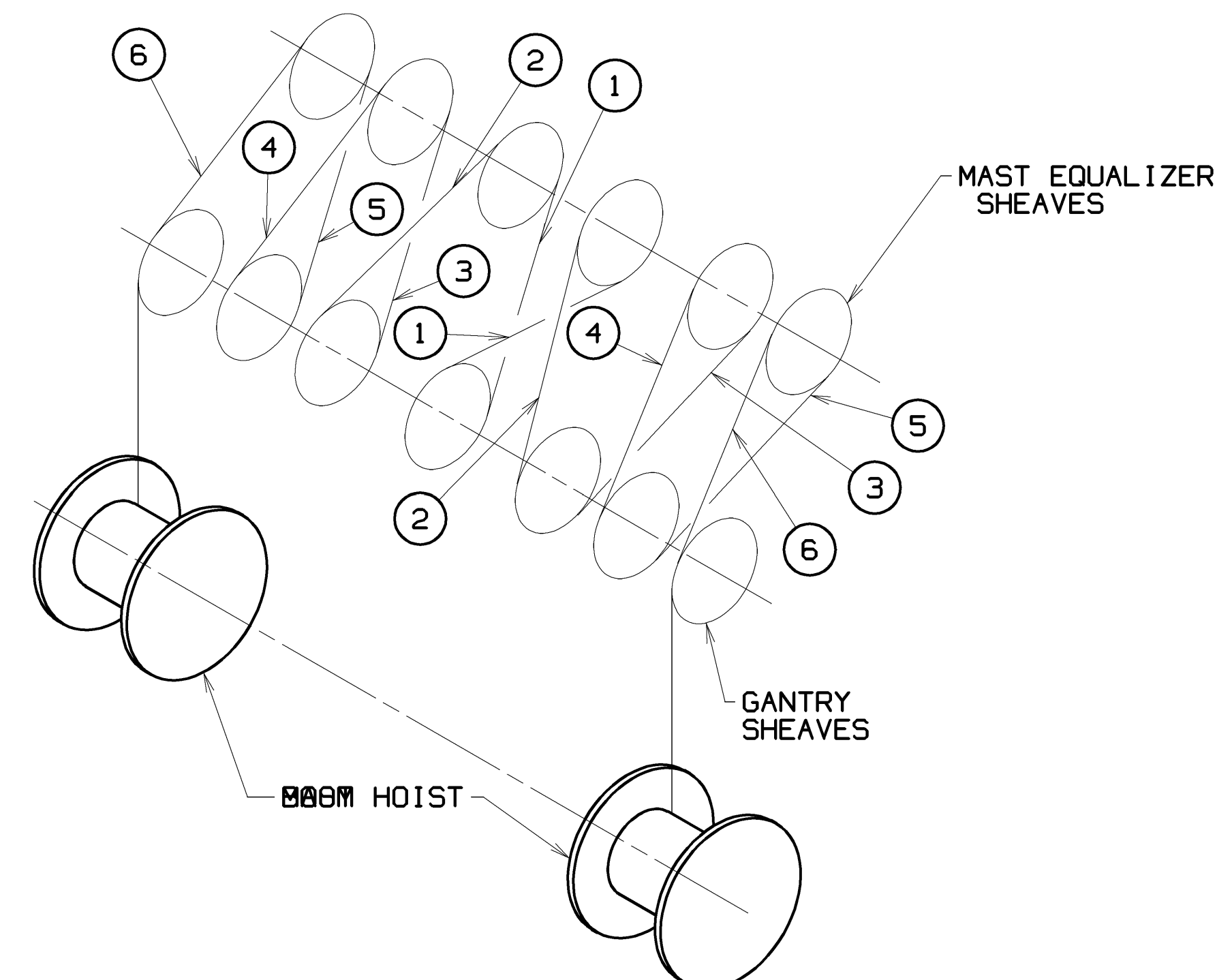
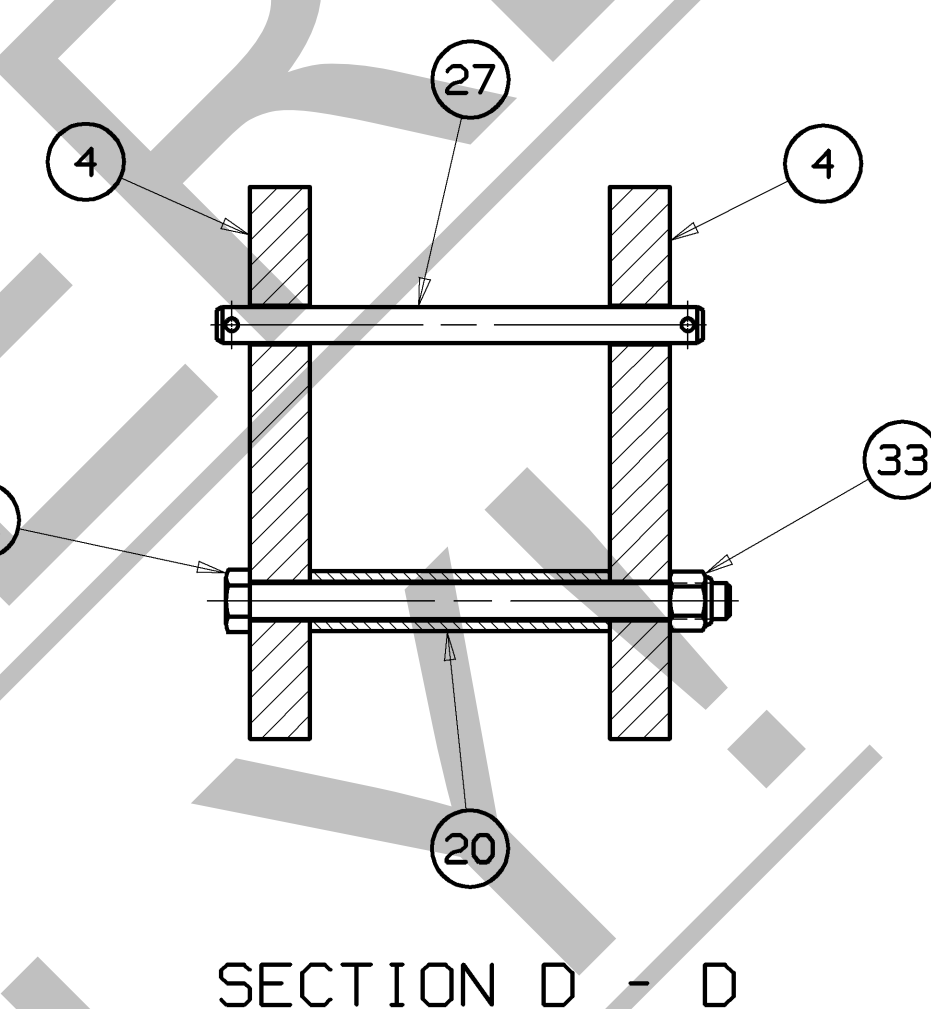
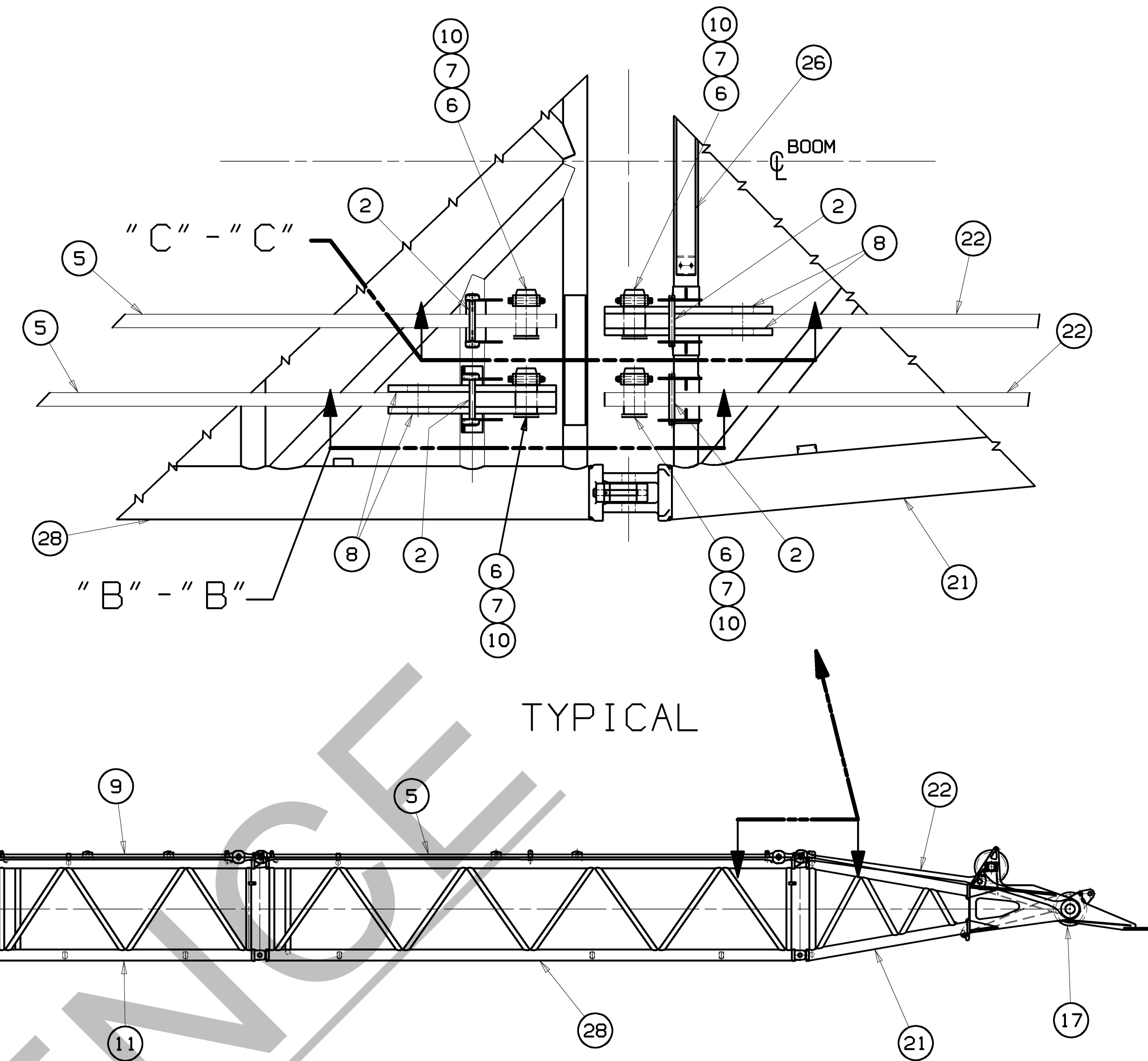
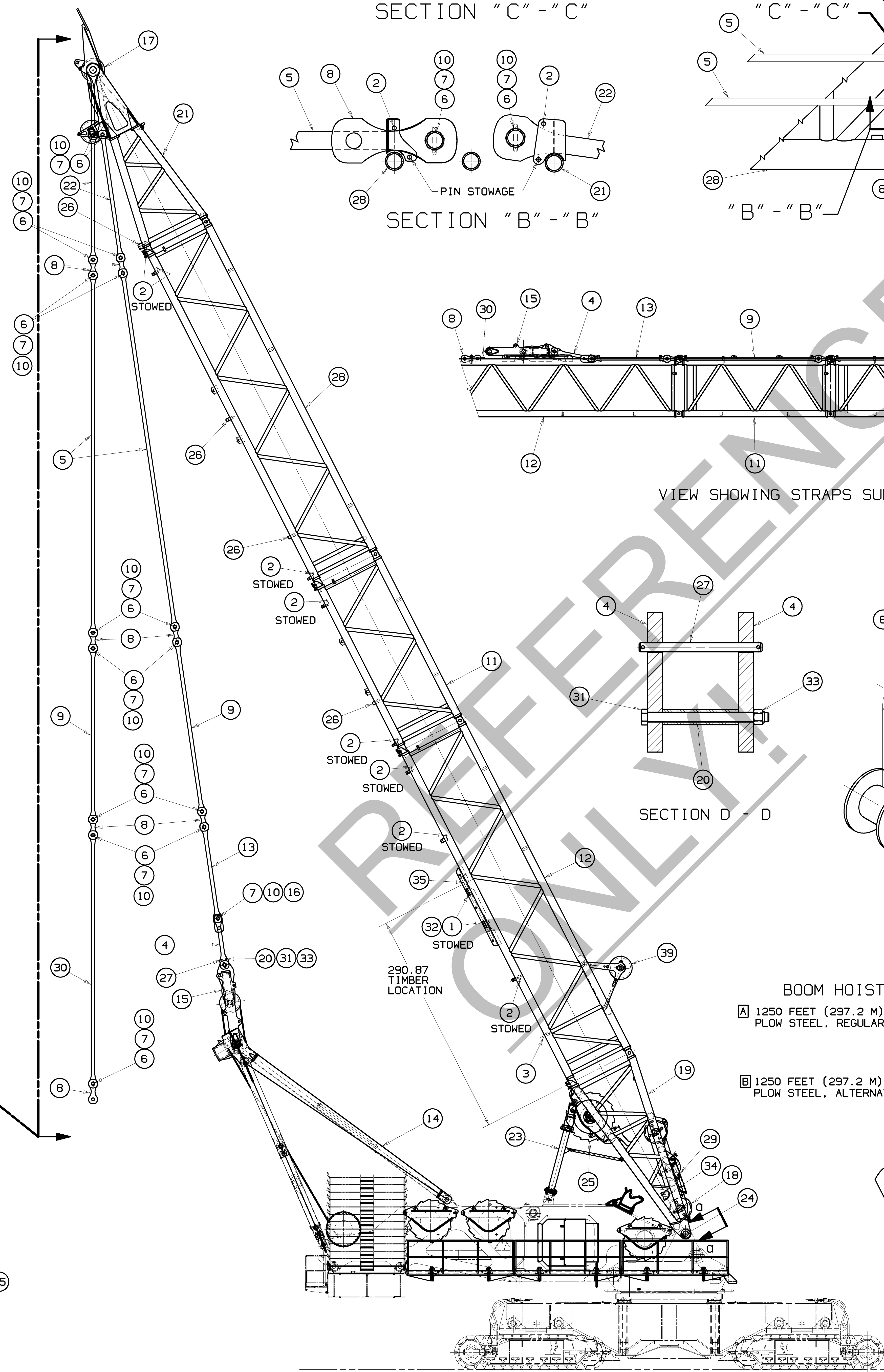




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OPTIONAL PARTS				
43	1	CAT WALK ASSY 20FT #81 INSERT	81016931	2
44	1	CAT WALK ASSY 40FT #81 MAST INSERT	81016930	2
45	1	CAT WALK ASSY 20FT #81 MAST BUTT	81016928	2
46	1	CAT WALK ASSY 20FT #81 TOP	81016929	2
47	1	CAT WALK ASSY 40FT #81 INSERT	81016932	2

BOOM SECTION	OPTIONAL CAT WALK ASSY
192685	81016931
192687	81016930
192990	81016928
193241	81016929
192686	81016932

PRIVATE LABELING
REQUIREMENT TO
CONFORM TO
ENGINEERING
SPECIFICATION
6829103794 FOR
COMPONENTS LISTED
IN GDS500-05-035

DATE	8-16-99
PATTERN NO.	

005. 81.

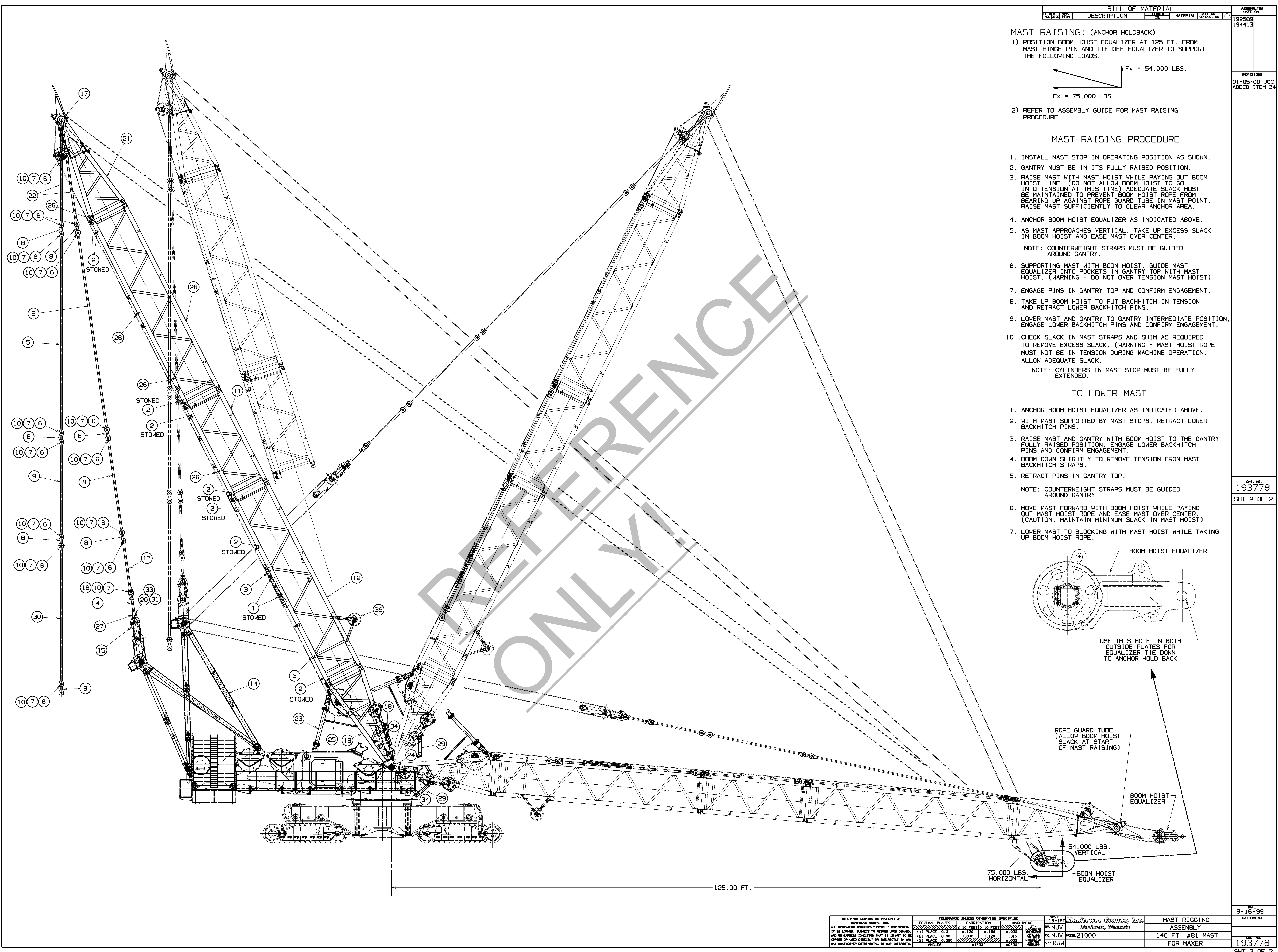
193778
SHT 1 OF 2

DO NOT SCALE THIS DRAWING

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1

SHT 1 OF 2



BILL OF MATERIAL				ASSEMBLIES USED ON
QTY	UNIT	DESCRIPTION	MATERIAL	QTY
1	1	MAST RIGGING		192589
1	1	MAST RIGGING		194413

MAST RAISING: (ANCHOR HOLDBACK)

1) POSITION BOOM HOIST EQUALIZER AT 125 FT. FROM MAST HINGE PIN AND TIE OFF EQUALIZER TO SUPPORT THE FOLLOWING LOADS.

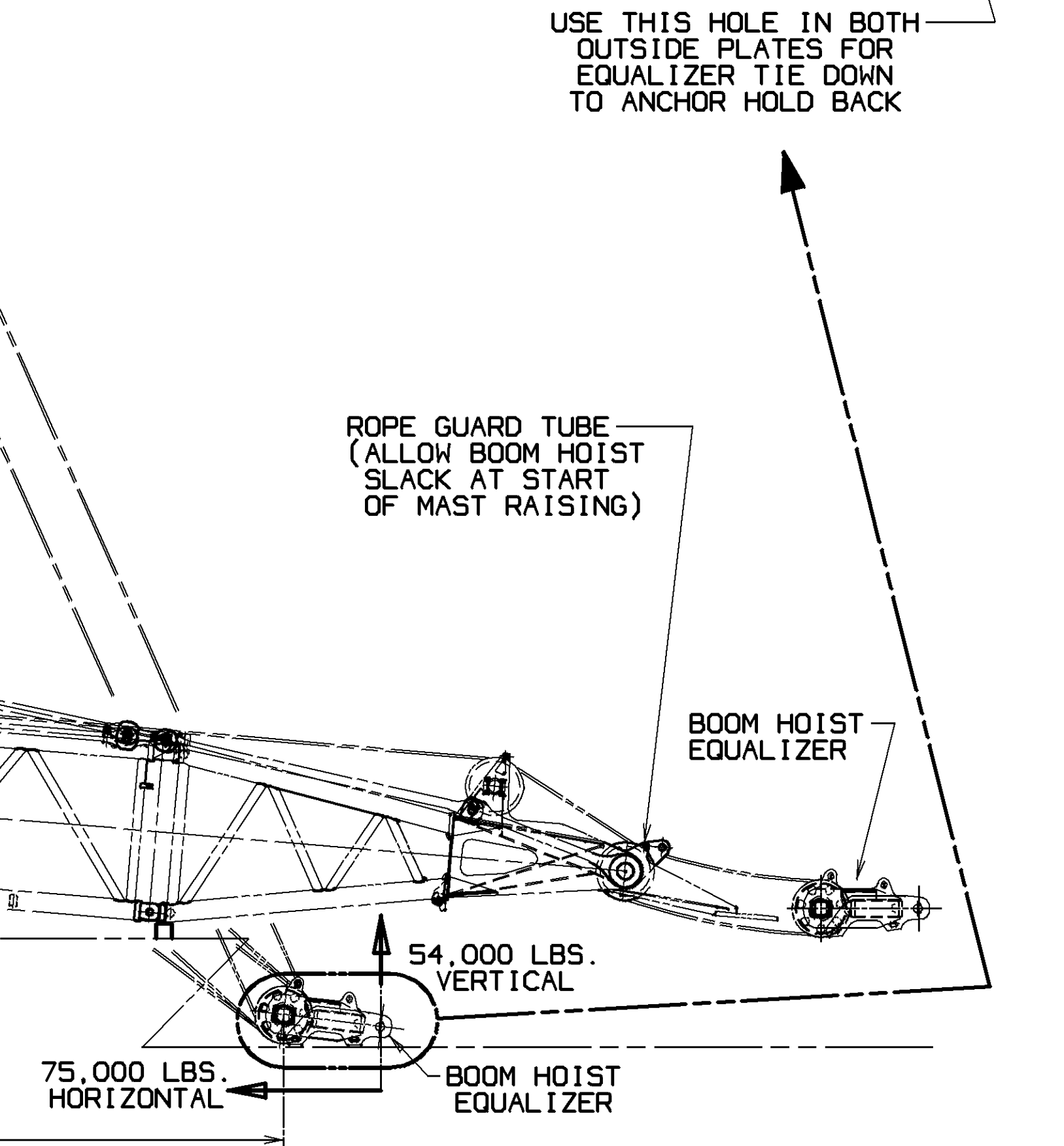
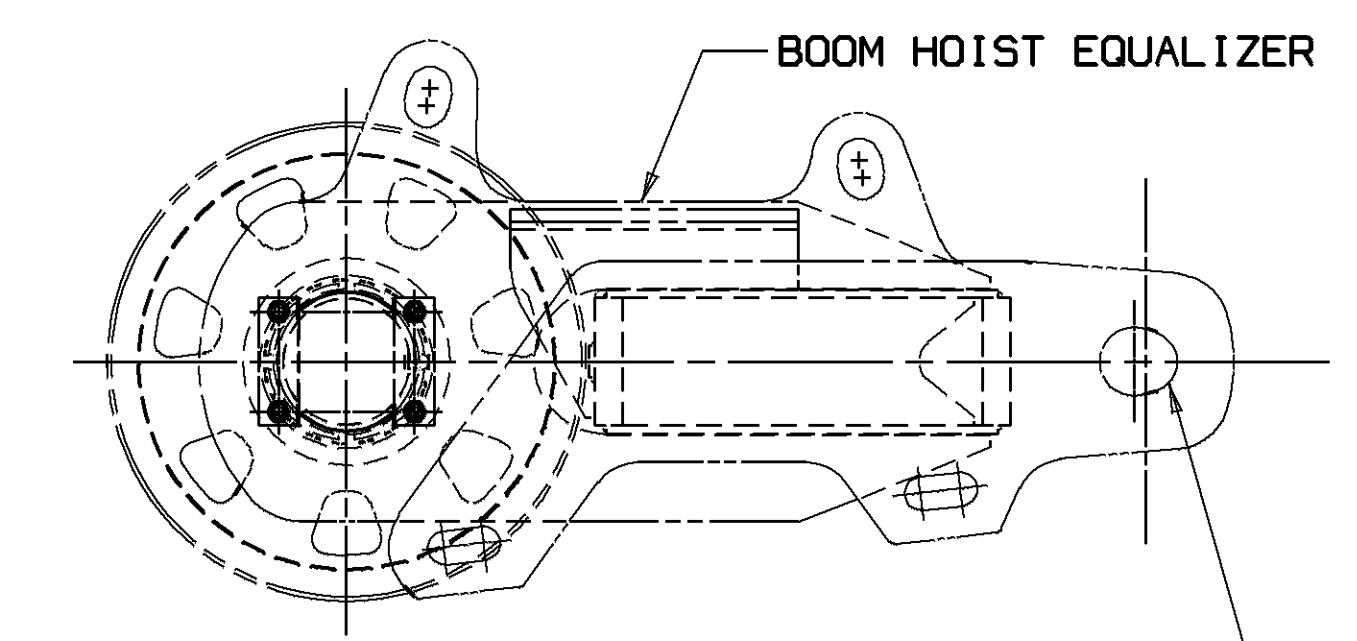
$F_y = 54,000 \text{ LBS.}$

$F_x = 75,000 \text{ LBS.}$

2) REFER TO ASSEMBLY GUIDE FOR MAST RAISING PROCEDURE.

- MAST RAISING PROCEDURE
1. INSTALL MAST STOP IN OPERATING POSITION AS SHOWN.
 2. GANTRY MUST BE IN ITS FULLY RAISED POSITION.
 3. RAISE MAST WITH MAST HOIST WHILE PAYING OUT BOOM HOIST LINE. (DO NOT ALLOW BOOM HOIST TO GO INTO TENSION AT THIS TIME) ADEQUATE SLACK MUST BE MAINTAINED TO PREVENT BOOM HOIST ROPE FROM BEARING UP AGAINST ROPE GUARD TUBE IN MAST POINT. RAISE MAST SUFFICIENTLY TO CLEAR ANCHOR AREA.
 4. ANCHOR BOOM HOIST EQUALIZER AS INDICATED ABOVE.
 5. AS MAST APPROACHES VERTICAL, TAKE UP EXCESS SLACK IN BOOM HOIST AND EASE MAST OVER CENTER.
- NOTE: COUNTERWEIGHT STRAPS MUST BE GUIDED AROUND GANTRY.
6. SUPPORTING MAST WITH BOOM HOIST, GUIDE MAST EQUALIZER INTO POCKETS IN GANTRY TOP WITH MAST HOIST. (WARNING - DO NOT OVER TENSION MAST HOIST).
 7. ENGAGE PINS IN GANTRY TOP AND CONFIRM ENGAGEMENT.
 8. TAKE UP BOOM HOIST TO PUT BACKHITCH IN TENSION AND RETRACT LOWER BACKHITCH PINS.
 9. LOWER MAST AND GANTRY TO GANTRY INTERMEDIATE POSITION, ENGAGE LOWER BACKHITCH PINS AND CONFIRM ENGAGEMENT.
 10. CHECK SLACK IN MAST STRAPS AND SHIM AS REQUIRED TO REMOVE EXCESS SLACK. (WARNING - MAST HOIST ROPE MUST NOT BE IN TENSION DURING MACHINE OPERATION. ALLOW ADEQUATE SLACK.
- NOTE: CYLINDERS IN MAST STOP MUST BE FULLY EXTENDED.

- TO LOWER MAST
1. ANCHOR BOOM HOIST EQUALIZER AS INDICATED ABOVE.
 2. WITH MAST SUPPORTED BY MAST STOPS, RETRACT LOWER BACKHITCH PINS.
 3. RAISE MAST AND GANTRY WITH BOOM HOIST TO THE GANTRY FULLY RAISED POSITION, ENGAGE LOWER BACKHITCH PINS AND CONFIRM ENGAGEMENT.
 4. BOOM DOWN SLIGHTLY TO REMOVE TENSION FROM MAST BACKHITCH STRAPS.
 5. RETRACT PINS IN GANTRY TOP.
- NOTE: COUNTERWEIGHT STRAPS MUST BE GUIDED AROUND GANTRY.
6. MOVE MAST FORWARD WITH BOOM HOIST WHILE PAYING OUT MAST HOIST ROPE AND EASE MAST OVER CENTER. (CAUTION: MAINTAIN MINIMUM SLACK IN MAST HOIST)
 7. LOWER MAST TO BLOCKING WITH MAST HOIST WHILE TAKING UP BOOM HOIST ROPE.



THIS PRINT REMAINS THE PROPERTY OF MANTOWOC CRANES, INC.		TOLERANCE UNLESS OTHERWISE SPECIFIED				SOLS - 19-1F		Mantowoc Cranes, Inc.		MAST RIGGING		PATTERN NO.	
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		± 1.50 FEET ± 10 FEET				MANTOWOC CRANES, INC. MANTOWOC, WISCONSIN		MODEL 21000		140 FT. #81 MAST			
		(1) PLACE 0.00		± 0.50 ± 1.20 ± 0.15				APP R/JW		FOR MAXER		193778	
		(2) PLACE 0.000		± 0.005 ± 0.005 ± 0.005								SHT 2 OF 2	
		ANGLES		± 1° 30' ± 30° 30' ± 30° 30'									

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