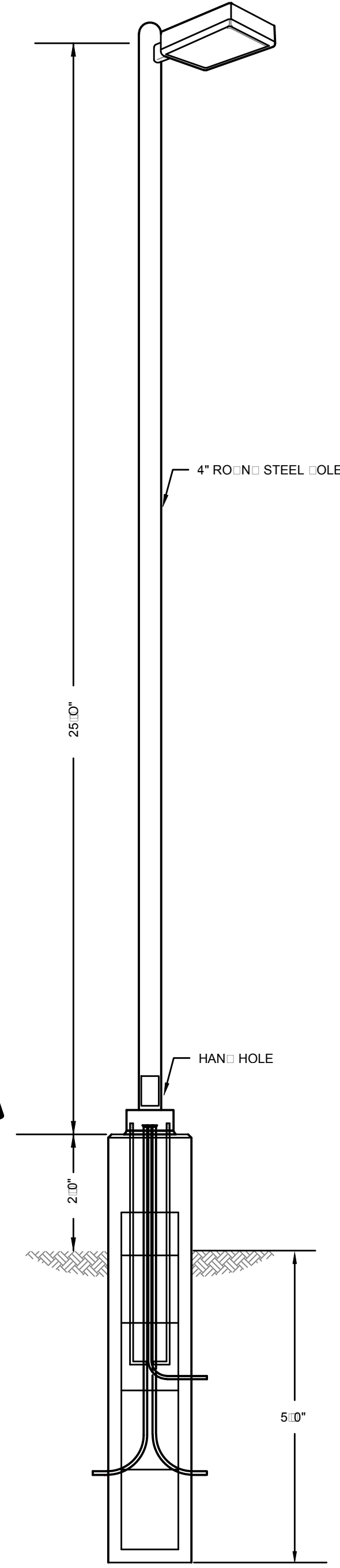
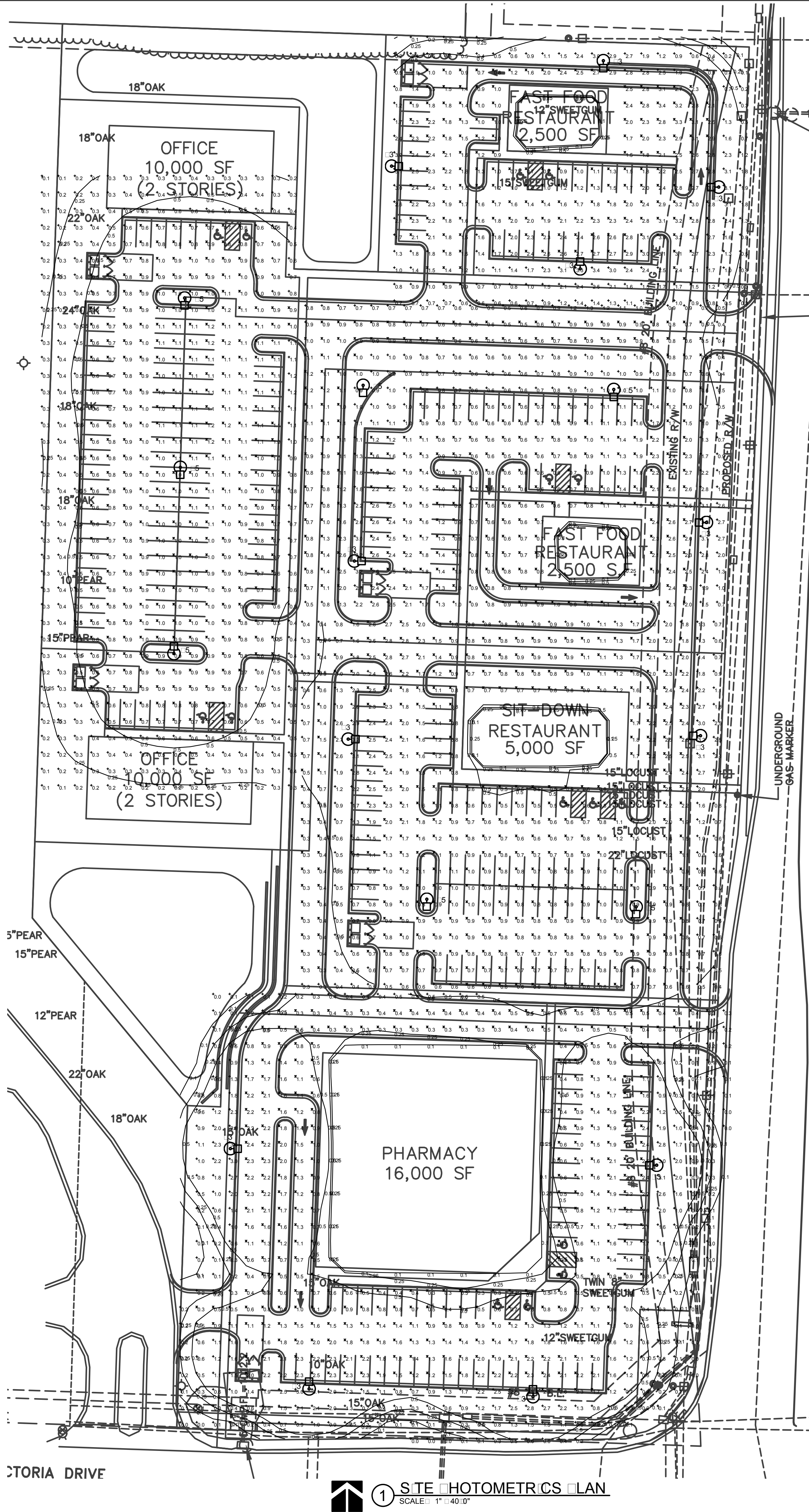




SOLID STATE AREA LIGHTING
RAZAR SERIES-LED
SPECIFICATIONS

OPTICAL HOUSING:
Heavy cast low copper aluminum (A356 alloy; $\pm 0.2\%$ copper) assembly with integral cooling fins. The Optical Panel mounting surface is milled flat (surface variance ± 0.002) to facilitate thermal transfer of heat to housing and cooling fins. Solid barrier wall separates optical and electrical compartments. The optical and electrical compartments are integrated to create one assembly. Minimum wall thickness is .188\"/>

ELECTRICAL HOUSING w/ INTEGRATED ARM:
Heavy cast low copper aluminum (A356 alloy; $\pm 0.2\%$ copper) assembly with integral cooling ribs surrounding the electrical compartment and a flat surface on the top of the arm to accommodate a photoeye receptacle. Solid barrier wall separates optical and electrical compartments. The optical compartment and electrical compartment with the integrated support arm combine to create one assembly. Minimum wall thickness is .188\"/>

LED OPTICS:
Emitters (LED's) are arrayed on a metal core PCB panel with each emitter located on a copper thermal transfer pad and enclosed by an LED reflector. In asymmetric distributions, a micro-reflector inside the reflector re-directs the house side emitter output towards the steel side and functions as a house side shielding element. Reflectors are injection molded H12 acrylic. Each LED reflector is sealed to the PCB over an emitter and all reflectors are retained by an aluminum frame. Any one Panel, or group of Panels in a luminaire, have the same optical pattern. LED reflectors produce standard side/area distributions. Panels are field replaceable and field rotatable in 90° increments.

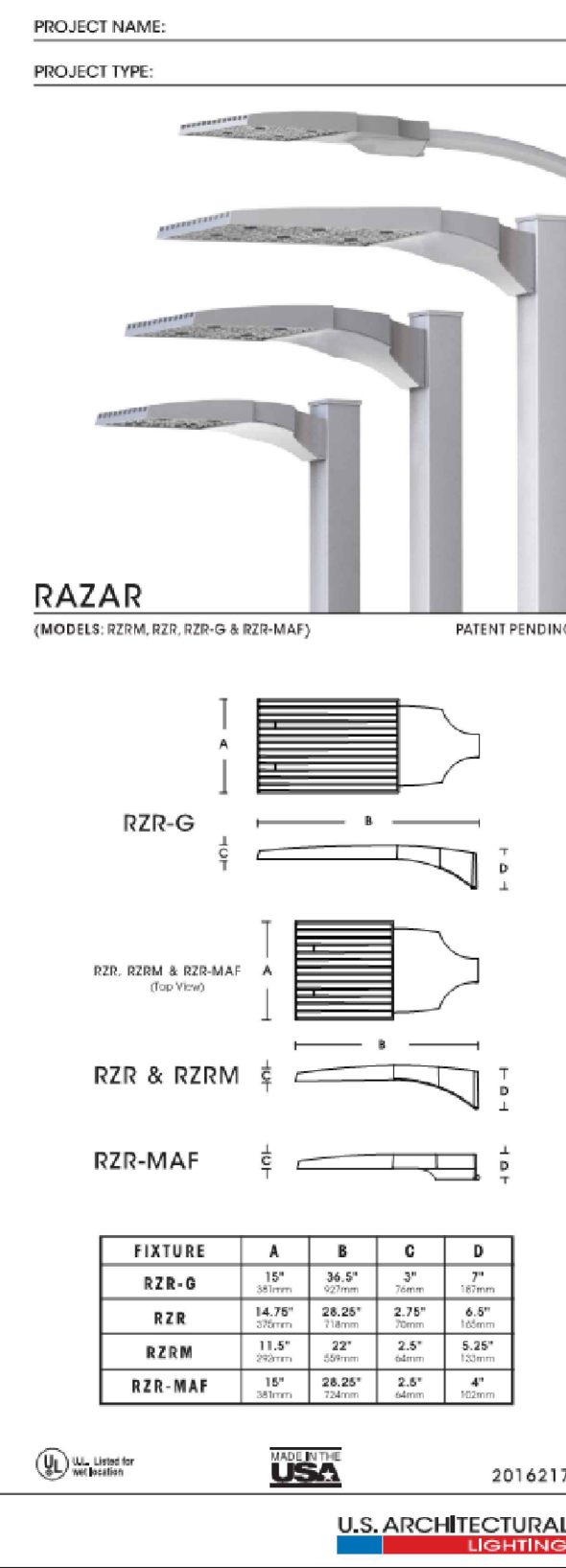
LED DRIVERS:
Constant current electronics with a power factor of $> .90$ and a minimum operating temperature of -40°F . Drivers are UL and cUL recognized and mounted directly against the Electrical Housing to facilitate thermal transfer held down by universal clamps to facilitate easy removal. In-line terminal blocks facilitate wiring between the driver and optical array. Drivers accept an input of 120-277V, 50/60Hz or 347V-480V, 50/60Hz. 0 - 10V dimmable driver is standard. Driver has a minimum of 3kV internal surge protection. Luminaires supplied with 20kV surge protector for field accessible installation.)

LED EMITTERS:
High output LED's are utilized with drive currents ranging from 350mA to 1050mA, 70CRI Minimum. LED's are available in standard Neutral White (4000K), or optional Cool White (5000K) or Warm White (3000K). Consult factory for other LED options.

FINISH:
Electrostatically applied TGIC Polyester Powder Coat on substrate prepared with 20 PSI power wash at 140°F . Four step media blast and non phosphate pre-treatment for protection and paint adhesion. 400°F bake for maximum hardness and durability.

MAST ARM FILTER/ELECTRICAL HOUSING:
Replaces standard Electrical Housing. Fits standard 2 3/8" O.D. horizontal tenon. Two (2) straps with two (2) bolts each enclose the lower half of the tenon. Upper half of the tenon rests on self-centering pins that position the angle of the luminaire at 0° , $+1.5^{\circ}$, $+1.5^{\circ}$ or $+3^{\circ}$ up from the horizontal. All hardware is stainless steel.

U.S. Architectural Lighting



PHOTOMETRICS LUMINAIRE SCHEDULE									
Sym:ol	Label	QTY	Catalog Number	Description	Luminaire	Lumens	LLF	Footcandle	
ⓐ	15	8	RZR-G 15\"/>	RAZAR SERIES LED LIGHTING RIVER COVER, 4 CIRCULAR BOARD: EACH WITH 20 LED'S, 1 CLEAR LAST CIRCULAR BOARD: EACH LED, 1 FORMER: SEMI-RECESSED LAMP METAL O.T.C. MOUNTING LATE BELOW: EACH CIRCULAR BOARD: .	EMITTERS: WHITE LED EMITTERS: COOL WHITE LED VERTICAL BASE: . COST: .	17504	0.85	174	
ⓑ	3	12	RZR-MAF 12\"/>	RAZAR SERIES LED LIGHTING RIVER COVER, 4 CIRCULAR BOARD: EACH WITH 20 LED'S, 1 CLEAR LAST CIRCULAR BOARD: EACH LED, 1 FORMER: SEMI-RECESSED LAMP METAL O.T.C. MOUNTING LATE BELOW: EACH CIRCULAR BOARD: .	EMITTERS: WHITE LED EMITTERS: COOL WHITE LED VERTICAL BASE: . COST: .	18762	0.85	172.9	

STATISTICS						
Description	Sym:ol	Avg	Max	Min	Max/Min	Avg/Min
FAST FOOD	ⓐ	1.2 c	2.7 c	0.5 c	5.41	2.41
FAST FOOD RESTAURANT	ⓐ	2.0 c	3.4 c	0.7 c	4.91	2.91
OFFICE	ⓐ	0.9 c	1.2 c	0.5 c	2.41	1.81
PHARMACY	ⓐ	1.2 c	2.8 c	0.3 c	9.31	4.01
RESTAURANT	ⓐ	1.1 c	2.8 c	0.3 c	9.31	3.71

Sheet No.: E001

SITE PHOTOMETRICS PLAN

POLYTAINERS ADDITION
LEE'S SUMMIT, JACKSON COUNTY,
MISSOURI

Reviewed By: CW
Designed By: SH
Drafted By: SH
Project No.: 015-3718

LUTJEN

OLSSON ASSOCIATES

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MO State Certificate of Authority #: 2007022824

NO.:		REVISIONS/APPROVALS:	
DATE:	12-22-2018	Submitted to City	Issued for Bid.
00-00-0000			