U.M. DESIGN NUMBER	"A" ROUND STEEL SHAFT	ARM TUBE SIZE	L SPAN	MAX. ALLOWABLE XYZ VALUES
71026-B87-Y1	0E-14x10.92x22'-0" 0.313" WALL THICKNESS	7E-9.0x6.90x15'-0"	15'-0"	302 CU. FT.
71026-B87-Y2		7E-9.0x6.2x20'-0"	20'-0"	467 CU. FT.
71026-B87-Y3		7E-10.0x6.5x25'-0"	25'-0"	680 CU. FT.
71026-B87-Y4		7E-10.0x5.80x30'-0"	30'-0"	890 CU. FT.
71026-B87-Y5		3E-10.0x5.10x35'-0"	35'-0"	1071 CU. FT.
71026-B87-Y6		3E-11.0x5.4x40'-0"	40'-0"	1318 CU. FT.
71026-B87-Y7		3E-12.0x8.5x25'-0" 7E-9.14x6.1x21'-9"	45'-0"	1500 CU. FT.
71026-B87-Y8	0E-17.5x14.42x22'-0" 0.313" WALL THICKNESS	3E-13.0x9.5x25'-0" 7E-10.14x6.40x26'-9"	50'-0"	1740 CU. FT.
71026-B87-Y9		3E-15.5x11.72"x27'-0" 7E-12.4x8.20x30'-0"	55'-0"	2200 CU. FT.
71026-B87-Y10		3E-15.5x11.72"x27'-0" 7E-12.4x7.50x35'-0"	60'-0"	2600 CU. FT.
71026-B87-Y11		0E-15.0x11.22"x27'-0" 3E-12.04x6.44x40'-0"	65'-0"	2900 CU. FT.

FORMULA: MAX ALLOW=$\sum$(P.A.)x(MOM ARM)

NOTE:
SAMPLE DESIGN = 35'-0" @ 17' SIGNAL ARM END MOUNTED AND SPACED 10'-0" & 22'-0" FROM OUTBOARD END; PLUS (1) LUMINAIRE ARM 16'-0" SPREAD & 40'-0" MTG. HGT.

71026-B87-Y5-M16-EK10K12-40-35@17 — "E" SIGNIFIES END MOUNTED SIGNAL CONN.
IF OUTBOARD SIGNAL IS SIDE MOUNTED USE, — "L" (ARM) LENGTH
71026-B87-Y5-M16-SK10K12-40-35@17 — ARM CONN. MTG HGT
"S" SIGNIFIES SIDE MOUNTED SIGNAL CONN.

APPROVED
Manufacturer's Pole Plan
Approved For Listing As A
Pre-Approved Drawing
WSDOT Bridge & Structures Office
By GB Date 1/20/2004

LUMINAIRE ARM DATA

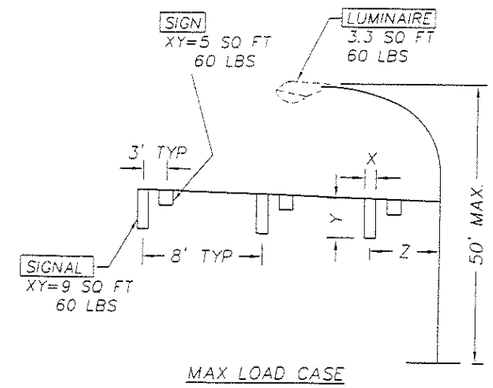
TYPE	SPAN "S"	"B"	ARM TUBE "D"	PIPE TUBE "E"	TENON	MTG.HT "Q"	EXTENSION SHAFT "EX"
M6	6'-0"	5'-10"	7E-5.60x3.89x12'-2 5/16"	———	REQ.	40'-0" 50'-0"	11E-6.43x5.03x10'-0" 11E-7.83x5.03x20'-0"
M8	8'-0"	6'-0"	7E-5.60x3.61x14'-2 5/16"	———	REQ.	40'-0" 50'-0"	11E-6.43x5.03x10'-0" 11E-7.83x5.03x20'-0"
M10	10'-0"	6'-2"	7E-5.60x3.33x16'-2 5/16"	———	REQ.	40'-0" 50'-0"	11E-6.43x5.03x10'-0" 11E-7.83x5.03x20'-0"
M12	12'-0"	6'-4"	7E-5.60x3.50x15'-0"	.188"W-3.50x3'-9 5/16"	REQ.	40'-0" 50'-0"	11E-6.43x5.03x10'-0" 11E-7.83x5.03x20'-0"
M14	14'-0"	6'-6"	7E-5.60x3.5x15'-0"	.188"W-3.50x5'-9 5/16"	REQ.	40'-0" 50'-0"	11E-6.43x5.03x10'-0" 11E-7.83x5.03x20'-0"
M16	16'-0"	6'-8"	7E-5.60x3.5x15'-0"	.188"W-3.50x7'-9 5/16"	REQ.	40'-0" 50'-0"	11E-6.43x5.03x10'-0" 11E-7.83x5.03x20'-0"

WELDING NOTE:
"WELDING PER AWS D1.1 STRUCTURAL WELDING CODE, 2002 AND SECTION 1.4.2 OF THE SPECIFICATIONS FOR STRUCTURAL SUPPORTS OF HIGHWAY SIGNS,LUMINAIRES AND TRAFFIC SIGNALS,AASHTO 2001."

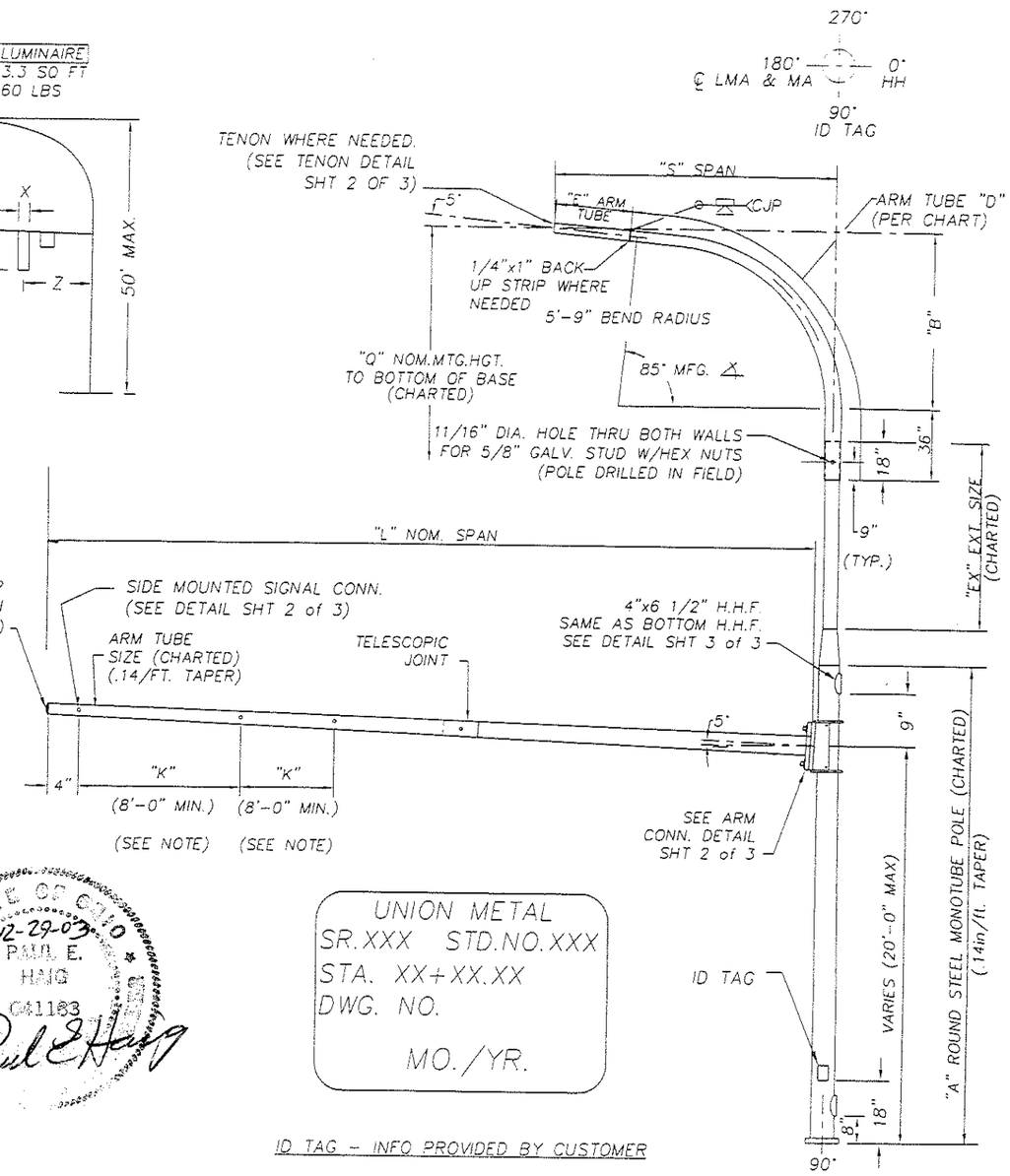
DESIGNED FOR MAX. ALLOW. XYZ VALUE AS CHARTED

MATERIAL	SPECIFICATION
MONOTUBES all t	ASTM-A595 GR.A OR A607-55
FOR 0.23<=t<=0.3125	ASTM-572 GR55 min. 21% EL.
OR t<0.23	ASTM-607 GR.55 CL. II /AKA/ ASTM-A1011 HSLAS GR.55 CL. II min. 22% EL
PLATES	ASTM-A36
PIPE TENON	ASTM-A53 GR.B OR A501
CONNECTION BOLTS	ASTM-A325
ANCHOR BOLTS	ASTM-A449
A. BOLT NUTS	ASTM-A563 GR. DH
STRUCTURE FINISH	H.D.GALV. ASTM-A123
HARDWARE FINISH	H.D.GALV. ASTM-A153

RATING NOTE:
DESIGNED PER 2001 AASHTO
BASIC WIND SPEED: 90MPH
DESIGN LIFE: 25 YEARS
FATIGUE CATEGORY: III
GALLOPING LOADS: YES (Ir=0.30)
TRUCK GUSTS: YES (Ir=0.68)
NATURAL WIND: YES (Ir=0.59)
CAFL AT CRITICAL CONNECTIONS:
POLE TO BASE PLATE CONNECTION
A. SOCKET DETAIL W/ FILLET WELD=E
B. FULL PENETRATION WELD=D
ARM TO PLATE CONNECTION:
A. SOCKET DETAIL W/ FILLET WELD=E
B. FULL PENETRATION WELD=D
FLANGE GUSSETS=E'
POLE WALL AT FLANGE GUSSETS=E'
POLE JUST BELOW FLANGE BOX=E
POLE SHAFT=B'
TELESCOPIC JOINT=B



MAX LOAD CASE



STATE OF OHIO
12-29-03
PAUL E. HAIG
041183
Paul E Haig

UNION METAL
SR.XXX STD.NO.XXX
STA. XX+XX.XX
DWG. NO.
MO./YR.

ID TAG - INFO PROVIDED BY CUSTOMER

R4	0873-07-5	CHANGED CONN. BOLT LENGTH FOR Y8-Y11 (CUSTOMER REQUEST), CHANGED CONE WELD SIZE. A.BOLT PLATE NOTE	11/24/03	LCV LCV
R3	0873-07-4	DECORATIVE CONE TO WELD ALL AROUND REVISED FLANGE BOLT SPACING ADDED HANDHOLE REINFORCEMENT DETAIL	10/3/03	LCV CXC
R2	0873-07-3	FLANGE CONNECTION TO WRAP-AROUND GUSSETS REVISED SIZING DUE TO STRONGER FLANGE BOX REVISED LUMINAIRE EXTENSION CONNECTION TO POLE	8/7/03	LCV CBL

REVISIONS

TYPE III STEEL COMBINATION TRAFFIC & STREET LIGHTING POLES, TYPE 1 LUM. ARM
STATE OF WASHINGTON DOT

LOF ----
REQ.# 0873-07-1 S.O.# ---- ENG.REF.# 71026-B35 CAD# ------

Union Metal CORPORATION R04

DRAWN LCV
DATE 3/4/03
CHECKED CBL

DRAWING NO.
71026-B87
SHT. 1 OF 3

ORIGINAL