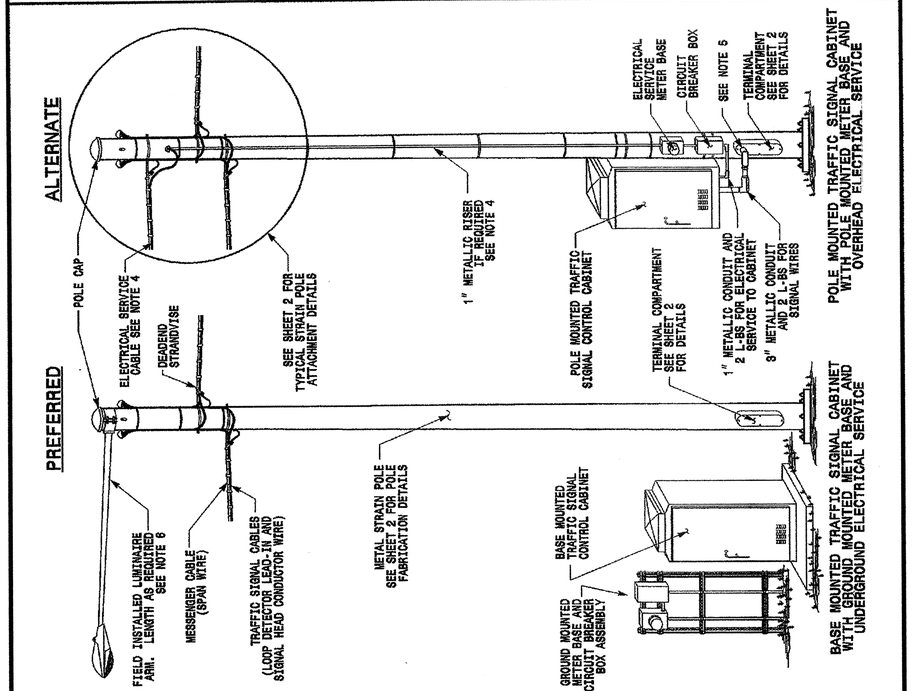
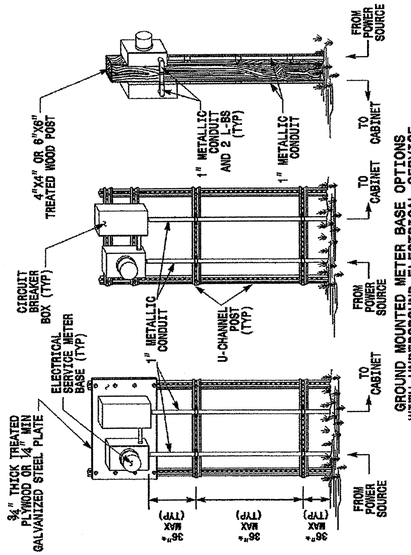
PROJECT REFERENCE NO.	SHEET NO.
U-4719	Sig.8

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH STANDARD DRAWING FOR
METAL POLES
ELECTRICAL SERVICE AND SIGNAL CABINET MOUNTING OPTIONS

SHEET 1 OF 3 — **1740.01**




FROM POWER SOURCE
4"X4" OR 6"X6" TREATED WOOD POST
1" METALLIC CONDUIT AND 2 L-BS (TYP)
1" METALLIC CONDUIT
TO CABINET
CIRCUIT BREAKER BOX (TYP)
U-CHANNEL POST (TYP)
ELECTRICAL SERVICE METER BASE (TYP)
¾" THICK TREATED PLYWOOD OR 14" MIN GALVANIZED STEEL PLATE
36"± MAX (TYP)

GROUND MOUNTED METER BASE OPTIONS
WITH UNDERGROUND ELECTRICAL SERVICE

*MAXIMUM TOTAL HEIGHT TO METER BASE NOT TO EXCEED 5'

GENERAL NOTES

1. WHEN TRAFFIC SIGNALS ARE INSTALLED USING METAL SIGNAL SUPPORTS:
   - BASE MOUNTED CABINETS ARE THE PREFERRED CABINET OPTION.
   - ROUTE POWER SOURCE UNDERGROUND AND USE GROUND MOUNTING OPTIONS SHOWN ABOVE TO INSTALL METER BASE AND CIRCUIT BREAKER BOX IF POSSIBLE.
2. LOCATE THE METER BASE ASSEMBLY NEAR THE SIGNAL CABINET IN A MANNER THAT WILL ALLOW EASY ACCESS TO THE CIRCUIT BREAKER BOX.
3. INSTALL METER BASE ASSEMBLIES AS SHOWN ABOVE. ENSURE 1" METALLIC CONDUITS ARE PROPERLY SECURED BETWEEN THE METER BASE ASSEMBLIES AND THE GROUND TO MINIMIZE DAMAGE POTENTIAL. REFER TO ROADWAY STANDARD DRAWING 1761.02 FOR ELECTRICAL SERVICE DETAILS.
4. INSTALL ELECTRICAL SERVICE ENTRANCE CONDUCTOR AS SHOWN WHEN UNDERGROUND SOURCE IS NOT AN OPTION. METER BASE AND CIRCUIT BREAKER BOX MAY BE INSTALLED ON THE POLE WHEN POLE MOUNTED CABINETS ARE REQUIRED FOR THE INSTALLATION. SEE SHEET 2 FOR ADDITIONAL INSTALLATION DETAILS.
5. FOR POLE MOUNTED CABINETS, USE A FACTORY DRILLED HOLE IN THE TERMINAL COMPARTMENT TO PROVIDE ACCESS FOR SIGNAL WIRES ENTERING THE POLE FROM THE CABINET. FIELD DRILLED HOLES ARE ACCEPTABLE ONLY IF APPROVED BY THE ENGINEER.
6. SEE ROADWAY STANDARD DRAWING 1408.01 (LIGHT STANDARD LUMINAIRES) FOR LUMINAIRE INSTALLATIONS.

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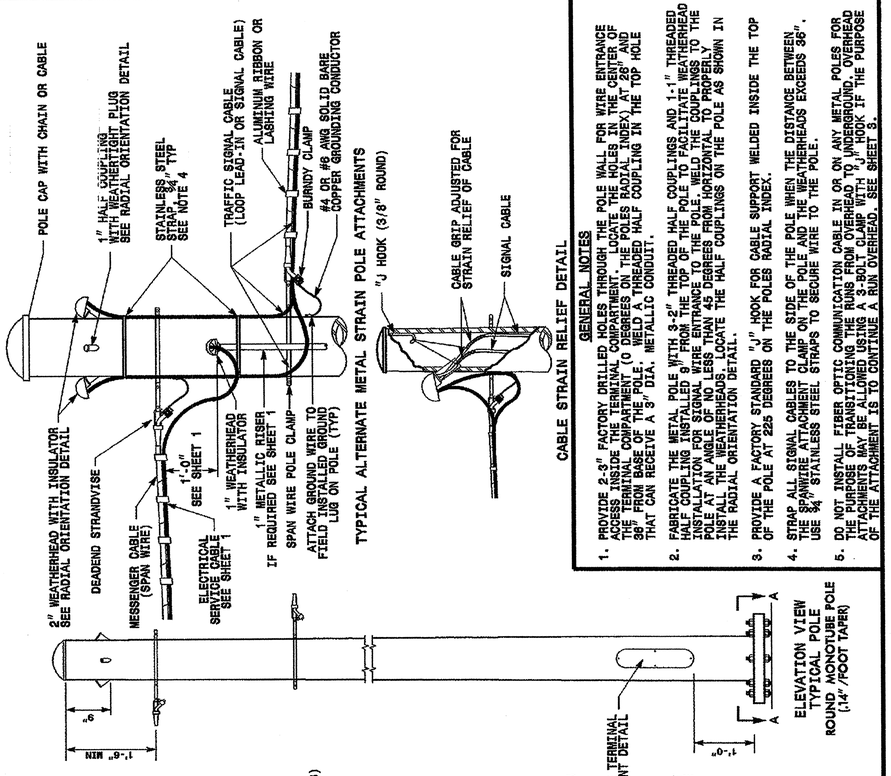
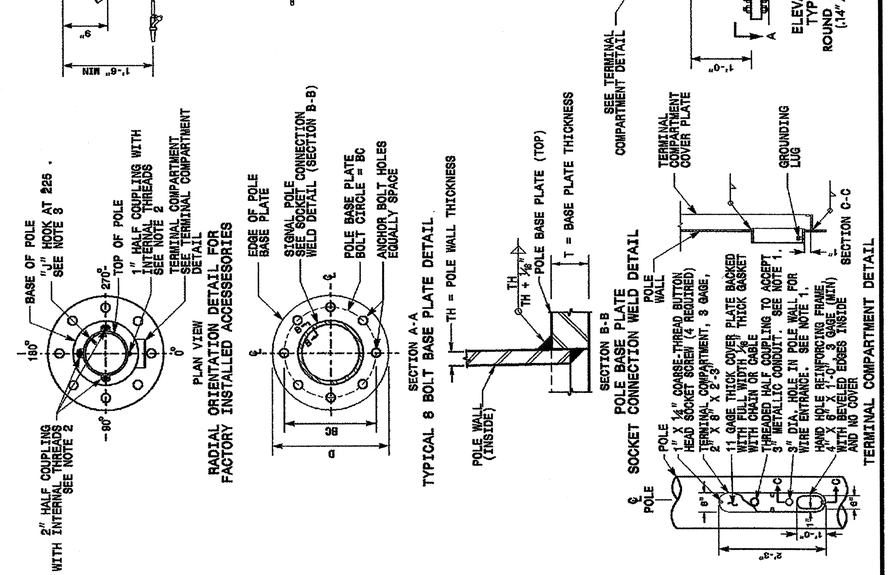
ENGLISH STANDARD DRAWING FOR
METAL POLES
FABRICATION AND ATTACHMENT DETAILS

SHEET 2 OF 3 — **1740.01**



GENERAL NOTES

1. PROVIDE 2-3" FACTORY DRILLED HOLES THROUGH THE POLE WALL FOR WIRE ENTRANCE ACCESS INSIDE THE TERMINAL COMPARTMENT. LOCATE THE HOLES IN THE CENTER OF THE TERMINAL COMPARTMENT (0 DEGREES ON THE POLES RADIAL INDEX) AT 28" AND 38" FROM BASE OF THE POLE. WELD A THREADED HALF COUPLING IN THE TOP HOLE THAT CAN RECEIVE A 3" DIA. METALLIC CONDUIT.
2. FABRICATE THE METAL POLE WITH 3-2" THREADED HALF COUPLINGS AND 1-1" THREADED HALF COUPLING INSTALLED 9" FROM THE TOP OF THE POLE TO FACILITATE WEATHERHEAD INSTALLATION FOR SIGNAL WIRE ENTRANCE TO THE POLE. WELD THE COUPLINGS TO THE POLE AT AN ANGLE OF NO LESS THAN 45 DEGREES FROM HORIZONTAL TO PROPERLY INSTALL THE WEATHERHEADS. LOCATE THE HALF COUPLINGS ON THE POLE AS SHOWN IN THE RADIAL ORIENTATION DETAIL.
3. PROVIDE A FACTORY STANDARD "J" HOOK FOR CABLE SUPPORT WELDED INSIDE THE TOP OF THE POLE AT 225 DEGREES ON THE POLES RADIAL INDEX.
4. STRAP ALL SIGNAL CABLES TO THE SIDE OF THE POLE WHEN THE DISTANCE BETWEEN THE SPAN WIRE ATTACHMENT CLAMP ON THE POLE AND THE WEATHERHEADS EXCEEDS 36". USE ¾" STAINLESS STEEL STRAPS TO SECURE WIRE TO THE POLE.
5. DO NOT INSTALL FIBER OPTIC COMMUNICATION CABLE IN OR ON ANY METAL POLES FOR THE PURPOSE OF TRANSITIONING THE RUNS FROM OVERHEAD TO UNDERGROUND. OVERHEAD ATTACHMENTS MAY BE ALLOWED USING A 3-BOLT CLAMP WITH "J" HOOK IF THE PURPOSE OF THE ATTACHMENT IS TO CONTINUE A RUN OVERHEAD. SEE SHEET 3.



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SHEET 2 OF 3 — **1740.01**

Structural Engineer	Electrical Engineer
NORTH CAROLINA PROFESSIONAL SEAL 028094 ENGINEER DEBESH C. SARKAR	NORTH CAROLINA PROFESSIONAL SEAL 16286 ENGINEER MILTON L. DEAN
D. Sarkar 9.23.03	Milton L Dean 9-24-03
SIGNATURE DATE	SIGNATURE DATE

Standard Drawings

Traffic Management and Signal Systems Unit
122 N. McDowell St., Raleigh, NC 27603

See Plate for Title

Original: 2002 Standards

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