

TRACK WORKS

TRACK WORK

NO	TITLE	DRAWING NO	SCALE
01	RAIL R.54 AND RAIL JOINT ACCESSORIES	TR - 01 - 001	1:4.5 / 1:2 / 1:1
02	RAIL FASTENING	TR - 01 - 002	1:2
03	INSULATED RAIL JOINT ACCESSORIES	TR - 01 - 003	1:11
04	TRACK PANEL	TR - 01 - 004	1:1000/1:100/1:25/1:5
05	SIMPLE TURNOUT R.54 NO.8	TR - 01 - 005	1:40
06	SIMPLE TURNOUT R.54 NO.10	TR - 01 - 006	1:200 / 1:40
07	SCISSOR CROSSING R.54 NO.8	TR - 01 - 007	1:80 / 1:45
08	SCISSOR CROSSING R.54 NO.10	TR - 01 - 008	1:200 / 1:100 / 1:50
09	DOUBLE SPLIT SWITCH R.54 NO.10	TR - 01 - 009	1:50 / 1:30
10	PC SLEEPERS AND FASTENING	TR - 01 - 010	1:5 / 1:2
11	WOODEN SLEEPERS AND FASTENING ON TRACK & BRIDGE	TR - 01 - 011	1:5 / 1:2 / 1:1
12	BUFFER STOP ASSEMBLY (TYPE A)	TR - 01 - 012	1:20 / 1:4 / 1:2
13	BUFFER STOP ASSEMBLY (TYPE B)	TR - 01 - 013	1:100
14	RAILWAY SIGN POST (1/3)	TR - 01 - 014	1:10
15	RAILWAY SIGN POST (2/3)	TR - 01 - 015	1:10
16	RAILWAY SIGN POST (3/3)	TR - 01 - 016	1:10
17	TRACK LAYOUT SWITCHING WORK FOR BEKASI STATION	TR - 01 - 017	N T S
18	TRACK LAYOUT SWITCHING WORK FOR BEKASI TIMUR STATION	TR - 01 - 018	N T S
19	TRACK LAYOUT SWITCHING WORK FOR TAMBUN STATION	TR - 01 - 019	N T S
20	TRACK LAYOUT SWITCHING WORK FOR CIBITUNG STATION	TR - 01 - 020	N T S
21	TRACK LAYOUT SWITCHING WORK FOR CIKARANG STATION	TR - 01 - 021	N T S

The Railway Electrification and
Double - double Tracking of
Java Main Line Project



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DIREKTORAT JENDERAL PERHUBUNGAN DARAT
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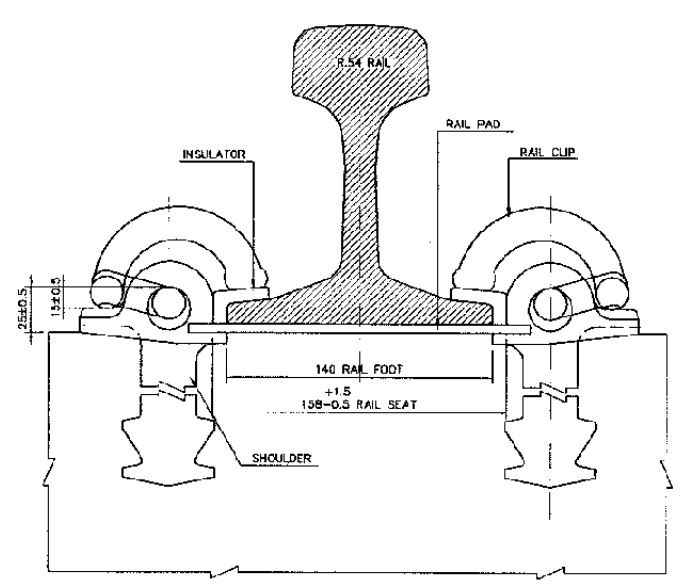
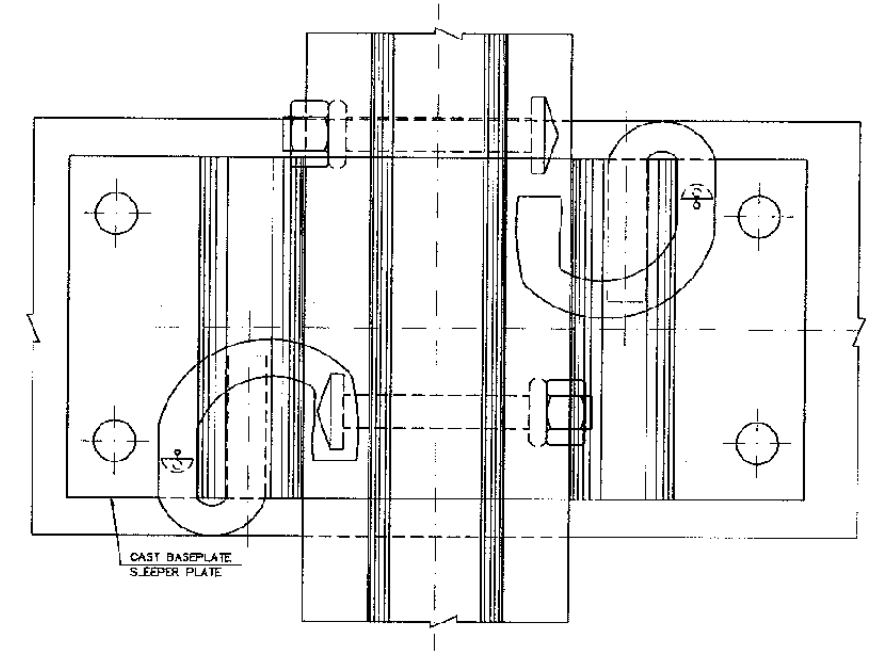
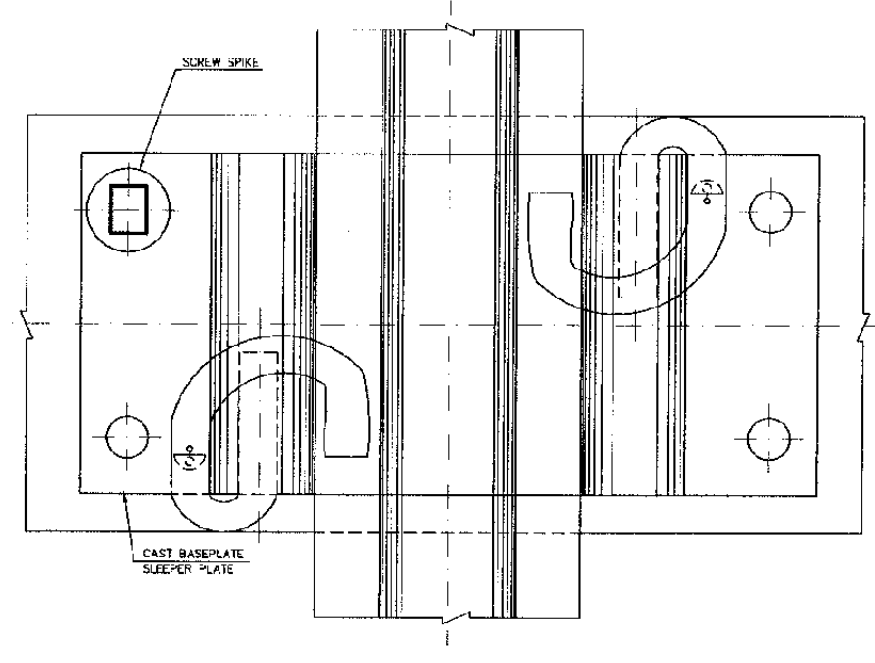
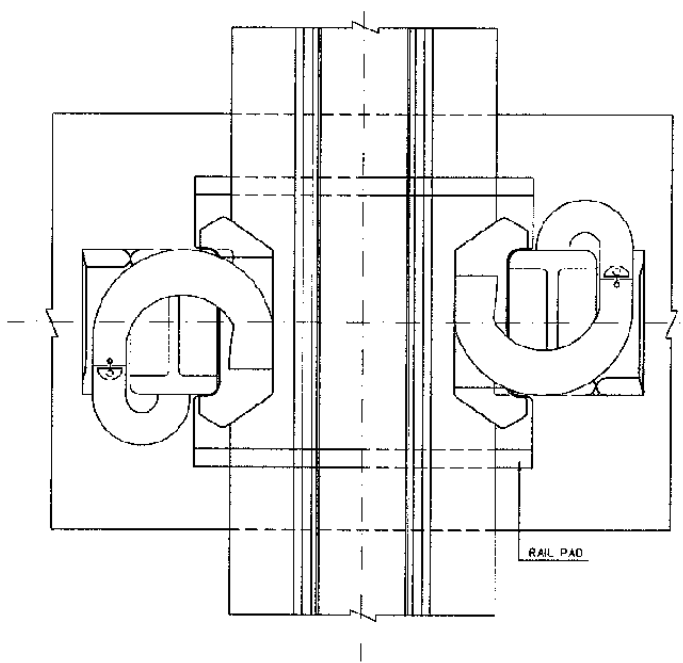
TRACK WORKS

DATE: 10 / MARCH / 2003

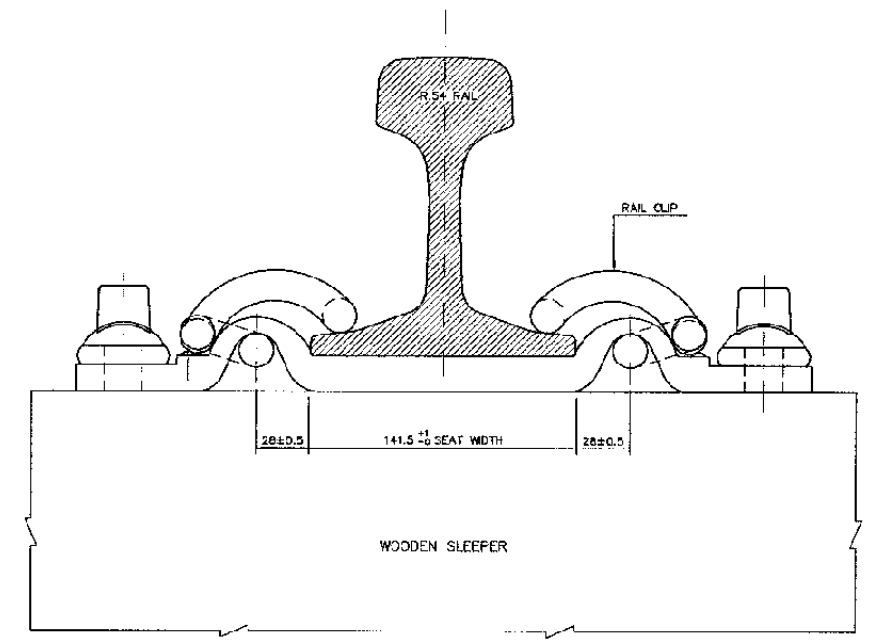
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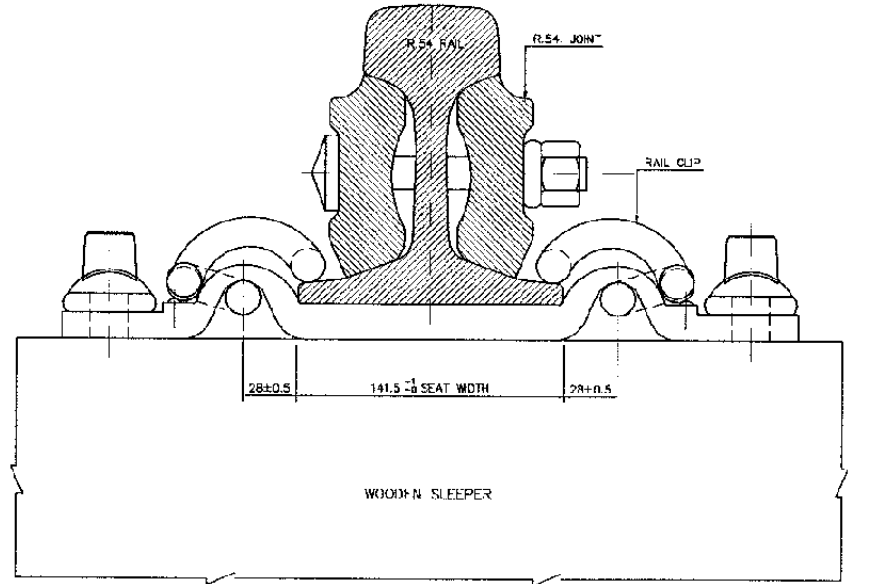
Scale: Drawing No:



FOR PC SLEEPER
SCALE 1:2



FOR WOODEN SLEEPER
SCALE 1:2



FOR JOINT
SCALE 1:2

RAIL FASTENING DEVICES

The Railway Electrification and Double - double Tracking of Java Main Line Project



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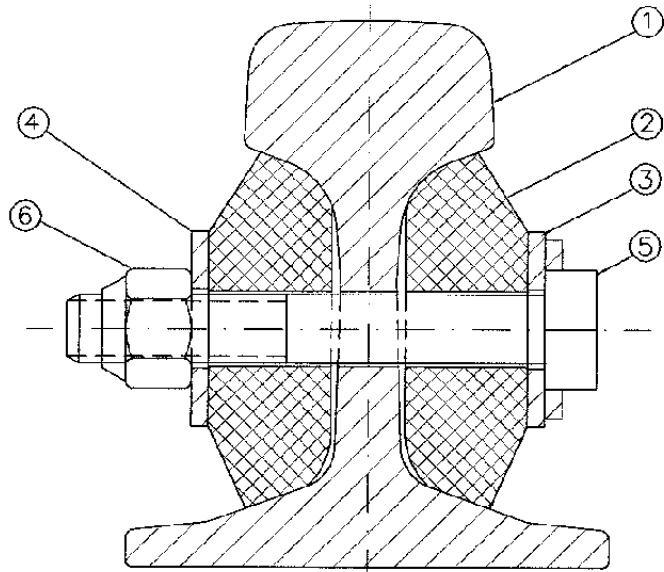
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DATE 10 / MARCH / 2003

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RAIL FASTENING

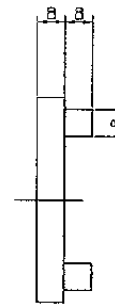
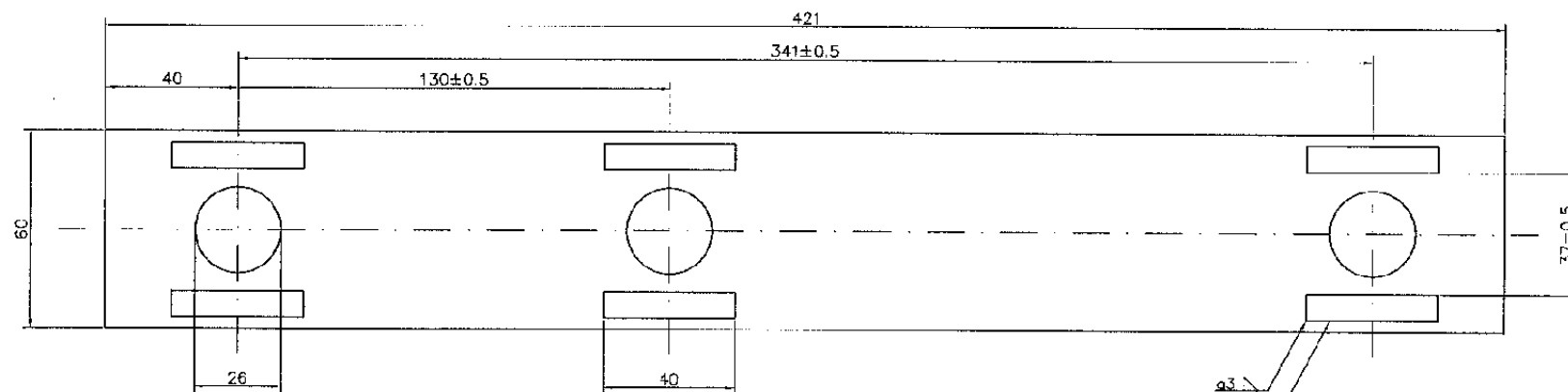
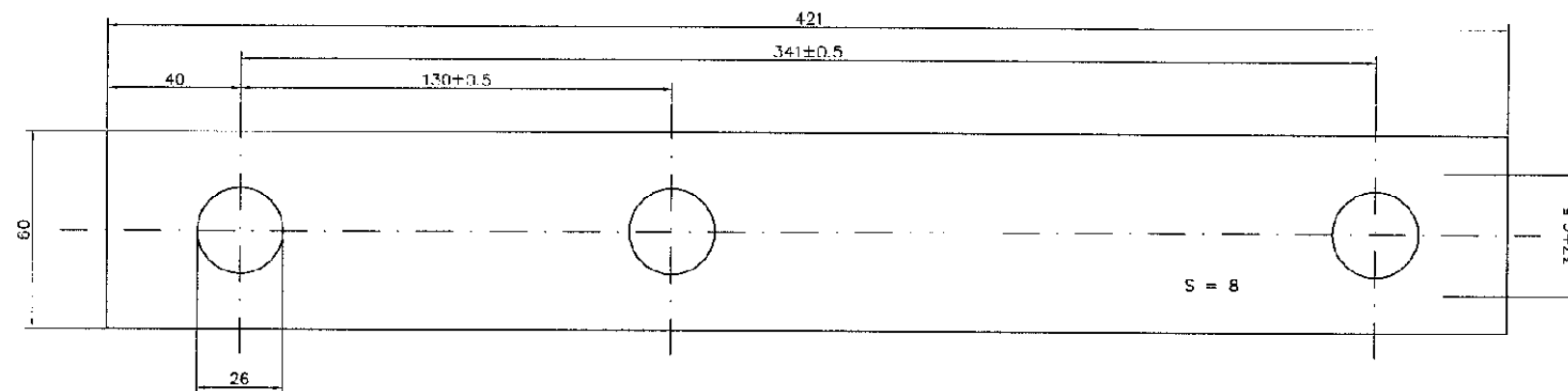
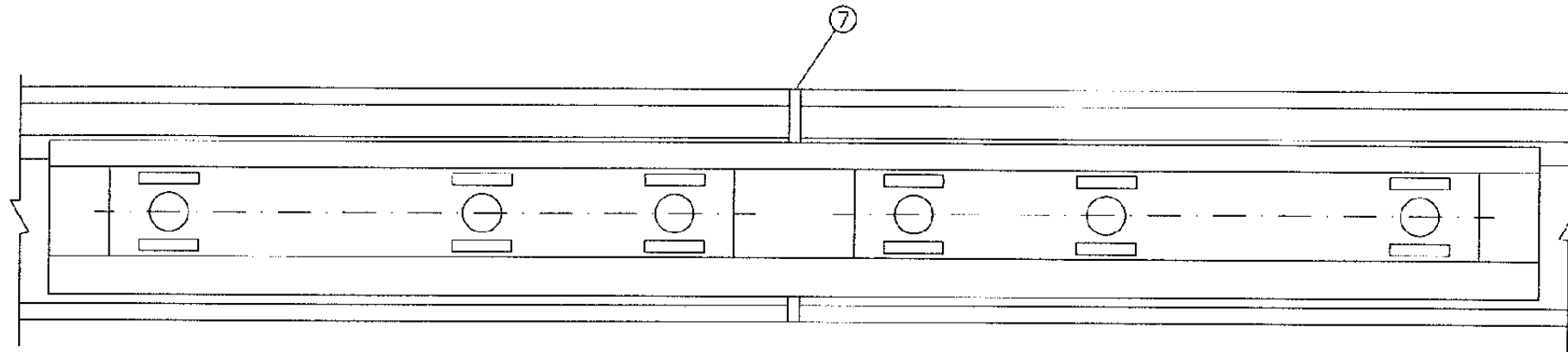
Scale 1:2 Drawing No. TR-01-002



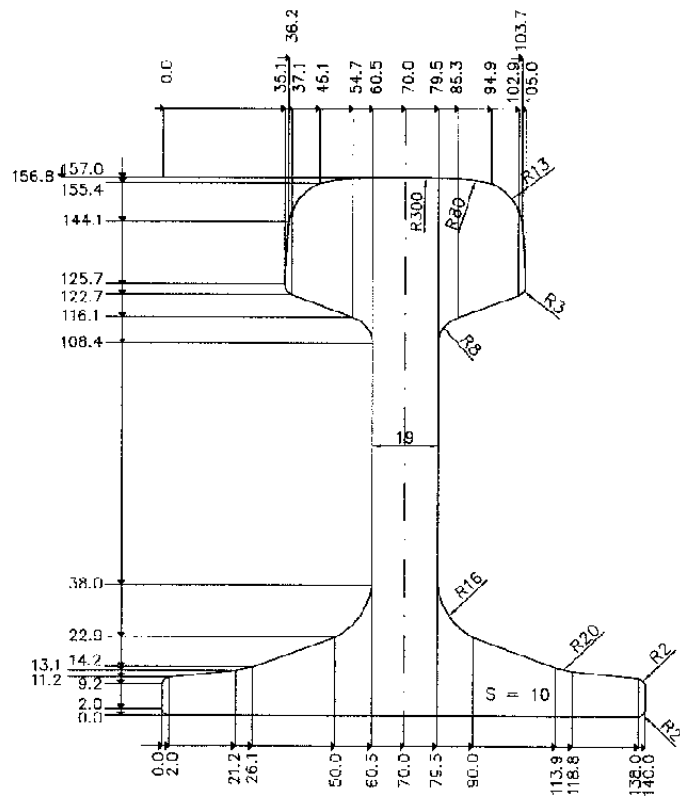
INSULATED JOINT ASSEMBLY

LIST OF MATERIAL AND QUANTITY

NO.	NAME	MATERIAL	QUANTITY
①	RAIL R54	STEEL	3
②	ISOLATOR BAR	FIBERGLASS	2
③	BACK-UP PLATE	STEEL	2
④	BACK-UP PLATE	STEEL	2
⑤	HEX SCREW M24	STEEL	6
⑥	LOCK NUT M24	STEEL	6
⑦	END PLATE	FIBERGLASS	1



BACK-UP PLATE



R.54 RAIL END POST
10 MM THICKNESS

The Railway Electrification and Double-double Tracking of Java Main Line Project



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 KEMENTERIAN KOMUNIKASIAN
 DIREKTORAT JENDERAL PERIKOMUNIKASIAN DARAT
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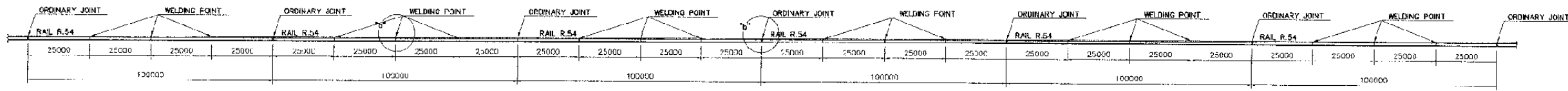
TRACK

TRACK WORKS

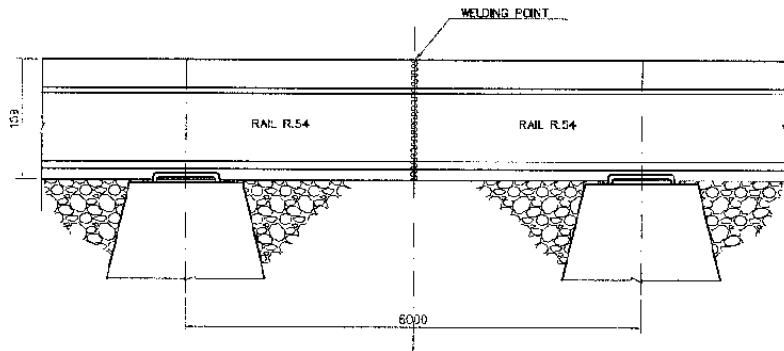
DATE 10 / MARCH / 2003

Drawing Title :
 INSULATED RAIL R.54 JOINT ACCESSORIES

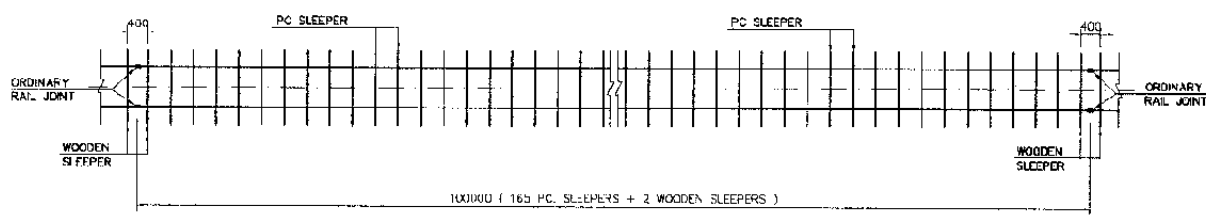
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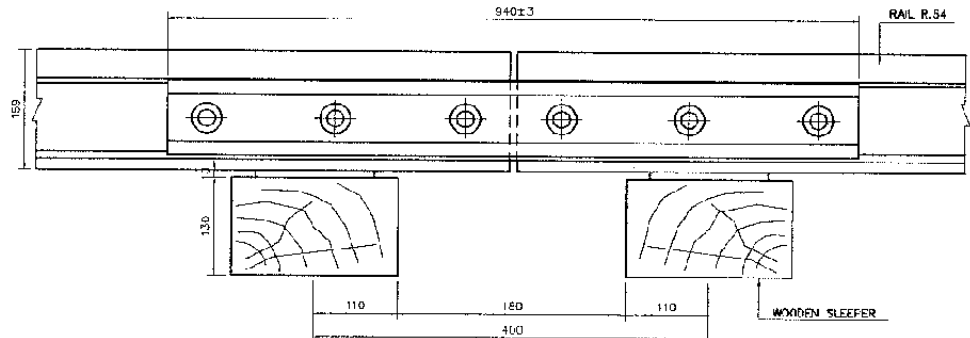
TRACK PANEL
SCALE 1:1000



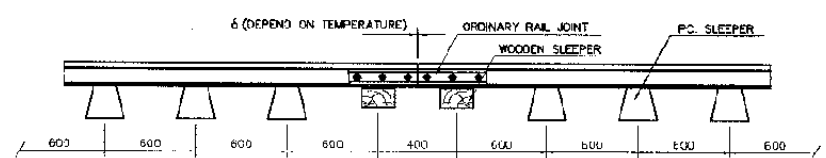
DETAIL "a"
RAIL WELDING
SCALE 1:5



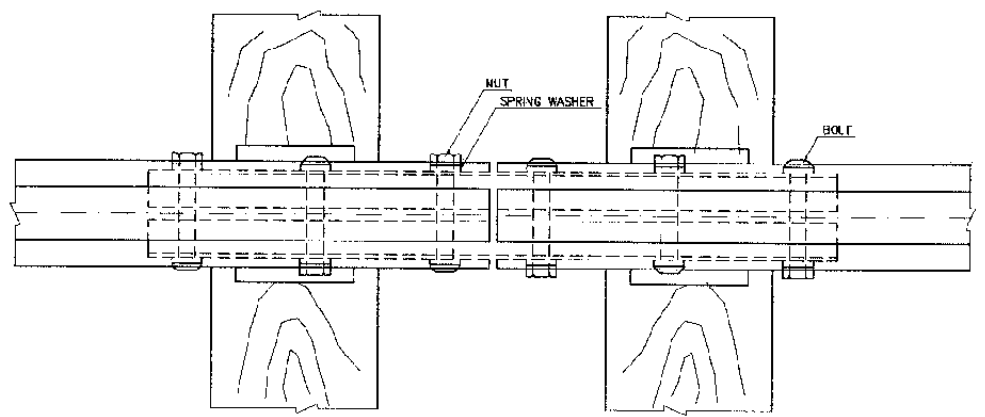
SLEEPER SPACE FOR FULL LENGTH OF 100 M
SCALE 1:100



DETAIL "b"
SIDE VIEW ORDINARY RAIL JOINT
SCALE 1:5



SLEEPER SPACE NEAR RAIL JOINT
SCALE 1:25



PLAN ORDINARY RAIL JOINT
SCALE 1:5

The Railway Electrification and Double - double Tracking of Java Main Line Project

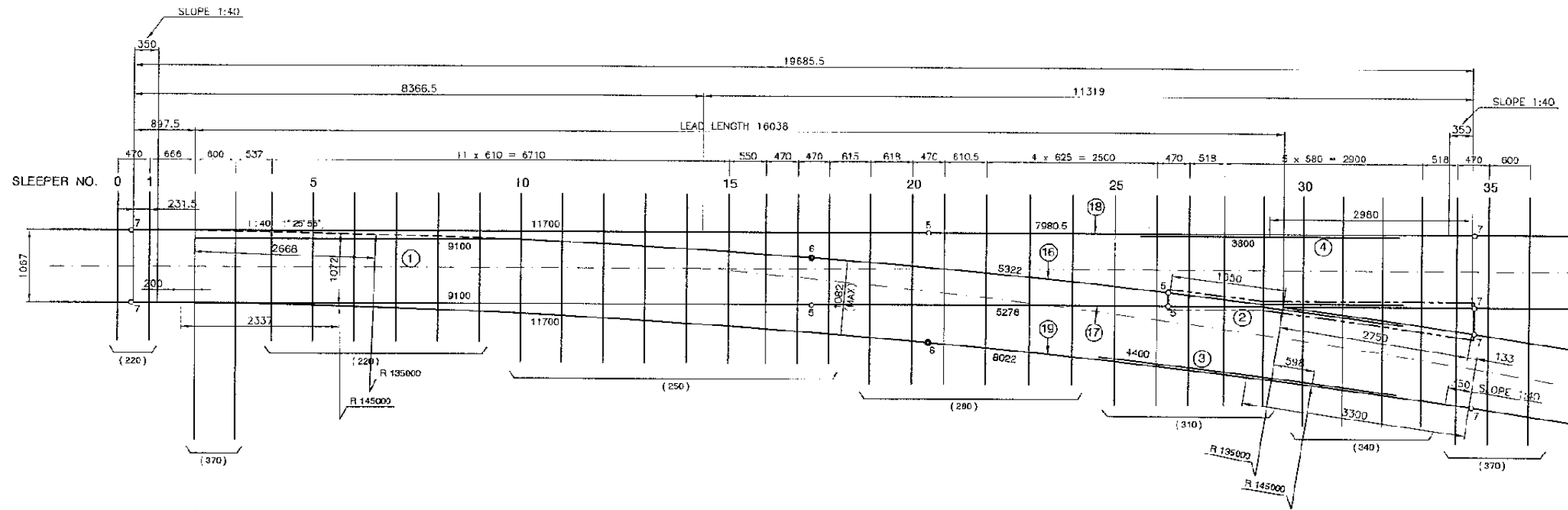


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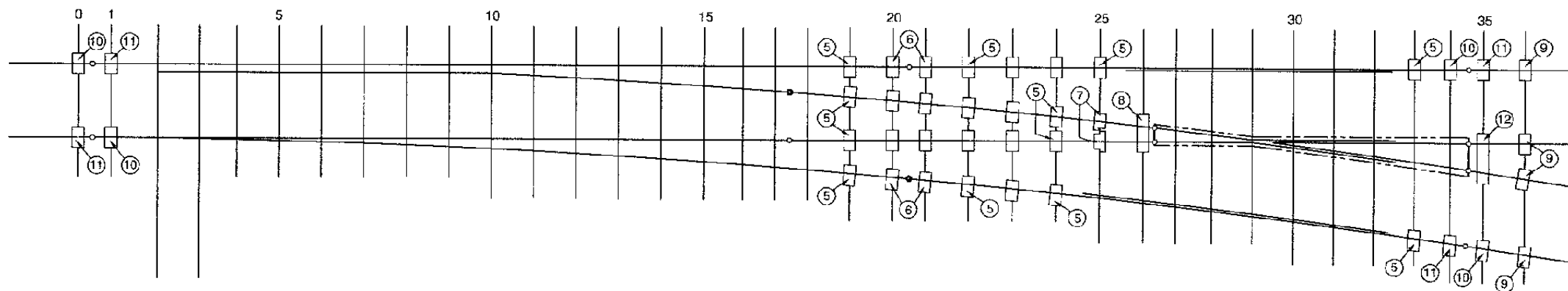
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TRACK	
TRACK WORKS	
DATE	10 / MARCH / 2003
Drawing Title :	
TRACK PANEL	
Scale:	Drawing No.:
1 : 1000 / 1 : 25 1 : 100 / 1 : 5	TR - 01 - 004

(B) RIGHT HAND TURNOUT



METHOD FOR INSTALLING TIE PLATE



MATERIAL LIST

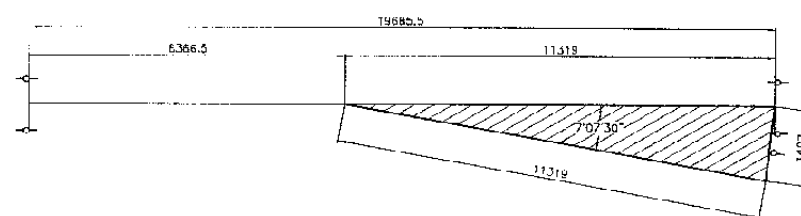
DESCRIPTION	DIMENSION	QTY	REMARKS
SWITCH	9100	1	
CROSSING	M = 1850 N = 2750	1	HIGH WAREHOUSE LASH SHEET
CHECK RAIL	4400	1	R54 RAIL
CHECK RAIL	3800	1	R54 RAIL
TIE PLATE	200 x 16 x 340	23	
TIE PLATE	200 x 16 x 340	4	
TIE PLATE	200 x 16 x 340	2	
TIE PLATE	220 x 16 x 635	1	
TIE PLATE	200 x 22 x 340	4	
TIE PLATE	200 x 22 x 340	4	
TIE PLATE	200 x 22 x 340	4	
TIE PLATE	220 x 22 x 634	1	
FISH PLATE		20	
INSULATED JOINT		2	
FISH BOLT & NUT		80	
SCREW SPIKE		430	
LEAD RAIL	5322	1	R54 RAIL
LEAD RAIL	5278	1	R54 RAIL
MAIN RAIL	7980.5	1	R54 RAIL
MAIN RAIL	8022	1	R54 RAIL
STOCK RAIL	11700	2	R64 RAIL

PART NO.	DESCRIPTION	DIMENSION	QTY	REMARKS
370	SLEEPER	250 x 150 x 3700	5	
340	SLEEPER	250 x 150 x 3400	4	
310	SLEEPER	250 x 150 x 3100	5	
290	SLEEPER	250 x 150 x 2900	6	
250	SLEEPER	250 x 150 x 2500	9	
220	SLEEPER	250 x 150 x 2200	8	

LEGEND :

- : ORDINARY JOINT 6mm
- : INSULATED JOINT 10mm
- - - : APPROXIMATE SHAPE OF MONOBLOCK CASTING

SKELETON



(A) LEFT HAND TURNOUT

CRAWING OMITTED SYMMETRICAL WITH (B)

Simple Turnout R 54 - No.8 Installation

No.	KM	To	Unit	Simple Turnout R 54 - No.8
1	25 + 100	To 25 + 700	Set	0
2	25 + 700	To 20 + 300	Set	0
3	25 + 300	To 25 + 900	Set	0
4	25 + 900	To 27 + 500	Set	0
5	27 + 500	To 28 + 100	Set	0
6	28 + 100	To 23 + 700	Set	0
7	23 + 700	To 29 + 300	Set	0
8	29 + 300	To 28 + 900	Set	0
9	29 + 900	To 30 + 500	Set	0
10	30 + 500	To 31 + 100	Set	0
11	31 + 100	To 31 + 700	Set	0
12	31 + 700	To 32 + 300	Set	0
13	32 + 300	To 32 + 900	Set	0
14	32 + 900	To 33 + 500	Set	0
15	33 + 500	To 34 + 100	Set	0
16	34 + 100	To 34 + 700	Set	0
17	34 + 700	To 35 + 300	Set	0
18	35 + 300	To 35 + 900	Set	0
19	35 + 900	To 36 + 500	Set	0
20	36 + 500	To 37 + 100	Set	0
21	37 + 100	To 37 + 700	Set	0
22	37 + 700	To 38 + 300	Set	0
23	38 + 300	To 38 + 900	Set	0
24	38 + 900	To 39 + 500	Set	0
25	39 + 500	To 40 + 100	Set	0
26	40 + 100	To 40 + 700	Set	0
27	40 + 700	To 41 + 300	Set	0
28	41 + 300	To 41 + 900	Set	0
29	41 + 900	To 42 + 500	Set	0
30	42 + 500	To 43 + 100	Set	0
31	43 + 100	To 43 + 700	Set	0
32	43 + 700	To 44 + 300	Set	0
TOTAL				0

The Railway Electrification and Double - double Tracking of Java Main Line Project



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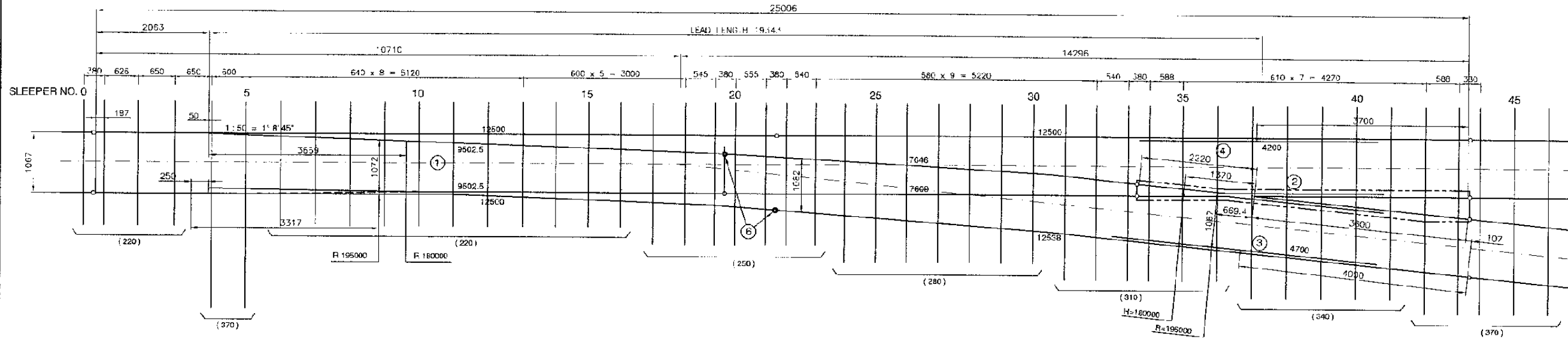
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TRACK WORKS

DATE 10 / MARCH / 2003

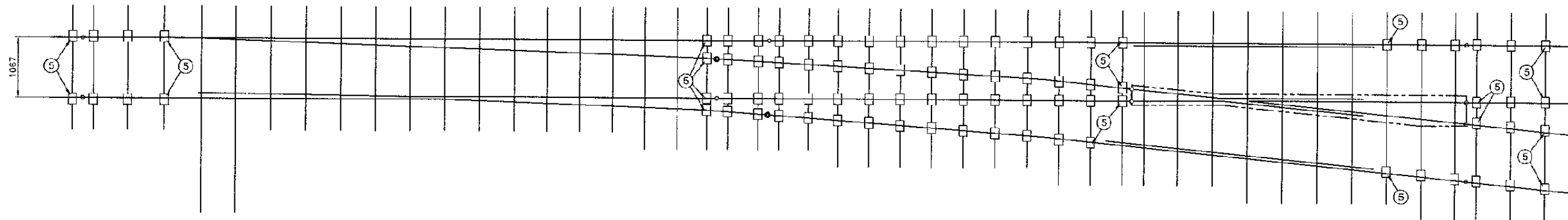
Drawing Title :
SIMPLE TURNOUT R 54 No.8

Scale: 1:40
Drawing No. TR - 01 - 005

(B) RIGHT HAND TURNOUT



METHOD FOR INSTALLING TIE PLATES



MATERIAL LIST

PART NO.	DESCRIPTION	DIMENSION	QTY	REMARKS
1	SWITCH	9502.5	1	
2	CROSSING	M - 2220 N = 3900	1	HG1 MANGANESE CAST IRON
3	CHECK RAIL	4700	1	R54 RAIL
4	CHECK RAIL	4200	1	R54 RAIL
5	TIE PLATE	200 x 19 x 265	65	
	FISH PLATE		50	
	FISH BOLT & NUT		60	
	SCREW SPIKE		506	
6	INSULATED JOINT		2	
	MAIN RAIL	12500	1	R54 RAIL
	MAIN RAIL	12538	1	R54 RAIL
	LEAD RAIL	7646	1	R54 RAIL
	LEAD RAIL	7638	1	R54 RAIL
	STOCK RAIL	12500	2	R54 RAIL

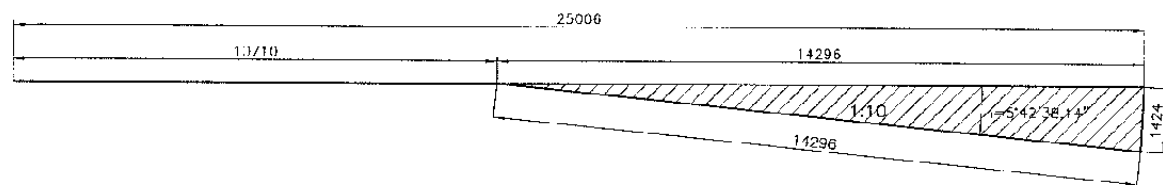
PART NO.	DESCRIPTION	DIMENSION	QTY	REMARKS
370	SLEEPER	230 x 140 x 3700	7	WOODEN MATERIAL
340	SLEEPER	230 x 140 x 3400	5	WOODEN MATERIAL
310	SLEEPER	230 x 140 x 3100	6	WOODEN MATERIAL
280	SLEEPER	230 x 140 x 2800	7	WOODEN MATERIAL
250	SLEEPER	230 x 140 x 2500	7	WOODEN MATERIAL
220	SLEEPER	230 x 140 x 2200	5	WOODEN MATERIAL

(A) LEFT HAND TURNOUT

DRAWING OMITED SYMMETRICAL WITH (B)

LEGEND :

- : ORDINARY JOINT 6mm
- : INSULATED JOINT 10mm
- - - : APPROXIMATE SHAPE OF MONOBLOCK CASING



SKELTON SCALE 1 : 200

Simple Turnout R 54 - No.13 Installation

No.	KM To	From	Unit	Simple Turnout R54 - No.10
1	25 + 100	To 25 + 700	Set	0
2	25 + 700	To 26 + 300	Set	2
3	26 + 300	To 26 + 000	Set	4
4	26 + 900	To 27 + 500	Set	4
5	27 + 500	To 28 + 100	Set	0
6	26 + 100	To 28 + 700	Set	0
7	26 + 700	To 28 + 300	Set	0
8	28 + 300	To 29 + 900	Set	0
9	29 + 300	To 30 + 500	Set	0
10	30 + 500	To 31 + 100	Set	0
11	31 + 100	To 31 + 700	Set	0
12	31 + 700	To 32 + 300	Set	0
13	32 + 900	To 32 + 900	Set	0
14	32 + 900	To 33 + 500	Set	2
15	33 + 500	To 34 + 100	Set	2
16	34 + 100	To 34 + 700	Set	0
17	34 + 700	To 35 + 300	Set	0
18	35 + 300	To 36 + 900	Set	0
19	35 + 900	To 36 + 500	Set	0
20	36 + 500	To 37 + 100	Set	0
21	37 + 100	To 37 + 700	Set	0
22	37 + 700	To 38 + 300	Set	0
23	38 + 300	To 38 + 900	Set	0
24	38 + 900	To 39 + 500	Set	0
25	39 + 500	To 40 + 100	Set	0
26	40 + 100	To 40 + 700	Set	0
27	40 + 700	To 41 + 300	Set	0
28	41 + 300	To 41 + 900	Set	0
29	41 + 900	To 42 + 500	Set	1
30	42 + 500	To 43 + 100	Set	0
31	43 + 100	To 43 + 700	Set	7
32	43 + 700	To 44 + 000	Set	3
TOTAL				30

The Railway Electrification and Double - double Tracking of Java Main Line Project



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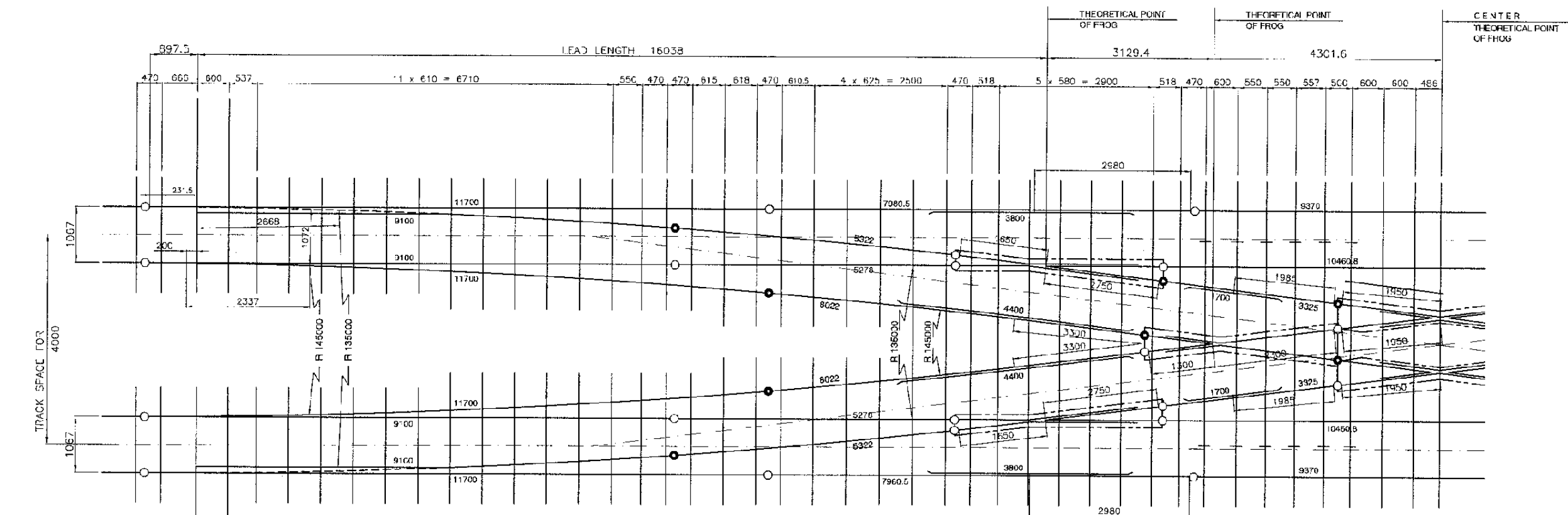
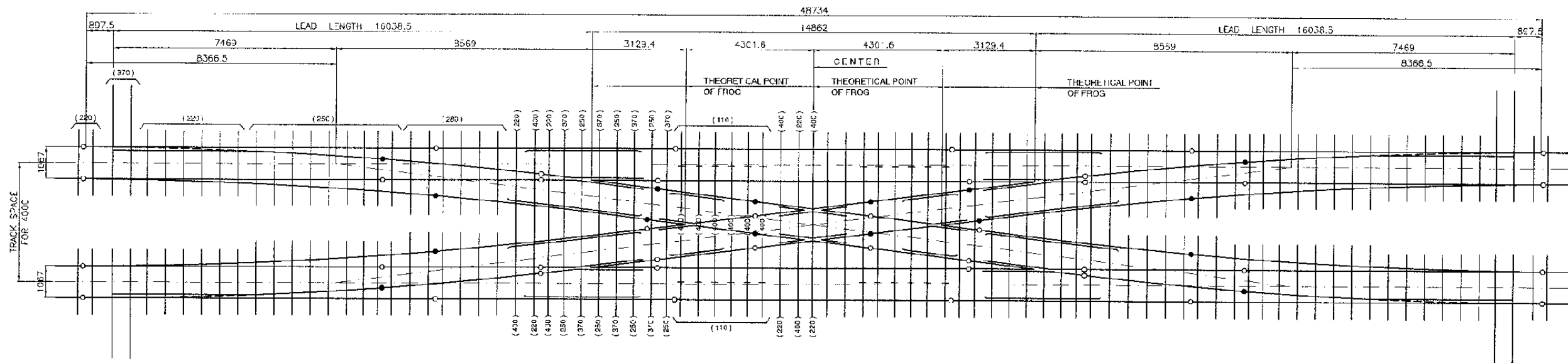
DATE 10 / MARCH / 2003

Drawing Title :

SIMPLE TURNOUT R.54 No.10

Scale: 1 : 200
1 : 40

Drawing No: TR - 0 - 006



MATERIAL LIST

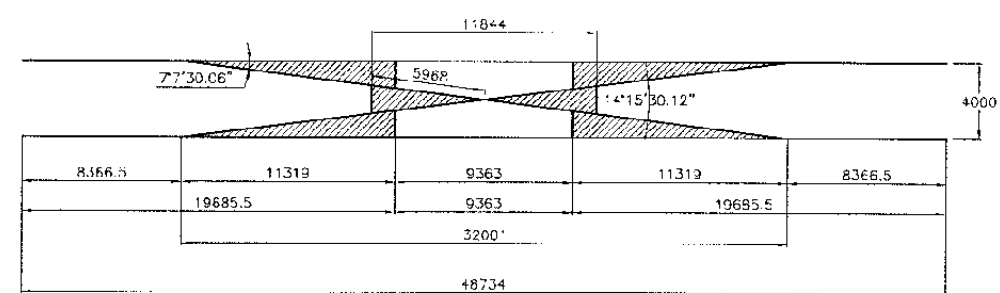
ITEM	DIMENSION	QTY	REMARKS
SWITCH	9100	2	
CROSSING (P ₁)	M = 1050 N = 2750	4	HIGH MANGANESE CAST STEEL
CROSSING (P ₂)	M = 2300 N = 1700	2	HIGH MANGANESE CAST STEEL
CROSSING (P ₃)	N = 1860	2	HIGH MANGANESE CAST STEEL
GUARD	3800	4	R 54
GUARD	1700	4	R 54
GUARD	4400	4	R 54
TIE PLATE		248	
FISH PLATE		40	
BOLT/NUT		240	FOR ORDINARY JOINT
SREW SPIKE		992	
INSULATED JOINT		16	
BOLT/NUT		36	FOR INSULATED JOINT
MAIN RAIL	7930.5	4	R 54
MAIN RAIL	8022	4	R 54
STOCK RAIL	1700	8	R 54
IFAD RAIL	5322	4	R 54
LEAD RAIL	5278	4	R 54
RAIL	3370	2	R 54
RAIL	10460.3	2	R 54
RAIL	3325	2	R 54

SLEEPER LIST

LENGTH	WIDTH X THICKNESS	QTY
2230	230 x 140	35
2530	230 x 140	60
2830	230 x 140	24
3730	230 x 140	22
4030	230 x 140	21
1190	230 x 140	24

LEGEND :

- : ORDINARY JOINT 6mm
- : INSULATED JOINT 10mm
- - - : APPROXIMATE SHAPE OF MONOBLOCK CASTING



R54 No. 8 SCISSORS CROSSING GEOMETRY

tg 1 in 8 - 7° 07' 30.12"

Scissors Crossing R.54 - No.8 Installation

No.	KM To	KM From	Unit	Scissors Crossing R.54 - No.8
1	25 + 100	To 25 + 700	Set	0
2	25 + 700	To 28 + 300	Set	0
3	28 + 300	To 28 + 600	Set	0
4	28 + 600	To 27 + 500	Set	0
5	27 + 500	To 28 + 100	Set	0
6	28 + 100	To 28 + 700	Set	0
7	28 + 700	To 29 + 300	Set	0
8	29 + 300	To 29 + 600	Set	0
9	29 + 600	To 30 + 900	Set	0
10	30 + 900	To 31 + 400	Set	0
11	31 + 400	To 31 + 700	Set	0
12	31 + 700	To 32 + 300	Set	0
13	32 + 300	To 32 + 600	Set	0
14	32 + 600	To 33 + 500	Set	0
15	33 + 500	To 34 + 100	Set	0
16	34 + 100	To 34 + 700	Set	0
17	34 + 700	To 35 + 300	Set	0
18	35 + 300	To 35 + 600	Set	0
19	35 + 600	To 36 + 500	Set	0
20	36 + 500	To 37 + 100	Set	0
21	37 + 100	To 37 + 700	Set	0
22	37 + 700	To 38 + 300	Set	0
23	38 + 300	To 38 + 600	Set	0
24	38 + 600	To 38 + 900	Set	0
25	39 + 900	To 40 + 100	Set	0
26	40 + 100	To 40 + 700	Set	0
27	40 + 700	To 41 + 300	Set	0
28	41 + 300	To 41 + 600	Set	0
29	41 + 600	To 42 + 500	Set	0
30	42 + 500	To 42 + 100	Set	0
31	42 + 100	To 43 + 700	Set	0
32	43 + 700	To 44 + 000	Set	0

The Railway Electrification and Double - double Tracking of Java Main Line Project



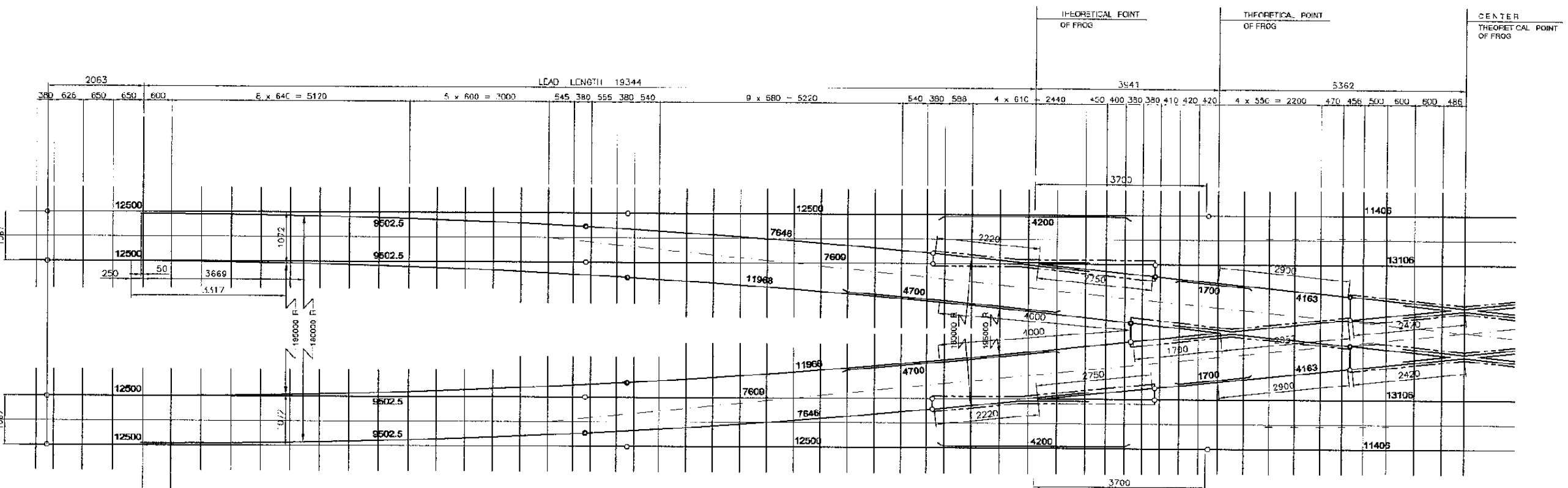
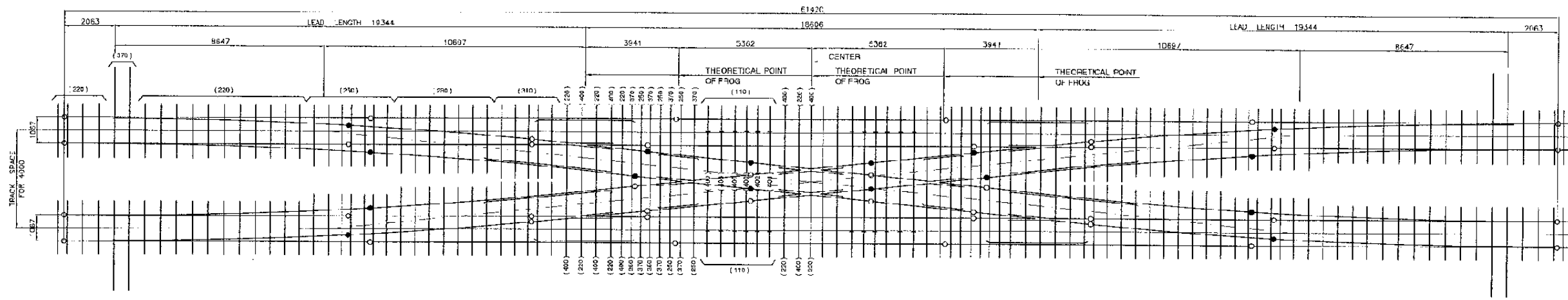
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TRACK
TRACK WORKS
DATE 10 / MARCH / 2003

Drawing Title :
SCISSOR CROSSING R.54 No.8

Scale: 1:45
Drawing No: TR - 01 - 007



MATERIAL LIST

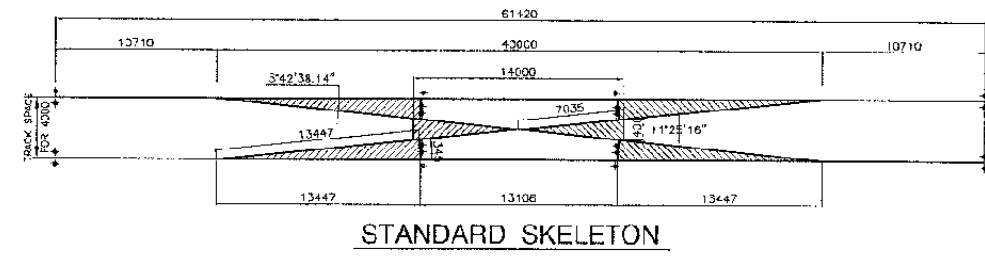
ITEM	DIMENSION	QTY	REMARKS
SWITCH	9502.5	2	
SWITCH	9512.5	2	
CROSSING (#10)	M = 2220 N = 2700	4	HIGH MANGANESE CAST STEEL
CROSSING (#8)	M = 2257 N = 1700	2	HIGH MANGANESE CAST STEEL
CROSSING (#6)	N = 2/20	2	HIGH MANGANESE CAST STEEL
GUARD	4200	4	R 54
GUARD	1700	4	R 54
GUARD	4700	4	R 54
TIE PLATE		698	
FLY PLATE		60	
ECLT / NUT		240	FOR ORDINARY JOINT
SREW SPIKE		2752	
INSULATED JOINT		92	
ECLT / NUT		90	FOR INSULATED JOINT
MAIN RAIL	12500	4	R 54
MAIN RAIL	11968	4	R 54
STOCK RAIL	12500	8	R 54
LEAD RAIL	7648	4	R 54
LEAD RAIL	7009	4	R 54
RAIL	11405	2	R 54
RAIL	13106	2	R 54
RAIL	4163	2	R 54

SLEEPER LIST

LENGTH	WIDTH x THICKNESS	QTY
2200	230 x 140	76
2500	230 x 140	42
2800	230 x 140	28
3100	230 x 140	20
3700	230 x 140	14
4000	230 x 140	26
1100	230 x 140	24

LEGEND:

- : ORDINARY JOINT 6mm
- : INSULATED JOINT 10mm
- - - - : APPROXIMATE SHAPE OF MONOBLOCK CASTING



Scissors Crossing R.54 - No.10 Installation

No.	10M To 10M	Unit	Subsidiary Crossing R.54 No.10
1	25 + 100 To 25 + 700	Set	0
2	25 + 700 To 26 + 300	Set	0
3	26 + 300 To 26 + 900	Set	1
4	26 + 900 To 27 + 500	Set	0
5	27 + 500 To 28 + 100	Set	0
6	28 + 100 To 28 + 700	Set	0
7	28 + 700 To 29 + 300	Set	0
8	29 + 300 To 29 + 900	Set	0
9	29 + 900 To 30 + 500	Set	0
10	30 + 500 To 31 + 100	Set	0
11	31 + 100 To 31 + 700	Set	0
12	31 + 700 To 32 + 300	Set	0
13	32 + 300 To 32 + 900	Set	0
14	32 + 900 To 33 + 500	Set	0
15	33 + 500 To 34 + 100	Set	0
16	34 + 100 To 34 + 700	Set	0
17	34 + 700 To 35 + 300	Set	0
18	35 + 300 To 35 + 900	Set	0
19	35 + 900 To 36 + 500	Set	0
20	36 + 500 To 37 + 100	Set	0
21	37 + 100 To 37 + 700	Set	0
22	37 + 700 To 38 + 300	Set	0
23	38 + 300 To 38 + 900	Set	0
24	38 + 900 To 39 + 500	Set	0
25	39 + 500 To 40 + 100	Set	0
26	40 + 100 To 40 + 700	Set	0
27	40 + 700 To 41 + 300	Set	0
28	41 + 300 To 41 + 900	Set	0
29	41 + 900 To 42 + 500	Set	0
30	42 + 500 To 43 + 100	Set	0
31	43 + 100 To 43 + 700	Set	1
32	43 + 700 To 44 + 300	Set	0
TOTAL			2

The Railway Electrification and Double - double Tracking of Java Main Line Project



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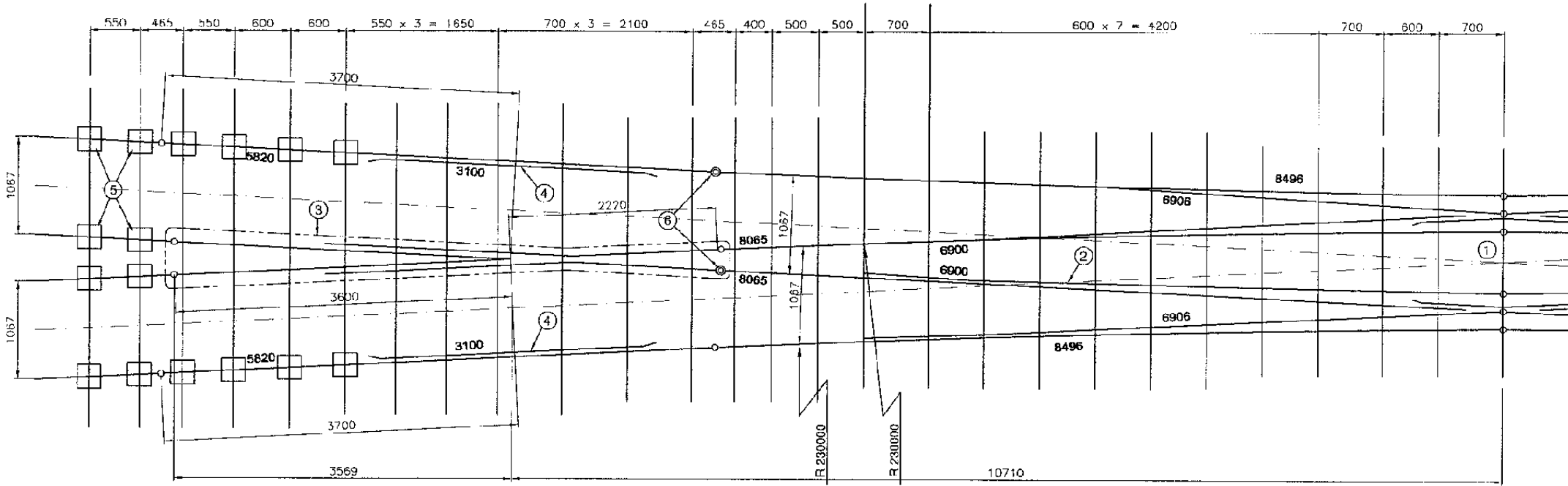
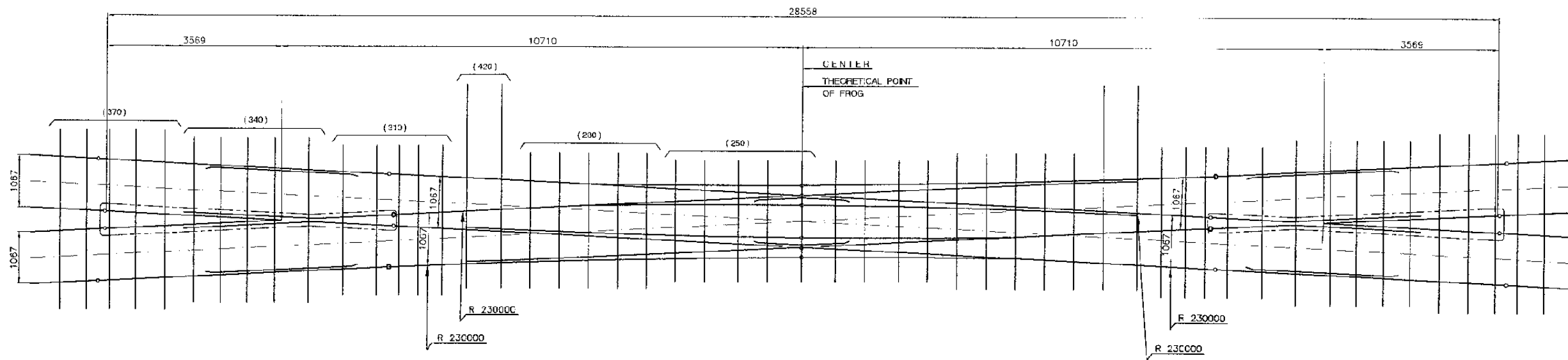
TRACK

TRACK WORKS

DATE 10 / MARCH / 2003

Drawing Title:
 SCISSOR CROSSING R.54 No.10

Scale: 1 : 200 / 1 : 100 / 1 : 50
 Drawing No.: TR - 01 - 008

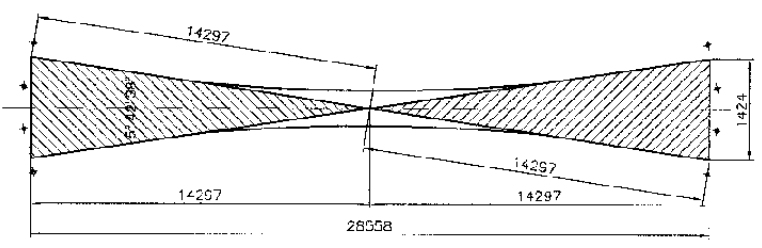


MATERIAL LIST

NO.	DESCRIPTION	DIMENSION	QTY	REMARKS
1	CROSSING	DSS 10	1	
2	SLIP POINT	6906	4	
	SLIP POINT	6900	4	
3	CROSSING	M = 2000 N = 3900	2	HIGH MANGANESE CAST STEEL
4	CHECK RAIL	3100	4	R 54 RAIL
5	TIE PLATE	200 x 18 x 265	32	
	FISH PLATE		10	
	FISH BOLT & NUT		64	
	SCREW SPIKE		192	
6	INSULATED JOINT		4	
	LEAD RAIL	8065	4	R 54 RAIL
	MAIN RAIL	8496	4	R 54 RAIL
	MAIN RAIL	5820	4	R 54 RAIL

NO.	DESCRIPTION	DIMENSION	QTY	REMARKS
420	SLEEPER	4	R 54 RAIL	WOODEN MATERIAL
370	SLEEPER	10	R 54 RAIL	WOODEN MATERIAL
340	SLEEPER	10	R 54 RAIL	WOODEN MATERIAL
310	SLEEPER	10	R 54 RAIL	WOODEN MATERIAL
280	SLEEPER	10	H 54 RAIL	WOODEN MATERIAL
250	SLEEPER	9	R 54 RAIL	WOODEN MATERIAL

LEGEND :
 ○ : ORDINARY JOINT 6mm
 ⊙ : INSULATED JOINT 10mm
 - - - : APPROXIMATE SHAPE OF MONOBLOCK CASING



SKELETON

Double Split Switch (DSS) R.54 - No. 10 Installation

No.	KM	To KM	Unit	Installation of Double Split Switch R.54 - No.10
1	25 + 100	To 25 + 700	Set	0
2	25 + 700	To 26 + 500	Set	0
3	26 + 500	To 26 + 600	Set	0
4	26 + 900	To 27 + 500	Set	0
5	27 + 500	To 28 + 100	Set	0
6	28 + 100	To 28 + 700	Set	0
7	28 + 700	To 29 + 500	Set	0
8	29 + 500	To 29 + 600	Set	0
9	29 + 900	To 30 + 600	Set	0
10	30 + 500	To 31 + 100	Set	0
11	31 + 100	To 31 + 700	Set	0
12	31 + 700	To 32 + 300	Set	0
13	32 + 300	To 32 + 600	Set	0
14	32 + 900	To 33 + 500	Set	0
15	33 + 500	To 34 + 100	Set	0
16	34 + 100	To 34 + 700	Set	0
17	34 + 700	To 35 + 300	Set	0
18	35 + 300	To 35 + 600	Set	0
19	35 + 900	To 36 + 500	Set	0
20	36 + 500	To 37 + 100	Set	0
21	37 + 100	To 37 + 700	Set	0
22	37 + 700	To 38 + 300	Set	0
23	38 + 300	To 38 + 600	Set	0
24	38 + 900	To 39 + 500	Set	0
25	39 + 500	To 40 + 100	Set	0
26	40 + 100	To 40 + 700	Set	0
27	40 + 700	To 41 + 300	Set	0
28	41 + 300	To 41 + 600	Set	0
29	41 + 900	To 42 + 500	Set	0
30	42 + 500	To 43 + 100	Set	0
31	43 + 100	To 43 + 700	Set	0
32	43 + 700	To 44 + 300	Set	0
TOTAL				0

The Railway Electrification and Double - double Tracking of Java Main Line Project



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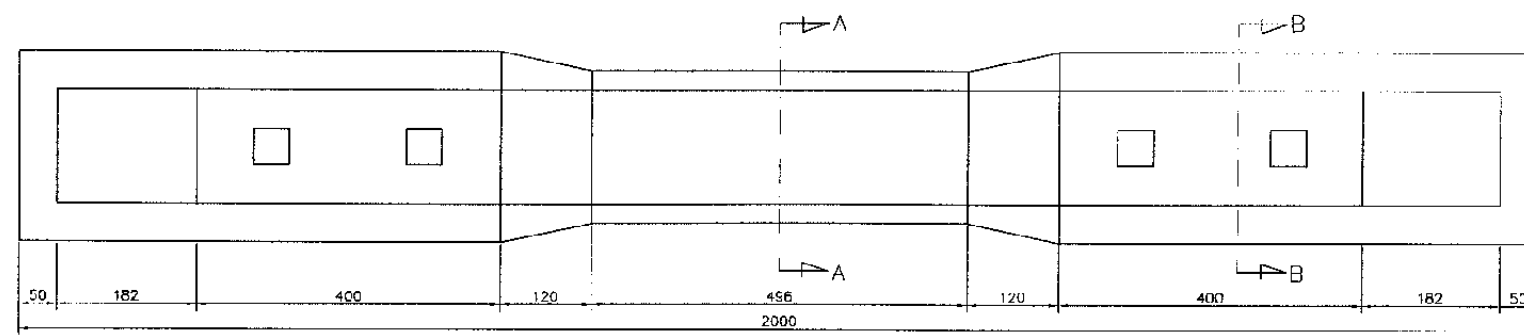
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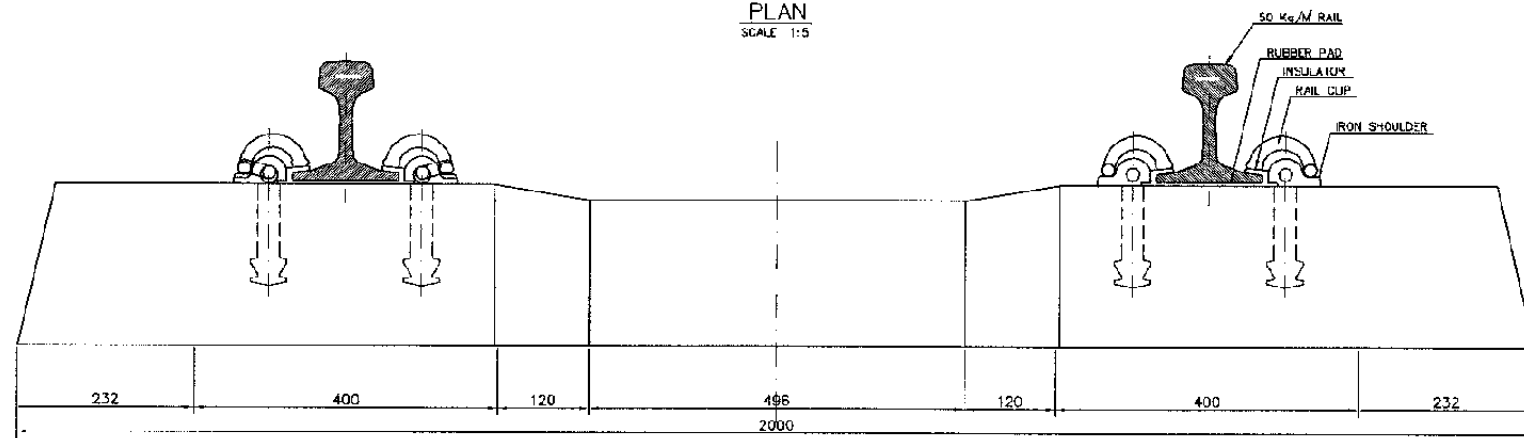
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 DOUBLE SPLIT SWITCH R.54 No.10

Scale: 1:50
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 Drawing No.: TR - 01 - 009

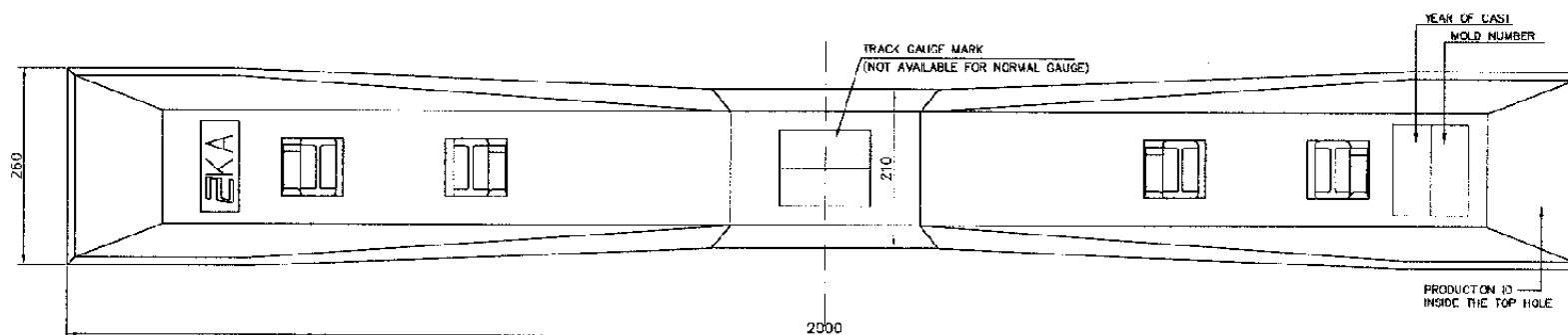
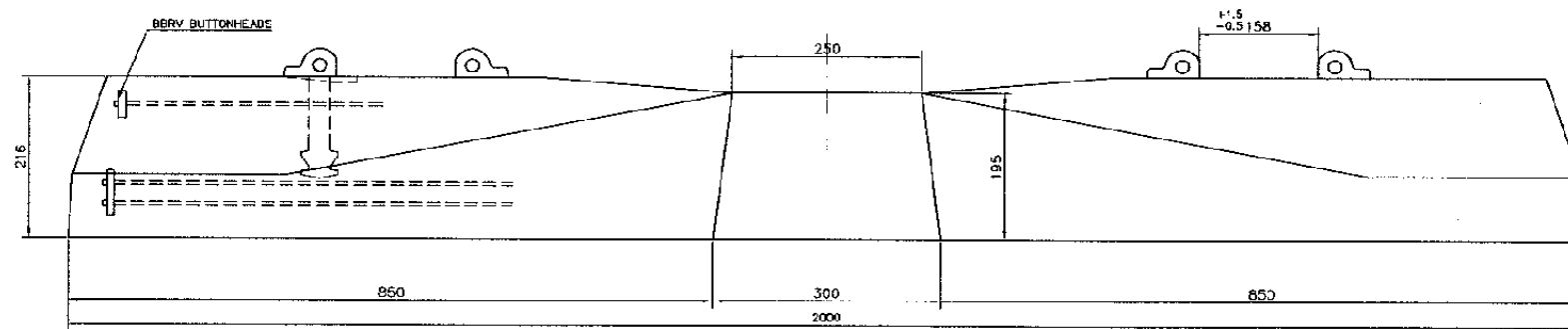


PRESTRESSED CONCRETE SLEEPERS

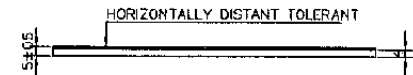
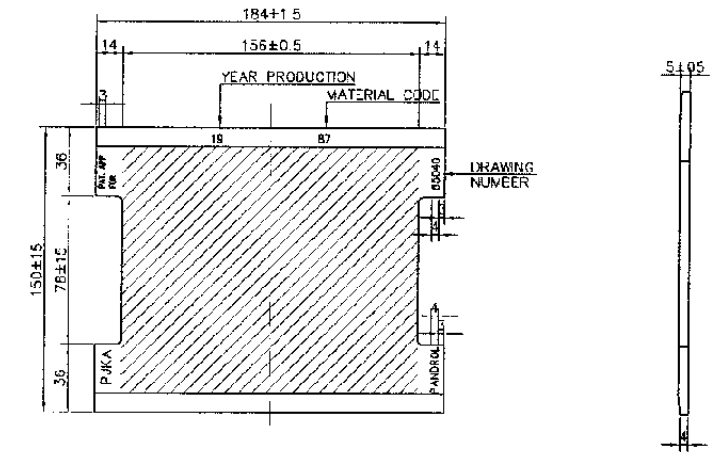
PLAN
SCALE 1:5



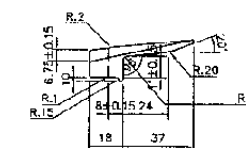
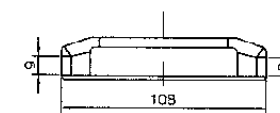
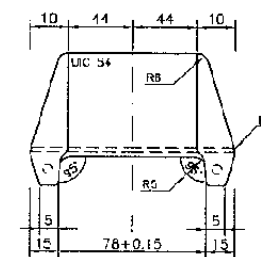
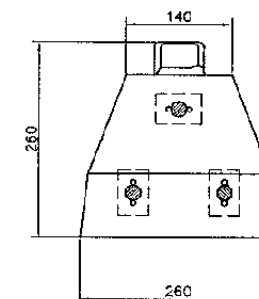
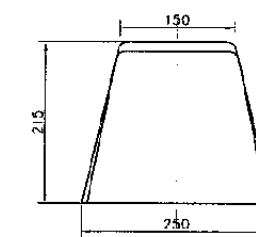
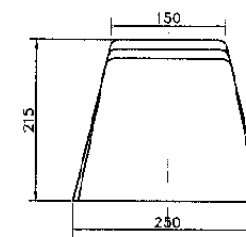
SIDE VIEW
SCALE 1:5
P.C. SLEEPER AND ACCESSORIES



PRESTRESSED CONCRETE SLEEPER
SCALE 1:5



RUBBER PAD FOR R.54 RAIL ON P.C. SLEEPER
SCALE 1:2



INSULATOR FOR R.54 RAIL ON P.C. SLEEPER
SCALE 1:2

The Railway Electrification and Double - double Tracking of Java Main Line Project



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TRACK

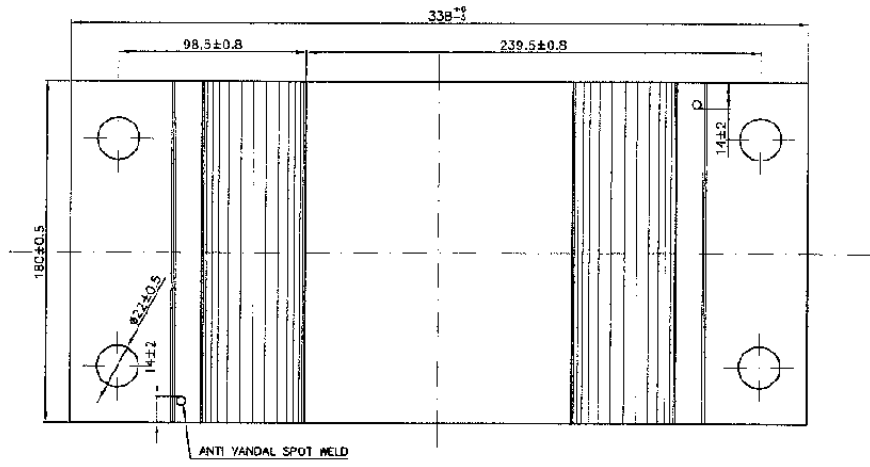
TRACK WORKS

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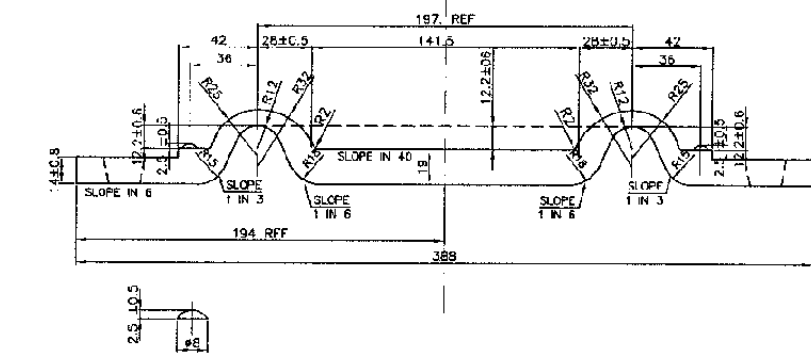
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PC SLEEPERS AND FASTENING

Scale: 1:5
1:2
Drawing No.: TR - 01 - 010

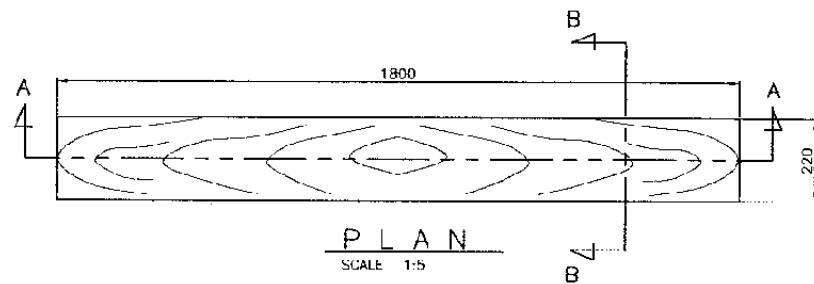


PLAN
SCALE 1:2

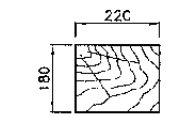


ENLARGED ANTI VANDAL SPOT WELD DETAIL
CROSS
SCALE 1:2

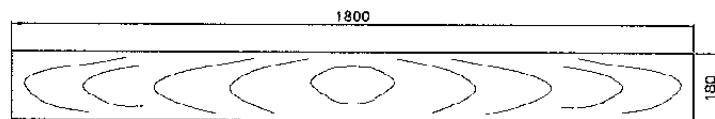
PANDROL TYPE BASE - PLATE FOR R.54



PLAN
SCALE 1:5

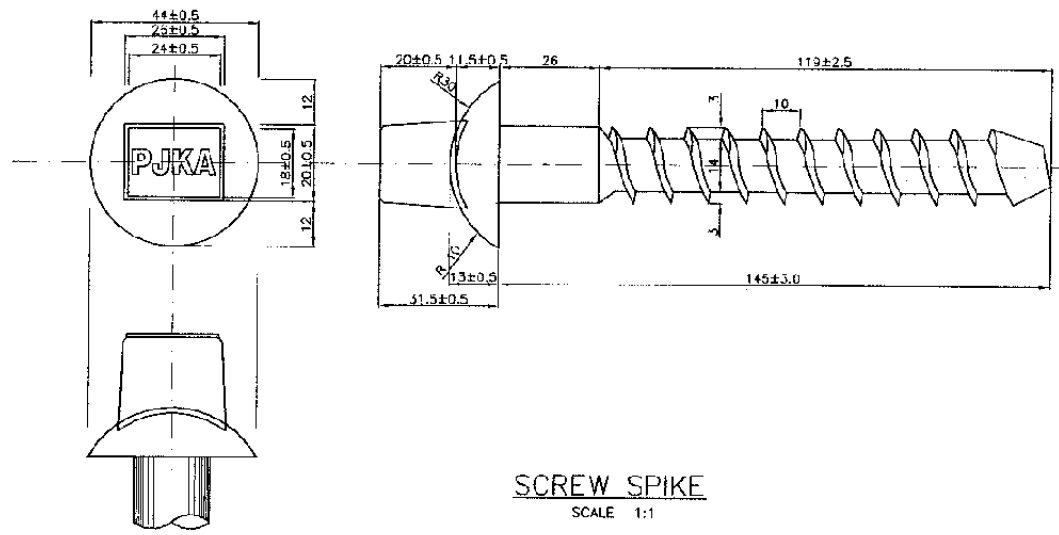


SECTION B - B

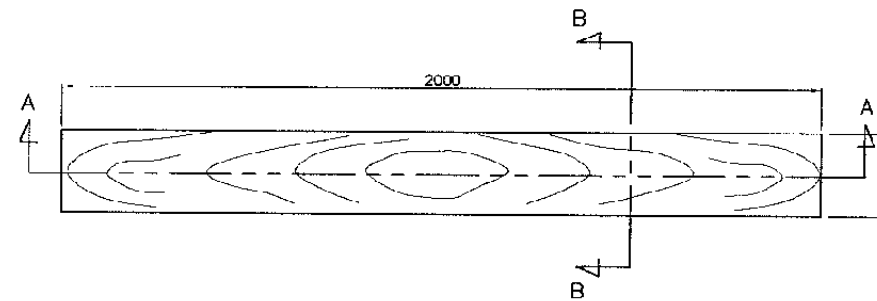


SECTION A - A
SCALE 1:5

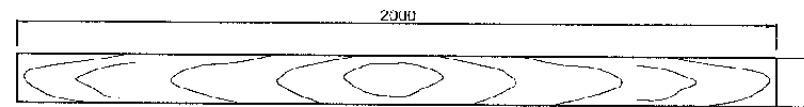
WOODEN SLEEPER ON BRIDGE



SCREW SPIKE
SCALE 1:1



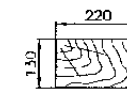
PLAN
SCALE 1:5



SECTION A - A
SCALE 1:5



SPRING WASHER
SCALE 1:1



SECTION B - B

WOODEN SLEEPER ON TRACK

WOODEN SLEEPER AND FASTENING

The Railway Electrification and
Double - double Tracking of
Java Main Line Project



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TRACK

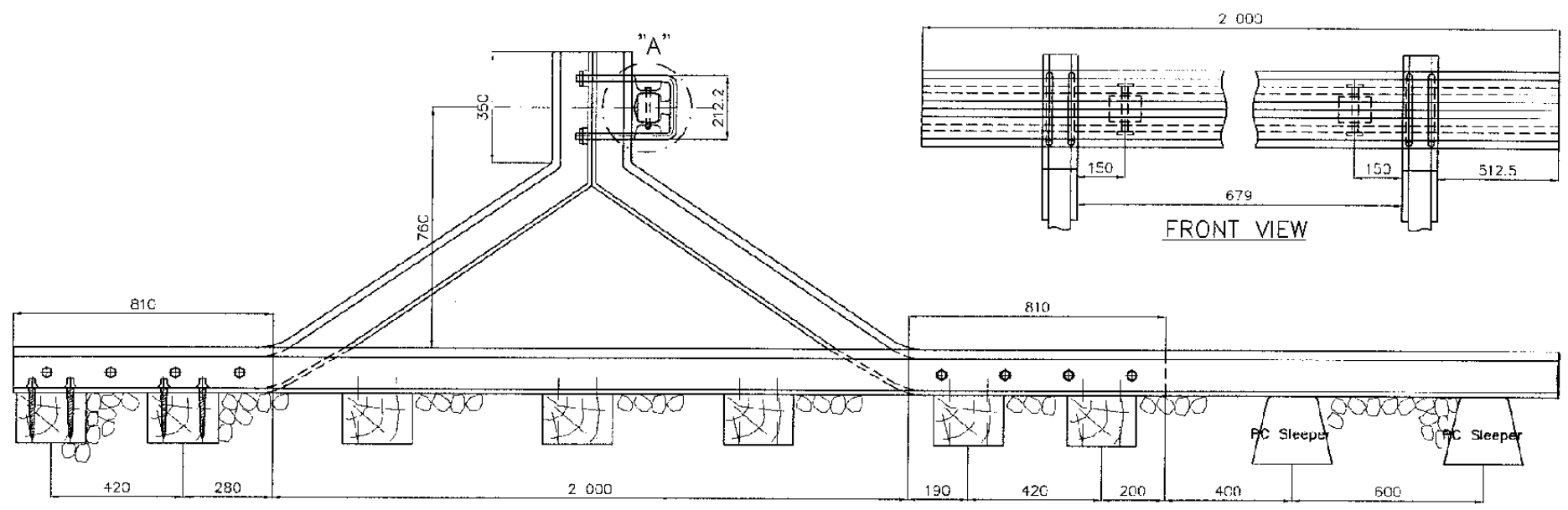
TRACK WORKS

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Drawing Title :

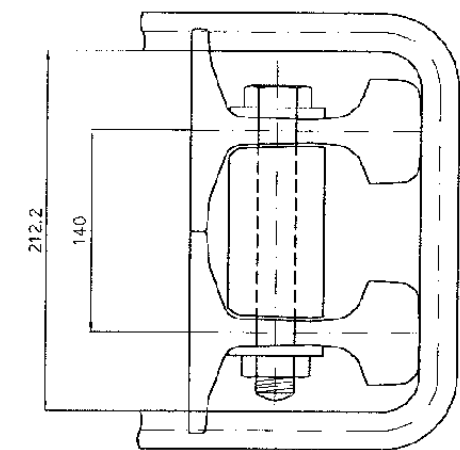
WOODEN SLEEPER AND FASTENING

Scale:
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Drawing No.:
TR-01-C1

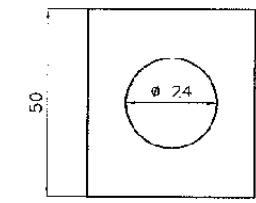
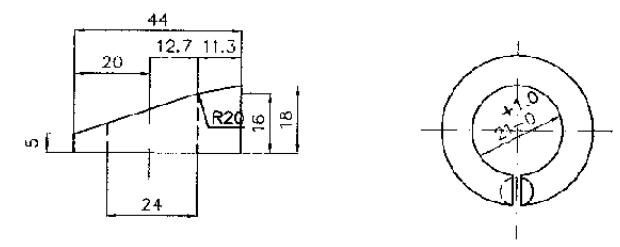


SIDE VIEW
SCALE 1:10

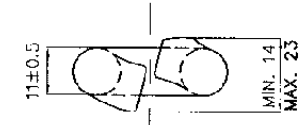
NOTE:
IN FABRICATING BUFFER STOPS
OLD R54 RAILS SHALL BE UTILIZED



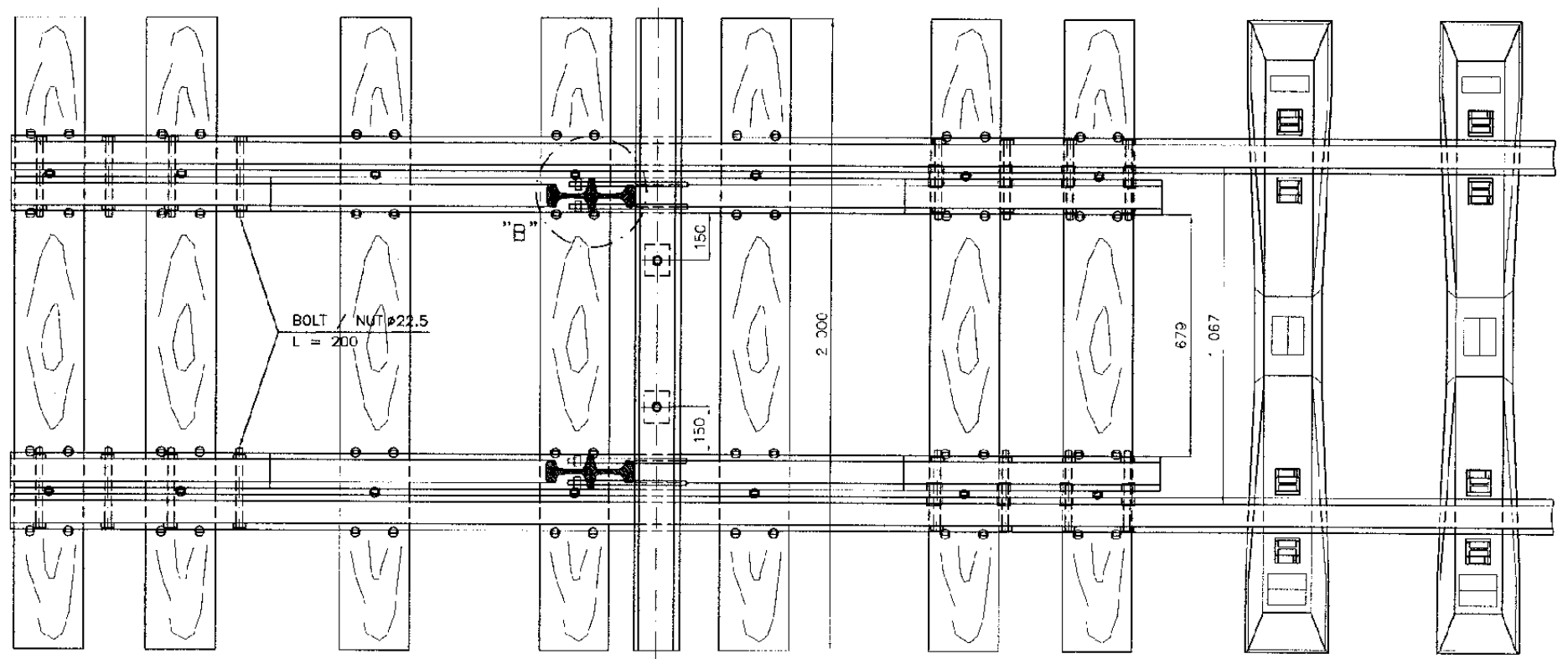
DETAIL "A"
SCALE 1:2



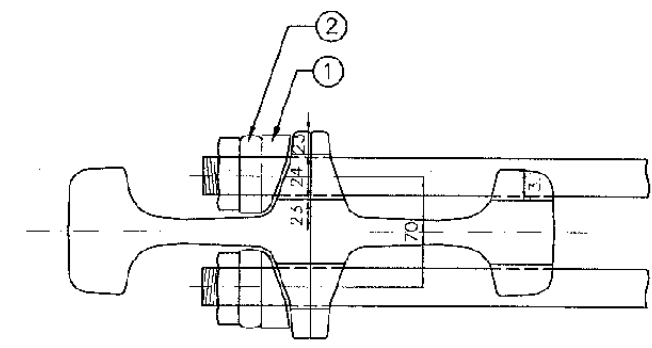
①
CLAMP PLATE
SCALE 1:1



②
WASHER
SCALE 1:1



PLAN
SCALE 1:10



DETAIL "B"
SCALE 1:2

The Railway Electrification and
Double - double Tracking of
Java Main Line Project



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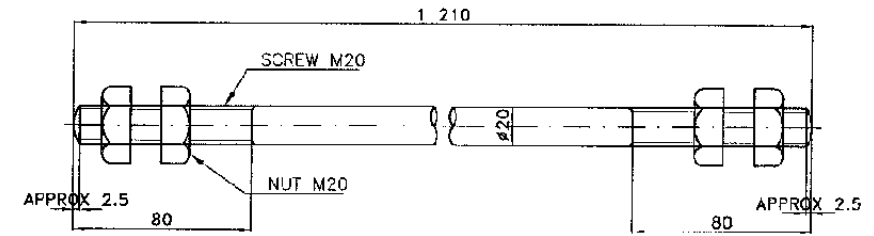
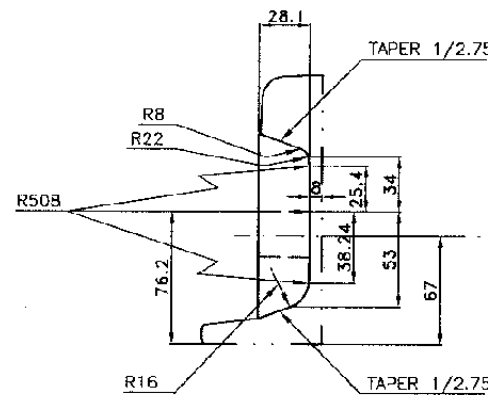
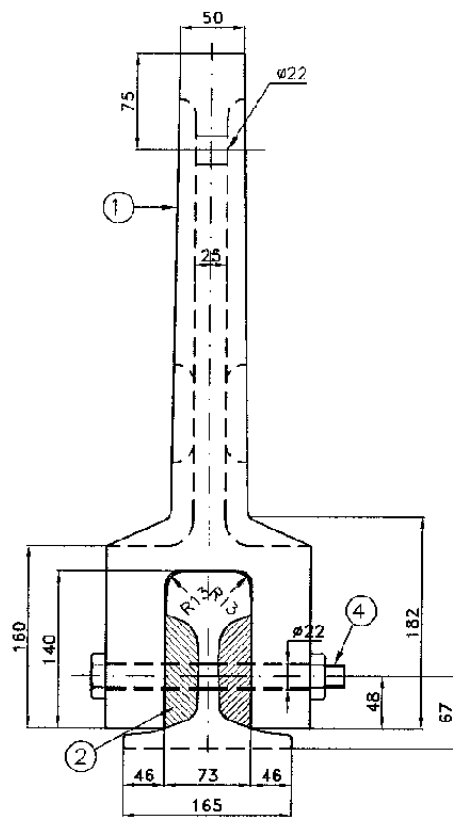
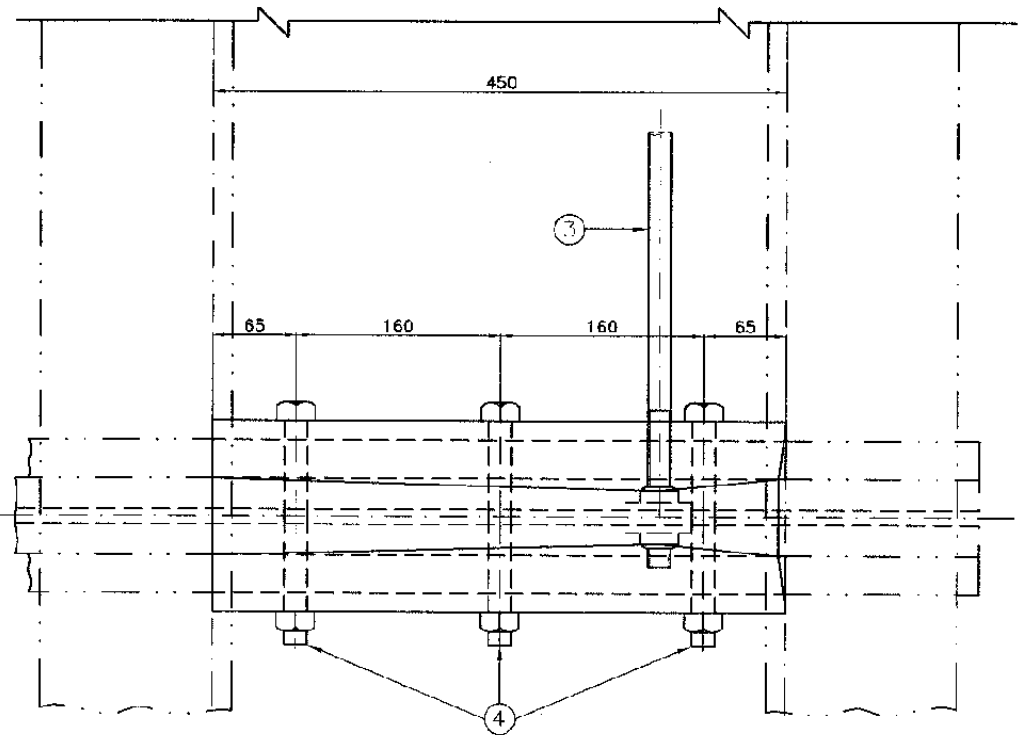
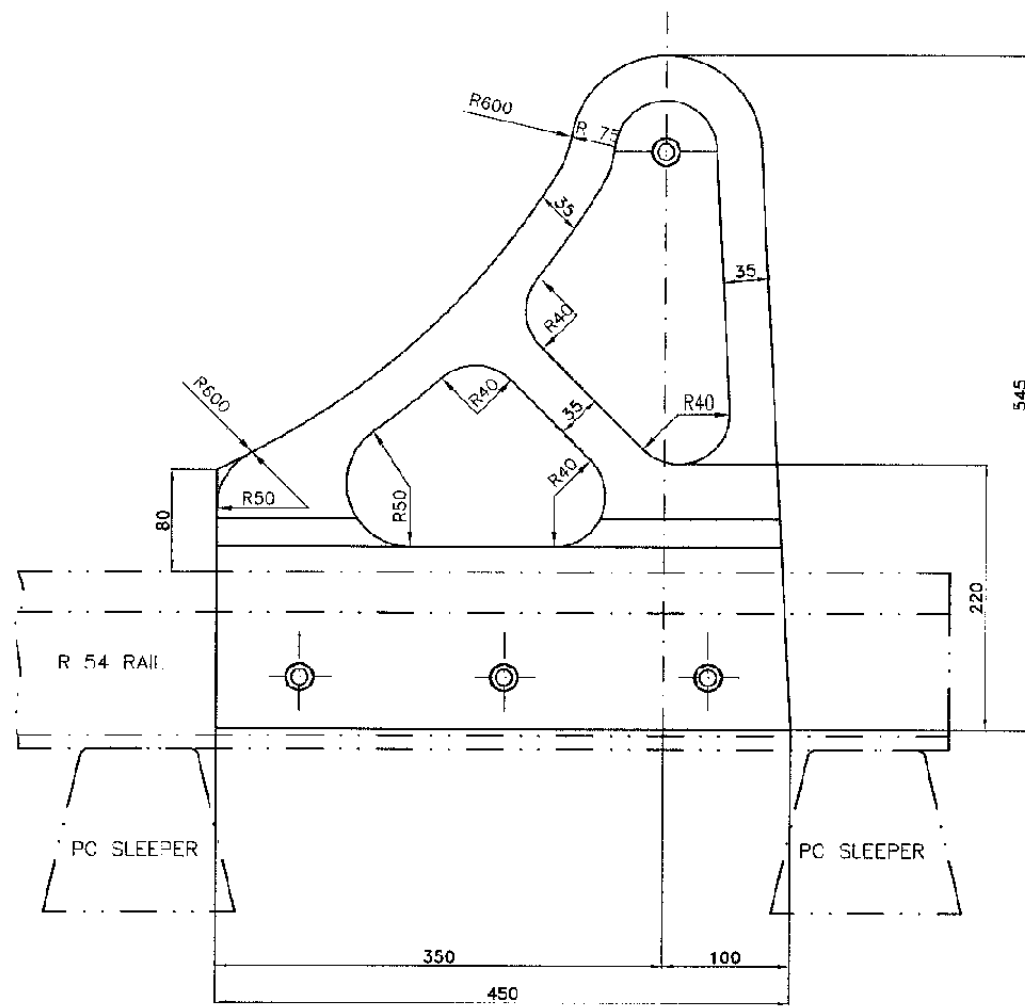
TRACK

TRACK WORKS

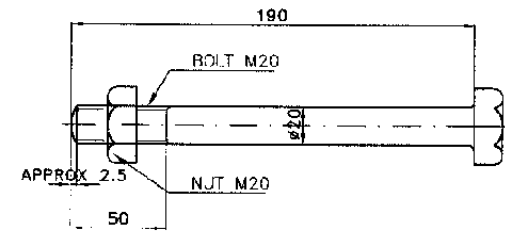
DATE 10 / MARCH / 2003

Drawing Title :
BUFFER STOP ASSEMBLY (TYPE A)

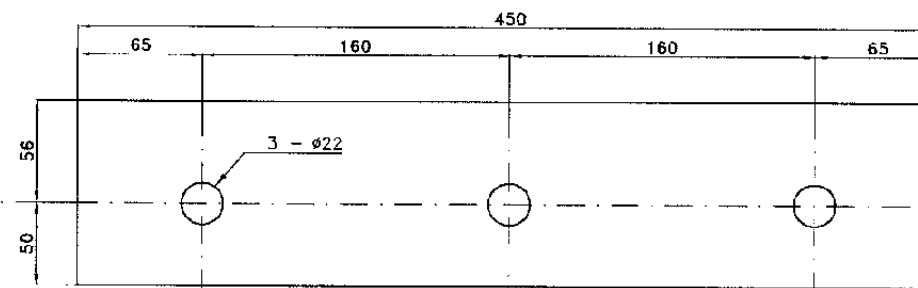
Scale: 1:10
1:4
1:2
Drawing No.: TR - 01 - 012



③ STRUT BAR



④ BOLT



② FILLER

MATERIAL LIST

NO	DESCRIPTION	DIMENSION	MATERIAL	Q'TY	REMARK
1	WHEEL STOPPER		CAST STEEL	2	
2	FILLER	97.5 x 26.5 x 450	WOOD	4	
3	STRUT BAR	20 x 1 210	3	1	
4	BOLT	20 x 190	4	6	

Buffer Stop Installation				
No.	KM To KM		Unit	Buffer Stop Installation
1	25 + 100	To 25 + 700	Set	0
2	25 + 700	To 26 + 300	Set	0
3	26 + 300	To 26 + 900	Set	0
4	26 + 900	To 27 + 500	Set	0
5	27 + 500	To 28 + 100	Set	0
6	28 + 100	To 28 + 700	Set	0
7	28 + 700	To 28 + 300	Set	0
8	29 + 300	To 29 + 900	Set	0
9	29 + 900	To 30 + 500	Set	0
10	30 + 500	To 31 + 100	Set	0
11	31 + 100	To 31 + 700	Set	0
12	31 + 700	To 32 + 300	Set	0
13	32 + 300	To 32 + 900	Set	0
14	32 + 900	To 33 + 500	Set	0
15	33 + 500	To 34 + 100	Set	0
16	34 + 100	To 34 + 700	Set	0
17	34 + 700	To 35 + 300	Set	0
18	35 + 300	To 35 + 900	Set	0
19	35 + 900	To 36 + 500	Set	0
20	36 + 500	To 37 + 100	Set	0
21	37 + 100	To 37 + 700	Set	0
22	37 + 700	To 38 + 300	Set	0
23	38 + 300	To 38 + 900	Set	0
24	38 + 900	To 39 + 500	Set	0
25	39 + 500	To 40 + 100	Set	0
26	40 + 100	To 40 + 700	Set	0
27	40 + 700	To 41 + 300	Set	0
28	41 + 300	To 41 + 900	Set	0
29	41 + 900	To 42 + 500	Set	0
30	42 + 500	To 43 + 100	Set	0
31	43 + 100	To 43 + 700	Set	0
32	43 + 700	To 44 + 300	Set	3
TOTAL				3

The Railway Electrification and Double - double Tracking of Java Main Line Project



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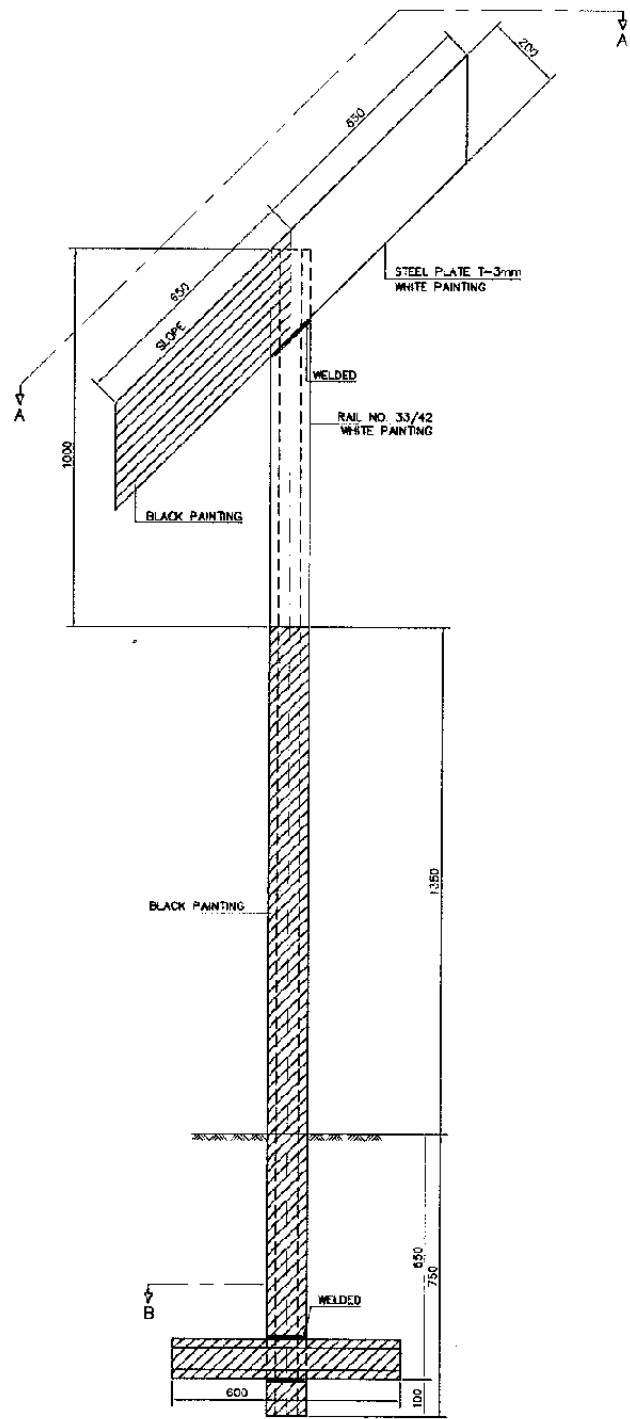
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TRACK
TRACK WORKS

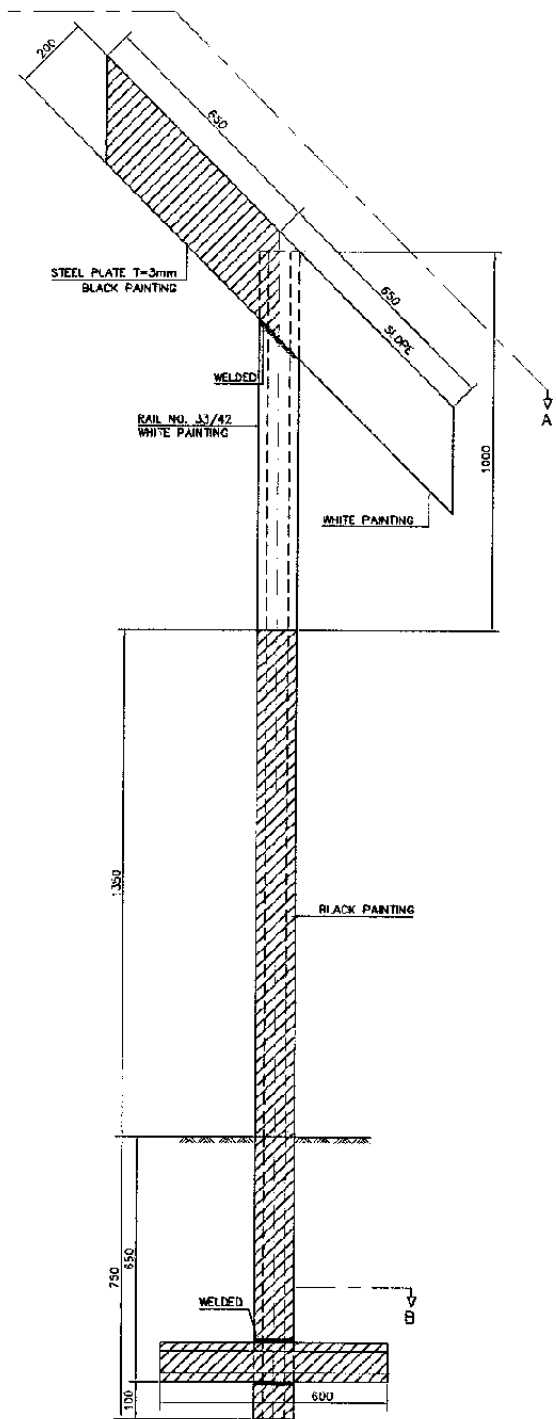
DATE 10 / MARCH / 2003

Drawing Title:
BUFFER STOP ASSEMBLY (TYPE B)

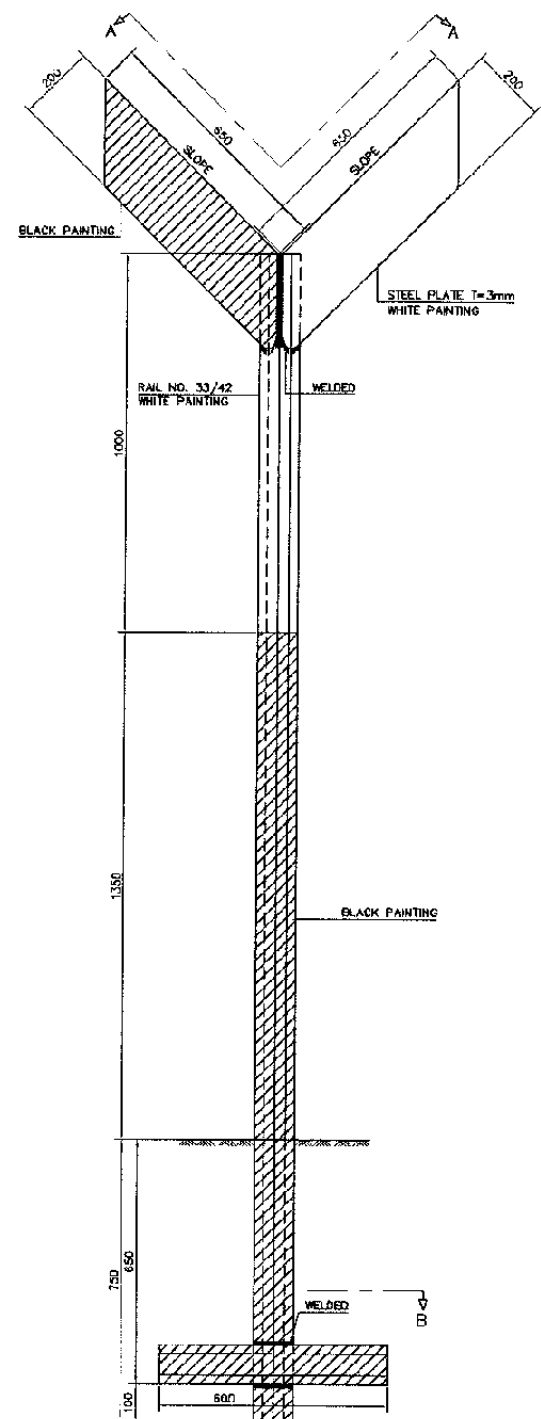
Scale: 1 : 100 Drawing No. TR - 01 - 013



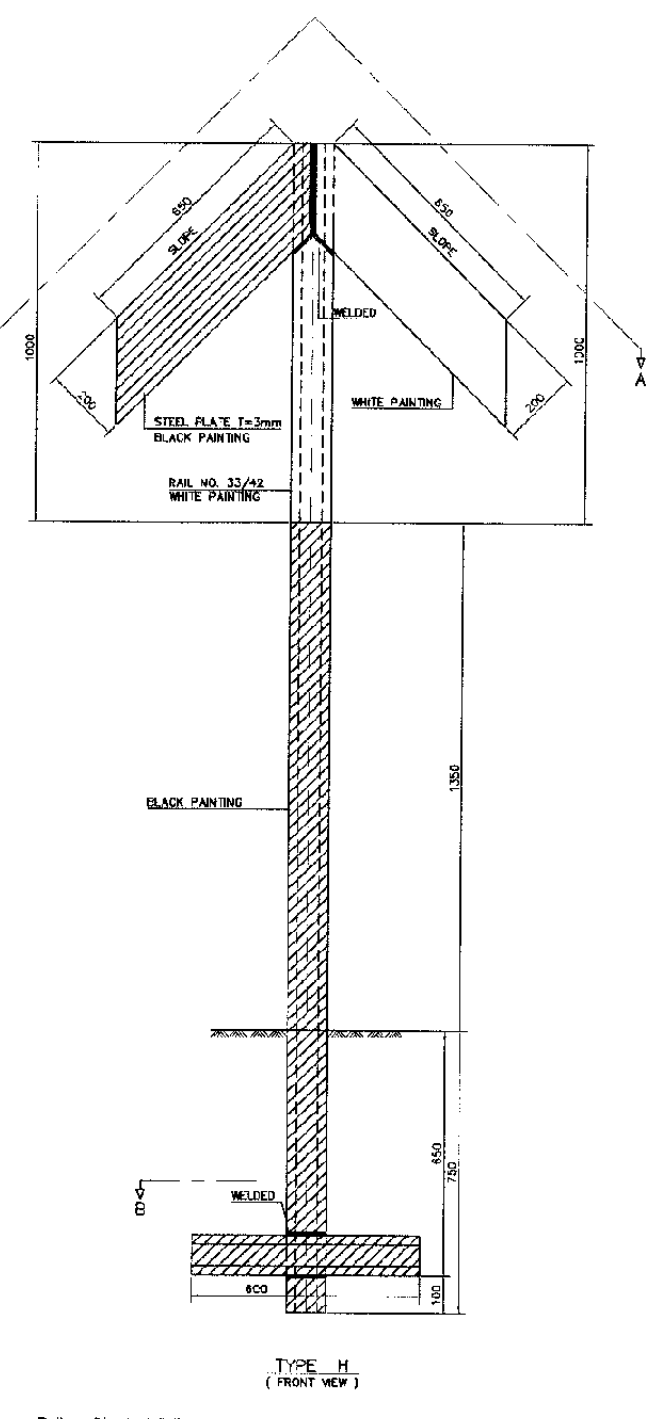
TYPE E
(FRONT VIEW)



TYPE F
(FRONT VIEW)



TYPE G
(FRONT VIEW)

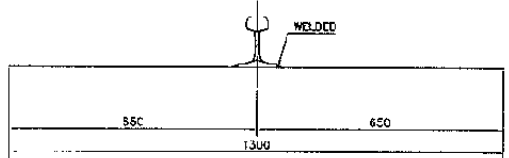


TYPE H
(FRONT VIEW)

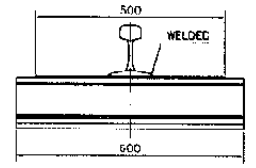
GRADIENT SIGN POST
SCALE 1:10

NOTE : ON BACK SIDE OF ALL STEEL PLATE MUST BE WELDED ON RAIL POST

- NOTE :
1. CLEARANCE POST SHALL BE INSTALLED AT SIMPLE TURN OUTS (OF SCISSORS CROSSING, OF DOUBLE SLIP SWITCH, OF SINGLE SLIP SWITCH)
 2. CURVE POST SHALL BE INSTALLED AT THE THEORETICAL BEGINNING AND END POINTS OF CIRCULAR CURVES
 3. GRADE POST SHALL BE INSTALLED AT THE CHANGING POINT OF GRADES
 4. KILOMETRE POST SHALL BE INSTALLED EVERY 1 KM.
 5. 100 METRE POST SHALL BE INSTALLED EVERY 100 M FROM A KILOMETRE POST
 6. LEVEL CROSSING POST SHALL BE INSTALLED AT BOTH SIDE OF THE ROAD



TOP VIEW



SECTION B-B

No.	KM To KM	Railway Sign Installation		
		Clearance Post	Curve Post	Grade Post
1	25 + 100 To 25 + 700	0	4	0
2	25 + 700 To 25 + 300	2	6	2
3	25 + 300 To 25 + 900	6	10	5
4	25 + 900 To 27 + 500	4	4	4
5	27 + 500 To 28 + 100	0	4	2
6	28 + 100 To 28 + 700	0	1	2
7	28 + 700 To 29 + 300	0	3	2
8	29 + 300 To 29 + 900	0	0	2
9	29 + 900 To 30 + 500	0	0	2
10	30 + 500 To 31 + 100	0	2	4
11	31 + 100 To 31 + 700	0	0	4
12	31 + 700 To 32 + 300	0	0	2
13	32 + 300 To 32 + 900	0	0	4
14	32 + 900 To 33 + 500	4	7	4
15	33 + 500 To 34 + 100	2	1	4
16	34 + 100 To 34 + 700	0	0	2
17	34 + 700 To 35 + 300	0	0	6
18	35 + 300 To 35 + 900	0	2	4
19	35 + 900 To 36 + 500	0	2	0
20	36 + 500 To 37 + 100	0	0	6
21	37 + 100 To 37 + 700	0	3	6
22	37 + 700 To 38 + 300	0	2	2
23	38 + 300 To 38 + 900	0	0	4
24	38 + 900 To 39 + 500	0	0	2
25	39 + 500 To 40 + 100	0	0	2
26	40 + 100 To 40 + 700	0	0	2
27	40 + 700 To 41 + 300	0	0	0
28	41 + 300 To 41 + 900	0	0	2
29	41 + 900 To 42 + 500	4	4	2
30	42 + 500 To 43 + 100	0	4	0
31	43 + 100 To 43 + 700	11	24	2
32	43 + 700 To 44 + 000	3	4	2
TOTAL		38	89	84

The Railway Electrification and Double - double Tracking of Java Main Line Project



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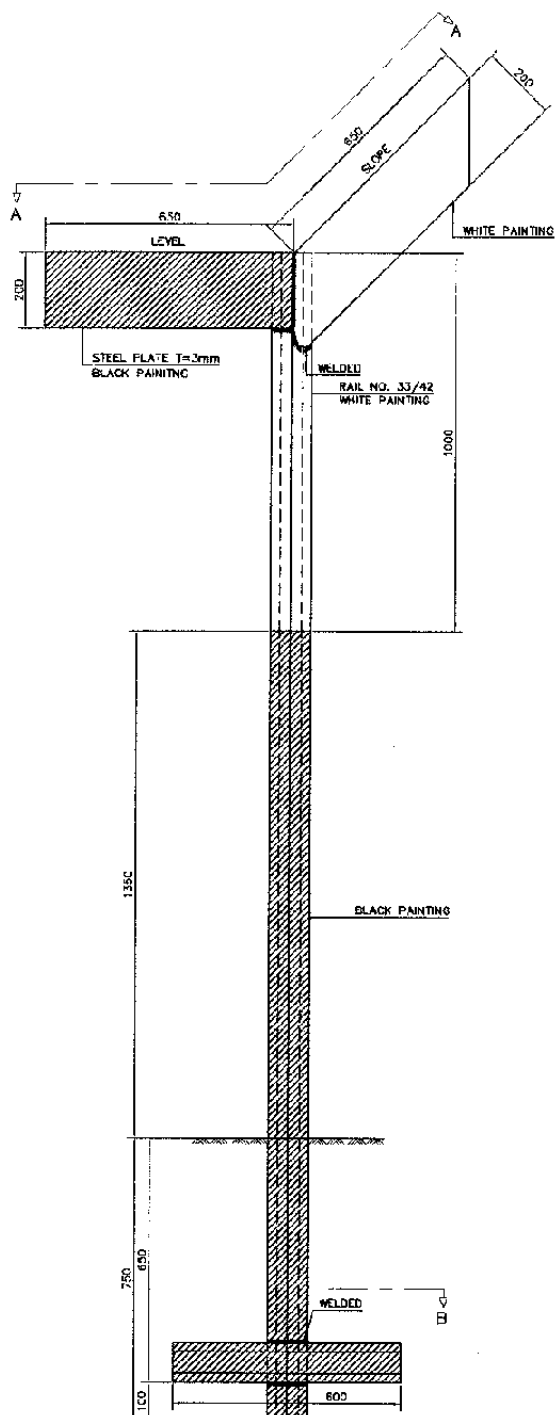
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TRACK
TRACK WORKS

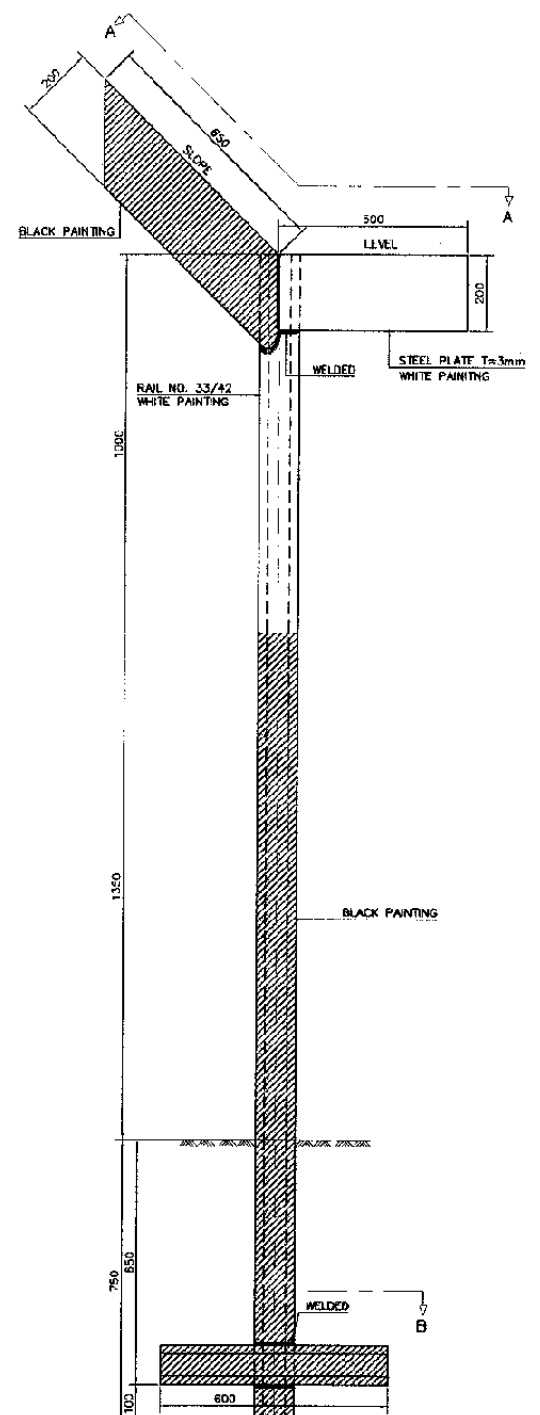
DATE 10 / MARCH / 2003

Drawing Title :
RAILWAY SIGN POST
(SHEET 1 OF 3)

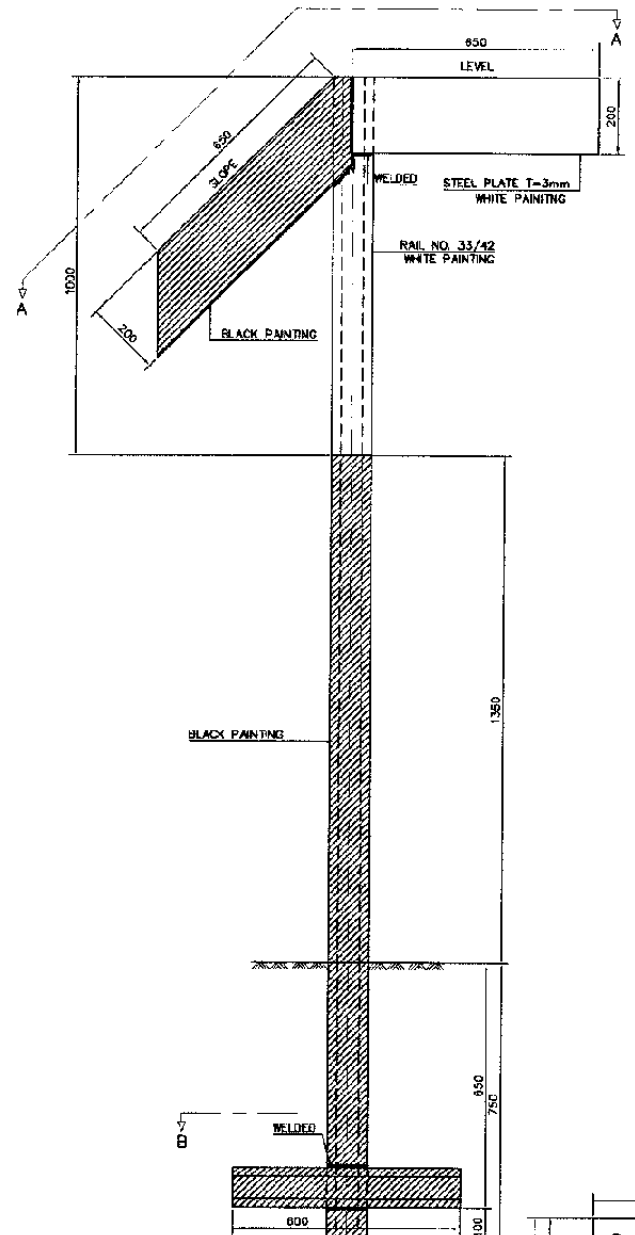
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Drawing No.: TR - 01 - 014



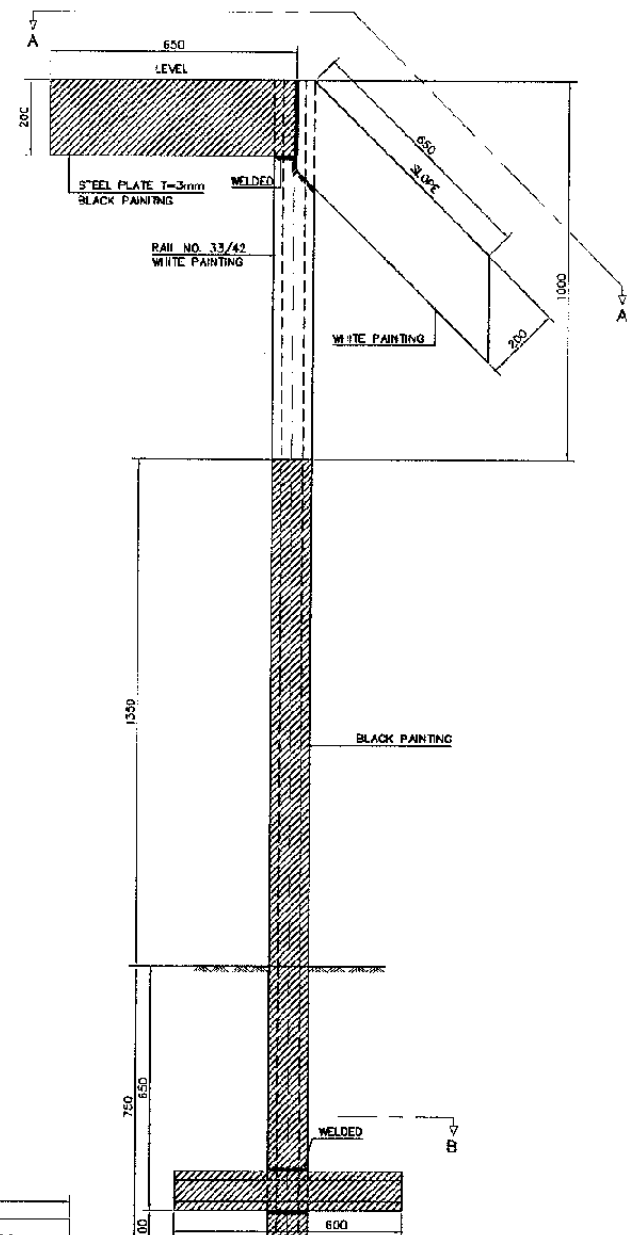
TYPE A
(FRONT VIEW)



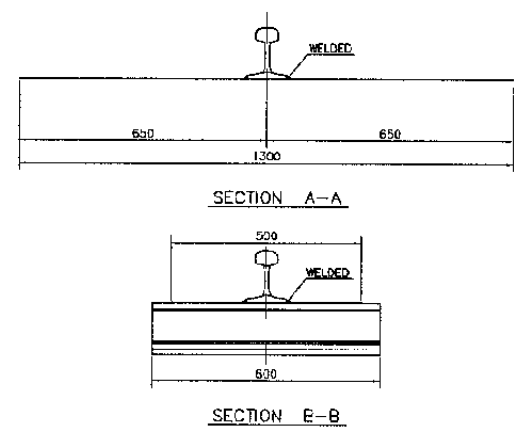
TYPE B
(FRONT VIEW)



TYPE C
(FRONT VIEW)



TYPE D
(FRONT VIEW)

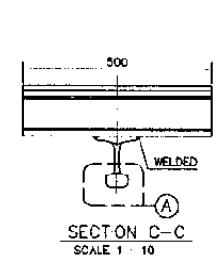


SECTION A-A

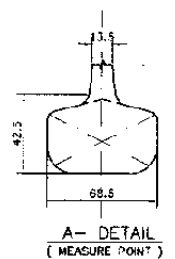
SECTION C-C

SECTION E-B

GRADIENT SIGN POST
SCALE 1:10

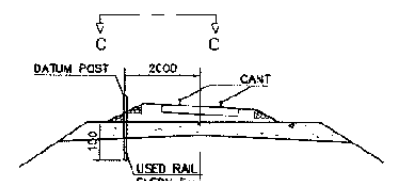


SECTION C-C
SCALE 1:10

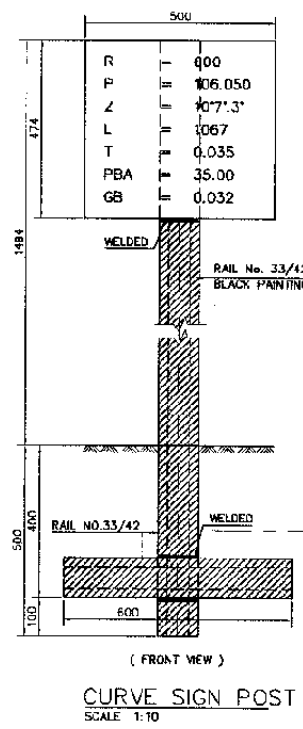


A-DETAIL
(MEASURE POINT)

CURVE DATUM POST
SCALE 1:10



INSTALLATION
SCALE 1:100



CURVE SIGN POST
SCALE 1:10

R	000
P	106.050
Z	107° 3'
L	1067
T	0.035
PBA	35.00
GB	0.032

NOTE: ON BACK SIDE OF ALL STEEL PLATE MUST BE WELDED ON RAIL POST

The Railway Electrification and Double - double Tracking of Java Main Line Project



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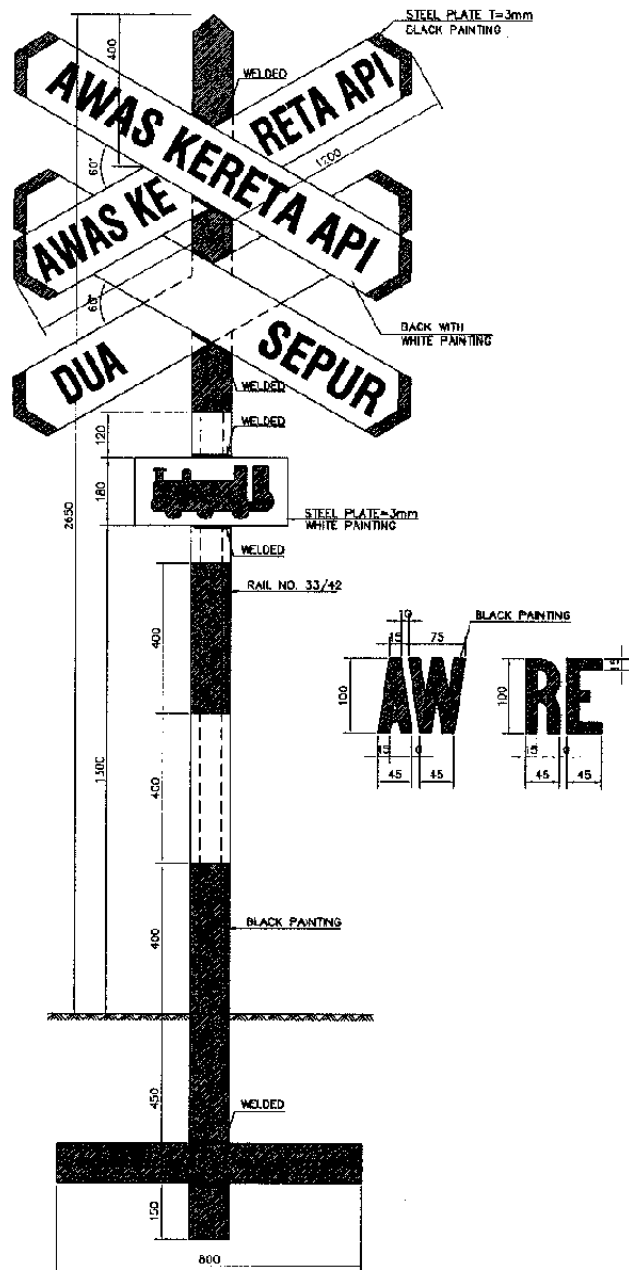
TRACK

TRACK WORKS

DATE 10 / MARCH / 2003

Drawing Title:
RAILWAY SIGN POST
(SHEET 2 OF 3)

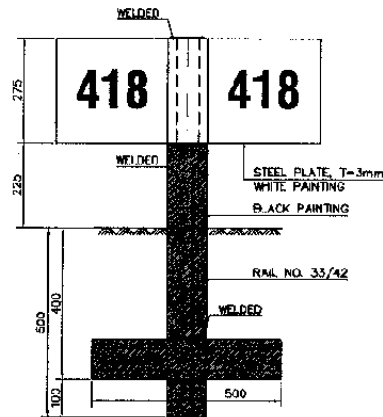
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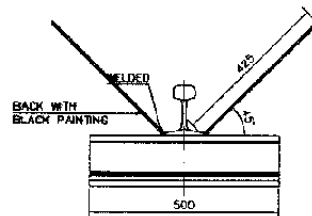
ANDREAS CROSS POST ON LEVEL CROSSING WITHOUT BARRIER
SCALE 1:10

NOTE

- 1) WORD : "DUA" CAN BE CHANGED INTO "TIGA" OR "EMPAT" ACCORDINGLY
- 2) ALL WORDS, FIGURES AND SYMBOLS ARE BLACK PAINTED
- 3) ON BACK SIDE OF ALL STEEL MUST BE WELDED ON RAIL POST

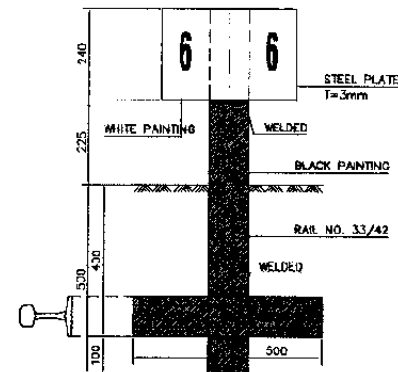


FRONT VIEW

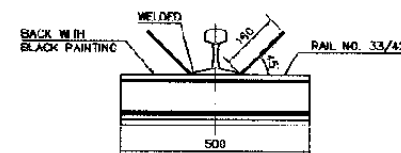


PLAN

SIGN POST OF EVERY KILOMETRE (KM)
SCALE 1:10

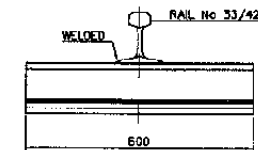


FRONT VIEW

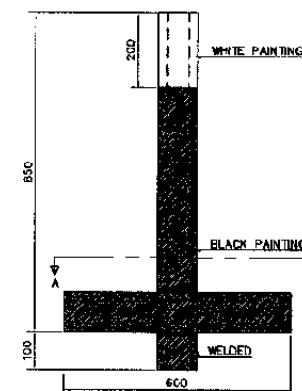


PLAN

SIGN POST OF EVERY 100 METRE (HM)
SCALE 1:10



SECTION A-A



CLEARANCE POST
SCALE 1:10

The Railway Electrification and Double - double Tracking of Java Main Line Project



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TRACK

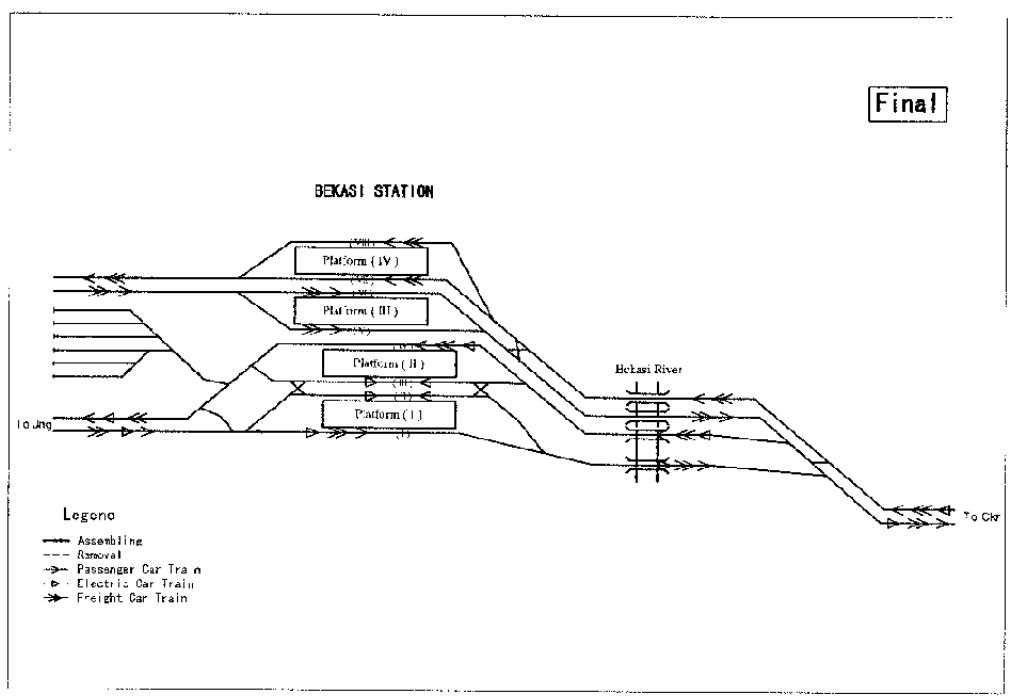
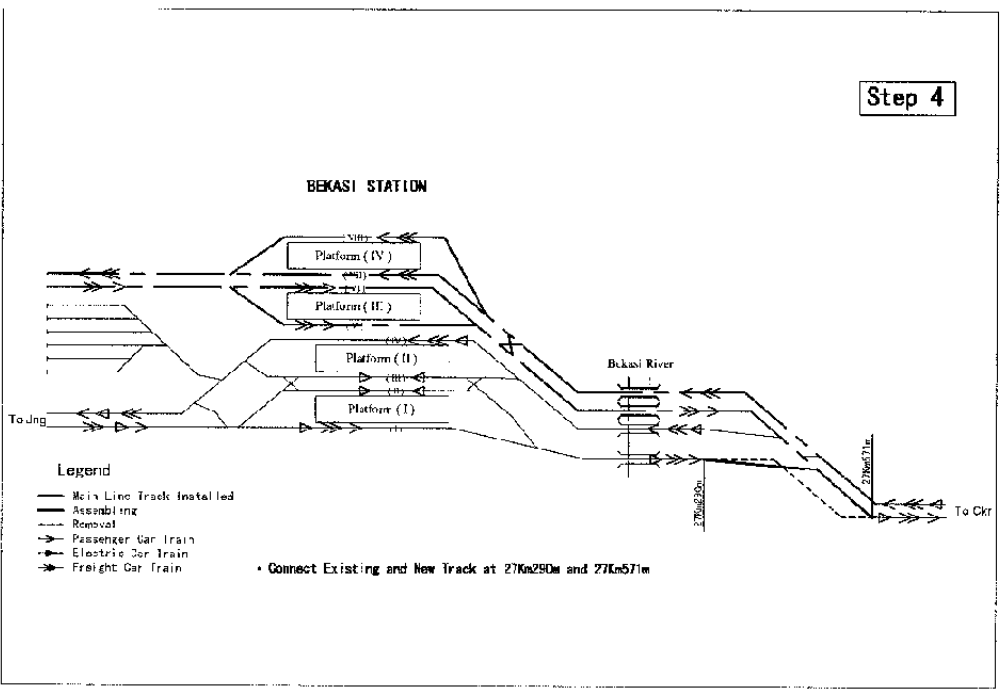
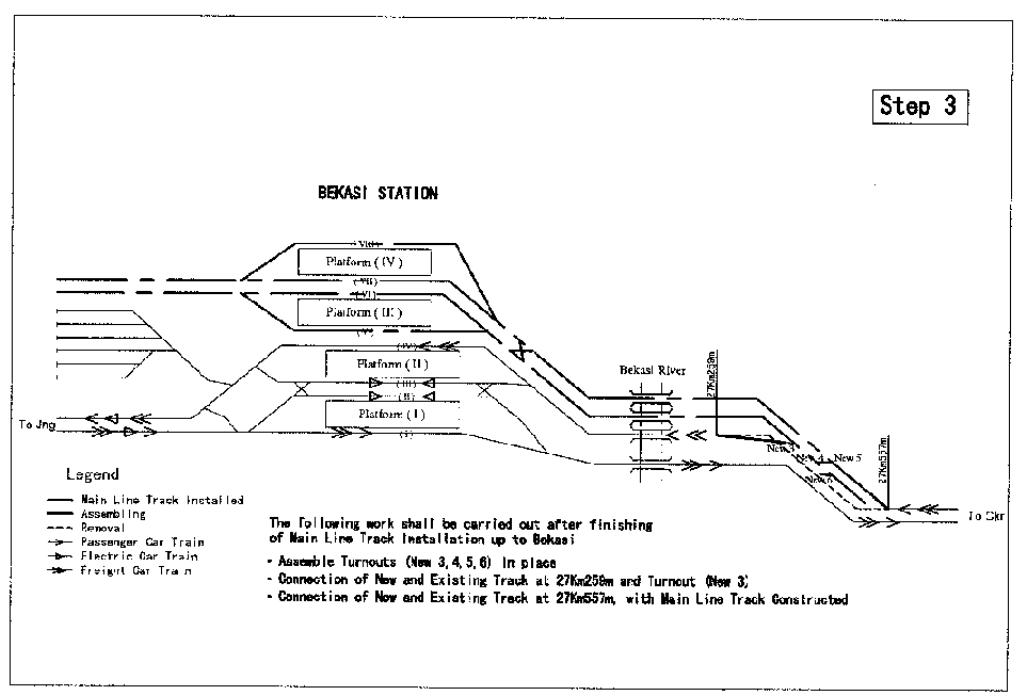
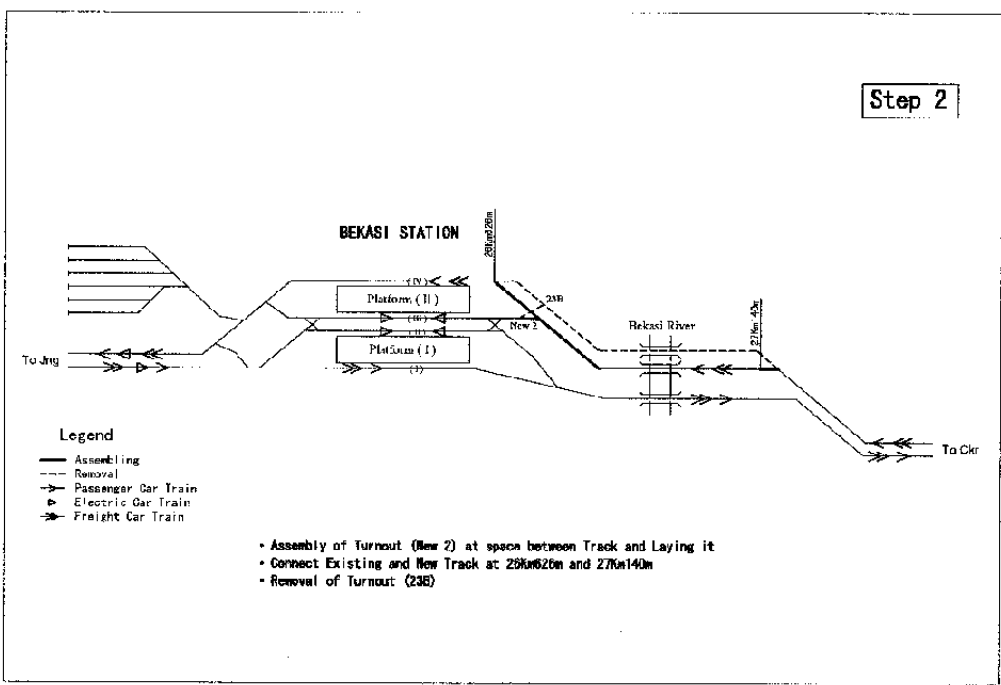
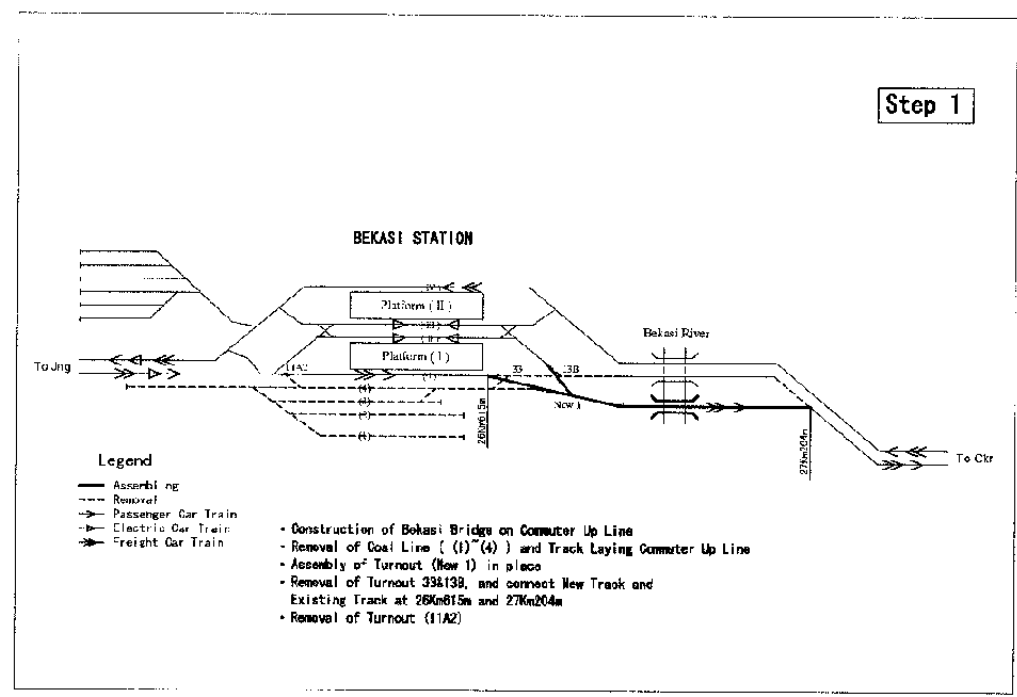
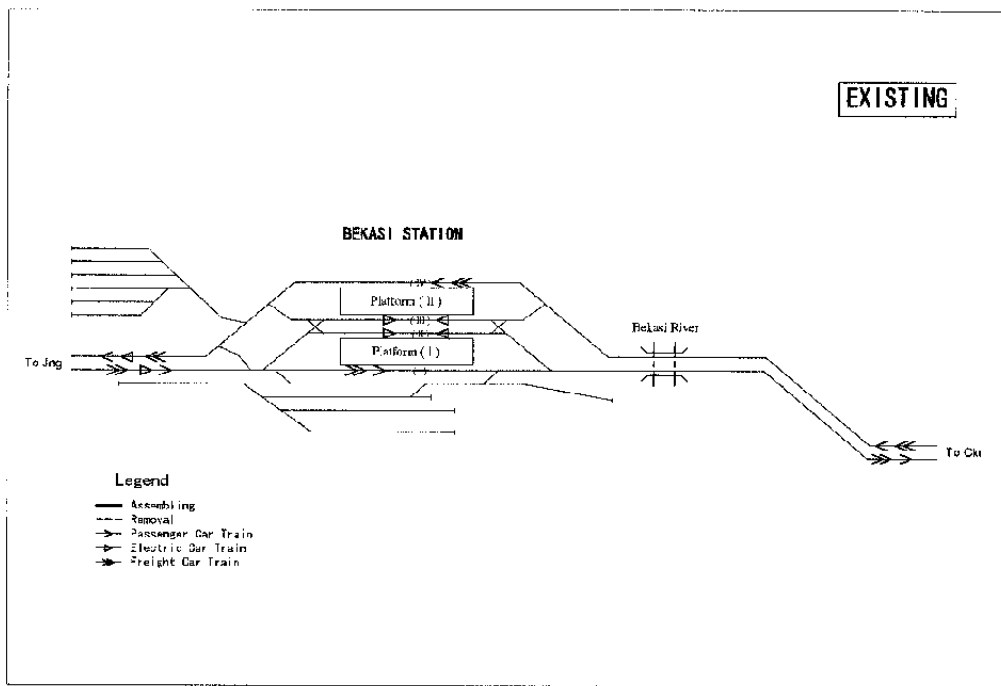
TRACK WORKS

DATE 10 / MARCH / 2003

Drawing Title :

RAILWAY SIGN POST
(SHEET 3 OF 3)

Scale: 1:10 Drawing No: TR-01-016



The Railway Electrification and Double double Tracking of Java Main Line Project



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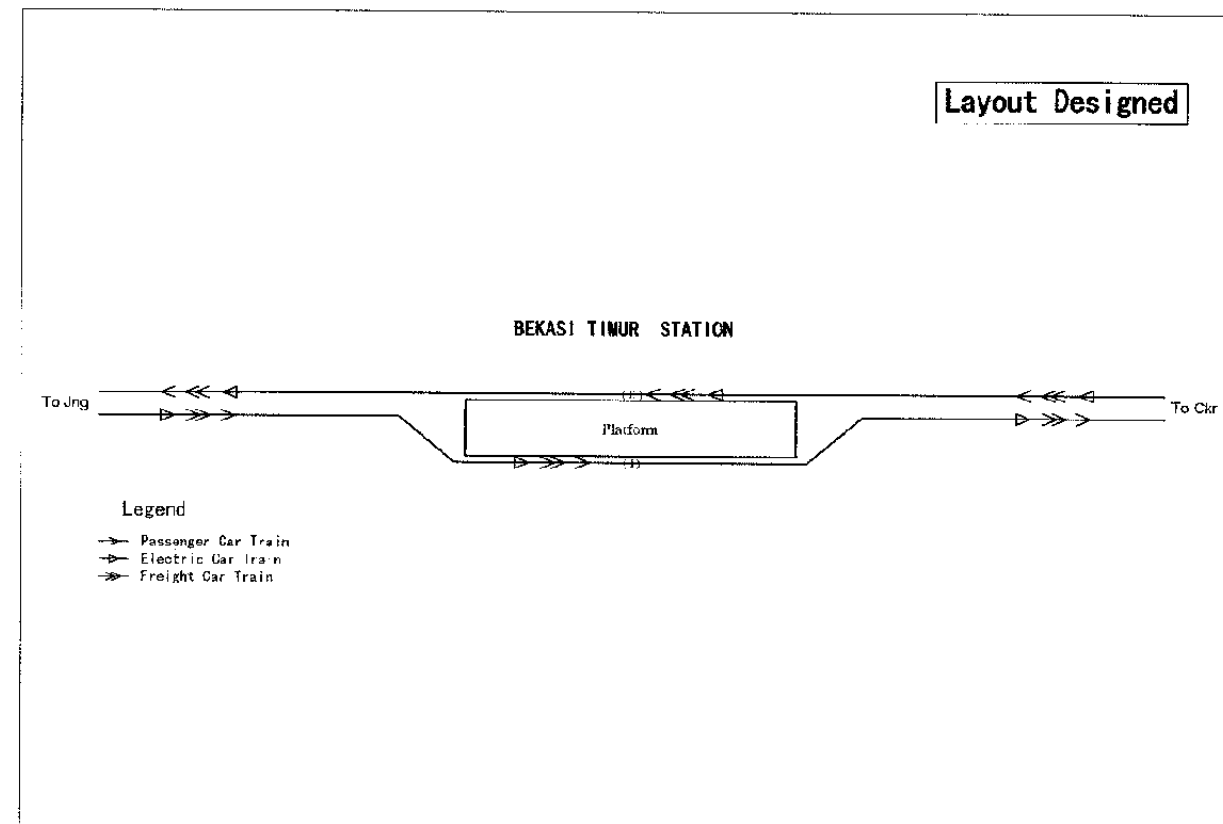
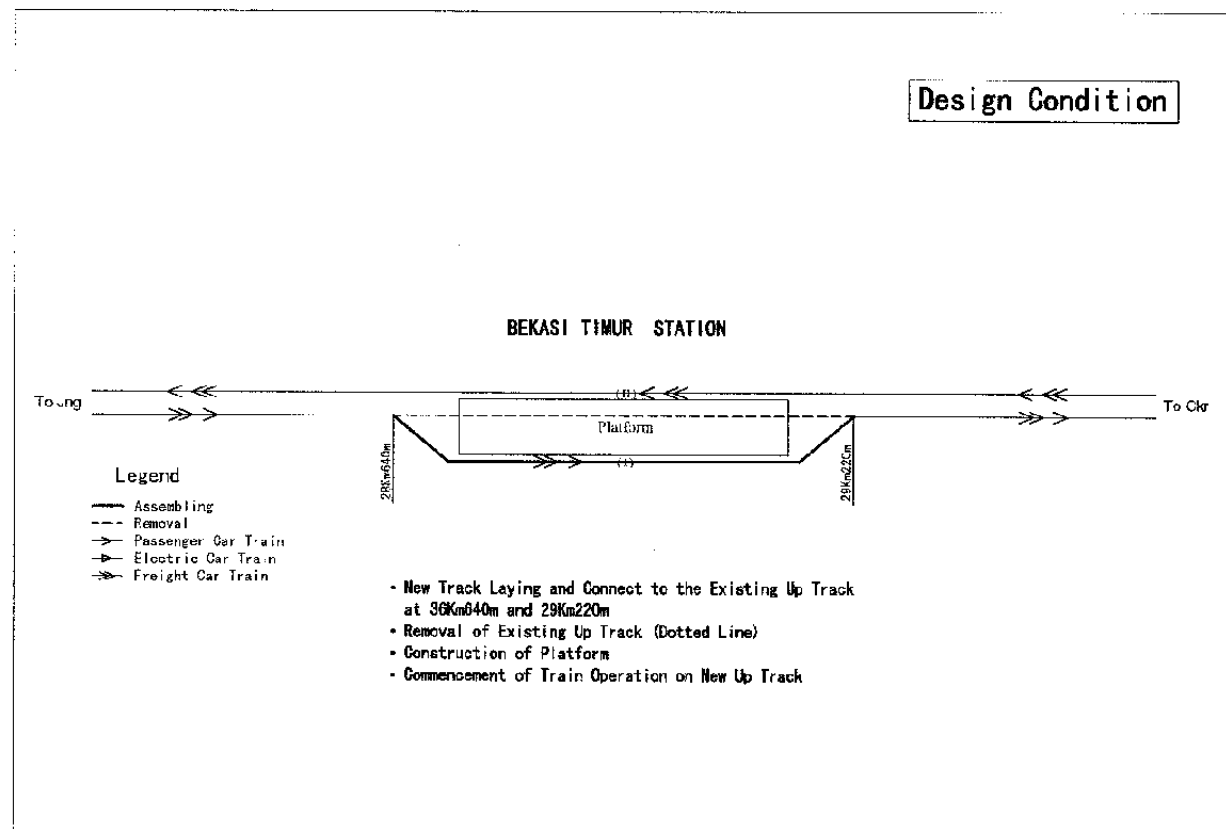
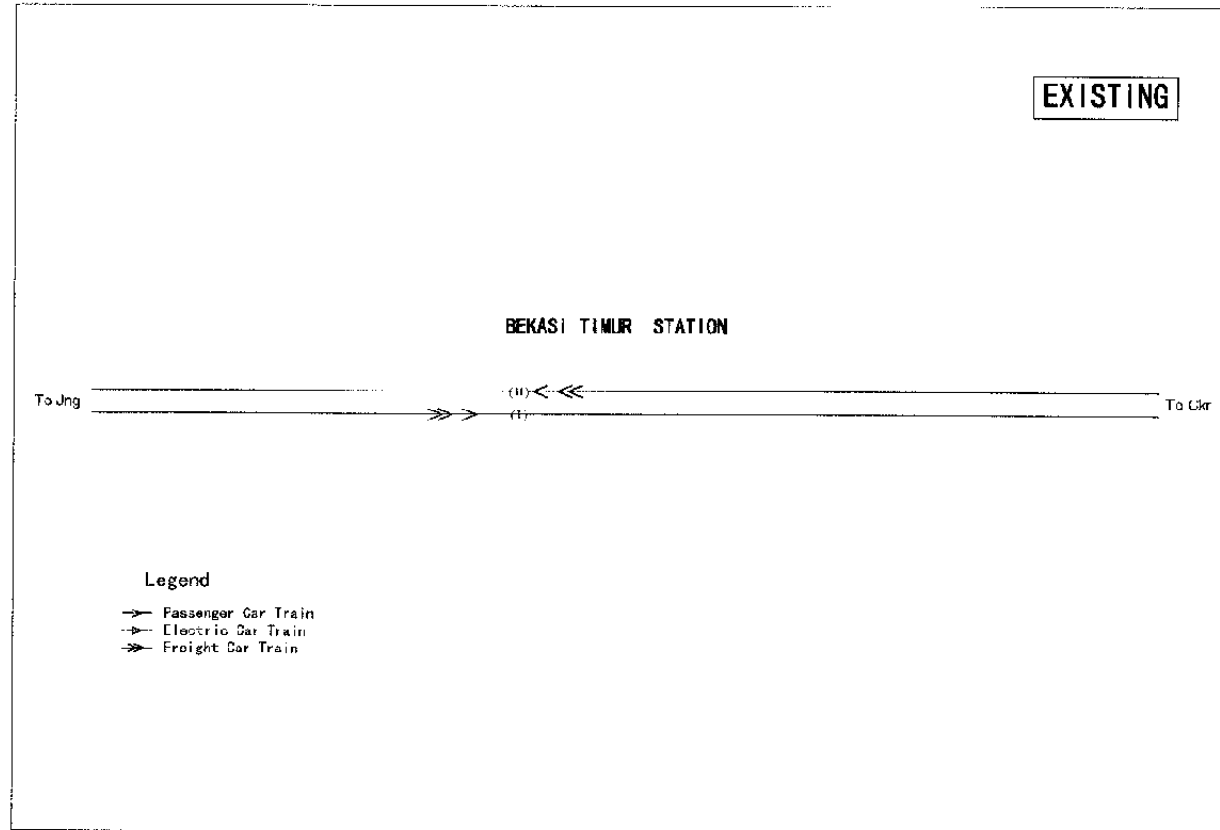
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TRACK
 RAILWAY LEVEL CROSSINGS.

DATE 10 / MARCH / 2003

Drawing Title :
 TRACK LAYOUT SWITCHING WORK FOR BEKASI STATION

Scale: NTS
 Drawing No: TR-01-017



The Railway Electrification and Double - double Tracking of Java Main Line Project



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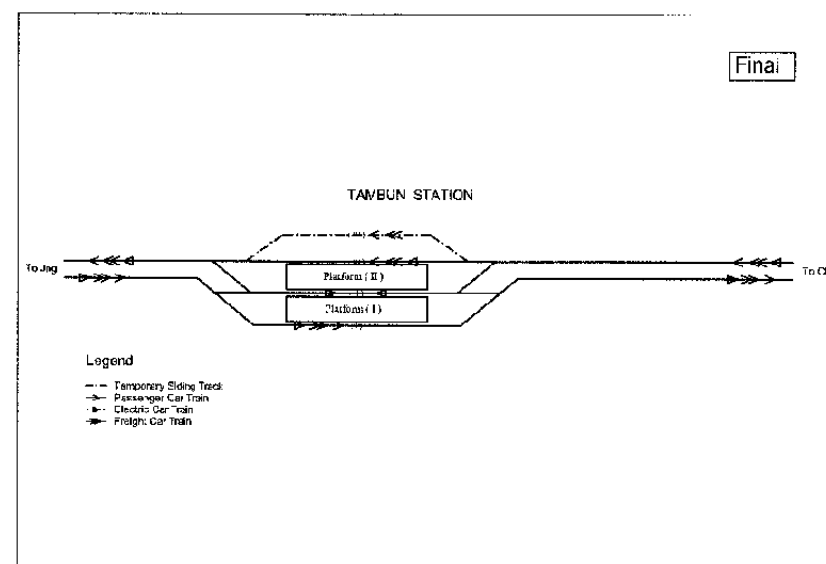
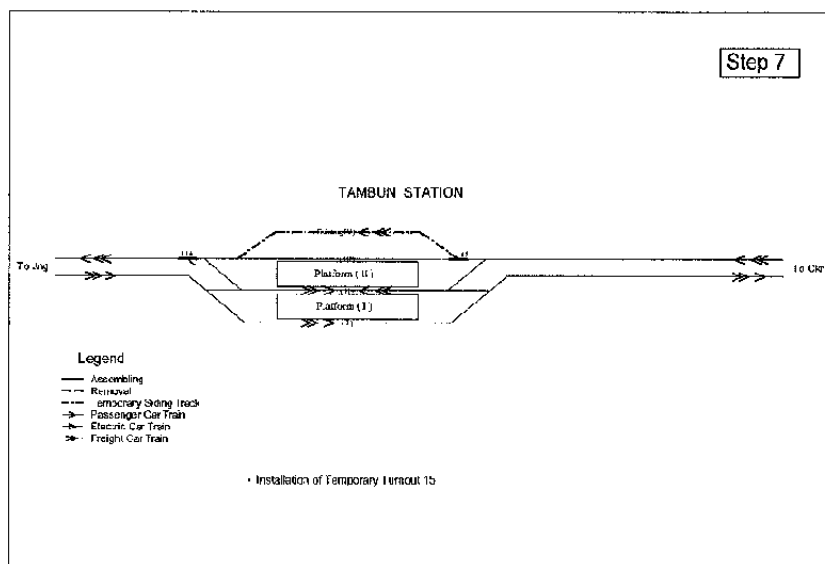
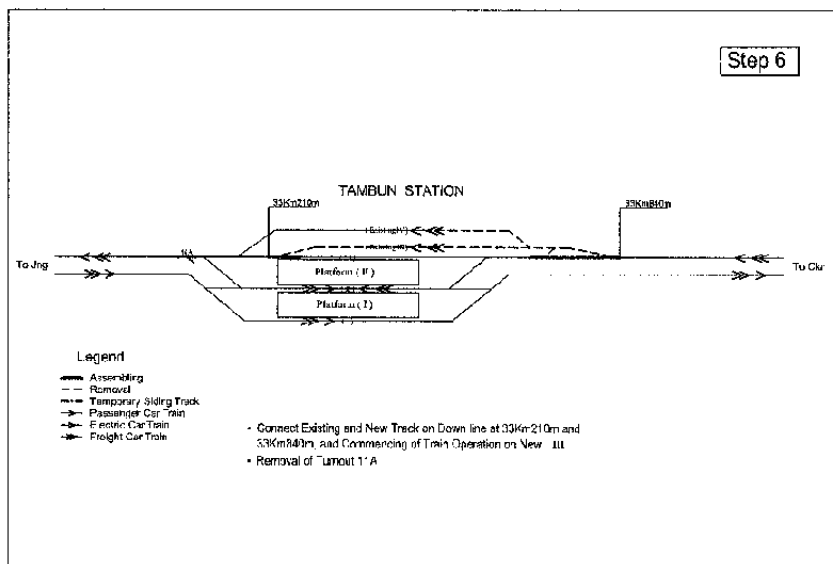
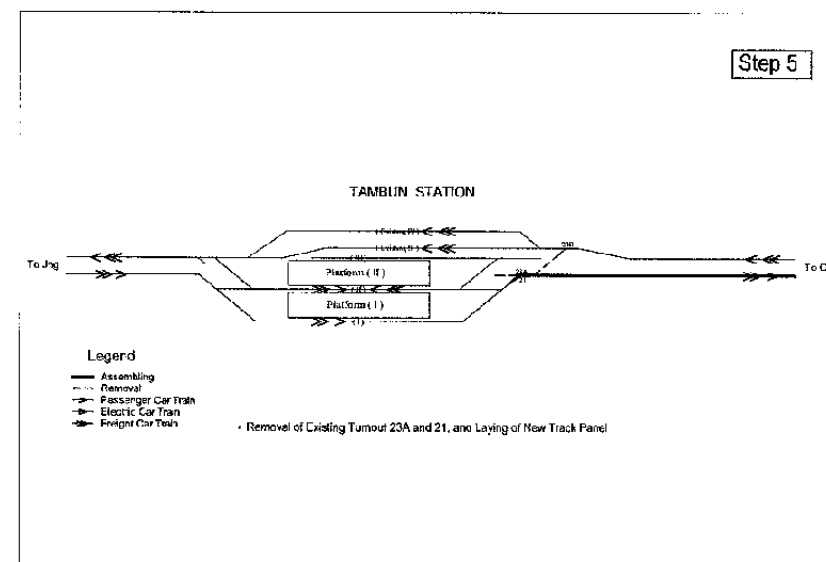
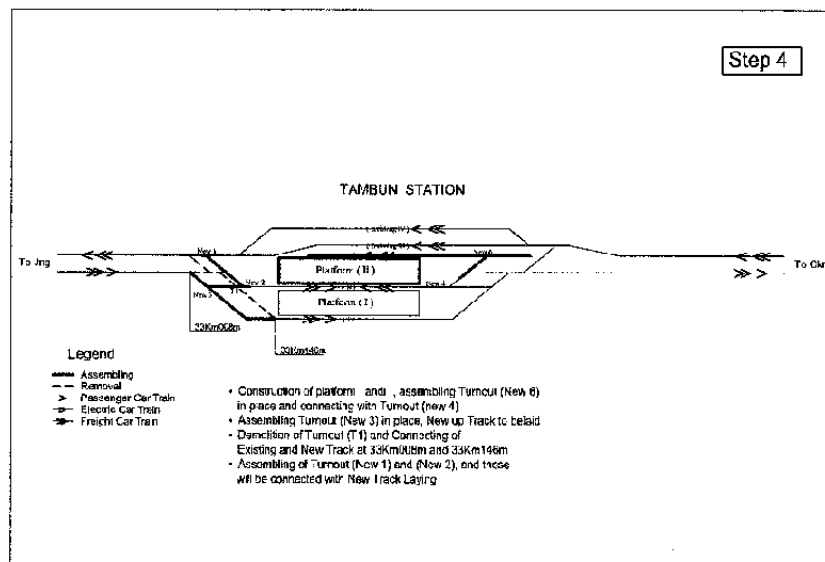
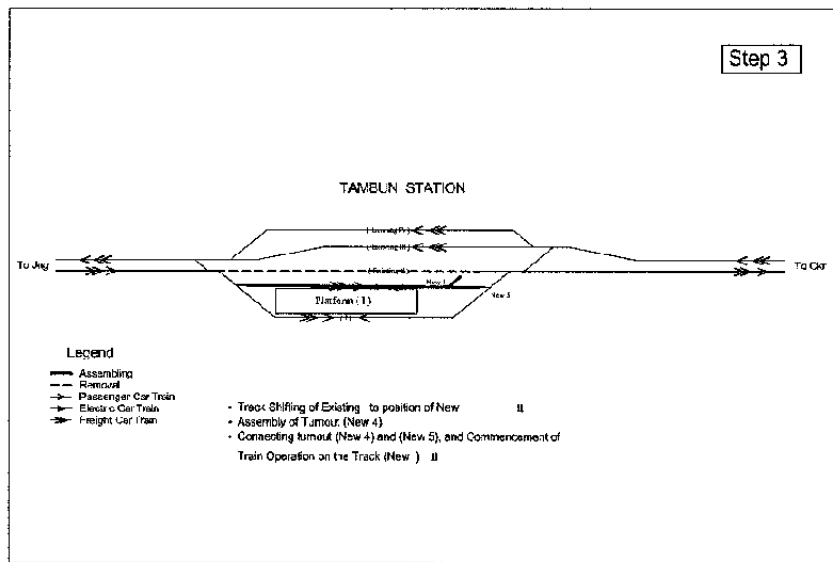
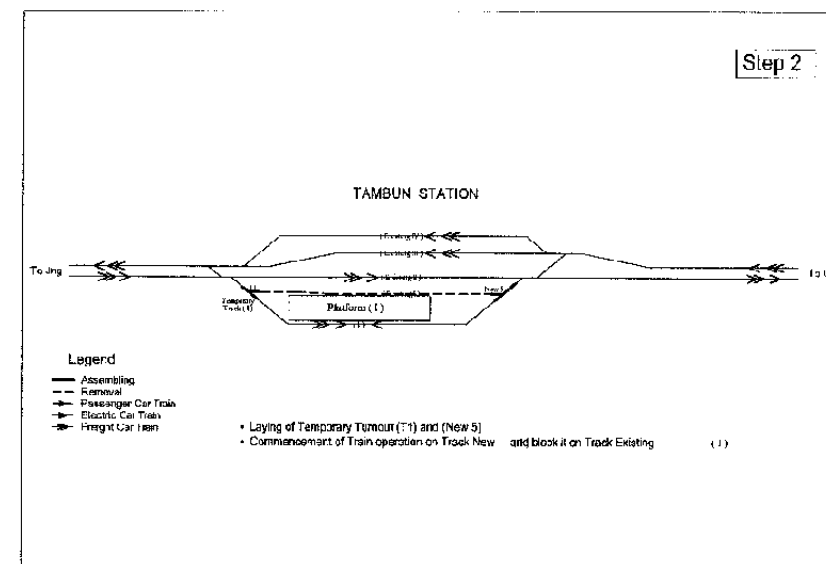
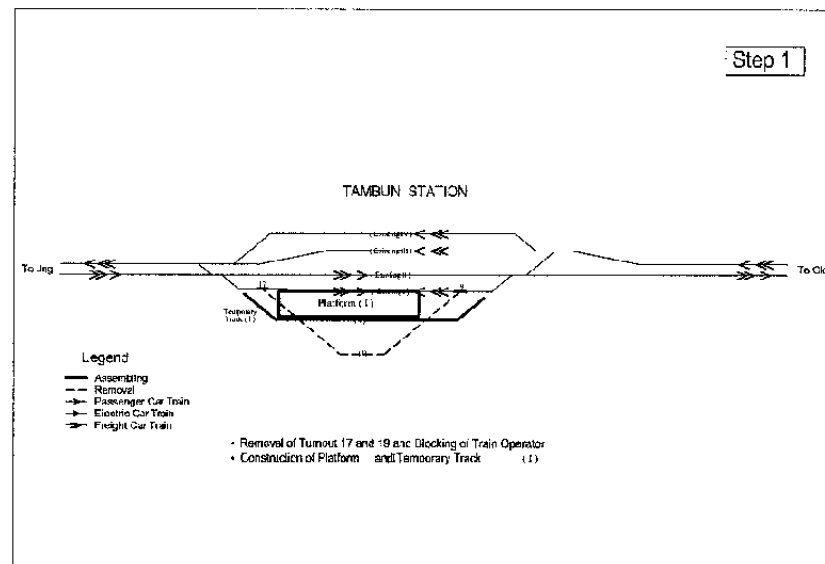
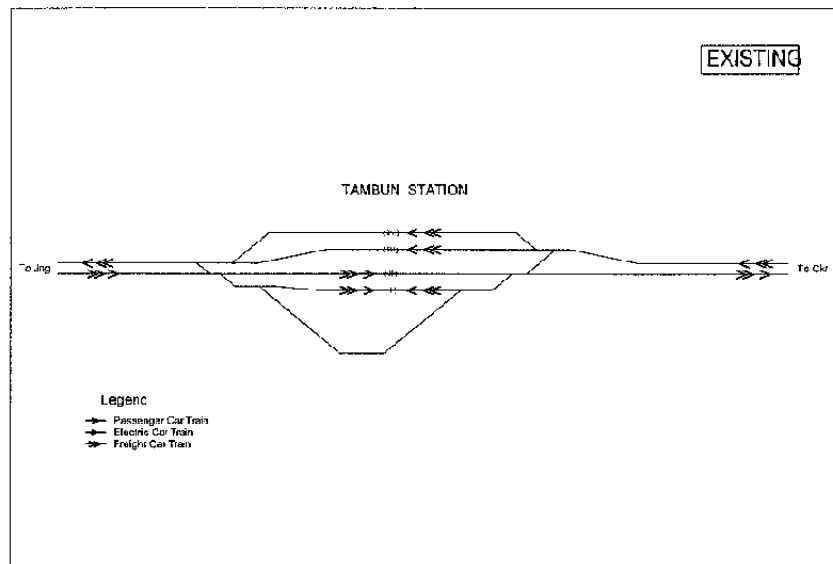
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DATE 10 / MARCH / 2003

Drawing Title :
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Scale: N.T.S. Drawing No.: TR - 01 - 018



The Railway Electrification and Double-double Tracking of Java Main Line Project



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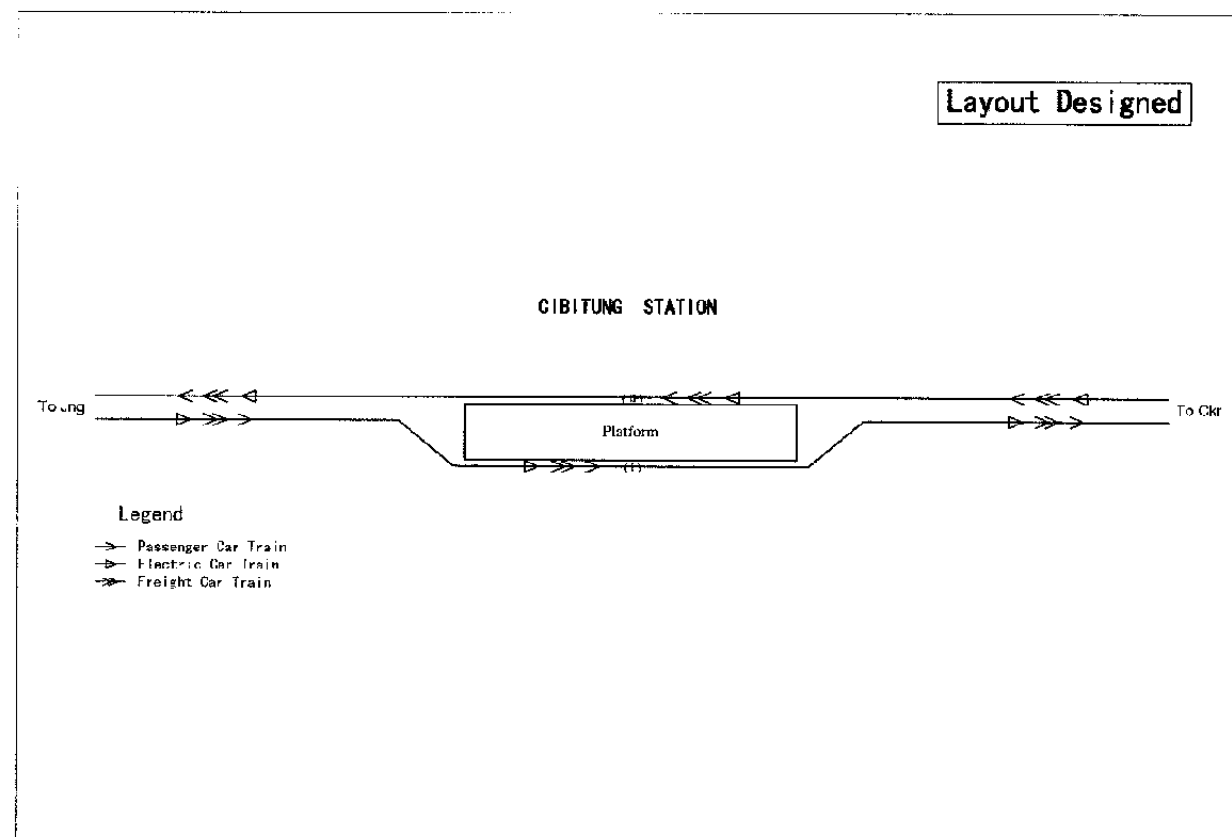
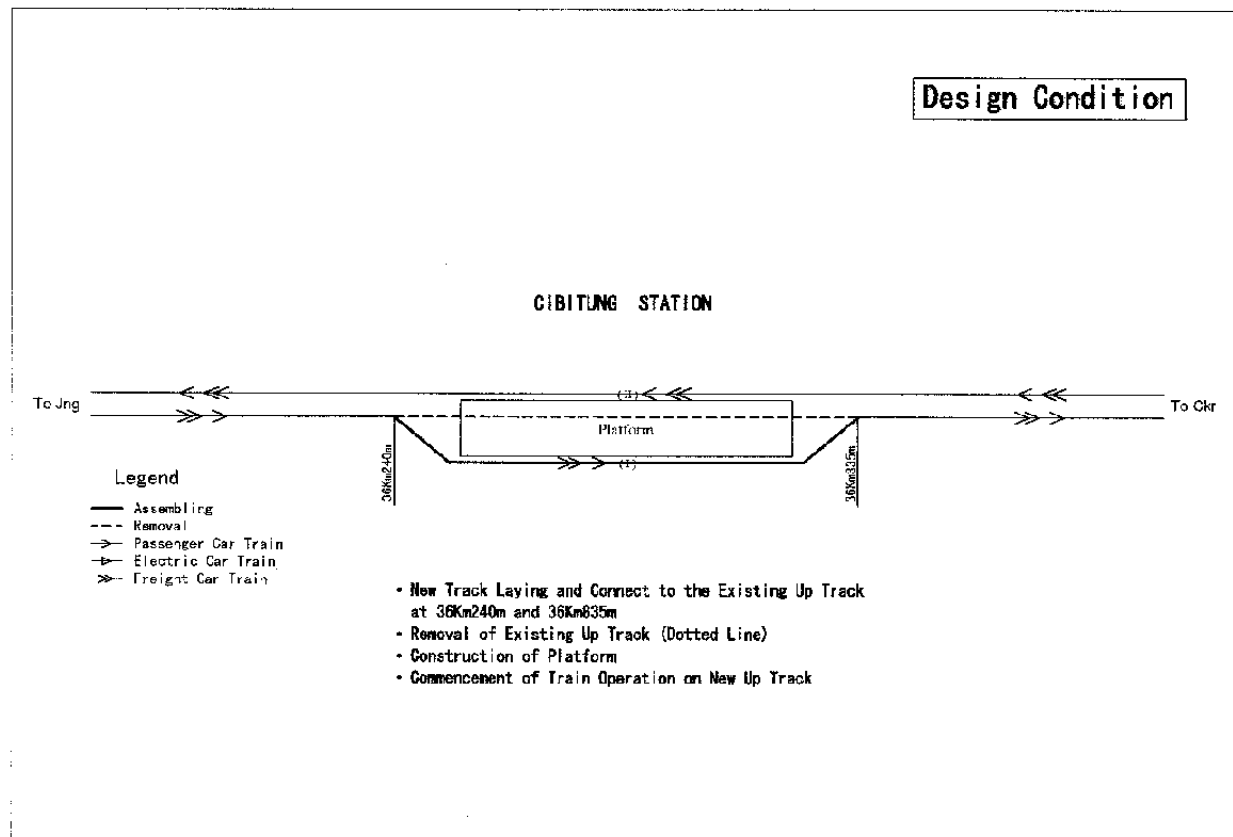
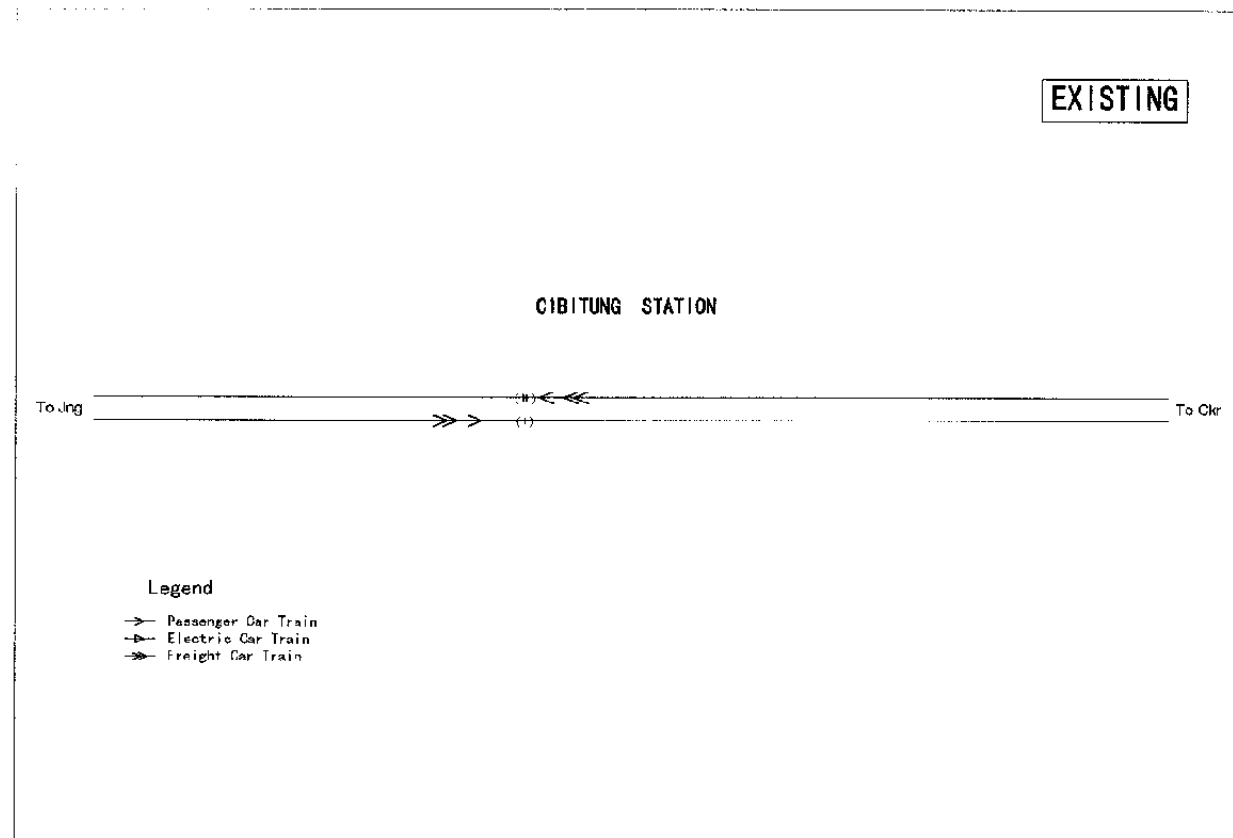
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DATE 10 / MARCH / 2003

Drawing Title :
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Scale: 1:5 Drawing No.: TR-01-019



The Railway Electrification and Double - double Tracking of Java Main Line Project



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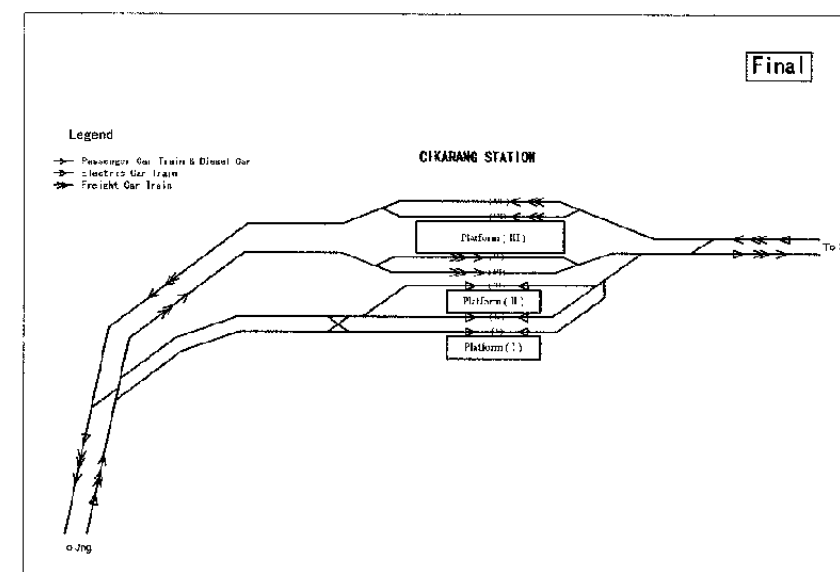
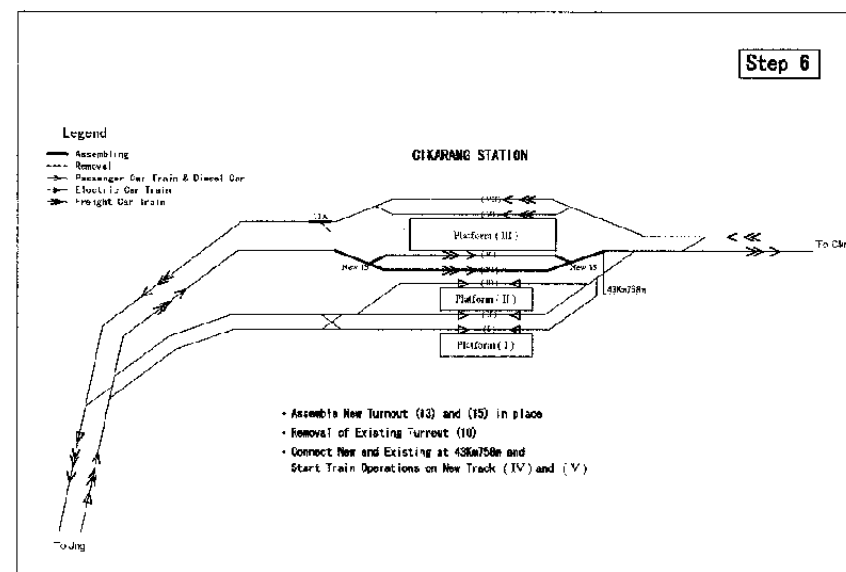
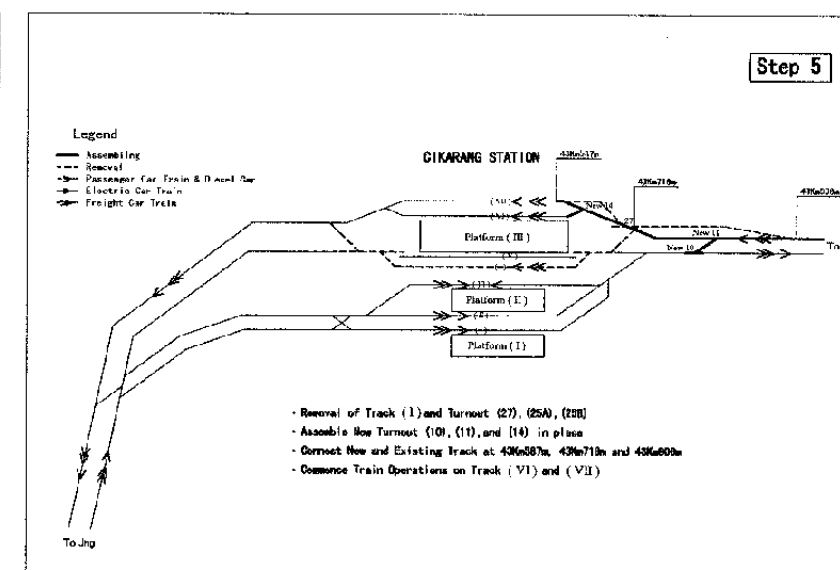
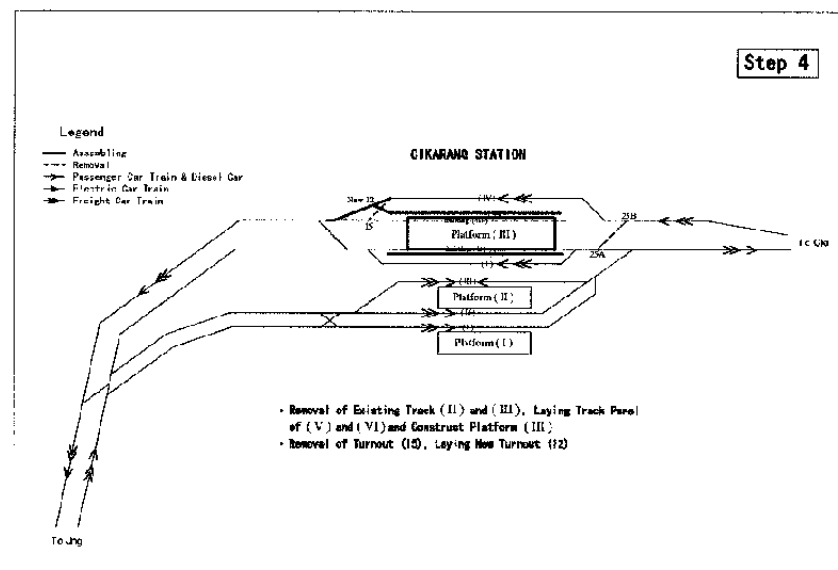
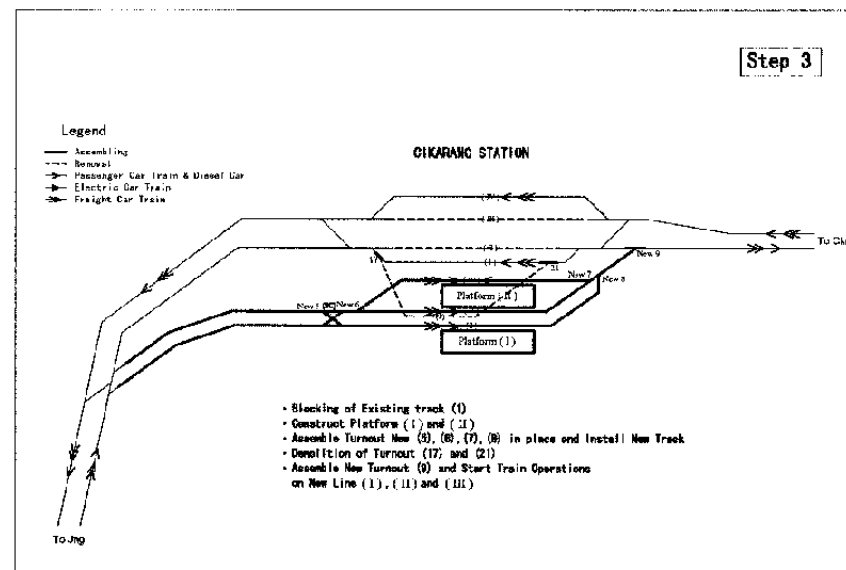
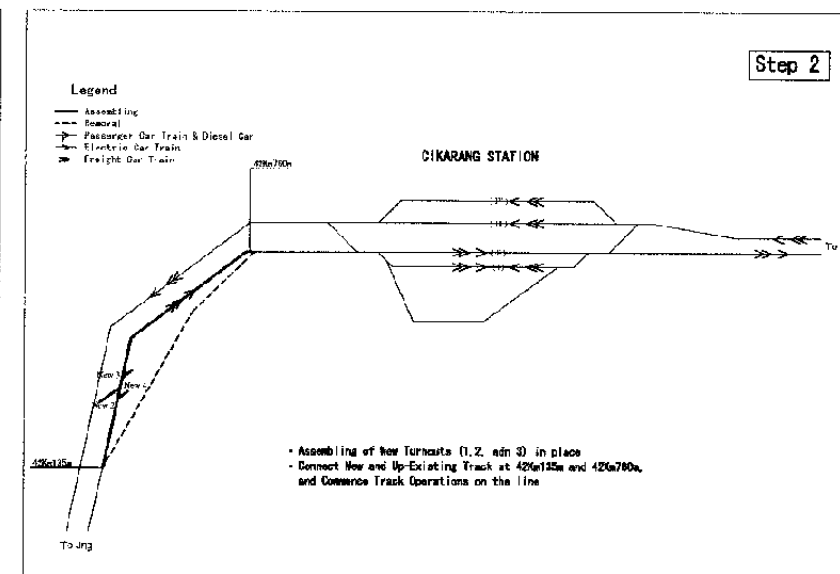
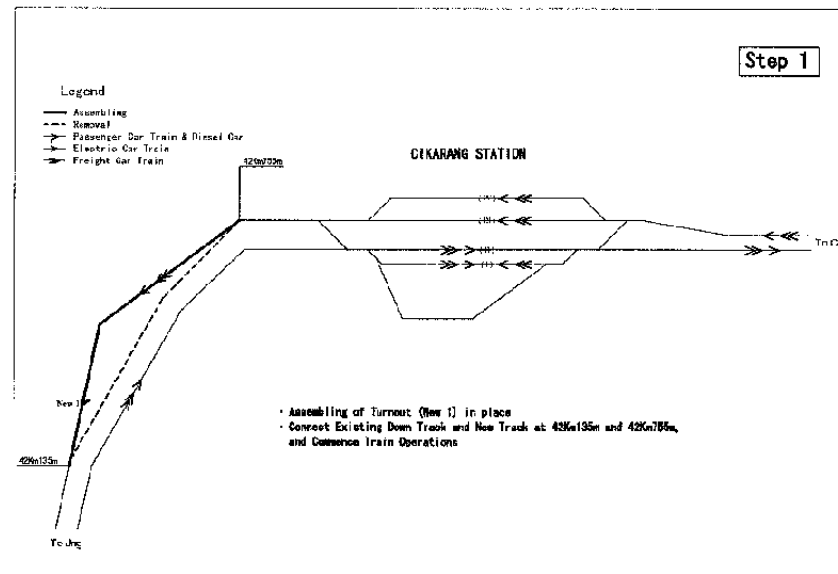
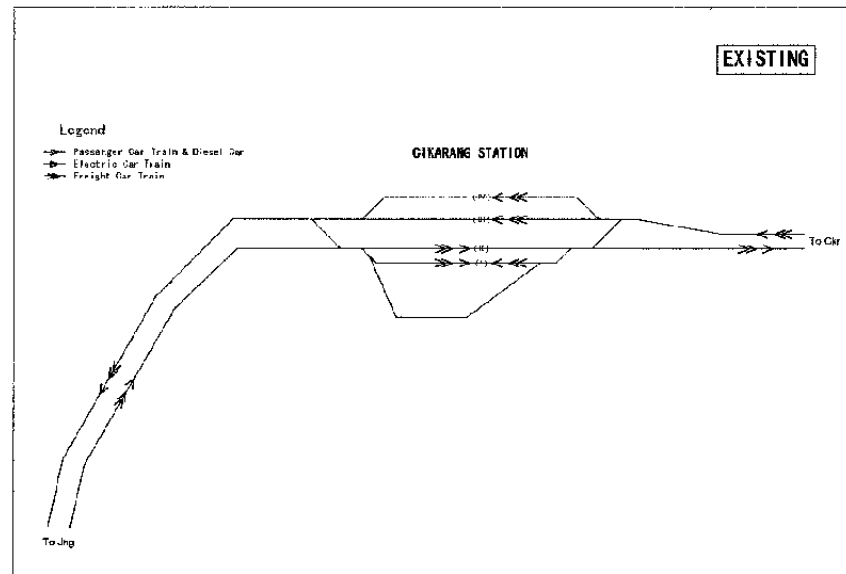
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DATE 10 / MARCH / 2003

Drawing Title :
TRACK LAYOUT SWITCHING WORK
FOR CIBITUNG STATION

Scale: 1:5
Drawing No. TR - 01 - 020



The Railway Electrification and Double-double Tracking of Java Main Line Project



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TRACK

RAILWAY LEVEL CROSSINGS.

DATE 10 / MARCH / 2003

Drawing Title :
 TRACK LAYOUT SWITCHING WORK FOR CIKARANG STATION

Scale: NTS Drawing No: TR-01-021

LEVEL CROSSINGS

LEVEL CROSSING

NO	TITLE	DRAWING NO	SCALE
01	TYPICAL DRAWING OF LEVEL CROSSING CONCRETE PANEL TYPE FOR DOUBLE TRACK	TR - 02 - 001	1:60
02	TYPICAL DRAWING OF LEVEL CROSSING CONCRETE PANEL TYPE FOR DOUBLE-DOUBLE TRACK	TR - 02 - 002	1:75
03	DETAIL OF LEVEL CROSSING CONCRETE PANEL TYPE	TR - 02 - 003	1:10 / 1:5
04	TYPICAL DRAWING OF LEVEL CROSSING ASPHALT PAVEMENT TYPE FOR DOUBLE TRACK	TR - 02 - 004	1:75 / 1:25
05	TYPICAL DRAWING OF LEVEL CROSSING ASPHALT PAVEMENT TYPE FOR DOUBLE-DOUBLE TRACK	TR - 02 - 005	1:75 / 1:45
06	DETAIL OF LEVEL CROSSING ASPHALT PAVEMENT TYPE	TR - 02 - 006	1:10 / 1:5
07	DETAIL OF LEVEL CROSSING DRAINAGE	TR - 02 - 007	1:50/1:20/1:15/1:10
08	DETAIL OF CATCH BASIN AND U-DITCH	TR - 02 - 008	1:10 / 1:5

The Railway Electrification and
Double - double Tracking of
Java Main Line Project



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TRACK

LEVEL CROSSINGS

DATE 10 / MARCH / 2003

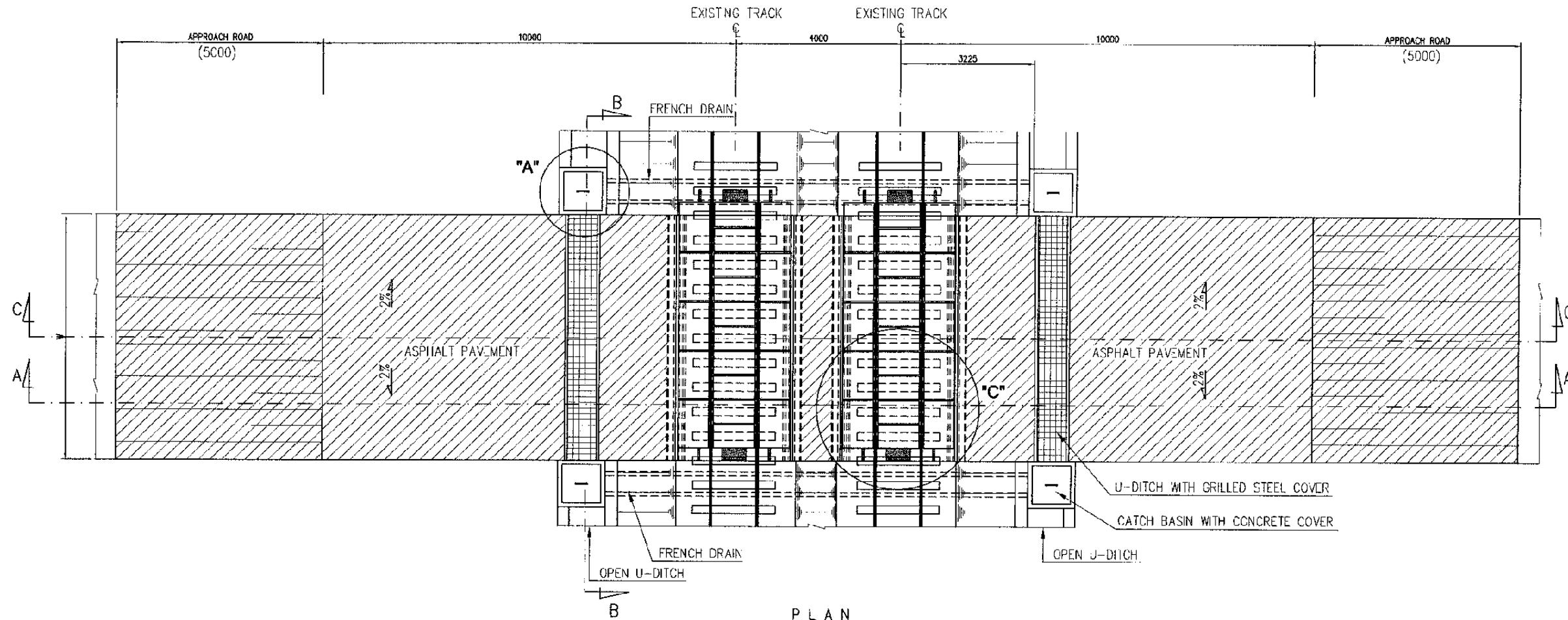
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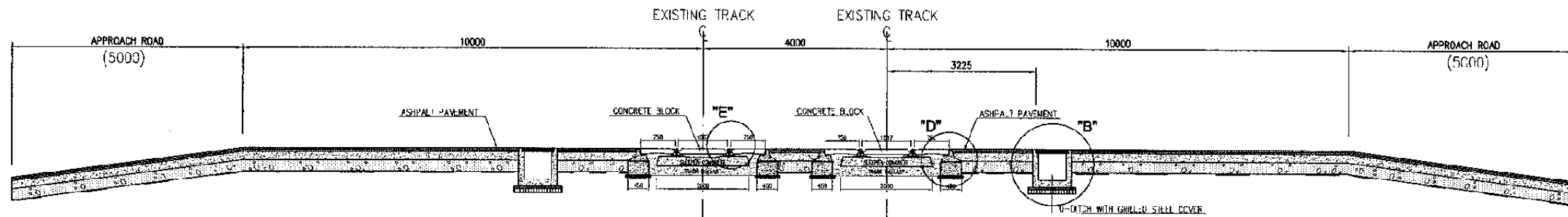
Scale:

Drawing No:

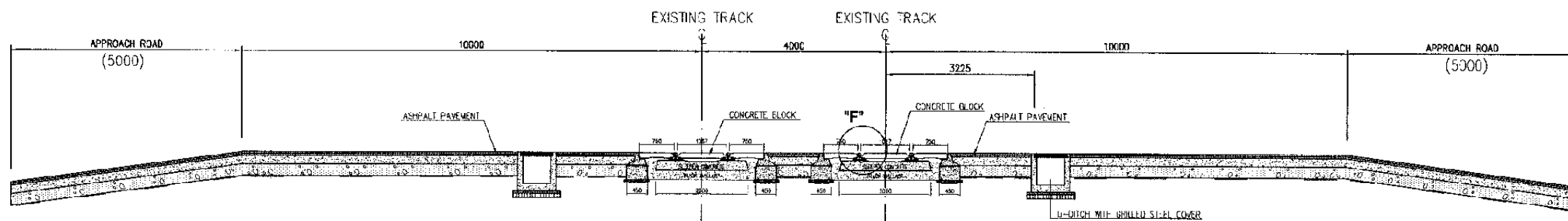
LEVEL CROSSING



PLAN
SCALE 1:60



SECTION A-A
SCALE 1:60



SECTION C-C
SCALE 1:60

The Railway Electrification and
Double - double Tracking of
Java Main Line Project



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TRACK

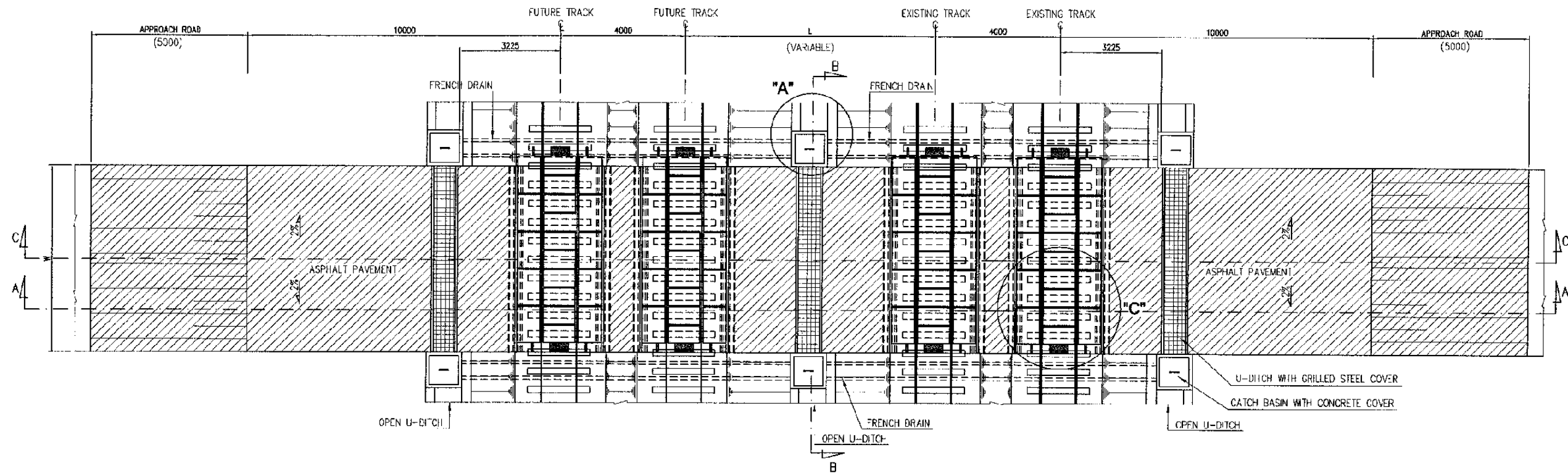
LEVEL CROSSINGS

DATE 10 / MARCH / 2003

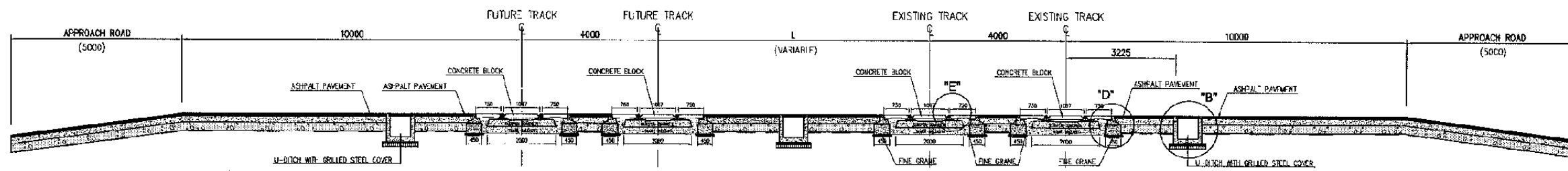
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TYPICAL DRAWING OF LEVEL CROSSING
CONCRETE PANEL TYPE FOR DOUBLE TRACK

Scale: 1:60
Drawing No.: TR - 02 - 001

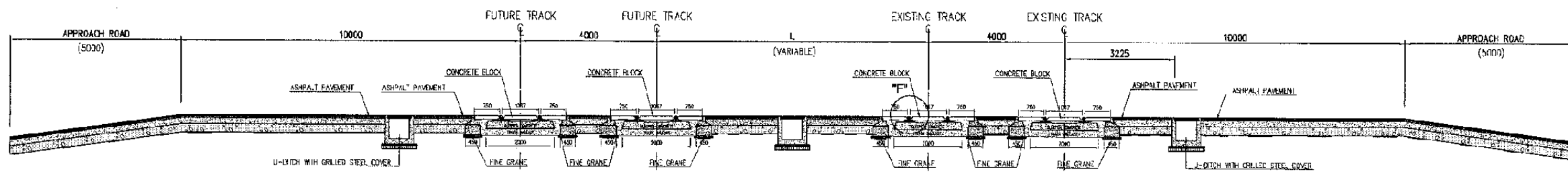
LEVEL CROSSING



PLAN
SCALE 1:75



SECTION A-A
SCALE 1:75



SECTION C-C
SCALE 1:75

The Railway Electrification and
Double - double Tracking of
Java Main Line Project



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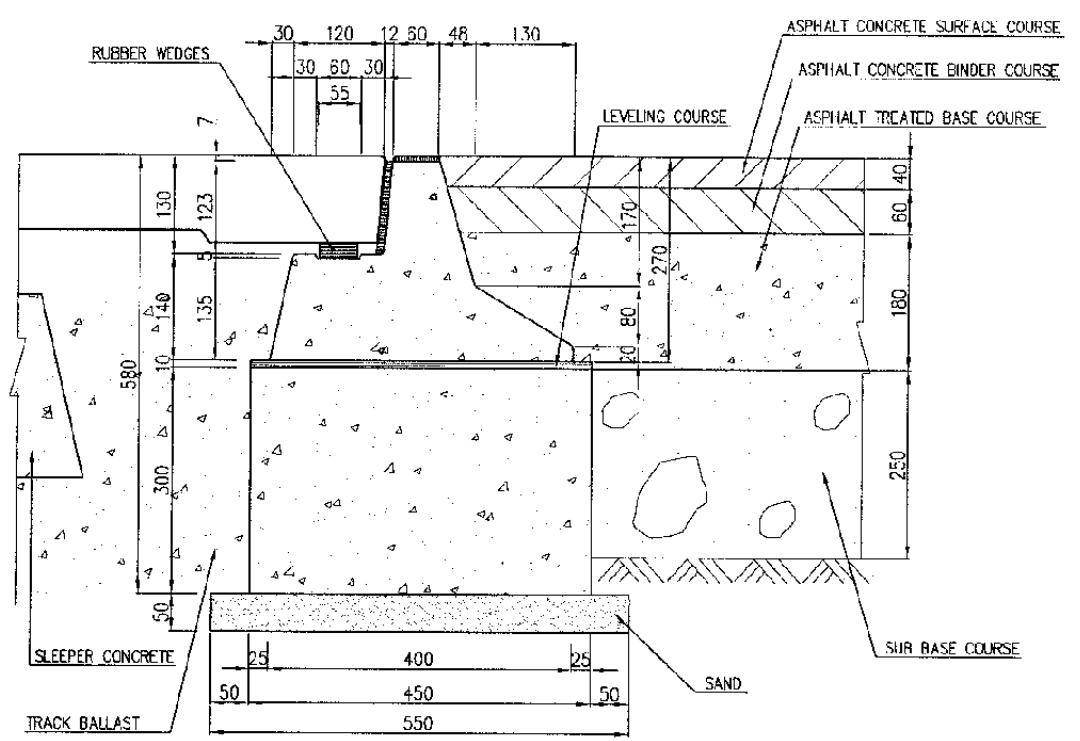
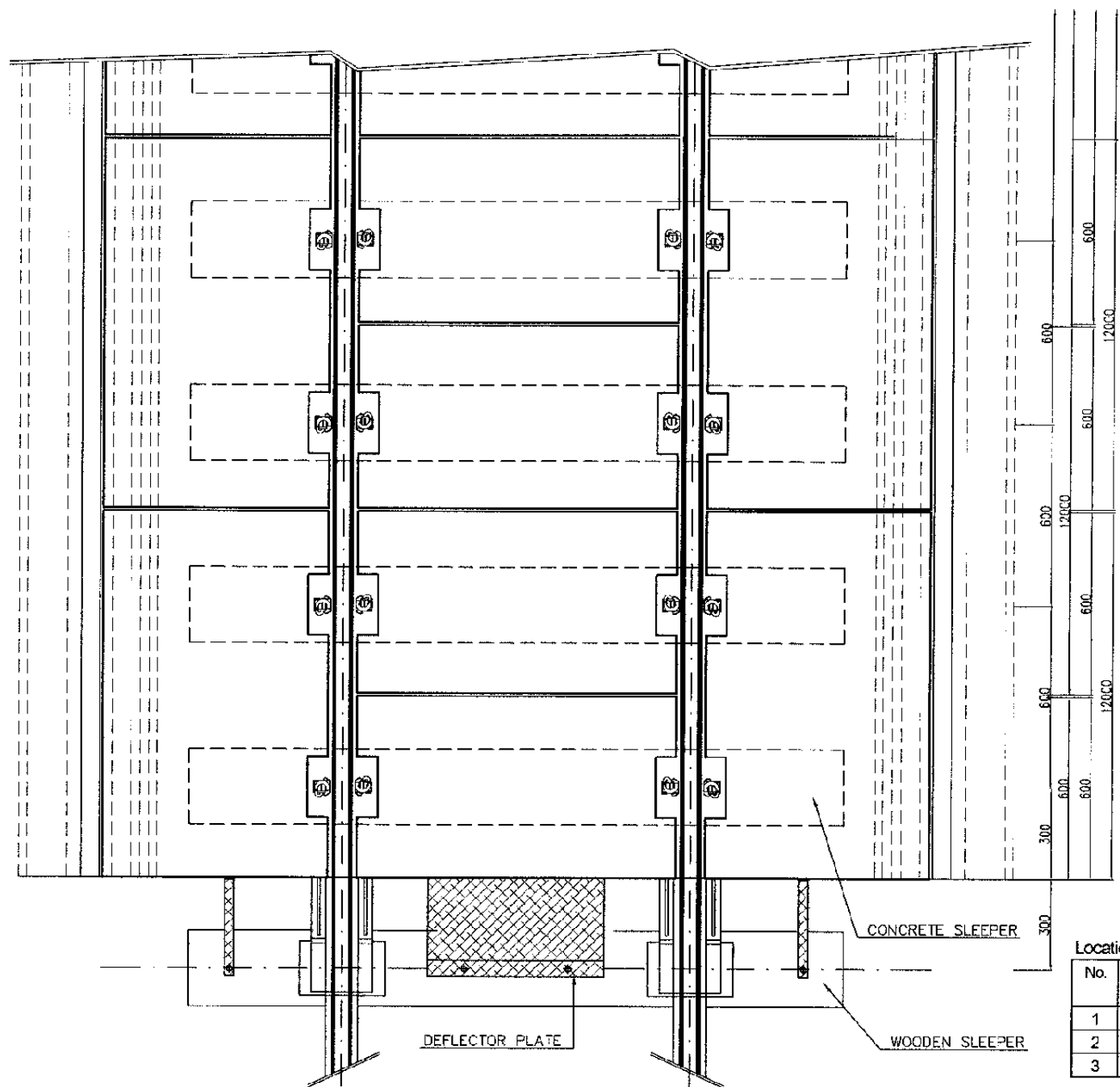
TRACK

LEVEL CROSSINGS

DATE 10 / MARCH / 2003

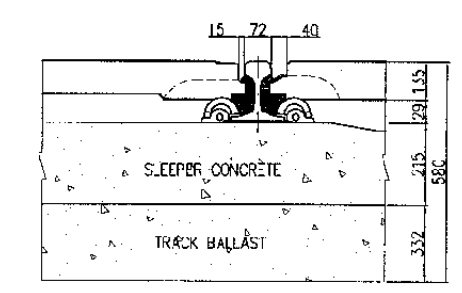
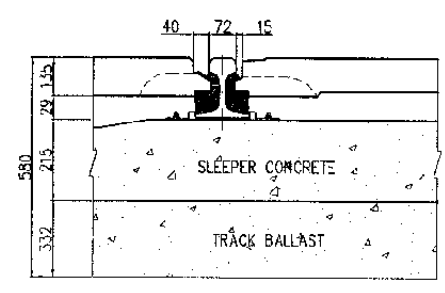
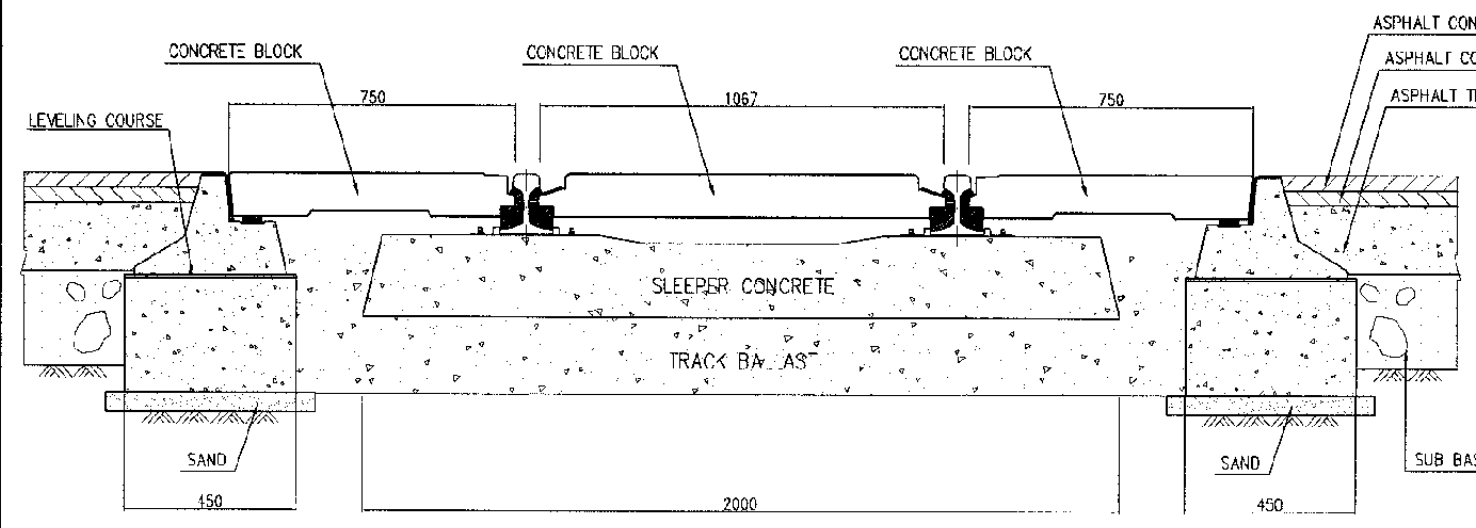
Drawing Title :
TYPICAL DRAWING OF LEVEL CROSSING
CONCRETE PANEL TYPE
FOR DOUBLE - DOUBLE TRACK

Scale: 1:75 Drawing No.: TR-02-002



Location of Execution:

No.	No. Of Level Crossing	Location	KM	Width (W) m	Length (L) m	Remarks
1	81	Jl.H.Agus Salim	Km 27+264	8.6	50.5	Existing Track + New Track
2	91	Jl. Setia Mekar (Indoporten)	Km 31+721	6.6	34.0	Existing Track
3	95	Jl.Mekar Sari	Km 33+450	9.7	46.0	Existing Track



The Railway Electrification and Double - double Tracking of Java Main Line Project



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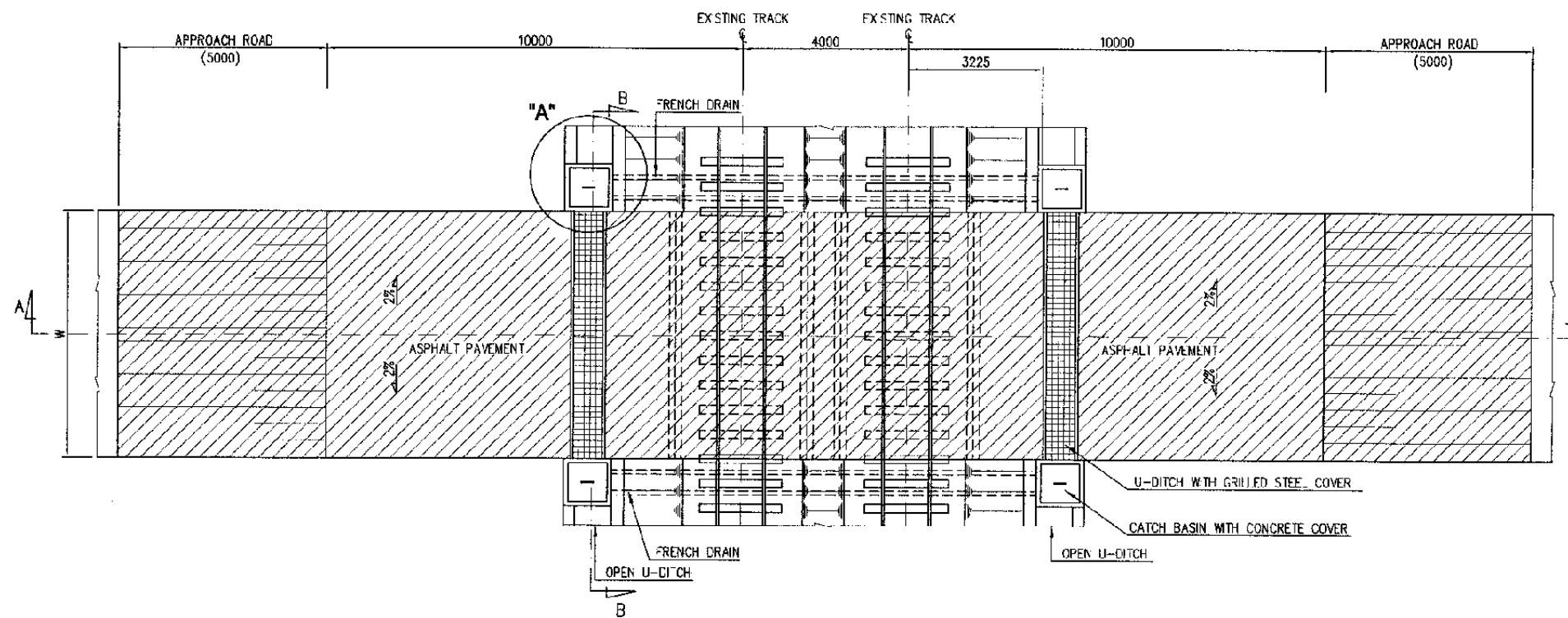
TRACK
LEVEL CROSSINGS

DATE 10 / MARCH / 2003

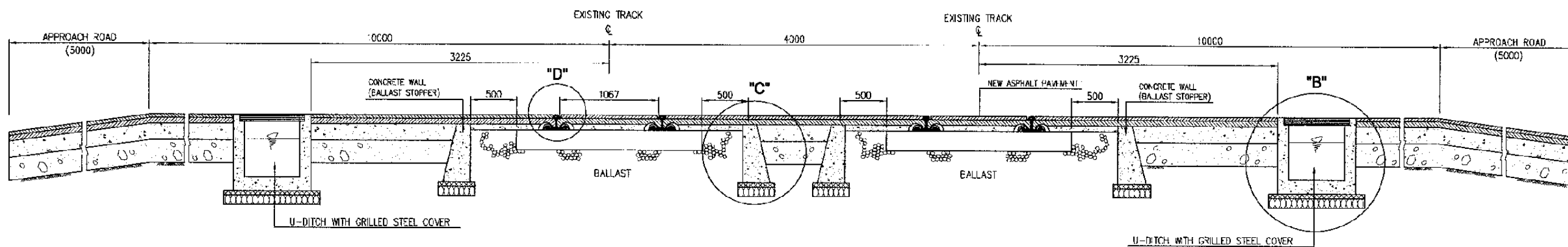
Drawing Title:
DETAIL OF LEVEL CROSSING CONCRETE PANEL TYPE

Scale: 1:10
1:5
Drawing No. TR - 02 - 003

LEVEL CROSSING



PLAN
SCALE 1:75



SECTION A-A
SCALE 1:25

The Railway Electrification and
Double - double Tracking of
Java Main Line Project



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TRACK

LEVEL CROSSINGS

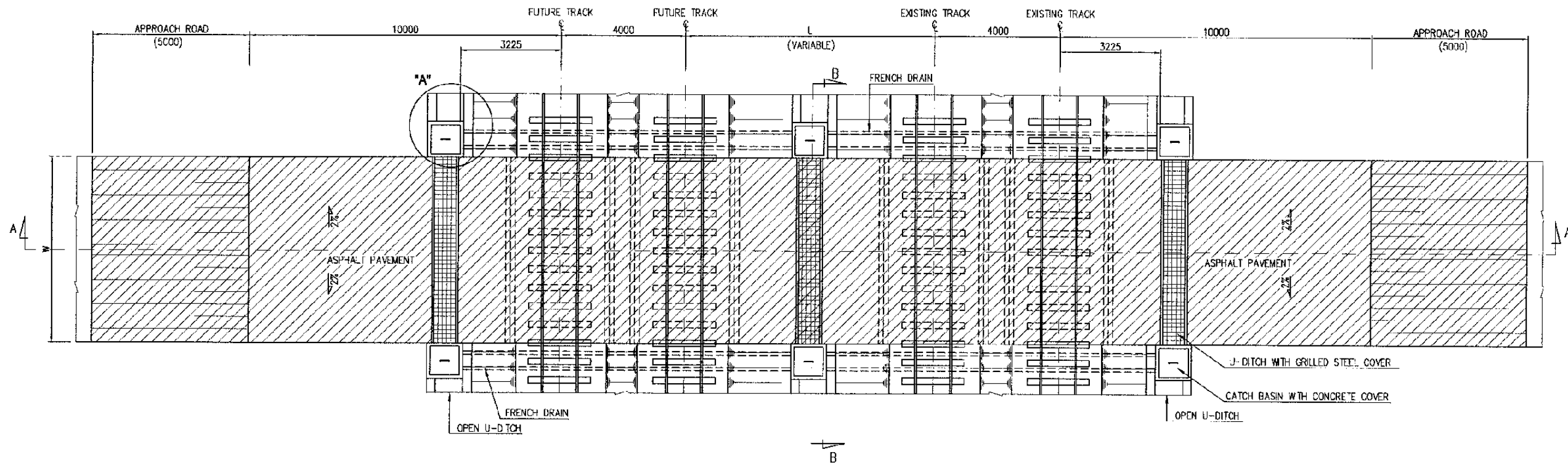
DATE 10 / MARCH / 2003

Drawing Title :

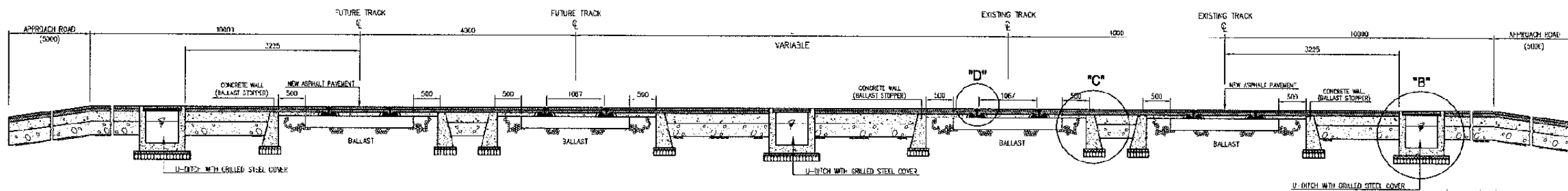
TYPICAL DRAWING OF LEVEL CROSSING
ASPHALT PAVEMENT TYPE FOR DOUBLE TRACK

Scale: 1:75
1:25
Drawing: TR - 02 - 004

LEVEL CROSSING



PLAN
SCALE 1:75



SECTION A-A
SCALE 1:45

The Railway Electrification and Double - double Tracking of Java Main Line Project



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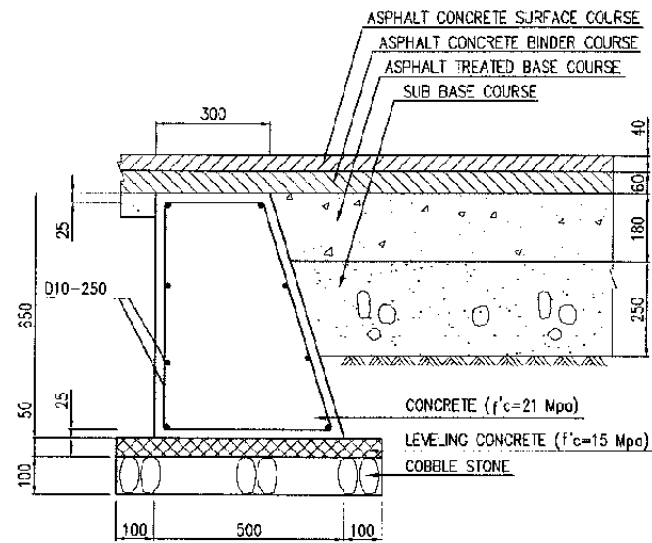
TRACK

LEVEL CROSSINGS

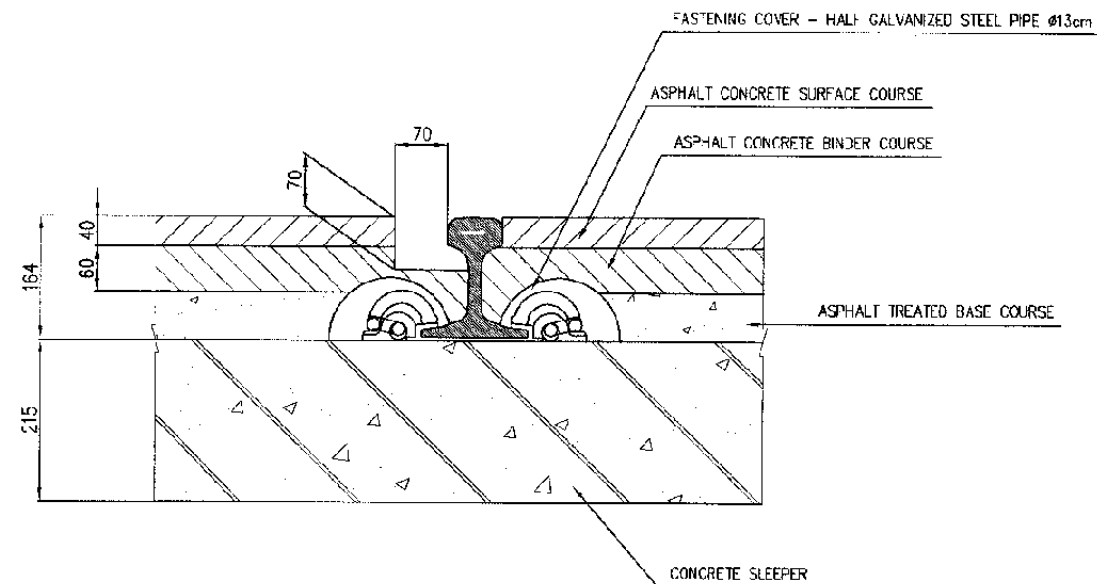
DATE 10 / MARCH / 2003

Drawing Title:
TYPICAL DRAWING OF LEVEL CROSSING ASPHALT PAVEMENT TYPE FOR DOUBLE-DOUBLE TRACK

Scale: 1:75 1:45
Drawing No: TR-02-005



DETAIL C
SCALE 1:10
BALLAST STOPPER



DETAIL D
SCALE 1:5
PAVEMENT ON RAIL

Location of Execution

No.	No. Of Level Crossing	Location	KM	Width (W) m	Length (L) m	Remarks
1	85A	Jl. Moh. Yamin	Km 28+725	7.0	35.1	Existing Track
2	86	Jl. Ampera	Km 29+281	6.3	34.0	Existing Track
3	87	Jl. Pahlawan (Grave Yard)	Km 29+745	6.4	34.0	Existing Track
4	99	Jl. Sasak III / Jl. Baru SKU	Km 34+986	5.7	34.0	Existing Track
5	101	Jl. Bosih (Ps. Ind-Cibitung)	Km 36+431	7.2	38.0	Existing Track
6	104	Jl. Telaga Asih (Cironggeng)	Km 38+471	4.7	34.0	Existing Track
7	109	Jl. Asmawi (Wangkal)	Km 42+867	4.7	49.6	Existing Track + New Track
8	110	Jl. Fudholi	Km 43+154	5.8	54.7	Existing Track + New Track
9	111	Jl. Gatot Subroto	Km 43+829	16.8	41.2	Existing Track + New Track

The Railway Electrification and Double - double Tracking of Java Main Line Project



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TRACK

LEVEL CROSSINGS

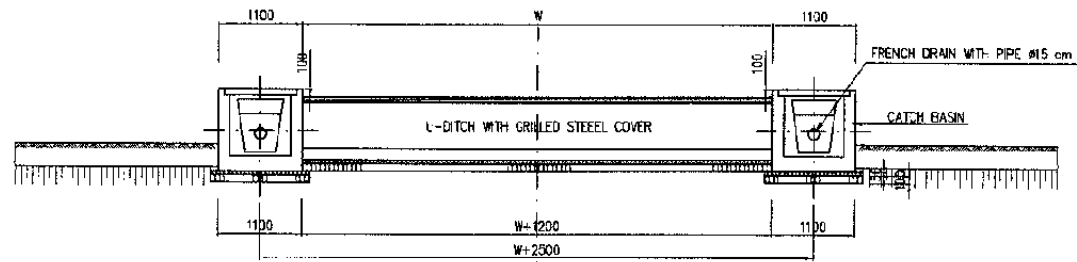
DATE 10 / MARCH / 2003

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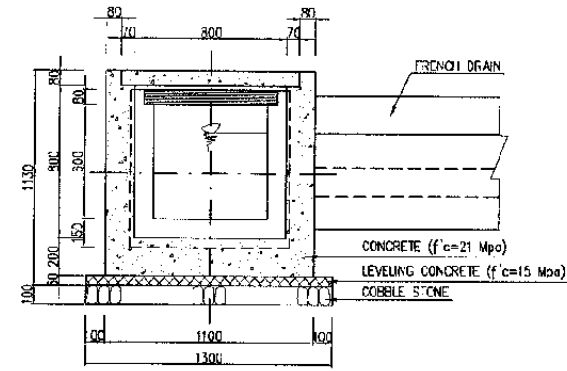
DETAIL OF LEVEL CROSSING
ASPHALT PAVEMENT TYPE

Scale:
1:10
1:5

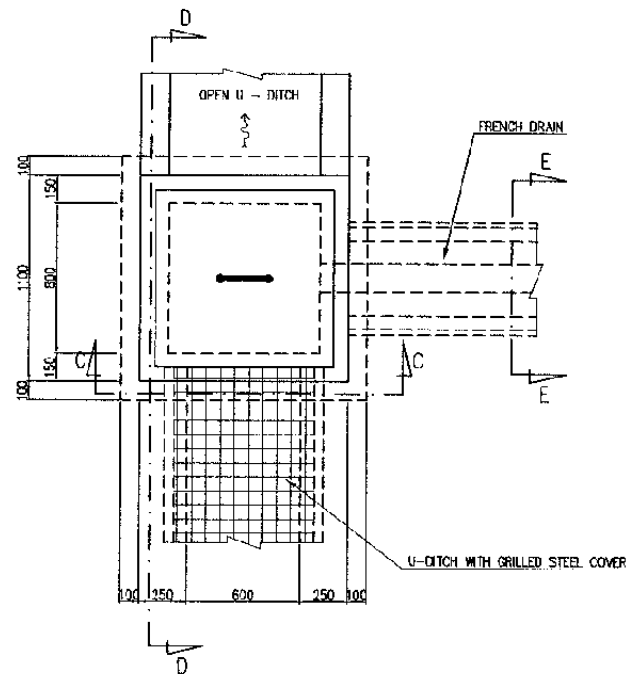
Drawing No.:
TR - 02 - 006



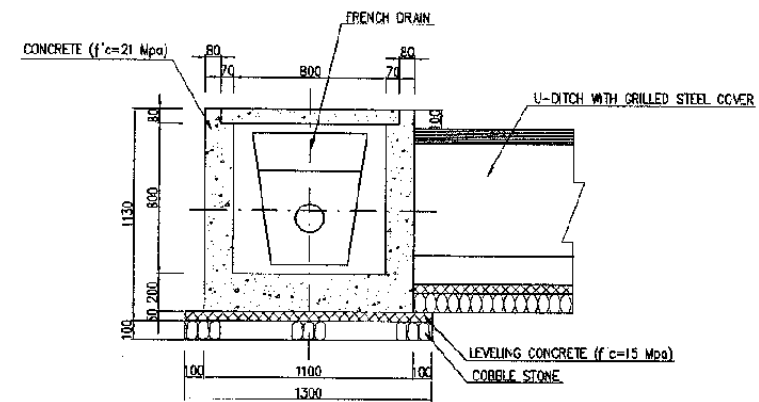
SECTION B-B
SCALE 1:50



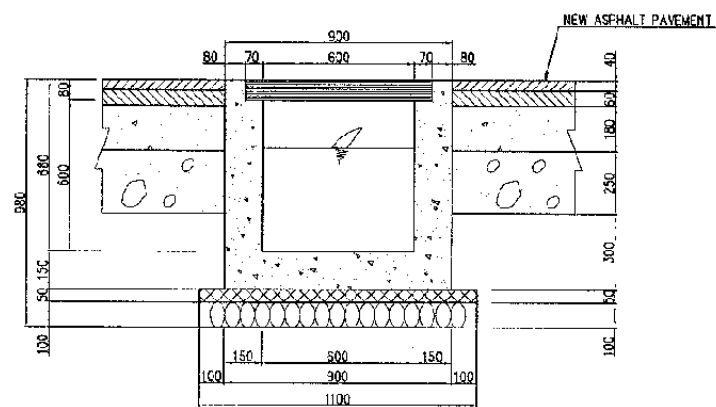
SECTION C-C
SCALE 1:20



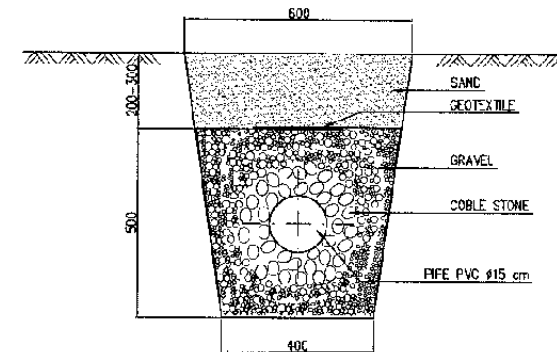
DETAIL A
SCALE 1:20
CATCH BASIN



SECTION D-D
SCALE 1:20



DETAIL B
SCALE 1:15
U-DITCH WITH GRILLED STEEL COVER



SECTION E-E
SCALE 1:10
FRENCH DRAIN

The Railway Electrification and
Double - double Tracking of
Java Main Line Project



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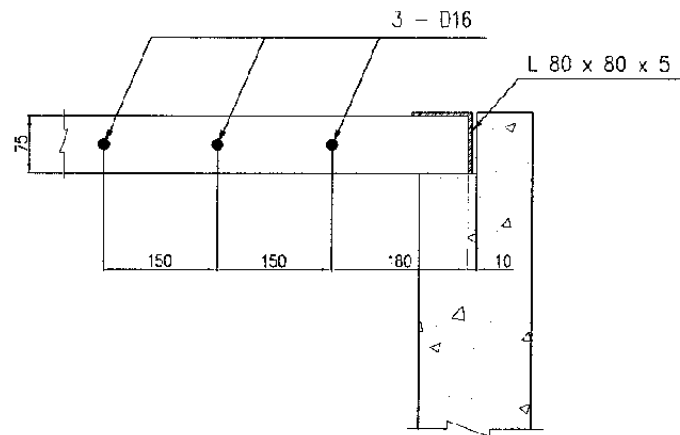
LEVEL CROSSINGS

DATE 10 / MARCH / 2003

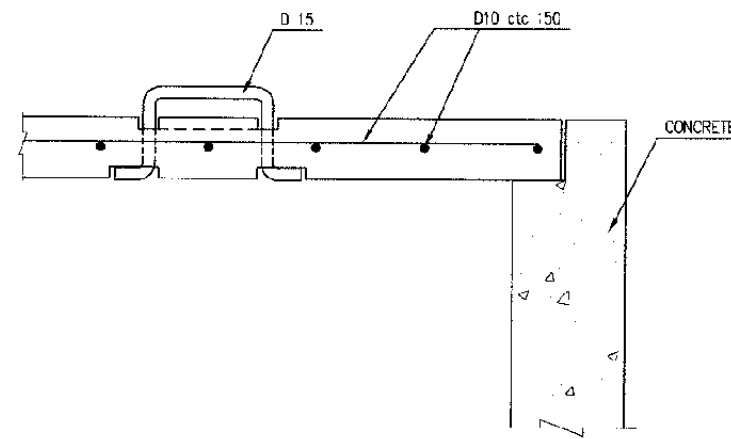
Drawing Title :

DETAIL OF
LEVEL CROSSING DRAINAGE

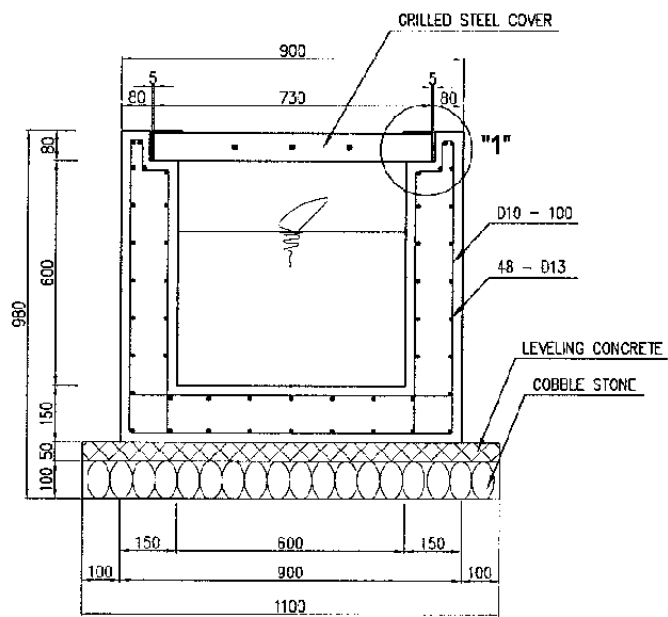
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1: 50/1: 20
1: 15/1: 10
Drawing No:
TR - 02 - 007



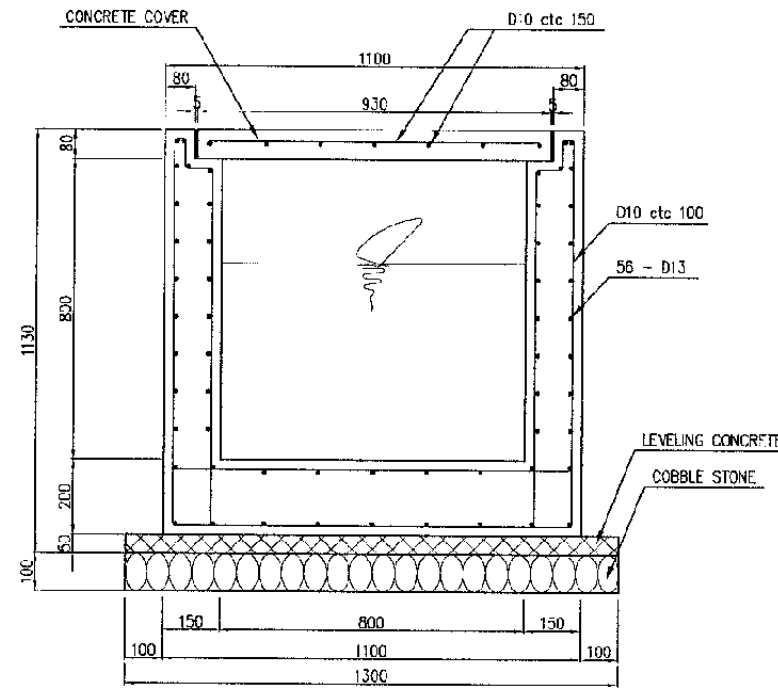
DETAIL 1
SCALE 1:5



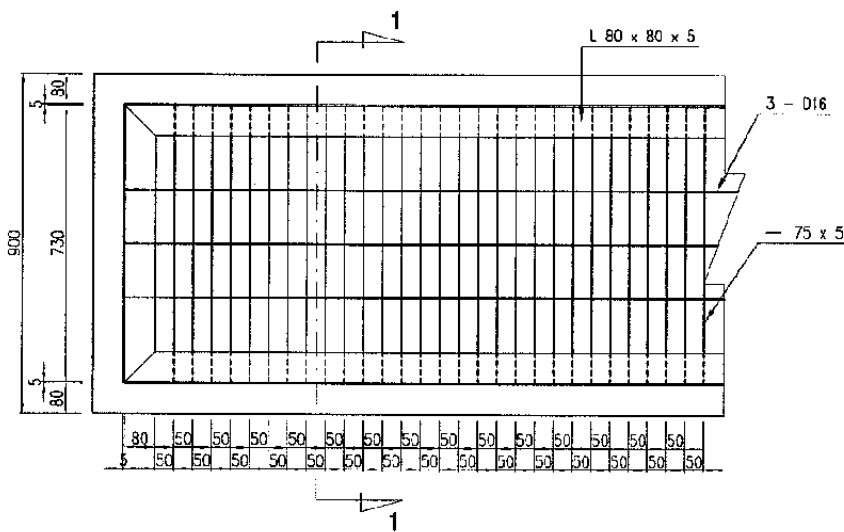
DETAIL 2
SCALE 1:5



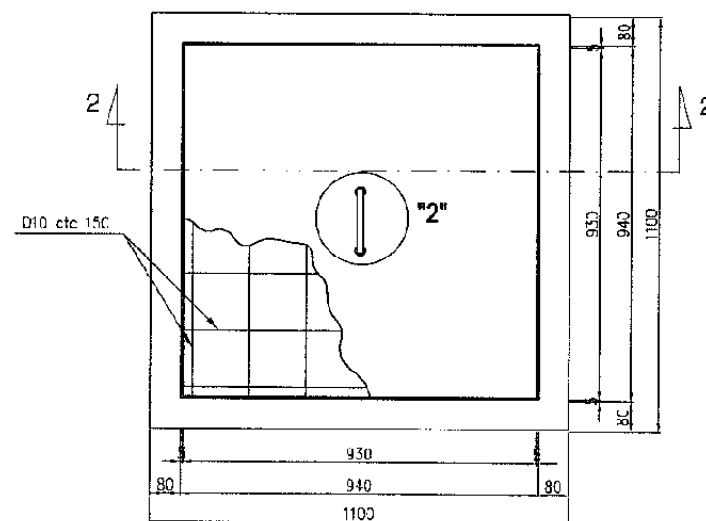
SECTION 1 - 1
SCALE 1:10



SECTION 2 - 2
SCALE 1:10



PLAN
SCALE 1:10
U-DITCH WITH GRILLED STEEL COVER



PLAN
SCALE 1:10
CATCH BASIN

The Railway Electrification and
Double - double Tracking of
Java Main Line Project



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TRACK

LEVEL CROSSINGS

DATE 10 / MARCH / 2003

Drawing Title :

DETAIL OF CATCH BASIN
AND U-DITCH

Scale:
1 : 5
1 : 10
Drawing No.:
TR - 02 - 008