1124

3PH SELF-SUPPORTING FRAMING

CONTAINS

NOTES:

These charts and models refer to Steel Poles.

If there is a difference in elevation between poles that are greater than 5'with greater than 200 ft span, it must be modeled by an engineer.

If there is a junction pole or pole with multiple circuits, it must be modeled by an engineer.

All calculations based on NESC medium loading area.

NESC Grade C construction areas include all electrical distribution lines except for highways and railroad crossings.

NESC Grade B construction areas include only highways and railroad crossings.

Consult with design lead to determine if 1/0 or 4/0 lines would be candidate for upgrade in the short-to-mid-term future.

Pole calculations done with consideration of two tangent medium to heavy communications.

Dead- end pole calculations done with consideration of dead- end medium sized communications. Any more than 2 will require to be modeled by an engineer.

Angle- pole and Dead- end pole calculations were performed with static full tension values in below table. Unless calculation states that it is "reduced tension" (50%) or slack (15%) of full tension values.

The pole analysis calculations are done to a maximum pole capacity utilization of 80%.

Dead- end poles shall have a full tension max span of 300 ft, spans greater than this will need to be modeled by an engineer.

Dead- end poles that have a "reduced" span of greater than 150 ft or "slack" span greater than 75 ft will need to be an engineer.

The longest span shall be modeled with the angle presented on the design.

BARE WIRE – STATIC FULL TENSION TABLE (lbs)		
AAC 795 KCM	Arbutus	4750
ACSR 336 KCM	26/7 Linnet	4230
AAC 4/0	Oxlip	1500
ACSR 1/0	Raven	1500

NOTES:

These charts and models refer to Steel Poles.

795 KCMIL AAC Arbutus Primary with 4/0 AAC Oxlip Neutral						
Ruling Span	<100 Feet		100-200 Feet		200-300 Feet	
Pole Length (ft.)	Grade C Limit (line angle degrees)	Grade B Limit (line angle degrees)	Grade C Limit (line angle degrees)	Grade B Limit (line angle degrees)	Grade C Limit (line angle degrees)	Grade B Limit (line angle degrees)
(LD-2 Series)						
45	0°-7°	0°-4°	0°-6°	0°-4°	0°-5°	0°-3°
50	0°-7°	0°-4°	0°-6°	0°-4°	0°-5°	0°-3°
55	0°-7°	0°-4°	0°-6°	0°-4°	0°-5°	0°-3°
60	0°-7°	0°-4°	0°-6°	0°-4°	0°-5°	0°-3°
65	0°-6°	0°-4°	0°-5°	0°-4°	0°-4°	0°-3°
(LD-4 Series)						
45	8°-10°	5°-6°	7°-9°	5°	6°-8°	4°
50	8°-10°	5°-6°	7°-9°	5°	6°-8°	4°
55	8°-10°	5°-6°	7°-9°	5°	6°-8°	4°
60	8°-10°	5°-6°	7°-9°	5°	6°-8°	4°
65	7°-9°	5°-6°	6°-8°	5°	5°-7°	4°
(LD-6 Series)						
45	11°-14°	7°-9°	10°-13°	6°-8°	9°-12°	5°-7°
50	11°-14°	7°-9°	10°-13°	6°-8°	9°-12°	5°-7°
55	11°-14°	7°-9°	10°-13°	6°-8°	9°-12°	5°-7°
60	11°-13°	7°-8°	10°-12°	6°-7°	9°-11°	5°-6°
65	10°-13°	7°-8°	9°-12°	6°-7°	8°-11°	5°-6°
(LD-8 Series)						
45	15°-20°	10°-13°	14°-19°	9°-12°	13°-18°	8°-11°
50	15°-19°	10°-12°	14°-18°	9°-11°	13°-17°	8°-10°
55	15°-18°	10°-12°	14°-17°	9°-11°	13°-16°	8°-10°
60	14°-17°	9°-11°	13°-16°	8°-10°	12°-15°	7°-9°
65	14°-17°	9°-11°	13°-16°	8°-10°	12°-15°	7°-9°
(LD-10 Series)						
45	21°-25°	14°-16°	20°-24°	13°-15°	19°-23°	12°-14°
50	20°-24°	13-16°	19°-23°	12°-15°	18°-22°	11°-14°
55	19°-23°	13°-15°	18°-22°	12°-14°	17°-21°	11°-13°
60	18°-22°	12°-14°	17°-21°	11°-13°	16°-20°	10°-12°
65	18°-21°	12°-14°	17°-20°	11°-13°	16°-19°	10°-12°

NOTES:

These charts and models refer to Steel Poles.

795 KCMIL AAC Arbutus Primary with 1/0 ACSR Raven Neutral						
Ruling Span	<100 Feet		100-200 Feet		200-300 Feet	
Pole Length (ft.)	Grade C Limit (line angle degrees)	Grade B Limit (line angle degrees)	Grade C Limit (line angle degrees)	Grade B Limit (line angle degrees)	Grade C Limit (line angle degrees)	Grade B Limit (line angle degrees)
(LD-2 Series)						
45	0°-7°	0°-5°	0°-6°	0°-5°	0°-6°	0°-4°
50	0°-7°	0°-5°	0°-6°	0°-5°	0°-6°	0°-4°
55	0°-7°	0°-5°	0°-6°	0°-5°	0°-6°	0°-4°
60	0°-6°	0°-5°	0°-6°	0°-5°	0°-5°	0°-4°
65	0°-6°	0°-5°	0°-6°	0°-5°	0°-5°	0°-4°
(LD-4 Series)						
45	8°-10°	6°	7°-10°	6°	7°-9°	5°
50	8°-10°	6°	7°-10°	6°	7°-9°	5°
55	8°-10°	6°	7°-10°	5°	7°-9°	5°
60	7°-10°	6°	7°-9°	5°	6°-9°	5°
65	7°-9°	6°	7°-9°	5°	6°-8°	5°
(LD-6 Series)						
45	11°-15°	7°-9°	11°-14°	7°-9°	10°-14°	6°-8°
50	11°-14°	7°-9°	11°-14°	7°-8°	10°-13°	6°-8°
55	11°-14°	7°-9°	11°-14°	6°-8°	9°-13°	6°-8°
60	11°-13°	7°-8°	10°-13°	6°-8°	10°-12°	6°-7°
65	10°-13°	7°-8°	10°-12°	6°-7°	9°-12°	6°-7°
(LD-8 Series)						
45	16°-21°	10°-13°	15°-20°	10°-13°	15°-20°	9°-12°
50	15°-20°	10°-12°	15°-19°	9°-12°	14°-19°	9°-12°
55	15°-19°	10°-12°	15°-19°	9°-11°	14°-18°	9°-11°
60	14°-18°	9°-11°	14°-17°	9°-11°	13°-17°	8°-10°
65	14°-17°	9°-11°	13°-17°	8°-10°	13°-16°	8°-10°
(LD-10 Series)						
45	22°-27°	14°-17°	21°-26°	14°-16°	21°-26°	13°-16°
50	21°-25°	13-16°	20°-25°	13°-16°	20°-24°	13°-15°
55	20°-24°	13°-15°	20°-24°	12°-15°	19°-23°	12°-14°
60	19°-23°	12°-15°	18°-23°	12°-14°	18°-22°	11°-14°
65	18°-21°	12°-14°	18°-22°	11°-13°	17°-21°	11°-13°

NOTES:

These charts and models refer to Steel Poles.

4/0 AAC Oxlip Primary with 4/0 AAC Oxlip Neutral						
Ruling Span	<100 Feet		100-200 Feet		200-300 Feet	
Pole Length (ft.)	Grade C Limit (line angle degrees)	Grade B Limit (line angle degrees)	Grade C Limit (line angle degrees)	Grade B Limit (line angle degrees)	Grade C Limit (line angle degrees)	Grade B Limit (line angle degrees)
(LD-2 Series)						
45	0°-20°	0°-12°	0°-18°	0°-10°	0°-16°	0°-8°
50	0°-20°	0°-12°	0°-18°	0°-10°	0°-16°	0°-8°
55	0°-20°	0°-12°	0°-18°	0°-10°	0°-15°	0°-8°
(LD-4 Series)						
45	21°-30°	13°-18°	19°-27°	11°-16°	17°-25°	9°-14°
50	21°-29°	13°-18°	19°-27°	11°-16°	17°-25°	9°-14°
55	21°-29°	13°-18°	19°-27°	11°-16°	16°-25°	9°-14°
(LD-6 Series)						
45	31°-41°	19°-26°	28°-39°	17°-24°	26°-37°	15°-22°
50	30°-40°	19°-25°	28°-38°	17°-23°	26°-36°	15°-21°
55	30°-39°	19°-25°	28°-37°	17°-23°	26°-35°	15°-21°
(LD-8 Series)						
45	42°-58°	27°-37°	40°-56°	25°-35°	38°-54°	23°-33°
50	41°-56°	26°-35°	39°-54°	24°-33°	37°-52°	22°-31°
55	40°-53°	26°-33°	38°-51°	24°-31°	36°-49°	22°-29°
(LD-10 Series)						
45	59°-76°	38°-47°	57°-74°	36°-45°	55°-72°	34°-43°
50	57°-72°	36°-45°	55°-70°	34°-43°	53°-68°	32°-41°
55	54°-69°	34°-43°	52°-67°	32°-41°	50°-65°	30°-39°

NOTES:

These charts and models refer to Steel Poles.

1/0 ACSR Raven Primary with 1/0 ACSR Raven Neutral						
Ruling Span	<100 Feet		100-200 Feet		200-300 Feet	
Pole Length (ft.)	Grade C Limit (line angle degrees)	Grade B Limit (line angle degrees)	Grade C Limit (line angle degrees)	Grade B Limit (line angle degrees)	Grade C Limit (line angle degrees)	Grade B Limit (line angle degrees)
(LD-2 Series)						
45	0°-20°	0°-12°	0°-18°	0°-11°	0°-16°	0°-9°
50	0°-20°	0°-12°	0°-18°	0°-10°	0°-16°	0°-9°
55	0°-20°	0°-12°	0°-18°	0°-10°	0°-16°	0°-8°
(LD-4 Series)						
45	21°-30°	13°-19°	19°-28°	12°-17°	17°-26°	10°-15°
50	21°-29°	13°-18°	19°-28°	11°-17°	17°-26°	10°-15°
55	21°-29°	13°-18°	19°-27°	11°-16°	17°-25°	9°-15°
(LD-6 Series)						
45	31°-41°	20°-26°	29°-40°	18°-25°	27°-38°	16°-23°
50	30°-41°	19°-26°	29°-39°	18°-24°	27°-37°	16°-22°
55	30°-40°	19°-25°	28°-38°	17°-23°	26°-36°	16°-22°
(LD-8 Series)						
45	42°-58°	27°-37°	41°-57°	26°-35°	39°-55°	24°-34°
50	42°-56°	27°-35°	40°-54°	25°-34°	38°-52°	23°-32°
55	41°-53°	26°-34°	39°-52°	24°-32°	37°-50°	23°-29°
(LD-10 Series)						
45	59°-76°	38°-47°	58°-75°	36°-46°	56°-73°	35°-47°
50	57°-72°	36°-45°	55°-71°	35°-44°	53°-69°	33°-42°
55	54°-69°	35°-43°	53°-67°	33°-42°	51°-66°	30°-40°

NOTES:

These charts and models refer to Steel Poles.

Conductor & Neutral	3PH 795 KCMIL AAC Arbutus Primary with 4/0 AAC Oxlip Neutral		3PH 795 KCMIL AAC Arbutus Primary with 1/0 Raven Neutral	
NESC Grade Scenario	**Grade C Limit - Max Dist**	**Grade B Limit - Max Dist**	**Grade C Limit - Max Dist**	**Grade B Limit - Max Dist**
Full Tension (100%)	LD-MOD	LD-MOD	LD-MOD	LD-MOD
Reduced Tension (50%)	LD-MOD	LD-MOD	LD-10	LD-MOD
Slack (15%)	LD-6	LD-8	LD-6	LD-8

Conductor & Neutral	3PH 336 ACSR Linnet Primary with 4/0 AAC Oxlip Neutral		3PH 336 ACSR Linnet Primary with 1/0 Raven Neutral	
NESC Grade Scenario	**Grade C Limit - Max Dist**	**Grade B Limit - Max Dist**	**Grade C Limit - Max Dist**	**Grade B Limit - Max Dist**
Full Tension (100%)	LD-MOD	LD-MOD	LD-MOD	LD-MOD
Reduced Tension (50%)	LD-10	LD-MOD	LD-10	LD-MOD
Slack (15%)	LD-6	LD-8	LD-6	LD-6

Conductor & Neutral	3PH 4/0 AAC Oxlip Primary with 4/0 AAC Oxlip Neutral		3PH 4/0 AAC Primary with 1/0 Raven Neutral	
NESC Grade Scenario	**Grade C Limit - Max Dist**	**Grade B Limit - Max Dist**	**Grade C Limit - Max Dist**	**Grade B Limit - Max Dist**
Full Tension (100%)	LD-MOD	LD-MOD	LD-MOD	LD-MOD
Reduced Tension (50%)	LD-10	LD-10	LD-10	LD-10
Slack (15%)	LD-6	LD-6	LD-4	LD-4

Conductor & Neutral	3PH 1/0 Raven Primary with 1/0 Raven Neutral	
NESC Grade Scenario	**Grade C Limit - Max Dist**	**Grade B Limit - Max Dist**
Full Tension (100%)	LD-MOD	LD-MOD
Reduced Tension (50%)	LD-10	LD-10
Slack (15%)	LD-6	LD-6

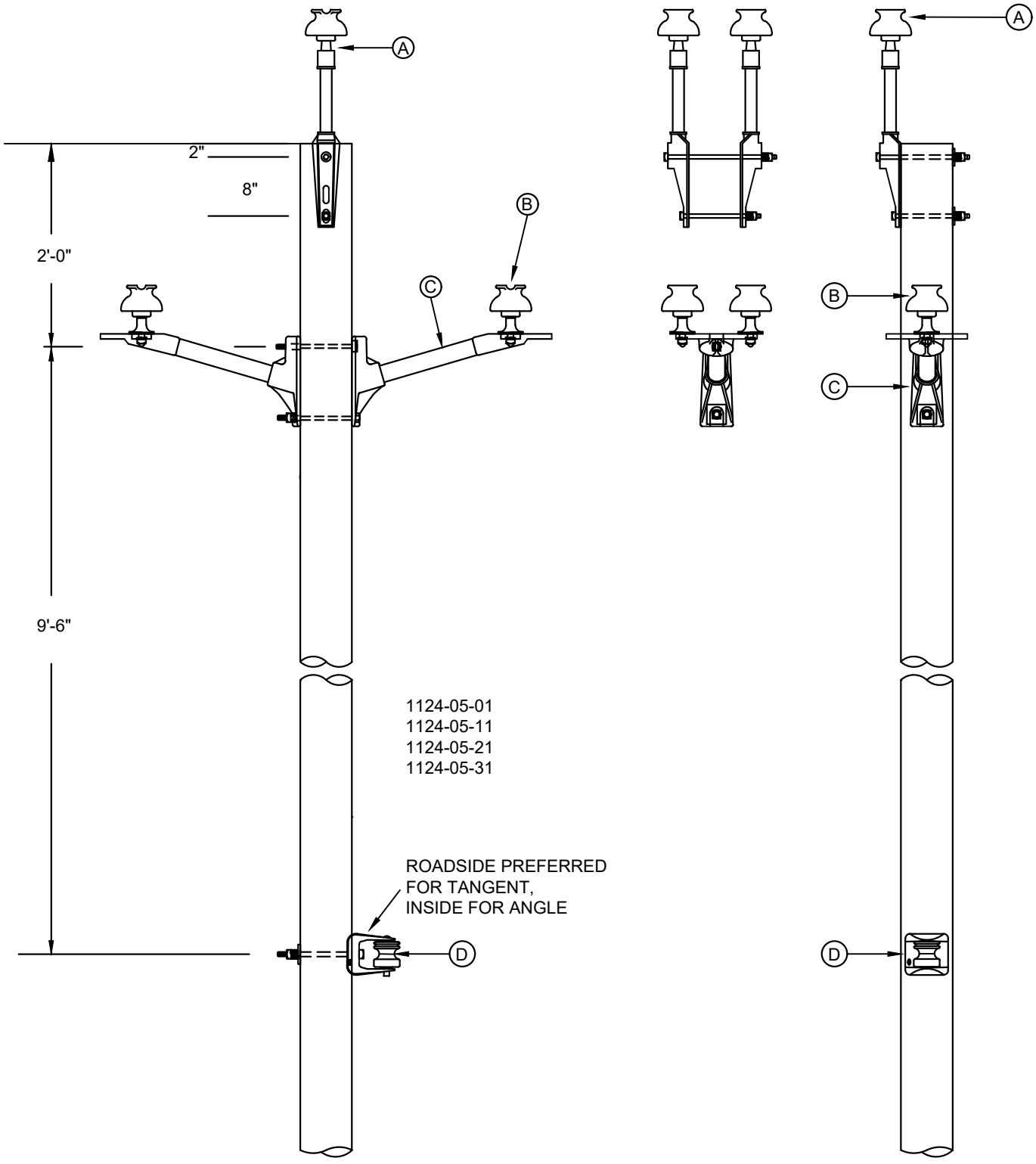
NOTES:

These charts and models refer to Steel Poles.

Conductor & Neutral	1PH 4/0 AAC Oxlip Primary with 4/0 AAC Oxlip Neutral		1PH 4/0 AAC Primary with 1/0 Raven Neutral	
NESC Grade Scenario	**Grade C Limit - Max Dist**	**Grade B Limit - Max Dist**	**Grade C Limit - Max Dist**	**Grade B Limit - Max Dist**
Full Tension (100%)	LD-6	LD-8	LD-4	LD-8
Reduced Tension (50%)	LD-2	LD-6	LD-2	LD-4

Conductor & Neutral	1PH 1/0 Raven Primary with 1/0 Raven Neutral	
NESC Grade Scenario	**Grade C Limit - Max Dist**	**Grade B Limit - Max Dist**
Full Tension (100%)	LD-4	LD-6
Reduced Tension (50%)	LD-2	LD-4

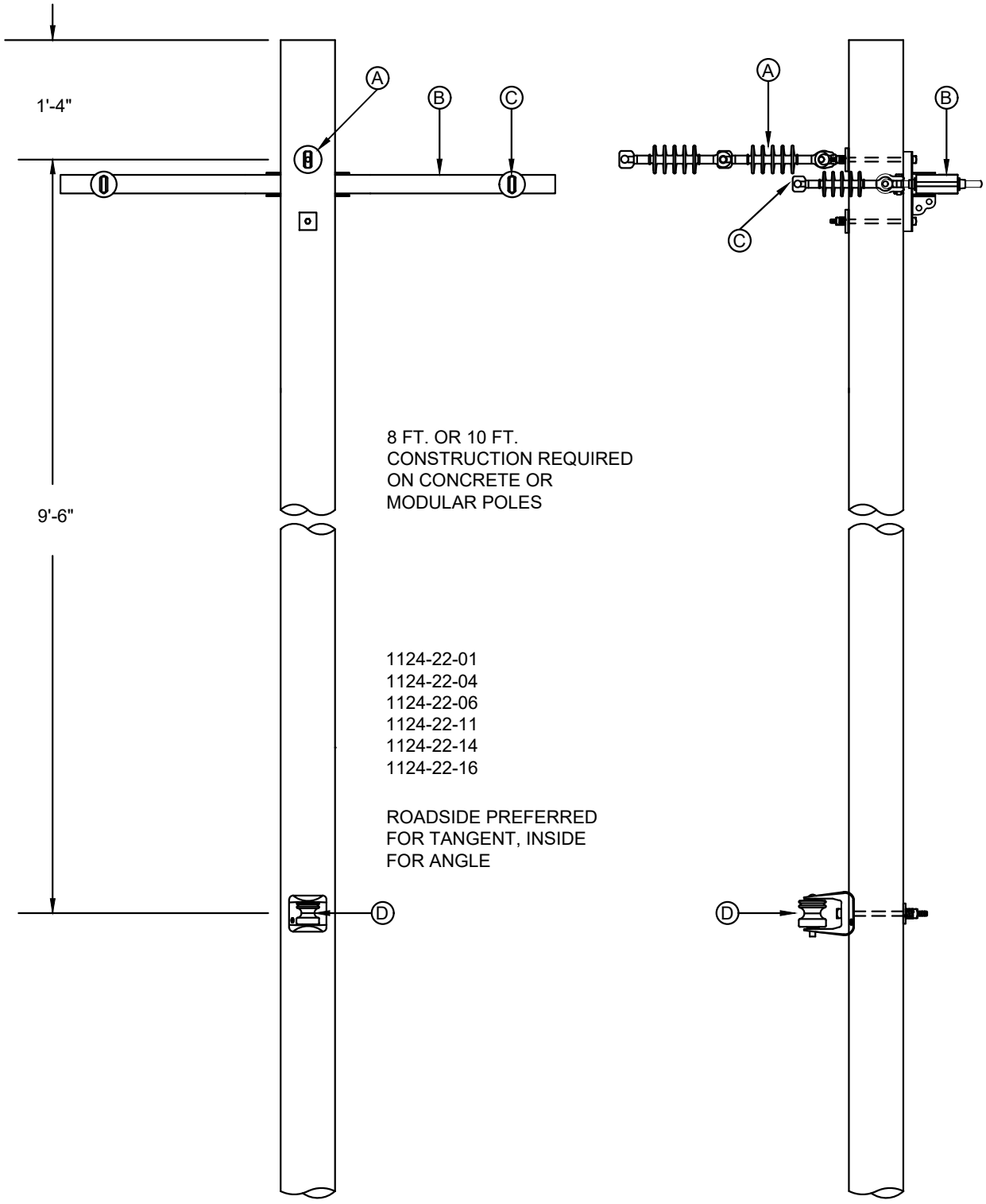
Austin Energy	POLES, HARDWARE, AND FRAMING	SECTION:
REV_DATE:	3PH SELF-SUPPORTING FRAMING	1124-05
04/01/26	**3PH SELF-SUPPORTING SGL & DBL PIN**	SHEET: 1 OF 1



SEE 1124 ASSOCIATED MODULES

MU-REF	MU-ID	MU-DESCRIPTION
11240501	3PHSSSGLPNSGLNU	3PH SS WITH SGL PIN SGL NEUT
11240511	3PHSSDBLPNSGLNU	3PH SS WITH DBL PIN SGL NEUT
11240521	3PHSSSGLPNSGLNU-CC	3PH SS WITH SGL PIN SGL NEUT - CC
11240531	3PHSSDBLPNSGLNU-CC	3PH SS WITH DBL PIN SGL NEUT - CC

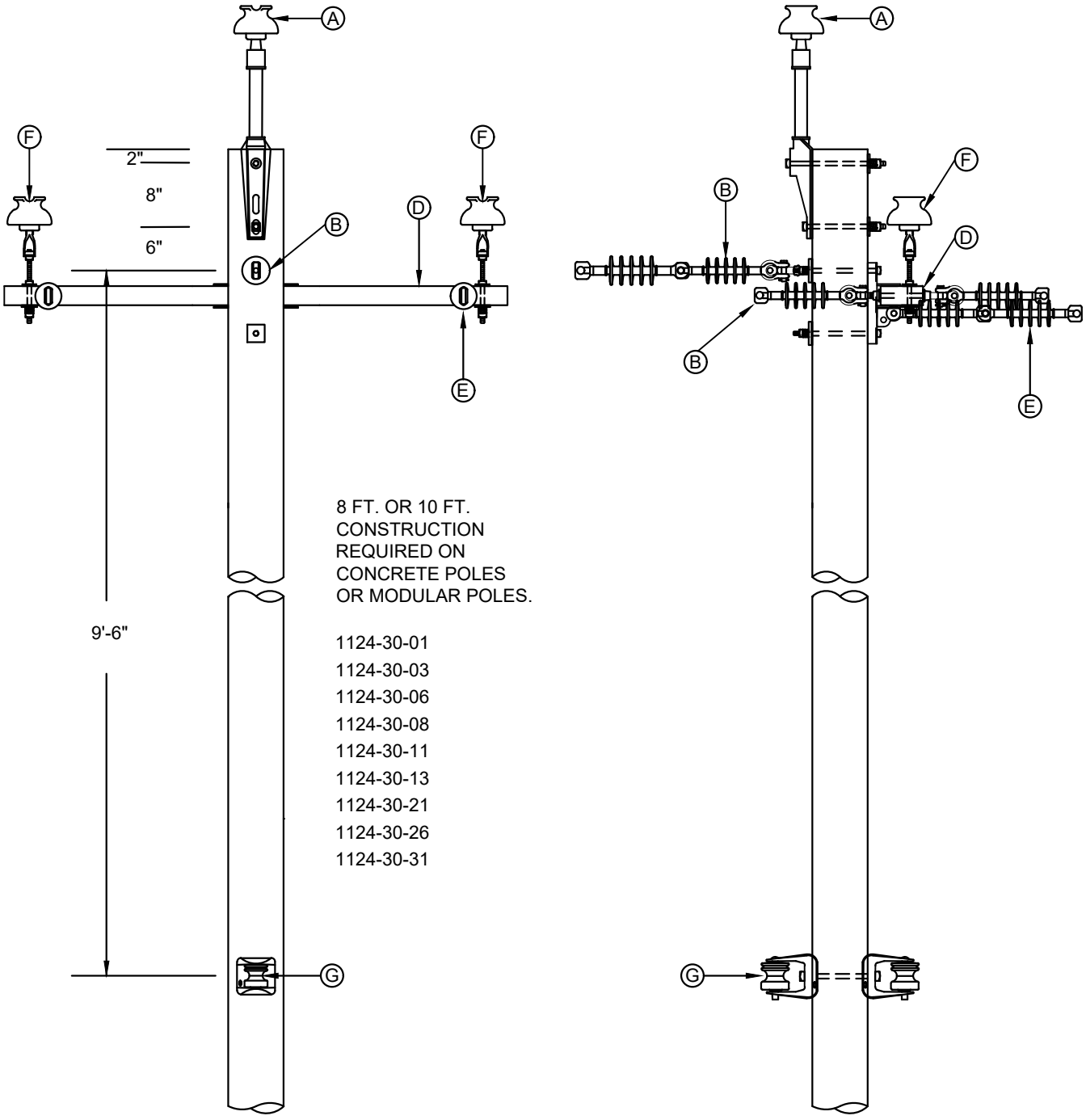
Austin Energy	POLES, HARDWARE, AND FRAMING	SECTION:
REV_DATE:	3PH SELF-SUPPORTING FRAMING	1124-22
04/01/26	**3PH SELF-SUPPORTING SGL DE FLAT**	SHEET: 1 OF 1



SEE 1124 ASSOCIATED MODULES

MU-REF	MU-ID	MU-DESCRIPTION
11242201	3PHSSSDEF5FTARM5	3PH SS SGL DE FLAT 5 FT ARM
11242204	3PHSSSDEF8FTARM	3PH SS SGL DE FLAT 8FT ARM
11242206	3PHSSSDEF10FTARM	3PH SS SGL DE FLAT 10FT ARM
11242211	3PHSSSDEF5FTARM-CC	3PH SS SGL DE FLAT 5 FT ARM - CC
11242214	3PHSSSDEF8FTARM-CC	3PH SS SGL DE FLAT 8FT ARM - CC
11242216	3PHSSSDEF10FTARM-CC	3PH SS SGL DE FLAT 10FT ARM - CC

Austin Energy	POLES, HARDWARE, AND FRAMING	SECTION:
REV_DATE:	3PH SELF-SUPPORTING FRAMING	1124-30
04/01/26	**3PH SELF-SUPPORTING DBL DE FLAT**	SHEET: 1 OF 1



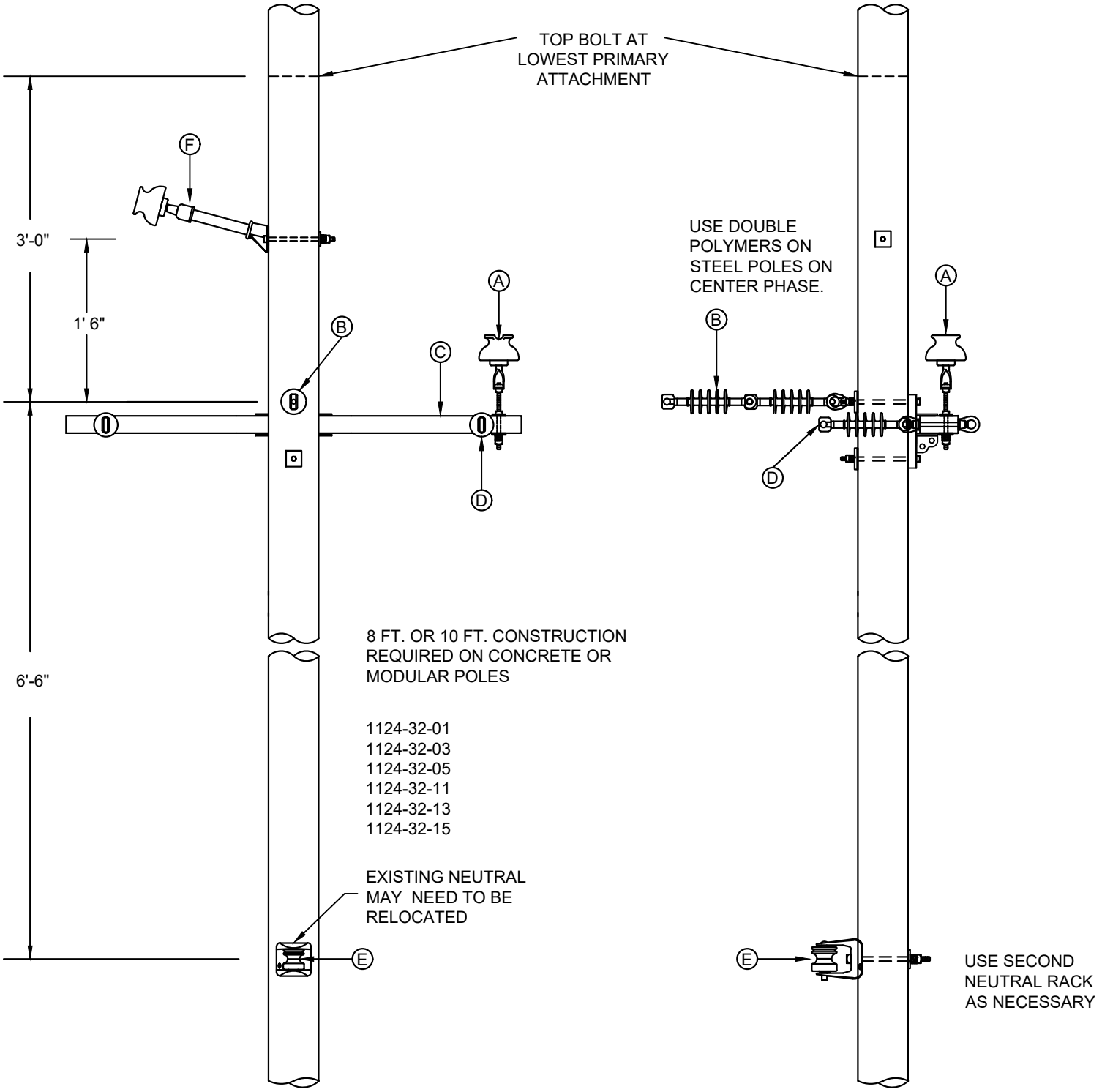
8 FT. OR 10 FT. CONSTRUCTION REQUIRED ON CONCRETE POLES OR MODULAR POLES.

1124-30-01
1124-30-03
1124-30-06
1124-30-08
1124-30-11
1124-30-13
1124-30-21
1124-30-26
1124-30-31

SEE 1124 ASSOCIATED MODULES

MU-REF	MU-ID	MU-DESCRIPTION
11243001	3PHSSDDEFLT5FTARM	3PH SS DBL DE FLAT-ANGLE 5 FT ARM
11243003	3PHSSDDERTN5FTARM	3PH SS DBL DE FLAT REDUCED TEN 5FT ARM
11243006	3PHSSDDEFLT8FTARM	3PH SS DBL DE FLAT-ANGLE 8 FT ARM
11243008	3PHSSDDERTN8FTARM	3PH SS DBL DE FLAT REDUCED TEN 8FT ARM
11243011	3PHSSDDEFLT10FTARM	3PH SS DBL DE FLAT-ANGLE 10FT ARM
11243013	3PHSSDDERTN10FTARM	3PH SS DBL FLAT REDUCED TEN 10FT ARM
11243021	3PHSSDDEFLTANGRTN5ARM-CC	3PH SS DBL DE FLAT ANGLE/ REDUCED TEN-ANGLE 5 FT ARM - CC
11243026	3PHSSDDEFLTANGRTN8ARM-CC	3PH SS DBL DE FLAT ANGLE/ REDUCED TEN-ANGLE 8 FT ARM - CC
11243031	3PHSSDDEFLTANGRTN10ARM-CC	3PH SS DBL DE FLAT-ANGLE 10FT ARM - CC

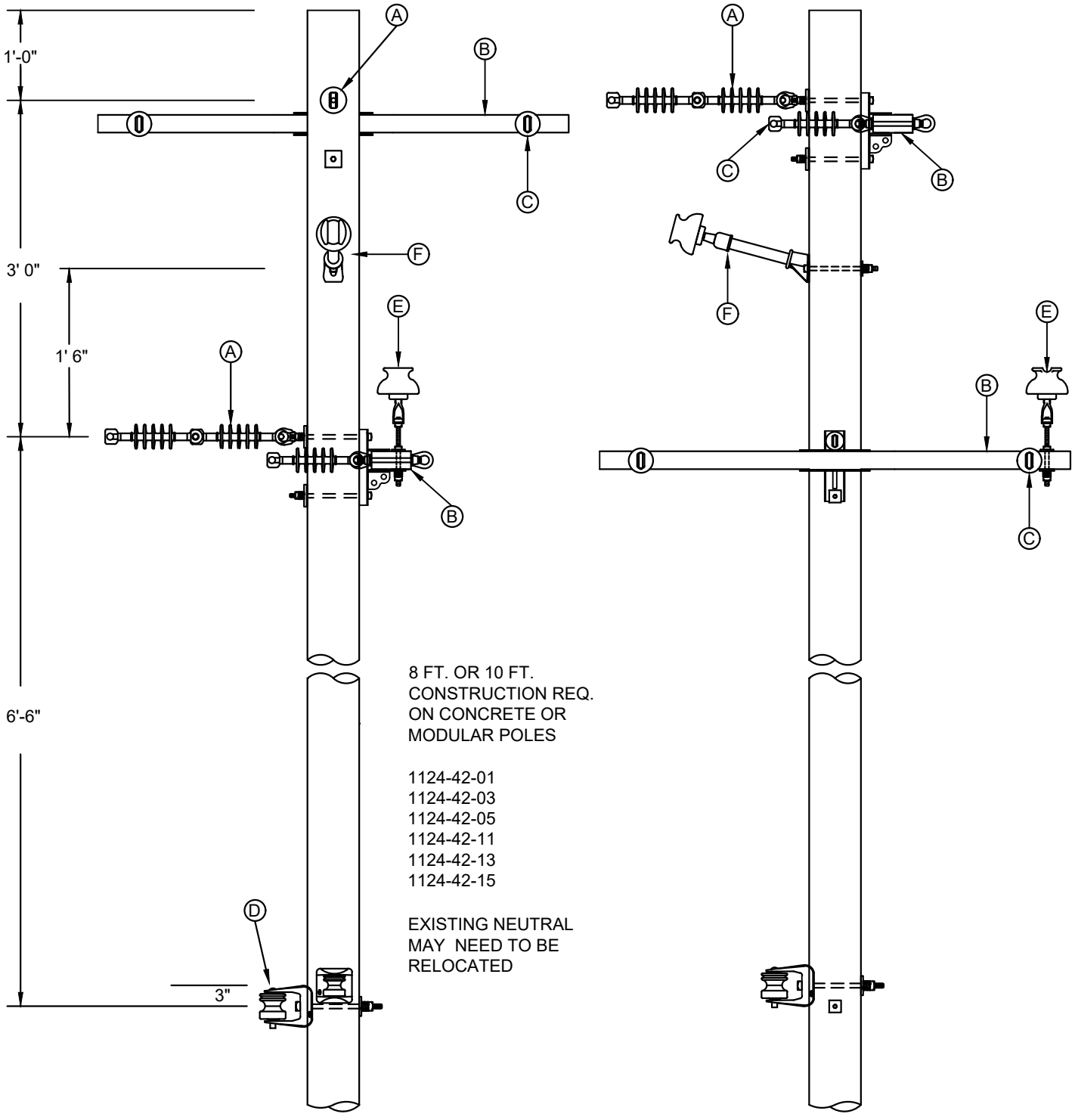
Austin Energy	POLES, HARDWARE, AND FRAMING	SECTION:
REV_DATE:	3PH SELF-SUPPORTING FRAMING	1124-32
04/01/26	**3PH SELF-SUPPORTING SGL DE JUNCTION FLAT**	SHEET: 1 OF 1



SEE 1124 ASSOCIATED MODULES

MU-REF	MU-ID	MU-DESCRIPTION
11243201	3PHSSSDEJNFLT5TARM	3PH SS SGL DE FLAT REDUCED TEN 5FT ARM
11243203	3PHSSSDEJNFLT8FTARM	3PH SS SGL DE FLAT REDUCED TEN 8FT ARM
11243205	3PHSSSDEJNFLT10FTARM	3PH SS SGL DE FLAT REDUCED TEN 10FT ARM
11243211	3PHSSSDEJNFLT5FTARM-CC	3PH SS SGL DE FLAT REDUCED TEN 5FT ARM - CC
11243213	3PHSSSDEJNFLT8FTARM-CC	3PH SS SGL DE FLAT REDUCED TEN 8FT ARM - CC
11243215	3PHSSSDEJNFLT10FTARM-CC	3PH SS SGL DE FLAT REDUCED TEN 10FT ARM - CC

Austin Energy	POLES, HARDWARE, AND FRAMING	SECTION:
REV_DATE:	3PH SELF-SUPPORTING FRAMING	1124-42
04/01/26	**3PH SELF-SUPPORTING SGL DE FLAT CORNER**	SHEET: 1 OF 1



8 FT. OR 10 FT.
CONSTRUCTION REQ.
ON CONCRETE OR
MODULAR POLES

1124-42-01
1124-42-03
1124-42-05
1124-42-11
1124-42-13
1124-42-15

EXISTING NEUTRAL
MAY NEED TO BE
RELOCATED

SEE 1124 ASSOCIATED MODULES

MU-REF	MU-ID	MU-DESCRIPTION
11244201	3PHSSSDEFCN5FT	3PH SS SGL DE FLAT CORNER 5FT ARM
11244203	3PHSSSDEFCN8FT	3PH SS SGL DE FLAT CORNER 8FT ARM
11244205	3PHSSSDEFCN10FT	3PH SS SGL DE FLAT CORNER 10FT ARM
11244211	3PHSSSDEFCN5FT-CC	3PH SS SGL DE FLAT CORNER 5FT ARM - CC
11244213	3PHSSSDEFCN8FT-CC	3PH SS SGL DE FLAT CORNER 8FT ARM - CC
11244215	3PHSSSDEFCN10FT-CC	3PH SS SGL DE FLAT CORNER 10FT ARM - CC