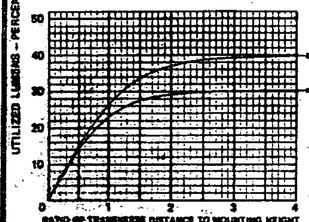
POLE NUMBER	POLE LENGTH, GAGE, & DIAMETER	B.C.	S	BASE DEPTH	BASE DIAMETER	ANCHOR BOLT SIZE
162	34', 3GA., 13"x8.24"	18"	18½"	9'-0"	30"	1 ¾"
	WITH 8' MAST ARM					
	AND LUMINAIRE.	2" BASE PLATE THICKNESS				



UTILIZATION CURVE

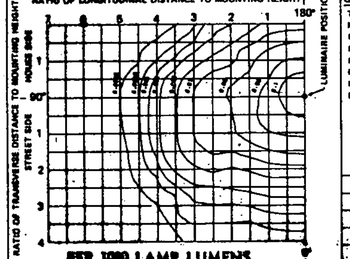
DESIGN CRITERIA
250w H.P.S LAMP
35' MOUNTING HEIGHT
1.1 f_c AVE. MAINTAINED
2.6 : 1 UNIFORMITY RATIO
8' MAST ARMS

GENERAL ELECTRIC
PHOTOMETRIC DATA
LIGHTING SYSTEMS BUSINESS DEPARTMENT
HENDERSONVILLE, N.C. U.S.A. 28739

PER 1000 LAMP LUMENS

FOR DESIGN PURPOSES ONLY
OTHER LUMINAIRES ACCEPTABLE
AS LONG AS THEY MEET OR
EXCEED THE CRITERIA SHOWN.

ISOFOOTCANDLE CURVES



NOTE: 1 FOOTCANDLE = 10.76 LUX

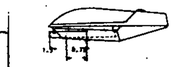
MOUNTING HEIGHT CORRECTION FACTORS FOR OTHER THAN [illegible] FEET
USE TABLE BELOW OR FACTOR = "ACTUAL MH"

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

LUMINAIRE
RADIUM CUTOFF
REFLECTOR 35-222829-01
CLEAR GLASS 35-222845-01
SOCKET POSITION A

LAMP
200.250.310 + 400 WATT HPS
GE NO LU200.LU250.LU310 + LU400
RWSI NO 586.550. MR . + 551

ANSI/IES TYPE 1972
MEDIUM/ CUT-OFF /TYPE III
CIE TYPE
CUT-OFF



GENERAL INFORMATION

TEST DISTANCE	7 METERS
MAX CANDELA	358
MAX CORE	72.5°
MAX VERTICAL PLANE	67.5°/292.5°
MAX CANDELA AT 80°	0
MAX CANDELA AT 90°	0
NADIR POST/CANDLE	0.1641
NADIR CANDELA	148

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

	LUMENS	PERCENT OF LAMP
DOWNWARD STREET SIDE	403	40.3
UPWARD STREET SIDE	0	0
DOWNWARD HOUSE SIDE	310	31.0
UPWARD HOUSE SIDE	0	0
TOTAL	713	71.3

TESTED [illegible] DATE 12-14-82
APPROVED [illegible] DATE 12-15-82
DRAWING NO 35-176563 SHEET NO 1

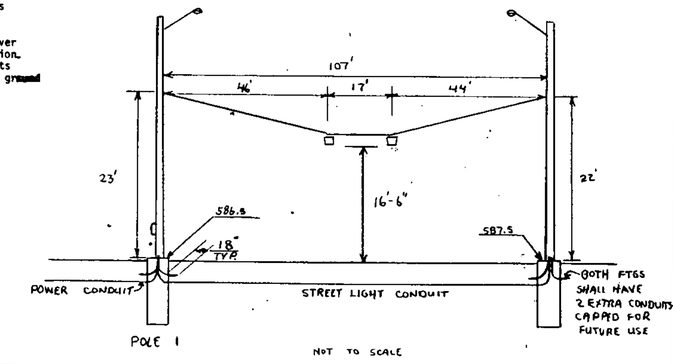
FLASHING BEACON

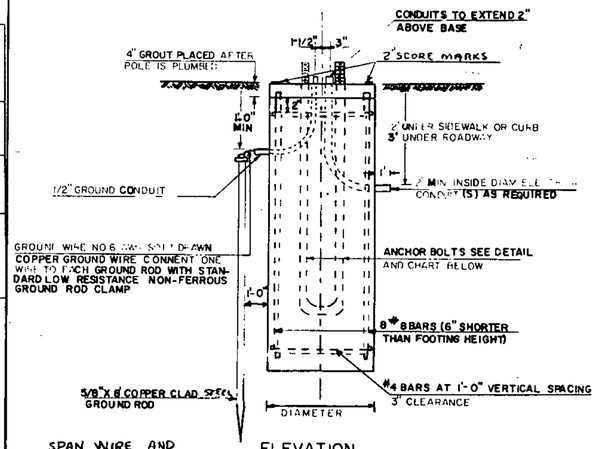
New equipment shall include but not be limited to, poles with mast arm and luminaire, span wire, beacons, conduit, double meter base, flasher unit with radio interference filter in a glass meter housing, conduit pole riser, all wiring and other incidentals to complete the system. The contractor is responsible for making all arrangements to work on and around the utility company's pole and obtain any necessary permits.

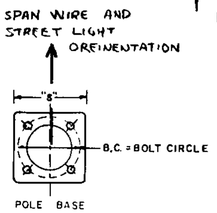
The system shall conform to requirements found in section 678- Traffic Control Signals and section 679- Street Lighting. All electrical work shall meet the requirements of the National Electrical Code and the local State electrical inspector.

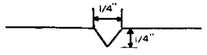
The 12" flashing beacon signal heads shall be 3M Brand optically programmed signal face assemblies. They shall be unmasked and the lenses cleaned before they are installed.

The top of footing elevation is assumed to be elevation shown however the top of the footing shall project no more than 4" above ground elevation. The footing shall be adjusted to suit the ground elevations as adjustments in the span wire tension can be made to provide for a 16½ foot signal to ground clearance.

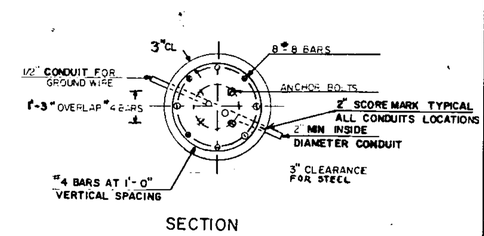




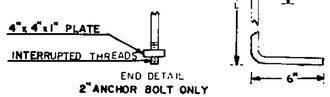




2" SCORE MARK DETAIL



SECTION



ANCHOR BOLT DETAIL

ANCHOR BOLT DETAIL			
SIZE	L	T	G
1-1/4"x 48"	42	8	10
1-1/2"x 60"	54	9	11
1-3/4"x 90"	84	9	11
2"x 96"	90	9	11

GENERAL NOTES

1) ALL MATERIAL AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANS. STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION.
2) TRAFFIC CONTROL SIGNAL STRAIN POLES SHALL CONFORM TO THE REQUIREMENTS OF SUBSECTION 752.02. STRAIN POLES, AND SHALL BE FURNISHED AND INSTALLED IN ACCORDANCE WITH SECTION 678 - TRAFFIC CONTROL SIGNALS.
3) STEEL POLE CAP SHALL BE PROVIDED WITH A 2-INCH BUSHED (BLIND) ELECTRICAL ENTRANCE WHEN APPLICABLE. THE STRAIN POLE SHALL BE PROVIDED WITH A 2-INCH (BLIND) HALF COUPLING NEAR THE TOP FOR SIGNAL CABLE.
4) FOUR HIGH-STRENGTH STEEL ANCHOR BOLTS WITH TWO HEXAGON NUTS PER BOLT SHALL BE FURNISHED WITH EACH POLE BOLTS SHALL HAVE A MINIMUM YIELD STRENGTH OF 55,000 P.S.I. AND AN ULTIMATE OF 80,000 P.S.I. BOLTS AND BASES SHALL BE OF ADEQUATE SIZE TO RESIST THE FULL BENDING MOMENT OF THE POLE AT YIELD STRENGTH STRESS.
5) ANCHOR BOLT ASSEMBLIES SHALL BE GALVANIZED.
6) ADDITIONAL DESIGN CRITERIA:
   CONCRETE - F_c = 1,400 P.S.I. F_c = 3,500 P.S.I.
   WIND LOAD - 25 LBS PER SQUARE FOOT (MINIMUM) ON THE EXPOSED POLE SURFACE.
7) IN ACCORDANCE WITH SUBSECTION 106.03 SHOP DRAWINGS (5 COPIES OF EACH) SHALL BE SUBMITTED TO THE STATE OF VERMONT, DEPARTMENT OF HIGHWAYS, FOR APPROVAL PRIOR TO FABRICATION.
8) CONCRETE FOR FOOTINGS SHALL CONFORM TO REQUIREMENTS OF CONCRETE CLASS "B", SECTION 601, STRUCTURAL CONCRETE.
9) ANY BACKFILL MATERIAL PLACED ADJACENT TO THE FOOTINGS SHALL BE GRAVEL MEETING THE REQUIREMENTS FOR GRANULAR BACKFILL FOR STRUCTURES, SUBSECTION 704.11.
10) WHEN THE DESIGNED DEPTH OF FOOTING CANNOT BE OBTAINED DUE TO UNFORESEEN FIELD CONDITIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND OBTAIN A REVISED FOOTING DETAIL FROM THE ENGINEER.
11) ALL ANCHOR BOLTS SHALL CONFORM WITH THE REQUIREMENTS OF SUBSECTION 714.16. NUTS FOR ASTM A-576 ANCHOR BOLTS SHALL CONFORM WITH ASTM A-325 OR ASTM A-576
12) PEDESTAL POSTS AND BASES (SUBSECTION 752.01) MAY BE EITHER STEEL WITH A CAST IRON BASE OR ALL ALUMINUM.
13) EACH METAL POLE SUPPORTING EITHER VEHICLE OR PEDESTRIAN TRAFFIC SIGNAL EQUIPMENT SHALL BE GROUNDED.
14) SHOP DRAWINGS SPECIFIED IN NOTE NO. 7 SHALL INCLUDE THE FOLLOWING INFORMATION:
   A) DETAILED DRAWING OF EACH COMPONENT OF THE STRAIN POLE.
   B) MATERIAL SPECIFICATIONS FOR EACH COMPONENT OF THE STRAIN POLE BY COMPLETE SPECIFICATIONS OR BY REFERENCE APPLICABLE ASTM STANDARD.
   C) NOTATION OF PROJECT NAME, PROJECT NUMBER, ROUTE NUMBER AND STRAIN POLE STATIONING. (TO BE INCLUDED ON EACH SHEET INCLUDING STANDARD SHEETS AND SPECIFICATION SHEETS).
   D) DETAILS FOR LOCATION OF LUMINAIRE ARM(S) ON STRAIN POLES.
   E) ALL ELEVATIONS AND DIMENSIONS NECESSARY TO PROVIDE A COMPLETE SET OF RECORD PLANS.
   F) DEAD LOAD DEFLECTION INFORMATION.
   G) WELDING DETAILS AND PROCEDURES ARE REQUIRED FOR ALL WELDS. PROCEDURES SHALL BE SUBMITTED FOR APPROVAL WITH REFERENCE TO EACH WELD IDENTIFIED ON THE SHOP DRAWINGS.
15) ALL DESIGN DETAILS, WORKMANSHIP, PROCEDURES AND INSPECTION OF WELDING SHALL CONFORM TO THE REQUIREMENTS OF AWS D.1.1-80 AS MODIFIED BY THE LATEST EDITION OF THE AASHTO STANDARD SPECIFICATIONS FOR WELDING OF STRUCTUAL STEEL HIGHWAY BRIDGES. THE SHIELDED METAL ARC WELDING (SMAW) OR SUBMERGED ARC WELDING (SAW) PROCESSES SHALL BE USED FOR ALL WELDING UNLESS OTHER PROCESSES ARE APPROVED, ON A PROJECT BY PROJECT BASIS, FROM ACCEPTABLE RESULTS OF PROCEDURE QUALIFICATION TESTS.
16) WHERE WELDMENTS ARE TO BE GALVANIZED AFTER WELDING, A TYPE OF FILLER METAL WHICH WILL DEPOSIT WELD METAL WITH A SILICON CONTENT LESS THAN 0.4 PERCENT SHALL BE USED.
17) ALL WELDS SHALL BE AT LEAST AS STRONG AS THE MATERIAL BEING WELDED.

STRAIN POLE FOOTING

STRAIN POLE FOOTING DETAIL SHEET

[TRAFFIC SIGNAL PROJECTS AND RELATED ITEMS]

DONE BY OAR DATE 1/85
DRAWN BY DATE
CHECKED BY DATE

PROJ. ST JOHNSBURY NO. DPFF041(1)
SHEET 54 OF 229