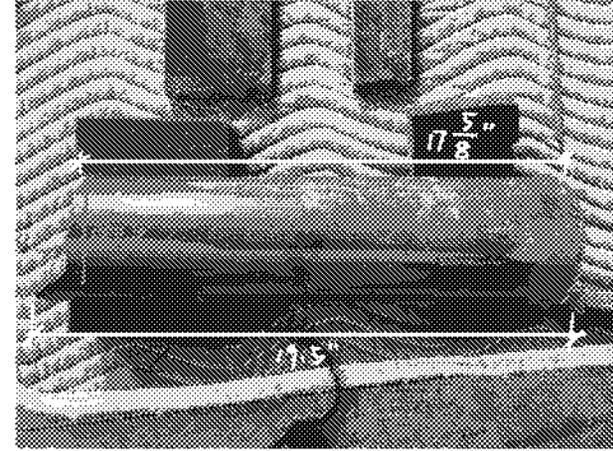
T: 1 7/8"

K.

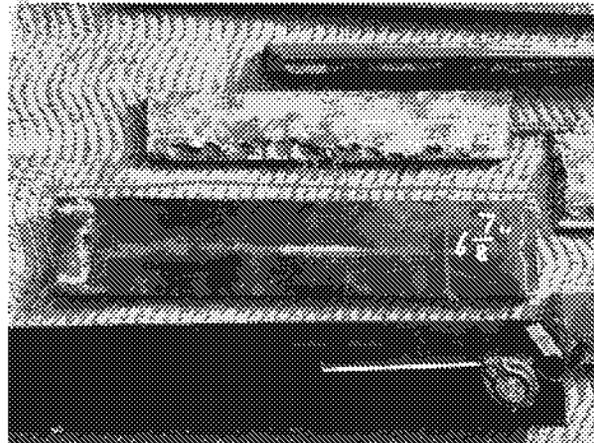


T: 1 7/8"

M. column.

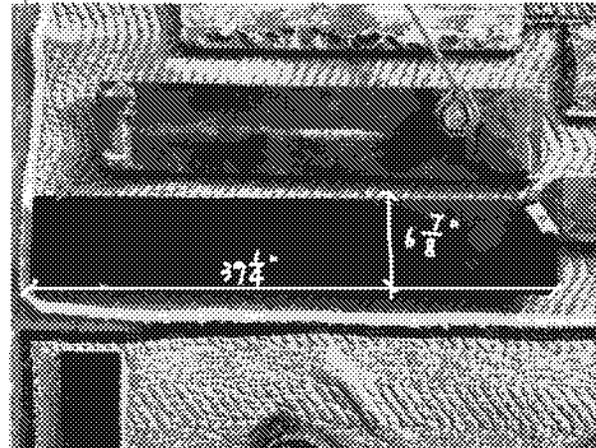


J.



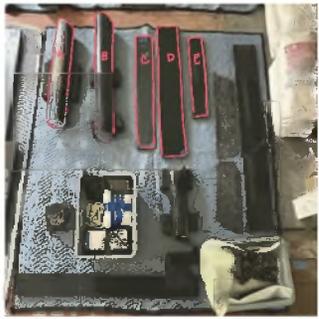
T: 7 7/8"

K.



T: 6 7/8"

PART IV.



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FIREPLACES SITE SURVEY PHOTOS  
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A. column.



B. column.



C. D. E.



E T: 1"

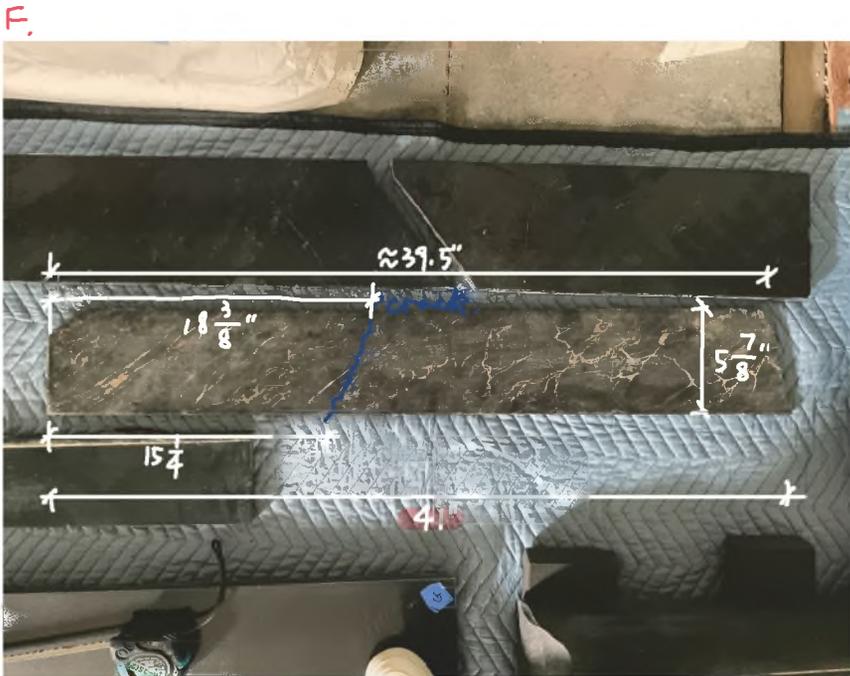
D T: 7/8"

C T: 1 1/16"

PART IV.



JOHN JAY HOMESTEAD - BEDFORD HOUSE  
FIREPLACES SITE SURVEY PHOTOS  
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T: 3/4"



T: 1"

PART IV.



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FIREPLACES SITE SURVEY PHOTOS  
BBB PROJECT #3003

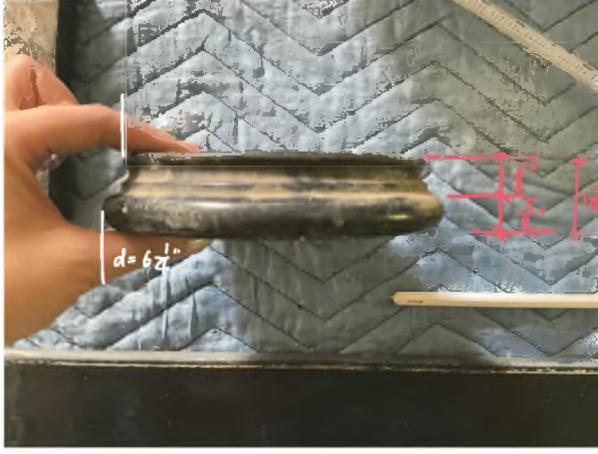
H. Column



J.



I.



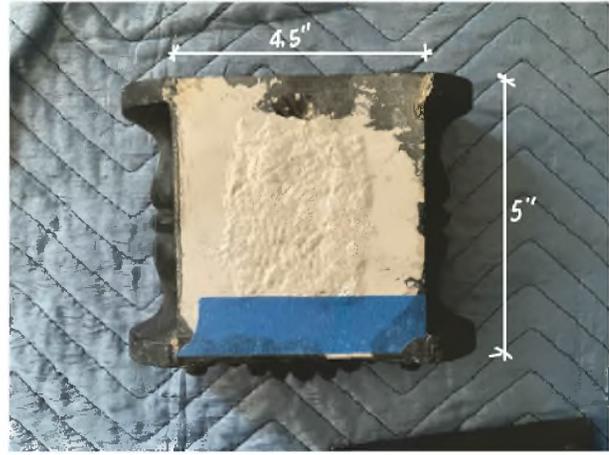
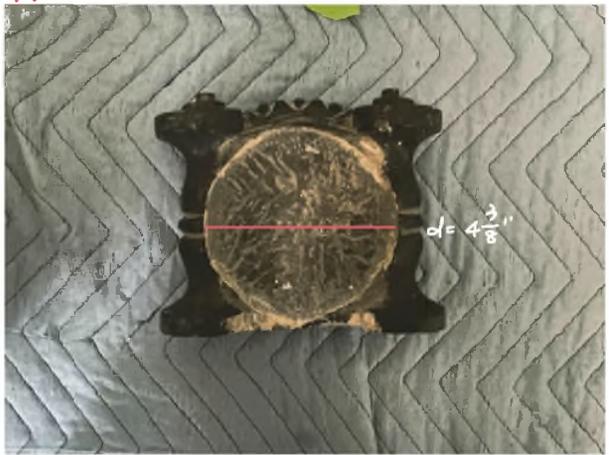
T. 3/4

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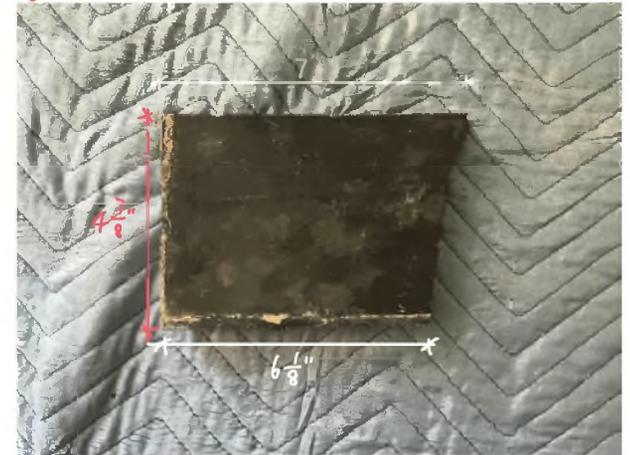


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FIREPLACES SITE SURVEY PHOTOS  
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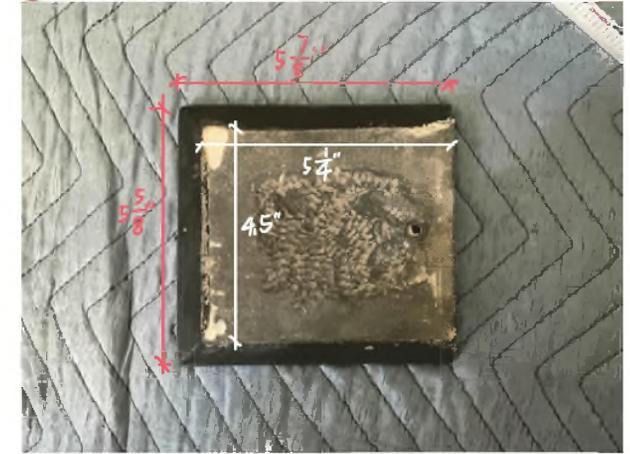
A.



B.



C.



T. 1/8"

Box I.



JOHN JAY HOMESTEAD - BEDFORD HOUSE  
FIREPLACES SITE SURVEY PHOTOS  
BBB PROJECT #3003

D.

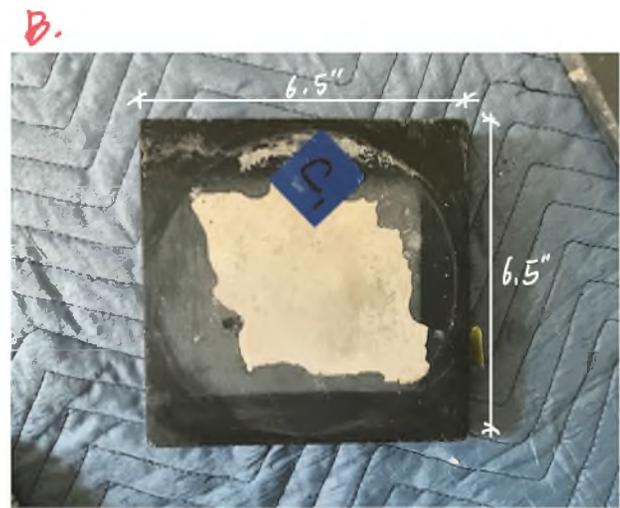


same with A.

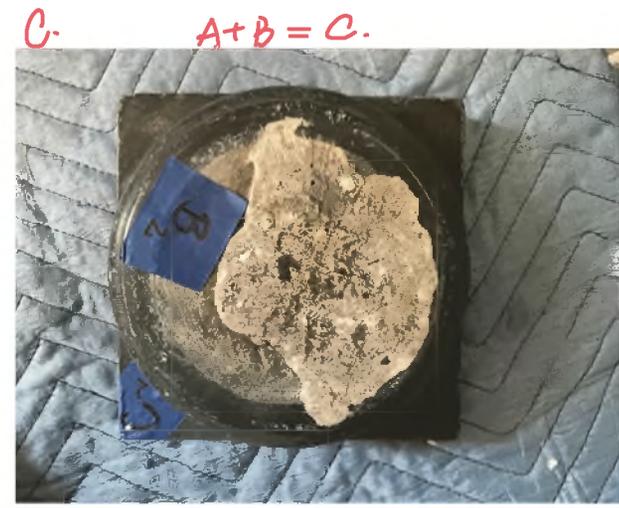
Box I.



JOHN JAY HOMESTEAD - BEDFORD HOUSE  
FIREPLACES SITE SURVEY PHOTOS  
BBB PROJECT #3003



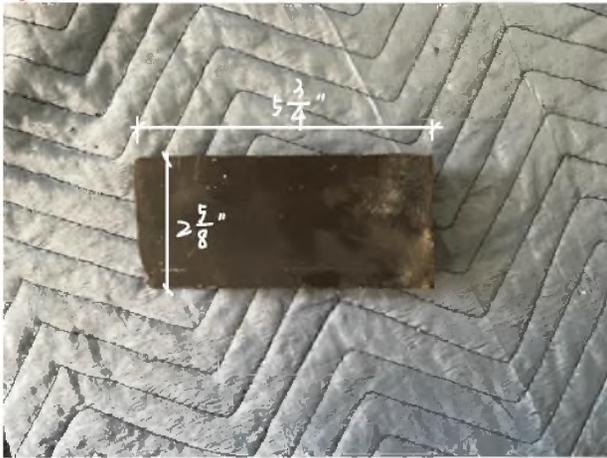
T. 1 1/4"



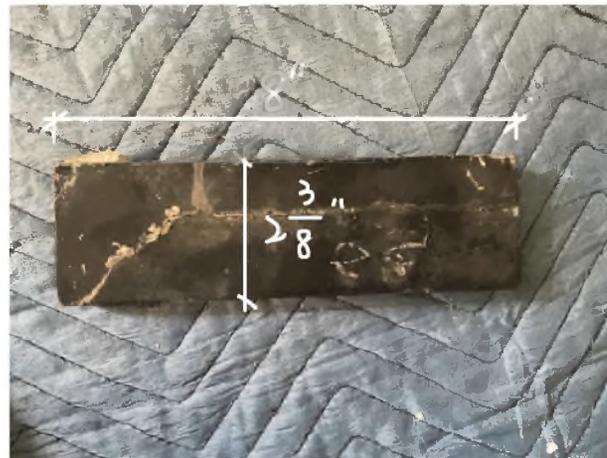
Box I.



D.



E.

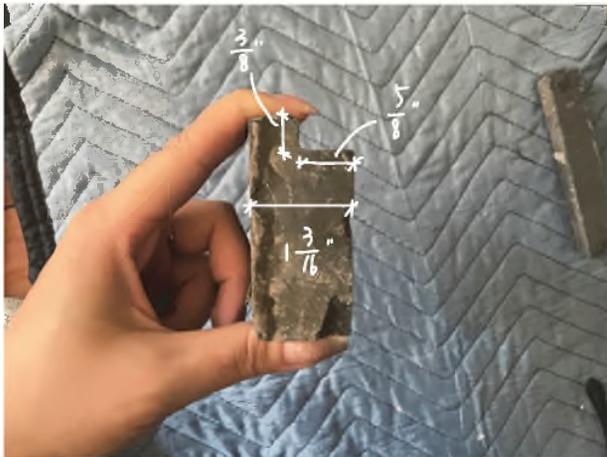


T.  $\frac{7}{8}$ "

F.



T.  $\frac{3}{4}$ "



JOHN JAY HOMESTEAD - BEDFORD HOUSE  
FIREPLACES SITE SURVEY PHOTOS  
BBB PROJECT #3003

Box I.



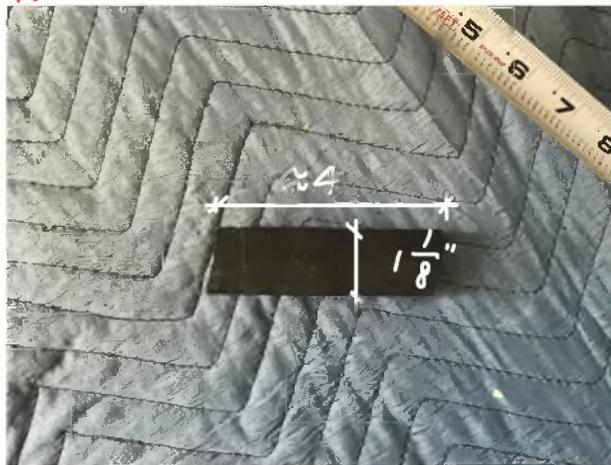
JOHN JAY HOMESTEAD - BEDFORD HOUSE  
FIREPLACES SITE SURVEY PHOTOS  
BBB PROJECT #3003

G.



T.  $\frac{13}{16}$ "

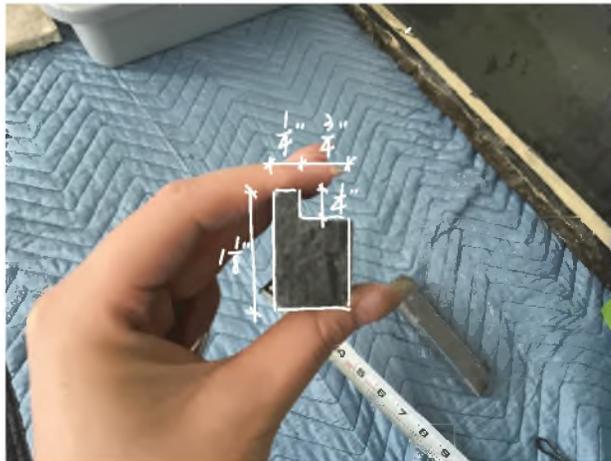
H.



I.



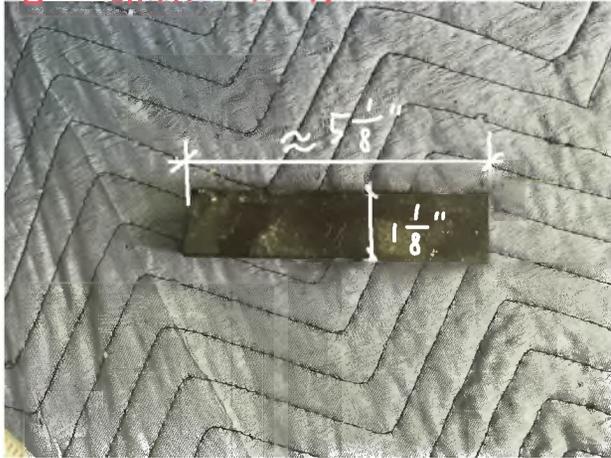
T.  $1 \frac{3}{16}$ "



Box I.



J- similar to H.



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FIREPLACES SITE SURVEY PHOTOS  
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DINING ROOM (104) FIREPLACE, CIRCA 1960



SOUTH PARLOR (102) FIREPLACE, CIRCA 1960



EAST PARLOR (110) FIREPLACE, CIRCA 1960

## APPENDIX 15

### Climbing Inspection

#### Basswood Trees 111 and 112

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185 Van Brunt St  
Brooklyn, NY 11231  
718-522-0612

20 June 2024

Jeff Dragan  
RHI  
RE: John Hay Homestead  
400 Jay Street  
Katonah, NY  
BY EMAIL: [jeffd@rhiplaces.com](mailto:jeffd@rhiplaces.com)

Dear Jeff:

We performed climbing inspections on Trees 111 and 112 – the two large basswoods that flank the house – to perform risk assessments. Both trees are, overall, in very good condition, though there are issues in each. Some pruning needs to be done, and some features that we observed should be regularly monitored. Details are in the detailed reports for each tree that appear in this letter. The numbers in the report are keyed to the numbered photos of the trees also included in this report.

Let me give you an overview of each tree.

Tree 111 is the very large basswood located east of the main house. On one leader is a neutral plane crack that is open and could in theory suffer decay as time goes by. There is little decay in that location at present. The defect should be monitored regularly to check on wound closure and potential decay. This problem is on a limb that would not strike the house or the new path, were it to fail.

The issue that requires prompt action is the branch that contains the readings numbered 5 and 6. This lateral, were it to fail, could impact the planned new path to the house. The strength loss at these sites suggest strongly that this lateral should be removed.

Tree 112 is the very large basswood located west of the main house. The limbs over the house are in moderately good condition. The chief issue –located at site #2 on the numbered plan – is an open hollow with significant strength loss. An existing cable meets this stem just above the open hollow, and it is possible that the open hollow extends into the area where the cable is attached. For this reason, and to supply an additional point of protection, we believe that a heavy-duty dynamic cable should be placed at a higher point between this leader and another sound leader. In addition, the wounded leader should have its crown reduced to reduce the amount of end weight and wind sail that the leader now presents.



Reinspections from the ground should occur on the schedule noted in the Excel report tables. We should re-climb and re-inspect the trees every other year.

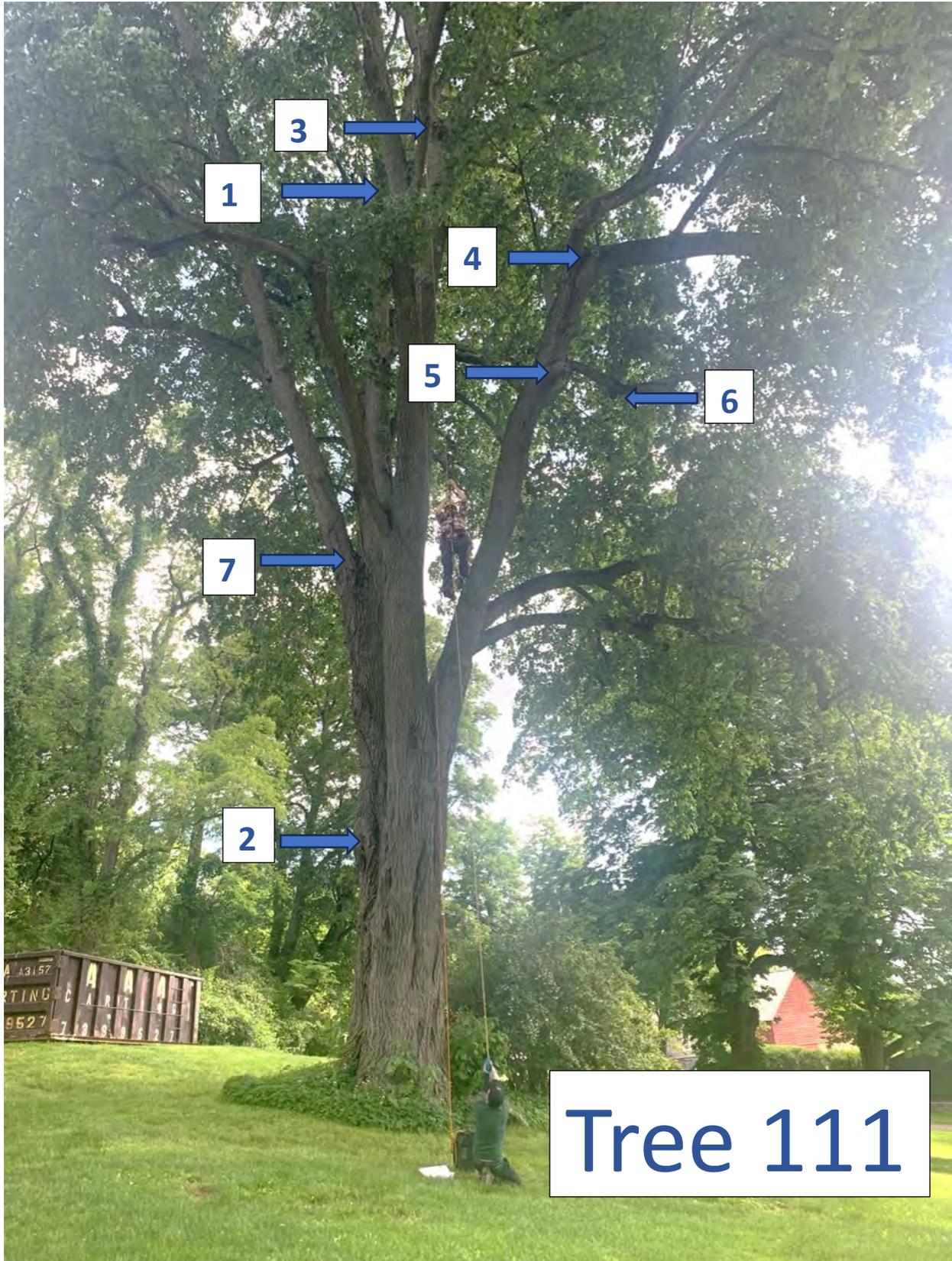
Here is the detailed tabular report:

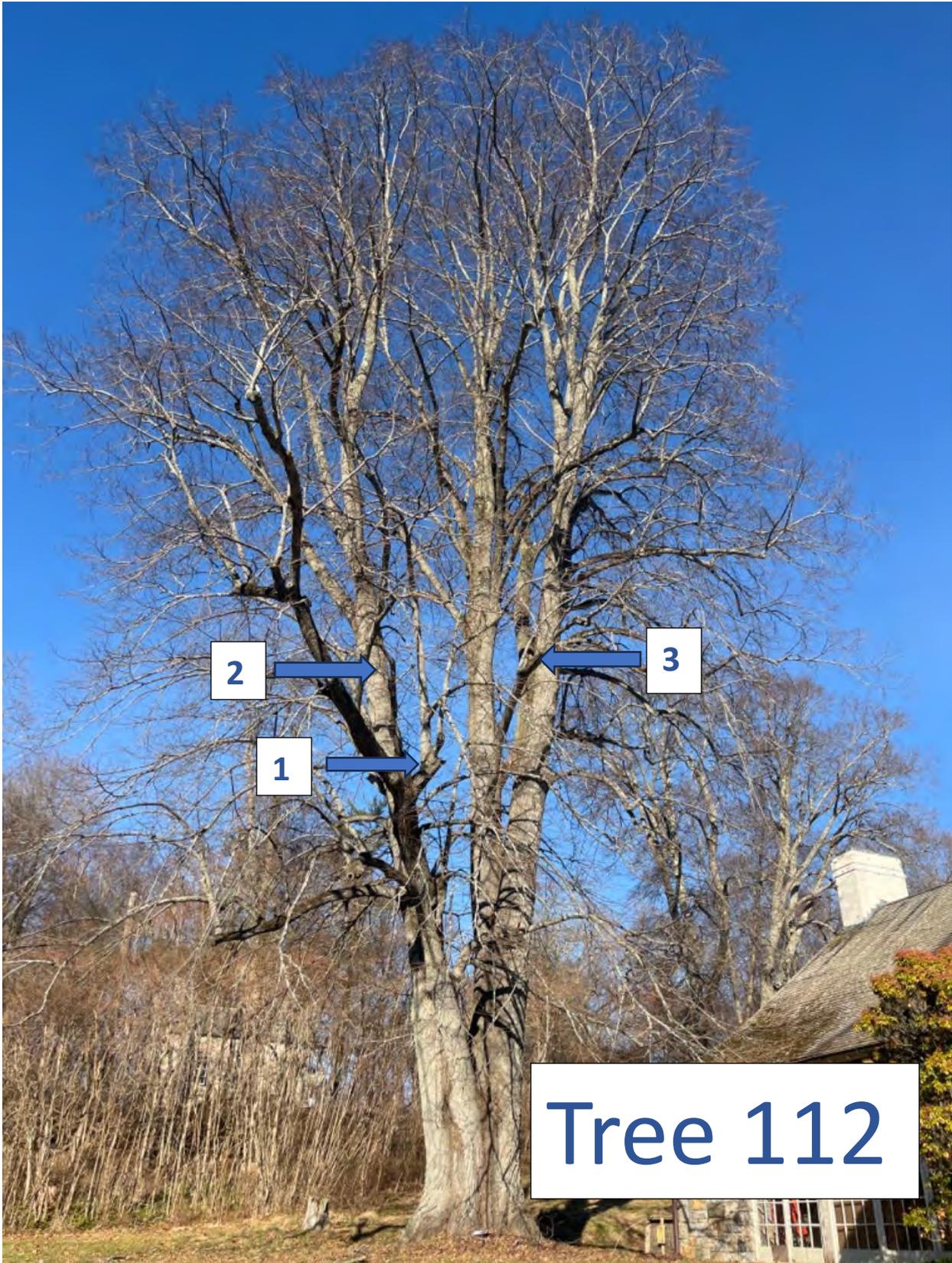
Tree #	Species	Site #	Assessment	Strength Loss	Action
111	Basswood				
		1	On Northeast leader, high aloft, Shear plane crack closing well	2" wide, 1' long	Monitor twice annually to assure continued closing. This stem is not over house or path.
		2	Principal leader emergence near base. Apparent incipient crack		No action. No crack found.
		3	On South leader, high aloft, recent storm damage. Hanging branch.		Branch pruned on inspection.
		4	On Southeast leader, diameter 18", hollow 3.75" wide and 7" deep	12%	Well within tolerances. Monitor twice annually
		5	On Southeast leader, lateral below #4, at base, diameter 20", hollow 2.5" wide and 12" deep	24%	Significant strength loss and on compression side.
		6	On southeast leader, on lateral below #4, midway out lateral on compression side, diameter 5.5", hollow 2" wide and 4" deep	46%	Readings 5 and 6 together are cause for serious concern. Remove this lateral.
		7	Tight codominant stems over roof. No crack or incipient crack noted.		No action.



112	Basswood				
		1	Small cavity located on northwest leader on 6" diameter limb, 2.5" height, 3" wide and 4" depth in hollow.	26%	Reduce weight of limb. Possibly take back to lateral. Monitor once annually
		2	Larger cavity located on northwest stem. 20" stem, 5" wide, 11" depth of cavity.	30%	Significant strength loss. Reaction wood is being put on. Reduce weight above wound by pruning. Steel cable located above cavity, possible dynamic cable installed above steel cable to reduce stress. Monitor twice annually.
		3	Small cavity located on southeast leader. 19" diameter, hollow is 2.5", 6" depth	7%	Well within tolerance. Monitor once annually

The numbered plans are below:







Please feel free to contact us with questions and comments.

Sincerely,

Urban Arborists BTH LLC

A handwritten signature in black ink, appearing to be 'Bill Logan', written in a cursive style.

by:\_\_\_\_\_

Bill Logan – Founder and Consulting Arborist

A handwritten signature in black ink, appearing to be 'Tyler Cook', written in a cursive style.

by:\_\_\_\_\_

Tyler Cook- Climbing Arborist