

**RTG SYSTEMS INC.**  
**ELECTRICAL CONSULTING ENGINEERS**

**January 10, 2018**

Castles of Caledon Corporation  
55 Blue Willow Drive  
WOODBIDGE ON L4L 9E8

Attention: Mr. John Spina

**Reference: Belfountain Development, Visual Impact Assessment  
Municipal Street Lighting System  
Our File: 04XXX-00**

**Dear Sir:**

We have reviewed the input from the Niagara Escarpment Commission as it relates to the municipal streetlighting design associated with the proposed Belfountain development. This is being done in coordination with the Visual Impact Assessment being completed by Baker Turner Inc., with the intent of minimizing lighting effects on the scenic resources of the escarpment in consideration of Dark Sky principles.

The draft plan of subdivision indicates exclusive use of the Town of Caledon Standard 202, 18.0m municipal ROW. We also anticipate that the Town standard streetlighting assemblies will be used – coach style 40W LED fixture with 3000K colour temperature, mounted on a 1.5m decorative black scroll arm and a 9.9m direct buried octagonal concrete pole (mounting height of luminaire approx. 8.4m).

We anticipate that with a typical 50m spacing between poles, in a staggered arrangement, the light levels on the roadway will be approximately 5 lux average with a uniformity of approximately 3:1.

The 3000K colour temperature of the LED luminaires (warm white) is in keeping with current best design practices that minimize impact to the natural environment and associated wildlife. The LED luminaires themselves direct all light downward per Dark Sky principles. In any area where the municipal roadway abuts a park or sensitive natural areas, backshields can be specified on specific fixtures to mitigate any backlight.

The luminaires themselves do not contain glass refraction panels, minimizing glare from the fixtures.

Please contact us directly if there are any questions or concerns.

**Yours truly,**

**Ted Gayowsky, P. Eng.  
Principal**

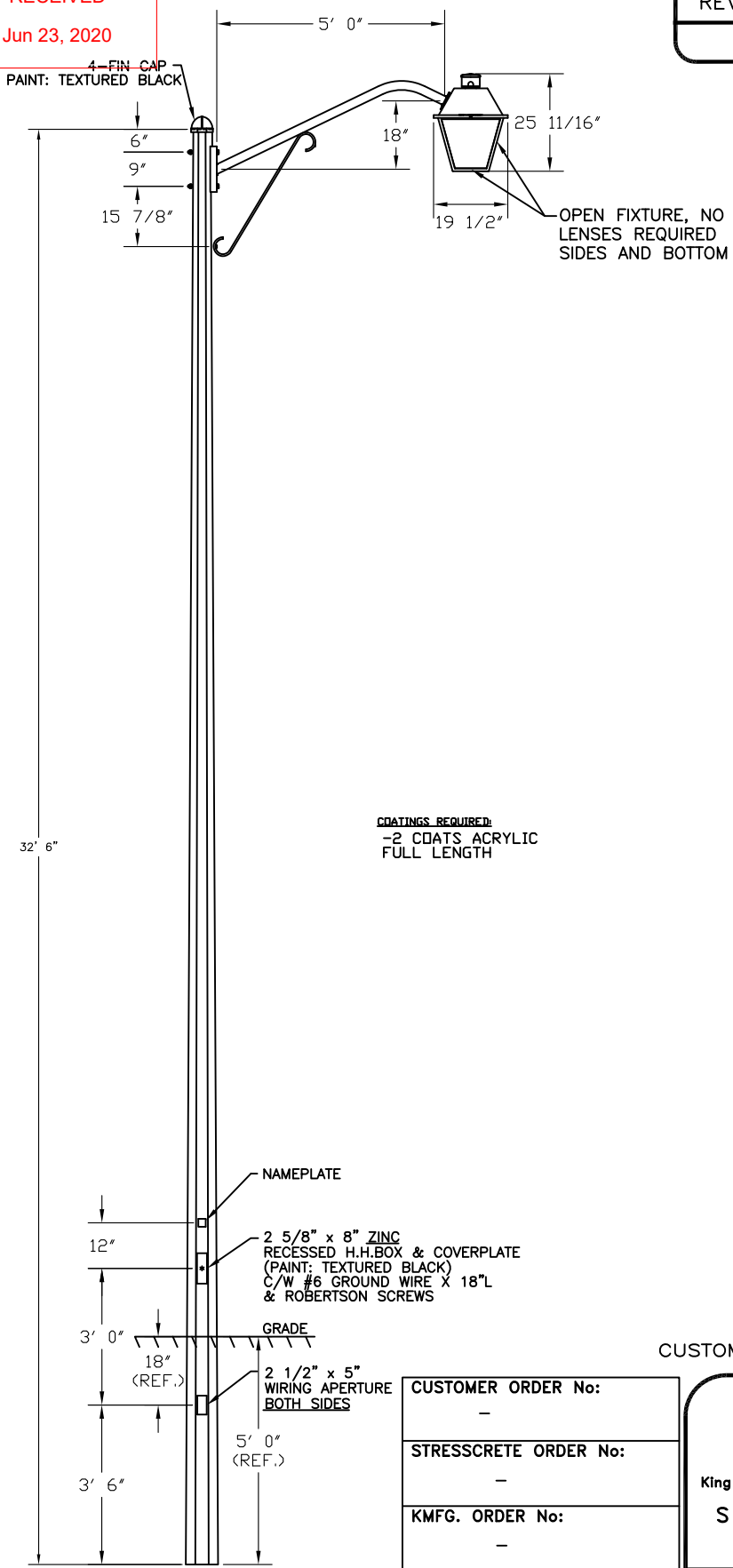
**Copy To:**

**Baker Turner Inc. - ATTN: Mr. Ted Baker, O.A.L.A.  
Baker Turner Inc. – ATTN: Mr. Mike Thistle, O.A.L.A.**

TOWN OF CALEDON  
PLANNING  
RECEIVED

Jun 23, 2020

REV.	ALTERATION	DATE	BY



**COATINGS REQUIRED:**  
-2 COATS ACRYLIC  
FULL LENGTH

**LUMINAIRE SPECIFICATIONS**

CATALOGUE NO.: K601D-S-P4NL-III-40(SSL)  
-7030-120:277-EN-PR7-F4

QUANTITY:  
MOUNTING TYPE: SIDE MOUNT  
OPTICAL DESIGN: FLAT ARRAY  
LENS MATERIAL: NO LENS  
LENS FINISH: N/A  
IES CLASS.: TYPE III  
WATTAGE: 40W  
SERIES: 7030  
LIGHT SOURCE: SOLID STATE LIGHTING  
LINE VOLTAGE: 120:277V  
PHOTOCELL: 7-PIN TWISTLOCK RECEPTACLE (PHOTO-EYE BY OTHERS)

FINIAL: F4  
PAINT: TEXTURED BLACK  
CCT/DIODE: 3000K/HE7  
IES FILE: 601DPP4NL304030.ies

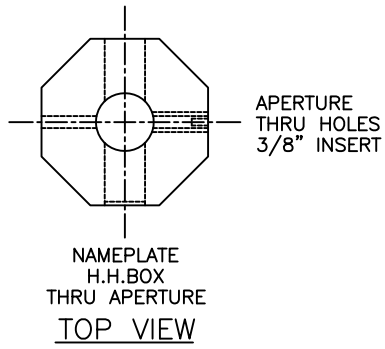
**ARM SPECIFICATIONS**

CATALOGUE NO.: KA175-LS  
QUANTITY:  
MATERIAL: ALUMINUM  
PAINT: TEXTURED BLACK

**POLE SPECIFICATIONS**

CATALOGUE NO.: E325-BPO-GSA

QUANTITY:  
SECTION: OCTAGONAL  
COLOUR: ECLIPSE  
FINISH: ETCHED  
POLE TOP: 5 3/8" FL/FL  
POLE BUTT: 8 1/2" FL/FL  
POLE LENGTH: 32' 6"  
APPROX WEIGHT: 1,450 lbs.  
MIN. RACEWAY: 1 1/8" ø



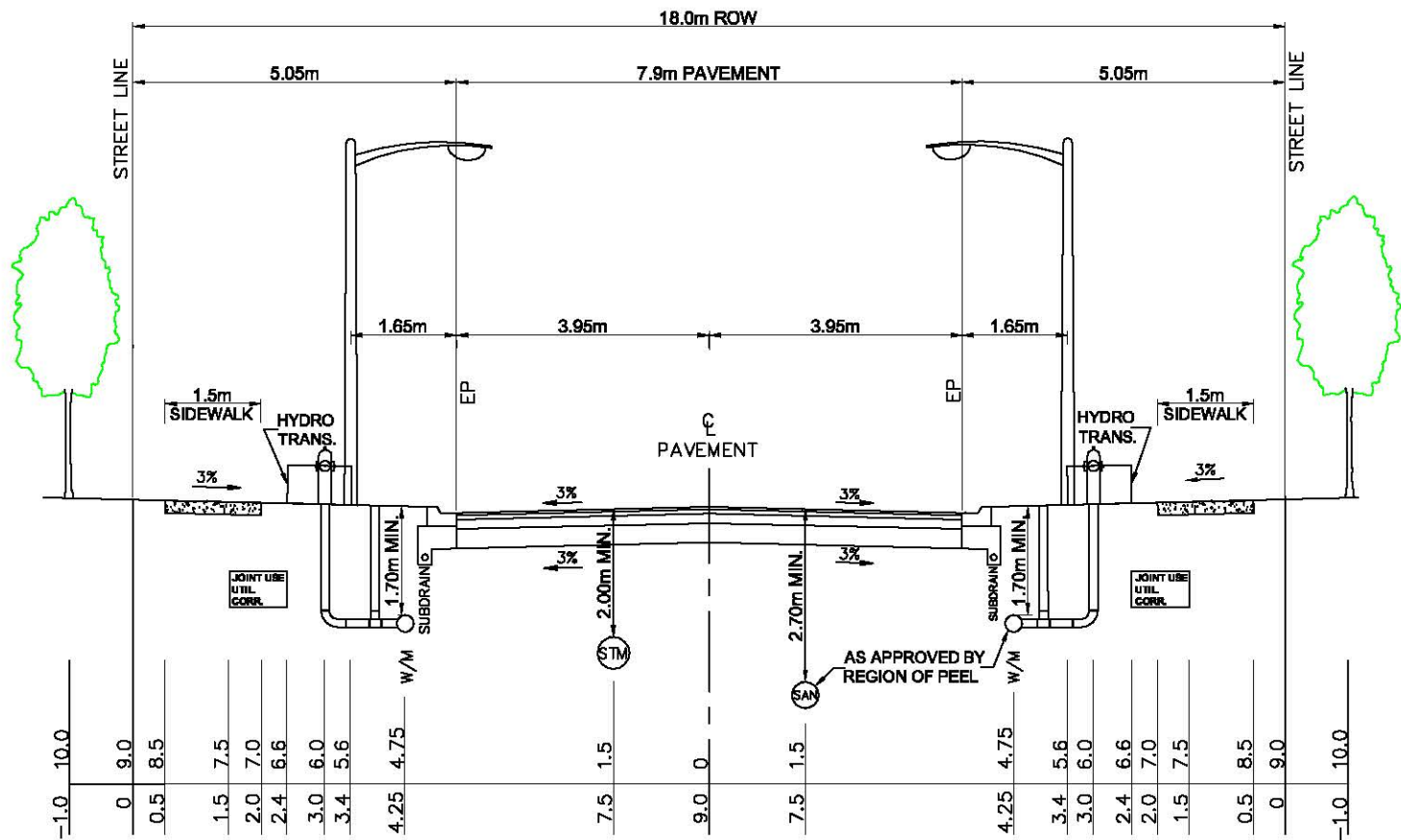
CUSTOMER APPROVAL & DATE: \_\_\_\_\_

CUSTOMER ORDER No:	-
STRESSCRETE ORDER No:	-
KMFG. ORDER No:	-
KING U.S. ORDER No:	-

  King Luminaire • StressCrete • Est. 1953 <b>STRESSCRETE GROUP</b>	<b>Manufacturing Locations:</b> Burlington, Ontario 1-800-268-7809 Northport, Alabama 1-800-435-6563 Atchison, Kansas 1-800-837-1024 Jefferson, Ohio 1-800-268-7809
	PROJECT/CUSTOMER:

**Notes:**  
StressCrete makes no claims that the reference embedment depth shown is suitable for supporting this structure. It is recommended that a competent professional evaluate the soils present on site, confirming required embedment depth, hole diameter and backfill material to be used.

DRAWN BY:	AT:	CHECKED BY:	DATE:	REVISION:
DRAWING TYPE: CONCEPT DWG.			DRAWING NUMBER:	



**NOTES**

1. WATERMAIN TO HAVE MINIMUM COVER OF 1.7m.
2. UTILITY CORRIDOR TO HAVE A MINIMUM COVER OF 0.9m.
3. TREES TO BE PLACED IN LOCATIONS PER APPROVED LANDSCAPE PLAN.
4. STREETLIGHT FIXTURE PER APPROVED TOWN STANDARD.
5. THE FOLLOWING IS A MINIMUM ROAD BASE AND WILL REQUIRE A SOILS REPORT VERIFICATION
  - 40 mm HL3
  - 65 mm HL8
  - 150 mm GRANULAR "A"
  - 300 mm GRANULAR "B"
6. THE BOULEVARDS REQUIRE A MINIMUM OF 300mm OF TOPSOIL AND NURSERY SOD.
7. ON A CRESCENT THE WATERMAIN SHALL BE PLACED ON THE OUTSIDE.
8. FULL LENGTH MINIMUM 100 MM DIA.SUB-DRAINS C/W FILTERCLOTH SHALL BE INSTALLED, AS PER APPROVED TOWN OF CALEDON STANDARD NO. 219.
9. SUB-GRADE SHALL BE COMPACTED TO A MINIMUM 95% OF S.P.D. AT OPTIMUM MOISTURE CONTENT.
10. WHERE POSSIBLE MANHOLE LIDS TO BE LOCATED OUT OF TIRE LANE OF TRAFFIC.
- 11.LONG DIMENSION OF TRANSFORMER TO BE PARALLEL TO STREETLINE.

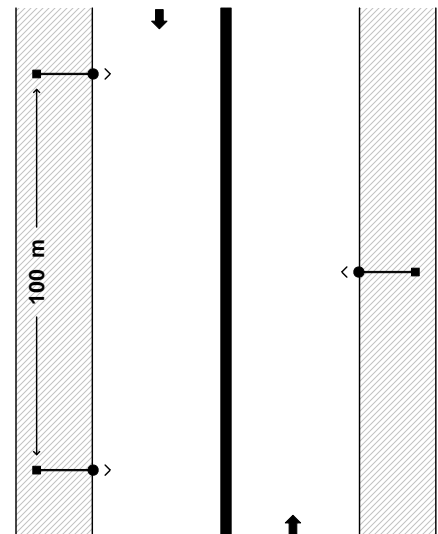
<p><b>TOWN OF CALEDON</b></p> <p><b>18.0m LOCAL ROAD</b> <b>8.5m ROADWAY (7.9m PAVEMENT)</b></p>	<p>3</p>	<p>DIMENSION AND TEXT REVISION</p>	<p>JAN. 09</p>	<p>APRD: C.C.</p>	<p>DATE: JUNE 08</p>
	<p>2</p>	<p>DIMENSION AND LAYOUT REVISION</p>	<p>JULY 08</p>	<p>DRAWN:</p>	<p>SCALE: N.T.S.</p>
	<p>1</p>	<p>DIMENSION EDIT</p>	<p>JUNE 08</p>	<p><b>STANDARD No. 202</b></p>	
	<p>NO.</p>	<p>REVISION</p>	<p>APR'D</p>		

**Design Information**

Project **Belfountain**  
 Number **TBD**  
 Name **Ted Gayowsky**  
 Company **RTG Systems Inc.**

**Roadway Information**

Number Left Lanes **1**  
 Left Lane Width **3.95 m**  
 Median Width **0 m**  
 Number Right Lanes **1**  
 Right Lane Width **3.95 m**  
 Calculation Method **IES RP8-2000**  
 Pavement Reflectance **Asphalt - R3**  
 Roadway Classification **Local**  
 Pedestrian Conflict **Low**



**Luminaire Information**

**Left Side**

Label **K601 40W 3000K**  
 Catalog Number **K601D-P-P4NL-III-40(SSL)-7030**  
 Photometric File **601DPP4NL304030.I**  
**ES**  
 Lamp Lumens **Absolute**  
 Light Loss Factor **0.90**  
 Input Power **42.6 W**  
 Tilt **0°**  
 Arm Length **1.52 m**  
 Mounting Height **8.4 m**  
 Setback **1.65 m**  
 Quantity **11**

**Right Side**

Label **K601 40W 3000K**  
 Catalog Number **K601D-P-P4NL-III-40(SSL)-7030**  
 Photometric File **601DPP4NL304030.I**  
**ES**  
 Lamp Lumens **Absolute**  
 Light Loss Factor **0.90**  
 Input Power **42.6 W**  
 Tilt **0°**  
 Arm Length **1.52 m**  
 Mounting Height **8.4 m**  
 Setback **1.65 m**  
 Quantity **10**

**Calculation Results - Right Side**

**Luminance**

Average **0.4 cd/m<sup>2</sup>**  
 Max **0.8 cd/m<sup>2</sup>**  
 Min **0.2 cd/m<sup>2</sup>**  
 Max/Min **4.0**  
 Avg/Min **2.0**

**Illuminance**

Average **5.3 lux**  
 Max **11.6 lux**  
 Min **1.9 lux**  
 Max/Min **6.1**  
 Avg/Min **2.8**

Lv Ratio **0.3**  
 STV **3.1**  
 Spacing **100 m**  
 Length **1000 m**  
 Quantity **21**

Calculations are based on procedures established by the governing standards body or standard industry practice. Visual computes output performance based on input data as provided by, and which is the sole responsibility of, the user. Acuity Brands Lighting, Inc. cannot be held responsible for the variations in actual situations which can effect calculated output.