POLE SELECTION TABLE - SINGLE ARM - WITH & WITHOUT LUMINAIRE					
Arm Type	D1	D3	D5	D6	D7
Pole Type	S1 & S21 Lum	S2 & S22 Lum	S3 & S23 Lum	S4 & S24 Lum	S6

POLE SELECTION TABLE - DOUBLE ARM - WITHOUT LUMINAIRE										
Arm Type	D1 - D1	D3 - D1	D5 - D2	D6 - D2	D4 - D4	D5 - D4	D6 - D4	D5 - D5	D6 - D5	D6 - D6
Pole Type	S1	S2	S3	S4	S3	S4	S4	S4	S4	S5

Arm 1 is listed first

ARM DESIGN TABLE - ALL CASES														
ARM TYPE	ARM LENGTH	MAST ARM				ARM EXTENSION				ARM CONNECTION & WELDS				
		FA(ft)	FB(in)	FC(in)	FD(in)	FE(ft)	FF(in)	FG(in)	FH(in)	HT(in)	FJ/SJ(in)	FK/SK(in)	FM/SM(in)	FQ/SQ(in)
D1	36'-0"	36	8.96	14	0.1793	-	-	-	-	20	25	2.5	0.125	0.313
D2	36'-0"	36	8.96	14	0.1793	-	-	-	-	30	36	3	0.125	0.313
D3	46'-0"	36.3	8.92	14	0.1793	11.7	13.36	15	0.313	20	25	2.5	0.25	0.375
D4	46'-0"	36.3	8.92	14	0.1793	11.7	13.36	15	0.313	30	36	3	0.25	0.375
D5	60'-0"	36	7.96	13	0.1793	26	12.36	16	0.375	30	36	3	0.313	0.563
D6	70'-6"	39.4	9.49	15	0.1793	33.1	14.37	19	0.375	30	36	3	0.313	0.563
D7	78'-0"	40	8.44	14	0.1793	40.0	13.40	19	0.375	30	34	3	0.313	0.625

Arm Camber Angle = 2 degrees

POLE, CONNECTION AND SHAFT DESIGN TABLE - SINGLE & DOUBLE ARM																						
POLE TYPE	UA(ft)	UC(in)	UD(in)	UE(in)	UG(ft)	UPRIGHT BASE CONNECTION							CONNECTION PLATE DATA									DRILLED SHAFT DATA			
						No. Bolts	BA (in)	BB (in)	BC (in)	BD (in)	BE (in)	BF (in)	HT (in)	FJ/SJ (in)	FL/SL (in)	FN/SN (in)	FO/SO (in)	FP/SP (in)	FR/SR (in)	FS/SS (in)	FT/ST (in)	DA (ft)	DB (ft)	RA	RB
S1	24	12.64	16	0.375	-	6	30	1.75	1.75	0.375	0.313	36	20	25	0.75	0.438	15.5	1	2	8	0.438	13	3.5	10	12
S2	24	14.64	18	0.375	-	6	32	1.75	1.75	0.375	0.313	36	20	25	0.75	0.438	15.5	1	2	8	0.438	13	4	10	16
S3	24	17.64	21	0.375	-	6	37	1.75	2	0.375	0.313	40	30	36	0.75	0.438	22	1.25	2.5	12.5	0.438	15	4	10	16
S4	24	22.64	26	0.375	-	6	42	1.75	2	0.375	0.313	40	30	36	0.75	0.438	22	1.25	2	12.5	0.438	17	4.5	10	20
S5	24	23.64	27	0.375	-	6	45	1.75	2.25	0.375	0.313	45	30	36	0.75	0.438	22	1.25	2	12.5	0.438	19	4.5	10	20
S6	24	21.64	25	0.375	-	6	41	1.75	2	0.375	0.313	40	30	34	0.75	0.5	16.5	1.25	2	12.5	0.5	15	4.5	10	20
S21 Lum	39	10.54	16	0.375	37.5	6	30	1.75	1.75	0.375	0.313	40	20	25	0.75	0.438	11.5	1	2	8	0.438	13	3.5	10	12
S22 Lum	39	12.54	18	0.375	37.5	6	32	1.75	1.75	0.375	0.313	40	20	25	0.75	0.438	12.5	1	2	8	0.438	13	4	10	16
S23 Lum	39	15.54	21	0.375	37.5	6	37	1.75	2	0.375	0.313	40	30	36	0.75	0.438	15	1.25	2.5	12.5	0.438	14	4	10	16
S24 Lum	39	20.54	26	0.375	37.5	6	42	1.75	2	0.375	0.313	40	30	36	0.75	0.438	17	1.25	2	12.5	0.438	15	4.5	10	20

LUMINAIRE AND LUMINAIRE CONNECTION											
LA(ft)	LB(ft)	LC(in)	LD(in)	LE	LF(ft)	LG(in)	LH(in)	LJ(in)	LK(in)	LL(deg)	UG(ft)
40	10	3	0.125	0.5	8	0.5	0.75	0.25	0.25	0	37.5

NOTES:

1. Work this Index with Index No. 17745.
2. Standard Mast Arm "D" Assemblies are designed to Loading Trees as indicated in Plans Preparation Manual.
3. Design Speed = 150 mph with Signal Backplates

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
07/01/07	DYW	AASHTO 2001 LTS-4 Specifications updates. Designed new Standard Mast Arm "D", "E" & "F" Assemblies.			

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STANDARD MAST ARM "D" ASSEMBLIES

Interim Date 07/01/07

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POLE SELECTION TABLE - SINGLE ARM - WITH & WITHOUT LUMINAIRE					
Arm Type	E1	E3	E5	E6	E7
Pole Type	T1 & T21 Lum	T2 & T22 Lum	T3 & T23 Lum	T4 & T24 Lum	T6

POLE SELECTION TABLE - DOUBLE ARM - WITHOUT LUMINAIRE										
Arm Type	E1 - E1	E3 - E1	E5 - E2	E6 - E2	E4 - E4	E5 - E4	E6 - E4	E5 - E5	E6 - E5	E6 - E6
Pole Type	T1	T2	T3	T4	T3	T4	T4	T4	T4	T5

Arm 1 is listed first

ARM DESIGN TABLE - ALL CASES														
ARM TYPE	ARM LENGTH	MAST ARM				ARM EXTENSION				ARM CONNECTION & WELDS				
		FA(ft)	FB(in)	FC(in)	FD(in)	FE(ft)	FF(in)	FG(in)	FH(in)	HT(in)	FJ/SJ(in)	FK/SK(in)	FM/SM(in)	FQ/SQ(in)
E1	36'-0"	36.0	5.96	11	0.25	-	-	-	-	22	22	2	0.187	0.313
E2	36'-0"	36.0	5.96	11	0.25	-	-	-	-	30	32	2.75	0.187	0.313
E3	46'-0"	36.3	6.95	12	0.25	11.7	11.36	13	0.313	22	22	2	0.25	0.375
E4	46'-0"	36.3	6.95	12	0.25	11.7	11.36	13	0.313	30	32	2.75	0.25	0.375
E5	60'-0"	36.0	5.99	11	0.25	26	10.36	14	0.375	30	32	2.75	0.313	0.5
E6	70'-6"	39.4	6.52	12	0.25	33.1	11.37	16	0.375	30	32	2.75	0.313	0.563
E7	78'-0"	40.0	7.47	13	0.1793	40	12.40	18	0.375	30	32	2.5	0.313	0.563

Arm Camber Angle = 2 degrees

POLE, CONNECTION AND SHAFT DESIGN TABLE - SINGLE & DOUBLE ARM																							
POLE TYPE	UA(ft)	UC(in)	UD(in)	UE(in)	UG(ft)	UPRIGHT BASE CONNECTION							CONNECTION PLATE DATA									DRILLED SHAFT DATA			
						No. Bolts	BA (in)	BB (in)	BC (in)	BD (in)	BE (in)	BF (in)	HT (in)	FJ/SJ (in)	FL/SL (in)	FN/SN (in)	FO/SO (in)	FP/SP (in)	FR/SR (in)	FS/SS (in)	FT/ST (in)	DA (ft)	DB (ft)	RA	RB
T1	24	10.64	14	0.375	-	6	26	1.375	1.5	0.375	0.313	36	22	22	0.5	0.375	14	0.75	1.75	9.5	0.375	12	3.5	10	12
T2	24	12.64	16	0.375	-	6	28	1.375	1.5	0.375	0.313	36	22	22	0.5	0.375	14	1	1.75	9	0.375	14	3.5	10	12
T3	24	15.64	19	0.375	-	6	33	1.375	2	0.375	0.313	36	30	32	0.75	0.375	19.5	1	2	13	0.375	15	4	10	16
T4	24	18.64	22	0.5	-	6	38	1.5	2	0.5	0.438	40	30	32	0.75	0.375	19.5	1.25	1.875	12.5	0.375	19	4	10	16
T5	24	18.64	22	0.5	-	6	38	1.625	2	0.5	0.438	40	30	32	0.75	0.375	19.5	1.25	1.875	12.5	0.375	21	4	10	16
T6	24	18.64	22	0.375	-	6	36	1.5	2	0.375	0.313	40	30	30	0.75	0.438	15	1.25	1.75	12.5	0.438	18	4	10	16
T21 Lum	39	8.54	14	0.375	37.5	6	26	1.625	1.5	0.375	0.313	40	22	22	0.5	0.375	10	0.75	1.75	9.5	0.375	12	3.5	10	12
T22 Lum	39	10.54	16	0.375	37.5	6	30	1.75	1.75	0.375	0.313	40	22	22	0.5	0.375	11	1	1.75	9	0.375	13	3.5	10	12
T23 Lum	39	13.54	19	0.375	37.5	6	33	1.625	2	0.375	0.313	40	30	32	0.75	0.375	13	1	2.25	13	0.375	14	4	10	16
T24 Lum	39	16.54	22	0.375	37.5	6	38	1.625	2	0.375	0.313	40	30	32	0.75	0.375	15	1.25	1.875	12.5	0.375	17	4	10	16

LUMINAIRE AND LUMINAIRE CONNECTION											
LA(ft)	LB(ft)	LC(in)	LD(in)	LE	LF(ft)	LG(in)	LH(in)	LJ(in)	LK(in)	LL(deg)	UG(ft)
40	10	3	0.125	0.5	8	0.5	0.75	0.25	0.25	0	37.5

NOTES:

1. Work this Index with Index No. 17745.
2. Standard Mast Arm "E" Assemblies are designed to Loading Trees as indicated in Plans Preparation Manual.
3. Design Speed = 130 mph with Signal Backplates or 150 mph without Signal Backplates

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
07/01/07	DYW	AASHTO 2001 LTS-4 Specifications updates. Designed new Standard Mast Arm "D", "E" & "F" Assemblies.			

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STANDARD MAST ARM "E" ASSEMBLIES

Interim Date 07/01/07

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POLE SELECTION TABLE - SINGLE ARM - WITH & WITHOUT LUMINAIRE					
Arm Type	F1	F3	F5	F6	F7
Pole Type	W1 & W21 Lum	W2 & W22 Lum	W3 & W23 Lum	W4 & W24 Lum	W6

POLE SELECTION TABLE - DOUBLE ARM - WITHOUT LUMINAIRE										
Arm Type	F1 - F1	F3 - F1	F5 - F2	F6 - F2	F4 - F4	F5 - F4	F6 - F4	F5 - F5	F6 - F5	F6 - F6
Pole Type	W1	W2	W3	W4	W3	W4	W4	W4	W4	W5

Arm 1 is listed first

ARM DESIGN TABLE - ALL CASES														
ARM TYPE	ARM LENGTH	MAST ARM				ARM EXTENSION				ARM CONNECTION & WELDS				
		FA(ft)	FB(in)	FC(in)	FD(in)	FE(ft)	FF(in)	FG(in)	FH(in)	HT(in)	FJ/SJ(in)	FK/SK(in)	FM/SM(in)	FQ/SQ(in)
F1	36'-0"	36	5.96	11	0.1793	-	-	-	-	20	20	2	0.125	0.25
F2	36'-0"	36	5.96	11	0.1793	-	-	-	-	29	29	2.25	0.125	0.25
F3	46'-0"	36.3	5.92	11	0.1793	11.7	10.36	12	0.25	20	20	2	0.188	0.313
F4	46'-0"	36.3	5.92	11	0.1793	11.7	10.36	12	0.25	29	29	2.25	0.188	0.313
F5	60'-0"	36	5.96	11	0.1793	26.0	10.36	14	0.313	29	29	2.25	0.25	0.375
F6	70'-6"	39.4	5.49	11	0.1793	33.1	10.37	15	0.313	29	29	2.25	0.25	0.438
F7	78'-0"	40	7.44	12	0.1793	40.0	12.4	17	0.313	29	29	2.25	0.25	0.438

POLE, CONNECTION AND SHAFT DESIGN TABLE - SINGLE & DOUBLE ARM																							
POLE TYPE	UA(ft)	UC(in)	UD(in)	UE(in)	UG(ft)	UPRIGHT BASE CONNECTION							CONNECTION PLATE DATA									DRILLED SHAFT DATA			
						No. Bolts	BA (in)	BB (in)	BC (in)	BD (in)	BE (in)	BF (in)	HT (in)	FJ/SJ (in)	FL/SL (in)	FN/SN (in)	FO/SO (in)	FP/SP (in)	FR/SR (in)	FS/SS (in)	FT/ST (in)	DA (ft)	DB (ft)	RA	RB
W1	24.0	9.64	13	0.375	-	6	25	1.25	1.5	0.375	0.313	36	20	20	0.5	0.313	13	0.75	2.0	8.5	0.313	12	3.5	10	12
W2	24.0	11.64	15	0.375	-	6	27	1.25	1.5	0.375	0.313	36	20	20	0.5	0.313	14	0.75	2.0	8.5	0.313	14	3.5	10	12
W3	24.0	14.64	18	0.375	-	6	32	1.25	1.75	0.375	0.313	36	29	29	0.5	0.313	17.5	1	2.0	12.5	0.313	15	4	10	16
W4	24.0	17.64	21	0.375	-	6	35	1.375	1.75	0.375	0.313	36	29	29	0.5	0.313	17.5	1	2.0	12.5	0.313	19	4	10	16
W5	24.0	17.64	21	0.375	-	6	35	1.375	1.75	0.375	0.313	36	29	29	0.5	0.313	17.5	1	2.0	12.5	0.313	21	4	10	16
W6	24.0	17.64	21	0.375	-	6	35	1.375	1.75	0.375	0.313	36	30	30	0.5	0.375	14	1.25	2.0	12.5	0.375	18	4	10	16
W21 Lum	39.0	7.54	13	0.375	37.5	6	25	1.375	1.5	0.375	0.313	36	20	20	0.5	0.313	9	0.75	2.0	8.5	0.313	10	3.5	10	12
W22 Lum	39.0	9.54	15	0.375	37.5	6	27	1.375	1.5	0.375	0.313	36	20	20	0.5	0.313	10	0.75	2.0	8.5	0.313	13	3.5	10	12
W23 Lum	39.0	12.54	18	0.375	37.5	6	32	1.375	1.75	0.375	0.313	36	29	29	0.5	0.313	11.5	1	2.0	12.5	0.313	14	4	10	16
W24 Lum	39.0	15.54	21	0.375	37.5	6	35	1.375	1.75	0.375	0.313	36	29	29	0.5	0.313	13	1	2.0	12.5	0.313	17	4	10	16

LUMINAIRE AND LUMINAIRE CONNECTION											
LA(ft)	LB(ft)	LC(in)	LD(in)	LE	LF(ft)	LG(in)	LH(in)	LJ(in)	LK(in)	LL(deg)	UG(ft)
40	10	3	0.125	0.5	8	0.5	0.75	0.25	0.25	0	37.5

NOTES:

1. Work this Index with Index No. 17745.
2. Standard Mast Arm "F" Assemblies are designed to Loading Trees as indicated in Plans Preparation Manual.
3. Design Speed = 110 mph with Signal Backplates or 130 mph without Signal Backplates.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
07/01/07	DYW	AASHTO 2001 LTS-4 Specifications updates. Designed new Standard Mast Arm "D", "E" & "F" Assemblies.			

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