



NOTE:
 THE METER SOCKET AND OVERLOAD DISCONNECT BOX SHALL HAVE A NEMA CLASSIFICATION OF RAINTIGHT. WITH APPROVAL OF THE UTILITY COMPANY THE CONTRACTOR MAY ATTACH THE BOX TO THE EXISTING UTILITY POLE WHICH HAS A TRANSFORMER ON IT.

UTILIZATION CURVE

ISOFOOTCANDLE CURVES

PER 1000 LAMP LUMENS

NOTE: 1 FOOTCANDLE = 10.76 LUX

MOUNTING HEIGHT - FEET	20	25	30	35	40	45	50
FACTOR	2.25	1.44	1.00	0.73	0.56	0.44	0.36

GENERAL ELECTRIC PHOTOMETRIC DATA

LIGHTING SYSTEMS BUSINESS DEPARTMENT
 HENDERSONVILLE, N.C. U.S.A. 27539

PER 1000 LAMP LUMENS

LUMINAIRE
 H40DR CUTOFF REFLECTOR 35-222020-01
 CLEAR GLASS 36-222045-01
 SOCKET POSITION C

LAMP
 200, 250, 310 + 400 WATT HPS
 DE NO LU200, LU250, LU310 + LU400
 RWSI NO 866,860, MR + 851

ANSI/IES TYPE 1072
 SHORT/ CUT-OFF /TYPE II
CIE TYPE CUT-OFF

GENERAL INFORMATION
 TEST DISTANCE 7 METERS
 MAX CANDELA 389
 MAX CONE 87.5°
 MAX VERTICAL PLANE 62.5°/297.5°
 MAX CANDELA AT 80° 0
 MAX CANDELA AT 80° 0
 NAHRI FOOTCANDLES 0.18380
 NAHRI CANDELA 185
 MULTIPLY ALL LUMEN, CANDELA AND FOOTCANDLE VALUES BY THIS RATIO
 RATIO - ACTUAL LAMP LUMENS / 1000

PHOTOMETRIC TEST IN ACCORDANCE WITH IES GUIDE

LIGHT FLUX VALUES	
	PERCENT OF LAMP
DOWNWARD STREET SIDE	44.8
UPWARD STREET SIDE	0
DOWNWARD HOUSE SIDE	31.4
UPWARD HOUSE SIDE	0
TOTAL	76.3

TESTED DATE 11/12/82
 APPROVED DATE 11/12/82
 DRAWING NO. 35-176565

- LEGEND**
- PROPOSED NEW POLE AND LUMINAIRE
 - PROPOSED POWER SOURCE
 - EXISTING POLE AND LUMINAIRE
 - PROPOSED CONDUIT
 - EXISTING AERIAL UTILITIES

STREET LIGHTING NOTES

CONCRETE BASES
 THE OFFSET AND LOCATION OF THE CONCRETE BASES SHALL BE AS SHOWN ON THE PLAN. CARE SHALL BE TAKEN WHERE CONCRETE BASE AND DRAINAGE STRUCTURES ARE CLOSE TOGETHER.

CONDUIT
 2" CONDUIT SHALL BE USED AT ALL LOCATIONS. ALL CONDUIT SHALL BE AT LEAST SCHEDULE 40 GALVANIZED STEEL ELECTRICAL CONDUIT.
 THE FINAL CONDUIT DEPTH SHALL BE 3' OR AS DIRECTED BY THE RESIDENT ENGINEER.
 A 6" WIDE YELLOW MARKING TAPE (PLASTIC) SHALL BE INSTALLED 6" TO 12" BELOW FINISH GRADE OVER THE CONDUIT RUNS.

GROUNDING
 IN ADDITION TO A GROUND ROD AT EACH POLE BASE, A CONTINUOUS GROUNDING CIRCUIT SHALL BE RUN BACK TO A CURCUIT PROTECTIVE DEVICE AT THE TRANSFORMER.
 ALUMINUM WIRE SHALL NOT BE USED FOR GROUND WIRE.

POLES, ANCHOR BASES AND ARMS
 NO POLE SHAFT WALL THICKNESS SHALL BE LESS THAN 0.188" AND SHALL HAVE A MINIMUM 8" O.D. BOTTOM DIMENSION.
 ALL NEW STREET LIGHT POLES AND LUMINAIRE ARMS SHALL BE ALUMINUM IN ACCORDANCE WITH SUBSECTION 753.01(B).
 THE TWO LIGHT POLE BASES SHALL HAVE A BREAKAWAY DESIGN FEATURE ADDED, SUCH AS BREAKAWAY COUPLINGS.

WIRE
 ALL WIRING BETWEEN THE METER AND THE FIRST POLE AND BETWEEN POLES SHOULD BE ALUMINUM, SIZE AS INDICATED ON THE PLAN.
 USE #10 AWG STRANDED COPPER WIRES IN EACH POLE BETWEEN THE POLE BASE AND THE LUMINAIRE.
 ALL CONDUIT MUST INCLUDE A GROUNDING CONDUCTOR AND ACT AS ONE.
 VOLTAGE LOSSES GREATER THAT 3% IN THE SECONDARY CIRCUIT REQUIRE LARGER WIRE.

LUMINAIRES
 LUMINAIRES SHALL BE DESIGNED FOR STREET LIGHTING AND THE INDICATED LIGHT DISTRIBUTION. THEY SHALL HAVE AN ALUMINUM HOUSING WITH EASY ACCESS TO THE BALLAST ASSEMBLY, A PHOTO-ELECTRIC CONTROL, FILTERED OPTICAL ASSEMBLY, MEDIUM CUT OFF DISTRIBUTION AND REGULATOR BALLAST FOR 120 VOLT HIGH PRESSURE SODIUM LAMPS.
 LIGHT DISTRIBUTION IS BASED ON GENERAL ELECTRIC PHOTOMETRIC DATA DRAWING 835-176565, SHORT CUTOFF, TYPE II DISTRIBUTION, DATED 12-10-79. THE ABOVE PHOTOMETRIC DATA DRAWING WAS USED FOR DESIGN PURPOSES ONLY.
 THE INSTALLED LUMINAIRE LIGHT UTILIZATION AND MINIMUM FOOTCANDLES ON THE ROADWAY AND SHOULDER SHALL BE AT LEAST AS GREAT AS INDICATED BY THE ABOVE PHOTOMETRIC.

GENERAL
 ALL ELECTRICAL MATERIAL AND INSTALLATION SHALL MEET THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE, STATE AND LOCAL CODES AND THE LOCAL UTILITY COMPANY.
 ALL STREET LIGHT POLES SHALL HAVE A METAL TAG ATTACHED TO THE HANDHOLE WITH THE POLE NUMBER, WATTAGE AND TYPE OF LAMP. EXAMPLE, #2-250W-H.P.S., (HPS= HIGH PRESSURE SODIUM). MINIMUM LETTER SIZE 1/2" HIGH. PAYMENT FOR TAGS SHALL BE SUBSIDIARY TO ITEM 679.15, STREET LIGHTING.

STREET LIGHTING DESIGN PARAMETERS

AVERAGE MAINTAINED ILLUMINATION: 1.0 FC MIN.
 EXISTING ON PROJECT: UNKNOWN.
 FILTERED LUMINAIRE: 0.95
 LAMP DEPRECIATION: 0.75824,000 HOURS.
 COMBINED LAMP FACTOR: 0.7
 MOUNTING HEIGHT FACTOR: 38/M.H.)
 UNIFORMITY RATIO: 4:1 (AVE./MIN.)
 MINIMUM FOOTCANDLES ON ROADWAY: 0.28 FC. MIN.

WORK TO BE PERFORMED BY THE CONTRACTOR
 THE CONTRACTOR SHALL: 1. INSTALL NEW CONCRETE BASES, POLES, LUMINAIRES, WIRING, CONDUIT, POLE RISER, WEATHER HEAD, METER SOCKET, RAIN TIGHT BOX WITH OVERLOAD DISCONNECT AND OTHER RELATED MATERIAL. 2. INSTALL METAL TAGS TO THE HANDHOLE OF THE NEW POLES WITH THE INFORMATION AS NOTED ON THE PLANS. 3. MAKE CONTACT WITH AND PERFORM WORK IN COMPLIANCE WITH THE LOCAL UTILITY COMPANY.
 PAYMENT FOR THE ABOVE WORK WILL BE SUBSIDIARY TO ITEM 679.15, STREET LIGHTING.

**ALBURG,
 INTERSECTION OF US-ROUTE 2 & T.H.-3**

STREET LIGHTING DESIGN CRITERIA AND GENERAL NOTES	SURVEYED BY _____ DATE _____ DRAWN BY <u>R. Davis</u> DATE <u>9-85</u> TRACED BY _____ DATE _____ STATEWIDE PROJ. <u>F</u> NO. <u>3FTY (85) 9</u> SHEET <u>55</u> OF <u>200</u>
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