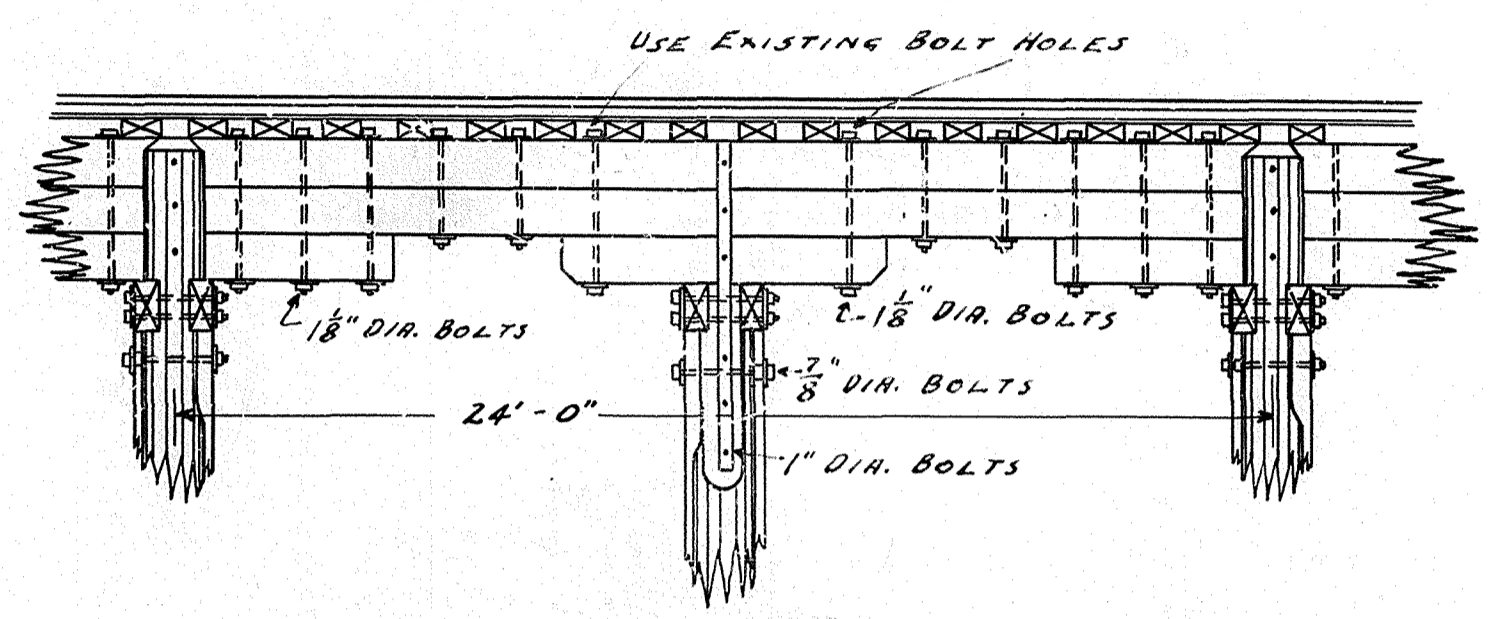
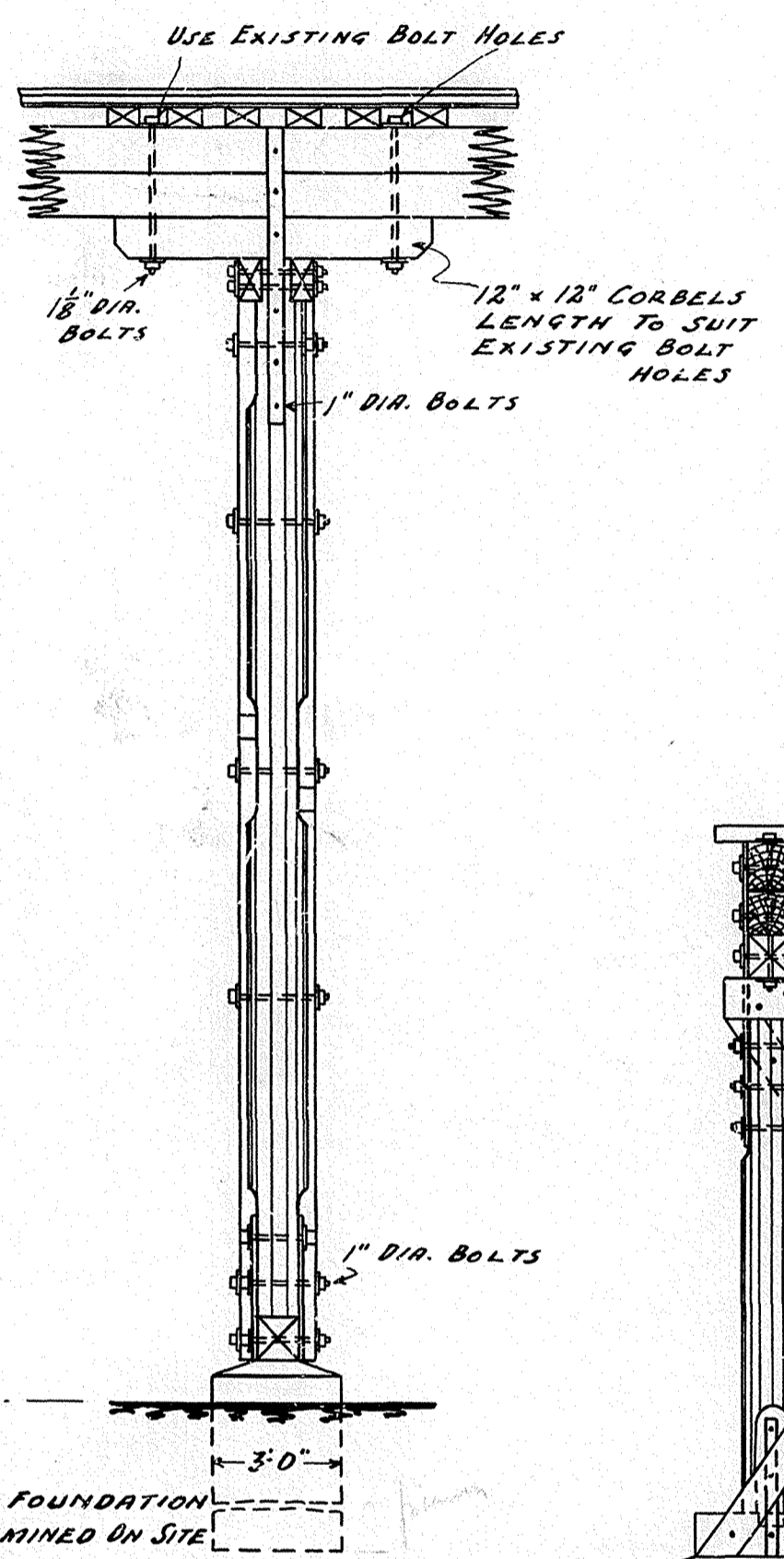
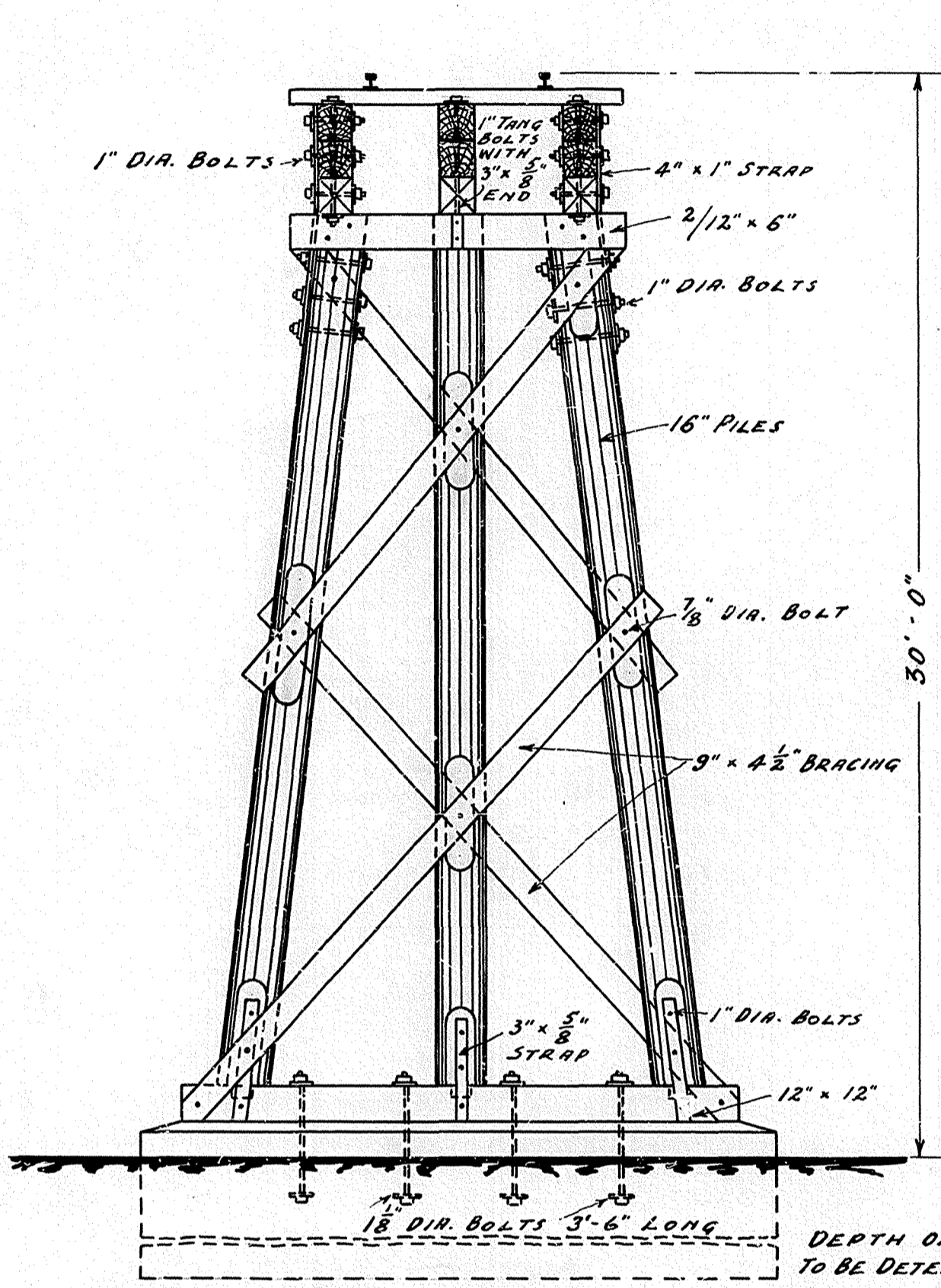
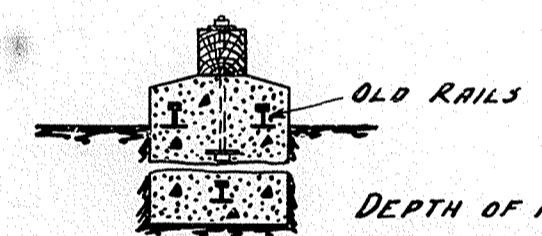


B	23-3-57	<i>Note re policy covering splicing of piles deleted.</i>
	A	20-2-56
N. S. W. R.		
STANDARD TIMBER OPENINGS RENEWAL OF PILES IN TRESTLES METHOD OF REPAIRS.		
APPRD. <i>[Signature]</i> 9. 11. 51		
CHIEF CIVIL ENGINEER		
S.S. 420 X.B.		



PART LONGITUDINAL ELEVATION



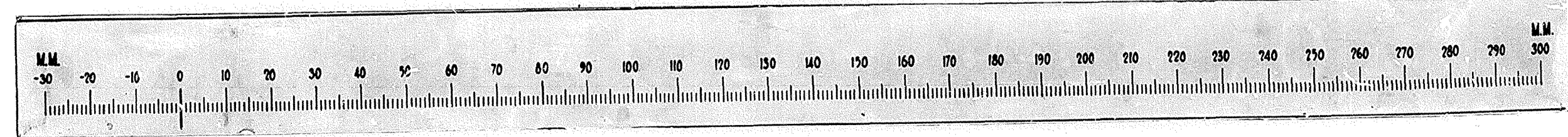
TYPICAL FOUNDATION IF IN POOR GROUND

N.	S.	W.	R.
STRENGTHENING			
STANDARD 24'-0" TIMBER OPENING			
INTERMEDIATE TRESTLES			
R.A.B. 30-3-32 PRIN. DESG. ENGR.		SCALE 1/4" = ONE FOOT	
A.C. Smith 31-3-32 CHIEF CIVIL ENGR. EER		R.G.M. 18-5-32 J.J.H.	
DRAWING No 96-82			

FROM 18'-0" TO 30'-0" FROM GROUND

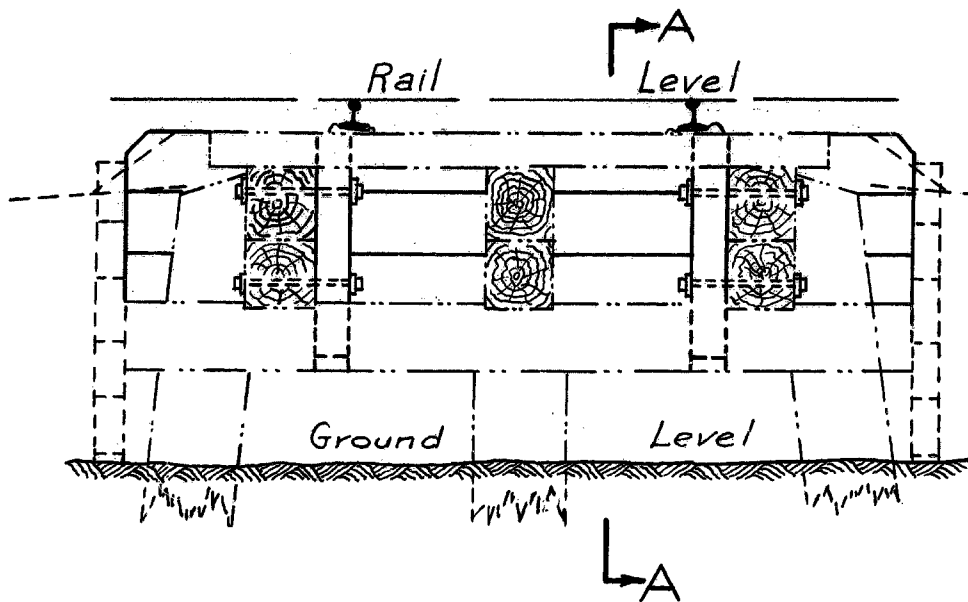
UP TO 18'-0" FROM GROUND

NOTE - OLD RAIL REINFORCING IN POOR GROUND

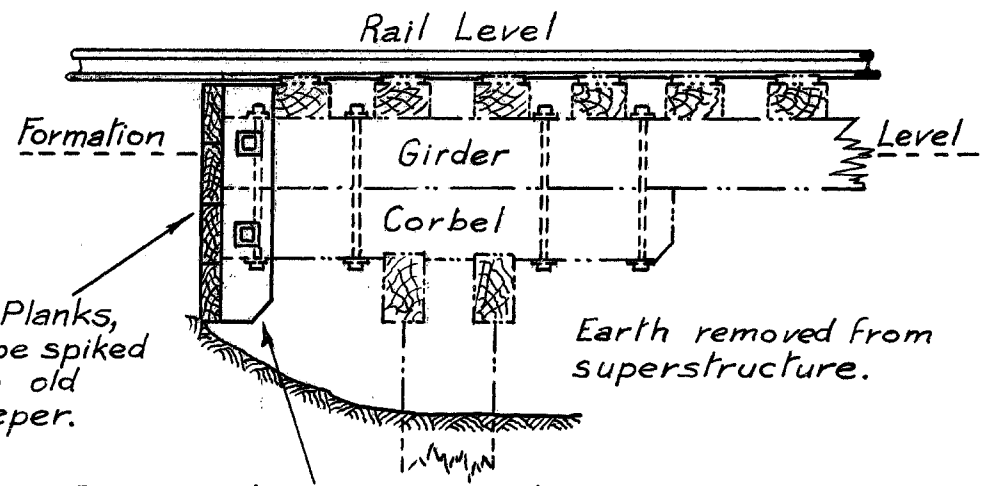


WARNING SCANNED IMAGE
EDMS CV0365333

2 H D.E. West 30-3-32



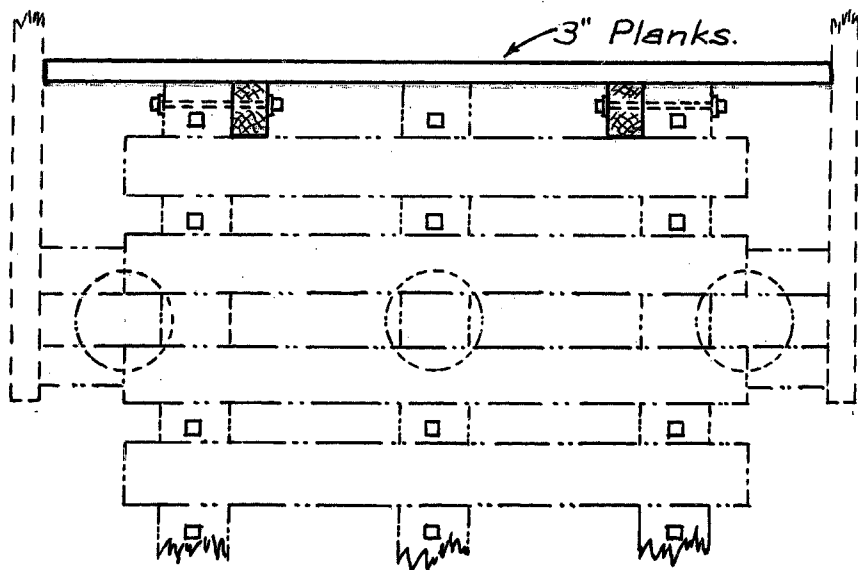
ELEVATION.



SECTION AA.

NOTE:

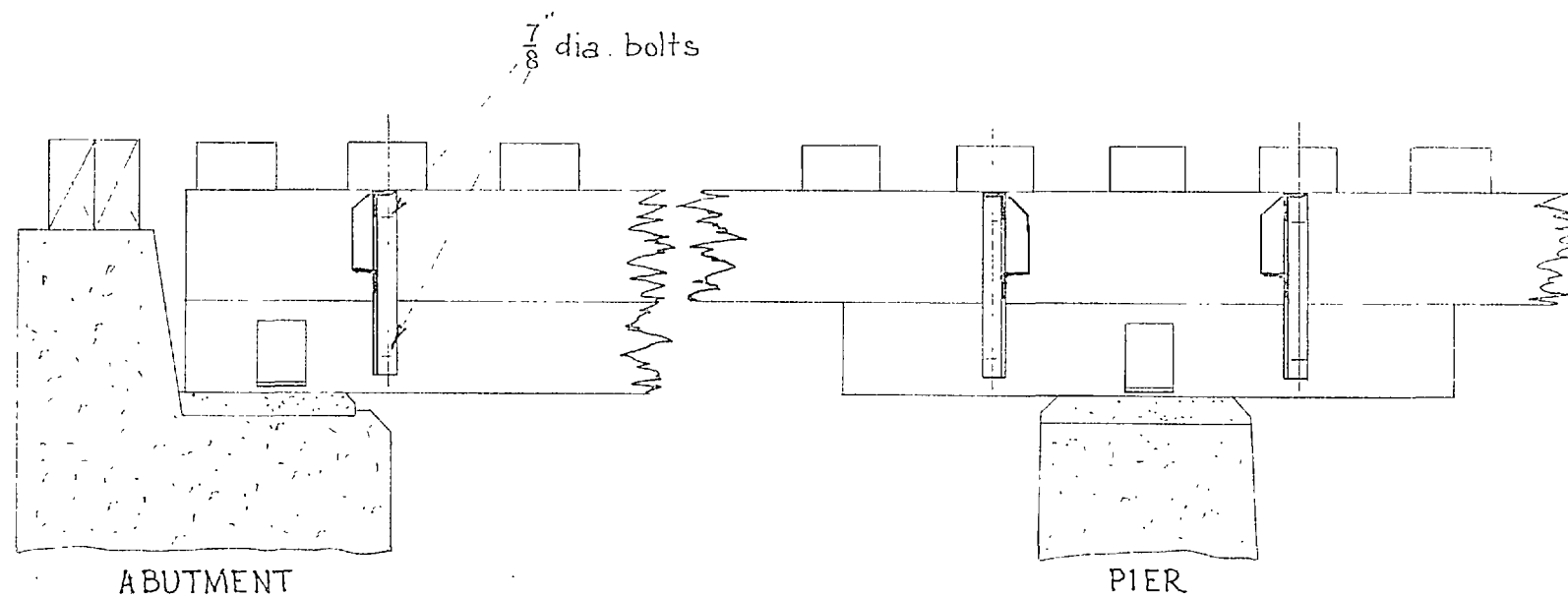
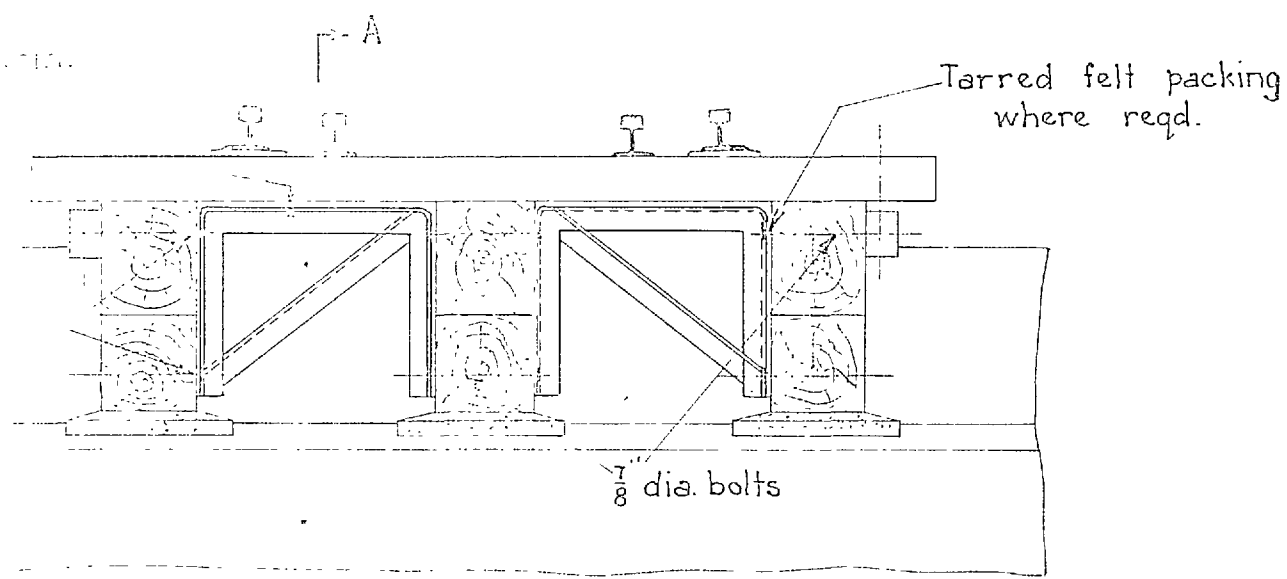
Recovered bridge timbers may be used in lieu of 3" planks at ends of girders. This Plan supersedes Dwg. No F783.



PLAN.

Old Sleepers or other suitable material for protection of headstocks, girders and corbels.

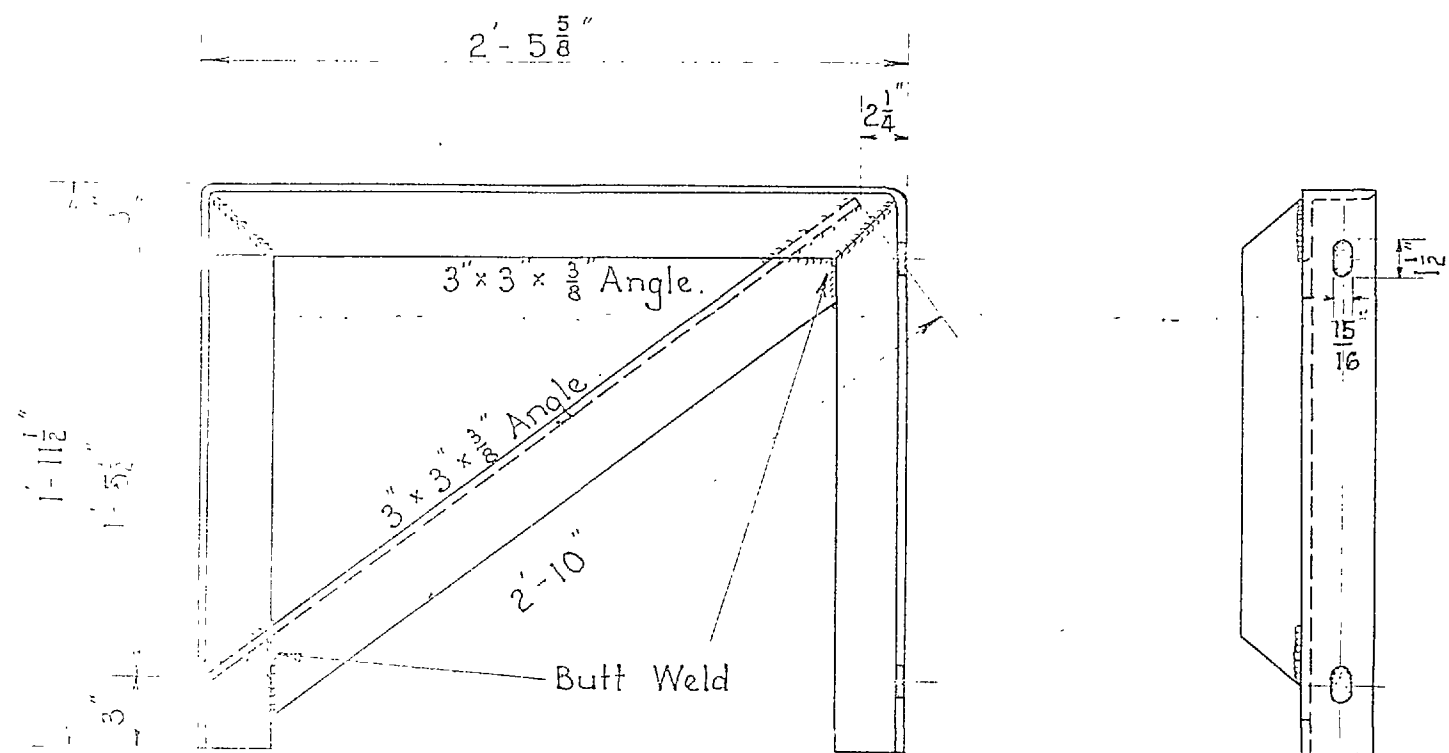
<p>N. S. W. R. TIMBER OPENINGS STANDARD PROTECTION FOR ENDS OF TIP SPANS.</p>
<p>APPRD. 23.12.52 <i>H. V. Spangenberg</i> CHIEF CIVIL ENGR.</p>
<p>S. S. 425</p>



ELEVATION OF BRACING

SECTION A-A

Note: As drawn: Top girder 14"x12", btm girder 12"x12".
 These bracing frames to be used, also where top end bottom girders are 12"x12".



All holes slotted
 $\frac{1}{2} \times \frac{15}{16}$ for $\frac{7}{8}$ bolts
 All fillet welds $\frac{1}{4}$ " continuous all around joints.

Note This bracing to be provided when concrete abutments and piers are constructed in lieu of timber abutments or trestles of a bridge on a curve not exceeding 30 C.R. or on a transition to such curve, or when the T.P. of the above curve or transition is within 20ft of either abutment. 2 Bracing frames are required at each abutment. 4 Bracing frames are required at each pier. Tarred felt packing to be placed between bracing frames and girders where required.

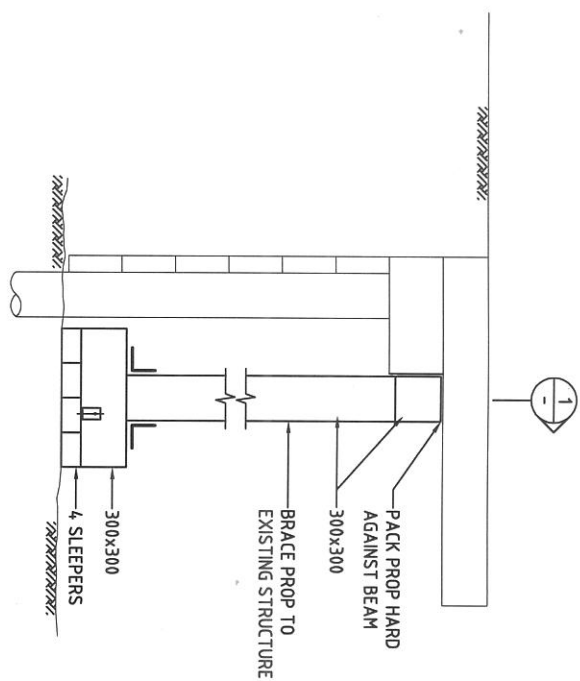
Reference See drawing N° 84-141 for details of concrete abutments using old rail reinforcement. See drawing N° 84-159 for details of concrete abutments using rod reinforcement. See drawing ST. 84 for details of concrete piers.

DETAIL OF BRACING FRAME
 4 OFF PER PIER
 2 OFF PER ABUTMENT

SPARES BATCH 69
EDMS CV0367301

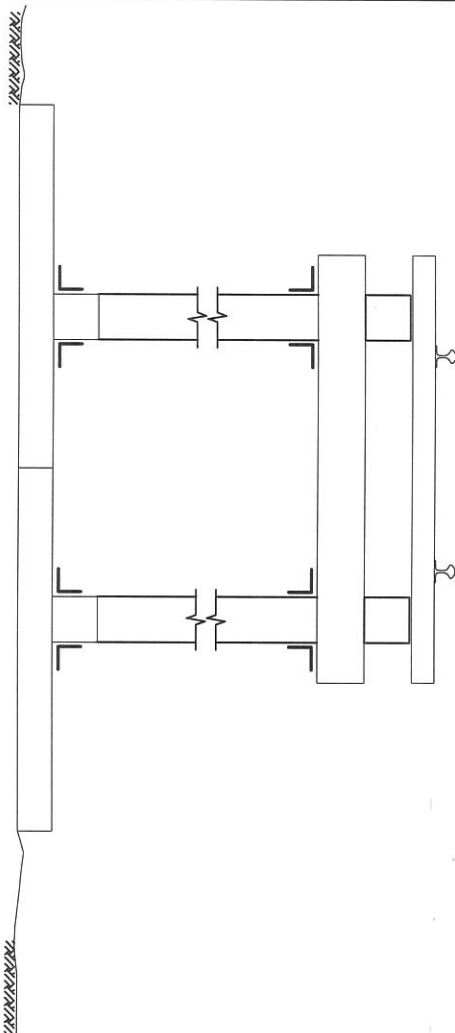
Cancelled
 see Plan 87-121 60/14
 44/15242G W.M.

DEPARTMENT OF RAILWAYS, N.S.W. WAY AND WORKS BRANCH	
14 FT. TIMBER OPENINGS BRACING TO GIRDERS AT PIERS & ABUTMENTS	
DRAWN F. S.	FILED 100/14
FRACED I. M. L.	
8-3-44	
20-3-44	



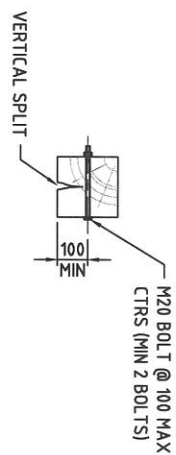
DETAIL A
SCALE 1:25

NOTE:
INSTALL PROPS UNDER BOTH OUTER GIRDERS.



SECTION 1
SCALE 1:25

- NOTES:
1. 2/300x150 SECTIONS ATTACHED AT 1m CTRS WITH M20 BOLTS MAY BE USED INSTEAD OF 1/300x300 SECTION.
 2. TIMBER TO BE GRADE F17.
 3. FIT PROPS CLOSE TO PILE TO BE SUPPORTED.
 4. SLEEPER PADS TO BE INSTALLED ON GROUND WITH MINIMUM SAFE BEARING VALUE OF 100 kpa.



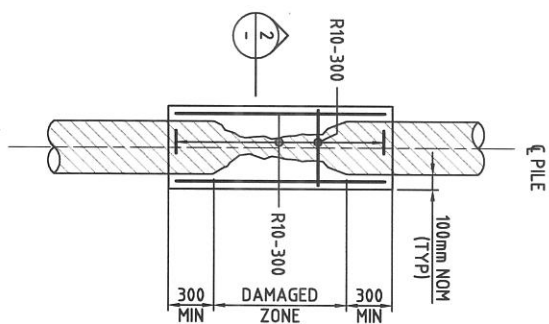
DETAIL B
SCALE 1:25

NOTE
1. BOLTS TO BE 100mm MIN FROM BOTTOM OR TOP FACE OF GIRDER / CORBEL TO SUIT SPLIT LOCATION

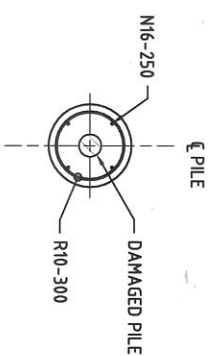
SPLIT GIRDER/CORBEL DETAIL



SPLIT PILE



DETAIL C
SCALE 1:25
(ROTTED TIMBER PILE)



SECTION 2
SCALE 1:25

- NOTES:
1. REMOVE LOOSE MATERIAL FROM PILE SURFACE
 2. EXTEND PILE JACKET 300mm MIN PAST DAMAGED ZONE
 3. DAMAGE ZONE DENOTES - ZONE WHERE DEFECT GREATER THAN Ø200 PIPE OR SIMILAR
 4. REINSTATE DIAGONAL BRACING TO CLEAR PILE JACKET

CLIENT:

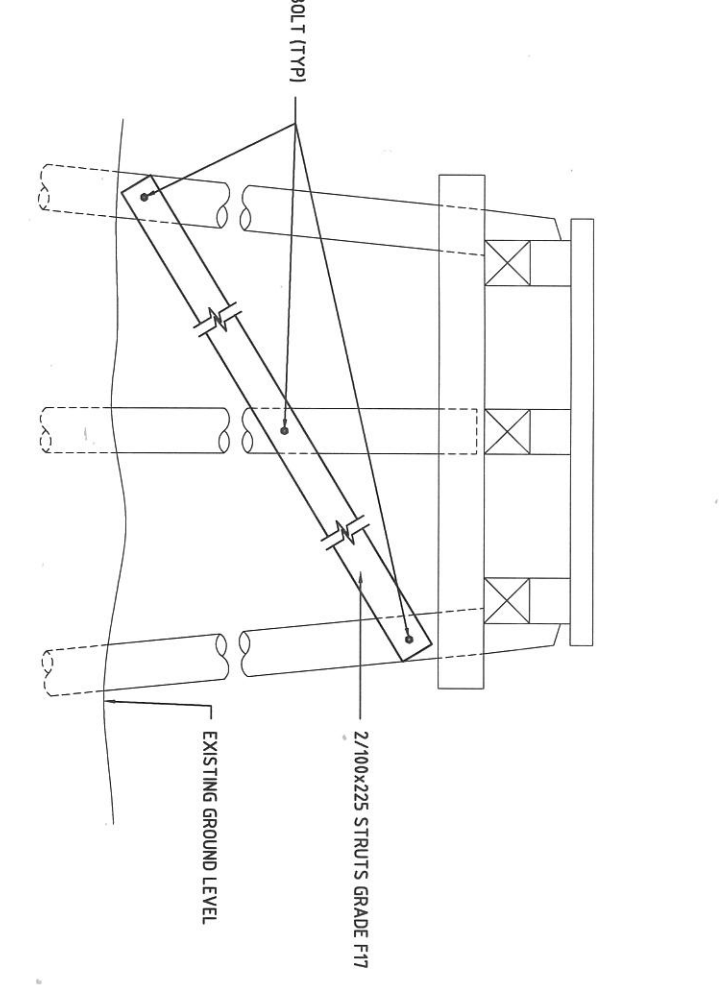
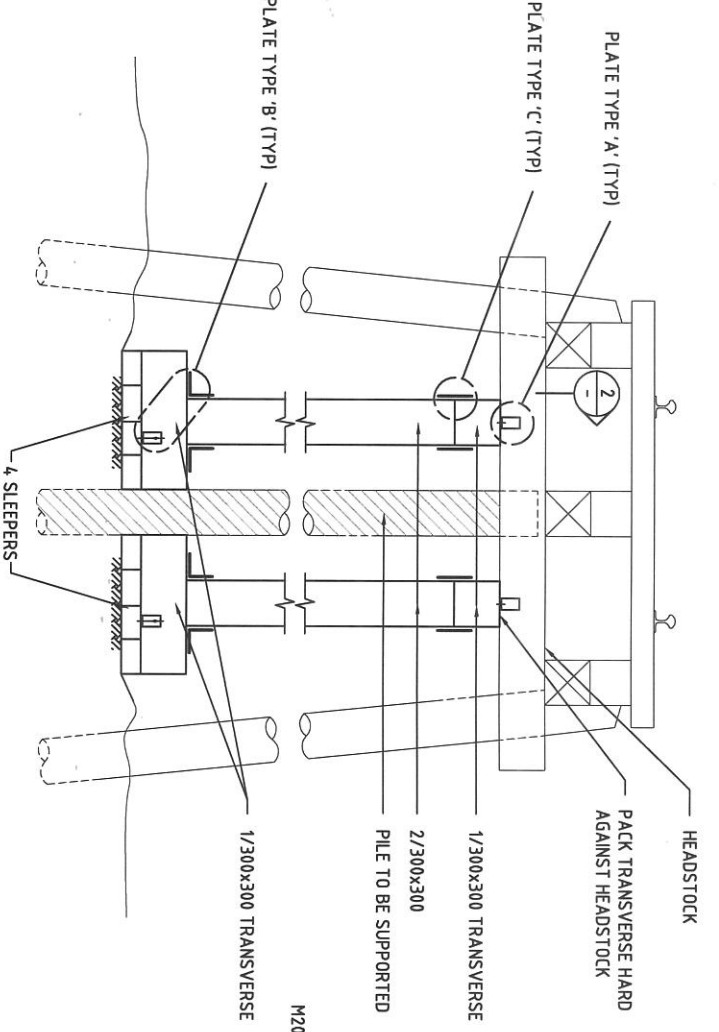
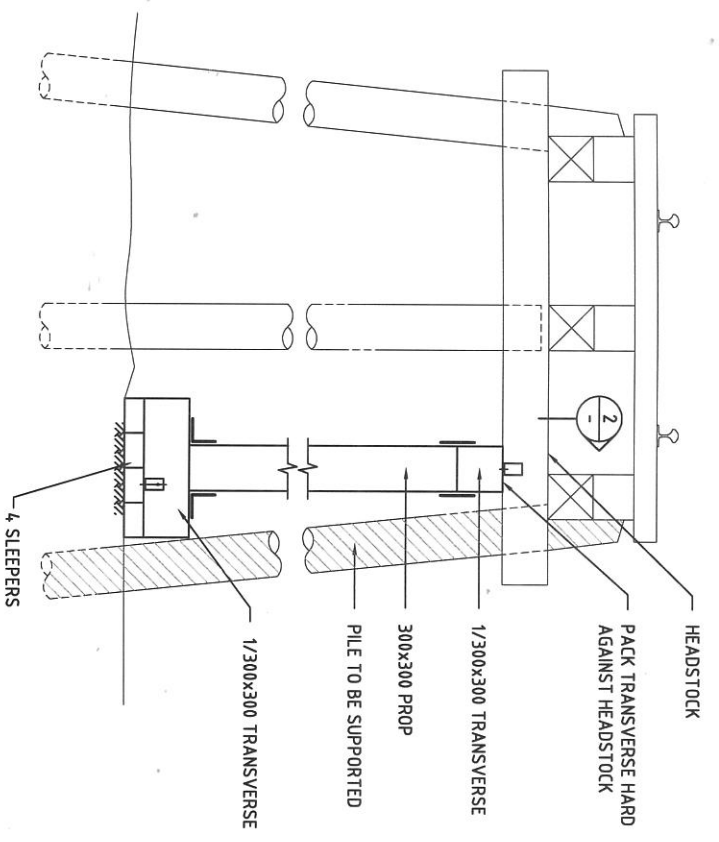
DESIGNED:	RH	DATE:	AHD
DRAWN:	JF	COORDINATE SYSTEM:	
CHECKED:	RH	APPROVED:	
RECOMMENDED:		PROJECT DIRECTOR:	
PROJECT MANAGER:		DATE:	

Cardno MBK
Cardno MBK (NSW) Pty Ltd
Level 3, 210 Pacific Highway, Newcastle NSW 2320
Phone: 081 22 2244 Fax: 081 22 2244
Email: yph@cardno.com.au Web: www.cardno.com.au

CLIENT
BINNAVAY - GWABEGAR RAIL LINE
TEMPORARY STRENGTHENING OF UNDER BRIDGES
DETAILS SHEET 1 OF 2

DRAWING NUMBER
602035-101

REV
A

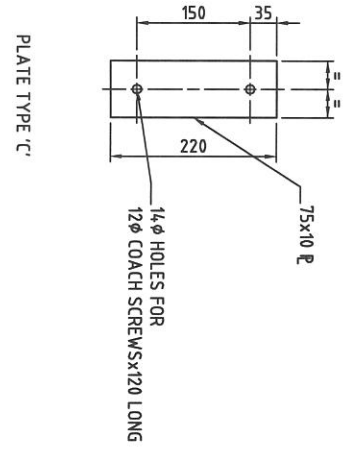
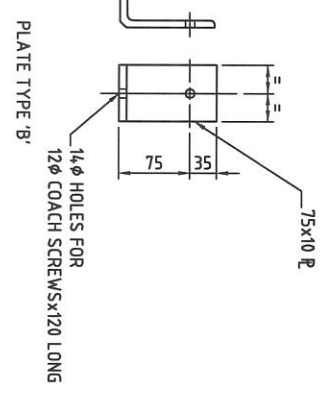
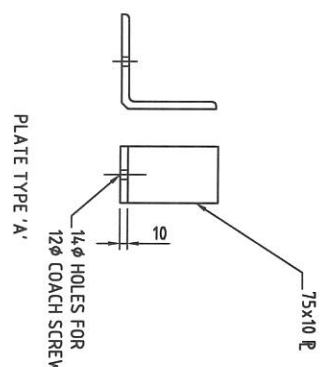
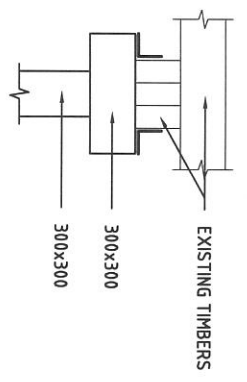


OUTER PILE
DETAIL D1
SCALE 1:25

INNER PILE
DETAIL D2
SCALE 1:25

BRACING
DETAIL E
SCALE 1:25

NOTES:
1. 2/300x150 SECTIONS ATTACHED AT 1m CTRS WITH M20 BOLTS MAY BE USED INSTEAD OF 1/300x300 SECTION.
2. TIMBER TO BE GRADE F17.
3. FIT PROPS CLOSE TO PILE TO BE SUPPORTED.
4. SLEEPER PADS TO BE INSTALLED ON GROUND WITH MINIMUM SAFE BEARING VALUE OF 100 kpa.



SECTION 2
SCALE 1:25

REV	DATE	ISSUED FOR CONSTRUCTION	REVISIONS
A	15-11-2004	ISSUED FOR CONSTRUCTION	

DESIGNED	RH	DATUM	AHD
DRAWN	JF	COORDINATE SYSTEM	
CHECKED	RH	APPROVED	15/11/04
RECOMMENDED		PROJECT DIRECTOR	
PROJECT MANAGER		DATE	

CLIENT	BINMAYAY - GWABEGAR RAIL LINE TEMPORARY STRENGTHENING OF UNDER BRIDGES DETAILS SHEET 2 OF 2
DRAWING STATUS	CONSTRUCTION
DRAWING NUMBER	602035-102
REV	A

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