Crossarms, Douglas Fir

1. Scope

This standard covers the requirements for utility pole crossarms.

This standard applies to the following Seattle City Light stock numbers:

Stock No.	Type	Length (ft)
540205	Primary	6
540146	Primary feeder	10
540220	26 kV	10
540209	Wing	11
540221	Switch	12
540014	Alley	14
540016	Alley	16
540018	Alley	18
540022	Alley	22
541365	H structure brace	44

2. Application

Crossarms are used in overhead line construction.

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3. Industry Standards

Crossarms shall meet the applicable requirements of the latest revisions of the following industry standards:

ANSI O5.3: "American National Standard for Wood Products - Solid Sawn-Wood Crossarms and Braces - Specifications and Dimensions"

AWPA U1: "Use Category System; User Specification for Treated Wood"

4. Requirements

4.1 General

Crossarms shall be constructed from Douglas fir (Pseudotsuga menziesii), Coastal variety.

Crossarms shall meet the requirements of ANSI O5.3.

4.2 Marking

Crossarms shall be marked or branded according to ANSI O5.3 with the following clarification:

Each crossarm shall be marked or branded "CL".

4.3 Incising

Crossarms shall be incised on all four sides to a uniform depth of 3/16 inch prior to treatment.

4.4 Treatment

Crossarms shall be pressure treated with copper naphthenate preservative according to AWPA U1.

Preservative retention shall be in accordance with AWPA U1 section 3.0 Sawn Products UC3A.

4.5 Edges

Edges shall be eased as follows:

- Top radius: 3/8 in
- Bottom radius: 1/8 in

4.6 Dimensions and Drilling

Dimensions and drilling shall be as shown in table 4.6a and 4.6b and figures 4.6a–4.6e.

Pin hole diameters shall be 13/16 inches unless otherwise noted.

Table 4.6a. Dimensions and Drilling

			Arm Dimensions			
Stock No.	**Arm Type**	**Pin Positions**	**Width (in)**	**Height (in)**	**Length (ft)**	**Drilled**
540205	Primary	4-pin	3-1/2	4-1/2	6	Per Fig. 4.6a
540146	Primary feeder	6-pin	4-1/2	5-1/2	10	Per Fig. 4.6b
540220	26 kV	6-pin	3-1/2	4-1/2	10	Per Fig. 4.6c
540209	Wing	9-pin	3-1/2	4-1/2	11	Per Fig. 4.6d
540221	Switch	None	4-3/4	5-3/4	12	Per Fig. 4.6e
540014	Alley	None	4-3/4	5-3/4	14	Blank
540016	Alley	None	4-3/4	5-3/4	16	Blank
540018	Alley	None	4-3/4	5-3/4	18	Blank
540022	Alley	None	4-3/4	5-3/4	22	Blank
541365	H structure brace	None	4	12	44	Blank

Dimensional tolerances shall be as shown in Table 4.6b.

Table 4.6b. Dimensional Tolerances

Dimension	**Tolerance**
Length	± 1/4 in
Width	± 1/16 in
Height	+ 1/8 in–1/16 in
Top radius easing	± 1/8 in
Bottom radius easing	± 1/16 in
Pin hole diameter	+ 1/32 in–3/32 in
All other hole diameters	± 1/16 in

Note: All figure dimensions are in inches, except Figure 4.6e.

Figure 4.6a. Primary Arm, 6 ft, 4-pin (540205)

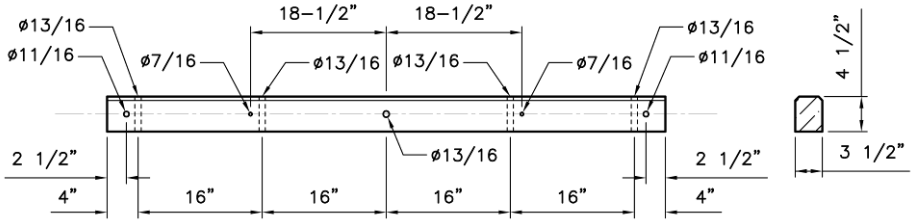


Figure 4.6b. Primary Feeder Arm, 10 ft, 6-pin (540146)

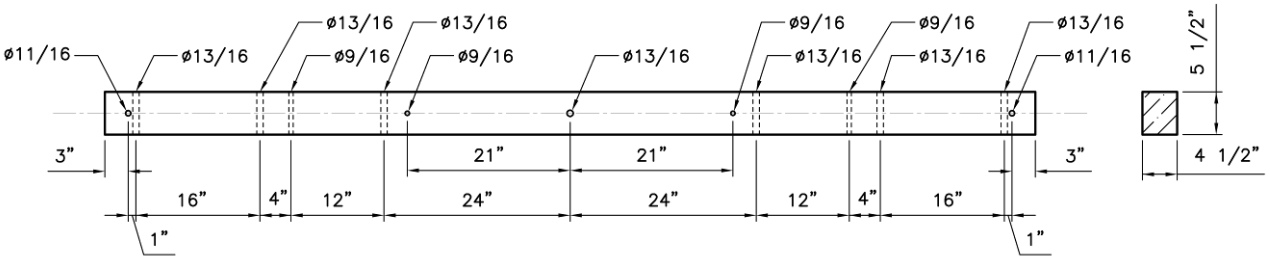


Figure 4.6c. 26 kV Arm, 10 ft, 6-pin (540220)

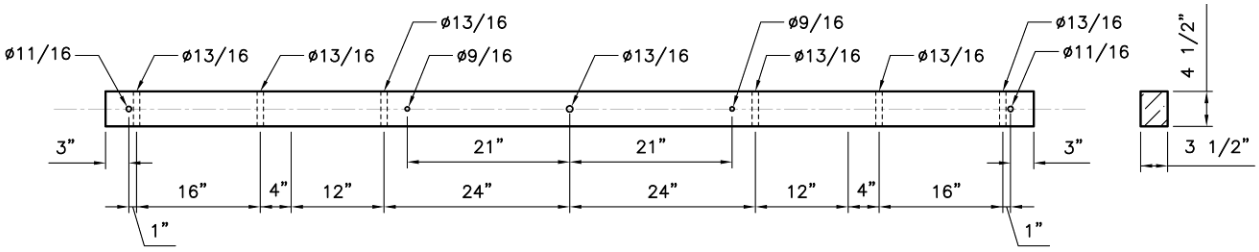


Figure 4.6d. Wing Arm, 11 ft, 9-pin (540209)

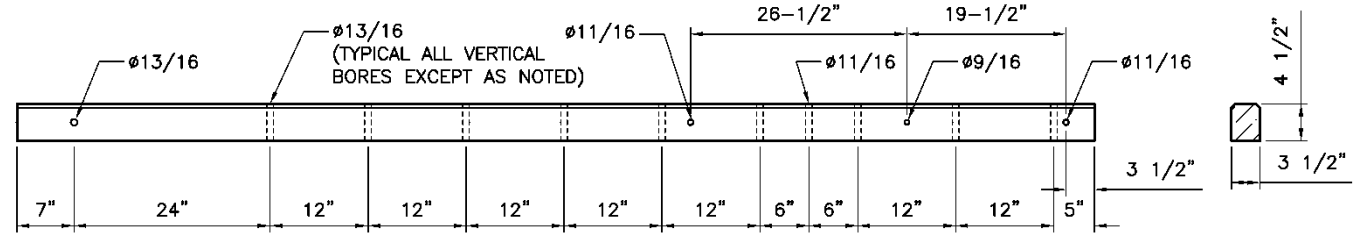
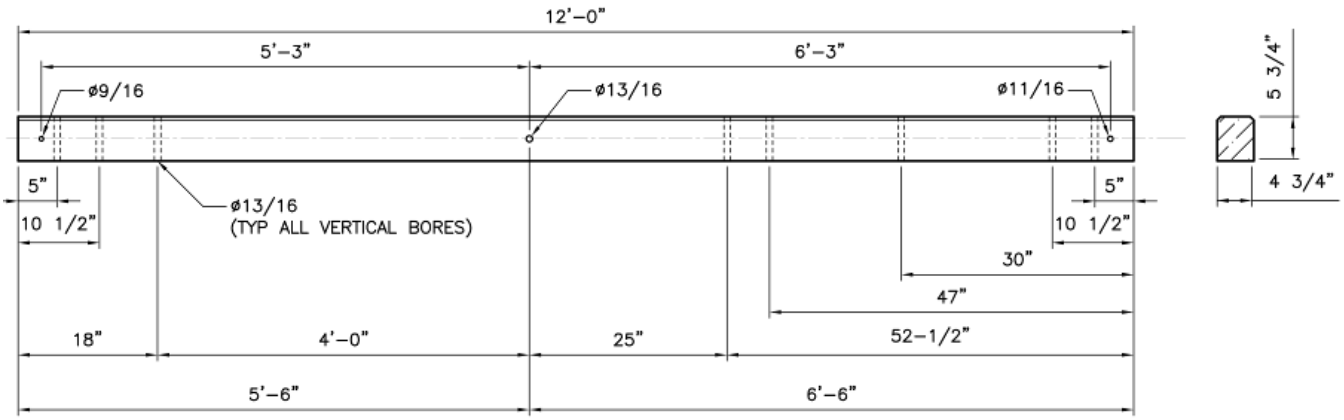


Figure 4.6e. 26 kV Switch Arm, 12 ft, (540221)



5. Packaging

5.1 Bundle Size

Crossarms shall be packaged in bundles as shown in Table 5.1.

Table 5.1. Crossarm Packaging

Crossarm Sizes	Bundle Sizes	
Width x Height x Length	**Quantity**	**Width x Height (ft)**
3-1/2″ x 4-1/2″ x all	50 each	10 x 5
4-1/2″ x 5-1/2″ x all	25 each	5 x 5
4-3/4″ x 5-3/4″ x all	25 each	5 x 5

5.2 Bundle Construction

The bundles shall have spacer strips between each lay of arms and each bundle shall be securely bound with flat metal strapping.

5.3 Bundle Marking

Each crossarm bundle shall be legibly marked with the following information:

- Manufacturer identification
- Gross weight
- Tare weight
- Net weight
- Date of manufacturer
- Seattle City Light purchase order number
- Seattle City Light stock number

6. Issuance

Stock Unit: EA

7. Approved Manufacturers

Brooks Manufacturing Co.

DIS-TRAN Wood Products, LLC

Pennington Crossarm Co.

8. Sources

AWPA C25: “American Wood-Preservers’ Association Standard, Sawn Crossarms – Preservative Treatment by Pressure or Thermal Process,” AWPA (withdrawn)

SCL 5400.00; “Crossarms, Douglas Fir, Treated” (canceled / renumbered to 5054.10)

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