

# **Willow Island Park Enhancements Committee Meeting –Agenda**

**Contract # C1001636**

**Date: 5/16/2023 @ 4pm**

## **Project Timeline**

Date awarded: 12/8/19

Contract start date: 5/1/2020

Contract end date: 4/30/2025

### **1. Housekeeping**

- Sign-in Sheet
- Meeting notes from 3/23/23

### **2. Discussions With Whitham (consultants)**








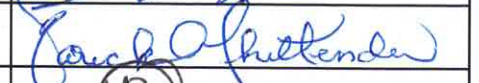
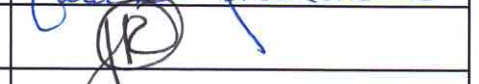
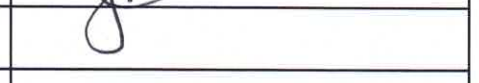
- Confirmation of in-kind Village work
  - pre-construction layout
  - paving work for a minimum 10' wide asphalt trail
    - Determine if 10' trail is appropriate; otherwise all asphalt work is to be publicly bid
- Review Ramtech Light Fixtures & Drawing
- Review Electrical needs at stage location
- Confirm plan for Phase 1 of Willow Island Project

### **3. Upcoming Meetings**

- Schedule next meeting

Willow Island Project Committee

Meeting  
5/16/23 4pm - 5:20 pm

	Printed Name	Organization	Signature
1	Bob		
2	John Larrance		
3	Michael Scriminger	FCE	
4	Tim SAVAGE		
5	LANCE RUDIGER	Tree Comm	
6	Barbara Beekman	Village Board	
7	TIM Bacon	NOC	
8	Variak Chittenden	GRH	
9	Jeni Reed	ED	
10	Leigh Rodriguez	ED	
11	Brooke Rouse	on Zoom	
12	Sean O'Brien	on Zoom	
13	Michele Palmer	on Zoom	consultant
14	Jacob von Mechow	on Zoom	consultant
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			

## Meeting Notes

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### Willow Island Park Enhancements Community Oversight Committee Progress Meeting

May 16, 2023

4:10 pm - 5:30 pm

Contract # C1001636

**Prepared by:** Jeni Reed/Michele Palmer

#### **Attendees:**

Michele Palmer (Whitham Planning & Design, Consultant) (zoom)

Jacob von Mechow (Whitham Planning & Design, Consultant) (zoom)

Barb Beekman

Varick Chittenden

Sean O'Brien (Zoom)

Lance Rudiger

Brooke Rouse (Zoom)

Tim Savage (attended until 5:00)

Mike Scriminger

John Larrance (left at 5:10pm)

Tim Bacon (Village Employee) (zoom)

Leigh Rodriguez (Village Employee)

Jeni Reed (Village Employee)

#### **Project Discussion**

Confirmation of in-kind Village work

- It was noted that not only will performing work in-house control costs, it can also contribute to the match required by the grant.
- Paving would only be possible for a 10' wide trail if contracted through the Village/County; the committee felt that this would be unnecessarily wide and that the original 8' proposed in the drawings would be appropriate.
- Based on the discussion, the asphalt trail (including prep work) on the West side of the island will be bid out, and costs will be compared to those of completing a 10' wide trail in house. At that time, the committee will be able to make a more informed decision.
- The 5' wide concrete return path (along the East side of the island) can be completed in-house by the Village DPW.
- Pre-construction layouts can be completed by the Village DPW.
- The concrete pad for the bathroom area can also be completed by the Village DPW.
- The Village DPW will also be able to trench, run conduit, and extend electrical wires as needed.

### Electrical Components

- Preliminary drawings done by Ram-Tech were shared with the committee by Whitham (see attached).
- The transformer which exists by Route 11 will remain and hold the master circuit panel and will provide 200 amps of power to the rest of the island.
- Up to 100 amps will be reserved for lighting and general electrical needs.
- Additional amps (minimum 100 amps) will be distributed to the stage area at the end of the island.
- There was discussion regarding the location and design of lighting around the island, and concerns were raised regarding safety versus not over-lighting the area.
- Additional options for neutral lighting poles were requested to allow the committee something to choose from.
- It was recommended that the conduits run underground be oversized, leaving room for potential expansion in the future.
- Lights are recommended to be hardwired to a switch (as opposed to “always on” or solar) to allow for control of the lighting through the park.

### Phasing Plan (see attached updated schematic drawing with phasing plan)

- Phase 1:
  - Parking lot reconfiguration
  - 8' wide asphalt trail
  - 5' wide concrete trail (by Village)
  - Concrete pad for future bathroom facilities (by Village)
  - Picnic area
  - Electrical service (by Village)
  - Planting plan will be developed (although not all plantings will take place in phase 1 due to potential disruption during streambank stabilization)
- Future Phases - see proposal on attached schematic drawing with phasing plan

### Stage Area

- Matthew Mazzotta presented some very early updated design sketches to the committee, having completed several changes through discussions with various members of the committee and taking their needs and concerns into consideration.
- Matthew will provide measurements of the current version to the consultants so the footprint of the proposed stage is accurate in the schematic drawing to allow for proper placement of the electrical.
- There are no additional updates regarding the process for design and construction of the stage area at this time.

### Next Steps

- The consultant will continue the process of creating construction documents from the current schematic design.
- Additional lighting options will be shared with the committee for consideration.
- Stage design and construction discussions will continue with the Village.

- DPW to estimate in-house cost for concrete work to establish budget for this item.
- WPD to send draft Construction Drawings to the Village for review when available.

**Next Meeting**

- June 8, 2023, at 4pm - Committee Meeting

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SEAL

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WHITHAM PLANNING DESIGN LANDSCAPE ARCHITECTURE, PLLC



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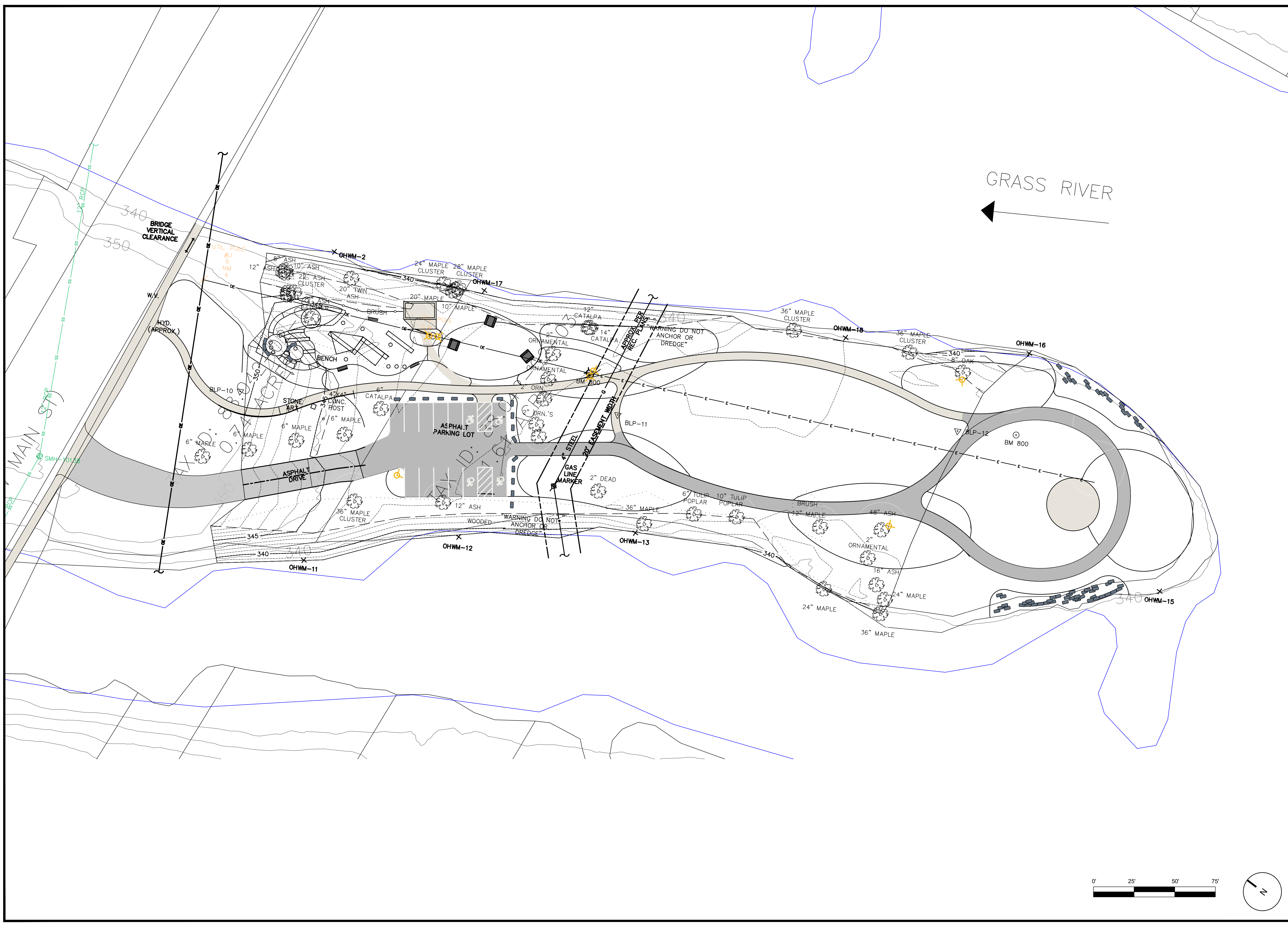
WILLOW ISLAND  
**VILLAGE OF CANTON**  
MAIN STREET  
CANTON, NEW YORK, 13617

**LAYOUT & MATERIALS PLAN**

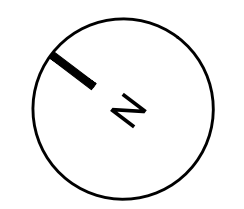
1"=25'  
SCALE

202214 PROJECT NO.	JVM DRAWN BY
2023.05.17 DATE	MP CHECKED BY

**L-201**



GRASS RIVER  
←





LUMINAIRE SCHEDULE								
TYPE	DESCRIPTION	MANUFACTURER	LAMP	VOLTAGE/DRIVER	LUMENS	WATTAGE	MOUNTING	NOTES
SL-1	18 3/8"DIA. x 1/8"H LED AREA LIGHT, BRONZE FINISH, TYPE 4 DIST	COOPER MCGRAW-EDISON TT-D6-830-1-T4-PM-BZ OR APPROVED EQUAL	LED, 3000 DEG. K	120 VOLT	13000	97.4	20' WOODEN POLE	COORDINATE HEIGHT WITH ARCH/ENG
SL-2	ARCHITECTURAL LED POST TOP, FULL CUTOFF, TYPE 3 DISTRIBUTION, CORROSION RESISTANT ALUMINUM, BRONZE FINISH	COOPER INVUE ARB-B3-LED-D1-T2-BZ-PC OR APPROVED EQUAL	LED, 3000 DEG. K	120/277 VOLT DIMMABLE	8500	96	12' TALL x 4" DIA ROUND STRAIGHT AL POLE, BRONZE	INTEGRAL PHOTOCELL



142 East State Street Suite B Ithaca NY 14850

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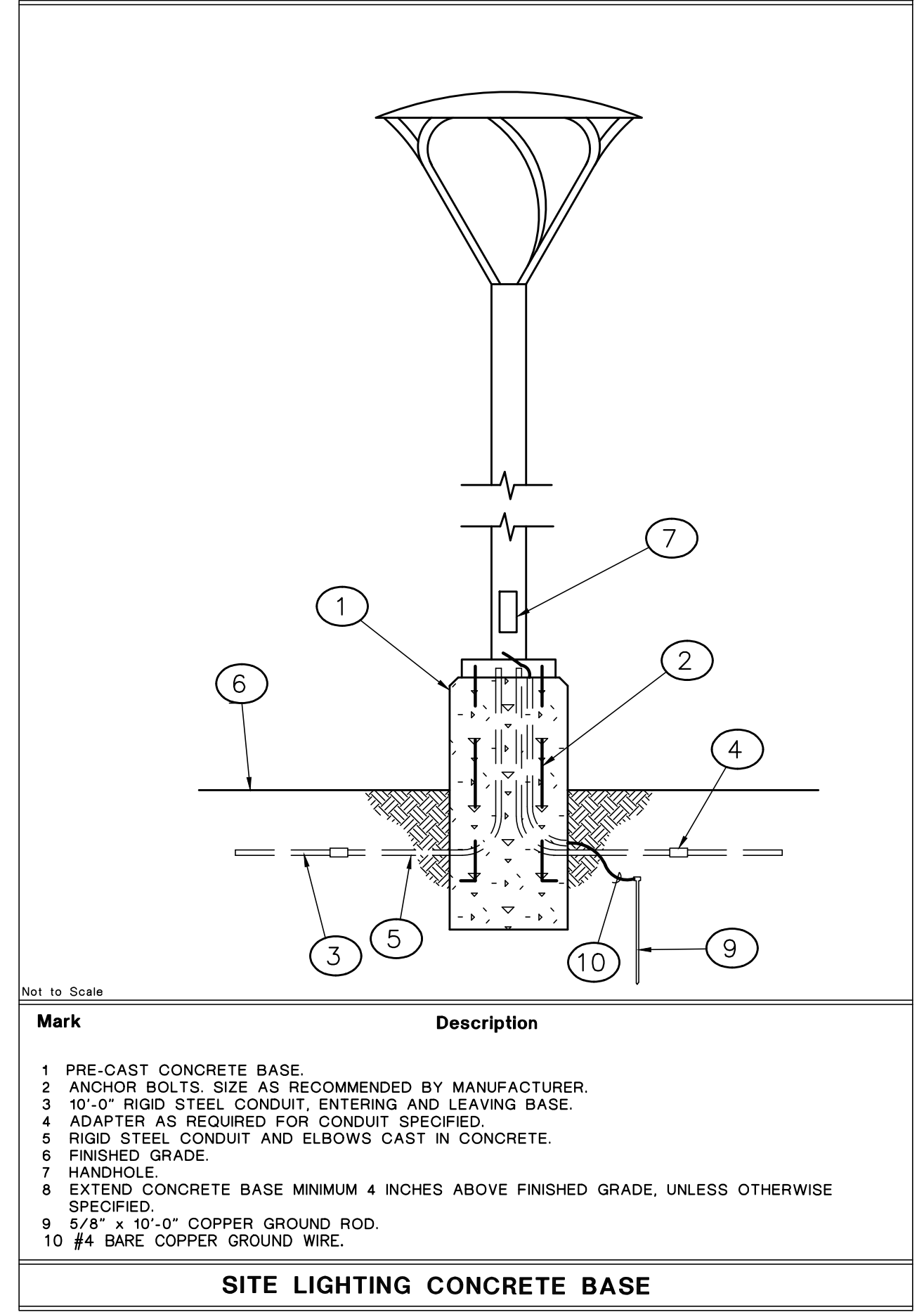
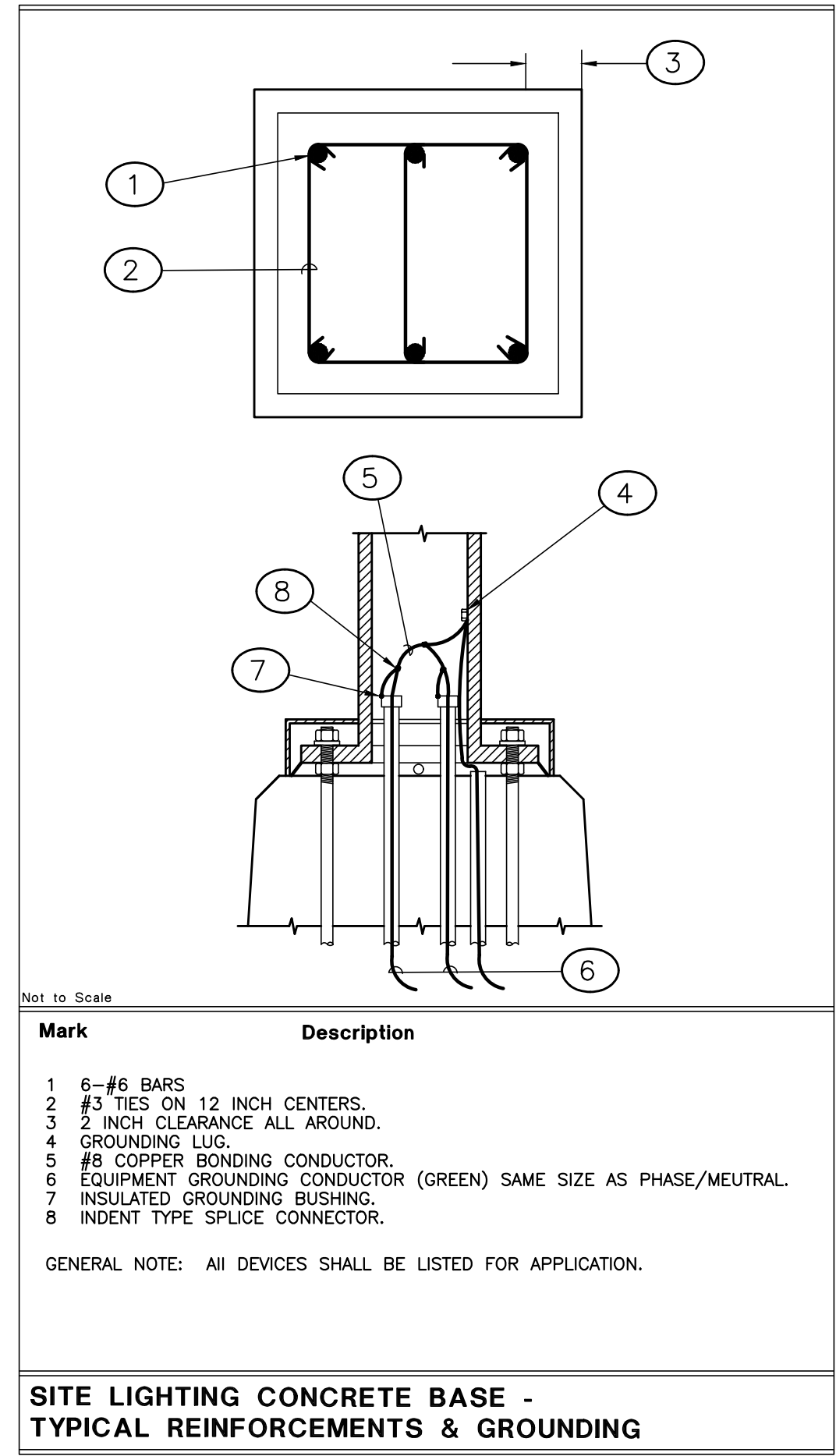
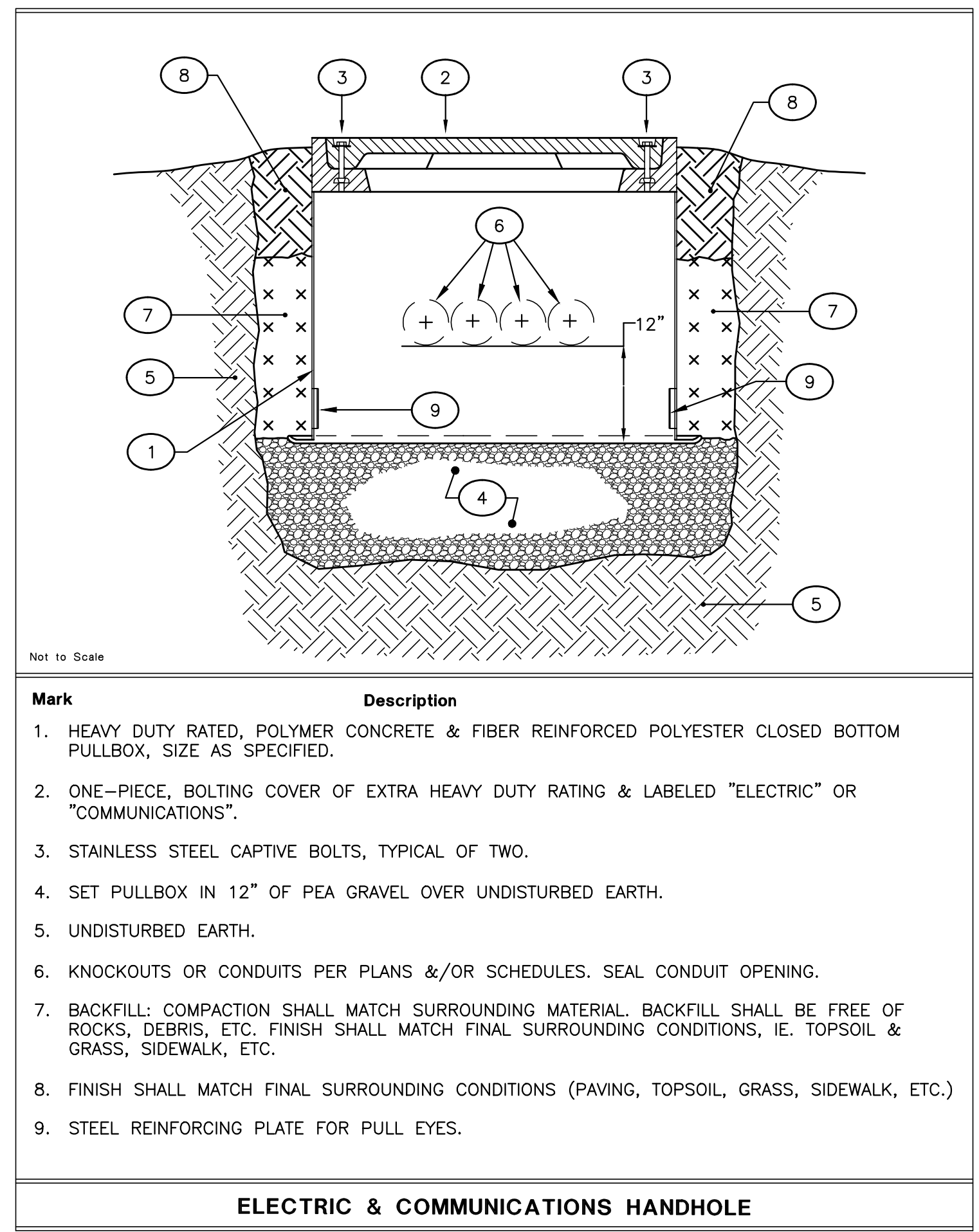
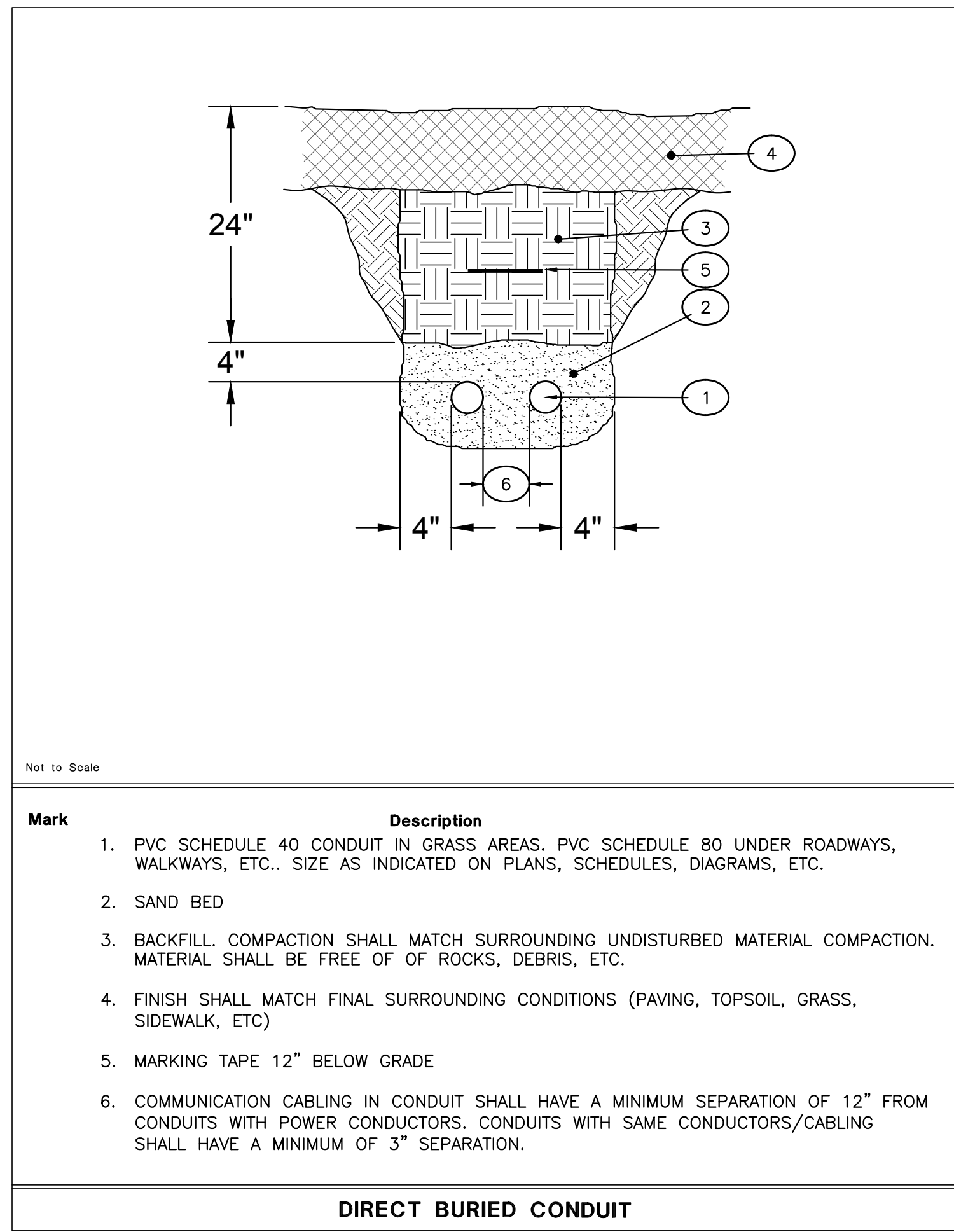
WILLOW ISLAND  
**VILLAGE OF CANTON**  
MAIN STREET  
CANTON, NEW YORK, 13617

**SCHEDULE & DETAILS**

AS NOTED SCALE

202214 PROJECT NO.	FAR DRAWN BY
2023/05/04 DATE	TAM CHECKED BY

ES500





Project		Catalog #		Type	
Prepared by		Notes		Date	



# McGraw-Edison

## TT TopTier

Area / Site Luminaire

### Product Features



### Product Certifications



### Interactive Menu

- Ordering Information [page 2](#)
- Product Specifications [page 2](#)
- Mounting Details [page 3](#)
- Optical Configurations [page 3](#)
- Energy and Performance Data [page 4](#)
- Control Options [page 6](#)

### Quick Facts

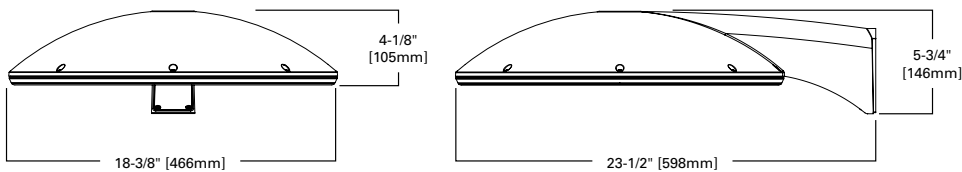
- Lumen packages range from 2,757 - 22,831
- Efficacies up to 146 lumens per watt
- Utilizes patented waveguide technology for maximum visual comfort

### Connected Systems

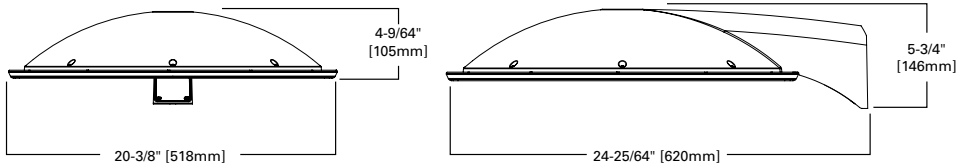
- WaveLinx Lite
- Synapse

### Dimensional Details

5CQ, 5MQ, 5WQ / RW (D1-D6) / T4 (D1-D5)



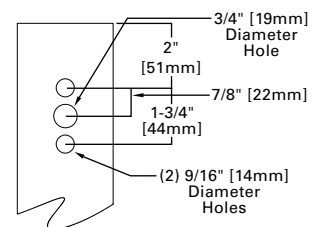
5CQ, 5MQ, 5WQ / RW (D7+) / T4 (D6+)



#### Dimension Data

Size	Width	Length (with arm)	Weight (lbs.)	EPA (sq. ft.)
D1-D6	18-3/8"	23-1/2"	20.5	0.66
D7-D10	20-3/8"	24-25/64"	22.4	0.66

#### Type "N" Drilling Pattern



**NOTES:**

1. Visit <https://www.designlights.org/search/> to confirm qualification. Not all product variations are DLC qualified.
2. IDA Certified for 3000K CCT and warmer only.

Ordering Information

SAMPLE NUMBER: **TT-D8-740-U-WQ-PM-DP**

Product Family	Lumen Package	Color Temperature	Voltage	Distribution	Mounting	Color
<b>TT=TopTier</b> <b>BAA-TT=TopTier, Buy American Act Compliant Product</b> <sup>3</sup> <b>TAA-TT=TopTier, Trade Agreements Act Compliant</b> <sup>3</sup>	<b>D1=4,000 Nominal Lumens</b> <b>D2=5,500 Nominal Lumens</b> <b>D3=6,500 Nominal Lumens</b> <b>D4=8,000 Nominal Lumens</b> <b>D5=10,000 Nominal Lumens</b> <b>D6=13,000 Nominal Lumens</b> <b>D7=15,000 Nominal Lumens</b> <b>D8=18,000 Nominal Lumens</b> <b>D9=20,000 Nominal Lumens</b> <b>D10=22,000 Nominal Lumens</b>	<b>735=70 CRI, 3500K CCT</b> <b>740=70 CRI, 4000K CCT</b> <b>750=70 CRI, 5000K CCT</b> <b>830=80 CRI, 3000K CCT</b> <b>AMB=Amber 590nm</b> <sup>16</sup>	<b>U=120-277V</b> <b>H=347-480V</b> <sup>4</sup> <b>1=120V</b> <b>2=208V</b> <b>3=240V</b> <b>4=277V</b> <b>8=480V</b> <sup>4</sup> <b>9=347V</b>	<b>5CQ=Type 5, Concentrated</b> <b>5MQ=Type 5, Medium</b> <b>5WQ=Type 5, Wide</b> <b>RW=Rectangular Wide</b> <sup>5</sup> <b>T4=Type 4</b> <sup>5</sup>	<b>PM=Pole Mount</b>	<b>NW=White</b> <b>AP=Gray</b> <b>BZ=Bronze</b> <b>BK=Black</b> <b>DP=Dark Platinum</b> <b>GM=Graphite Metallic</b>
Options (Add as Suffix)				Accessories (Order Separately)		
<b>F=Single Fuse (120, 277 or 347V Specify Voltage)</b> <b>FF=Double Fuse (208, 240 or 480V Specify Voltage)</b> <b>CG=Clear Glass</b> <sup>6</sup> <b>SG=Solite® Glass</b> <sup>7</sup> <b>CC=Coastal Construction</b> <b>DALI=DALI Driver</b> <sup>9</sup> <b>BPC=Button Type Photocontrol</b> <sup>17</sup> <b>PR=NEMA 3-PIN Photocontrol Receptacle</b> <b>PR7=NEMA 7-PIN Photocontrol Receptacle</b> <sup>18</sup> <b>MS/DIM-L08=Dimming Occupancy Sensor (&lt;9' Mounting)</b> <sup>8,10</sup> <b>MS/DIM-L20=Dimming Occupancy Sensor (9' - 20' Mounting)</b> <sup>8,10</sup> <b>MS/DIM-L40=Dimming Occupancy Sensor, 21'-40' Mounting</b> <sup>8,10</sup> <b>SPB1=Dimming Motion and Daylight Sensor, Bluetooth Programmable, &lt; 8' Mounting</b> <sup>8,13</sup> <b>SPB2=Dimming Motion and Daylight Sensor, Bluetooth Programmable, 8' - 20' Mounting</b> <sup>8,13</sup> <b>SPB4=Dimming Motion and Daylight Sensor, Bluetooth Programmable, 21' - 40' Mounting</b> <sup>8,13</sup> <b>ZW=WaveLinx-enabled 4-PIN Twistlock Receptacle</b> <sup>15</sup> <b>ZD=SR Driver-enabled 4-PIN Twistlock Receptacle</b> <sup>15</sup> <b>ZW-WOBWH=WaveLinx Lite, Dimming Motion and Daylight, Bluetooth Programmable, 7' - 15' Mounting</b> <sup>8,15</sup> <b>ZW-WOFWH=WaveLinx Lite, Dimming Motion and Daylight, Bluetooth Programmable, 15' - 40' Mounting</b> <sup>8,15</sup> <b>ZD-WOBWH=WaveLinx Lite, SR Driver, Dimming Motion and Daylight, Bluetooth Programmable, 7' - 15' Mounting</b> <sup>8,15</sup> <b>ZD-WOFWH=WaveLinx Lite, SR Driver, Dimming Motion and Daylight, Bluetooth Programmable, 15' - 40' Mounting</b> <sup>8,15</sup> <b>ZW-SWPD4WH=WaveLinx Pro, Dimming Motion and Daylight, WAC Programmable, 7' - 15' Mounting</b> <sup>8,15</sup> <b>ZW-SWPD5WH=WaveLinx Pro, Dimming Motion and Daylight, WAC Programmable, 15' - 40' Mounting</b> <sup>8,15</sup> <b>ZD-SWPD4WH=WaveLinx Pro, SR Driver, Dimming Motion and Daylight, WAC Programmable, 7' - 15' Mounting</b> <sup>8,15</sup> <b>ZD-SWPD5WH=WaveLinx Pro, SR Driver, Dimming Motion and Daylight, WAC Programmable, 15' - 40' Mounting</b> <sup>8,15</sup> <b>LWR-LW=Enlighted Wireless Sensor, Wide Lens 8' - 16' Mounting Height</b> <sup>8,11</sup> <b>LWR-LN=Enlighted Wireless Sensor, Narrow Lens 16' - 40' Mounting Height</b> <sup>8,11</sup> <b>DIM10-MS/DIM-L08=Synapse occupancy sensor (&lt;8' Mounting)</b> <b>DIM10-MS/DIM-L20=Synapse occupancy sensor (8'-20' Mounting)</b>				<b>MA1252=Replacement 10kV Surge Module</b> <b>OA/RA1016=NEMA Photocontrol Multi-Tap - 105-285V</b> <b>OA/RA1027=NEMA Photocontrol - 480V</b> <b>OA/RA1201=NEMA Photocontrol - 347V</b> <b>OA/RA1013=Photocontrol Shorting Cap</b> <b>OA/RA1014=120V Photocontrol</b> <b>MA1036-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon</b> <b>MA1037-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon</b> <b>MA1197-XX=3@120° Tenon Adapter for 2-3/8" O.D. Tenon</b> <b>MA1188-XX=4@90° Tenon Adapter for 2-3/8" O.D. Tenon</b> <b>MA1189-XX=2@90° Tenon Adapter for 2-3/8" O.D. Tenon</b> <b>MA1190-XX=3@90° Tenon Adapter for 2-3/8" O.D. Tenon</b> <b>MA1191-XX=2@120° Tenon Adapter for 2-3/8" O.D. Tenon</b> <b>MA1038-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon</b> <b>MA1039-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon</b> <b>MA1192-XX=3@120° Tenon Adapter for 3-1/2" O.D. Tenon</b> <b>MA1193-XX=4@90° Tenon Adapter for 3-1/2" O.D. Tenon</b> <b>MA1194-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon</b> <b>MA1195-XX=3@90° Tenon Adapter for 3-1/2" O.D. Tenon</b> <b>FSIR-100=Wireless Configuration Tool for Occupancy Sensor</b> <sup>10</sup> <b>WOLC-7P-10A=WaveLinx Outdoor Control Module (7-pin)</b> <sup>12</sup> <b>WOB-WH=WaveLinx Lite Sensor, Dimming Motion and Daylight, Bluetooth Programmable, 7' - 15' Mounting</b> <sup>8,15</sup> <b>WOF-WH=WaveLinx Lite Sensor, Dimming Motion and Daylight, Bluetooth Programmable, 15' - 40' Mounting</b> <sup>8,15</sup> <b>SWPD4-WH=WaveLinx Sensor, Dimming Motion and Daylight, WAC Programmable, 7' - 15' Mounting</b> <sup>12,14,16</sup> <b>SWPD5-WH=WaveLinx Sensor, Dimming Motion and Daylight, WAC Programmable, 15' - 40' Mounting</b> <sup>12,14,16</sup>		

- NOTES:**
- For Design Lights Consortium qualification, refer to [www.designlights.org](http://www.designlights.org) Qualified Products List under Family Models for details.
  - Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional support information.
  - Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.
  - For 480V, not for use with ungrounded or impedance grounded systems.
  - Not available with D10 configuration.
  - Not available with 5CQ.
  - Standard with 5CQ, option available with 5WQ only.
  - Includes integral photocell.
  - Not available with H voltage. Not compatible with MS/DIM or LWR sensors.
  - The FSIR-100 configuration tool is required to adjust parameters including high and low modes, sensitivity, time delay and more.
  - Enlighted wireless sensors are factory installed only, and require network components in appropriate quantities.
  - Requires ZW or ZD receptacle.
  - Sensor configuration mobile application required for configuration. See controls page for details.
  - Cannot be used with other control options.
  - For WaveLinx applications, WAC Gateway required to enable field-configurability: Order WAC-PoE and WPOE-120 (10V to PoE injector) power supply if needed. Not required for WaveLinx Lite Commercial (LC) applications.
  - Narrow-band 590nm +/- 5nm for wildlife and observatory use. Choose lumen package D1.
  - Not available with voltage options H, 8 or 9.
  - Not available if any SPB, LWR, or WaveLinx sensor is selected. Motion sensor has an integral photocell.

Product Specifications

Construction

- Low profile, two-piece die-cast aluminum housing

Optics

- Five optical distributions; three symmetrical and two asymmetrical
- Patented visual comfort waveguide technology
- 10 lumen packages, ranging from 2,757 to 22,831
- IDA Certified for 3000K CCT and warmer only

Electrical

- D1-D6: -40°C - 50°C operating temperature
- D7-D10: -40°C - 40°C operating temperature

- Greater than 90% lumen maintenance at 50,000 hours
- IP66 rated
- 120-277V 50/60Hz, 347V 60Hz or 480V 60Hz operation
- 10kV surge module standard
- 0-10V dimming standard

Finish

- 2.5 mil nominal TGIC powder coat thickness
- Finishes include white, black, bronze, gray, dark platinum and graphite metallic
- RAL and custom color matches available

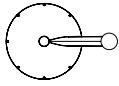
- Coastal Construction (CC) available, providing 5,000 hour salt spray rating per ASTM B117 with a scribe rating of 9 per ASTM D1654

Warranty

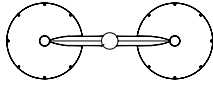
- Five-year warranty

Mounting Configurations and EPAs

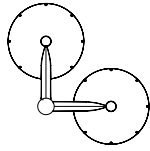
Arm Mount Single  
EPA 0.66



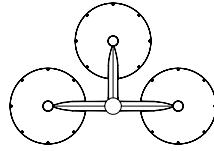
Arm Mount 2 @ 180°  
EPA 1.32



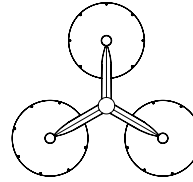
Arm Mount 2 @ 90°  
EPA 0.95



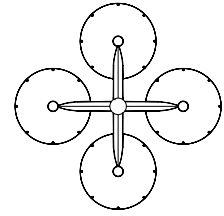
Arm Mount 3 @ 90°  
EPA 1.36



Arm Mount 4 @ 90°  
EPA 1.03

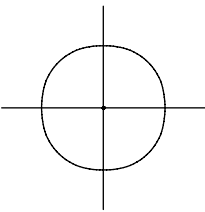


Arm Mount 4 @ 90°  
EPA 1.36

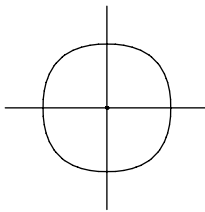


Optical Distributions

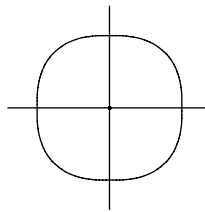
5CQ  
(Type 5 Concentrated)



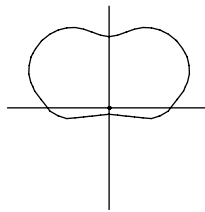
5MQ  
(Type 5 Medium)



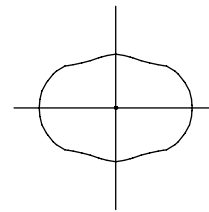
5WQ  
(Type 5 Wide)



T4  
(Type 4)



RW  
(Rectangular Wide)



Energy and Performance Data

Lumen Maintenance

Lumen Package	Ambient Temperature	25,000 hours*	50,000 hours*	60,000 hours*	100,000 hours**	Theoretical L70 hours**
D1-D6 (D1 - D4 DL/T4)	25°C	98.0%	95.2%	94.1%	89.8%	> 300,000
	40°C	97.9%	94.8%	93.6%	89.0%	> 290,000
	50°C	97.7%	94.5%	93.2%	88.4%	> 270,000
D7 - D10 (D5+ DL/T4)	25°C	95.8%	93.2%	92.2%	88.2%	> 300,000
	40°C	93.9%	89.7%	88.1%	81.9%	> 180,000

\* Supported by IES TM-21 standards

\*\*Theoretical values represent estimations commonly used; however, refer to the IES position on LED Product Lifetime Prediction, IES PS-10-18, explaining proper use of IES TM-21 and LM-80.

Lumen Multiplier

Ambient Temperature	Multiplier
0°C	1.03
10C	1.02
25°C	1.00
40°C	0.98
50°C	0.97

[View TopTier IES files](#)

Energy and Performance Data

Lumen Package <sup>1</sup>		D1	D2	D3	D4	D5	D6	D7	D8	D9	D10		
Power (Wattage) 5CQ, 5MQ, 5WQ		28.0	39.2	47.2	57.6	74.7	105.2	124.7	148.7	173.1	193.8		
Power (Wattage) RW Only		28.0	39.2	47.2	57.6	74.7	105.2	127.1	152.6	178.0	--		
Power (Wattage) T4 Only			40.5	48.8	59.8	62.3	97.4	127.1	152.6	178.0	--		
3000K CCT 80 CRI	5CQ Concentrated	Lumens	3,409	4,640	5,595	6,660	8,383	11,030	12,307	14,411	16,430	18,001	
		BUG Rating	B1-U0-G1	B2-U0-G1	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G2
		Lumens per Watt	122	118	119	116	112	105	99	97	95	93	
	5MQ Medium	Lumens	3,647	4,964	5,986	7,125	8,969	11,800	12,854	15,053	17,161	18,802	
		BUG Rating	B2-U0-G1	B2-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G3	B4-U0-G3	
		Lumens per Watt	130	127	127	124	120	112	103	101	99	97	
	5WQ Wide	Lumens	3,449	4,695	5,662	6,740	8,483	11,161	12,350	14,463	16,489	18,065	
		BUG Rating	B2-U0-G1	B3-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B4-U0-G3	B4-U0-G3	B4-U0-G3	
		Lumens per Watt	123	120	120	117	114	106	99	97	95	93	
	RW Rectangular Wide	Lumens	2,757	3,753	4,526	5,387	6,781	8,922	11,977	13,619	15,122	--	
		BUG Rating	B2-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G3	B4-U0-G3	--	
		Lumens per Watt	98	96	96	94	91	85	94	89	85	--	
	T4	Lumens	2,959	3,985	4,762	5,622	6,537	8,771	11,834	13,337	14,768	--	
		BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G3	B1-U0-G3	B2-U0-G3	B2-U0-G4	B2-U0-G4	B2-U0-G4	--	
		Lumens per Watt	103	98	98	94	105	90	93	87	83	--	
3500K CCT 70 CRI	5CQ Concentrated	Lumens	3,618	4,925	5,940	7,070	8,899	11,708	14,944	17,500	19,951	21,858	
		BUG Rating	B1-U0-G1	B2-U0-G1	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G2	
		Lumens per Watt	129	126	126	123	119	111	120	118	115	113	
	5MQ Medium	Lumens	3,872	5,270	6,355	7,564	9,520	12,527	15,609	18,279	20,839	22,831	
		BUG Rating	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B4-U0-G3	B4-U0-G3	B4-U0-G3	B4-U0-G3	
		Lumens per Watt	138	134	135	131	127	119	125	123	120	118	
	5WQ Wide	Lumens	3,662	4,984	6,011	7,154	9,005	11,848	14,997	17,562	20,022	21,936	
		BUG Rating	B2-U0-G1	B3-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G3	B4-U0-G3	B4-U0-G3	B4-U0-G3	B4-U0-G3	B4-U0-G4	
		Lumens per Watt	131	127	127	124	121	113	120	118	116	113	
	RW Rectangular Wide	Lumens	2,927	3,984	4,805	5,719	7,198	9,471	14,544	16,537	18,363	--	
		BUG Rating	B2-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B4-U0-G3	B4-U0-G3	B4-U0-G3	B4-U0-G3	--	
		Lumens per Watt	105	102	102	99	96	90	114	108	103	--	
	T4	Lumens	3,141	4,230	5,055	5,968	7,938	10,650	14,370	16,195	17,933	--	
		BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	--	
		Lumens per Watt	109	104	104	100	127	109	113	106	101	--	
4000K and 5000K CCT 70 CRI	5CQ Concentrated	Lumens	3,828	5,211	6,284	7,480	9,415	12,387	14,944	17,500	19,951	21,858	
		BUG Rating	B1-U0-G1	B2-U0-G1	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G2	
		Lumens per Watt	137	133	133	130	126	118	120	118	115	113	
	5MQ Medium	Lumens	4,096	5,575	6,723	8,002	10,072	13,253	15,609	18,279	20,839	22,831	
		BUG Rating	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B4-U0-G3	B4-U0-G3	B4-U0-G3	B4-U0-G3	
		Lumens per Watt	146	142	142	139	135	126	125	123	120	118	
	5WQ Wide	Lumens	3,874	5,273	6,359	7,569	9,527	12,535	14,997	17,562	20,022	21,936	
		BUG Rating	B2-U0-G1	B3-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G3	B4-U0-G3	B4-U0-G3	B4-U0-G3	B4-U0-G3	B4-U0-G4	
		Lumens per Watt	138	135	135	131	128	119	120	118	116	113	
	RW Rectangular Wide	Lumens	3,097	4,215	5,083	6,050	7,615	10,020	14,544	16,537	18,363	--	
		BUG Rating	B2-U0-G2	B3-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B4-U0-G3	B4-U0-G3	B4-U0-G3	B4-U0-G3	--	
		Lumens per Watt	111	108	108	105	102	95	114	108	103	--	
	T4	Lumens	3,323	4,475	5,348	6,314	7,938	10,650	14,370	16,195	17,933	--	
		BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	--	
		Lumens per Watt	115	110	110	106	127	109	113	106	101	--	

NOTES:

1. Nominal data with 70 CRI for 4000K and 5000K, 80 CRI for 3000K. For configurations that include the glass or sensor options, refer to the specific IES files for BUG rating and lumen output data.

2. Wattage with T4 optic is 33W for C1, 41W for C2, and 67W for C3.

Input Current

5CQ, 5MQ and 5WQ Distributions

Lumen Package	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10
Power (Wattage)	28.0	39.2	47.2	57.6	74.7	105.2	124.7	148.7	173.1	193.8
Input Current @ 120V (A)	0.23	0.33	0.39	0.48	0.62	0.88	1.09	1.31	1.53	1.72
Input Current @ 208V (A)	0.13	0.19	0.23	0.28	0.36	0.51	0.57	0.67	0.78	0.88
Input Current @ 240V (A)	0.12	0.16	0.20	0.24	0.31	0.44	0.56	0.66	0.76	0.85
Input Current @ 277V (A)	0.10	0.14	0.17	0.21	0.27	0.38	0.49	0.58	0.67	0.74
Input Current @ 347V (A)	0.08	0.11	0.14	0.17	0.22	0.30	0.40	0.47	0.55	0.62
Input Current @ 480V (A)	0.06	0.08	0.10	0.12	0.16	0.22	0.30	0.35	0.41	0.45

RW Distribution Only

Lumen Package	D1	D2	D3	D4	D5	D6	D7	D8	D9
Power (Wattage)	28.0	39.2	47.2	57.6	74.7	105.2	127.1	152.6	178.0
Input Current @ 120V (A)	0.23	0.33	0.39	0.48	0.62	0.88	1.11	1.34	1.58
Input Current @ 208V (A)	0.13	0.19	0.23	0.28	0.36	0.51	0.58	0.69	0.81
Input Current @ 240V (A)	0.12	0.16	0.20	0.24	0.31	0.44	0.56	0.67	0.78
Input Current @ 277V (A)	0.10	0.14	0.17	0.21	0.27	0.38	0.50	0.59	0.68
Input Current @ 347V (A)	0.08	0.11	0.14	0.17	0.22	0.30	0.41	0.48	0.57
Input Current @ 480V (A)	0.06	0.08	0.10	0.12	0.16	0.22	0.30	0.36	0.42

T4 Distribution Only

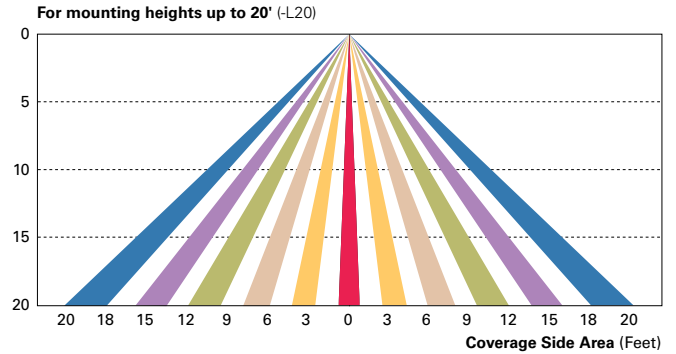
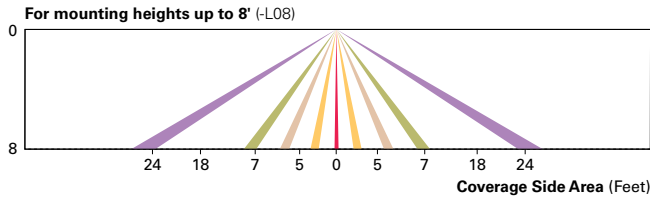
Lumen Package	D1	D2	D3	D4	D5	D6	D7	D8	D9
Power (Wattage)	28.8	40.5	48.8	59.8	62.3	97.4	127.1	152.6	178.0
Input Current @ 120V (A)	0.24	0.34	0.41	0.50	0.55	0.86	1.11	1.34	1.58
Input Current @ 208V (A)	0.14	0.19	0.23	0.29	0.28	0.44	0.58	0.69	0.81
Input Current @ 240V (A)	0.12	0.17	0.20	0.25	0.28	0.43	0.56	0.67	0.78
Input Current @ 277V (A)	0.10	0.15	0.18	0.22	0.24	0.37	0.50	0.59	0.68
Input Current @ 347V (A)	0.08	0.12	0.14	0.17	0.21	0.31	0.41	0.48	0.57
Input Current @ 480V (A)	0.06	0.08	0.10	0.12	0.15	0.23	0.30	0.36	0.42

Control Options

**0-10V (D)** 0-10V dimming comes standard on all TopTier configurations for use with integrated or external lighting controls.

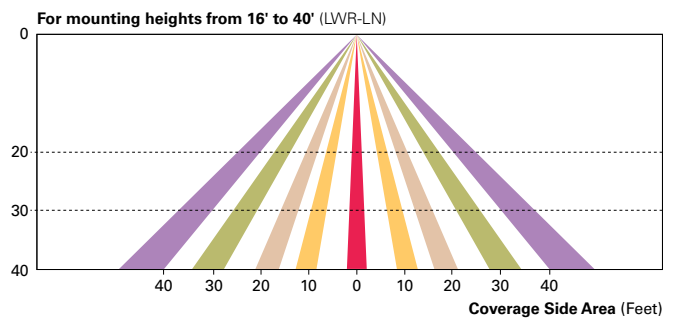
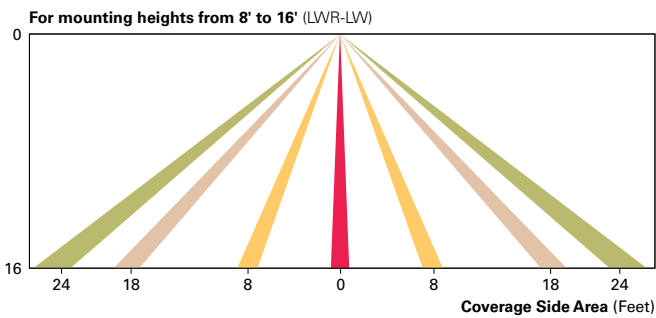
**Photocontrol** (BPC, PR and PR7) Optional button-type photocontrol (BPC) and photocontrol receptacles (PR and PR7) provide a flexible solution to enable “dusk-to-dawn” lighting by sensing light levels. Advanced control systems compatible with NEMA 7-pin standards can be utilized with the PR7 receptacle.

**Dimming Occupancy Sensor** (MS/DIM) These sensors are factory installed in the luminaire, dimming to 50% after five minutes of no motion detected. When motion is detected, the luminaire output is 100%. Includes an integral photocell that can be programmed for “dusk-to-dawn” operation. The FSIR-100 programming tool can be utilized to adjust dimming level, time delay, sensitivity and other parameters. Two lens options provide optimal coverage patterns up to 20’ mounting height.



**WaveLinx-Ready 4-PIN Twistlock Receptacle** (ZW) Includes the WaveLinx control module, integrated 4-Pin receptacle, and standard 0-10V dimming driver, enabling the subsequent addition of a WaveLinx sensor.

**Enlighted Wireless Control and Monitoring System** (LWR-LW and LWR-LN) The Enlighted control system is a connected lighting solution, combining LED luminaires with an integrated wireless sensor system. The sensor controls the lighting system in compliance with the latest energy codes while collecting valuable data about building performance and use. Software applications utilizing energy dashboards maximize data inputs to help optimize the use of other resources beyond lighting.



**Synapse** (DIM10) SimplySNAP integrated wireless controls system by Synapse. Includes factory installed DIM10 control module and MS/DC motion sensor; requires additional Synapse system components for operation. Contact Synapse at [www.synapsewireless.com](http://www.synapsewireless.com) for product support, warranty, and terms and conditions.

