MEMORANDUM TO: Mr. Whit H. Webb
   Head of Feasibility Studies Unit
FROM: E. T. Cozart, III, PE
   Special Design Engineer
SUBJECT: Nash County
   I-95/NC 4 Interchange at Gold Rock
   I-95/US 64 Interchange at Rocky Mount

   Lighting

   In response to the verbal request by Mr. Mohammed Mustafa on July 12, 1993 to Dave Milton of this office, an estimate has been made to provide lighting at the subject interchanges. The estimates are being forwarded to Mr. Doug Lane by copy of this memo to assure that appropriate percentages are added for mobilization, engineering and contract administration. It should be noted that only traffic control and landscape work considered essential to accomplish the lighting work was included.

   An estimate was prepared for each of the interchanges because they were constructed as part of separate NCDOT roadway projects. The I-95/US 64 interchange was constructed as part of NCDOT project 8.1161704 (1st July 1975) and the I-95/NC 4 interchange was constructed as part of NCDOT project 8.1161805 (1st October 1965).

   The estimates are based on using a combination of high mast (100' and 120') and conventional (45') mounting height lights with underground circuitry, and high pressure sodium (HPS) lamps.

   The estimated annual electrical cost to operate the lighting system at NC 4 (30.6 kw load) is $9,792 and for US 64 (71.6 kw load) is $23,040. Both electrical estimates are based on 4000 hours per year at $.08 per kilowatt hour (Kwhr).
The annual maintenance cost to replace failed lamps and circuitry, and to repair pole knockdowns is difficult to estimate, but $1,500 for NC 4 and $3,000 for US 64 would not be unreasonable.

If additional information is needed please contact Mr. Dave Milton or Mr. Doug Lane at (919) 250-4128.

ETC\TFP\tfp

CC:  Mr. W. D. McFarling, PE
     Ms. Kathy Lassiter, PE (attn: Mr. Roland Robinson)
     Mr. C. A. Gardner, Jr., PE
     Mr. Kenneth Hill
     Mr. Mohammed Mustafa
     Mr. D. F. Milton w/attachment worksheets and estimates
     Mr. Doug Lane w/attachment estimates

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