

Requests for Bids

**MEMORIAL PARK
LIGHTING**

Milton Contract No. 2015-56

Town of Milton



***115 Federal Street
Milton, Delaware 19968***

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Prepared By:



**PENNONI ASSOCIATES INC.
CONSULTING ENGINEERS**

Pennoni Associates Inc.
18072 Davidson Drive
Milton, DE 19968

PROJECT NO. MTON-1504

May 6, 2015



Town of Milton
ADDENDUM #1



Project:	<u>Memorial Park Lighting</u>
Job Number:	<u>Contract No. 2015-56 (MTON1504)</u>
Project Location:	<u>Memorial Park</u>
Addendum:	<u>#1</u>
Addendum Date:	<u>May 15, 2015</u>

CHANGES TO SPECIFICATIONS

ITEM 1: Bid Form Item A-4 (LED)

A line item has been added "A-4 (LED)" to provide a price for Furnishing and Installing 3 New Pole Mounted (LED) Lights with additional 110v pole mounted outlets. The cost bid for Item A-4 (LED) shall be the cost to install Granville II LED style lights as described herein to be "equivalent" to the specified High Pressure Sodium Lights in Bid Item A-4.

A revised Bid Form is attached for your use, and should be the bid form submitted with Bid.

Total Price shall be filled out for both A-4 and A-4 (LED) and shall be the total price to install a complete system under each style light. The Town reserves the right to select either item based on cost or personal preference during the bid selection.

Specifications have been included for the Granville II LED style fixture.

ITEM 2: Bid Form Item No. A-5 (Furnish and Install LED Retrofit Replacements for existing park lights)

Part B: Alternate Items has been included to the Bid Form.

Bid Item A-6 has been added to Part B as a possible add alternate item.

Bid Item A-6 shall be described as a unit price per retrofit for the contractor to furnish and install a complete LED retrofit for the existing lights within the park. This retrofit kit shall be that of the Granville II LED style (60 watt) as specified herein and above. This item shall include all necessary appurtenances to retrofit the light complete and operational given the system they are on.

The Town of Milton reserves the right to add a single retrofit, multiple retrofits, or no retrofit items to the contract based on their decision alone. The price bid shall be assumed that work will be performed in conjunction with the Base Bid above.

A revised Bid Form is attached for your use, and should be the bid form submitted with Bid.

Specifications have been included for the Granville II LED style fixture.

ITEM A-4: Furnish and Install New Pole Mounted (HIGH PRESSURE SODIUM) Lights with additional 110 v POLE mounted outlets

The word "BASE" has been changed to "POLE" as referring to the location of the additional 110v outlet mounting location. The location was specified correctly on the product sheet for the item however this shall clarify the location even further.

ITEM A-4: Furnish and Install New Pole Mounted (HIGH PRESSURE SODIUM) Lights with additional 110 v pole mounted outlets

A revised Utility Granville Series Postlite specification sheet has been included in this addendum changing the following:

- **(100HP) Ballast Type**
 - o The specified light shall be 100watt High Pressure Sodium.
- **(S) Finial**
 - o The specified finial shall be a standard finial black in color.
- **(B) Finial Color**
 - o The specified finial shall be a standard finial black in color.

A revised Wadsworth Aluminum Pole specification sheet has been included in this addendum changing the following:

- **(L5J) Shaft Style**
 - o The specified shaft style shall be L5J with SiteLink Access panel in base.

END OF ADDENDUM #1

(ATTACHMENTS INCLUDED: BID FORM, Granville II LED Spec., Revised Utility Granville Series Postlite Spec., & Revised Wadsworth Aluminum Pole Spec.)

SECTION 00 41 00 - BID FORM
TOWN OF MILTON, DELAWARE
MEMORIAL PARK LIGHTING
CONTRACT No. 2015-56

To: Town of Milton, Delaware

For the Construction of: Memorial Park Lighting, Town of Milton Contract No. 2015-56

The undersigned Bidder has carefully examined the site of work, the Plans, the General Conditions, Technical Specifications, and the Agreement for the construction of the above-named project, and in compliance with the Advertisement dated _____ shall provide all the necessary machinery, tools, apparatus, and other means of construction, including all the work to furnish all the material called for in accordance with the requirements of the Town of Milton and the true intent of the Contract Documents, and shall complete the contract within 30 consecutive calendar days .

The undersigned Bidder further understands that all supplies and materials covered by this Bid shall be new and of the best quality and the highest-grade workmanship.

The Bidder certifies by the submission of this Bid that there has been no violation of copyrights or patent rights in manufacturing, producing or selling the product or services shipped or ordered as a result of this Bid. The successful Bidder shall, at his own expense, defend any and all actions or suits charging such infringements, and will save Town of Milton, and its appointed and elected officials, officers, partners, directors, employees, and agents harmless from any and all liability, loss, or expense occasioned by any such violation.

The Bidder acknowledges receipt of the following Addenda:

This Bid includes sales tax and all other applicable taxes and fees.

Accompanying this Bid is a Bid Bond/certified check in the amount of _____

_____, payable to the Town of Milton, Delaware, which is to be forfeited to the extent necessary to make up the difference between the Bid and the second low bid, or if the undersigned shall fail to execute the Agreement and furnish satisfactory Performance and Payment Bonds under the conditions and within the time specified; otherwise said Bid guarantee shall be

Pennoni Associates

Section 00 41 00 - Bid Form
00 41 00 - 1

returned to the undersigned. If the Bid Bond or guarantee is not sufficient to make up the difference between the Bid and the second low bid, together with any consequential damages, the undersigned

Bidder agrees to pay the Owner any losses in excess of the bond or guarantee.

Subcontractors

The following subcontractors and suppliers shall execute portions of the work as indicated.

Type of Work	Contractor / Supplier
Light and Pole Supplier	
Licensed Electrician	
Concrete Base – Mason	

The undersigned Bidder agrees to begin the work not later than ten (10) days after the date specified in the Notice to Proceed and to prosecute the work in such manner as to complete it within the time limit as set forth above. In the event the said work is not completed within the time limit above stated, Bidder shall be liable and hereby agrees to pay the Owner as liquidated damages and not as a penalty the sum of **\$100.00** dollars per calendar day for each and every day that the said work remains incomplete after the expiration of the contract time for completion.

As Bidder, we have completed the Certification of Non-Collusion reflected within the Bid Form Section.

Delaware Contractor No. _____/Class/ _____ / Specialty _____

Dated _____.

(If an Individual, Partnership, or Non-Incorporated Organization)

Name: _____

Signature of Bidder: _____

Title: _____

Business Address: _____

Names and _____
Address of _____
Members _____

(If a corporation)

Name of Corporation: _____

Signature of Bidder: _____

Title: _____

Business Address: _____

Incorporated under the

laws of the State of: _____

Name President _____

(Address) _____

Name Secretary _____

(Address) _____

Name Treasurer _____

(Address) _____

Affix Corporate Seal

and Acknowledge

All Addenda

**BID SCHEDULE
MEMORIAL PARK LIGHTING
TOWN OF MILTON CONTRACT NO. 2015-56**

PART A – MEMORIAL PARK LIGHTING PROJECT

NO.	ITEM	SIZE OR DEPTH	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
A-1	Mobilization and Restoration	--	LS	--		
A-2	Furnish and Install Pole Bases	--	LS	--		
A-3	Design, Furnish, and Install Underground Electric run from Gazebo to New Pole Lights (within buried conduit)	--	LS	--		
A-4	Furnish and Install New Pole Mounted (<u>HIGH PRESSURE SODIUM</u>) Lights with additional 110 v pole mounted outlets	--	LS	--		
A-4 (LED)	Furnish and Install New Pole Mounted (<u>LED</u>) Lights with additional 110 v pole mounted outlets	--	LS	--		
TOTAL PRICE (A-4)	<i>(Complete and Operational System for 3 pole mounted (<u>HIGH PRESSURE SODIUM</u>) lights)</i>				HIGH PRESSURE SODIUM	\$
TOTAL PRICE (A-4 LED)	<i>(Complete and Operational System for 3 pole mounted (<u>LED</u>) lights)</i>				LED	\$

PART B: ADD ALTERNATE ITEMS

NO.	ITEM	UNIT	QUANTITY	UNIT PRICE
A-6	Furnish and Install (<u>LED</u>) Retrofit Replacements for existing park lights (Cost per retrofit)	<i>EACH</i>	<i>1</i>	\$

NON-COLLUSION STATEMENT

Date: _____

Town of Milton
115 Federal Street
Milton, DE 19968

Gentlemen:

This is to certify that the undersigned Bidder, _____ has not, either directly or indirectly, entered into any agreement, participated in any competitive bidding in connection with this proposal submitted to the Town of Milton, and shall comply with the Copeland "Anti-Kickback" Act (18 U.S.C. 874), as supplemented in the U.S. Department of Labor Regulations (29 C.F.R., Part 3) on the _____ day of _____, 20__, for the Town of Milton Contract No. 2014-1031 Water Tower #2 Foundation and Relocation Project".

CORPORATE SEAL

Signature of Bidder

BY: _____

Attest: _____
Secretary

Sworn and subscribed before me this _____ day of _____, 20__.

My commission expires _____.

Notary Public

**CERTIFICATION REGARDING COMPLIANCE
WITH EQUAL OPPORTUNITY REQUIREMENTS**

The undersigned Bidder _____ (has, has not) previously performed work subject to the Presidents Executive Order Nos. 10925, 11114 or 11246.

**NOTICE TO PROSPECTIVE SUBCONTRACTORS OF REQUIREMENTS
FOR CERTIFICATION OF NON-SEGREGATED FACILITIES**

A certification of Non-Segregated Facilities, as required by the May 9, 1967 order (32 F.R. 7439, May 19, 1967), on Elimination of Segregated Facilities, by the Secretary of Labor, must be submitted prior to the award of a subcontract exceeding \$10,000, which is not exempt from the provisions of the Equal Opportunity clause. The certification may be submitted either for each subcontract or for all subcontracts during a period (i.e., quarterly, semi-annually, or annually).

NOTE: The penalty for making false statements in orders is prescribed in 18 U.S.C. 10001.

Date: _____

Signature of Bidder or Prospective Contractor

Address (Including Zip Code)

END OF SECTION



GRANVILLE® II LED
EVOLUTION OF A CLASSIC CONTINUES



HOLOPHANE®
LEADER IN LIGHTING SOLUTIONS



AcuityBrands.



GRANVILLE® II LED

THE USE OF LED (LIGHT EMITTING DIODE) LIGHT SOURCES IN STREET AND AREA LIGHTING APPLICATIONS IS GAINING MOMENTUM IN TODAY'S LIGHTING WORLD. IDEALLY, LED LUMINAIRES REDUCE ENERGY CONSUMPTION, FACILITATE LONG COMPONENT LIFE, AND PROMOTE SUSTAINABILITY.

To meet these 21st century needs, it is imperative that the LED system is properly engineered for thermal and performance considerations. Holophane has exhausted many hours of research and development to ensure reliability through innovative integration of this exciting technology.





FEATURES AND BENEFITS

- Engineered LED system for maximum performance and reliability
- Designed for use with original globes and housings maintaining familiar appearance
- Optimized to meet existing lighting standards
- Asymmetric and symmetric distributions offer application design flexibility
- Simple access to electronic driver and components for ease of maintenance

TYPICAL APPLICATIONS

- City Streets
- Parks
- Residential Areas
- Campuses
- Walkways
- Parking Lots

GRANVILLE®
CLASSIC

GRANVILLE®
PREMIER

Cast Aluminum Finial

Decorative Trim

Electrical Housing

Top Reflector

Bottom Refractor

WOULDN'T YOU WANT THE
ENTIRE LIGHTING FIXTURE TO
LAST AS LONG AS THE LED?



Glass

Plastic

The Borosilicate Glass Advantage

You can have aesthetically pleasing permanent glass that sparkles and will never turn yellow or cloudy with age.

Pole Options

Trim and Cover Options for the Classic and Premier Optics offers a variety in luminaire shapes, decorative trim and uplight options



Internal LED stalk design offers state-of-the-art light control and thermal management



The GranVille II LED offers compatibility with the original GranVille housing and mounting arrangements for ultimate flexibility



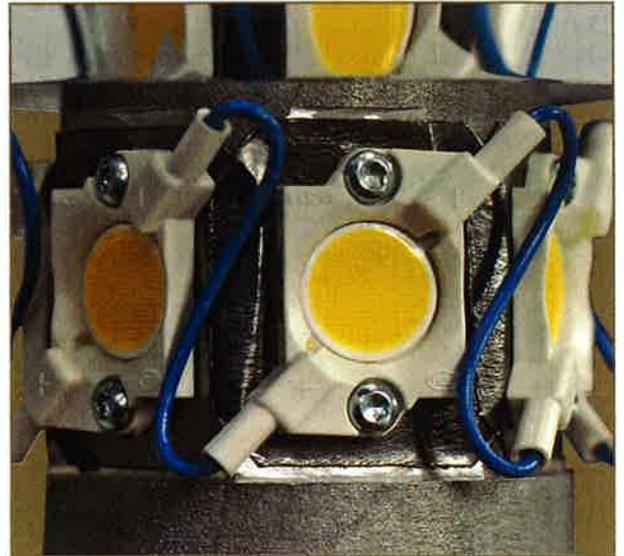
Pole Options include a variety of pole materials and styles available to complement luminaire and site architecture

INNOVATIVE LED TECHNOLOGY



Thermal Management

LED light source output and system life are optimized with proper thermal management. The above diagram shows the effective engineering behind a dedicated heat sink. Note the convection currents pulling the heat away from the critical components.



Optical Precision

As shown above, the optical system is designed to accurately replicate a point source, maximize energy savings and ensure design effectiveness.

RETROFIT EXISTING STREETLIGHTS

The new GranVille LED system has been designed to be fully compatible with installed GranVille glass globes and housings.

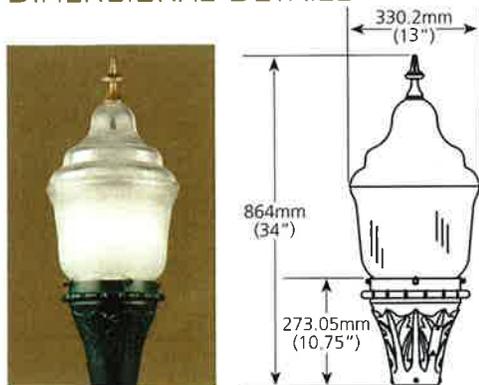
Should you select the housing and LED system only, you will realize the following benefits:

- Promote sustainability
- Save on initial material costs
- Maintain original exterior appearance



ORDERING INFORMATION

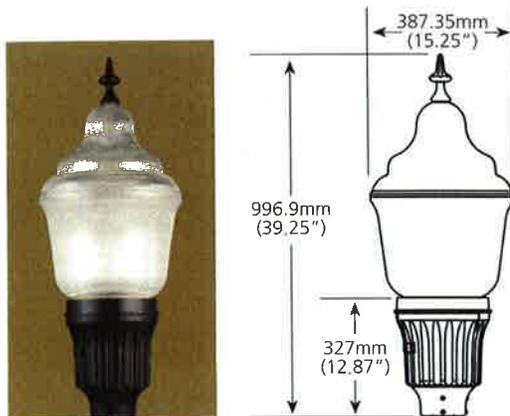
DIMENSIONAL DETAILS



GranVille Classic

Maximum Weight: 21.32 kg (47 lbs.)

Maximum EPA: 1.38



GranVille Premier

Maximum Weight: 29.03 kg (64 lbs.)

Maximum EPA: 1.38

PERFORMANCE SPECIFICATIONS

General

The GranVille II Classic LED and the GranVille II Premier LED are designed for ease of maintenance with the electrical module common to each of the luminaires in Holophane's original GranVille Series. A precision optical system that maximizes post spacing while maintaining uniform illumination.

Optical System

The optical system consists of a precisely molded multi-piece thermal resistant borosilicate glass refractor and top reflector. The glass top reflector redirects over 50% of the upward light into the controlling refractor while allowing a soft uplight component to define the traditional acorn shape of the luminaire. A decorative aluminum cover and trim options are available. The lower refractor uses precisely molded prisms to maximize pole spacings while maintaining uniform illuminance. Two refractors are available, symmetric and asymmetric distribution.

The light source is composed of a cast, "finned" stalk top plate, five LED locations, and a top formed reflector engineered to replicate a "point source" for optimization. The fins cast into the stalk are intended to provide thermal management for maximum life and output. The LED's are located on the stalk so as to provide the desired pattern (Type III or Type V) for the most efficient distribution. The reflector provides reduced uplight and increased coefficient of utilization.

Luminaire Housing

The luminaire housing, cast aluminum, cradles the refractor and provides an enclosure for the electrical module. The slipfitter will accept a 3" by 2 7/8" to 3 1/8" O.D. tenon.

Luminaire Housing/Door (M&T Housing)

Cast of aluminum, the housing opens without the use of tools and is retained on a hinge. For units with an E.E.I.-N.E.M.A. twist lock photocell receptacle, the housing contains a "window" to allow light to reach the cell. The three station terminal block is prewired to a five conductor receptacle for ease in connection the electrical module.

Electrical Module

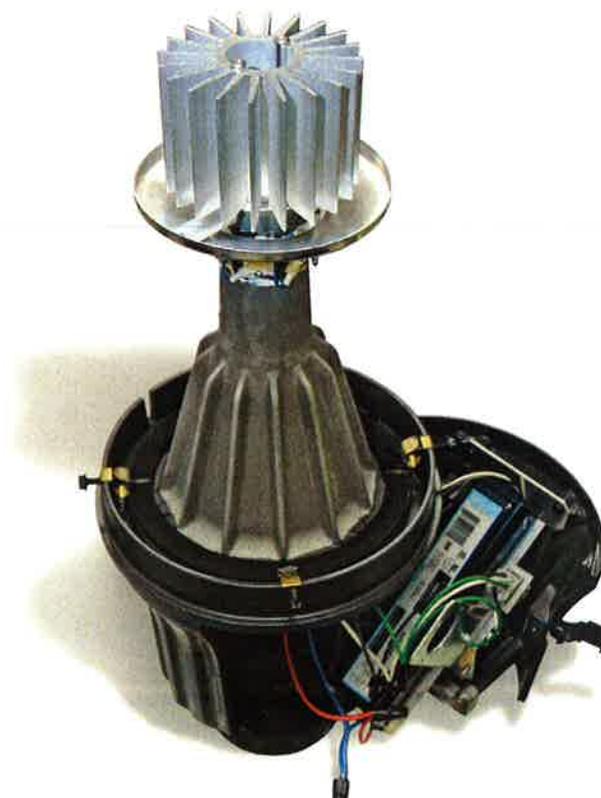
The electrical components are mounted on a steel plate that is removable with minimum use of tools. A matching five conductor plug connects to the receptacle in the luminaire housing to complete the wiring. For photoelectric operation, the electrical module is provided with an E.E.I.-N.E.M.A. twist lock photocell receptacle.

Electronic Driver

(refer to data sheet for specific operation characteristics)

Finish

The luminaire is finished with polyester powder to insure maximum durability.



PREFERRED SELECTIONS:

Most Frequently Ordered Catalog Numbers

GVD	100	4K	AS	M	N	3	N	S	N	F
1	2	3	4	5	6	7	8	9	10	11
LUMINAIRE	WATTAGE	COLOR TEMP.	VOLTAGE	HOUSING	COLOR	OPTICS	TRIM	FINIAL	TRIM/FINIAL COLOR	OPTIONS
GVD	100	4K	AS	M T	B N	3 5	N	B S	B N	F

GVD 60 4K AS M B S N S U PCS
 CATALOG NUMBERS FOR ENTIRE PRODUCT OFFERING

(Pricing and lead times may be affected)

<p>STEP 1: LUMINAIRE</p> <p>GVD GranVille Classic II LED GPD GranVille Premier II LED</p> <p>STEP 2: WATTAGE</p> <p>100 100 watt (525mA) 80 80 watt (400mA) 60 60 watt (315mA) 40 40 watt (215mA)</p> <p>1 Available with M & T housings only</p> <p>STEP 3: COLOR TEMPERATURE</p> <p>3K 3000 series CCT 4K 4000 series CCT 5K 5000 series CCT</p> <p>STEP 4: VOLTAGE</p> <p>AS Auto-sensing voltage (120 thru 277) AH Auto-sensing voltage (347 thru 480)</p> <p>STEP 5: HOUSING</p> <p>A Arcadian C Convex F Fluted L Leaf Style-Standard S Simple M Modern style-swing open design T Leaf style-swing open design</p> <p>STEP 6: HOUSING COLOR</p> <p>A As specified B Black Z Bronze N Green</p>  <p>*Colors are just a representation. Custom colors are available upon request</p>	<p>STEP 7: OPTICS</p> <p>3 Asymmetric, Type III 5 Symmetric, Type V 6 Asymmetric Lunar Optic 80 watt, 60 watt, 40 watt only 8 Symmetric Lunar Optic 80 watt, 60 watt, 40 watt only</p> <p>STEP 8: TRIM</p> <p>R Ribs and Band N No Trim S Syracuse style cover includes decorative bands</p> <p>2 Not available with GPD model</p> <p>STEP 9: FINIAL</p> <p>B Painted cast aluminum ball C Clear acrylic 3" E Painted cast aluminum eagle F Painted cast aluminum flower N None P Painted cast aluminum pawn R Painted cast aluminum cross S Painted cast aluminum standard T Painted cast aluminum roman cross</p> <p>STEP 5: HOUSING</p> <p>A As specified B Black G Gold N Green Z Bronze U No trim and clear or no finial</p>  <p>*Colors are just a representation. Custom colors are available upon request</p>	<p>STEP 11: OPTIONS</p> <p>F Full cover M Mayfield 1/2 optional cover H NEMA twistlock photocontrol receptacle DM 0-10V dimming PCS DTL twistlock photocontrol for solid state PSC Shorting cap L1H 1.5 ft. prewired leads L03 3 ft. prewired leads L10 10 ft. prewired leads L20 20 ft. prewired leads L25 25 ft. prewired leads L30 30 ft. prewired leads DE ROAM concierge dimming control only available with M and T housings VE ROAMview dimming control only available with M and T housings</p> <p>3 Not available with "N" finial choice</p> <p>STEP 12: ACCESSORIES</p> <p>GVD12⁴ Photocontrol kit with DTL photocell-120V GVD27⁴ Photocontrol kit with DTL photocell-277V GVD34⁴ Photocontrol kit not DTL photocell-347V GVBANDX Decorative band added to glass assembly GVDHSS90 House side shield solid 90 degree GVDHSS12 House side shield solid 120 degree GVDHSS18 House side shield solid 180 degree GV1A73X⁵ 3 inch to 7 inch post capital. Converts 3 inch post top tenon to flared 7 inch post capital.</p> <p>4 Use with L&S housing and GV1A73X post capital only 5 Use with A,F, & C housing only X = color</p>
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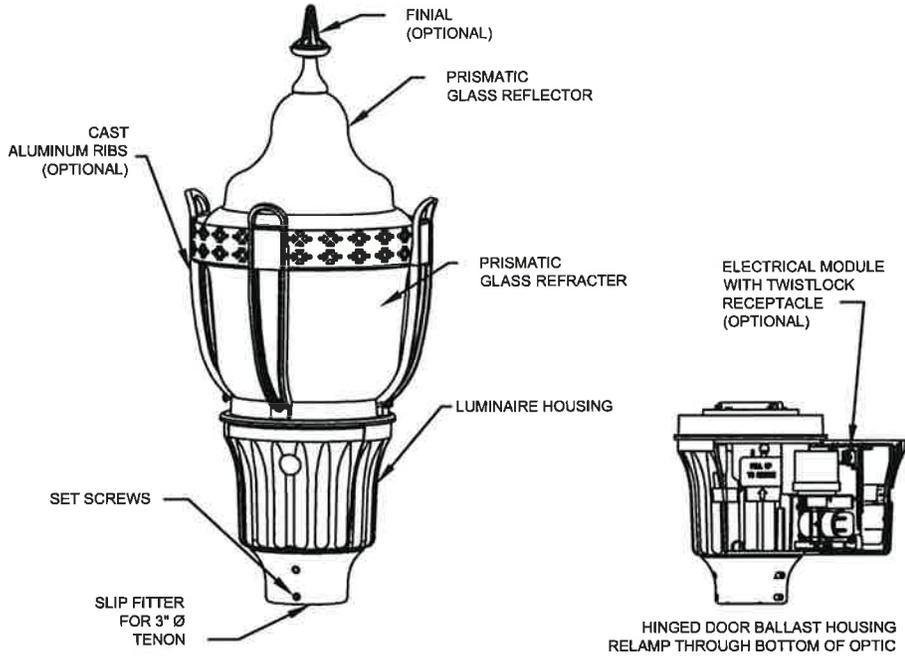
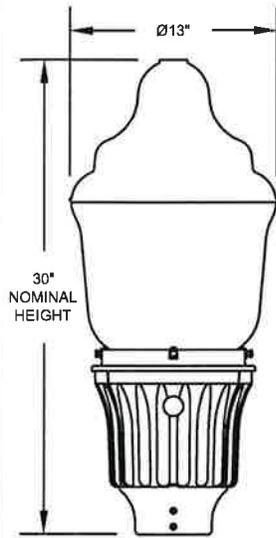
← If * required



THIS DRAWING, WHEN APPROVED, SHALL BECOME THE COMPLETE SPECIFICATION FOR THE MANUFACTURE OF THE LAMP AS ORDERED. THE CUSTOMER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS. THE CUSTOMER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS. THE CUSTOMER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS.

ORDER #: _____
 TYPE: _____
 DRAWN: JCH
 DATE: 6-22-10
 DWG #: LUM_GVU

Maximum weight - 47 lbs
 Maximum effective projected area - 1.38 sq. ft.



*drawing depicting base model no finial.

ORDERING INFORMATION:

GVU 100HP 12 B 5 N S B
 GVU 15AHP 12 N 3 N F G

HOUSING
 GVU = STANDARD
 GVL = LEAF

BALLAST TYPE (MOGUL BASE)
 050HP = 50W HPS (not available with 347 V)
 070HP = 70W HPS
 100HP = 100W HPS
 15AHP = 150W 55V HPS
 150MH = 150W MH (NOT AVAIL. W/ 480V)
 **175MH = 175W MH
 175PM = 175W PM

BALLAST TYPE (MEDIUM BASE)
 50DHP = 50W HPS (not available with 347 V)
 70DHP = 70W HPS
 10DHP = 100W HPS
 15DHP = 150W 55V HPS
 70DMH = 70W MH (not available with 480V)
 10DMH = 100W MH (not available with 480V)
 15DMH = 150W MH (not available with 480V)
 **17DMH = 175W MH

VOLTAGE
 08 = 208 VOLT (C.U.L.) (not available with 70DMH, 10DMH, 15DMH)
 12 = 120 VOLT (UL & C.U.L.)
 20 = 208 VOLT
 24 = 240 VOLT
 27 = 277 VOLT (UL & C.U.L.)
 34 = 347 VOLT (C.U.L.)
 40 = 240 VOLT (C.U.L.) (not available with 70DMH, 10DMH, 15DMH)
 48 = 480 VOLT
 MT = MULTITAP (factory 240V) (120, 208, 240, 277 VOLT)
 MA = MULTITAP (factory 120V) (120, 208, 240, 277 VOLT)
 MB = MULTITAP (factory 208V) (120, 208, 240, 277 VOLT)
 MC = MULTITAP (factory 240V) (120, 208, 240, 277 VOLT)
 MD = MULTITAP (factory 277V) (120, 208, 240, 277 VOLT)

HOUSING COLOR
 A = AS SPECIFIED
 B = BLACK
 D = DARK GREEN
 E = BROWN GREEN
 F = DARK GREEN
 H = DARK GREEN
 N = GREEN
 Z = BRONZE

OPTICS
 3 = IES TYPE III DISTRIBUTION
 4 = IES TYPE IV DISTRIBUTION
 5 = IES TYPE V DISTRIBUTION
 6 = IES TYPE II DISTRIBUTION LUNAR
 7 = IES TYPE III DISTRIBUTION LUNAR
 8 = IES TYPE V DISTRIBUTION LUNAR

FINIAL
 B = BALL
 C = CLEAR
 E = EAGLE
 F = FLOWER
 N = NONE
 P = PAWN
 R = CROSS
 S = STANDARD
 T = ROM CROSS

COLOR
 A = AS SPECIFIED
 B = BLACK
 D = DARK GREEN
 E = BROWN GREEN
 F = DARK GREEN
 G = GOLD
 H = DARK GREEN
 U = NO TRIM AND CLEAR OR NO FINIAL
 Z = BRONZE

TRIM
 N = NO TRIM
 R = RIBS & BAND
 S = SYRACUSE STYLE WITH COVER

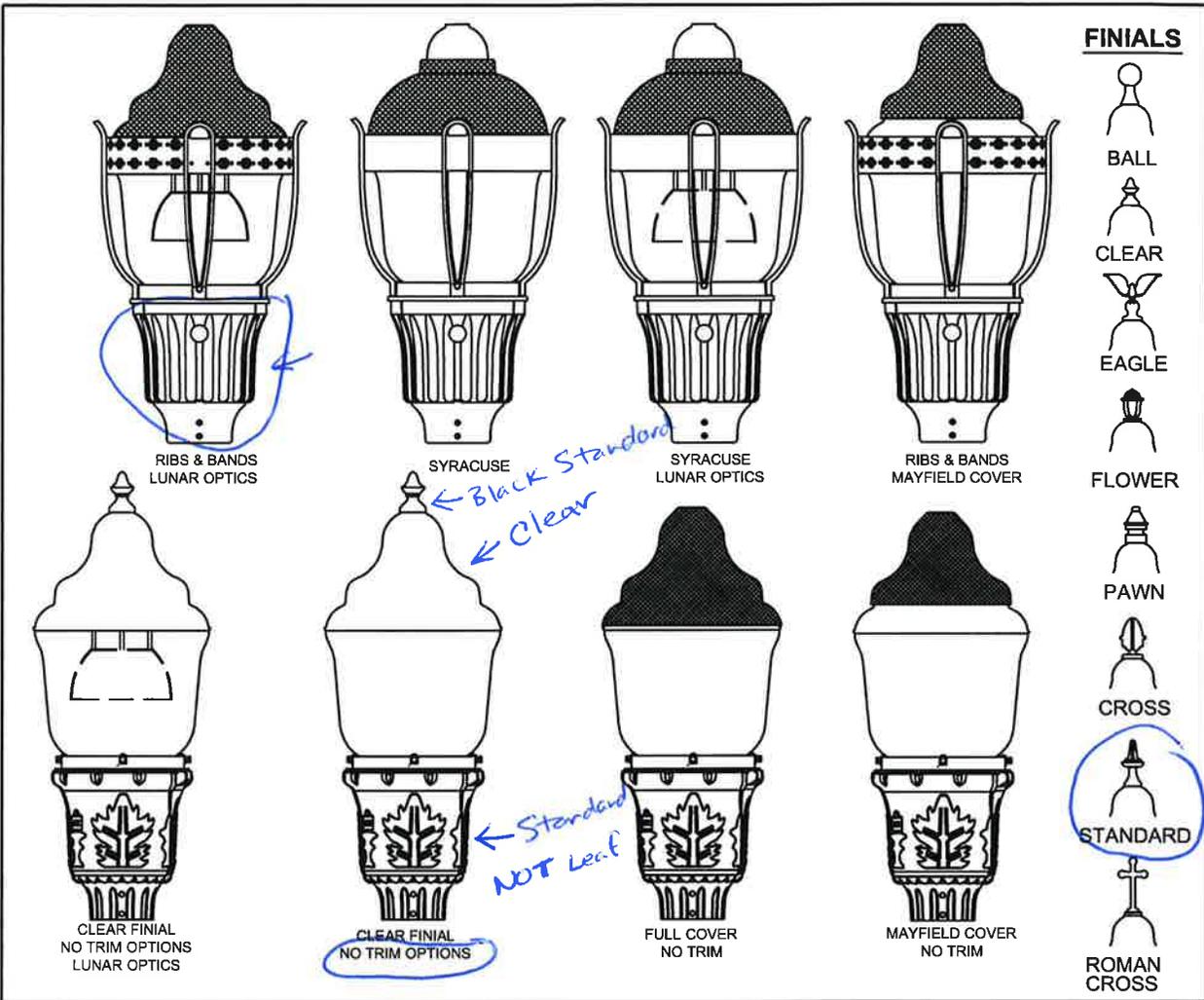
**NOT AVAILABLE FOR SHIPMENT IN US AFTER 12/31/08 DUE TO EISA 2007 LEGISLATION.

OPTIONS

- H = NEMA TWISTLOCK PHOTOCONTROL RECEPTACLE ONLY
- P = PROTECTED STARTER FOR HPS UNITS ONLY
- T = NEMA TWISTLOCK AND PROTECTED STARTER FOR HPS UNITS ONLY.
- FCVRX = FULL COVER (INSERT TRIM FINISH, FROM STEP 8 FOR X, ALSO MUST HAVE FINIAL)
- MCVRX = MAYFIELD 1/2 COVER (INSERT TRIM FINISH, FROM STEP 8 FOR X, ALSO MUST HAVE FINIAL)
- NE = NEMA LABEL
- P27 = DTL TWISTLOCK PHOTOCONTROL 120-277 VOLT
- P48 = DTL TWISTLOCK PHOTOCONTROL 480 VOLT
- PSC = SHORTING CAP
- L1H = 1.5 FEET OF PREWIRED LEADS
- L03 = 3 FEET OF PREWIRED LEADS
- L10 = 10 FEET OF PREWIRED LEADS
- L20 = 20 FEET OF PREWIRED LEADS
- L25 = 25 FEET OF PREWIRED LEADS
- L30 = 30 FEET OF PREWIRED LEADS

ACCESSORIES

- LAMP = SHIP APPROPRIATE LAMP AS LINE ITEM. SEE LAMP SHEET
- GVBANDX = DECORATIVE BAND (INSERT TRIM FINISH FOR X)
- GVPHOUSE90 = HOUSE SIDE SHIELD 90 DEGREE (NOT AVAILABLE IN 6,7 OR 8 OPTIC)
- GVPHOUSE12 = HOUSE SIDE SHIELD 120 DEGREE (NOT AVAILABLE IN 6,7 OR 8 OPTIC)
- GVPHOUSE18 = HOUSE SIDE SHIELD 180 DEGREE (NOT AVAILABLE IN 6,7 OR 8 OPTIC)
- IG-5 = PLUG-IN REPLACEMENT STARTER FOR HPS UNITS
- IG-6 = PLUG-IN REPLACEMENT PROTECTED STARTER FOR HPS UNITS
- IG-7 = PLUG-IN REPLACEMENT STARTER FOR 70/10/15DMH UNITS



Utility Granville® Series Postlite

DECORATIVE
OUTDOOR

HOLOPHANE®
LEADER IN LIGHTING SOLUTIONS
An Acuity Brands Company
© 2009 Acuity Brands Lighting, Inc. All Rights Reserved

Specifications

GENERAL DESCRIPTION

The Utility Granville is designed for ease of maintenance with the plug-in electrical module common to each of the luminaires in Holophane's Utility Luminaire Series. The traditional acorn shaped luminaire, while reminiscent of the 1920's, contains a precision optical system that maximizes post spacings while maintaining uniform illumination.

OPTICAL SYSTEM

The optical system consists of a precisely molded thermal resistant borosilicate glass refractor and top reflector mounted within decorative aluminum ribs and banding. The glass top reflector redirects over 50% of the upward light into the controlling refractor while allowing a soft uplight component to define the traditional acorn shape of the luminaire. Two decorative aluminum covers are available. A stainless steel hinge and latch allow easy access for relamping. The lower refractor uses precisely molded prisms to maximize pole spacings while maintaining uniform illuminance. Three refractors are available, designed for I.E.S. type II, III, and V distributions. The Lunar Optics assembly (IES Cutoff) is standard. It consists of an aluminum plate and anodized, hydroformed reflector designed to restrict intensity at the critical angle.

LUMINAIRE HOUSING

The luminaire housing, cast of aluminum, provides an enclosure for the plug-in electrical module. Four uniquely designed stainless steel spring clips enclosed in a clear polyvinyl chloride sleeve and adjusted by hex head 1/4-20 bolts securely cradle the prismatic glass refractor. The same 1/4-20 bolts support the decorative rib and banding assembly. The nickel plated lamp grip socket and three station incoming line terminal block are prewired to a five conductor receptacle for ease in connection the electrical module. The slipfitter will accept a 3" by 2-7/8" to 3-1/8" O.D. tenon.

LUMINAIRE HOUSING / DOOR

Cast of aluminum, the housing / door is removable without the use of tools and is retained by a nonconductive lanyard. For units with an E.E.I.-N.E.M.A. twist lock photocell receptacle, the door contains an acrylic "window" to allow light to reach the cell.

ELECTRICAL MODULE

The ballast components are mounted on a steel plate that is removable without the use of tools. A matching five conductor plug connects to the receptacle in the luminaire housing to complete the wiring. Where a starting aid is required, it is provided with a separate plug-in connector and can be replaced without the use of tools. For photoelectric operation, the electrical module is provided with an E.E.I.-N.E.M.A. twist lock photocell receptacle.

BALLASTS

(Refer to Ballast Data Sheet for specific operation characteristics)
50 watt 120 volt High Pressure Sodium (HPS) ballasts are High Power Factor Reactor type. All other HPS ballast are High Power Factor Autotransformer type.
175 watt Metal Halide (MH) ballasts are Peak Lead Autotransformer type. 70 and 100 watt MH units are available only with High Power Factor High Reactance type ballast.

FINISH

The luminaire is finished with polyester powder paint to insure maximum durability.

UL LISTING

The luminaire is UL listed as suitable for wet locations at a maximum 40 degrees C ambient temperature.

THIS DRAWING WHEN APPROVED, SHALL BECOME THE COMPLETE SPECIFICATION FOR THE LUMINAIRE. ANY CHANGES TO THE ORDER NOTED ABOVE, A UNIT OF SIMILAR DESIGN MAY BE SUPPLIED, BUT ONLY AFTER APPROVAL BY THE CUSTOMER IN WRITING. ON POLE ORDERS AN ANCHOR BOLT TEMPLATE PRINT WILL BE SUPPLIED WITH EACH ANCHOR BOLT ORDER TO MATCH THE POLE ORDER. THIS DRAWING IS THE PROPERTY OF HOLOPHANE AND IS LOANED SUBJECT TO RETURN UPON DEMAND AND UPON EXPRESS WRITTEN AGREEMENT. IT IS NOT TO BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO OUR INTERESTS, AND ONLY IN CONNECTION WITH MATERIAL FURNISHED BY HOLOPHANE.

ORDER #:	
TYPE:	
DRAWN:	JCH
DATE:	6-22-10
DWG #:	LUM_GVU

TM

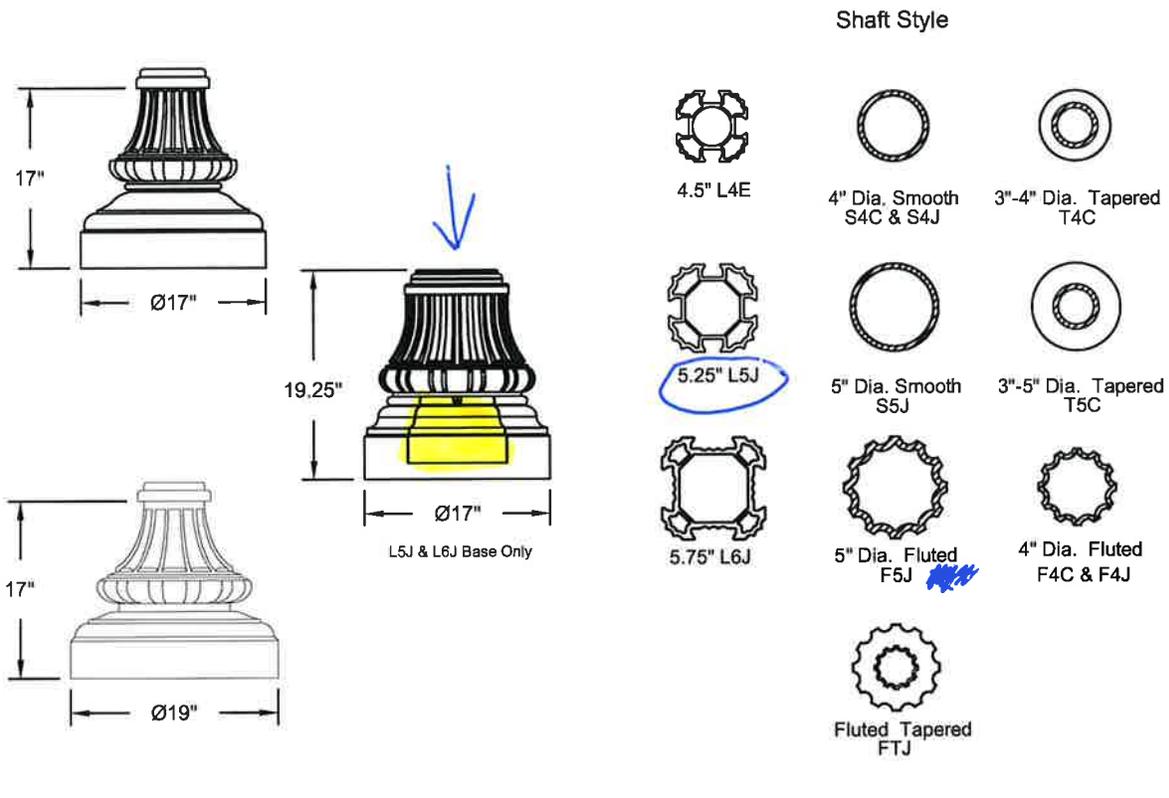
WADSWORTH Aluminum Pole

Architectural Outdoor

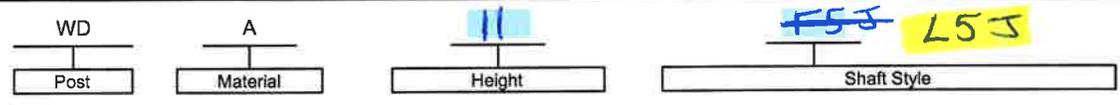


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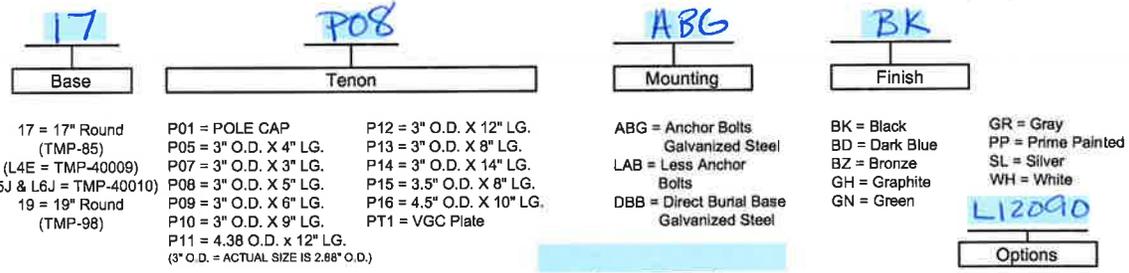
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ORDERING INFORMATION:



- WD = Wadsworth
- A = Aluminum
- 08 = 8' 15 = 15' Cast Pole
- 09 = 9' 16 = 16' 08 = 8'-0"
- 10 = 10' 17 = 17' 10 = 10'-0"
- 11 = 11' 18 = 18' 12 = 12'-0"
- 12 = 12' 19 = 19' 14 = 13'-7"
- 13 = 13' 20 = 20'
- 14 = 14' 21 = 21'
- 22 = 22'



SPECIFICATIONS

DESCRIPTION

The lighting post shall be all aluminum, one-piece construction, with a classic tapered and fluted base design.

MATERIALS

The base and fluted tapered cast shaft shall be heavy wall, cast aluminum produced from certified ASTM 356.1 ingot per ASTM B-179-95a or ASTM B26-95. The straight shafts shall be extruded from aluminum, ASTM 6061 alloy, heat treated to a T6 temper. The tapered shaft shall be extruded from aluminum, ASTM 6063 alloy, spun to a tapered shape, then heat treated to a T6 temper. All hardware shall be tamper resistant stainless steel. Anchor bolts to be completely hot dip galvanized.

CONSTRUCTION

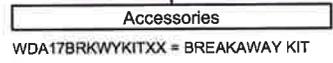
The shaft shall be double welded to the base casting and shipped as one piece for maximum structural integrity. The shaft shall be welded inside the base casting at the top of the access door, and externally where the shaft exits the base. All welding shall be per ANSI/AWS

DIMENSIONS

The post shall be X'- XX" in height with a 17" or 19" diameter base. The shaft diameter shall be XX". At the top of the post, an integral tenon with a transitional donut shall be provided for luminaire mounting.

INSTALLATION

The post shall be provided with four, hot dip galvanized L-type anchor bolts. A door shall be provided in the base for anchorage and wiring access. A grounding screw shall be provided inside the base opposite the door.

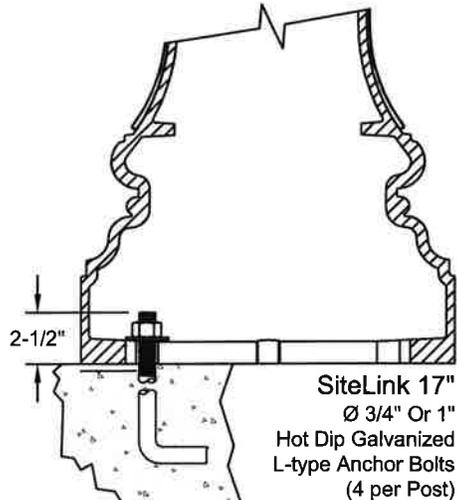
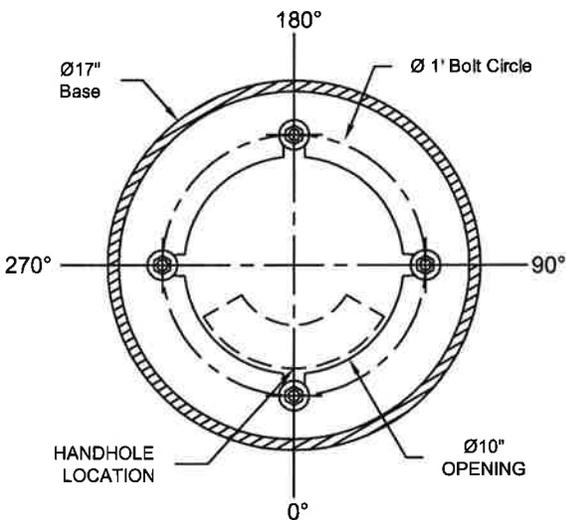
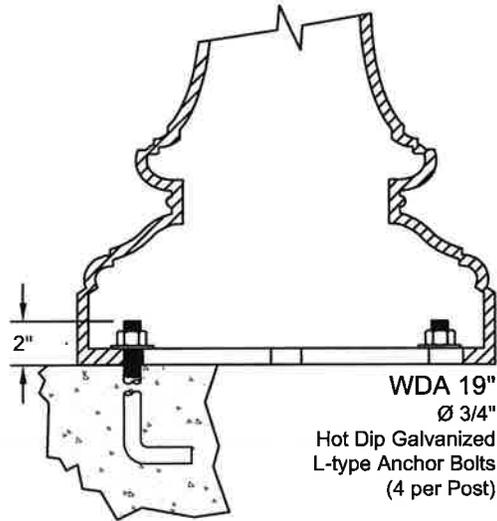
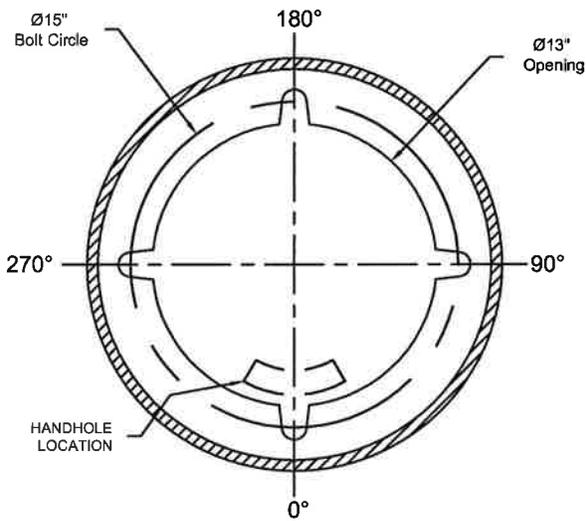
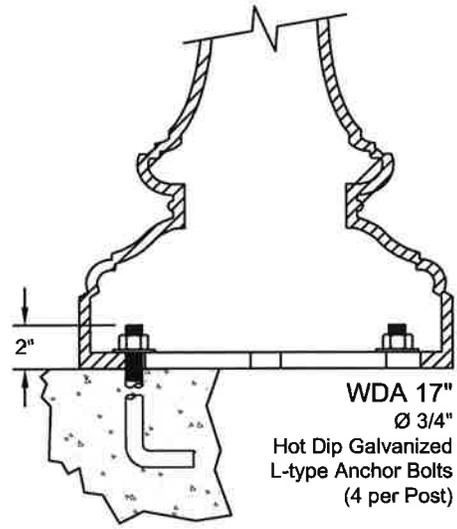
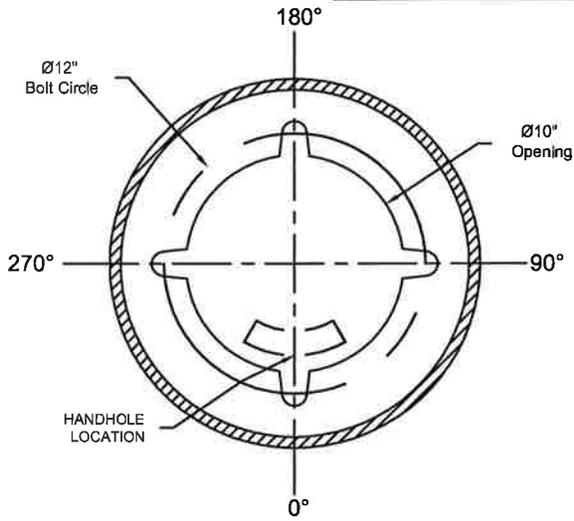


- EXXXY² = Provision for eye bolt.
- LXXXY² = Large provision.
- RXXXY² = Receptacle provision.
- SXXXY² = Small provision.
- FGB = GFI receptacle in base

* - Replace "XXX" with height from grade (inches), can be up to 3 digits. Must use whole numbers. Leading zeros are not used. Replace Y with orientation from hand hole (A=0, B=90, C=180, D=270). Add multiple provisions as necessary to cover each location. Must validate EPA restrictions for banners.

ORDER #:
TYPE:
DRAWN: KRW
DATE: 10/31/13
DWG #: POL_WDA

ANCHORAGE GUIDE



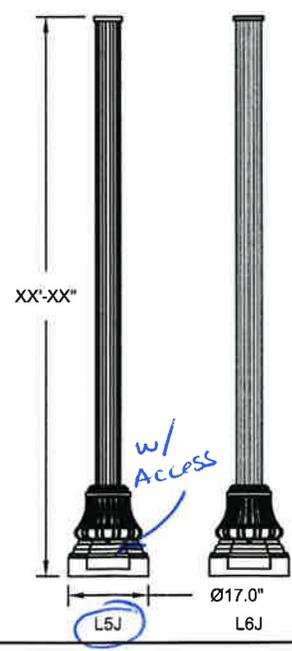
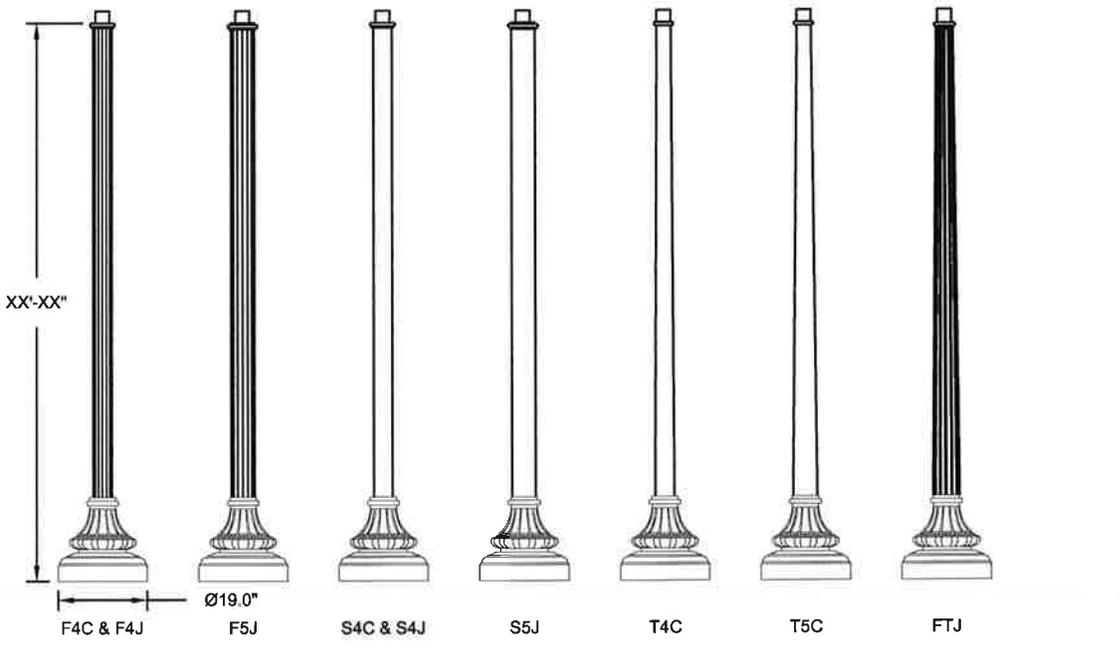
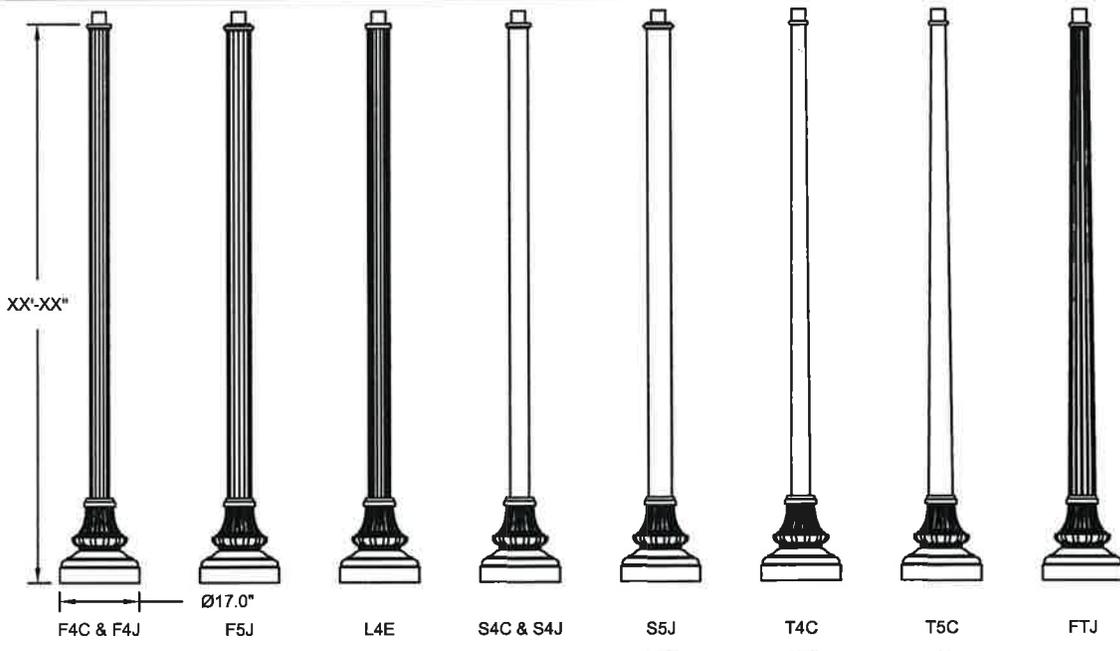
TM
WADSWORTH
Aluminum Pole

Architectural
Outdoor

HOLOPHANE
LEADER IN LIGHTING SOLUTIONS
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ORDER #:	
TYPE:	
DRAWN:	KRW
DATE:	10/3/13
DWG #:	POL_WDA



WADSWORTH™
Aluminum Pole

**Architectural
 Outdoor**



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ORDER #:	
TYPE:	3
DRAWN:	KRW
DATE:	10/3/13
DWG #:	POL_WDA



Town of Milton
ADDENDUM #2



Project: Memorial Park Lighting
Job Number: Contract No. 2015-56 (MTON1504)
Project Location: Memorial Park
Addendum: #2
Addendum Date: June 29, 2015

CHANGES TO SPECIFICATIONS

ITEM 1: ADVERTISEMENT

The project has been re-advertised for bid.

The bid opening date shall be revised to July 20, 2015 @ 11:00 am.

The requirement for a “mandatory pre-bid conference” has been removed and therefor only a “NON-mandatory pre-bid conference” will be held on July 9, 2015 @ 10:00 am.

END OF ADDENDUM #2

(ATTACHMENTS INCLUDED: Revised ADVERTISEMENT – 00 10 00 Advertisement for Bid.pdf)

00 10 00 - ADVERTISEMENT FOR BID

Sealed bids will be received on behalf of the Town of Milton, (herein called the "Owner") at Milton Town Hall, 115 Federal Street, Milton, Delaware no later than Monday, **July 20, 2015 at 11:00 a.m. EST.** Bids will then be publicly opened and read thereafter for the following:

Town of Milton, MEMORIAL PARK LIGHTING
Contract No. 20145-56 Contract Duration 30 Consecutive Calendar Days

The work consists of construction of three new pole mounted street lights, wiring, and associated appurtenances within the Town of Milton's Memorial Park as described by the Contract Documents. The work is located in Memorial Park, off of Chandler Street, behind the Town Library and represents work consisting of pole mounted lighting, concrete bases, electrical wiring, and all associated work to provide three new operational "street" type lights within the park.

Drawings and Specifications, including the proposal forms, may be obtained for \$30.00 from Pennoni Associates, Inc., 18072 Davidson Drive, Milton, Delaware 19968. Drawings and Specifications Fees are **NON-REFUNDABLE**. Packages will be available for purchase at the pre-bid conference.

Plans and specifications are available for review at the following locations:

- Milton Town Hall, 115 Federal Street, Milton Delaware 19968
- Pennoni Associates, Inc., 18072 Davidson Drive, Milton, Delaware 19968

Each BID must be accompanied by a BID BOND or Certified Check payable to the OWNER for ten (10) percent of the total amount of the BID. No Bidder may withdraw his bid within sixty (60) days after the actual date of the opening thereof.

The right is reserved, as the interests of the Town of Milton may appear, to reject any and all bids, to waive any informality in bids received, and to accept or reject any items of any bid.

A **NON-MANDATORY Pre-Bid Conference** will be held on **Thursday, July 9, 2015 at 10:00 a.m.** at the gazebo within Memorial Park, Chandler St., Milton, Delaware; to allow Contractors an opportunity to obtain information on the project from the Consulting Engineer and the Owner. The Town of Milton reserves the right to extend the time and place of Bid Opening on not less than two (2) calendar days notice by certified delivery, electronic delivery, or facsimile.

Town of Milton, Delaware
Kristy Rogers, Town Clerk

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SECTION	ELECTRICAL	
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END OF SECTION

00 10 00 - ADVERTISEMENT FOR BID

Sealed bids will be received on behalf of the Town of Milton, (herein called the "Owner") at Milton Town Hall, 115 Federal Street, Milton, Delaware no later than **May 20, 2015 at 11:00 a.m. EST.** Bids will then be publicly opened and read thereafter for the following:

Town of Milton, MEMORIAL PARK LIGHTING
Contract No. 20145-56 Contract Duration 30 Consecutive Calendar Days

The work consists of construction of three new pole mounted street lights, wiring, and associated appurtenances within the Town of Milton's Memorial Park as described by the Contract Documents. The work is located in Memorial Park, off of Chandler Street, behind the Town Library and represents work consisting of pole mounted lighting, concrete bases, electrical wiring, and all associated work to provide three new operational "street" type lights within the park.

Drawings and Specifications, including the proposal forms, may be obtained for \$30.00 from Pennoni Associates, Inc., 18072 Davidson Drive, Milton, Delaware 19968. Drawings and Specifications Fees are **NON-REFUNDABLE.** Packages will be available for purchase at the pre-bid conference.

Plans and specifications are available for review at the following locations:

- Milton Town Hall, 115 Federal Street, Milton Delaware 19968
- Pennoni Associates, Inc., 18072 Davidson Drive, Milton, Delaware 19968

Each BID must be accompanied by a BID BOND or Certified Check payable to the OWNER for ten (10) percent of the total amount of the BID. No Bidder may withdraw his bid within sixty (60) days after the actual date of the opening thereof.

The right is reserved, as the interests of the Town of Milton may appear, to reject any and all bids, to waive any informality in bids received, and to accept or reject any items of any bid.

A **MANDATORY Pre-Bid Conference** will be held on Thursday, **May 6, 2015 at 10:00 a.m.** at the gazebo within Memorial Park, Chandler St., Milton, Delaware; to allow Contractors an opportunity to obtain information on the project from the Consulting Engineer and the Owner. The Town of Milton reserves the right to extend the time and place of Bid Opening on not less than two (2) calendar days notice by certified delivery, electronic delivery, or facsimile.

Town of Milton, Delaware
Kristy Rogers, Town Clerk

SECTION 00 20 00 - INSTRUCTIONS TO BIDDERS

BIDS will be received by The Town of Milton, (herein called the "OWNER"), at the Office of the Town Manager, Milton Town Hall, 115 Federal Street, Milton, Delaware no later than **May 20 2015 at 11:00 a.m. EST.** They will be publicly opened and read aloud for **Town of Milton Contract No. 2015-56 Memorial Park Lighting Project.**

Each bid shall be submitted in a sealed envelope, addressed to Kristy Rogers, Town Clerk, Town of Milton, 115 Federal Street, Milton, Delaware 19968. Each sealed envelope containing a bid shall be plainly marked on the outside as "**Bid for Town of Milton Contract No. 2015-56 Memorial Park Lighting Project**" and the envelope shall bear on the outside the BIDDER's name, address and license number and the name of the project for which the bid is submitted.

The work consists of construction of three new pole mounted street lights, wiring, conduit, and associated appurtenances within the Town of Milton's Memorial Park as described by the Contract Documents. The work is located in Memorial Park, off of Chandler Street, behind the Town Library and represents work consisting of pole mounted lighting, concrete bases, electrical wiring, and all associated work to provide three new operational lights within the park connected to the existing electrical lighting system.

All bids shall be made on the required Bid form. All blank spaces for bid prices shall be filled in, using ink or typewritten, and the Bid form shall be fully completed and executed when submitted. Only one copy of the Bid form is required.

The OWNER may waive any informalities or minor defects or reject any and all bids. Any Bid may be withdrawn prior to the above scheduled time for the opening of bids or authorized postponement thereof. Any bid received after the time and date specified shall not be considered. No BIDDER may withdraw a bid within 60 days after the actual date of the opening. Should there be reason why the contract cannot be awarded within the specified period, the time may be extended by mutual agreement between the OWNER and the BIDDER.

The OWNER shall provide to BIDDERS prior to bidding, all information which is pertinent to, and delineates and describes, the land owned and rights-of-way acquired or to be acquired.

The contract documents contain the provisions required for the construction of the project. Information obtained from an officer, agent, or employee of the OWNER or any other person shall not affect the risks or obligations assumed by the Contractor or relieve the Contractor from fulfilling any of the conditions of the contract.

To better insure fair competition and to permit a determination of the lowest BIDDER, unresponsive bids, or bids obviously unbalanced may be rejected by the OWNER.

BIDDERS shall satisfy themselves of the accuracy of the estimated quantities in the Bid schedule by examination of the site and a review of the drawings and specifications including ADDENDA. After

bids have been submitted, the BIDDER shall not assert that there was a misunderstanding concerning the quantities of WORK or of the nature of the WORK to be done. It is the responsibility of each BIDDER before submitting a Bid, to (a) examine the Contract Documents thoroughly, (b) visit and inspect the site to become familiar with local conditions and perform additional investigations as necessary to satisfy himself as to surface and subsurface conditions, availability of utilities, and access roads as necessary that may affect the cost, progress, performance, or furnishing of the Work, (c) consider federal, state, and local laws and regulations that may affect cost, progress, performance, or furnishing of the Work, (d) study and carefully correlate BIDDER'S observations with the Contract Documents, and (e) notify ENGINEER of all conflicts, errors, or discrepancies in the Contract Documents. The failure of any Bidder to do any of the foregoing shall in no way relieve any BIDDER from any obligation in respect to its Bid.

BIDDERS are required to fill out the "Total Price" column and total their proposals, so that the result of the BIDDING, barring possible arithmetical errors, will be at once known. The Engineer will correct any errors in computation when the proposals are canvassed; in case of discrepancy between unit prices and their extensions, the unit prices shall govern.

The quantities given under the various items of the proposal are approximate only and subject to increase or decrease as provided in the contract, without changing the unit prices to be paid for the work.

The description of work and/or material in these plans and specifications by use of a brand or trade name is for the purpose of indicating the type or quality of material to be bid. Any Bidder wishing to have equipment approved as an "or equal" must provide the Town with all pertinent information at least **10** days prior to the bid opening. If approved by the Town, all other Bidders will be informed by the issuance of an Addendum to these Bid documents. The bid opening may be postponed if necessary to review the technical data of the material in question. The Engineer shall have the sole authority to decide if the material in question is an "or equal" material. Bids for equipment or materials that have not been pre-approved by the Engineer may be rejected.

BIDDERS must be prepared to complete the work within the time stated in the proposal. The completion date named in the Notice to Proceed is the date that certain components of the contract including cleaning up and restoration, shall be completed.

Each Bid must be accompanied by a Bid Bond payable to the OWNER for ten percent of the total amount of the Bid. As soon as the Bid prices have been compared, the OWNER will return the Bonds of all except the three lowest responsible BIDDERS. When the Agreement is executed, the bonds of the two remaining unsuccessful BIDDERS will be returned. The Bid Bond of the successful BIDDER will be retained until the Payment Bond and Performance Bond have been executed and approved, after which it will be returned. A certified check may be used in lieu of a Bid Bond.

A Performance Bond and a Payment Bond each in the amount of **100 percent** of the contract price, with a corporate surety approved by the OWNER, will be required for the faithful performance of the contract.

Attorneys-in-fact who signs Bid Bonds or Payment Bonds and Performance Bonds shall file with each Bond a certified and effective dated copy of their power of attorney.

The BIDDER or BIDDERS to whom the contract is awarded will be required to execute the Agreement and obtain the Performance Bond and Payment Bond and acceptable certificates of insurance and return five copies of these documents within ten calendar days from the date when Notice of Award is delivered to the BIDDER. The Notice of Award shall be accompanied by the necessary Agreement and Bond forms. In case of failure of the BIDDER to execute the Agreement, the OWNER may consider the BIDDER in default, in which case the Bid Bond accompanying the proposal shall become the property of the OWNER.

The OWNER within twenty days of receipt of acceptable Performance Bond, Payment Bond, certificate of insurance and Agreement signed by the party to whom the Agreement was awarded shall sign the Agreement and return to such party an executed duplicate of the Agreement. Should the OWNER not execute the Agreement within such period, the BIDDER may by written notice, withdraw the signed Agreement. Such notice of withdrawal shall be effective upon receipt of the notice by the OWNER. This withdrawal is the only recourse available to the Contractor when the OWNER fails to execute the contract within this specified time period. The Contractor cannot be reimbursed for any additional costs incurred if he does not by written notice withdraw the signed Agreement.

The Notice to Proceed shall be issued within twenty days of the execution of the Agreement by the OWNER. Should there be reasons why the Notice to Proceed cannot be issued within such period, the time may be extended by mutual agreement between the OWNER and Contractor. If the Notice to Proceed has not been issued within the period mutually agreed upon, the Contractor may terminate the Agreement without further liability on the part of either party.

The OWNER may make such investigations as deemed necessary to determine the ability of the BIDDER to perform the Work, and the BIDDER shall furnish to the OWNER all such information and data for this purpose as the OWNER may request. The OWNER reserves the right to reject any Bid if the evidence submitted by, or investigation of, such BIDDER fails to satisfy the OWNER that such BIDDER is properly qualified to carry out the obligations of the Agreement and to complete the work contemplated therein.

A conditional or qualified Bid will not be accepted.

All applicable laws, ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the Project shall apply to the contract throughout.

The BIDDER shall supply the names and addresses of major material suppliers and subcontractors ***on specified BID FORM to be included with BID.***

Any change in major material supplier or subcontractor shall be submitted by the BIDDER in writing for approval of the OWNER and ENGINEER.

No allowance will be made subsequently in this connection on behalf of the Contractor, for any error or negligence on his part to comply with the above, inadvertently or otherwise.

BIDDERS on this work will be required to comply with 30 Delaware C. Section 2502. BIDDERS and their SUBCONTRACTORS are required to have initiated their license procedures with the Delaware Division of Revenue prior to BID.

Holidays observed by the Town of Milton are:

New Years Day
Martin Luther King Jr.'s Birthday
Good Friday
Memorial Day
Independence Day
Labor Day
Elections Day
Return Day
Veterans Day
Thanksgiving Day
Day after Thanksgiving
½ Day Christmas Eve
Christmas Day

In case of an emergency which may require that work be done on Saturdays, Sundays, holidays or longer than nine hours per day, the Contractor shall request permission of the Engineer and Town to do so. If, in the opinion of the Engineer and Town the emergency is bona fide, both shall grant permission to the Contractor to work such hours as may be necessary. Also, if in the opinion of the Engineer and/or Town a bona fide emergency exists, he may direct the Contractor to work such hours as may be necessary whether the Contractor requests permission to do so or not.

The Contractor, in performing the work furnished by this contract or furnishing the services provided herein, shall not discriminate against any person seeking employment with or employed by him because of race, creed, color or national origin.

Permits and Fees

- A. The Contractor shall obtain all permits and inspections and pay taxes, fees and other costs required in connection with the work including but not limited to the Town of Milton. The Contractor shall also file all necessary plans, prepare documents, give proper notices, and obtain all necessary approvals in connection with the work.
 1. The Contractor is required to comply with the requirements of all permits obtained by the Owner. A copy of these permits will be distributed at the Pre-Bid Meeting.

2. All inspections and approval certificates shall be delivered to the Engineer prior to the substantial completion of the work.
3. The contractor shall be required to obtain a business license to perform work within the Town limits of Milton.
4. A building permit will need to be obtained for this project, as with any construction within Town limits, however the fee associated with this building permit shall be waived by the Town for this project.

END OF SECTION

SECTION 00 41 00 - BID FORM
TOWN OF MILTON, DELAWARE
MEMORIAL PARK LIGHTING
CONTRACT No. 2015-56

To: Town of Milton, Delaware

For the Construction of: **Memorial Park Lighting, Town of Milton Contract No. 2015-56**

The undersigned Bidder has carefully examined the site of work, the Plans, the General Conditions, Technical Specifications, and the Agreement for the construction of the above-named project, and in compliance with the Advertisement dated _____ shall provide all the necessary machinery, tools, apparatus, and other means of construction, including all the work to furnish all the material called for in accordance with the requirements of the Town of Milton and the true intent of the Contract Documents, and shall complete the contract within 30 consecutive calendar days .

The undersigned Bidder further understands that all supplies and materials covered by this Bid shall be new and of the best quality and the highest-grade workmanship.

The Bidder certifies by the submission of this Bid that there has been no violation of copyrights or patent rights in manufacturing, producing or selling the product or services shipped or ordered as a result of this Bid. The successful Bidder shall, at his own expense, defend any and all actions or suits charging such infringements, and will save Town of Milton, and its appointed and elected officials, officers, partners, directors, employees, and agents harmless from any and all liability, loss, or expense occasioned by any such violation.

The Bidder acknowledges receipt of the following Addenda:

This Bid includes sales tax and all other applicable taxes and fees.

Accompanying this Bid is a Bid Bond/certified check in the amount of _____

_____, payable to the Town of Milton, Delaware, which is to be forfeited to the extent necessary to make up the difference between the Bid and the second low bid, or if the undersigned shall fail to execute the Agreement and furnish satisfactory Performance and Payment Bonds under the conditions and within the time specified; otherwise said Bid guarantee shall be

returned to the undersigned. If the Bid Bond or guarantee is not sufficient to make up the difference between the Bid and the second low bid, together with any consequential damages, the undersigned

Bidder agrees to pay the Owner any losses in excess of the bond or guarantee.

Subcontractors

The following subcontractors and suppliers shall execute portions of the work as indicated.

Type of Work	Contractor / Supplier
Light and Pole Supplier	
Licensed Electrician	
Concrete Base – Mason	

The undersigned Bidder agrees to begin the work not later than ten (10) days after the date specified in the Notice to Proceed and to prosecute the work in such manner as to complete it within the time limit as set forth above. In the event the said work is not completed within the time limit above stated, Bidder shall be liable and hereby agrees to pay the Owner as liquidated damages and not as a penalty the sum of **\$100.00** dollars per calendar day for each and every day that the said work remains incomplete after the expiration of the contract time for completion.

As Bidder, we have completed the Certification of Non-Collusion reflected within the Bid Form Section.

Delaware Contractor No. _____/Class/ _____/ Specialty _____

Dated _____.

(If an Individual, Partnership, or Non-Incorporated Organization)

Name: _____

Signature of Bidder: _____

Title: _____

Business Address: _____

Names and _____
Address of _____
Members _____

(If a corporation)

Name of Corporation: _____

Signature of Bidder: _____

Title: _____

Business Address: _____

Incorporated under the

laws of the State of: _____

Name President _____

(Address) _____

Name Secretary _____

(Address) _____

Name Treasurer _____

(Address) _____

Affix Corporate Seal

and Acknowledge

All Addenda

**BID SCHEDULE
MEMORIAL PARK LIGHTING
TOWN OF MILTON CONTRACT NO. 2015-56**

PART A – MEMORIAL PARK LIGHTING PROJECT

NO.	ITEM	SIZE OR DEPTH	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
A-1	Mobilization and Restoration	--	LS	--		
A-2	Furnish and Install Pole Bases	--	LS	--		
A-3	Design, Furnish, and Install Underground Electric run from Gazebo to New Pole Lights (within buried conduit)	--	LS	--		
A-4	Furnish and Install New Pole Mounted Lights with additional 110 v base mounted outlets	--	LS	--		
TOTAL PRICE	<i>(Complete and Operational System for 3 pole mounted lights)</i>				\$	

NON-COLLUSION STATEMENT

Date: _____

Town of Milton
115 Federal Street
Milton, DE 19968

Gentlemen:

This is to certify that the undersigned Bidder, _____ has not, either directly or indirectly, entered into any agreement, participated in any competitive bidding in connection with this proposal submitted to the Town of Milton, and shall comply with the Copeland "Anti-Kickback" Act (18 U.S.C. 874), as supplemented in the U.S. Department of Labor Regulations (29 C.F.R., Part 3) on the _____ day of _____, 20____, for the Town of Milton Contract No. 2014-1031 Water Tower #2 Foundation and Relocation Project".

CORPORATE SEAL

Signature of Bidder

BY: _____

Attest: _____
Secretary

Sworn and subscribed before me this _____ day of _____, 20____.

My commission expires _____.

Notary Public

**CERTIFICATION REGARDING COMPLIANCE
WITH EQUAL OPPORTUNITY REQUIREMENTS**

The undersigned Bidder _____ (has, has not) previously performed work subject to the Presidents Executive Order Nos. 10925, 11114 or 11246.

**NOTICE TO PROSPECTIVE SUBCONTRACTORS OF REQUIREMENTS
FOR CERTIFICATION OF NON-SEGREGATED FACILITIES**

A certification of Non-Segregated Facilities, as required by the May 9, 1967 order (32 F.R. 7439, May 19, 1967), on Elimination of Segregated Facilities, by the Secretary of Labor, must be submitted prior to the award of a subcontract exceeding \$10,000, which is not exempt from the provisions of the Equal Opportunity clause. The certification may be submitted either for each subcontract or for all subcontracts during a period (i.e., quarterly, semi-annually, or annually).

NOTE: The penalty for making false statements in orders is prescribed in 18 U.S.C. 10001.

Date: _____

Signature of Bidder or Prospective Contractor

Address (Including Zip Code)

END OF SECTION

SECTION 00 43 00 - BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned, _____
 _____ as Principal, and _____ as Surety, are hereby held and firmly
 bound unto Town of Milton, a political subdivision of the State of Delaware, as Owner in the penal
 sum of _____ for the payment of which, well and truly to be made, we hereby
 jointly and severally bind ourselves, successors and assigns. Signed, this _____ day of ,
 _____ 20____.

The Condition of the above obligation is such that whereas the Principal has submitted to
 _____ a certain BID, attached hereto and hereby made a part hereof to enter
 into an Agreement in writing, for the construction of **Town of Milton Contract No. 2015-56**
Memorial Park Lighting Project NOW, THEREFORE,

- (a) If said BID shall be rejected, or
- (b) If said BID shall be accepted and the Principal shall execute and deliver an Agreement in the form attached hereto (properly completed in accordance with said BID) and shall furnish a BOND for his faithful performance of said Agreement, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all respects perform the Agreement created by the acceptance of said BID, then this obligation shall be void; otherwise, the same shall remain in force and effect, it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its BOND shall be in no way impaired or affected by any extension of the time within which the OWNER may accept such BID; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

_____ (L.S.) _____

Principal

Surety

By:_____

IMPORTANT - Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the project is located.

END OF SECTION

SECTION 00 05 00 - AGREEMENT

THIS AGREEMENT, made this ___ day of _____, 20___, by and between **The Town of Milton, a political subdivision of the State of Delaware**, hereinafter called "OWNER" and _____ doing business as _____ (an Individual) or (a Partnership) or (a Corporation) hereinafter called "CONTRACTOR".

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned:

1. The CONTRACTOR shall commence and complete construction of Town of Milton Contract No. 2015-56 Memorial Park Lighting Project.
2. The CONTRACTOR shall furnish all of the material, supplies, tools, equipment, labor and other services necessary for the construction and completion of the PROJECT described herein.
3. The CONTRACTOR shall commence the work required by the CONTRACT DOCUMENTS on the effective date referenced by the NOTICE TO PROCEED and shall complete the same within 30 consecutive calendar days, unless the period for completion is extended otherwise by the CONTRACT DOCUMENTS.
4. The CONTRACTOR shall perform all of the WORK described in the CONTRACT DOCUMENTS and shall comply with the terms therein as shown in the BID schedule.
5. The term "CONTRACT DOCUMENTS" means and includes the following:
 - (A) ADVERTISEMENT FOR BIDS
 - (B) INSTRUCTIONS TO BIDDERS
 - (C) BID FORM
 - (D) BID BOND
 - (E) AGREEMENT
 - (F) PERFORMANCE BOND
 - (G) PAYMENT BOND

- (H) NOTICE OF AWARD
- (I) NOTICE TO PROCEED
- (J) GENERAL AND SPECIAL CONDITIONS
- (K) SPECIFICATIONS issued by Pennoni Associates, Inc. dated May 6, 2015.
- (L) ADDENDA:

6. The OWNER shall pay the CONTRACTOR in the manner and at such times as set forth in the General Conditions such amounts as required by the CONTRACT DOCUMENTS.
7. To the fullest extent permitted by law, the undersigned Contractor shall indemnify, hold harmless and defend the Town of Milton, ("OWNER"), Engineer, Engineer's Consultants, and the elected or appointed officials, officers, directors, partners, employees, agents and other consultants and subcontractors of each harmless from and against all claims, damages, losses, injuries and expenses including court costs and attorneys fees arising out of or resulting from the performance or such claim, damage, loss or expense, that is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property, including the loss of use resulting therefrom, or to economic loss; provided, however, that the Contractor's indemnification obligation under this agreement shall be limited to claims, damages, losses, and expenses caused in whole or in part by any act or omission of the Contractor, or any Subcontractor (a "Subcontractor") performing work required by the Contractor or any Subcontractor may be liable, regardless of whether or not such claims, damages, losses, and expenses are caused in part by a party indemnified hereunder.

The Contractor's indemnification obligation hereunder with respect to any and all claims against the Town of Milton ("OWNER"), Engineer, Engineer's Consultants, and the elected or appointed officials, officers, directors, partners, employees, agents and other consultants and subcontractors of each, shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any Subcontractor under Worker's Compensation Acts, Disability Benefit Acts or other Employee Benefit Acts.

The Contractor's indemnification obligation hereunder shall not extend to the liability of the Engineer, his agents or employees arising out of (1) the preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs or specifications, or (2) the giving of or the failure to give directions or

instructions by the Engineer, his agents or employees provided such giving or failure to give is the primary cause of the injury or damage. The Contractor's indemnification obligation contained in this paragraph are in addition to any other indemnification obligation of the Contractor set forth within the Contract Documents.

8. This Agreement shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors, and assigns.
9. The retainage shall be an amount equal to 5% of said estimate until the work has been completed. Upon substantial completion of the work, any amount retained may be paid to the Contractor. When the work has been substantially completed except for work which cannot be completed because of weather conditions, lack of materials or other reasons which in the judgment of the Owner are valid reasons for non-completion, the Owner may make additional payments, retaining at all times an amount sufficient to cover the estimated cost of the work still to be completed.
10. For each and every day that the CONTRACTOR is in default in completing the CONTRACT, as defined in the General Conditions, he shall pay to the OWNER \$100 per day in liquidated damages.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Agreement in 5 copies each of which shall be deemed an original on the date first above written.

SIGNED, SEALED AND DELIVERED IN THE PRESENCE OF

WITNESS:

CONTRACTOR:

Signature

Title

(SEAL)

Date

ATTEST:

OWNER

Witness, Town of Milton

Town of Milton

Date

APPROVED AS TO FORM:

Attorney

SECTION 006100 – PAYMENT AND PERFORMANCE BONDS

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: that

(Name of Contractor)

(Address of Contractor)

a _____, (Corporation, Partnership, or Individual) hereinafter called PRINCIPAL,

and

(Name of Surety)

(Address of Surety)

hereinafter called SURETY, are held and firmly bound unto Town of Milton, Delaware, a political subdivision of the State of Delaware, located at:

Town of Milton, Delaware
115 Federal Street
Milton, Delaware 19968

hereinafter called TOWN, and unto all persons, firms, and corporations who or which may furnish labor, or who furnish materials to perform as described under this Contract and to their materials to perform as described under this Contract and to their successors and assigns in the total aggregate penal sum of _____

_____ Dollars, (\$ _____) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain Contract with the TOWN, dated the _____ day of _____, 20__ a copy of which is hereto attached and made a part hereof for the work of: **Bid for Town of Milton Contract No. 2015-56 Memorial Park Lighting Project**, which Contract and Work to be done thereunder and the Specifications accompanying the same shall be deemed a part thereof to the same extent as if fully set out herein.

NOW THEREFORE, if the PRINCIPAL shall promptly make payment to all persons, firms, and

Pennoni Associates

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corporations, furnishing materials for or performing labor in the prosecution of the WORK provided for in such Contract, and any authorized extension or modifications thereof, including all amounts due for materials, lubricants, oil, gasoline, coal and coke, repairs on machinery, equipment and tools consumed or used in connection with the prosecution of such WORK, and for all labor cost incurred in such WORK including that by a SUBCONTRACTOR, and to any mechanic or material supplier lienholder whether he/she acquires his/her lien by operation of State or Federal law; then this obligation shall be void, otherwise to remain in full force and effect.

PROVIDED, the beneficiaries or claimants hereunder shall be limited to the SUBCONTRACTORS: and persons, firms and corporations having a direct Contract with the PRINCIPAL or his/her SUBCONTRACTORS.

PROVIDED FURTHER, that the said SURETY, for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of this CONTRACT or to WORK performed thereunder or the SPECIFICATIONS accompanying the same shall in any way affect its obligation on this BOND, and he/she does hereby waive notice of any such change, extension of time, alteration or addition to the terms of this CONTRACT or to the WORK or to the SPECIFICATIONS.

PROVIDED FURTHER that, no suit or action shall be commenced hereunder by any claimant; (a) Unless claimant, other than one having a direct Contract with the PRINCIPAL, shall have given written notice to any two (2) of the following: The PRINCIPAL, the TOWN, or the SURETY above named within 90 days after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom this work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in any envelope addressed to the PRINCIPAL, TOWN, or SURETY, at any place where any office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the state which the aforesaid project is located, save that such service need not be made by a public officer. (b) After the expiration of one (1) year following the date of which PRINCIPAL ceased work on said CONTRACT, it being understood, however, that if any limitation embodied in the BOND is prohibited by any law controlling the prosecution hereof, such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.

PROVIDED FURTHER that, is expressly agreed that the BOND shall be deemed amended automatically and immediately, without formal separate amendments hereto, upon amendment to this CONTRACT not increasing the Contract price more than 20 percent, so as to bind the PRINCIPAL and the SURETY to the full and faithful performance of this CONTRACT as so amended. The term Amendment, wherever used in this BOND, and whether referring to this BOND, this CONTRACT or the Loan Documents, shall include all alteration, addition, extension, or modification of any character whatsoever.

PROVIDED FURTHER that, no final settlement between the TOWN and the PRINCIPAL shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied. The TOWN is the only beneficiary hereunder.

IN WITNESS WHEREOF, this instrument is executed in three (3) counterparts, each one of which shall be deemed an original, this _____ day of _____, 20__.

ATTEST:

BY: _____
PRINCIPAL

(SEAL)

(Principal) Secretary

(Witness as to Principal)

(Address)

ATTEST:

BY: _____
SURETY

(SEAL)

(Surety) Secretary

(Witness as to Surety)

(Address)

NOTE: Date of BOND must not be prior to date of CONTRACT. If CONTRACTOR is Partnership, all partners should execute BOND.

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the PROJECT is located.

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: that

(Name of Contractor)

(Address of Contractor)

a _____, (Corporation, Partnership, or Individual) hereinafter called PRINCIPAL,

and

(Name of Surety)

(Address of Surety)

hereinafter called SURETY are held and firmly bound unto the Town of Milton, 115 Federal Street, Milton, Delaware 19968, hereinafter called TOWN, in the total aggregate sum of _____ Dollars (\$ _____) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITIONS OF THIS OBLIGATION is such that whereas, the Principal entered into a certain Contract with the COUNTY, dated the ____ day of _____, 20__ for **Bid for Town of Milton Contract No. 2015-56 Memorial Park Lighting Project**, a copy of which Contract and the specifications shall be deemed a part thereof to the same extent, as if fully set out herein.

NOW THEREFORE, if the Principal shall well, truly and faithfully perform his/her duties, all the undertakings, covenants, terms, conditions, and agreements of said Contract during the original term thereof, and any extensions thereof which may be granted by the TOWN with or without notice to the SURETY and during the one (1) year guaranty period, and if he/she shall satisfy all claims and demands incurred under such Contract, and shall fully indemnify and save harmless the TOWN from all costs and damages which he/she may suffer by reason of failure to do so, and shall reimburse and repay the TOWN all outlay and expenses which the TOWN may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED FURTHER that, the said SURETY for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of this Contract or to WORK to be performed thereunder or the SPECIFICATIONS accompanying the same shall in any way affect its obligation on this BOND, and he/she does hereby waive notice of any such change, extension of time, alteration or addition of the terms of this CONTRACT or to the WORK or to the SPECIFICATIONS.

Pennoni Associates

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PROVIDED FURTHER that, it is expressly agreed that the BOND shall be deemed amended automatically and immediately, without formal separate amendments hereto, upon amendment to this CONTRACT not increasing the Contract price more than 20 percent, so as to bind the PRINCIPAL and the SURETY to the full and faithful performance of this CONTRACT as so amended. The term Amendment, wherever used in this BOND, and whether referring to this BOND, this CONTRACT, or the Loan Documents shall include any alteration, addition, extension, or modification of any character whatsoever.

PROVIDED FURTHER that, no final settlement between the TOWN and the PRINCIPAL shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied. TOWN is the only beneficiary hereunder. IN WITNESS WHEREOF, this instrument is executed in three (3) counterparts, each one of which shall be deemed an original, this _____ day of _____, 20____

BY: _____
PRINCIPAL

ATTEST:

(SEAL)

(Principal) Secretary

(Witness as to Principal)

(Address)

BY: _____
SURETY

ATTEST:

(SEAL)

(Surety) Secretary

(Witness as to Surety)

(Address)

NOTE: Date of BOND must not be prior to date of CONTRACT. If CONTRACTOR is Partnership, all partners should execute BOND.

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the PROJECT is located.

END OF SECTION

SECTION 00 72 00 - GENERAL CONDITIONS**1. DEFINITIONS:**

The OWNER is the party referred to in the Advertisement and whenever the word Owner is used herein it shall refer to and designate the party of the first part of the contract contained herein.

The CONTRACTOR is the individual, group, partnership or corporation undertaking to do the work herein specified (including his or their heirs, legal representatives, successors or assigns) and is the party of second part of the contract contained herein.

The ENGINEER, the person, firm or corporation who represents the OWNER on the contract contained herein.

The CONTRACT DOCUMENTS consist of the Advertisement, Instructions to Bidders, Bid Form, General and Special Conditions, Construction Specifications, Form of Agreement, Form of Bond and Drawings.

A SUB-CONTRACTOR is an individual group, partnership or corporation, having a direct contract with the Contractor to furnish a special service, labor or material towards the completion for the Contractors contract.

An INSPECTOR is an authorized representative of the Engineers and/or Owner, assigned to inspect the work performed and the materials supplied by the Contractor as to compliance with the Contract Documents.

The term WORK, used herein, includes all labor and/or materials, equipment and any other facilities necessary for the Contractor to complete the contract.

The term APPROVED, used herein, shall be held to mean as approved by the Engineer.

The term SUBSTANTIAL COMPLETION used herein shall be held to mean construction that is sufficiently completed in accordance with the Contract Documents and certified by the Engineer of the Owner, as modified by change orders agreed to by the parties, so that a project can be used, occupied or operated for its intended use. In no event shall a project be certified as substantially complete until at least 90% of the work on the project is completed.

NOTICE shall be deemed to have been duly served if written and delivered in person to the individual, or to a member of the firm, or to an officer of the Corporation for whom it is intended, or if delivered at or sent by registered mail to the last business address known to him who gives notice.

2. OTHER CONTRACTS

The Owner may award, or may have awarded other contracts for additional work, and the

Contractor shall cooperate fully with such other Contractors, by scheduling his own work with that to be performed under other contracts as may be directed by the Owner. The Contractor shall not commit or permit any act which will interfere with the performance of work by any other Contractor as scheduled.

3. SUB-CONTRACTS

No part of the contract shall be sublet without the prior written approval of the Owner and setting forth requirements to be met.

4. MUTUAL RESPONSIBILITY OF CONTRACTORS

If, through acts or neglect on the part of the Contractor, any other Contractors, or any subcontractor, shall suffer loss or damage on the work, the Contractor shall settle with such other Contractor or subcontractor by agreement or arbitration, if such other Contractor or subcontractor will so settle. If such other Contractor, or subcontractor shall assert any claim against the Owner on account of any damage alleged to have been so sustained, the Owner will notify this Contractor, who shall defend at his own expense any suit based upon such claim and, if any judgment or claims against the Owner shall be allowed, the Contractor shall pay or satisfy such judgment or claim and pay all costs and expenses in connection therewith.

5. FITTING AND COORDINATION OF WORK

The Contractor shall be responsible for the proper fitting of all work and for the coordination of the operations of all trades, subcontractors, or material men engaged upon this contract. He shall be prepared to guarantee to each of his subcontractors the locations and measurements which they may require for the fitting of their work to all surrounding work.

6. SUPERINTENDENCE BY CONTRACTOR

At all times during which work is being performed under or affecting this contract, the Contractor shall keep a competent superintendent acceptable to the Engineer constantly on the site from the commencement of work under this contract until the completion thereof, who shall be constantly in touch with work and in all interlocking contracts affected thereby. The superintendent shall, in the absence of the Contractor, see that the instructions of the Engineer are carried out and all directions given such superintendent shall be as binding as if given to the Contractor.

7. PERMITS, LICENSES AND TAXES

The Contractor shall give all notice required by and comply with all applicable laws, ordinances, and codes of the Local Government, all construction work and/or utility installations shall comply with all applicable ordinances, and codes including all written waivers. Before installing any work, the Contractor shall examine the Drawing and Detail Specifications for compliance with applicable ordinances and codes and shall immediately report any discrepancy to the Owner. Where the requirements of the Drawings and Detail Specifications fail to comply with such applicable ordinances or codes, the Owner will

adjust the Contract by Change Order to conform to such ordinances or codes (unless waivers in writing covering the difference have been granted by the governing body or department) and make appropriate adjustment in the Contract Price or stipulated unit prices.

Should the Contractor fail to observe the foregoing provisions and proceed with the construction and/or install any utility varying with any applicable Ordinance or code, including any written waivers (notwithstanding the fact that such installation is in compliance with the Drawings and Detail Specifications) the Contractor shall remove such work without cost to the Owner.

The Contractor shall at his own expense, secure and pay to the appropriate department of the Local Government the fees, or charges for all permits required by the local regulatory body or any of its agencies.

Permits for the opening and/or occupation of Town roads shall be obtained by the Contractor and State Highway permits shall be obtained by the Owner. However, all inspection fees and/or any other charges shall be borne by the Owner through their Engineer, whether same is billed directly to him or to the Owner. Should any such bill be left unpaid by the Contractor, the Owner shall be empowered to pay such bills and the cost thereof deducted from any monies due or to become due the Contractor.

Whenever the proposed construction requires a sales tax, consumers use tax, or other similar tax, the contractor shall pay for same.

8. PROVISIONS REQUIRED BY LAW

Each and every provision of law and clause required by law to be inserted in this Contract shall be deemed to be inserted herein and the Contract shall be read and enforced as though it were included herein; and, if through mistake or otherwise, any such provision is not inserted or is not correctly inserted, then upon the application of either party the Contract shall forthwith be physically amended to make such insertion.

9. PROTECTION OF WORK AND PROPERTY

The Contractor shall provide adequate protection against injury or loss arising in connection with this contract for all his work and the property of the Owner. He shall make good any such damage, injury or loss, except such as may be due directly to errors in the drawings or specifications or caused by agents or employees of the Owner. He shall adequately protect adjacent property as provided by law and the specifications and drawings. He shall provide facilities for protection required by public authority or local conditions as passageways, guard fences, lights, etc.

The Contractor shall preserve and protect all trees, shrubs and grass on or adjacent to the site which do not reasonably interfere with the construction as may be determined by the Engineer and the Contractor shall be responsible for all unauthorized cutting or damaging or trees and shrubs, including damage due to careless operation of equipment, stockpiling of materials or tracking of grass areas by equipment. The Contractor shall remove only those

trees designated by the Engineer to be removed.

10. TEMPORARY PROVISION FOR PUBLIC TRAVEL

The Contractor shall perform his work in such a manner as to interfere as little as possible with the use of intersecting roads or adjoining property. No excavation shall be left open or other obstruction allowed to remain longer than is absolutely necessary; and the Contractor shall provide all safeguards and temporary passageways that may be necessary for the convenience and protection of all persons using said property either day or night.

11. SHOP DRAWINGS

The Contractor shall check and verify all field measurements and shall submit with such promptness as to cause no delay in his own work or in that of any other Contractor, three copies, checked and approved by him, of all shop or setting drawings and schedules required for the work of the various trades. The Engineers shall review, with reasonable promptness, such schedules and drawings only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents. The Contractor shall make any corrections required by the Engineers, file with him two copies and furnish such other copies as may be needed. The Engineers' review of such drawings or schedules shall not relieve the Contractor from responsibility for deviations from Drawings or Specifications, unless he has in writing called the Engineers' attention to such deviations at the time of submission, and secured his written approval, nor shall it relieve him from responsibility for errors in shop drawings or schedules.

12. TERMINATION; DELAYS; LIQUIDATED DAMAGES

If the Contractor refuses or fails to prosecute the work with such diligence as will insure its completion within the time specified in these Contract Documents, or as modified as provided in these Contract Documents, the Owner, by written notice to the Contractor, may terminate the Contract and the Contractor's right to proceed with the work. Upon such termination, the Owner may take over the work and prosecute the same to completion by contract or otherwise, and the Contractor and his sureties shall be liable to the Owner for additional cost incurred by the Owner, as well as liquidated damages for any delay in the completion of the work as provided below. If the Contractor's right to proceed is so terminated, the Owner may and take possession of and utilize in completing the work any materials, tools, equipment and plant on the site of the work as necessary to complete the project.

If the work not be completed within the time stipulated, including any extensions of time for excusable delays as herein provided, the Contractor shall pay to the Owner Liquidated Damages for each calendar day of delay, as set forth in the Form of Agreement, and the Contractor and his sureties shall be liable to the Owner for the amount thereof.

The right of the Contractor to proceed shall not be terminated nor shall the Contractor be charged with Liquidated Damages for any delays in the completion of the work due:

To any acts of the Government, including controls or restriction upon or requisitioning of materials, equipment, tools, or labor by reason or war, national defense, or any other national emergency;

To any acts of the Owner;

To causes not reasonably foreseeable by the parties to this contract at the time of the execution of the contract which are beyond the control and without the fault of negligence of the Contractor, including, but not restricted to, acts of God or of the public enemy, acts of another Contractor in the performance of some other contract with the Owner, fires, floods, epidemics, quarantine, restrictions, strikes, freight embargoes, and weather of unusual severity such as hurricanes, tornadoes, cyclones and other extreme weather conditions; and

To any delay of any subcontractor occasioned by any of the causes specified in sub-paragraphs above.

Provided, however, that the contractor promptly notified the Owner within ten (10) days in writing of the cause of the delay. Upon receipt of such notification, the Owner shall ascertain the facts and the cause and extent of delay. If, upon the basis of the facts and the terms of this contract, the delay is properly excusable, the Owner shall extend the time of completing the work for a period of time commensurate with the period of excusable delay.

Should the completion of the work be delayed beyond the time herein specified for completion for any reason other than the act of neglect of the Owner, or an approved extension of time, the Contractor shall pay the Owner the actual engineering expenses incurred by the Owner as a result of such delay and the Owner may deduct such engineering costs from any payments due or to become due the Contractor.

13. INCONSISTENT SPECIFICATIONS AND DRAWINGS

Anything mentioned in the Detail Specifications and not shown on the Drawings, or shown on the Drawings and not mentioned in the Detail Specifications, shall be of like effect as if shown on or mentioned in both. In case of difference between Drawings and Detail Specifications, the better quality or greater quantity of work or materials and the more stringent requirements shall be included in the bid, and unless otherwise ordered in writing, shall be performed or furnished.

14. USE OF PREMISES

The Contractor shall confine his equipment, storage of materials and construction operations to the Contract Limits as shown on the Drawings and as prescribed by ordinances or permits, or as may be directed by the Owner, and shall not unreasonably encumber the site or public rights of way with his materials and construction equipment. No material of any kind may be stored on Town or State Roads.

The Contractor shall comply with all reasonable instructions of the Owner and the ordinances and codes of the Local Government regarding signs, advertising, traffic, fires,

explosives, danger signals, and barricades.

15. POSSESSION PRIOR TO COMPLETION

The Owner shall have the right to take possession or use any completed or partially completed part of the work, but such possession or use shall not be deemed an acceptance of any work not completed in accordance with the Contractor.

16. CHANGES IN THE WORK

The Owner may make changes in the scope of the work required to be performed by the Contractor under the Contract or make additions thereto, or omit work there from, without invalidating the Contract, and without relieving or releasing the Contractor from any of his obligations under the Contract or any guarantee given by him pursuant to the Contract provisions, and without affecting the validity of the guaranty bonds, and without relieving or releasing the surety or sureties of said bonds. All such work shall be executed under the terms of the original Contract unless it is expressly provided otherwise.

Except for the purpose of affording protection against endangering life or property, the Contractor shall make no changes in the materials used or in the specified manner of constructing and/or installing the improvements or supply additional labor, services, or materials beyond that actually required for the execution of the Contract, unless in pursuance of a written order from the Owner authorizing the Contractor to proceed with the change. No claim for an adjustment of the Contract price will be valid unless so ordered.

Where applicable, when unit prices are contained in the Bid, the Owner may order the Contractor to proceed with desired changes in the work. The value of such changes is to be determined by the measured quantities involved and the applicable unit prices specified in the Contract. The Owner shall, before ordering the Contractor to proceed with desired changes, request an itemized bid from him covering the work involved in the change, following which the procedure shall be as follows:

If the bid is acceptable, the Owner will prepare the change order in accordance therewith for acceptance by the Contractor and;

If the bid is not acceptable, and prompt agreement between the two parties cannot be reached, the Owner may order the Contractor to proceed with the work on a COST OF WORK basis.

Payment under COST OF WORK will be for the actual and necessary direct cost of the work in accordance with the orders of the Engineer, and in addition thereto the percentage of such cost hereafter stated. "Actual and necessary direct cost" shall be deemed to include the following:

- (1) The actual expenditure for labor for the time actually engaged in the work, including the distributed cost of foreman in direct charge of such labor and insurance, taxes and other payments applicable to such labor.

- (2) The actual expenditure for materials used up or incorporated in the work.
- (3) A reasonable hourly, weekly or monthly rental as applicable, as determined by the Engineers, for use of motor trucks and special equipment such as power-operated shovels, cranes, drills, paving breakers, etc. (but not including small hand tools), at a rate not to exceed the current local rate charged for the type of equipment used, for the time that such equipment is required on the work for the performance of COST OF WORK EXCLUSIVELY. The rental price shall be for the equipment provided on the work and shall include transportation to and from the work, fuel, power, lubricants, operating tools, repairs, depreciation, replacements, and the sharpening of drills and other tools required to keep them in the best working condition.

To the actual and necessary direct cost of the work done under COST OF WORK as noted above, fifteen (15) percent will be added to the expenditure for labor as set forth in sub-paragraph (1) above and then (10) percent will be added to the expenditure for materials. No additions will be allowed to the rental of trucks, and special equipment. These percentages, and the rental price for equipment furnished, shall be deemed to cover the cost of heat, light, use and upkeep of small hand tools, administration, engineering, superintendence, all loss, damage, risk, and expenses incidental to the work and profit. The Contractor shall have no claim in excess of the above, such payments being in full compensation for the performance of such work and the furnishing of such materials and for all expense in connection therewith and incidental thereto.

Should the Contractor sublet any portion of the work to be executed under COST OF WORK payment for that portion will be computed as the actual and necessary direct cost as defined above, exclusive of any profit to the subcontractor, plus the percentages allowed, plus five (5) percent of the total paid to the sub-contractor.

The Contractor shall submit daily a statement in duplicate of work done on a COST OF WORK basis within twenty-four hours of the time the work is done, and representatives of the Engineer and the Contractor shall make daily comparison of the time and rates of labor, material used, etc., as given therein. After correction, if necessary, this comparison shall be signed by each and filed with the Engineer and the Contractor. The Contractor shall submit to the Engineer monthly, prior to each current estimate, four copies of an itemized statement of the amount and value of labor and materials furnished, accompanied by the original receipted bills for commodities purchased or for work performed under a subcontract, and by an affidavit certifying the correctness of the said statement. The Engineer shall have access to any books, vouchers, records, and memoranda showing the labor employed and the materials actually used on the specific operation and the actual net cost thereof.

17. CLAIMS FOR EXTRA COST

If the Contractor claims that any instructions by Drawing or otherwise involve extra cost or extension of time, he shall, within ten (10) days after the receipt of such instructions, and in any event before proceeding to execute the work, submit his protest thereto in writing to the Owner, stating clearly and in detail the basis of his objections. No such claim will be

considered unless so made.

Any discrepancies which may be discovered between actual conditions and those represented by the Drawings and maps shall at once be reported to the Owner and work shall not proceed except at the Contractor's risk, until written instructions have been received by him from the Owner.

If, on the basis of the available evidence, the Owner determines that an adjustment of the Contract Price and/or Time is justifiable, the procedure shall then be as provided herein.

18. DISPUTES

All disputes arising under this Contract or its interpretation, whether involving law or fact or both, or extra work and all claims for alleged breach of contract within (10) days of commencement of the dispute be presented by the Contractor to the Owner for decision. All papers pertaining to claims shall be filed in quadruplicate. Such notice need not detail the amount of the claim but shall state the facts surrounding the claims in sufficient detail to identify the claim, together with its character and scope. In the meantime, the Contractor shall proceed with the work as directed. Any claim not presented within the time limit specified within this paragraph shall be deemed to have been waived, except that if the claim is of a continuing character and notice of the claim is not given within ten (10) days of its commencement, the claim will be considered only for a period commencing ten (10) days prior to the receipt by the Owner of notice thereof.

The Contractor shall submit in detail his claim and his proof thereof. Each decision by the governing body of the Owner will be in writing and will be mailed to the Contractor by registered mail, return receipt requested.

If the Contractor does not agree with any decision of the Owner, he shall in no case allow the dispute to delay the work but shall notify the Owner promptly that he is proceeding with the work under protest and he may then except the matter in question from the final release.

19. MATERIALS AND WORKMANSHIP

Unless otherwise specifically provided for in the Detail Specifications, all workmanship, equipment, materials and articles incorporated in the work shall be new and the best grade of the respective kinds for their purpose. Where equipment, materials, articles or workmanship are referred to in the Detail Specifications as "Equal To" any particular standard, the Engineer shall decide the question of equality.

The Contractor shall furnish to the ENGINEERS for approval the manufacturer's detailed specifications for all machinery, mechanical and other special equipment, which he contemplates installing together with full information as to type, performance characteristics, and all other pertinent information as required, and shall likewise submit for approval as required full information concerning proposes all other materials or articles which he proposes to incorporate in the work.

Machinery, mechanical and other equipment, materials or articles installed or used without such prior approval shall be at the risk of subsequent rejections.

Materials specified by reference to the number or symbol of a specific standard, such as an A.S.T.M. Specification, a Federal Specification or other similar standard, shall comply with requirements in the latest revision thereof and any amendment or supplement thereto in effect on the date of the Invitation for Bids, except as limited to type, class or grade, or modified in such reference. The standards referred to, except as modified in the Detail Specifications, shall have full force and effect as though printed therein.

The Owner may require the Contractor to dismiss from the work such employee or employees as the Owner or the Engineer may deem incompetent or careless or insubordinate.

20. SAMPLES, CERTIFICATES AND TESTS

The Contractor shall submit all material or equipment samples, certificates, affidavits, etc., as called for in the contract documents or required by the Engineer; promptly after award of the contract and acceptance of the Contractor's bond. No such material or equipment shall be manufactured or delivered to the site, except at the Contractor's own risk, until the required samples or certificates have been approved in writing by the Engineer. Any delay in the work caused by late or improper submission of samples or certificates for approval shall not be considered just cause for an extension of the contract time.

Each sample submitted by the Contractor shall carry a label giving the name of the Contractor, the project for which it is intended, and the name of the producer. The accompanying certificates or letter from the Contractor shall state that the sample complies with contract requirements, shall give the name and brand of the product, its place of origin, the name and address of the producer and all specifications or other detailed information which will assist the Engineer in passing upon the acceptability of the sample promptly. It shall also include the statement that all materials or equipment furnished for use in the project will comply with the samples and/or certified statements.

Review of any materials shall be general only and shall not constitute a waiver of the Owner's right to demand full compliance with Contract requirements. After actual deliveries, the Engineer will have such tests made as he deems necessary in each instance and may reject materials and equipment and accessories for cause, even though such materials and articles have been given general approval. If materials, equipment or accessories which fail to meet check tests have been incorporated in the work, the Engineer will have the right to cause their removal and replacement by proper materials or to demand and secure such reparation by the Contractor as is equitable. If materials, equipment or accessories are rejected, the Contractor shall reimburse the Owner for Engineering costs incurred as a result of the rejected materials, equipment, or accessories.

21. CHANGES IN EQUIPMENT AND/OR MATERIALS

In these specifications and on accompanying drawings, there are specified and shown

certain pieces of equipment and/or materials which are deemed most suitable for service anticipated. This is not done to eliminate other equipment and material equally as good and efficient. Contractor shall prepare his bid on particular material and equipment specified. Following award of contract, should Contractor desire to use some other make of machinery, equipment or material, he shall submit to Engineers a written request for such change and in same shall state advantage to Owner and saving or additional cost involved by substitution. Determination as to whether or not such change will be permitted rests solely with the Engineer.

If the requested change resulted in added engineering costs, the Contractor and Owner will be notified of the magnitude of same, by the Engineer, and the change will only be processed upon agreement by the Contractor to pay for the added engineering costs. If the Contractor refuses to pay said added costs, he must supply the equipment and/or materials specified.

22. PATENTS

The Contractor shall hold and save the Owner, its officers, and employees, harmless from liability of any nature or kind including costs and expenses, for, or on account of, any patented or unpatented invention, process, article, or appliance manufactured or used in the performance of the Contract including its use by the Owner unless otherwise specifically stipulated in the Detail Specifications.

23. WARRANTY OF TITLE

No material, supplies, or equipment for the work shall be purchased subject to any chattel mortgage or under a conditional sale or other agreement by which an interest therein or in any part thereof is retained by the seller or supplier. The Contractor shall warrant good title to all materials, supplies, and equipment installed or incorporated in the work and upon completion of all work, shall deliver the same together with all improvements and appurtenances, constructed or places thereon by him to the Owner free from any claim, liens, or charges. Neither the Contractor nor any person, firm or corporation furnishing any material or labor for any work covered by this contract shall have any right to a lien upon any improvement or appurtenance thereon. Nothing contained in this paragraph, however, shall defeat or impair the right of persons furnishing materials or labor to recover under any bond given by the Contractor for their protection or any rights under any law permitting such persons to look to funds due the contractor in the hands of the Owner. The provisions of this paragraph shall be inserted in all sub-contracts and material contracts and notice of its provisions shall be given to all persons furnishing materials for the work when no formal contract is entered into for such material.

24. THE OWNER'S RIGHT TO DO WORK

If the Contractor should neglect to prosecute the work properly or fail to perform any provision of the Contract, the Owner, after three days' written notice to the Contractor may, without prejudice to any other remedy he may have, make good such deficiencies and may deduct the cost thereof from the payment then or thereafter due the Contractor, provided,

however, that the Engineers shall approve both such action and the amount charged to the Contractor.

25. THE OWNER'S RIGHT TO TERMINATE CONTRACT

If the Contractor should be adjudged bankrupt, or if he should make a general assignment for the benefit of his creditors, or if a receiver should be appointed on account of his insolvency, or if he should persistently or repeatedly refuse or should fail, except in cases for which extension of time is provided, to supply enough properly skilled workmen or proper materials, or if he should fail to make prompt payment to subcontractors or for material or labor, or persistently disregard laws, ordinances or the instructions of the Engineers, or otherwise be guilty of a substantial violation of any provision of the Contract, then the Owner, upon the certification of the Engineers that sufficient cause exists to justify such action, may, without prejudice to any other right or remedy and after giving the Contractor, and his surety if any, seven (7) days' written notice, terminate the employment of the Contractor and take possession of the premises and of all materials, tools and appliances thereon and finish the work by whatever method he may deem expedient. In such case the Contractor shall not be entitled to receive any further payment until the work is finished. If the unpaid balance of the Contract Sum shall exceed the expense of finishing the work including compensation for additional managerial and administrative services, such excess shall be paid to the Contractor. If such expense shall exceed such unpaid balance, the Contractor shall pay the difference to the Owner. The expense incurred by the Owner as herein provided, and the damage incurred through the Contractor's default, shall be certified by the Engineers.

26. DAMAGES

Should either party to the Contract suffer damages because of any wrongful act or neglect of the other party or of anyone employed by him, claim shall be made in writing to the party liable within a reasonable time of the first observance of such damage and not later than the final payment, except as expressly stipulated otherwise in the Contract Documents, and shall be adjusted by agreement or arbitration.

27. ENGINEERS STATUS

The Engineers shall be the Owner's representatives during the construction period. The Engineers will make periodic visits to the site to familiarize themselves generally with the progress and quality of the work and to determine in general if the work is proceeding in accordance with the Contract Documents. They will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the work and they will not be responsible for the Contractor's failure to carry out the construction work in accordance with the Contract Documents. During such visits and on the basis of their observations while at the site, they will keep the Owner informed of the progress of the work, will endeavor to guard the Owner against defects and deficiencies in the work of Contractor, and they may condemn work as failing to conform to the Contract Documents. They shall have authority to act on behalf of the Owner only to the extent expressly provided in the Contract Documents or otherwise in writing, which shall be shown to the Contractor. They shall

have authority to reject the work whenever such rejection may be necessary in their reasonable opinion to insure the proper execution of the Contract.

The Engineers shall be, in the first instance, the interpreter of the conditions of the Contract and the judge of its performance. They shall side neither with the Owner nor with the Contractor, but shall use their powers under the Contract to enforce its faithful performance by both.

In case of termination of the employment of the Engineers, the Owner shall appoint a capable and reputable Engineer against whom the Contractor makes no reasonable objection, whose status under the Contract shall be that of the former Engineer; any dispute in connection with such appointment shall be subject to arbitration.

28. NO ESTOPPEL OR WAIVER OF LEGAL RIGHTS

The Owner or the Engineers shall not be precluded or estopped by any measurement, estimate or certificate, made or given by either of them or by any agent or employee of the Owner under any provision or revisions of the contract at any time, either before or after the completion and acceptance of the work and payment thereof pursuant to any measurements, estimate or certificate is untrue or incorrectly made in any particular or that the work or materials or any part thereof, do not conform in fact to the contract. The Owner shall have the right to reject the whole or any part of the aforesaid work or materials should that said measurements, estimate, certificate or payment be found or be known to be inconsistent with the terms of the contract or otherwise improperly given. The Owner shall not be precluded or estopped not withstanding any such measurement, estimate, certificate and payment in accordance therewith, from demanding and recovering from the Contractor and his surety such damages as he may sustain by reason of his failure to comply with the terms of the Contract. Neither the acceptance by the Engineer, or any agent or employee of the Owner nor any certificate by the Engineers for payment of money, nor any payment for, nor acceptance of the whole or any part of the work by the Owner or the Engineers nor any extension of time, nor any possession taken by the Owner or his employees, shall operate as a waiver of any portion of the contract or of any power herein reserved by the Owner, or any right to damages herein provided, nor shall any waiver of any breach of contract be held to be a waiver of any other or subsequent breach.

29. SAFETY AND HEALTH REGULATIONS (OSHA)

The Contractor shall comply with the Department of Labor Safety and Health Regulations for construction promulgated under the Occupational Safety and Health Act of 1970 (PL-91-596) and under Section 107 of the Contract Work Hours and Safety Standards Act (PL-91-54). All work must be in compliance with State and Federal Occupational Health and Safety Regulations.

30. ARBITRATION

All claims, disputes and other matters in question arising out of, or relating to, this Contract or the breach thereof shall be decided by mutual agreement to arbitration in accordance with

the Construction Arbitration Rules of the American Arbitration Association then obtaining. This agreement so to arbitrate shall be specifically enforceable under the prevailing arbitration law. The award rendered by the arbitrators shall be final, and judgment may be entered upon it in any court having jurisdiction thereof except in disputes between the Contractor and the Owner over the payment of retainage and final payment on contracts in excess of \$50,000, either party shall have the right of appeal from any decision and award as provided by law.

Notice of the request for arbitration shall be filed in writing with the other party to the Agreement and with the American Arbitration Association, and a copy shall be filed with the ENGINEER. The request for arbitration shall be made within a reasonable time after the claim, dispute or other matters in question has arisen, and in no event shall it be made after institution of legal or equitable proceedings based on such claims, dispute or other matter in question would be barred by the applicable statute of limitations.

The CONTRACTOR will carry on the Work and maintain the progress schedule during any arbitration proceedings, unless otherwise agreed by him and the OWNER in writing.

31. INDEMNIFICATION

The Contractor will indemnify and hold harmless the Owner and the Engineer and their agents and employees from and against all claims, damages, losses and expenses including attorney's fees arising out of or resulting from the performance of the Work, provided that any such claim, damage, loss or expense (a) is attributed to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself) including the loss of use resulting therefrom and (b) is caused in whole or in part by any negligent act or omission of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder.

In any and all claims against the Owner or the Engineer or any of their agents or employees by any employee of the Contractor, and Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose agents any of them may be liable, the indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation of benefits payable by or for the Contractor or any Subcontractor under workmen's compensation acts, disability benefit acts or other employee benefit acts.

The obligations of the Contractor shall not extend to the liability of the Engineer, his agents or employees arising out of (a) the preparation or approval of maps, drawings, opinions, reports, surveys, Change Orders, designs or specifications or (b) the giving of or the failure to give directions or instructions by the Engineer, his agents or employees provided such giving or failure to give is the primary cause of injury or damage.

32. SUB-SURFACE INFORMATION

There are no representations or Warranties as to the accuracy or completeness of any

subsurface data provided by the OWNER or the ENGINEERS, and the data shall not be considered as part of the contract plans or specifications. The CONTRACTOR(s) shall assume all risks in excavation for this project and shall not rely on any sub-surface information received or obtained directly or indirectly from the ENGINEER or the OWNER.

END OF SECTION

SECTION 00 73 00 - SUPPLEMENTARY CONDITIONS**1. CONTRACT SECURITY**

Each Contractor shall furnish a surety bond in an amount to 100 percent of the contract for faithful PERFORMANCE; a separate surety bond in an amount equal to 100 percent of the contract for the payment of LABOR and MATERIALS. The PERFORMANCE AND LABOR AND MATERIALS bonds are to continue in effect for a period of one (1) year after final payment. Work shall not commence under this contract until each of the above bonds have been obtained.

All Bonds must be executed by a corporate surety satisfactory to the Owner, and each set of bonds executed must include a Power of Attorney and the latest statement of assets and liabilities with an authorized signature from that company. Should any surety upon such bonds become unsatisfactory to the Owner, the Contractor must promptly furnish such additional security as may be required from time to time to protect the interests of the Owner.

Only bonds from companies licensed to do business in the State where the Owner is located will be accepted and the bond shall so state same.

2. CONTRACTOR'S INSURANCE

Prior to the commencement of any work under the Contract and until completion and final payment is made for the work, the CONTRACTOR shall, at its expense, maintain the following insurance on its behalf, with an insurance company or companies having an A.M. Best Rating of "A-: Class VII" or better and furnish to the OWNER Certificates of Insurance evidencing the same.

The term CONTRACTOR as used in these Insurance requirements shall mean to include SUBCONTRACTORS, including Suppliers, Manufacturers, Vendors, etc. of every tier.

The CONTRACTOR shall either: a) require each SUBCONTRACTOR to procure and maintain during the life of the Contract, insurance of the type and in the same amounts as specified; or b) Insure the activities of his SUBCONTRACTORS in his own policy.

Three (3) original copies of all Certificates must be provided.

Umbrella Policies shall spell out the primary coverage to which the excess coverage will apply.

Only certificates of insurance from companies licensed to do business in the state where the Owner is located will be approved.

Prior to the commencement of work, CONTRACTOR shall file Certificates of Insurance with the OWNER which shall be subject to the OWNER's approval of adequacy of protection and character of the insurer. Certificate shall include project description and Contract number.

All contractors/suppliers are required to procure and maintain the following insurance coverages.

(a) Workers' Compensation and Employers Liability

The contractor/supplier must maintain during the life of the contract Workers' Compensation and Employer's Liability insurance in the State in which the Work is being performed.

Workers' Compensation: Coverage must be in accordance with statutory requirements.

Employers Liability Limits not less than:

Bodily Injury by Accident	\$100,000 Each Accident
Bodily Injury by Disease	\$100,000 Each Employee
Bodily Injury by Disease	\$500,000 Policy Limit

(b) Commercial General Liability

The CONTRACTOR must maintain during the life of this Contract Commercial General Liability insurance: including Premises – Operations, Contractors, Products/Completed Operations, Broad Form Property Damage, Contractual Liability (including Liability for Employee Injury assumed under a Contract) and Explosion, Collapse and Underground Coverages.

Occurrence form with the following minimum limits:

General Aggregate	\$2,000,000
Products/Completed Operations Aggregate	\$2,000,000
Each Occurrence	\$1,000,000
Personal and Advertising Injury	\$1,000,000
Fire Damage (any one fire)	\$100,000
Medical Expense (any one person)	\$5,000

Products/Completed Operations Coverage must remain in effect for a minimum of two (2) years after Final Payment.

The General Aggregate Limit must apply on a per project basis.

(c) Automobile Liability

The CONTRACTOR must maintain during the life of this contract Liability Insurance for all vehicles operating on Owners property including all owned, hired and Non-owned vehicles. Coverage shall include Contractual Liability including Liability for Employee Injury assumed under a Contract.

Per Accident Combined Single Limit	\$1,000,000
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(d) Commercial Umbrella Liability

Occurrence Limit	\$1,000,000
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Aggregate Limit (where applicable) \$1,000,000

Policy to apply excess of the Commercial General Liability (following form per Project Limit), Commercial Automobile Liability and Employers Liability Coverages.

- (e) Deductibles of Self Insured Retentions
None of the policies of the insurance required of the CONTRACTOR by this CONTRACT shall contain deductibles or self-insurance retentions in excess of \$0.
- (f) Financial Rating of Insurance Companies
A.M. Best Rating: A- (Excellent) or Higher
A.M. Best Financial Size Category: Class VII or Higher

The OWNER, its officers, agents, and employees; the ENGINEER; and any other contractor that the OWNER may be obligated to defend and indemnify in the Contract shall be added as additional insureds on all liability policies. With respect to General Liability, additional insured status shall include coverage for both ongoing operations and completed operations using CG 20 26 11/85 or equivalent.

CONTRACTOR's insurance shall be endorsed to reflect its *primary and non-contributory* for the OWNER and all other additional insureds named in the Contract.

CONTRACTOR's insurance shall not be cancelled, materially changed or renewed without at least 30 days advance written notice to the OWNER by certified mail – return receipt requested.

Waiver of Rights of Recovery and Waiver of Rights of Subrogation

The CONTRACTOR waives all rights of recovery against OWNER and all additional insureds for the loss or damage covered by any of the insurance maintained by the CONTRACTOR pursuant to this Contract.

The CONTRACTOR and their insurance carriers hereby waive all rights of subrogation against OWNER and all additional insureds for loss or damage covered by any of the insurance maintained by the CONTRACTOR pursuant to this Contract.

If any policies of insurance under this Contract require an endorsement to provide for the waiver of subrogation set forth above, then named insureds of such policies will cause them to be so endorsed.

The amount of insurance provided in the aforementioned coverages shall not be construed as a limitation of the liability on the part of the CONTRACTOR.

Any type of insurance or any increase in limits of liability not described above which the

CONTRACTOR requires for its own protection or on account of statute shall be its own responsibility and at its own expense.

The carrying of insurance shall in no way be interpreted as relieving the CONTRACTOR of any responsibility or liability under the Contract.

3. PROGRESS SCHEDULE

The Contractor shall submit for approval immediately after execution of the Agreement, a carefully prepared Progress Schedule, showing the proposed dates of starting and completing each of the various sections of the work, and the anticipated payments to become due the Contractor.

4. PROGRESS SCHEDULE

The Contractor shall submit for approval immediately after execution of the Agreement, a carefully prepared Progress Schedule, showing the proposed dates of starting and completing each of the various sections of the work, the anticipated monthly payments to become due the Contractor, and the accumulated percent of progress each month.

5. LOCATION OF UTILITIES

Since it is the desire of the Owner to disturb the area of construction only during the contract period and because all of the necessary equipment and materials are more readily available to the Contractor during the construction, these specifications provide that all utilities be located by the Contractor during construction.

The Contractor will be held responsible for locating, in advance of the structures to be built under this contract, all underground structures, such as water and gas mains; water and gas services; storm sewers and telephone and electric conduits, etc., which may be encountered during the constructing operation. He shall either dig test holes to determine the position of the underground structures, or he shall arrange with the Owners of such underground structures to assign a representative to make the locations. The Contractor shall pay the cost of digging test holes and likewise he shall pay the cost of the services of the representative of the Owners of such utilities for locating the said utilities; and the cost of determining the locations shall be included in the Contractor's unit or lump sum prices bid. The locations of utility service lines as shown on the plans is for the guidance of the Contractor and, since the information is as furnished by the respective utilities, the Engineer is not responsible for the accuracy of the information in this respect. The Contractor shall not be entitled to any claim for damage or extra compensation because of any delay caused by his failure to arrange for the location of utilities in advance of his work.

6. INSPECTION OF WORK

The Owner and/or Engineers may appoint such persons as they deem necessary to inspect, at any time, materials and equipment furnished and work done, under this contract. The Engineer shall be notified of the time and place of all work performed in sufficient time to

allow arrangements for the assignment of inspectors. Neither the inspection nor surveillance of the work, nor the presence or absence of an inspector shall relieve the Contractor of any of his obligations under the Contract or of making his work conform to the intent of the drawings and/or specifications.

The Owner's inspectors shall be authorized to inspect all work done and materials furnished. Such inspection may extend to all or any part of the work and to the preparation or manufacture of the materials to be used. Inspectors will be stationed on the work to report to the Engineers as to the progress of the work and the manner in which it is being performed; to report whenever it appears that the materials furnished and work performed by the Contractor fail to fulfill the requirements of the Contract, and to call to the attention of the Contractor any such failure or other default, but no inspection or any failure to inspect, at any time or place; shall relieve the Contractor from any obligation to perform all work strictly in accordance with the requirement of the Contract. In case of any dispute arising between the Contractor and any inspector as to materials furnished or the manner of performing the work, the inspector shall have the authority to reject materials or suspend the work until the question at issue can be referred to and decided on by the Engineers. The inspectors shall not be authorized to revoke, alter, enlarge, relax or release any requirements of the Contract, or to approve or accept any portion of work, or to issue instructions contrary to the drawings and specifications. Inspectors shall in no case act as foreman or perform other duties for the Contractor, nor interfere with the management of the work by the latter. Any instructions which the inspectors may give the Contractor shall in no way be construed as releasing the Contractor from fulfilling the term of the Contract.

When the Contractor has fully completed all work provided for under his contract and so notified the Engineers in writing, they will make a final inspection of the completed work and if, in their judgment, the Contractor has fully completed the work and it is in accordance with all terms, provisions and stipulations of the drawings, specifications and contract, they will issue a Certificate of Completion to the Owner showing the entire amount of work performed and the compensation earned by Contractor, including any approved extra work and the compensation therefore.

7. NIGHT, WEEKEND AND HOLIDAY WORK

When required by the nature of the contract and/or upon specific permission of the Engineers and Owner, the Contractor may perform necessary work at night and/or weekends and holidays.

8. PAYMENT TO CONTRACTOR

Partial:

The total value of work completed to date shall be based on the estimated quantities of work completed and on the unit prices and lump sum prices contained in the Bid. Payment for materials delivered and stored but not yet used will be made only if specifically provided for herein under the "SPECIAL CONDITIONS". The Contractor shall prepare his requisition for partial payment as of the day of the month mutually agreed upon and submit same in

quadruplicate to the Engineer for his approval.

For contracts \$50,000 or less, the amount due the Contractor shall be determined by the total value of work completed to date less five percent (5%) of the total amount to be retained until final payment.

For contracts in excess of \$50,000, the amount due the Contractor shall be determined by the total value of work completed to date less five percent (5%) of the total amount to be retained until fifty percent (50%) of the work has been completed and five percent (5%) until final payment. Provided, however, that in the event a dispute arises between the Owner and any prime Contractor, which dispute is based upon increased costs claimed by one prime Contractor occasioned by delays or other actions of another prime Contractor, additional retainage in the sum of one and one-half times the amount of any possible liability may be withheld until such time as a final resolution is agreed to by all parties directly or indirectly involved, unless the Contractor causing the additional claim furnishes a bond satisfactory to the Owner to indemnify such Owner against the claim. However, all such moneys retained by the Owner may be withheld from the Contractor until substantial completion of the contract.

Within 20 days of the receipt of a retainage payment by the Contractor, the Contractor shall pay all subcontractors with whom he has contracted their earned share of the payment the Contractor received.

Monthly or partial payments made by the Owner to the Contractor are moneys advanced for the purpose of assisting the Contractor to expedite the work of construction. All material and completed work covered by such monthly or partial payments shall remain the property of the Contractor and he shall be responsible for the care and protection of all materials and work upon which payments have been made. Such payments shall not constitute a waiver of the right of the Owner to require the fulfillment of all terms of the Contract and the delivery of all improvement embraced in this Contract complete and satisfactory to the Owner in all details.

Payment for Stored Materials

The following (checked) provision will apply to this job.

No Payment will be made for stored materials.

Payment for materials stored.

Payment for materials stored in reasonable quantities which are delivered and accepted for incorporation in the work but are not yet so used, shall be estimated at ninety (90) percent of their cost, as determined by the ENGINEER. Such materials included in the estimate shall be and become the property of the Owner, and the CONTRACTOR shall promptly execute, acknowledge and deliver to the ENGINEER, proper bills of sale, or other instruments in writing in a form satis-

factory to the ENGINEER. The CONTRACTOR shall submit to the ENGINEER, together with such bills of sale or other instruments, receipted invoices certifying to the payment of such materials, and delivery slips certifying to the delivery of such materials to the site of the work and shall, at his own expense, act for and protect the same and procure and maintain insurance against loss of the same by fire, theft or water, payable to the OWNER and/or CONTRACTOR as their respective interests may appear.

The CONTRACTOR shall submit the above under cover of a letter certifying that the materials incorporated on the "Material Invoice Statement" have been delivered to the site of work and that payment for said materials has been made in accordance with the specifications, and that upon payment to the CONTRACTOR of the amount invoiced, all such materials shall become the property of the OWNER. The letter shall also indicate that the CONTRACTOR certifies that said material is free from liens, charges and encumbrances, and the specifications regarding the materials remain in effect.

Such documents transferring to the OWNER the absolute legal title to said property shall be delivered to the OWNER before any such partial payment for such material shall be made. The inclusion of and the partial payment for this material shall in no way relieve the CONTRACTOR of responsibility for satisfactorily furnishing and placing this material in the work in accordance with the terms of the contract. In the event that any of this material becomes lost, impaired or damaged, the aforesaid monetary value of the lost, impaired or damaged material as may have been included in any estimate, will be deducted from the next estimate, and no payment will be allowed therefor until such material meets the specifications applicable thereto and exists on the project at the time a current estimate is being prepared.

Final:

After final inspection and acceptance by the Owner and/or Owner's representative of all work under the contract, the Contractor shall prepare his requisition for final payment which shall be based upon the carefully measured or computed quantity of each item of work at the applicable unit prices and lump sum prices stipulated in the Bid. The total amount of the final payment due the Contractor under this contract shall be the amount computed as described less all previous payments.

The Owner, before paying the final estimate, may at his option require the Contractor to furnish individual releases or receipts from all subcontractors having performed any work and all persons having supplied materials, equipment (installed on the project), and services to the Contractor, if the Owner deems the same necessary in order to protect its interest. The Owner, however, may, if it deems such action advisable, make payment in part or in full to the Contractor without requiring the furnishing of such releases or receipts and any payments so made shall in no way impair the obligations of any surety or sureties furnished under this Contract. The foregoing provisions shall be construed solely for the benefit of the

Owner and will not require the Owner to determine or adjust any claim or disputes between the Contractor and his subcontractors or material dealers, or to withhold any moneys for their protection unless the Owner elects to do so. The failure or refusal of the Owner to withhold any moneys from the Contractor shall in no way impair the obligations of any surety or sureties under any bond or bonds furnished under this Contract.

On contracts in excess of \$50,000. the Contractor shall be paid in full, except as provided in paragraph 9, within 30 days following the date of substantial completion, less only 1 and 1/2 times such amount as is required to complete any then remaining, uncompleted, minor items, which amount shall be certified by the Engineer and upon receipt by the Owner of any guarantee bonds which may be required, in accordance with the contract documents, to insure proper workmanship for a designated period of time. The certificate given by the Engineer shall list in detail each and every uncompleted item and a reasonable cost of completion. Final payment of any amount so withheld for the completion of the minor items shall be paid forthwith upon completion of the items in the certificate of the Engineer.

On contracts in excess of \$50,000 the final payment due the Contractor from the Owner after substantial completion of the contract shall bear interest at a rate of 6% per annum after the date that such payment shall become due and payable to the Contractor.

9. CORRECTION OF WORK AFTER FINAL PAYMENT

Neither the final estimate nor final payment nor any provisions in the Contract shall relieve the Contractor of the responsibility for faulty materials or workmanship; and he shall remedy any defects due thereto and pay any damage resulting therefrom which shall appear within a period of one (1) year from the date for completion and acceptance by the Owner.

10. GENERAL GUARANTY

Neither the final certificate of payment nor any provision in the Contract nor partial or entire use of the improvements embraced in this Contract by the Owner or the public shall constitute an acceptance of work not done in accordance with the Contract and relieve the Contractor or liability in respect to any express warranties or responsibility for faulty materials or workmanship. The Contractor shall promptly remedy any defects in the work and pay for any damage to other work resulting therefrom which shall appear within a period of one (1) year from the date for final inspection and acceptance of the work. The Owner will give notice of defective materials and work with reasonable promptness.

11. OFFICE SPACE

Temporary on-site office space is not required for this project.

12. SANITARY FACILITIES

The Contractor shall furnish, install, and maintain ample sanitary facilities for the workmen. As the needs arise, a sufficient number of enclosed temporary toilets shall be conveniently placed as required by the sanitary codes of the State and local Government.

13. WATER

All water for construction purposes will be provided and paid for by the Contractor. Supply connections shall be installed by the Contractor as approved by the Engineer. Under water main extension projects only, all water for testing and flushing will be paid for by the Owner.

14. ELECTRICITY

All electricity required for construction purposes will be provided and paid for by the Contractor. Temporary extensions shall be furnished by the Contractor as approved by the Engineer.

15. LINES, GRADES AND CONSTRUCTION SURVEYING

The OWNER’S ENGINEER shall provide stakeout services necessary for the construction of the project, however the Contractor shall remain responsible for coordination of and description of actual survey work to be performed; and ultimately shall remain responsible for ensuring the stake-out information provided corresponds with the construction plans for the construction of the project. The only difference shall be is that the Owner shall be responsible for payment of the survey work performed. All reference points and survey stake-out information provided by the Owner's Engineer shall be carefully inspected and protected by the Contractor. The Contractor shall notify and explain to the Owner's Engineer a reasonable time in advance (10 days min.) of requiring survey or stakeout services, to allow for layout of the references required with a minimum of inconvenience to the Engineer and delay to the Contractor. Should areas need to be re-staked due to construction activities disrupting the stakeout or causing loss of stakeout, the cost of re-staking shall be paid for by the Contractor through the Town.

On jobs where the Contractor intends to use a laser he shall either: provide offset stakes at a minimum of 100' intervals and use them to spot check his grades or provide a level, rod and level operator to spot check his grades.

16. RATES OF WAGES

When indicated herein the Contractor and any subcontractor shall fully comply with the applicable Wage Rate Decisions of the United States Department of Labor or the State of Delaware.

The Following (Checked) Wage Rates will apply to this Job:

- U.S. DEPARTMENT OF LABOR
- STATE OF DELAWARE PREVAILING WAGES
- NONE

END OF SECTION

SECTION 01 10 00 - SUMMARY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Project information.
 - 2. Work covered by Contract Documents.
 - 3. Access to site.
 - 4. Work restrictions.
 - 5. Specification and drawing conventions.

1.3 PROJECT INFORMATION

- A. Project Identification: **Town of Milton Contract No. 2015-56 Memorial Park Lighting Project.**
 - 1. Project Location: Memorial Park; Chandler Street, Behind Town Library
- B. Owner: Town of Milton.
 - 1. Owner's Representative: **Kristy Rogers, Town Clerk.**
- C. Engineer: Pennoni Associates Inc.
 - 1. Primary Contact: **Carlton Savage Jr. PE, Senior Engineer.**

1.4 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work of Project is defined by the Contract Documents and consists of the following:
 - 1. Design, Furnishing, and Construction of three (3) new pole mounted "street" type lights in the locations depicted within this specification including but not limited to concrete bases for the lights, wiring, trenching, conduit, additional 110v outlets at each light pole base, connection to the existing electrical system located at the

gazebo within Memorial Park, and all other items necessary to design, furnish, and install three (3) new lights complete and operational.

2. Miscellaneous erosion and sediment control, restoration, etc. as necessary and required to complete the above work.

B. Type of Contract:

1. Project will be constructed under a single prime contract.

- a. **Town of Milton Contract No. 2015-56 Memorial Park Lighting Project**

1.5 ACCESS TO SITE

- A. General: Contractor shall have full use of Project site for construction operations during construction period. Contractor's use of Project site is limited only by Owner's right to perform work or to retain other contractors on portions of Project.
- B. Use of Site: Limit use of Project site to work in areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.
- C. Access to the site is from a parking lot behind the Library off of Chandler Street.
- D. All areas of construction and/or areas disturbed during construction shall be restored to the acceptance of the owner and engineer prior to project completion.

1.6 WORK RESTRICTIONS

- A. Work Restrictions, General: Comply with restrictions on construction operations.
 1. Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.
- B. On-Site Work Hours: Limit work in the existing building to normal business working hours of 7:00 a.m. to 6:00 p.m., Monday through Friday, unless otherwise indicated.
 1. Weekend and Holiday Hours: See Section 00 73 00.
- C. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after providing temporary utility services according to requirements indicated:
 1. Notify Owner not less than two days in advance of proposed utility interruptions.
 2. Obtain Owner's written permission before proceeding with utility interruptions.
- D. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to Owner occupancy with Owner.

1. Notify Owner days in advance of proposed disruptive operations.

1.7 SPECIFICATION AND DRAWING CONVENTIONS

- A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
 1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
 2. Specification requirements are to be performed by Contractor unless specifically stated otherwise.
- B. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.
- C. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:
 1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
 2. Abbreviations: Materials and products are identified by abbreviations.
 3. Keynoting: Materials and products are identified by reference keynotes referencing Specification Section numbers found in this Project Manual.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 22 00 - PRICE AND PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for prices.

1.3 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment following the initial Application for Payment shall be consistent with previous applications and payments as certified by and paid for by Owner.
 - 1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.
- B. Payment Application Times: The date for each progress payment is indicated in the Agreement between Owner and Contractor. The period of construction work covered by each Application for Payment is the period indicated in the Agreement.
 - 1. Submit draft copy of Application for Payment seven days prior to due date for review by Owner.
- C. Application for Payment Forms: Use forms acceptable to Owner for Applications for Payment. Submit forms for approval with initial submittal of schedule of values.
- D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Owner will return incomplete applications without action.
 - 1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.
 - 2. Include amounts for work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.
 - 3. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
 - 4. Indicate separate amounts for work being carried out under Owner-requested project acceleration.

- E. Transmittal: Submit three signed and notarized original copies of each Application for Payment to Owner by a method ensuring receipt within 24 hours. One copy shall include waivers of lien and similar attachments if required.
1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- F. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's lien from entities lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment.
1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
 2. When an application shows completion of an item, submit conditional final or full waivers.
 3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
 4. Waiver Forms: Submit executed waivers of lien on forms acceptable to Owner.
- G. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
1. List of subcontractors.
 2. Schedule of values.
 3. Contractor's construction schedule (preliminary if not final).
 4. Products list (preliminary if not final).
 5. Submittal schedule (preliminary if not final).
 6. List of Contractor's staff assignments.
 7. List of Contractor's principal consultants.
 8. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
- H. Application for Payment at Substantial Completion: After Engineer issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
 2. This application shall reflect Certificate(s) of Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- I. Final Payment Application: After completing Project closeout requirements, submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. Evidence of completion of Project closeout requirements.
 2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
 3. Updated final statement, accounting for final changes to the Contract Sum.
 4. "Contractor's Affidavit of Payment of Debts and Claims."
 5. "Contractor's Affidavit of Release of Liens."

6. "Consent of Surety to Final Payment."
7. Evidence that claims have been settled.

1.4 PRICES

- A. Prices include all necessary material, plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit.
- B. List of Prices: Specification sections referenced in the schedule contain requirements for materials described under each price.

A-1 Mobilization and Restoration:

- a. Description of Work: Cost associated to contractor to provide all equipment, man power, temporary services, materials not included in other items, etc. necessary to complete all items in the contract and to restore the site to the condition prior to construction.
- b. Measurement and Payment: Payment will be made as a single lump sum price as detailed on the bid form.

A-2 Furnish and Install Pole Bases

- a. Description of Work: The work performed under this task shall be considered as all necessary work complete to furnish and install the concrete pole bases as specified by the manufacturer with adequate strength to support the lights given the site and soil conditions. This work shall include all items necessary to be installed within the base to properly bolt the base foundation, and route cable and conduit up through the pole bases to each light. All manufacture specifications shall be followed for the pole bases.
- b. Measurement and Payment: Payment will be made as a single lump sum price as detailed on the bid form.

A-3 Design, Furnish, and Install Underground Electric run from Gazebo to New Pole Lights (within buried conduit)

- a. Description of Work: The work performed under this task shall be considered as all necessary work complete to design, furnish, and install underground electrical service to the new pole mounted lights in there designated locations, including cable, conduit, junction boxes, grounding, bugs, hook-up and connection to existing service, and all other necessary work and appurtenances to provide the task item complete, legal, and whole per all regulations, requirements, and manufactures specifications.
- b. Measurement and Payment: Payment will be made as a single lump sum price as detailed on the bid form.

A-4 Furnish and Install New Pole Mounted Lights with additional 110 v base mounted outlets

- a. Description of Work: The work performed under this task shall be considered as all necessary work complete to design, furnish, and install the new Granville Style tenon top mount ornamental luminaire and Wadsworth Style aluminum lighting pole bolt base tenon top mount light pole in there designated locations, including connection to base / foundation, aluminum pole, bolts, nuts, grounding, additional 110v outlets, glass refractor, modules, photocontrol receptacle, screws, tenons, housings, luminaire, controls, and all other necessary work and appurtenances to provide the task item complete, legal, and whole per all regulations, requirements, and manufactures specifications. Unit shall match that of existing lights and poles currently in operation within the park. Specifications attached herein shall be for contractor's reference however contractor shall verify all specifications on poles prior to ordering. Differences from specifications attached and in field observations shall be discussed with Town of Milton and Engineer prior to ordering. Additional outlets shall be a pre-fabricated item through Holophane as specified herein not installed after (outlets on existing poles may have been installed after pole installation).
- b. Measurement and Payment: Payment will be made as a single lump sum price as detailed on the bid form.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 01 31 00 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
 - 1. General coordination procedures.
 - 2. Coordination drawings.
 - 3. Requests for Information (RFIs).
 - 4. Project meetings.
- B. Each contractor shall participate in coordination requirements. Certain areas of responsibility are assigned to a specific contractor.
- C. Related Requirements:
 - 1. Section

1.3 DEFINITIONS

- A. RFI: Request from Owner, Engineer, or Contractor seeking information required by or clarifications of the Contract Documents.

1.4 INFORMATIONAL SUBMITTALS

- A. Subcontract List: Complete the table in Section 00 30 00 "Bid Form" identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design.
- B. Include the following information in tabular form:
 - 1. Name, address, and telephone number of entity performing subcontract or supplying products.
 - 2. Number and title of related Specification Section(s) covered by subcontract.
 - 3. Drawing number and detail references, as appropriate, covered by subcontract.

- C. Key Personnel Names: Within 14 days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home, office, and cellular telephone numbers and e-mail addresses. Provide names, addresses, and telephone numbers of individuals assigned as alternates in the absence of individuals assigned to Project.

1.5 GENERAL COORDINATION PROCEDURES

- A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections that depend on each other for proper installation, connection, and operation.
 - 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 - 2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
 - 3. Make adequate provisions to accommodate items scheduled for later installation.
- B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
 - 1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.

1.6 REQUESTS FOR INFORMATION (RFIs)

- A. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.
 - 1. Owner will return RFIs submitted to Owner by other entities controlled by Contractor with no response.
 - 2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.
- B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:
 - 1. Project name.
 - 2. Project number.
 - 3. Date.
 - 4. Name of Contractor.

5. Name of Contractor and Contact Name or Superintendent Name
 6. RFI number, numbered sequentially.
 7. RFI subject.
 8. Specification Section number and title and related paragraphs, as appropriate.
 9. Drawing number and detail references, as appropriate.
 10. Field dimensions and conditions, as appropriate.
 11. Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
 12. Contractor's signature.
 13. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
 - a. Include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments on attached sketches.
- C. Owner's Action: Owner will review each RFI, determine action required, and respond. Allow 7 working days for Owner's response for each RFI. RFIs received by Owner after 1:00 p.m. will be considered as received the following working day.
1. The following Contractor-generated RFIs will be returned without action:
 - a. Requests for approval of submittals.
 - b. Requests for approval of substitutions.
 - c. Requests for approval of Contractor's means and methods.
 - d. Requests for coordination information already indicated in the Contract Documents.
 - e. Requests for adjustments in the Contract Time or the Contract Sum.
 - f. Requests for interpretation of Architect's actions on submittals.
 - g. Incomplete RFIs or inaccurately prepared RFIs.
 2. Owner's action may include a request for additional information, in which case Engineer's time for response will date from time of receipt of additional information.
 3. Owner's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal.
 - a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Owner in writing within 10 days of receipt of the RFI response.

1.7 PROJECT MEETINGS

- A. General: Schedule and conduct meetings and conferences at Project site unless otherwise indicated.

1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Owner and Architect of scheduled meeting dates and times.
 2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
 3. Minutes: Entity responsible for conducting meeting will record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Owner within 3 days of the meeting.
- B. Preconstruction Conference: Schedule and conduct a preconstruction conference before starting construction, at a time convenient to Owner and Engineer, but no later than 14 days after execution of the Agreement.
1. Conduct the conference to review responsibilities and personnel assignments.
 2. Attendees: Authorized representatives of Owner and consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
 3. Agenda: Discuss items of significance that could affect progress, including the following:
 - a. Tentative construction schedule.
 - b. Critical work sequencing and long-lead items.
 - c. Designation of key personnel and their duties.
 - d. Lines of communications.
 - e. Procedures for processing field decisions and Change Orders.
 - f. Procedures for RFIs.
 - g. Procedures for testing and inspecting.
 - h. Procedures for processing Applications for Payment.
 - i. Distribution of the Contract Documents.
 - j. Submittal procedures.
 - k. Preparation of record documents.
 - l. Use of the premises.
 - m. Work restrictions.
 - n. Working hours.
 - o. Responsibility for temporary facilities and controls.
 - p. Procedures for disruptions and shutdowns.
 - q. Construction waste management and recycling.
 - r. Parking availability.
 - s. Work and storage areas.
 - t. Equipment deliveries and priorities.
 - u. First aid.
 - v. Security.
 - w. Progress cleaning.
 4. Minutes: Entity responsible for conducting meeting will record and distribute meeting minutes.

- C. Pre-installation Conferences: Conduct a pre-installation conference at Project site before each construction activity that requires coordination with other construction.
1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise Owner of scheduled meeting dates.
 2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
 - a. Contract Documents.
 - b. Options.
 - c. Related RFIs.
 - d. Related Change Orders.
 - e. Purchases.
 - f. Deliveries.
 - g. Submittals.
 - h. Possible conflicts.
 - i. Compatibility requirements.
 - j. Time schedules.
 - k. Weather limitations.
 - l. Manufacturer's written instructions.
 - m. Warranty requirements.
 - n. Compatibility of materials.
 - o. Acceptability of substrates.
 - p. Temporary facilities and controls.
 - q. Space and access limitations.
 - r. Regulations of authorities having jurisdiction.
 - s. Testing and inspecting requirements.
 - t. Installation procedures.
 - u. Coordination with other work.
 - v. Required performance results.
 - w. Protection of adjacent work.
 - x. Protection of construction and personnel.
 3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
 4. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information.
 5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.

MTON1504

Memorial Park Lighting
Milton, DE

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013100

SECTION 01 40 00 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - 1. Specific quality-assurance and -control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
 - 2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
 - 3. Requirements for Contractor to provide quality-assurance and -control services required by Engineer, Owner, or authorities having jurisdiction are not limited by provisions of this Section.
 - 4. Specific test and inspection requirements are not specified in this Section.

1.3 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Engineer.
- C. Preconstruction Testing: Tests and inspections performed specifically for Project before products and materials are incorporated into the Work, to verify performance or compliance with specified criteria.

- D. **Product Testing:** Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.
- E. **Source Quality-Control Testing:** Tests and inspections that are performed at the source, e.g., plant, mill, factory, or shop.
- F. **Field Quality-Control Testing:** Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- G. **Testing Agency:** An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
- H. **Installer/Applicator/Erector:** Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
 - 1. Use of trade-specific terminology in referring to a trade or entity does not require that certain construction activities be performed by accredited or unionized individuals, or that requirements specified apply exclusively to specific trade(s).
- I. **Experienced:** When used with an entity or individual, "experienced" means having successfully completed a minimum of five previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.4 CONFLICTING REQUIREMENTS

- A. **Referenced Standards:** If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer conflicting requirements that are different, but apparently equal, to Owner and/or Engineer for a decision before proceeding.
- B. **Minimum Quantity or Quality Levels:** The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

1.5 ACTION SUBMITTALS

- A. **Shop Drawings:**

1. Indicate manufacturer and model number of individual components.
2. Provide axonometric drawings for conditions difficult to illustrate in two dimensions.

1.6 INFORMATIONAL SUBMITTALS

- A. Testing Agency Qualifications: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.

1.7 REPORTS AND DOCUMENTS

- A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections. Include the following:
 1. Date of issue.
 2. Project title and number.
 3. Name, address, and telephone number of testing agency.
 4. Dates and locations of samples and tests or inspections.
 5. Names of individuals making tests and inspections.
 6. Description of the Work and test and inspection method.
 7. Identification of product and Specification Section.
 8. Complete test or inspection data.
 9. Test and inspection results and an interpretation of test results.
 10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
 12. Name and signature of laboratory inspector.
 13. Recommendations on retesting and reinspecting.
- B. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.8 QUALITY ASSURANCE

- A. General: Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.

- B. **Manufacturer Qualifications:** A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- C. **Fabricator Qualifications:** A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- D. **Installer Qualifications:** A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- E. **Professional Engineer Qualifications:** A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar in material, design, and extent to those indicated for this Project.
- F. **Testing Agency Qualifications:** An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented; and with additional qualifications specified in individual Sections; and, where required by authorities having jurisdiction, that is acceptable to authorities.
 - 1. **NRTL:** A nationally recognized testing laboratory according to 29 CFR 1910.7.
 - 2. **NVLAP:** A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.
- G. **Manufacturer's Technical Representative Qualifications:** An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- H. **Factory-Authorized Service Representative Qualifications:** An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.
- I. **Preconstruction Testing:** Where testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following:
 - 1. **Contractor responsibilities include the following:**
 - a. Provide test specimens representative of proposed products and construction.
 - b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.

- c. Provide sizes and configurations of test assemblies, mockups, and laboratory mockups to adequately demonstrate capability of products to comply with performance requirements.
2. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Owner, with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.

1.9 QUALITY CONTROL

- A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage the Town Engineer of another qualified testing agency to perform these services.
 1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
 2. Payment for these services will be made by Owner.
 3. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor and/or detailed as change orders to the Contract.
 4. Failure to pay for retesting and/or reinspection shall result in stop of work and/or termination of contract until debts are settled. Retainage funds may be used as payment for these services.
- B. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities required to verify that the Work complies with requirements, whether specified or not.
 1. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.
 2. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
 - a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.
 3. Notify testing agencies at least 48 hours in advance of time when Work that requires testing or inspecting will be performed.
 4. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
 5. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
 6. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.

- C. **Manufacturer's Field Services:** Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Section 013300 "Submittal Procedures."
- D. **Manufacturer's Technical Services:** Where indicated, engage a manufacturer's technical representative to observe and inspect the Work. Manufacturer's technical representative's services include participation in preinstallation conferences, examination of substrates and conditions, verification of materials, observation of Installer activities, inspection of completed portions of the Work, and submittal of written reports.
- E. **Retesting/Reinspecting:** Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.
- F. **Testing Agency Responsibilities:** Cooperate with Owner and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
1. Notify Owner and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
 3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
 4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
 5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
 6. Do not perform any duties of Contractor.
- G. **Associated Services:** Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
1. Access to the Work.
 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 4. Facilities for storage and field curing of test samples.
 5. Delivery of samples to testing agencies.
 6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
 7. Security and protection for samples and for testing and inspecting equipment at Project site.

- H. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
1. Schedule times for tests, inspections, obtaining samples, and similar activities.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 TEST AND INSPECTION LOG

- A. Test and Inspection Log: Prepare a record of tests and inspections. Include the following:
1. Date test or inspection was conducted.
 2. Description of the Work tested or inspected.
 3. Date test or inspection results were transmitted to Architect.
 4. Identification of testing agency or special inspector conducting test or inspection.

3.2 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
1. Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible. Comply with the Contract Document requirements for all items of repair and restoration.
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION

SECTION 31 20 00 - EARTH MOVING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Excavating and backfilling trenches for utilities and pits for buried utility structures.

1.3 DEFINITIONS

- A. Backfill: Soil material or controlled low-strength material used to fill an excavation.
 - 1. Initial Backfill: Backfill placed beside and over pipe in a trench, including haunches to support sides of pipe.
 - 2. Final Backfill: Backfill placed over initial backfill to fill a trench.
- B. Bedding Course: Aggregate layer placed over the excavated subgrade in a trench before laying pipe.
- C. Borrow Soil: Satisfactory soil imported from off-site for use as fill or backfill.
- D. Drainage Course: Aggregate layer supporting the slab-on-grade that also minimizes upward capillary flow of pore water.
- E. Excavation: Removal of material encountered above subgrade elevations and to lines and dimensions indicated.
- F. Fill: Soil materials used to raise existing grades.
- G. Subgrade: Uppermost surface of an excavation or the top surface of a fill or backfill immediately below subbase, drainage fill, drainage course, or topsoil materials.
- H. Utilities: On-site underground pipes, conduits, ducts, and cables as well as underground services within buildings.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of the following manufactured products required:
 - 1. Warning tapes.
- B. Samples for Verification: For the following products, in sizes indicated below:
 - 1. Warning Tape: **12 inches** long; of each color.

1.5 FIELD CONDITIONS

- A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during earth-moving operations.
 - 1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.
 - 2. Provide alternate routes around closed or obstructed traffic ways if required by Owner or authorities having jurisdiction.
- B. Utility Locator Service: Notify "**Miss Utility**" for area where Project is located before beginning earth-moving operations.
- C. Do not commence earth-moving operations until and erosion- and sedimentation-control measures are in place.

PART 2 - PRODUCTS

- A. Bedding Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D 2940/D 2940M; except with 100 percent passing a **1-inch** sieve and not more than 8 percent passing a **No. 200** sieve.
- B. Sand: ASTM C 33/C 33M; fine aggregate.

2.2 ACCESSORIES

- A. Warning Tape: Acid- and alkali-resistant, polyethylene film warning tape manufactured for marking and identifying underground utilities, **6 inches** wide and **4 mils** thick, continuously inscribed with a description of the utility; colored as follows:
 - 1. Red: Electric.
 - 2. Yellow: Gas, oil, steam, and dangerous materials.
 - 3. Orange: Telephone and other communications.
 - 4. Blue: Water systems.
 - 5. Green: Sewer systems.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earth-moving operations.
- B. Protect and maintain erosion and sedimentation controls during earth-moving operations.
- C. Protect subgrades and foundation soils from freezing temperatures and frost. Remove temporary protection before placing subsequent materials.

3.2 EXPLOSIVES

- A. Explosives: Do not use explosives.

3.3 EXCAVATION FOR UTILITY TRENCHES

- A. Excavate trenches to indicated gradients, lines, depths, and elevations.
 - 1. Beyond building perimeter, excavate trenches to allow installation of top of pipe below frost line.
- B. Excavate trenches to uniform widths to provide the following clearance on each side of pipe or conduit. Excavate trench walls vertically from trench bottom to **12 inches** higher than top of pipe or conduit unless otherwise indicated.
 - 1. Clearance: **12 inches each side of pipe or conduit.**
- C. Trench Bottoms: Excavate and shape trench bottoms to provide uniform bearing and support of pipes and conduit. Shape subgrade to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits. Remove projecting stones and sharp objects along trench subgrade.
 - 1. For pipes and conduit less than **6 inches** in nominal diameter, hand-excavate trench bottoms and support pipe and conduit on an undisturbed subgrade.
 - 2. For pipes and conduit **6 inches** or larger in nominal diameter, shape bottom of trench to support bottom 90 degrees of pipe or conduit circumference. Fill depressions with tamped sand backfill.
 - 3. For flat-bottomed, multiple-duct conduit units, hand-excavate trench bottoms and support conduit on an undisturbed subgrade.
 - 4. Excavate trenches **6 inches** deeper than elevation required in rock or other unyielding bearing material to allow for bedding course.

3.4 STORAGE OF SOIL MATERIALS

- A. Stockpile borrow soil materials and excavated satisfactory soil materials without intermixing. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
 - 1. Stockpile soil materials away from edge of excavations. Do not store within drip line of remaining trees.

3.5 UTILITY TRENCH BACKFILL

- A. Place backfill on subgrades free of mud, frost, snow, or ice.
- B. Place and compact bedding course on trench bottoms and where indicated. Shape bedding course to provide continuous support for bells, joints, and barrels of pipes and for joints, fittings, and bodies of conduits.
- C. Backfill voids with satisfactory soil while removing shoring and bracing.
- D. Initial Backfill:
 - 1. Soil Backfill: Place and compact initial backfill of satisfactory soil, free of particles larger than **1 inch** in any dimension, to a height of **12 inches** over the pipe or conduit.
 - a. Carefully compact initial backfill under pipe haunches and compact evenly up on both sides and along the full length of piping or conduit to avoid damage or displacement of piping or conduit. Coordinate backfilling with utilities testing.
- E. Final Backfill:
 - 1. Soil Backfill: Place and compact final backfill of satisfactory soil to final subgrade elevation.
- F. Warning Tape: Install warning tape directly above utilities, **12 inches** below finished grade, except **6 inches** below subgrade under pavements and slabs.

3.6 SOIL FILL

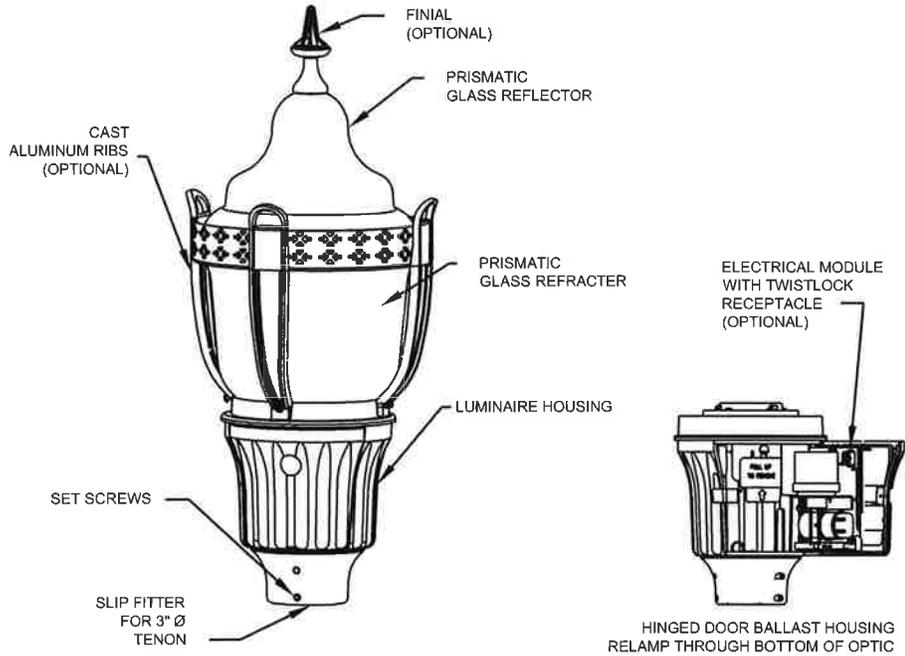
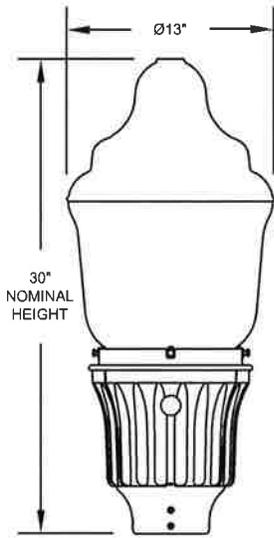
- A. Plow, scarify, bench, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so fill material will bond with existing material.
- B. Place and compact fill material in layers to required elevations as follows:
- C. Place soil fill on subgrades free of mud, frost, snow, or ice.

3.7 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Remove surplus satisfactory soil and waste materials, including unsatisfactory soil, trash, and debris, and legally dispose of them off Owner's property.

END OF SECTION

Maximum weight - 47 lbs
Maximum effective projected area - 1.38 sq. ft.



*drawing depicting base model no finial.

Utility Granville® Series Postlite

DECORATIVE
OUTDOOR

ORDERING INFORMATION:

HOUSING GVU = STANDARD GVL = LEAF	BALLAST TYPE (MOGUL BASE) 050HP = 50W HPS (not available with 347 V) 070HP = 70W HPS 100HP = 100W HPS 15AHP = 150W 55V HPS 150MH = 150W MH (NOT AVAIL. W/ 480V) **175MH = 175W MH 175PM = 175W PM (E)	VOLTAGE 08 = 208 VOLT (C.U.L.) (not available with 700MH, 100DMH, 150DMH) 12 = 120 VOLT (UL & C.U.L.) 20 = 208 VOLT 24 = 240 VOLT 27 = 277 VOLT (UL & C.U.L.) 34 = 347 VOLT (C.U.L.) 40 = 240 VOLT (C.U.L.) (not available with 700MH, 100DMH, 150DMH) 48 = 480 VOLT MT = MULTITAP (factory 240V) (120, 208, 240, 277 VOLT) MA = MULTITAP (factory 120V) (120, 208, 240, 277 VOLT) MB = MULTITAP (factory 208V) (120, 208, 240, 277 VOLT) MC = MULTITAP (factory 240V) (120, 208, 240, 277 VOLT) MD = MULTITAP (factory 277V) (120, 208, 240, 277 VOLT)	HOUSING COLOR A = AS SPECIFIED B = BLACK D = DARK GREEN TIGER DRYLAC RAL6005 E = BROWN GREEN TIGER DRYLAC RAL6008 F = DARK GREEN TIGER DRYLAC RAL6009 H = DARK GREEN TIGER DRYLAC RAL6012 N = GREEN Z = BRONZE	OPTICS 3 = IES TYPE III DISTRIBUTION 4 = IES TYPE IV DISTRIBUTION 5 = IES TYPE V DISTRIBUTION 6 = IES TYPE II DISTRIBUTION LUNAR 7 = IES TYPE III DISTRIBUTION LUNAR 8 = IES TYPE V DISTRIBUTION LUNAR	FINIAL B = BALL C = CLEAR E = EAGLE F = FLOWER N = NONE P = PAWN R = CROSS S = STANDARD T = ROM CROSS	COLOR A = AS SPECIFIED B = BLACK D = DARK GREEN TIGER DRYLAC RAL6005 E = BROWN GREEN TIGER DRYLAC RAL6008 F = DARK GREEN TIGER DRYLAC RAL6009 G = GOLD H = DARK GREEN TIGER DRYLAC RAL6012 N = GREEN U = NO TRIM AND CLEAR OR NO FINIAL Z = BRONZE	TRIM N = NO TRIM R = RIBS & BAND S = SYRACUSE STYLE WITH COVER
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**NOT AVAILABLE FOR SHIPMENT IN US AFTER 12/31/08 DUE TO EISA 2007 LEGISLATION.

OPTIONS

- H = NEMA TWISTLOCK PHOTOCONTROL RECEPTACLE ONLY
- P = PROTECTED STARTER FOR HPS UNITS ONLY
- T = NEMA TWISTLOCK AND PROTECTED STARTER FOR HPS UNITS ONLY.
- FCVRX = FULL COVER (INSERT TRIM FINISH, FROM STEP 8 FOR X, ALSO MUST HAVE FINIAL)
- MCVRX = MAYFIELD 1/2 COVER (INSERT TRIM FINISH, FROM STEP 8 FOR X, ALSO MUST HAVE FINIAL)
- NE = NEMA LABEL
- P27 = DTL TWISTLOCK PHOTOCONTROL 120-277 VOLT
- P48 = DTL TWISTLOCK PHOTOCONTROL 480 VOLT
- PSC = SHORTING CAP
- L1H = 1.5 FEET OF PREWIRED LEADS
- L03 = 3 FEET OF PREWIRED LEADS
- L10 = 10 FEET OF PREWIRED LEADS
- L20 = 20 FEET OF PREWIRED LEADS
- L25 = 25 FEET OF PREWIRED LEADS
- L30 = 30 FEET OF PREWIRED LEADS

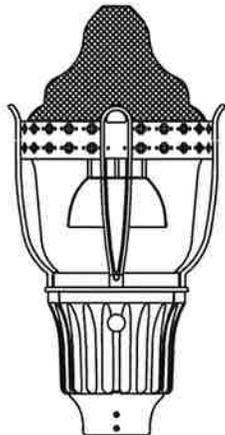
ACCESSORIES

- LAMP = SHIP APPROPRIATE LAMP AS LINE ITEM. SEE LAMP SHEET
- GVBANDX = DECORATIVE BAND (INSERT TRIM FINISH FOR X)
- GVPHOUSE90 = HOUSE SIDE SHIELD 90 DEGREE (NOT AVAILABLE IN 6,7 OR 8 OPTIC)
- GVPHOUSE12 = HOUSE SIDE SHIELD 120 DEGREE (NOT AVAILABLE IN 6,7 OR 8 OPTIC)
- GVPHOUSE18 = HOUSE SIDE SHIELD 180 DEGREE (NOT AVAILABLE IN 6,7 OR 8 OPTIC)
- IG-5 = PLUG-IN REPLACEMENT STARTER FOR HPS UNITS
- IG-6 = PLUG-IN REPLACEMENT PROTECTED STARTER FOR HPS UNITS
- IG-7 = PLUG-IN REPLACEMENT STARTER FOR 70/10/150DMH UNITS

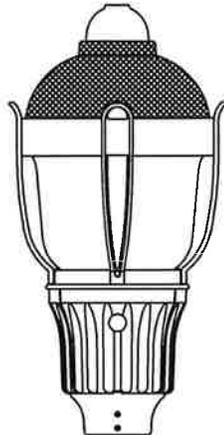
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LEADER IN LIGHTING SOLUTIONS
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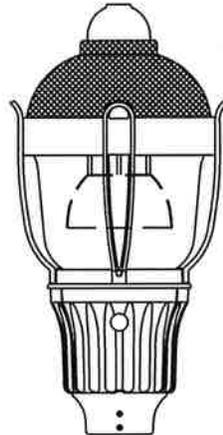
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DRAWN: JCH
DATE: 6-22-10
DWG #: LUM_GVU



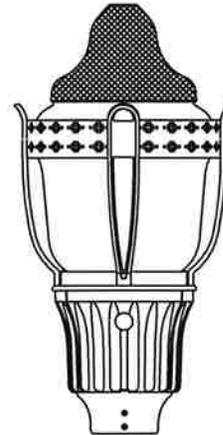
RIBS & BANDS
LUNAR OPTICS



SYRACUSE



SYRACUSE
LUNAR OPTICS



RIBS & BANDS
MAYFIELD COVER



CLEAR FINIAL
NO TRIM OPTIONS
LUNAR OPTICS



CLEAR FINIAL
NO TRIM OPTIONS



FULL COVER
NO TRIM



MAYFIELD COVER
NO TRIM

FINIALS

- BALL
- CLEAR
- EAGLE
- FLOWER
- PAWN
- CROSS
- STANDARD
- ROMAN CROSS

Utility Granville® Series Postlite

**DECORATIVE
OUTDOOR**

HOLOPHANE®
LEADER IN LIGHTING SOLUTIONS
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Specifications

GENERAL DESCRIPTION

The Utility Granville is designed for ease of maintenance with the plug-in electrical module common to each of the luminaires in Holophane's Utility Luminaire Series. The traditional acorn shaped luminaire, while reminiscent of the 1920's, contains a precision optical system that maximizes post spacings while maintaining uniform illumination.

OPTICAL SYSTEM

The optical system consists of a precisely molded thermal resistant borosilicate glass refractor and top reflector mounted within decorative aluminum ribs and banding. The glass top reflector redirects over 50% of the upward light into the controlling refractor while allowing a soft uplight component to define the traditional acorn shape of the luminaire. Two decorative aluminum covers are available. A stainless steel hinge and latch allow easy access for relamping. The lower refractor uses precisely molded prisms to maximize pole spacings while maintaining uniform illuminance. Three refractors are available, designed for I.E.S. type II, III, and V distributions. The Lunar Optics assembly (IES Cutoff) is standard. It consists of an aluminum plate and anodized, hydroformed reflector designed to restrict intensity at the critical angle.

LUMINAIRE HOUSING

The luminaire housing, cast of aluminum, provides an enclosure for the plug-in electrical module. Four uniquely designed stainless steel spring clips enclosed in a clear polyvinyl chloride sleeve and adjusted by hex head 1/4-20 bolts securely cradle the prismatic glass refractor. The same 1/4-20 bolts support the decorative rib and banding assembly. The nickel plated lamp grip socket and three station incoming line terminal block are prewired to a five conductor receptacle for ease in connection the electrical module. The slipfitter will accept a 3" by 2-7/8" to 3-1/8" O.D. tenon.

LUMINAIRE HOUSING / DOOR

Cast of aluminum, the housing / door is removable without the use of tools and is retained by a nonconductive lanyard. For units with an E.E.I.-N.E.M.A. twist lock photocell receptacle, the door contains an acrylic "window" to allow light to reach the cell.

ELECTRICAL MODULE

The ballast components are mounted on a steel plate that is removable without the use of tools. A matching five conductor plug connects to the receptacle in the luminaire housing to complete the wiring. Where a starting aid is required, it is provided with a separate plug-in connector and can be replaced without the use of tools. For photoelectric operation, the electrical module is provided with an E.E.I.-N.E.M.A. twist lock photocell receptacle.

BALLASTS

(Refer to Ballast Data Sheet for specific operation characteristics)

50 watt 120 volt High Pressure Sodium (HPS) ballasts are High Power Factor Reactor type. All other HPS ballast are High Power Factor Autotransformer type.

175 watt Metal Halide (MH) ballasts are Peak Lead Autotransformer type. 70 and 100 watt MH units are available only with High Power Factor High Reactance type ballast.

FINISH

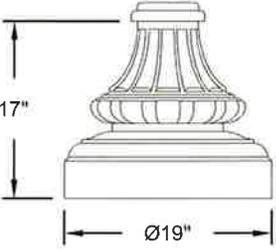
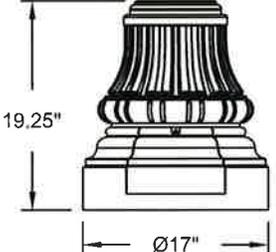
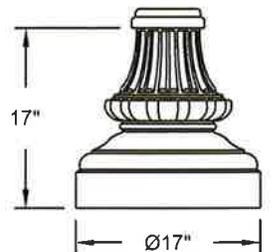
The luminaire is finished with polyester powder paint to insure maximum durability.

UL LISTING

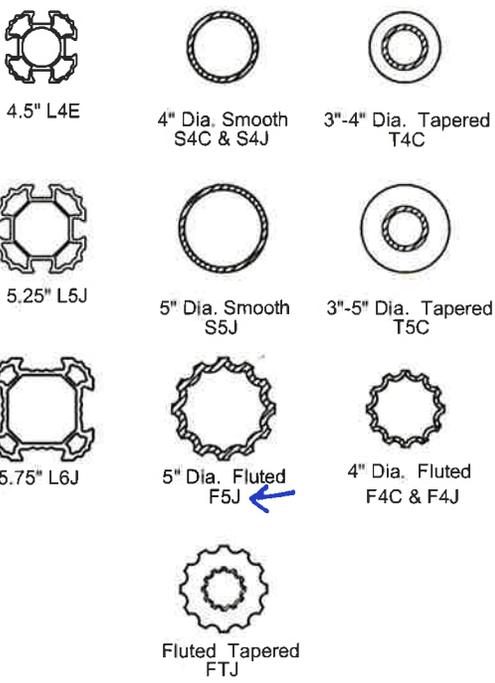
The luminaire is UL listed as suitable for wet locations at a maximum 40 degrees C ambient temperature.

THIS DRAWING, WHEN APPROVED, SHALL BECOME THE COMPLETE SET OF DRAWINGS FOR THE MANUFACTURE OF THE LUMINAIRE. THE ORDER NOTED ABOVE, A UNIT OF SIMILAR DESIGN MAY BE SUPPLIED, BUT ONLY AFTER APPROVAL BY THE CUSTOMER IN WRITING. ON POLE ORDERS AN ANCHOR BOLT TEMPLATE PRINT WILL BE SUPPLIED WITH EACH ANCHOR BOLT ORDER TO MATCH THE POLE ORDERED. THIS DRAWING IS THE PROPERTY OF HOLOPHANE AND IS LOANED SUBJECT TO RETURN UPON DEMAND AND UPON EXPRESS CONDITION THAT IT WILL NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO OUR INTERESTS, AND ONLY IN CONNECTION WITH MATERIAL FURNISHED BY HOLOPHANE.

ORDER #:	
TYPE:	
DRAWN:	JCH
DATE:	6-22-10
DWG #:	LUM_GVU



Shaft Style



ORDERING INFORMATION:



- WD = Wadsworth
- A = Aluminum
- 08 = 8' 15 = 15' Cast Pole
- 09 = 9' 16 = 16' 08 = 8'-0"
- 10 = 10' 17 = 17' 10 = 10'-0"
- 11 = 11' 18 = 18' 12 = 12'-0"
- 12 = 12' 19 = 19' 14 = 13'-7"
- 13 = 13' 20 = 20'
- 14 = 14' 21 = 21'
- 22 = 22'

- 17** Base: 17 = 17" Round (TMP-85), (L4E = TMP-40009), (L5J & L6J = TMP-40010), 19 = 19" Round (TMP-98)
- P08** Tenon: P01 = POLE CAP, P05 = 3" O.D. X 4" LG., P07 = 3" O.D. X 3" LG., P08 = 3" O.D. X 5" LG., P09 = 3" O.D. X 6" LG., P10 = 3" O.D. X 9" LG., P11 = 4.38 O.D. x 12" LG. (3" O.D. = ACTUAL SIZE IS 2.88" O.D.)
- 11** Height: P12 = 3" O.D. X 12" LG., P13 = 3" O.D. X 8" LG., P14 = 3" O.D. X 14" LG., P15 = 3.5" O.D. X 8" LG., P16 = 4.5" O.D. X 10" LG., PT1 = VGC Plate
- F5J** Shaft Style: FTJ = Fluted Tapered (Cast), .25 Wall; F4C = 4" DIA. Fluted, .125 Wall; F4J = 4" DIA. Fluted, .25 Wall; F5J = 5" DIA. Fluted, .25 Wall; L4E = SiteLink 4.5" Fluted, .156 Wall; L5J = SiteLink 5.25" Fluted, .25 Wall; L6J = SiteLink 5.75" Fluted, .25 Wall; S4C = 4" DIA. Smooth, .125 Wall; S4J = 4" DIA. Smooth, .25 Wall; S5J = 5" DIA. Smooth, .25 Wall; T4C = 3" to 4" DIA. Tapered, .125 Wall; T5C = 3" to 5" DIA. Tapered, .125 Wall
- ABG** Mounting: ABG = Anchor Bolts Galvanized Steel; LAB = Less Anchor Bolts; DBB = Direct Burial Base Galvanized Steel
- BK** Finish: BK = Black, BD = Dark Blue, BZ = Bronze, GH = Graphite, GN = Green; GR = Gray, PP = Prime Painted, SL = Silver, WH = White

SPECIFICATIONS

DESCRIPTION

The lighting post shall be all aluminum, one-piece construction, with a classic tapered and fluted base design.

MATERIALS

The base and fluted tapered cast shaft shall be heavy wall, cast aluminum produced from certified ASTM 356.1 ingot per ASTM B-179-95a or ASTM B26-95. The straight shafts shall be extruded from aluminum, ASTM 6061 alloy, heat treated to a T6 temper. The tapered shaft shall be extruded from aluminum, ASTM 6063 alloy, spun to a tapered shape, then heat treated to a T6 temper. All hardware shall be tamper resistant stainless steel. Anchor bolts to be completely hot dip galvanized.

CONSTRUCTION

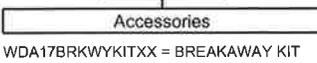
The shaft shall be double welded to the base casting and shipped as one piece for maximum structural integrity. The shaft shall be welded inside the base casting at the top of the access door, and externally where the shaft exits the base. All welding shall be per ANSI/AWS

DIMENSIONS

The post shall be X'- XX" in height with a 17" or 19" diameter base. The shaft diameter shall be XX". At the top of the post, an integral tenon with a transitional donut shall be provided for luminaire mounting.

INSTALLATION

The post shall be provided with four, hot dip galvanized L-type anchor bolts. A door shall be provided in the base for anchorage and wiring access. A grounding screw shall be provided inside the base opposite the door.



L12090 Options

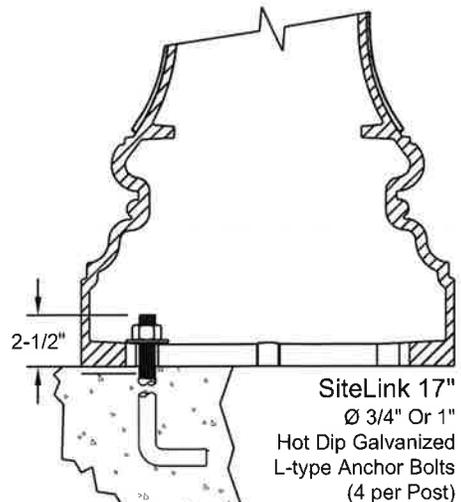
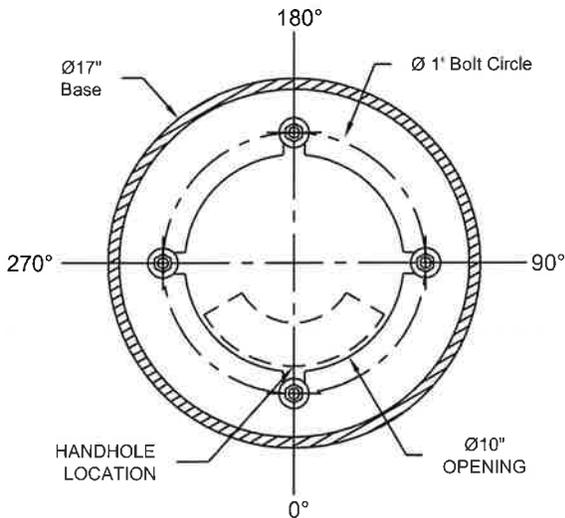
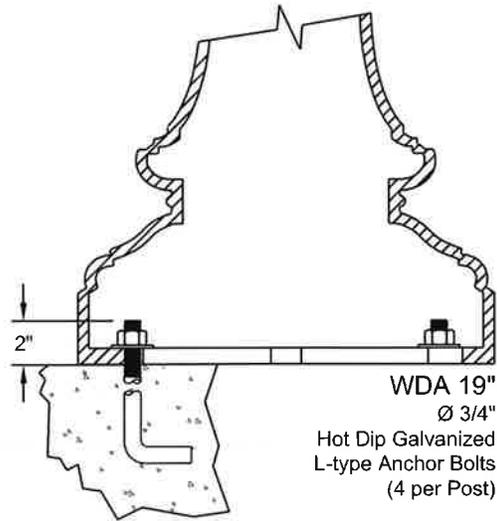
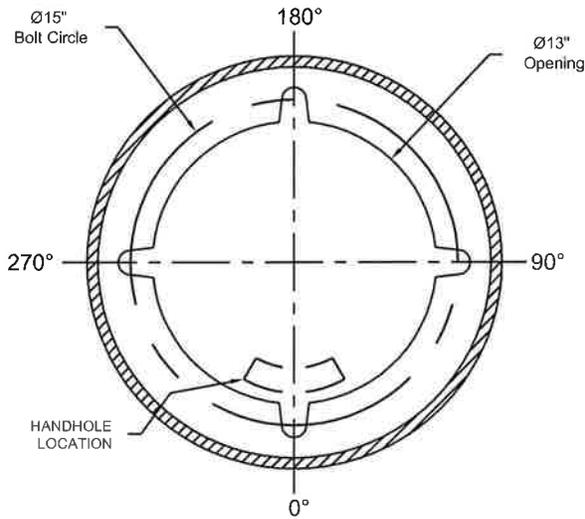
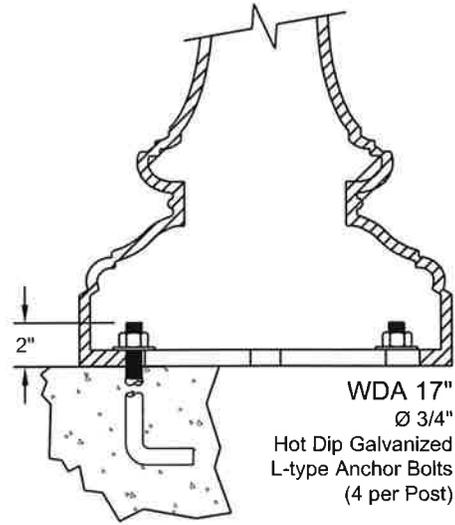
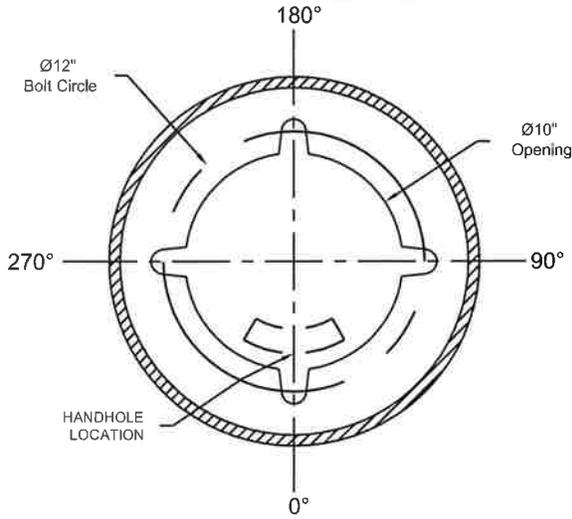
- EXXX² = Provision for eye bolt.
- LXXX² = Large provision.
- RXXX² = Receptacle provision.
- SXXX² = Small provision.
- FGB = GFI receptacle in base

THIS DRAWING WHEN APPROVED SHALL BECOME THE COMPLETE CONTRACT DOCUMENT. ANY CHANGES TO THE DRAWING SHALL BE NOTED ABOVE A LIST OF SIMILAR DESIGN MAY BE SUPPLIED, BUT ONLY AFTER APPROVAL BY THE CUSTOMER. NO WRITING ON POLE ORDERS AN ANCHOR BOLT TEMPLATE PRINT WILL BE SUPPLIED WITH EACH ANCHOR BOLT ORDER TO MATCH THE POLE ORDER. ANY CHANGES TO THE ORDER MUST BE MADE AND EXPRESSED IN WRITING. THIS DRAWING IS THE PROPERTY OF HOLOPHONE AND IS LOANED SUBJECT TO RETURN UPON DEMAND AND UPON EXPRESS CONDITION THAT IT WILL NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO OUR INTERESTS AND ONLY IN CONNECTION WITH MATERIAL FURNISHED BY HOLOPHONE.

² - Replace "XXX" with height from grade (inches), can be up to 3 digits. Must use whole numbers. Leading zeros are not used. Replace Y with orientation from hand hole (A=0, B=90, C=180, D=270). Add multiple provisions as necessary to cover each location. Must validate EPA restrictions for banners.

ORDER #:	TYPE:	DRAWN:	DATE:	DWG #:
		KRW	10/3/13	POL_WDA

ANCHORAGE GUIDE



TM

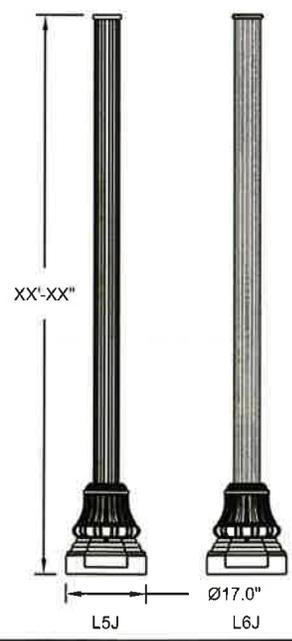
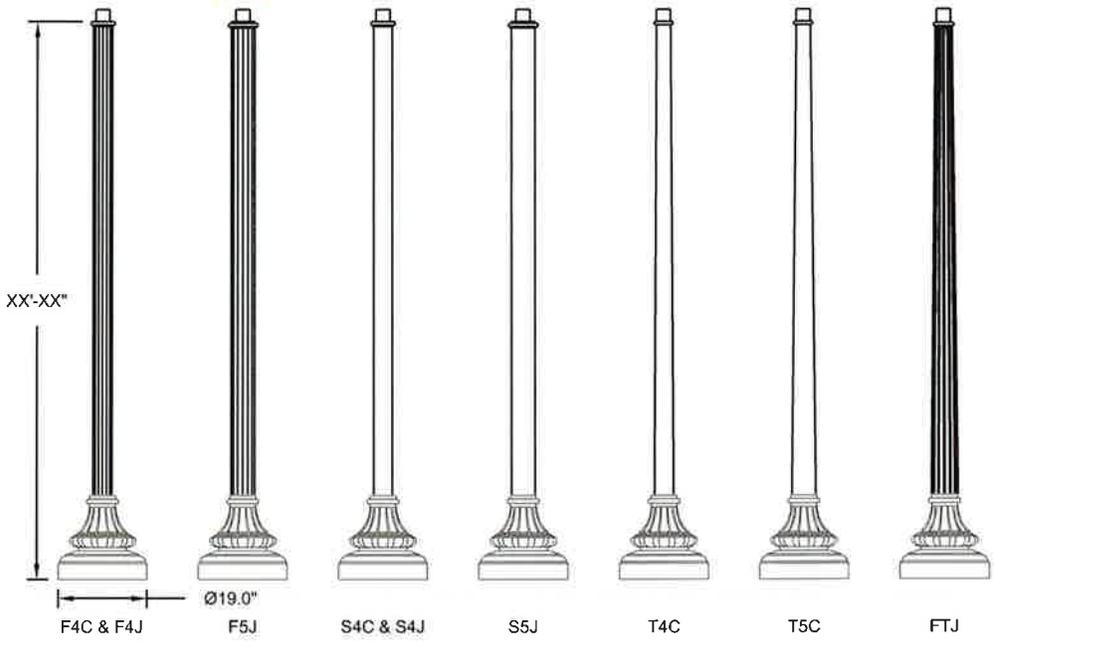
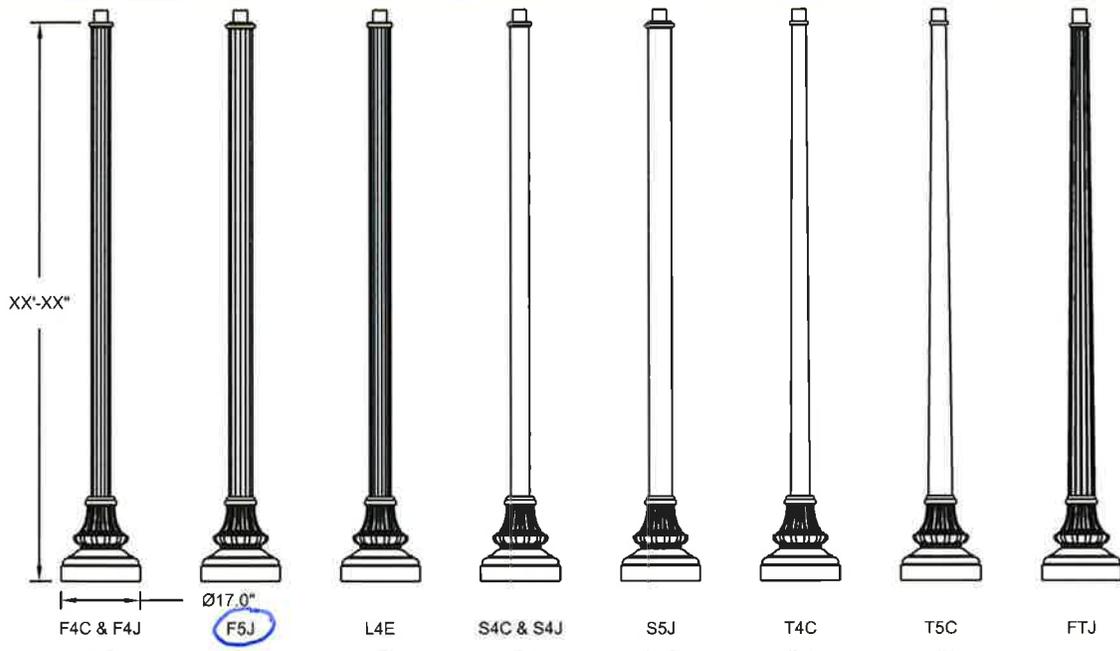
WADSWORTH
Aluminum Pole

Architectural
Outdoor

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LEADER IN LIGHTING SOLUTIONS
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TYPE:
DRAWN: KRW
DATE: 10/3/13
DWG #: POL_WDA



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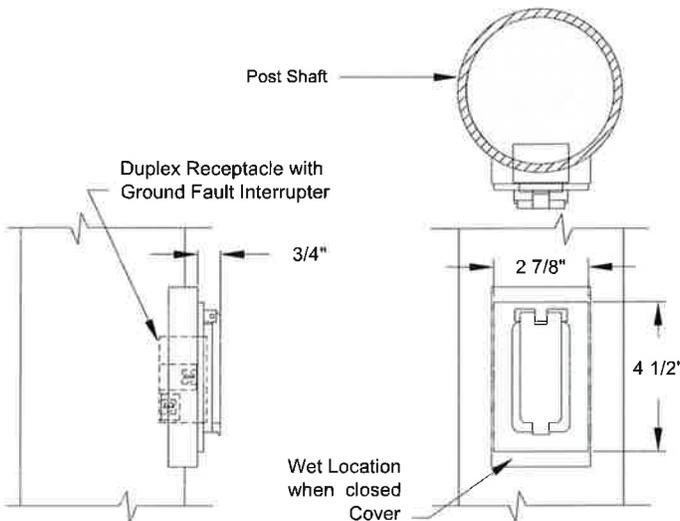
ORDER #:	
TYPE:	
DRAWN:	KRW
DATE:	10/3/13
DWG #:	POL_WDA

Weatherproof Receptacles

External, Post Shaft Location

- Ground Fault Circuit Interrupter Receptacles.
- Test/Reset buttons on face of receptacles.
- All Cast Aluminum Covers. Not Plastic.
(Paintable to match post color).
- Weatherproof "While in Use" covers in two sizes.

External receptacles are typically installed above pedestrian level for special event uses and decorative seasonal lighting.

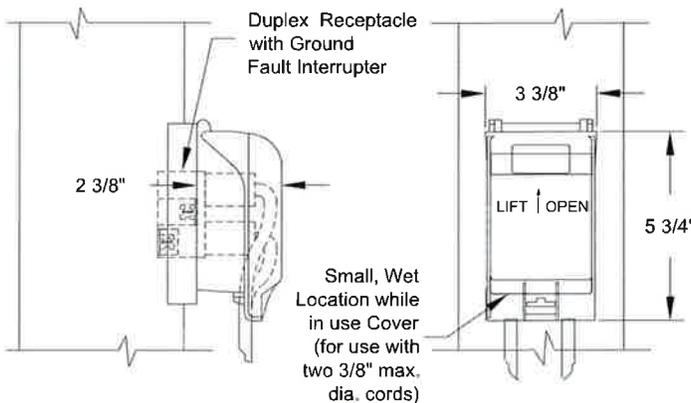


•Receptacle with Wet Location While Closed Cover

Catalog part # **FG-SXXH**

SPECIFICATIONS

A 20 amp, 125 volt, ground fault circuit interrupter duplex receptacle shall be mounted in the post. The receptacle shall be UL Listed according to E-48380 and UL 943 Class A and UL 498. The receptacle shall have a cast aluminum, UL Listed cover that is suitable for wet locations while not in use. The receptacle and cover shall mount to an outlet opening, in the post shaft, with a gasket and stainless steel screws.

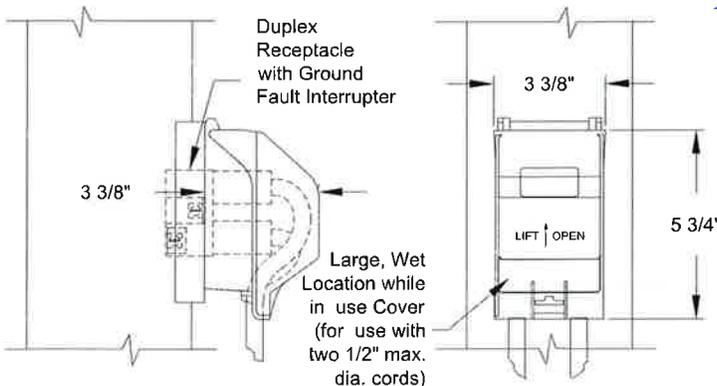


• Receptacle with Small, In-Use Wet Location Cover

Catalog part # **FGIUS-SXXH**

SPECIFICATIONS

A 20 amp, 125 volt, ground fault circuit interrupter duplex receptacle shall be mounted in the post. The receptacle shall be UL Listed according to E-48380 and UL 943 Class A and UL 498. The receptacle shall have a cast aluminum, lockable, UL Listed cover that is suitable for wet locations while in use and complies with NEC Article 410-57(b). The cover shall accept most common cord sets up to 3/8" diameter (14/3). The receptacle and cover shall mount to an outlet opening, in the post shaft, with a gasket and stainless steel screws.



*Receptacle with Large, In-Use Wet Location Cover ←

Catalog part # **FGIUL-SXXH**

SPECIFICATION

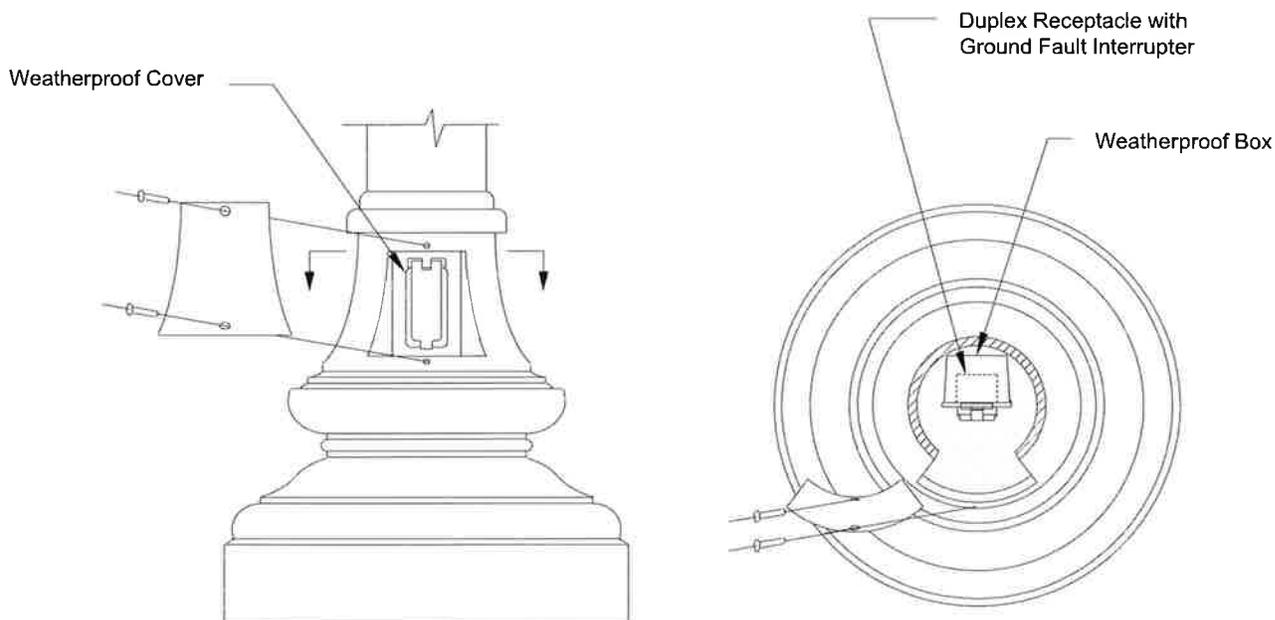
A 20 amp, 125 volt, ground fault circuit interrupter duplex receptacle shall be mounted in the post. The receptacle shall be UL Listed according to E-8380 and UL 943 Class A and UL 498. The receptacle shall have a cast aluminum, lockable, UL Listed cover that is suitable for wet locations while in use and complies with NEC Article 410-57(b). The cover shall accept most common cord sets up to 1/2" diameter (12/3). The receptacle and cover shall mount to an outlet opening, in the post shaft, with a gasket and stainless steel screws.

Weatherproof Receptacles

Internal, Base Location

- Ground Fault Circuit Interrupter Receptacles.
- Test/Reset buttons on face of receptacles.
- All Cast Aluminum Covers. Not Plastic.

Internal receptacles are typically installed for use by authorized personnel for special events and owner maintenance purposes.



• Receptacle with Weatherproof Box and Cover

Catalog part # **RB/GFI/WPC**

RB - receptacle in base
GFI - ground fault interrupter
WPC - weatherproof cover

SPECIFICATION

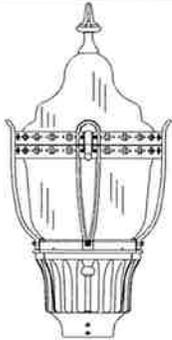
A 20 amp, 125 volt, ground fault circuit interrupter duplex receptacle shall be mounted inside the post base, facing toward the access door. The receptacle shall be UL Listed according to E-48380 and UL 943 Class A and UL 498. The receptacle shall be mounted in a cast aluminum box and cover that is suitable for wet locations while not in use. The receptacle and cover shall mount to a outlet box with a gasket and stainless steel screws.

For information on specifying orientation and mounting heights see **Orientation Guide** in the back of the Accessories section in the catalog.

HOLOPHANE® Utility Series With Swing Open Housing

Installation and Maintenance Manual

AFTER INSTALLATION DELIVER THIS MANUAL TO OWNER



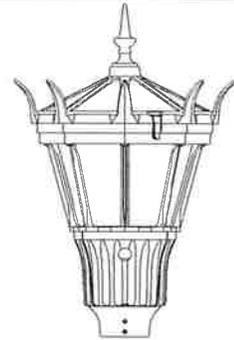
**Utility GranVille® w/Ribs & Bands
Utility Syracuse**



Utility Postop®



Utility Arlington



Utility Jefferson

GR926, GR920, GR921, GR922

IMPORTANT SAFETY INSTRUCTIONS

WARNING – READ THESE INSTRUCTIONS CAREFULLY BEFORE ATTEMPTING TO INSTALL OR MAINTAIN THIS FIXTURE. WORK MUST BE DONE BY QUALIFIED PERSONNEL.

WARNING – BE CERTAIN THAT ALL ELECTRICAL POWER IS DISCONNECTED FROM THE FIXTURE BEFORE INSTALLING OR MAINTAINING THE FIXTURE.

WARNING – FOLLOW LAMP MANUFACTURER'S OPERATING AND MAINTENANCE INSTRUCTIONS.

FAILURE TO FOLLOW THESE WARNINGS MAY RESULT IN DEATH, INJURY OR SIGNIFICANT PROPERTY DAMAGE.

1. INTRODUCTION

1.1 Product Description.

This post top luminaire is designed to include most of the standard low wattage medium- and mogul-base HID lamps currently available.

The fixture includes a plug-in electrical module that contains the photocontrol receptacle when specified. These modules are common to all luminaire styles in this Series.

1.2 Alternate Information Sources.

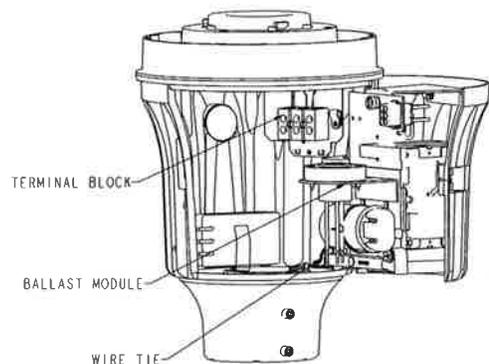
Holophane
Field Service Department
P.O. Box 3004
Newark, OH 43058-3004
(866) 759-1577

2. INSTALLATION

2.1 Tools and Material Required.

Table 1. Installation Tools and Materials	
DESCRIPTION	USE
Flat-end screwdriver	Installation of electrical module
3/16" Allen wrench	3/8" set screws in pole fitter
Torque wrench	Set screws

Figure 1



GR1723

2.2 Fixture Installation.

2.2.1 This luminaire is designed to be installed on a bracket or a pole top with a 3" tenon fitter. A latched door on the side of the housing allows access to the ballast module, electrical connections and the relamp door. The electrical ballast module may remain in place while installing on this fitter.

2.2.2 To remove this ballast module; open the housing door by unlatching and swinging open, Unplug the ballast electrical disconnect in the upper right corner of the plate facing you, disengage the knurled head captive screw fastener in the upper center of the plate and then tip the electrical module out of the opening in the housing. See Figure 1.

CAUTION

ALL UNITS ORDERED WITH THE "MT" OPTION (MULTIPLE TAP BALLASTS) ARE FACTORY WIRED FOR 240 VOLT OPERATION. IF YOUR INSTALLATION REQUIRES A DIFFERENT VOLTAGE, IT WILL BE NECESSARY TO DISCONNECT THE 240 V BALLAST LEAD AND RECONNECT THE APPROPRIATE LEAD FOLLOWING NATIONALLY ACCEPTED WIRING PRACTICES.

2.2.3 Insert the electrical supply wiring into the fixture's electrical chamber through the hole in the pole fitter.

2.2.4 Set the fixture on its mounting (bracket, tenon, pole top), being careful not to pinch the supply wires. Orient and level the fixture before tightening all six set screws. If the unit is supplied with a photocontrol, the photo eye should be oriented in a northerly direction. Alternate tightening of the screws will assist in leveling and insuring proper attachment of the fixture. Tighten the set screws to 10 to 12 ft-lbs of torque.

2.2.5; Pass the supply conductors through the wire tie provided, leave enough length for connections and tighten wire tie. See Fig 1.

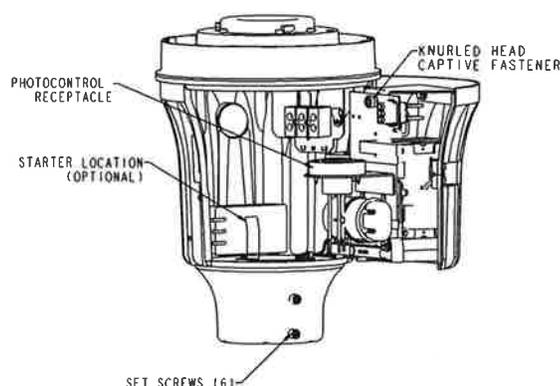
HOUSING ORIENTATION NOTES

Typical installations orient the housing with a rib pointed toward the street.

2.2.6 Connect the electrical supply wires to the terminal block in the back of the electrical chamber. The terminals are marked "L1" (Line 1), "G" (Ground), and "L2" (Line 2). If one of the supply lines is electrically neutral, it should be connected to terminal "L2".

2.2.7 If the unit is supplied with a potted starter or photocontrol, remove them. Lifting it and disconnecting the electrical connector remove the potted starter. The photocontrol is removed by twisting it counterclockwise.

Figure 2



GR1738

2.2.8 Re-install the electrical module by inserting it into the notches in the door assembly, behind the support bar. Hold the wire harness with the six-pole plug out of the way. Be careful not to score the wires as you seat plate and engage the knurled head captive screw fastener. Plug in the six-pole ballast electrical disconnect.

2.2.9 If the unit was supplied with a potted starter, re-install it. Place the starter in location Fig. 2 marked "starter location". (under photo control window) behind bracket provided. Reconnect the electrical connector.

2.2.10 Units supplied with a photo control option require a shorting plug or a twist lock photo control to be installed. Install the device by twisting it clockwise. See Figure 2.

CAUTION

A PHOTO CONTROL THAT MEETS THE REQUIREMENTS OF ANSI C136.10 AND WITH A CLEAR WINDOW ON THE SIDE THAT EXPOSES THE PHOTOCELL MUST BE USED. ALSO INSURE LIGHT FIXTURE IS DISCONNECTED FROM ELECTRICAL POWER AND ALLOWED TO COOL BEFORE PROCEEDING TO LAMP REPLACEMENT.

2.2.11 Close lamp compartment and engage latch.

OPTICS ORIENTATION NOTES

Some of the fixtures in this series are equipped with optical components that produce distributions of light that are not symmetric and are intended to be aimed by orienting the prismatic refractor a specific direction. There is a molded-in "Street Side" marking on the refractor, point this side toward the street.

2.2.12 Energize the fixture and check for proper operation.

3. MAINTENANCE

3.1 Re-lamping and Cleaning

3.1.1 Make sure fixture is de-energized.

3.1.2 Wipe off exterior dirt and debris using a soft, clean cloth.

CAUTION

DO NOT USE ABRASIVE CLEANSERS ON OPTICAL SURFACES. THEIR USE MAY RESULT IN THE LOSS OF OPTICAL EFFICIENCY.

3.1.3 Utility Postop®, Arlington and Jefferson;

Access the lamp compartment by unlatching top.

3.1.4 Remove the lamp and dispose of it in a safe and proper manner.

3.1.5 Install the proper lamp type. Tighten the lamp carefully but securely.

3.1.6 Close lamp compartment and engage latch.

3.1.7 Energize the fixture and check for proper operation.

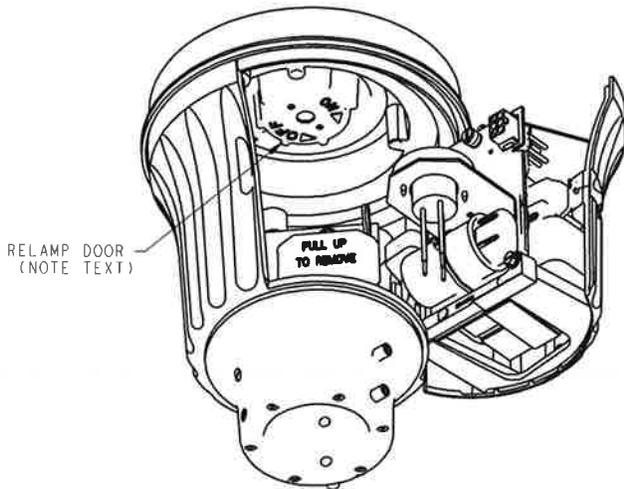
3.1.8 Utility GranVille® w/Ribs & Bands and Syracuse:

Access the lamp compartment by grasping the relamp door and turning in the direction marked "OFF". It will twist about a quarter of a turn. Slowly lower this assembly down and out of the unit. Install the proper lamp type. Tighten the lamp carefully but securely, reverse process to engage relamp door back into position. See Fig. 3.

Follow 3.1.5 through 3.1.7 for lamp instructions

3.1.9 Close the housing by carefully swinging door shut while insuring no leads are pinched. Latch door to secure.

Figure 3



GR1722

3.2 Electrical Component Replacement

3.2.1 Make sure fixture is de-energized. Open housing door unlatching and swinging open.

3.2.2 If provided as part of the fixture, both the photocontrol and the potted starter may be replaced without the removal of the electrical module. The replacement starter must be supplied by Holophane. The potted starter is removed by lifting it and disconnecting the electrical connector. The photocontrol is removed by twisting it counterclockwise. If no other components are to be replaced go to Section 3.2.8.

3.2.3 Unplug the ballast electrical disconnect in the upper right corner of the plate facing you, disengage the knurled head captive screw fastener in the upper center of the plate and then tip the electrical module out of the slotted area of the door support. See

Figure 2.

If a complete replacement electrical module is being used, skip to step 3.2.6

3.2.4 Tag all leads that will be disconnected and note the orientation and position of all components that will be replaced and the fasteners holding them. Remove the component(s) to be replaced.

3.2.5 Use components supplied by Holophane. Place the new components exactly as were the original components and reuse the original fasteners to secure them. Check for pinched wires before tightening down the replacement components. Tighten all fasteners firmly. Bundle and secure the wiring in a manner similar to the way it was originally secured to avoid pinching of wires when reinstalling the module into the housing. Replace all shields/insulation as originally installed.

3.2.6 Re-Install the electrical module by inserting it into the housing while holding the wire harness with the six-pole plug out of the way. Seat the bottom of the plate of the module into the slot in the housing and engage the knurled head captive screw fastener. Plug in the six pole ballast electrical disconnect.

3.2.7 If the unit is supplied with a potted starter or photocontrol, re-install them. Place the potted starter in the back floor of the housing (under photo control window) and reconnect the electrical connector. The photocontrol is re-installed by twisting it clockwise. See Figure 2.

3.2.8 Close the housing by carefully swinging door shut while insuring no leads are pinched. Latch door to secure.

3.2.9 Energize the fixture and check for proper operation.

4. LIMITED WARRANTY AND LIMITATION OF LIABILITY

The Holophane limited warranty and limitation of liability is published in the "Terms and Conditions" section of the current Holophane buyer's guide, and is available from your local Holophane sales representative.



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Acuity Lighting Group, Inc.
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