

WOOD CROSSARMS

MATERIAL SPECIFICATION #1111.01



Prepared April 9, 2014

Chelan County Public Utility District
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Wenatchee, WA. 98807-1231
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1. SCOPE AND GENERAL REQUIREMENTS

- 1.1. The purpose of this specification is to cover the Public Utility District No. 1 of Chelan County, Wenatchee, Washington, requirements for the manufacturing, preservative treatment and inspection requirements of Douglas Fir distribution wood crossarms used in overhead electric line construction.
- 1.2. All poles should meet the requirements of the latest American National Standard Specifications and Dimensions for Wood Crossarms, ANSI O5.3, except as otherwise specified herein. Preservative treatments shall be in accordance with the latest American Wood Preservers' Association (AWPA) Standards, except as modified herein.

2. MATERIAL REQUIREMENTS

- 2.1. Poles shall be Solid Sawn Douglas Fir and shall be manufactured from new timber meeting the requirements as referenced in the latest ANSI O5.3 except as modified herein.

3. DIMENSIONS

- 3.1. The dimensions and drilling details of crossarms shall conform to the Material Standard Specification 98.100.

4. GRADE

- 4.1. Material shall be "Crossarm" grade in accordance with paragraphs 170 and 170a of the West Coast Lumber Inspection Bureau Standard Grading Rules (latest revision). Slope of grain shall not exceed 1 in 12.

5. MOISTURE CONTENT

- 5.1. The average moisture content shall be 19% not to exceed 22%, determined by moisture meter in accordance with AWP A M2 (latest revision).

6. EDGES

- 6.1. All four edges shall be slightly eased approximately 1/8 inch, the entire length of the crossarm.

7. PRESERVATIVE TREATMENT

- 7.1. Crossarm shall be surfaced, bored, and incised to a depth of 1/4 inch on all faces prior to treatment. Crossarms shall be pressure treated per AWP A standards C1, C25, P8, and P9 (latest revisions) with a preservative solution containing not less than 5% pentachlorophenol. Carrier shall be hydrocarbon solvent, Type A as specified in AWP A P9.

8. RETENTION OF PRESERVATIVE

Preservative retention shall be determined by the chemical assay of test borings per AWWA A5 (latest revision). The minimum retention for acceptance shall be 0.4 lbs of dry pentachlorophenol per cubic foot per AWWA C25 (latest revision).

9. MARKING

9.1. All crossarms shall be branded prior to treatment to indicate the following information:

9.1.1. The Manufacturer's name

9.1.2. The month and year of manufacture,

9.1.3. The symbol "DF" for Douglas Fir,

9.1.4. Type and amount of preservative "0.4P".

9.1.5. The brand shall be 1/16 inch in depth, with figures a minimum of 1/2 inch in height and shall be placed on one of the wide faces, approximately one foot from the midpoint of the arm.

10. INSPECTION

10.1. Manufacturers supplying crossarms to the District shall be WQC certified. If inspection by a representative of the District is required, it will be specified on the purchase order. Inspection, when indicated, shall be in accordance with AWWA M2 (latest revision). Any crossarms which are not in accordance with this District Specification shall be replaced by the supplier at no cost to the District.

11. EVALUATION AND AWARD

11.1. For the purpose of evaluating bid, consideration will be given to past performance regarding quality of product and service.

11.2. For the purpose of evaluating bid, consideration will be given to delivery time.

11.3. Whenever applicable for purpose of evaluating bid, equalizing elements or factors not specifically mentioned or provided herein, in addition to price, which would affect the final cost to and the benefits to be derived by the District, will be taken into consideration in determining the award of contract.

11.4. The District reserves the right either to make an award which in the judgement of the District is in its best interest or at the District's discretion to reject all bids and to waive any informalities in bids received.

12. DELIVERY AND REJECTION

- 12.1. All poles shall be shipped F.O.B. Destination to 1150 Hawley Street, Wenatchee, WA 98801, unless expressly stated in the purchase order. The delivery will be accepted Monday through Friday between the hours of 9:00 am and 3:30 pm. Please call the Hawley Street warehouse forman at (509) 663-8121, ext. 4730, 24 hours prior to delivery.
- 12.2. Delivery must be delivered on a flatbed truck or curtain side trailer for side unloading by a forklift.
- 12.3. The supplier can increase or decrease quantity to facilitate truckload capacities with prior approval.
- 12.4. Rejection: crossarms not conforming to this specification and received damaged or broken shall be rejected. The supplier shall either replace such rejected crossarms with crossarms complying with this specification at his own expense, or shall allow credit for such rejected crossarms.

13. SPECIFICATIONS REVISIONS LOG

#	Date	Section	Description
1	12/29/05	ALL	Added Specifications Revision Log
2	12/29/05	ALL	Renumbered Spec from 2111.001 to 1111.01
3	8/21/12	ALL	Fixed inconsistencies and formatting
4	4/9/2014	ALL	Added 098.100 Series Drilling Guide Specification Sheets

14. DRILLING SPECIFICATIONS

See 098.100 Crossarm Drilling Specifications 115kV on following pages

098.100 Series



Std's Committee Approval:
Approved

[illegible]



WOOD CROSSARM SPECIFICATIONS
Transmission Standard Practice

Originator:
J. Flader

Standards Approval:
Jeff Flader

Approval:

Date:
4/3/2014

098.100
STOCK NO. 06322

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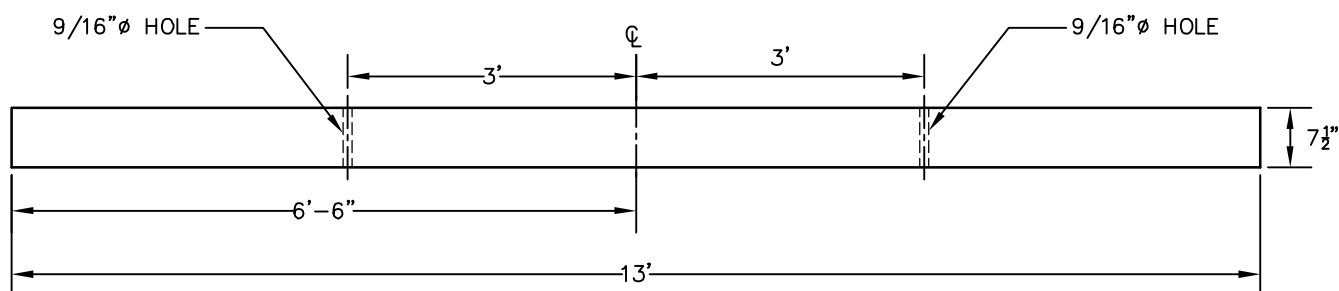
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Revision Description:

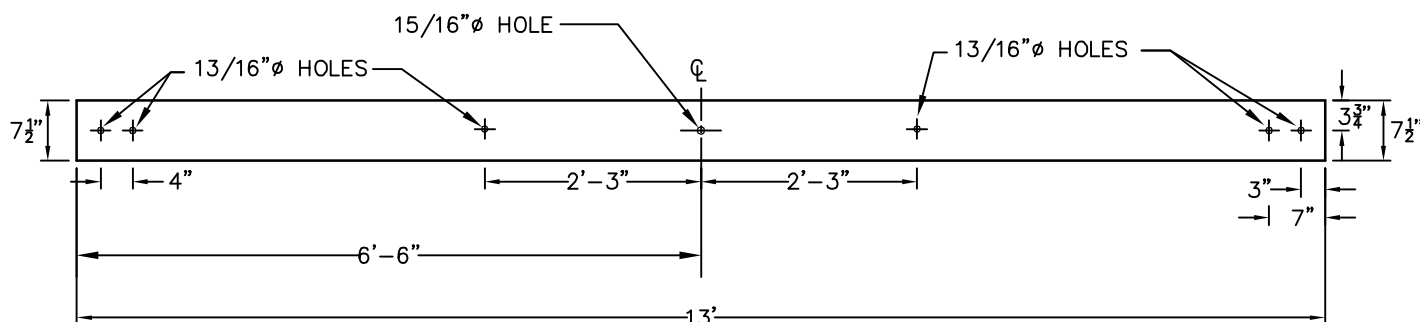
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TOP



FRONT



CROSSARM: 7-1/2" x 7-1/2" x 13'-0" FOR CDE STRUCTURE
STOCK NO. 006322

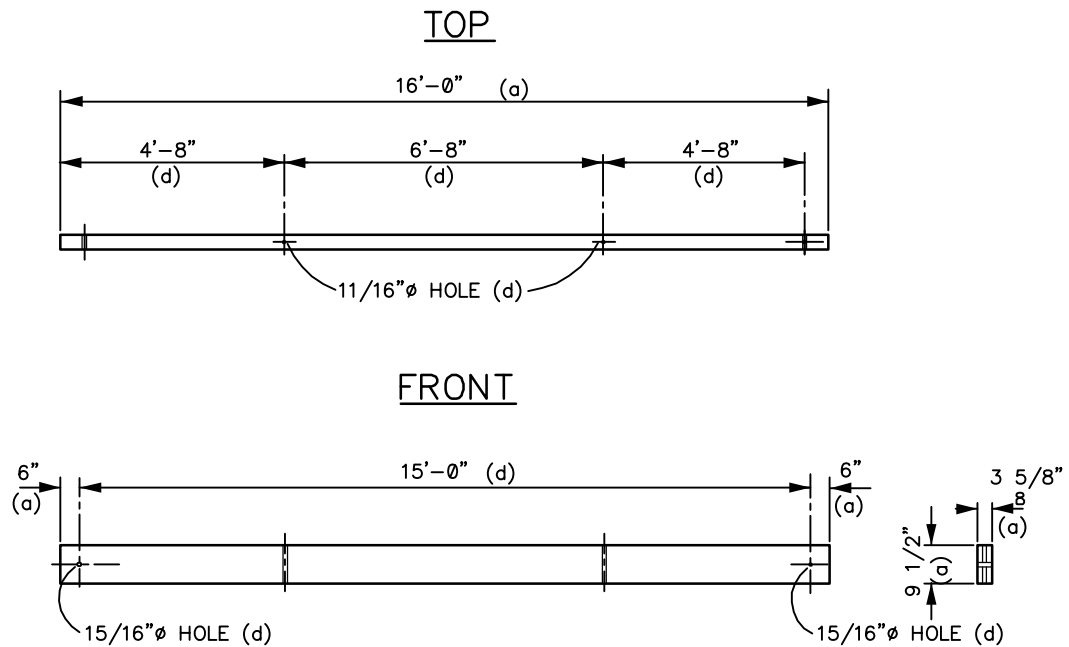


WOOD CROSSARM SPECIFICATIONS
Transmission Standard Practice

098.100
STOCK NO. 80200

Originator: J. Flader	Standards Approval: Jeff Flader
Approval:	Date: 4/3/2014

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WOOD CROSSARM SPECIFICATIONS
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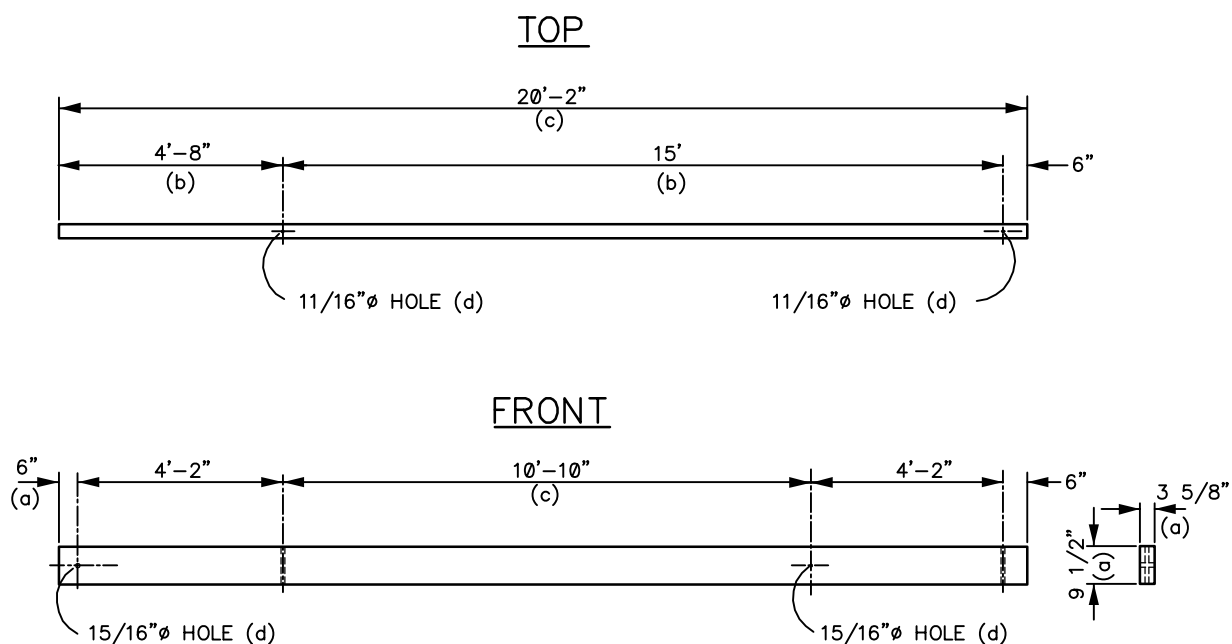
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STOCK NO. 80220

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Originator: J. Flader	Standards Approval: Jeff Flader
Approval:	Date: 4/3/2014

Rev #:	Revision Description:
1	NEW TITLE BLOCK



CROSSARM 3-5/8" x 9-1/2" x 20'-2" FOR TYPE GA STRUCTURE
STOCK No.80220



WOOD CROSSARM SPECIFICATIONS
Transmission Standard Practice

098.100

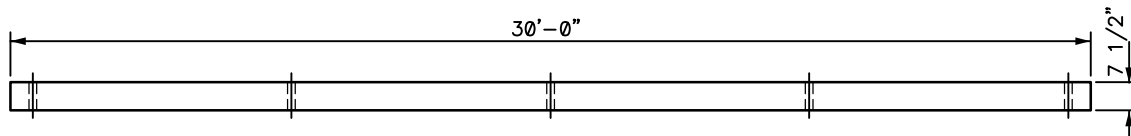
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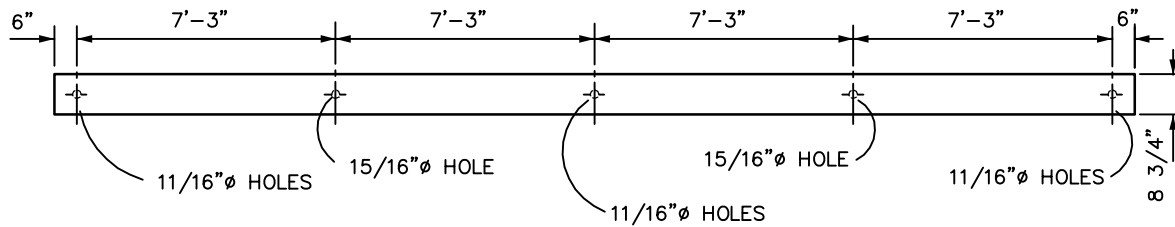
Originator: J. Flader	Standards Approval: Jeff Flader
Approval:	Date: 4/3/2014

Rev #:	Revision Description:
2	DOCUMENT NUMBER

TOP



FRONT



CROSSARM: 7-1/2" x 8-3/4" x 30' AP
STOCK No.80235



WOOD CROSSARM SPECIFICATIONS

Transmission Standard Practice

098.100

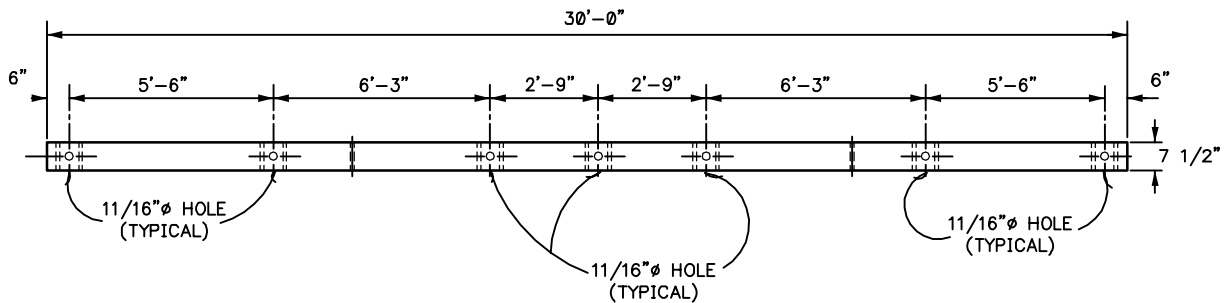
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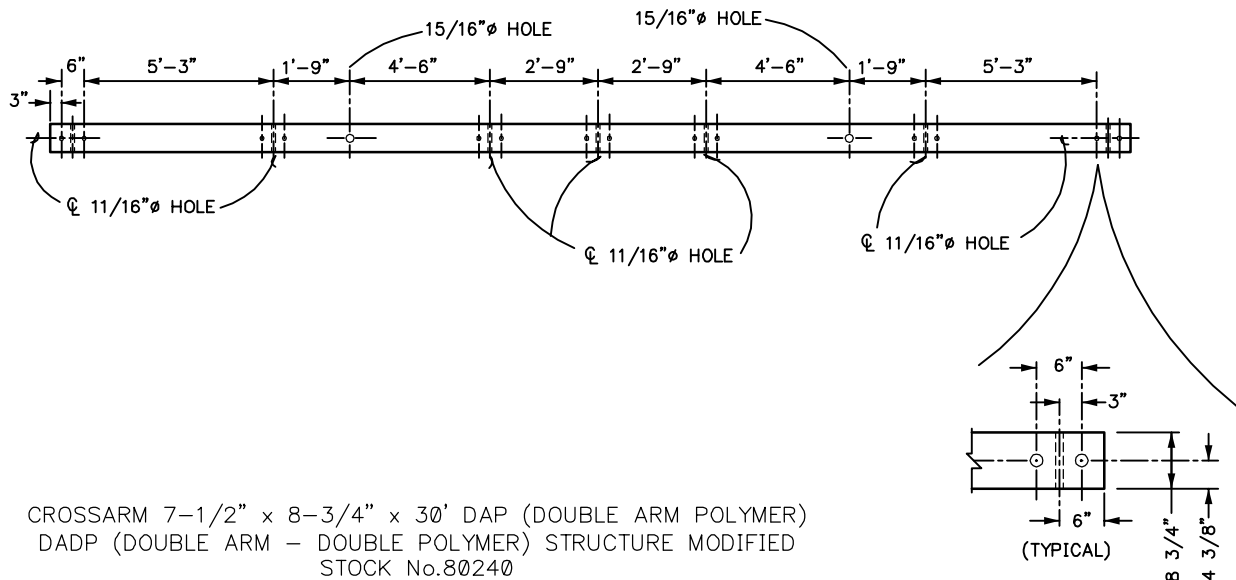
Originator: J. Flader	Standards Approval: Jeff Flader
Approval:	Date: 4/3/2014

Rev #:	Revision Description:
1	NEW TITLE BLOCK

TOP



FRONT



CROSSARM 7-1/2" x 8-3/4" x 30' DAP (DOUBLE ARM POLYMER)
DADP (DOUBLE ARM - DOUBLE POLYMER) STRUCTURE MODIFIED
STOCK No.80240



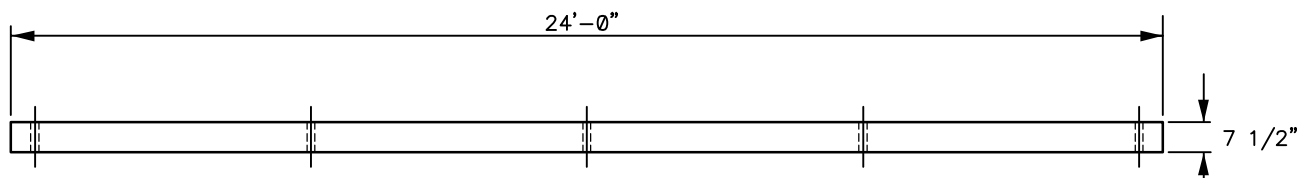
WOOD CROSSARM SPECIFICATIONS
Transmission Standard Practice

098.100
STOCK NO. 80250

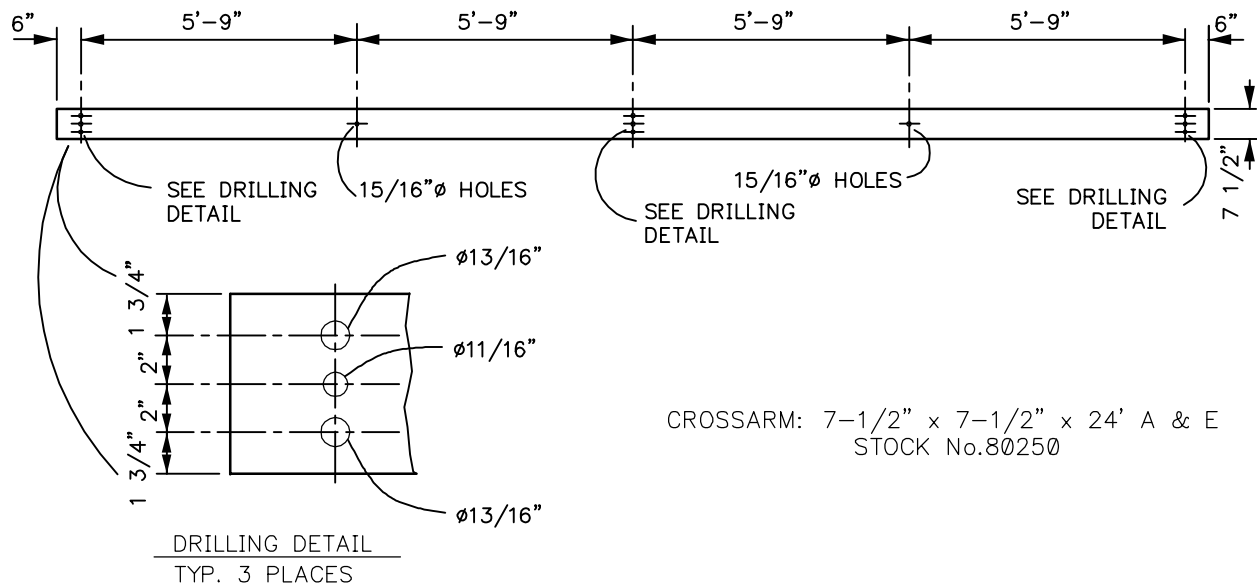
Originator: J. Flader	Standards Approval: Jeff Flader
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Rev #:	Revision Description:
2	DOCUMENT NUMBER

TOP



FRONT



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STOCK No.80250



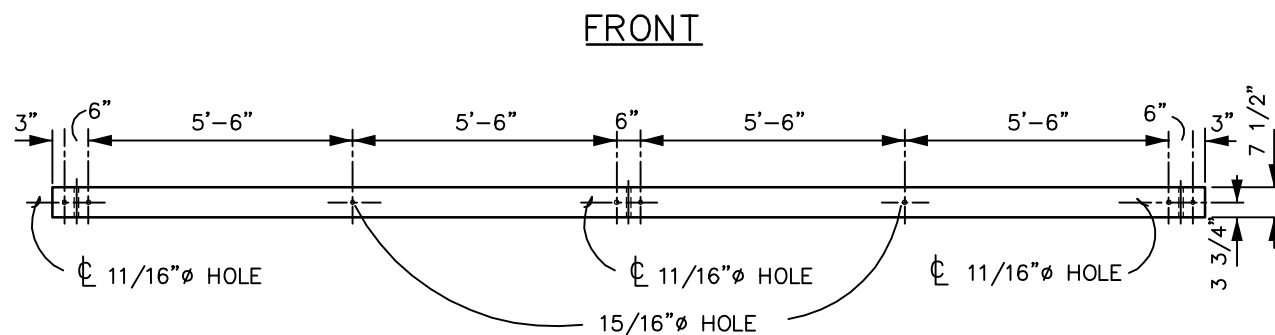
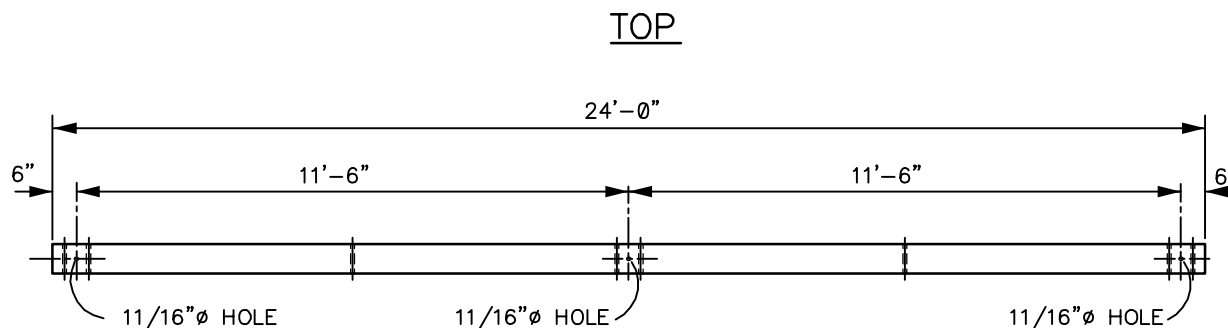
WOOD CROSSARM SPECIFICATIONS
Transmission Standard Practice

098.100

STOCK NO. 80260

Originator: J. Flader	Standards Approval: Jeff Flader
Approval:	Date: 4/3/2014

Rev #:	Revision Description:
2	DOCUMENT NUMBER



CROSSARM: 7-1/2" x 7-1/2" x 24' TYPE DA STRUCTURE
STOCK NO. 80260

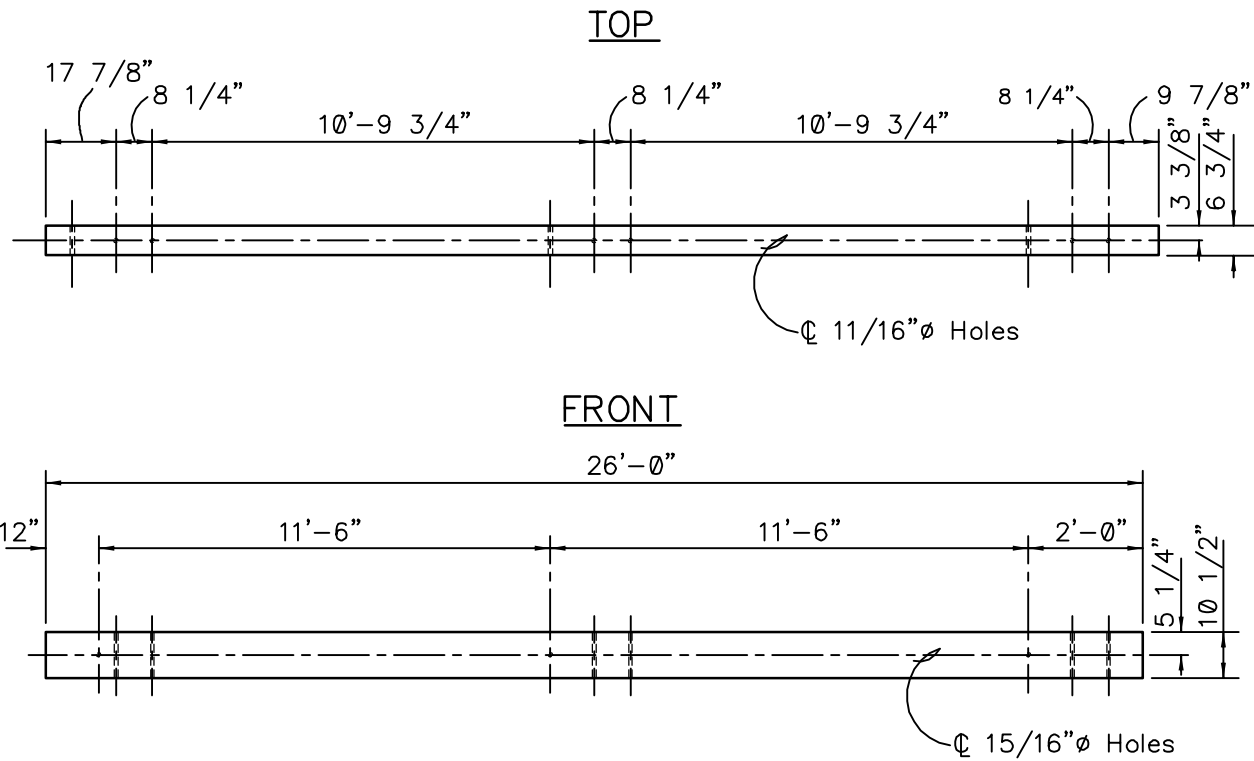


WOOD CROSSARM SPECIFICATIONS
Transmission Standard Practice

098.100
STOCK NO. 80297

Originator: J. Flader	Standards Approval: Jeff Flader
Approval:	Date: 4/3/2014

Rev #:	Revision Description:
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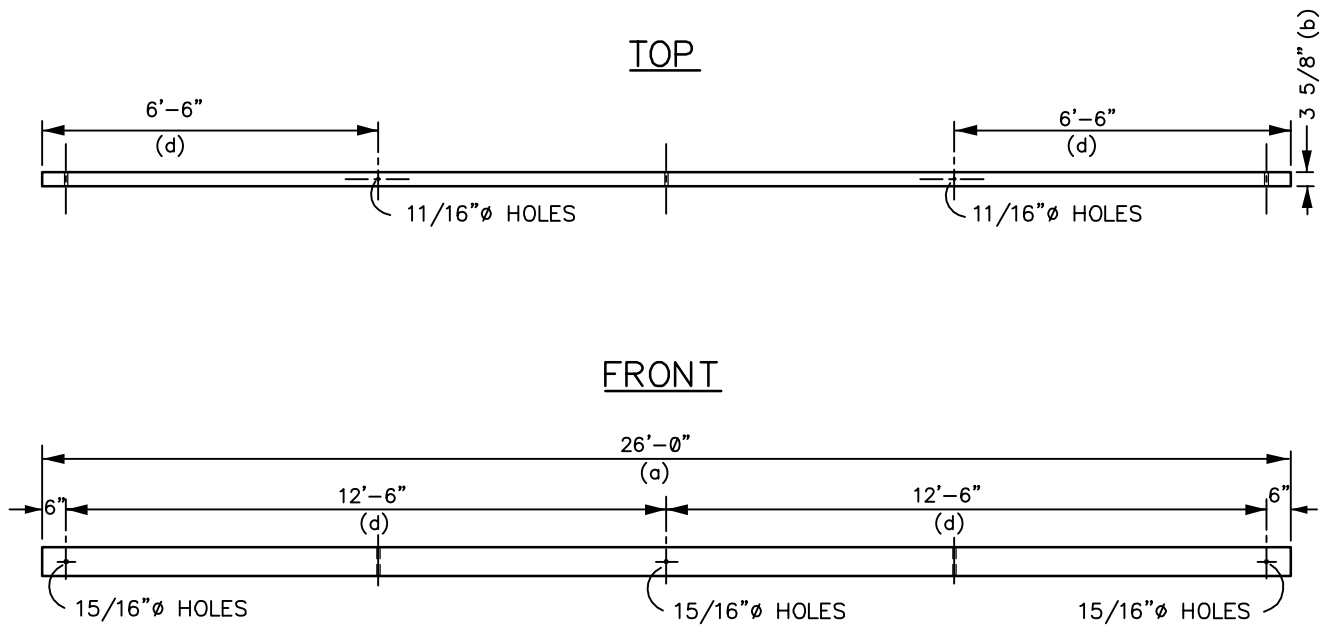


WOOD CROSSARM SPECIFICATIONS
Transmission Standard Practice

098.100
STOCK NO. 80300

Originator: J. Flader	Standards Approval: Jeff Flader
Approval:	Date: 4/3/2014

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2	DOCUMENT NUMBER



CROSSARM: 3-5/8" X 9-1/2" X 26' TYPE D, F, HORIZONTAL SWITCH,
T STOCK NO. 80300



WOOD CROSSARM SPECIFICATIONS
Transmission Standard Practice

Originator:
J. Flader

Standards Approval:
Jeff Flader

Approval:

Date:
4/3/2014

098.100
STOCK NO. 80330

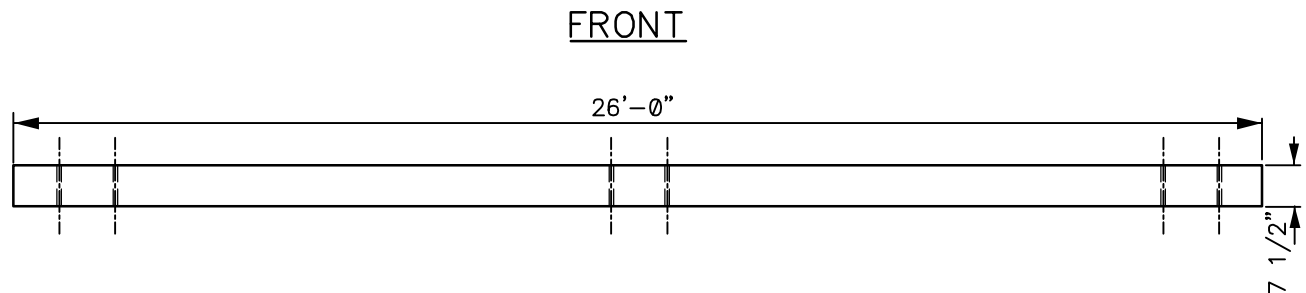
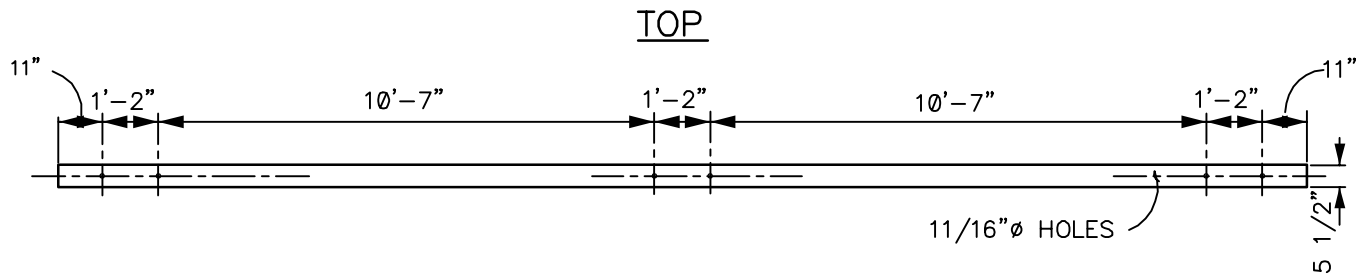
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Rev #:

1

Revision Description:

NEW TITLE BLOCK



CROSSARM: 5-1/2" x 7-1/2" x 26' FOR 115KV SWITCH PLATFORM
STOCK NO. 80330



WOOD CROSSARM SPECIFICATIONS
Transmission Standard Practice

098.100

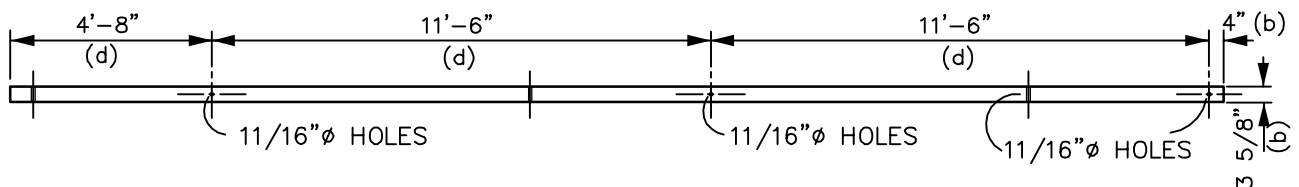
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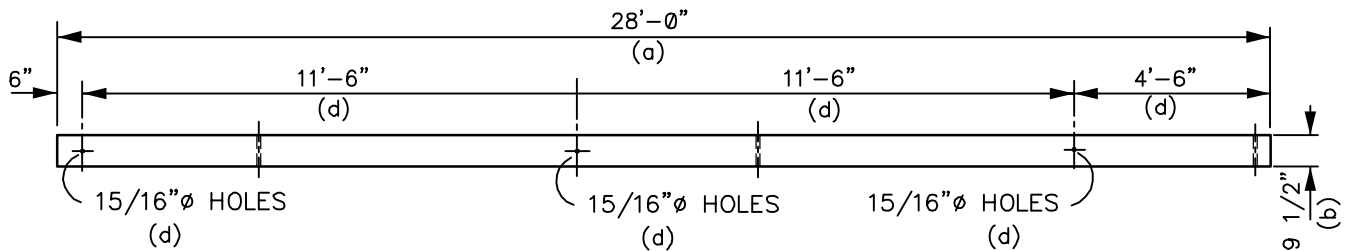
Originator: J. Flader	Standards Approval: Jeff Flader
Approval:	Date: 4/3/2014

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2	DOCUMENT NUMBER

TOP



FRONT



CROSSARM: 3-5/8" x 9-1/2" x 28' TYPE G2, G2A & T STRUCTURES
STOCK NO. 80350



WOOD CROSSARM SPECIFICATIONS
Transmission Standard Practice

Originator:
J. Flader

Standards Approval:
Jeff Flader

Approval:

Date:
4/3/2014

098.100
STOCK NO. 80356

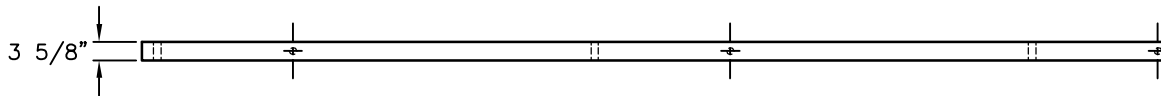
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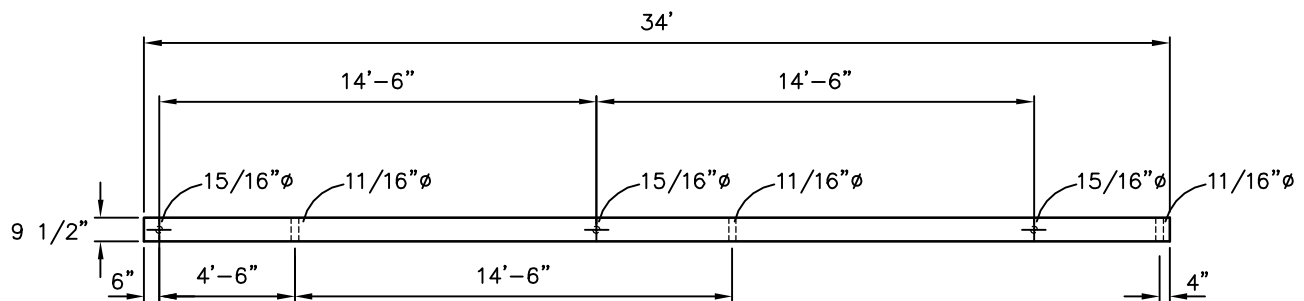
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TOP VIEW



FRONT VIEW



CROSSARM: 3-5/8" x 9-1/2" x 34'
TYPE G2P & G2AP STRUCTURES
STOCK NO. 80356



WOOD CROSSARM SPECIFICATIONS
Transmission Standard Practice

Originator:
J. Flader

Standards Approval:
Jeff Flader

Approval:

Date:
4/3/2014

098.100
STOCK NO. 80580

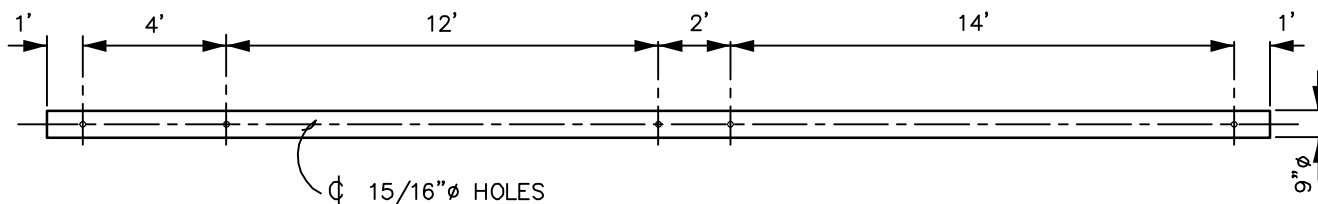
Page 1 of 1

Rev #: Revision Description:

2

DOCUMENT NUMBER

FRONT



ROUND CROSSARM 9"Ø x 34"
STOCK NO. 80580