

GENERAL NOTES

1. ALL LAMPS SHALL BE LED UNLESS OTHERWISE NOTED.
2. OPERATING VOLTAGE SHALL BE 240 VOLTS.
3. ALL FUSES AND FUSEHOLDERS SHALL BE IN-LINE TYPE AND WATERPROOF.
4. CONDUIT ACCESSORIES, SUCH AS EXPANSION JOINTS, CONDULETS, ELBOWS, FLEXIBLE CONDUIT, ETC., SHALL BE INCLUDED IN THE PRICE BID FOR CONDUIT.
5. THE CONTRACTOR SHALL INSTALL A NYLON PULL CORD OR GALVANIZED PULL WIRE IN EACH EMPTY CONDUIT. THE COST OF THIS ITEM WILL NOT BE PAID FOR SEPARATELY AND SHALL BE INCLUDED IN THE COST OF THE CONDUIT.
6. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER PRODUCT DATA SHEETS, PHOTOMETRIC DATA, AND DESIGN CALCULATIONS FOR THE PROPOSED LUMINAIRES TO VERIFY THE LIGHTING DESIGN CRITERIA. THE CONTRACTOR SHALL FURNISH TO THE GDOT LIGHTING DESIGN GROUP THE APPROPRIATE .IES FILE(S) FOR EACH FIXTURE SUBMITTED.
7. THE CONTRACTOR SHALL BEWARE OF OVERHEAD POWER LINES AND LOCATE TOWERS AND/OR STANDARDS SUCH THAT THEY WILL HAVE TEN FEET MINIMUM CLEARANCE FROM DISTRIBUTION LINES OR 20 FEET MINIMUM CLEARANCE FROM TRANSMISSION LINES.
8. LUMINAIRE SPECIFICATIONS:
 - A. THE HOUSING SHALL BE MADE FROM 0.100 INCH MINIMUM THICKNESS DIE CAST A360 ALUMINUM ALLOY OR APPROVED EQUIVALENT. THE HOUSING ASSEMBLY SHALL BE TENON MOUNTED AND SECURELY AFIXED TO THE POLE. THE HOUSING TILT SHALL BE ADJUSTABLE BY +/- 5 DEGREES. HOUSING SHALL BE FITTED WITH A SECURED ACCESS DOOR AVOIDING ACCIDENTAL DROPPING AND A GROUND LUG AND A TERMINAL BLOCK. THE ACCESS MECHANISM SHALL OFFER TOOLFREE ACCESS TO THE INSIDE OF THE LUMINAIRE.
 - B. THE LIGHT ENGINE SHALL BE COMPOSED OF 4 MAIN COMPONENTS: LED LAMP, OPTICAL SYSTEM, HEAT SINK, AND DRIVERS. ELECTRICAL COMPONENTS SHALL BE ROHS COMPLIANT.
 - C. THE LAMP SHALL BE COMPOSED OF HIGH-PERFORMANCE LED CLUSTERS, AND SHALL HAVE A PUBLISHED WATTAGE AS DENOTED IN THE LUMINAIRE SCHEDULE. COLOR TEMPERATURE SHALL BE 4000 (+/- 300) KELVIN NOMINAL, 70 CRI (+/- 5%).
 - D. THE OPTICAL SYSTEM SHALL PROVIDE IES TYPE PATTERNS AS DENOTED IN THE LUMINAIRE SCHEDULE, AND SHALL BE COMPOSED OF HIGH-PERFORMANCE ACRYLIC COLLIMATORS, OPTIMIZED WITH VARYING BEAM ANGLES TO ACHIEVE DESIRED DISTRIBUTION. PERFORMANCE SHALL BE TESTED PER LM63 AND LM79 (IESNA) CERTIFYING ITS PHOTOMETRIC PERFORMANCE. SYSTEM SHALL BE DARK SKY COMPLIANT.
 - E. HEAT SINK SHALL BE BUILT INTO THE HOUSING, OPTIMIZING THE LEDS EFFICIENCY AND LIFE. THE COOLING DEVICE SHALL BE PASSIVE, AND SHALL IN NO CASE UTILIZE MOVING PARTS.
 - F. THE LED DRIVER SHALL BE HIGH POWER FACTOR OF 90% OR GREATER, ELECTRONIC, WITH AN OPERATING RANGE OF 50-60 HZ. THE DRIVER SHALL AUTO-ADJUST TO A VOLTAGE BETWEEN 120 AND 277 VOLT AC RATED FOR BOTH LINE TO LINE OR LINE TO NEUTRAL APPLICATIONS. MAXIMUM TOTAL HARMONIC DISTORTION SHALL BE 20% OR LESS. THE ELECTRONICS SHALL BE CAPABLE OF OPERATING WITHIN AN AMBIENT TEMPERATURE RANGE FROM -40 DEG F TO 130 DEG F. DRIVER SHALL BE CERTIFIED IN COMPLIANCE TO UL/CUL REQUIREMENTS FOR DRY AND DAMP LOCATIONS AND SHALL BE LOCATED IN A SEPARATE ENCLOSURE IN ORDER TO PROTECT FROM HEAT GENERATED BY LEDS. THE CURRENT SUPPLYING LEDS SHALL BE REDUCED BY THE DRIVER IF THE INTERNAL TEMPERATURE EXCEEDS 185 DEG F. OUTPUT SHALL BE PROTECTED FROM SHORT CIRCUITS, VOLTAGE OVERLOAD, AND CURRENT OVERLOAD. RECOVERY SHALL BE AUTOMATIC AFTER CORRECTION.
 - G. SURGE PROTECTION SHALL BE INTEGRAL TO THE LUMINAIRE AND PROTECT LINE-GROUND, LINE-NEUTRAL, AND NEUTRAL-GROUND IN ACCORDANCE WITH IEEE/ANSI C62.41.2 GUIDELINES.
 - H. LUMINAIRE SHALL INCLUDE INTEGRAL BIRD GUARD THAT PREVENTS BIRDS FROM ENTERING THE LUMINAIRE.
 - I. ALL EXPOSED SCREWS SHALL BE STAINLESS STEEL WITH CERAMIC PRIMER-SEAL BASE COAT OR APPROVED EQUIVALENT TO REDUCE SEIZING OF THE PARTS. ALL SEALS AND SEALING DEVICES SHALL BE MADE AND/OR LINED WITH EPDM (ETHYLENE PROPYLENE DIENE MONOMER) AND/OR SILICONE.
 - J. QUALITY CONTROL: THE MANUFACTURER SHALL PROVIDE A WRITTEN CONFIRMATION OF ISO 9001-2008 AND ISO 14001-2004 INTERNATIONAL QUALITY STANDARDS CERTIFICATION TO THE PROJECT ENGINEER.
 - K. THE MANUFACTURER SHALL SUPPLY A COPY OF APPROVAL PRODUCTS CERTIFICATE, CSA OR UL.
 - L. THE LIGHTING CONTRACTOR SHALL PROVIDE VERIFICATION TO THE PROJECT ENGINEER THAT THE LUMINAIRE MEETS THE ANSI C136.31-2001 TABLE 2, AMERICAN NATIONAL STANDARD FOR ROADWAY LUMINAIRE VIBRATION SPECIFICATIONS FOR BRIDGE/OVERPASS APPLICATIONS.
9. THE LIGHTING CONTRACTOR SHALL COORDINATE THE MODIFICATION WORK AT EACH SERVICE POINT WITH JEFFERSON ENERGY COOP. CONTACT WAYNE GOSSAGE, COLUMBIA COUNTY, GEORGIA (706) 547-5083.
10. RIGID CONDUIT, INSTALLED ON STRUCTURES, SHALL BE SUPPORTED AT LEAST EVERY TEN FEET AND WITHIN THREE FEET OF JUNCTION BOXES, LUMINAIRES, ETC.
11. THE LIGHTING CONTRACTOR SHALL COORDINATE ALL WORK WITH GENERAL CONTRACTOR.
12. THE LIGHTING CONTRACTOR SHALL FURNISH A ONE YEAR WRITTEN WARRANTY FOR PARTS AND DEFECTIVE WORKMANSHIP ON THE LUMINAIRES, POLES, LIGHTING CONTROL PANEL AND ALL THE OTHER ELECTRICAL EQUIPMENT.
13. CCTV SYSTEM CONDUCTORS AND CABLE, CAMERAS AND ASSOCIATED MOUNTING HARDWARE, AND HEAD-END EQUIPMENT ARE PROVIDED BY COLUMBIA COUNTY UNDER SEPARATE CONTRACT. COORDINATE THE INSTALLATION OF THE SERVICE POINT CABINET, CCTV CONDUITS, AND TUBULAR EXTENSIONS FOR CAMERA MOUNTING WITH GLEN BOLLINGER, COLUMBIA COUNTY TRAFFIC ENGINEER, (706) 447-7613.



G R E S H A M
S M I T H A N D
P A R T N E R S

GEORGIA
DEPARTMENT
OF
TRANSPORTATION

NOT TO SCALE

REVISION DATES

02/05/13		

STATE OF GEORGIA
DEPARTMENT OF TRANSPORTATION
OFFICE: ROADWAY DESIGN

GENERAL NOTES

SR47 @ SR223 INTERSECTION
IMPROVEMENT

DRAWING No.
25-002