

G.T.S. DATUM LEVEL

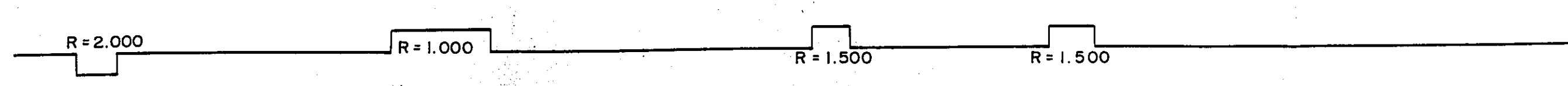
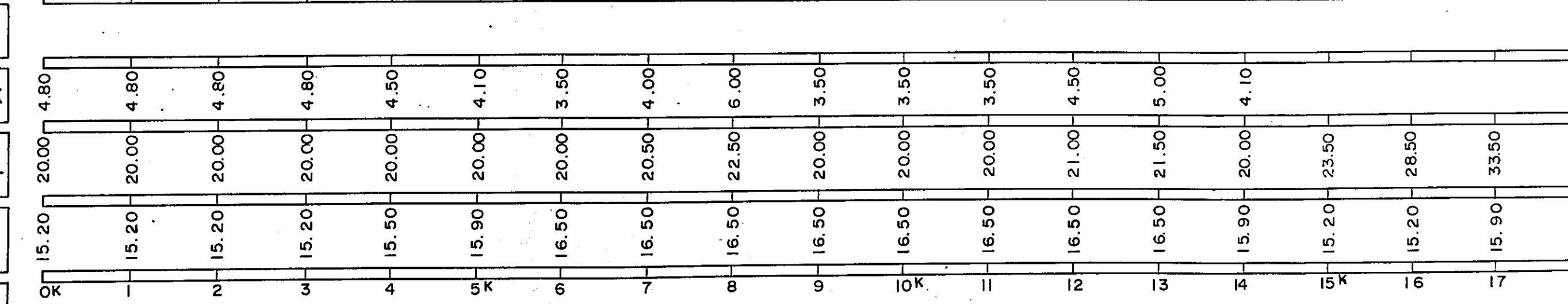
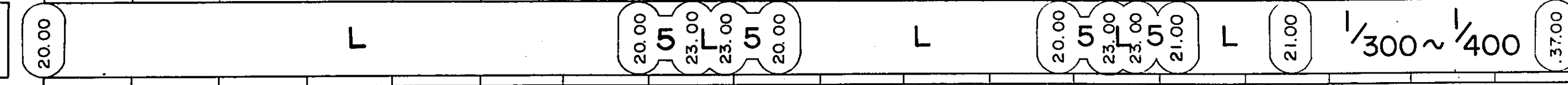
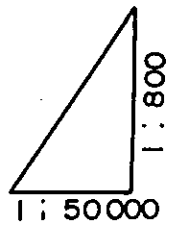
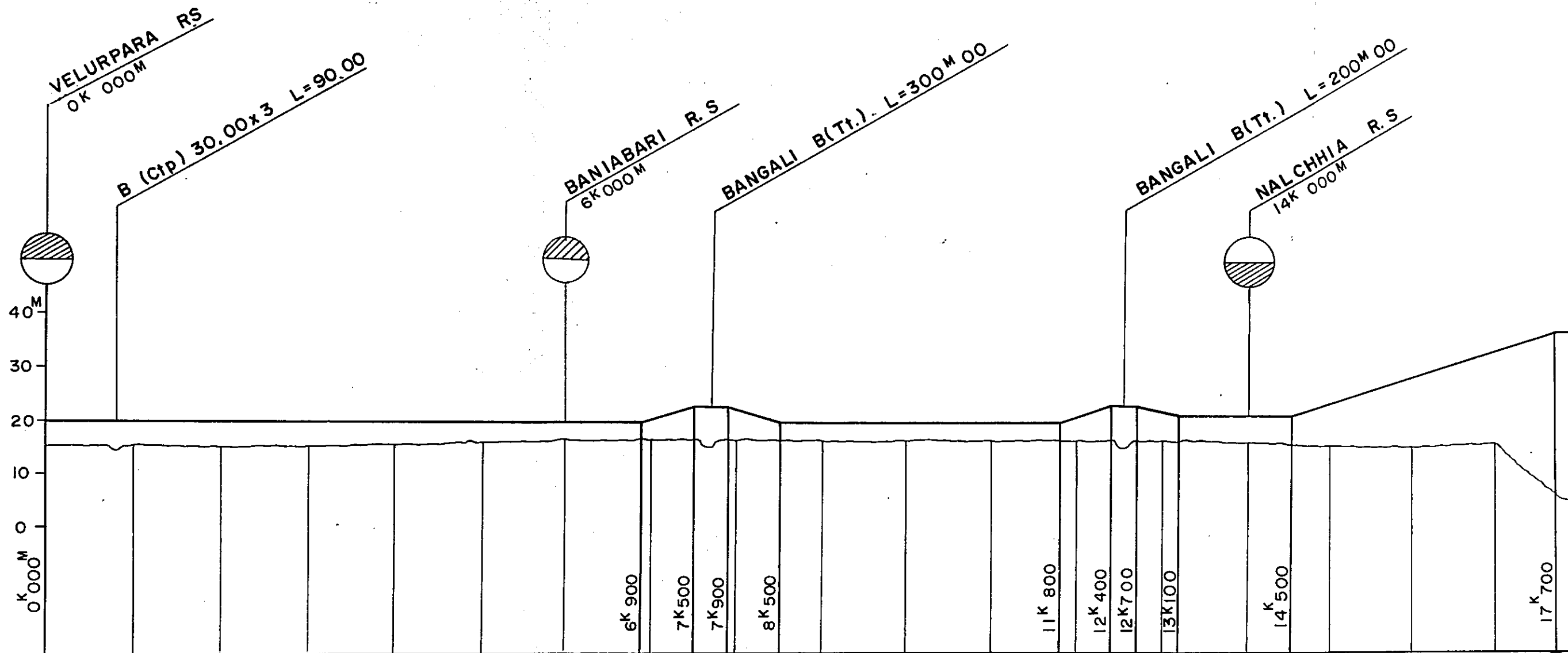
JAPAN INTERNATIONAL COOPERATION AGENCY	
PEOPLE'S REPUBLIC OF BANGLADESH	
JAMUNA RIVER BRIDGE PROJECT NO.4 SITE (NAGARBARI)	
RAILWAY HORIZONTAL ALIGNMENT SCALE 1/50 000	
Drawn	Date
Approved	Date
PACIFIC CONSULTANTS INTERNATIONAL	Fig 8

APPENDIX "4"

RAILWAY VERTICAL ALIGNMENT

ROUTES FOR NO. 1, NO. 2, NO. 3 AND NO. 4

(Figures)



- GRADES
- HEIGHT OF BANK
- FORMATION LEVEL
- GROUND LEVEL
- K. METER AGE
- CURVES

JAMUNA RIVER B
19K 900M

RAIAPUR R.S
26K 000M

B (Ctp) 30M00x3 L=90M00

B (Csb) L=40M00

B (Ctp) 30M00x3 L=90M00

R.C (NEW)

H.W.L. = 20.40

17' 700

22' 100

25' 300

37.00

37.00

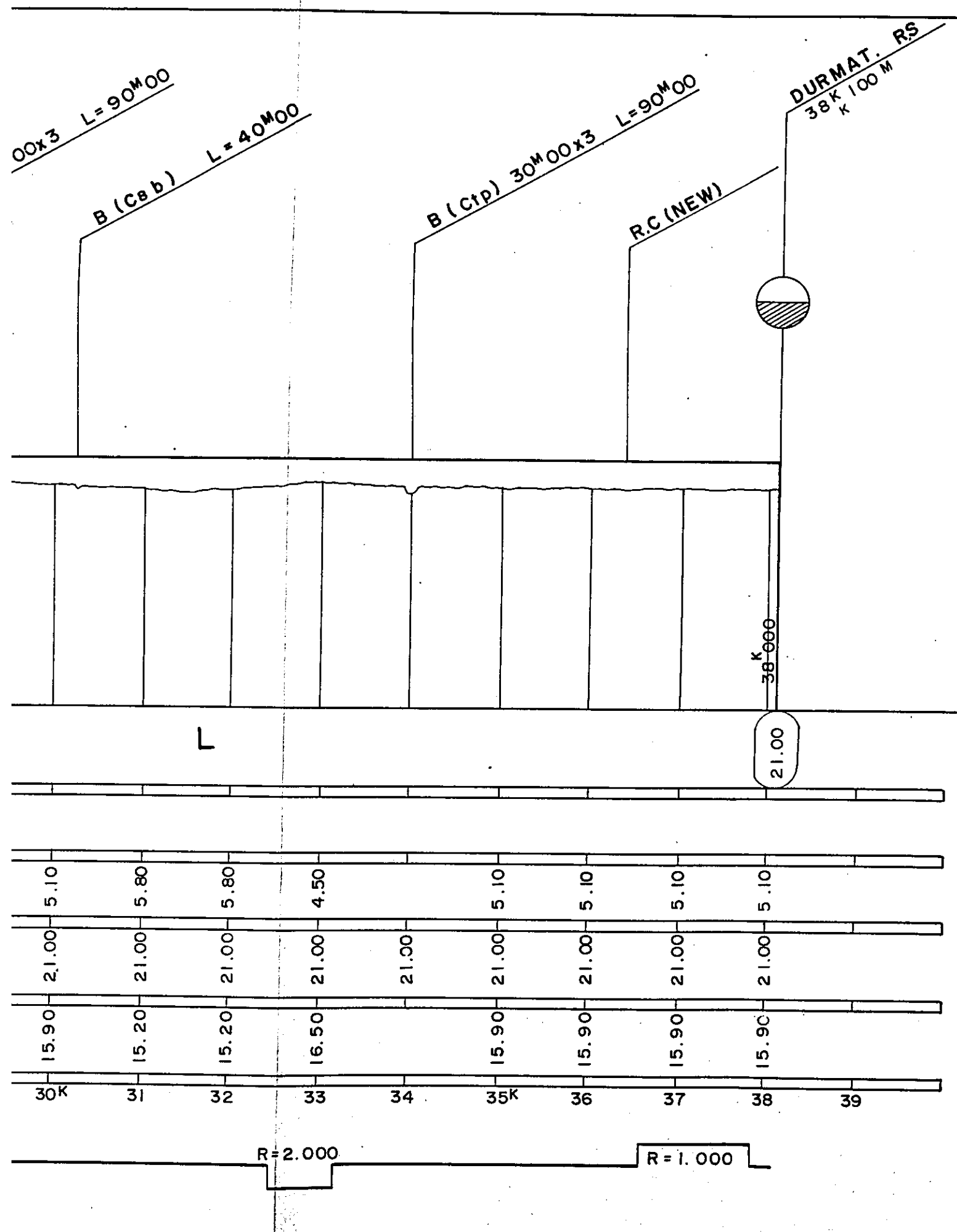
21.00

$\frac{1}{300} \sim \frac{1}{400}$

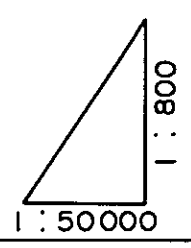
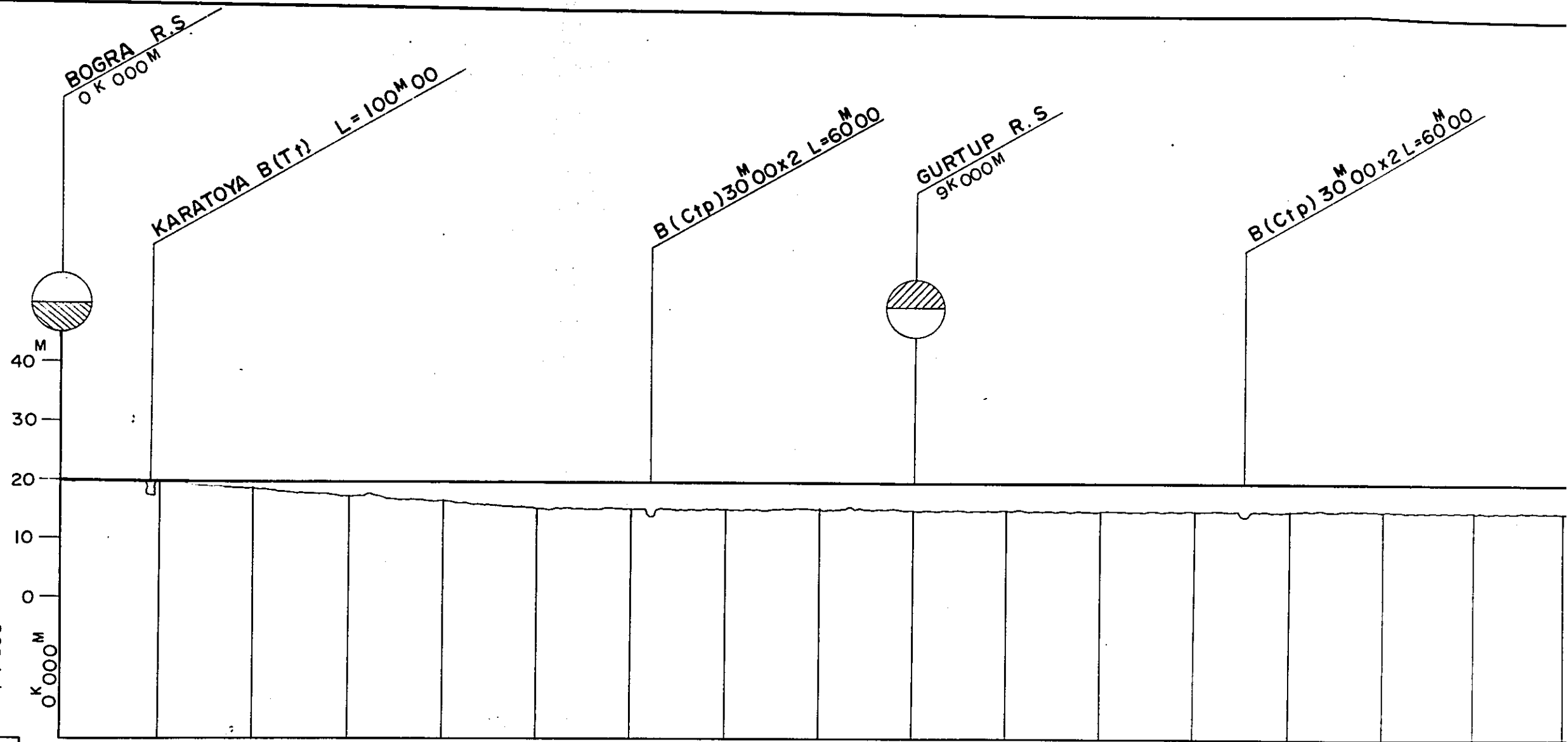
4.50	4.50	4.50	4.50	5.10	5.80	5.80	4.50	5.10	5.10	5.10									
37.00	37.00	37.00	37.00	37.00	32.50	27.50	21.50	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00	
15.90	16.50	16.50	16.50	16.50	16.50	16.50	16.50	15.90	15.20	15.20	16.50	15.90	15.90	15.90	15.90				
18	19	20K	21	22	23	24	25K	26	27	28	29	30K	31	32	33	34	35K	36	37

R=2.000

R=1.000

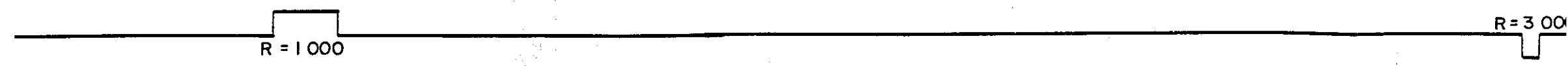


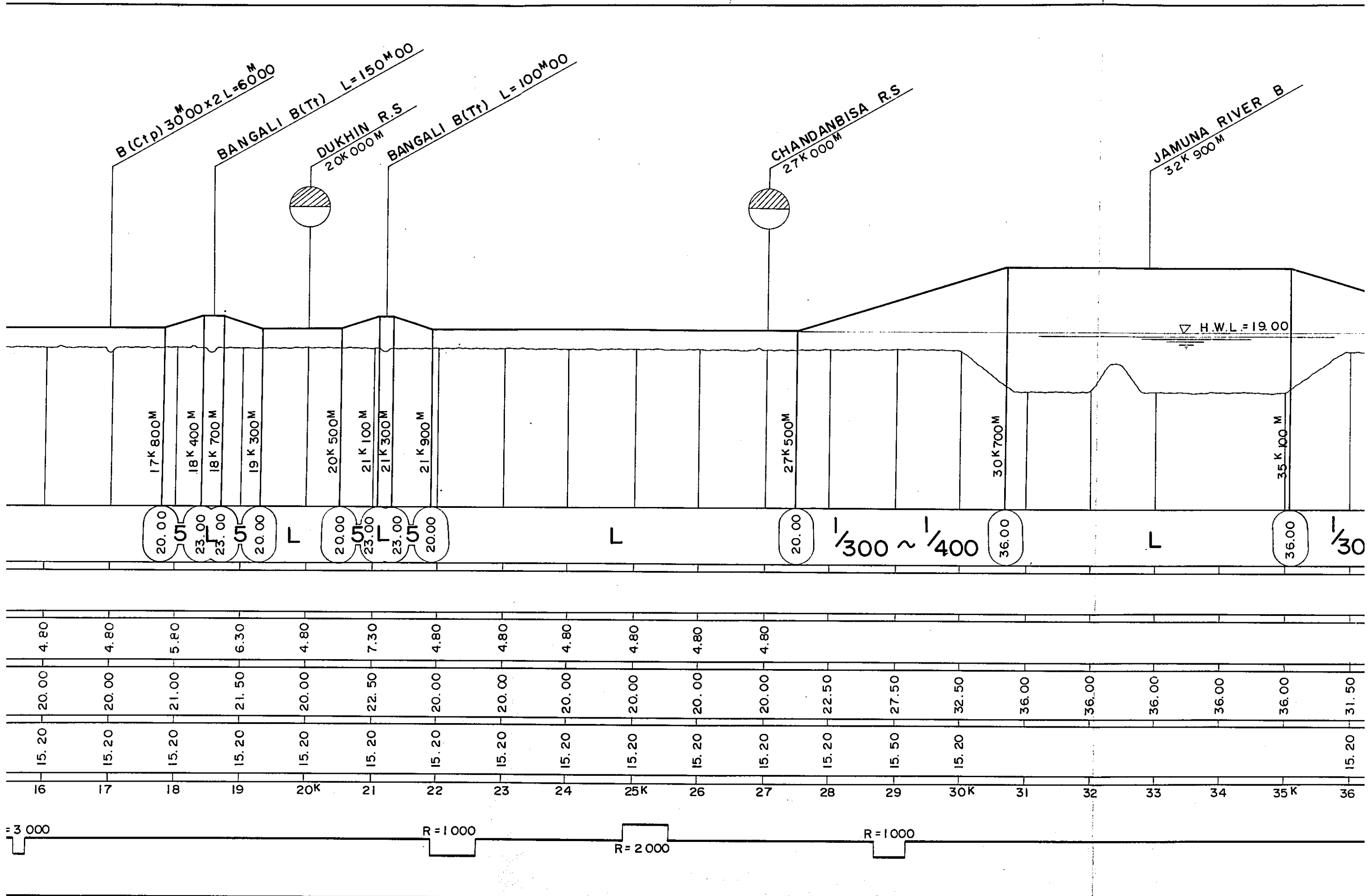
G.T.S. DATUM LEVEL	
JAPAN INTERNATIONAL COOPERATION AGENCY	
PEOPLE'S REPUBLIC OF BANGLADESH	
JAMUNA RIVER BRIDGE PROJECT NO.1 SITE (BAHADRABAD) RAILWAY VERTICAL ALIGNMENT SCALE HOR : 1/50000 VER : 1/800	
Drawn	Date
Approved	Date
PACIFIC CONSULTANTS INTERNATIONAL	Fig 9

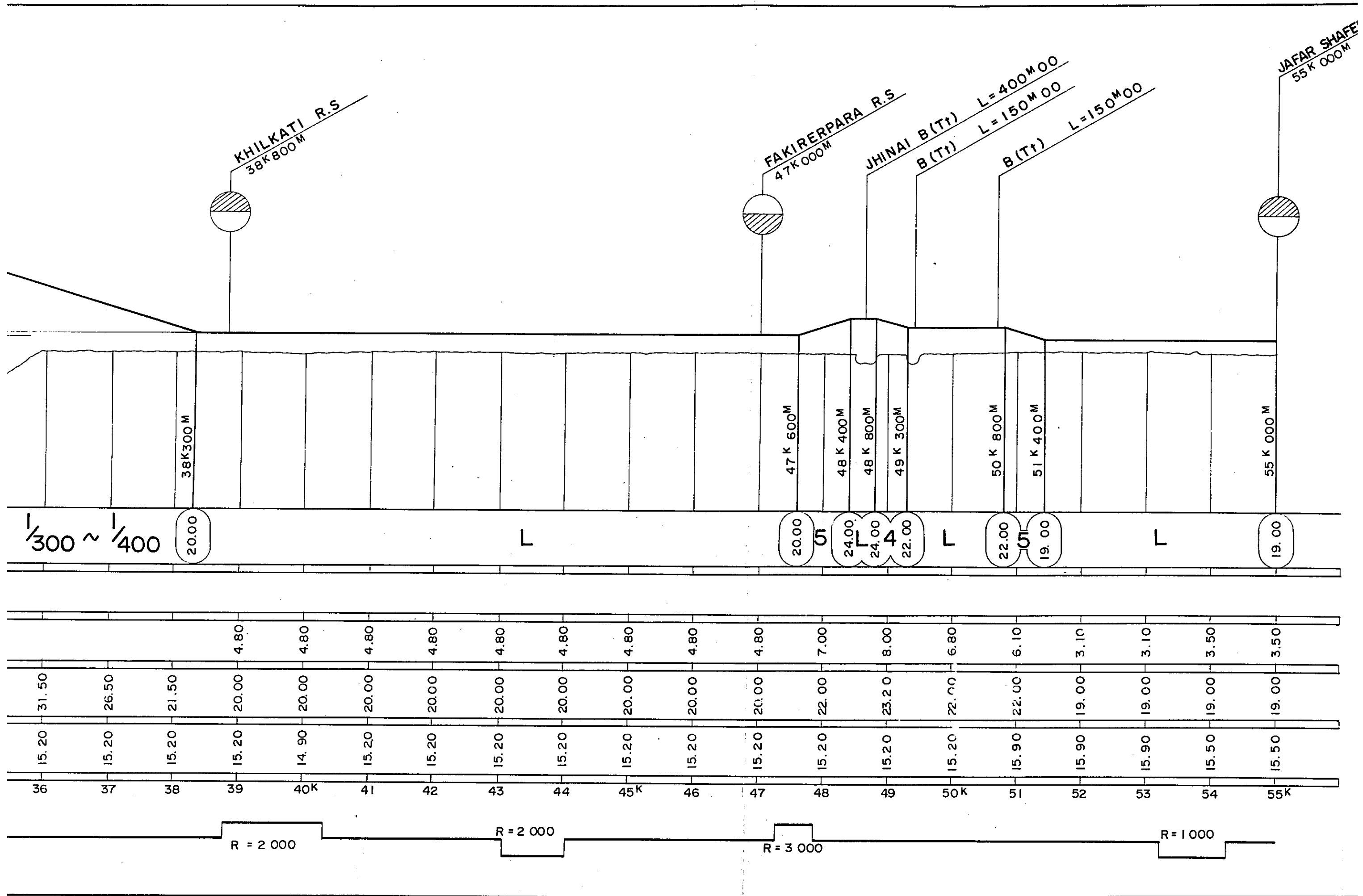


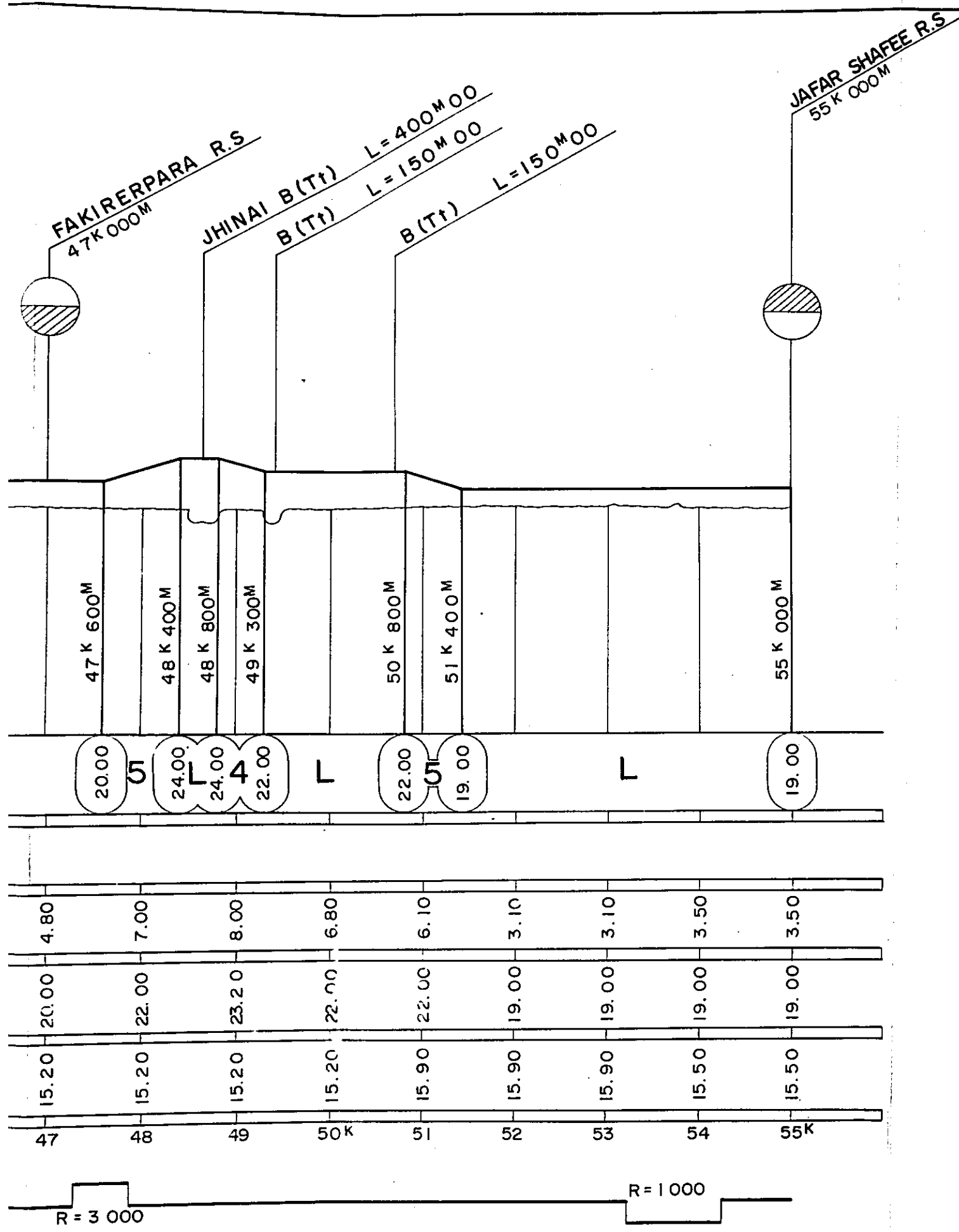
GRADES
HEIGHT OF BANK
FORMATION LEVEL
GROUND LEVEL
K. METER AGE
CURVES

20.00																			
20.00	0.20	0.40	2.60	3.60	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80	5.10	4.80			
20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00
19.80	19.80	18.60	17.40	16.40	15.20	15.20	15.20	15.20	15.20	15.20	15.20	15.20	15.20	15.20	14.90	15.20			
OK	1	2	3	4	5K	6	7	8	9	10K	11	12	13	14	15K	16			



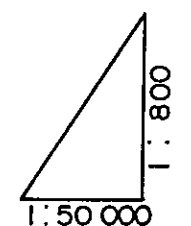
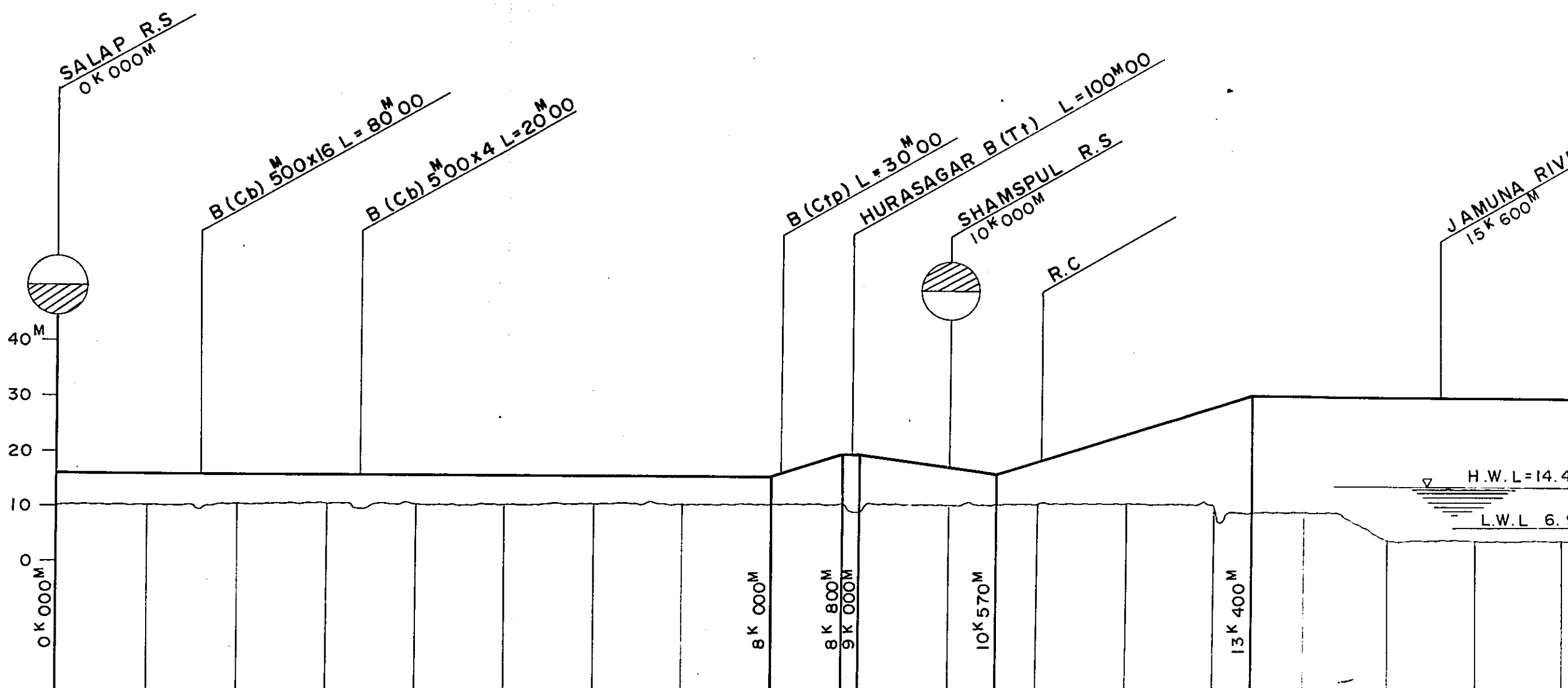




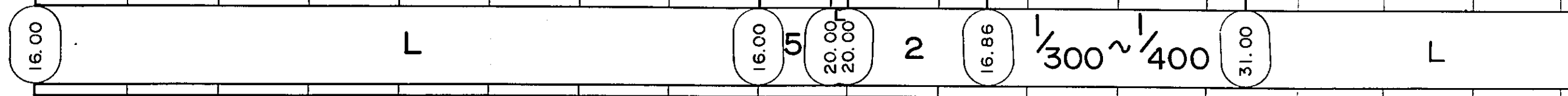


G.T.S. DATUM LEVEL

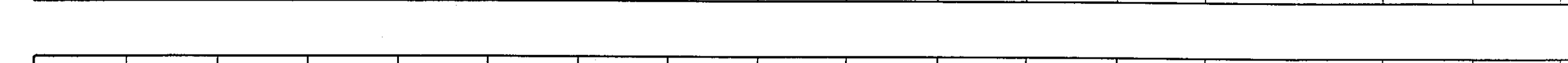
JAPAN INTERNATIONAL COOPERATION AGENCY	
PEOPLE'S REPUBLIC OF BANGLADESH	
JAMUNA RIVER BRIDGE PROJECT NO. 2 SITE (GABARGAON) RAILWAY VERTICAL ALIGNMENT SCALE HOR : 1/50 000 VER : 1/800	
Drawn	Date
Approved	Date
PACIFIC CONSULTANTS INTERNATIONAL	Fig 10



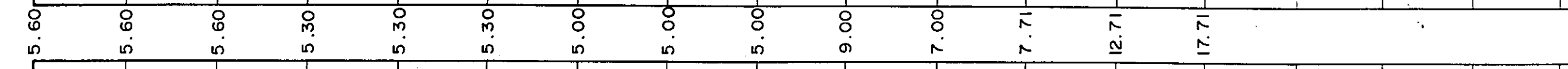
GRADES



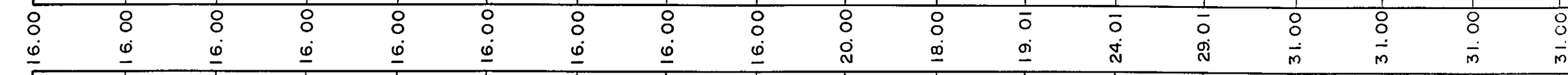
HEIGHT OF BANK



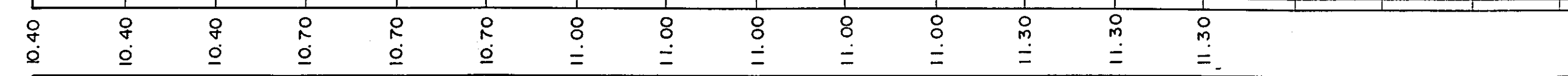
FORMATION LEVEL



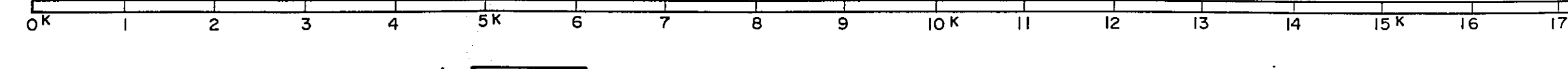
GROUND LEVEL



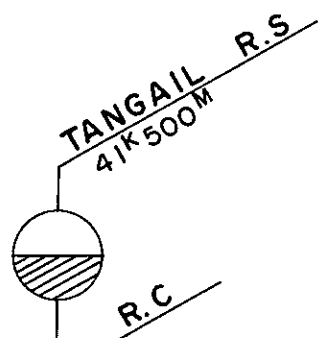
K. METER AGE



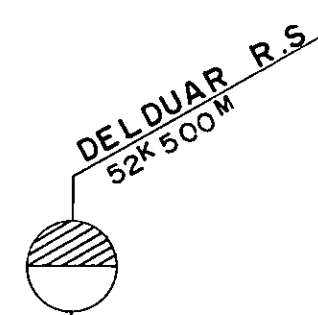
CURVES



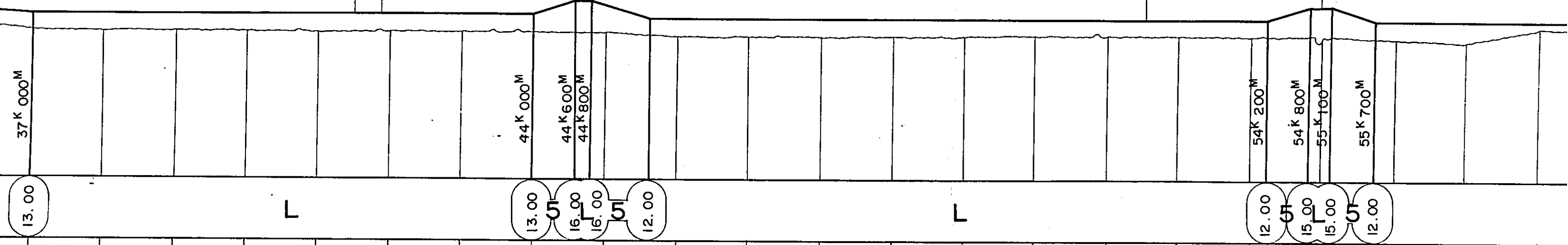
3000



LOHAJANG B(Tt) L=100M 00

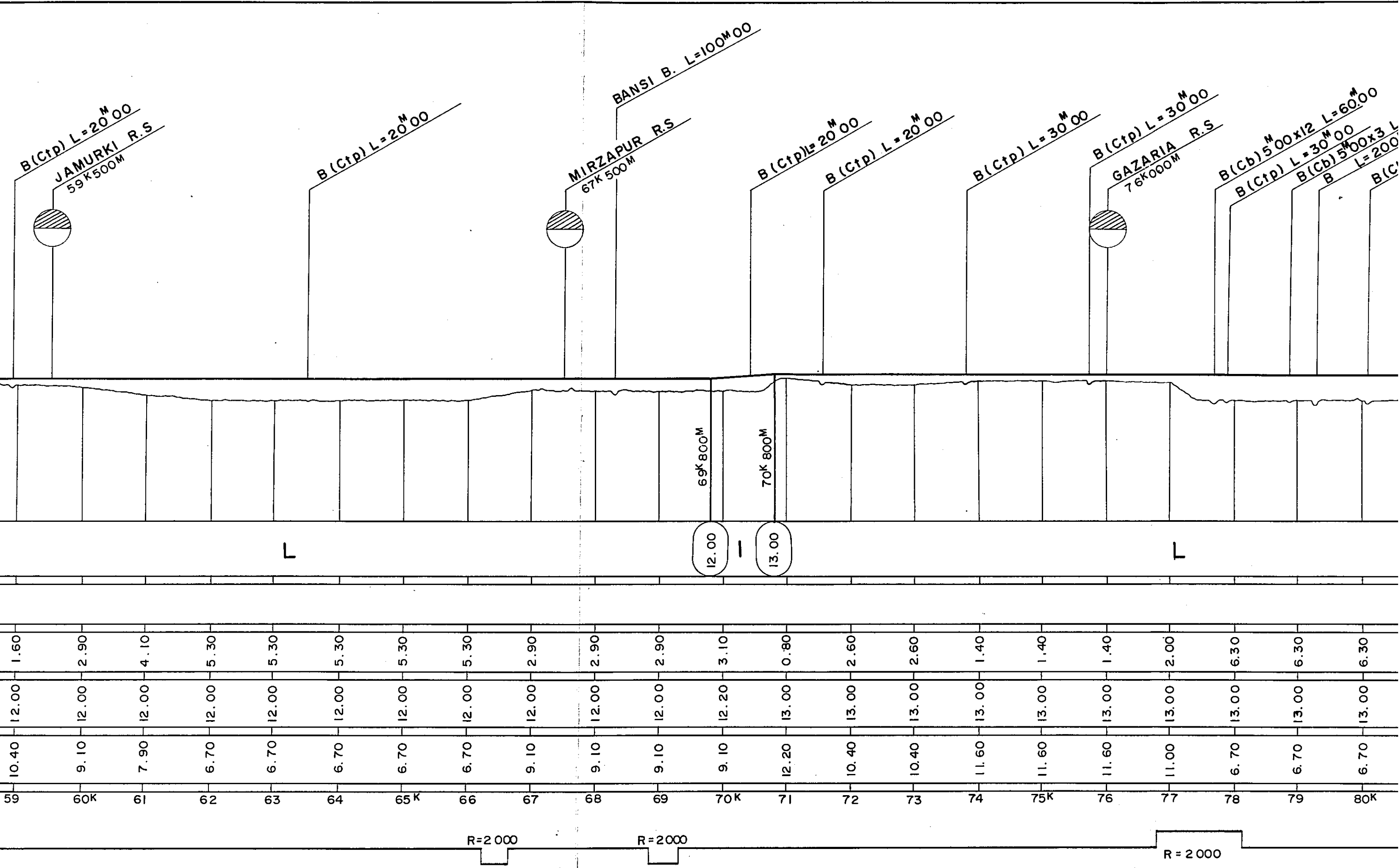


FUTJANI B(Tt) L=200M 00



37	38	39	40K	41	42	43	44	45K	46	47	48	49	50K	51	52	53	54	55K	56	57	58
9.10	9.10	9.10	9.10	9.10	9.10	9.10	9.10	9.10	8.20	8.20	8.20	8.20	8.20	8.50	8.50	8.50	8.50	8.50	7.90	7.30	10.40
13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	16.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	15.00	12.00	12.00	12.00
3.90	3.90	3.90	3.90	3.90	3.90	3.90	3.90	6.90	3.80	3.80	3.80	3.80	3.80	3.50	3.50	3.50	3.50	3.50	4.10	4.70	1.60



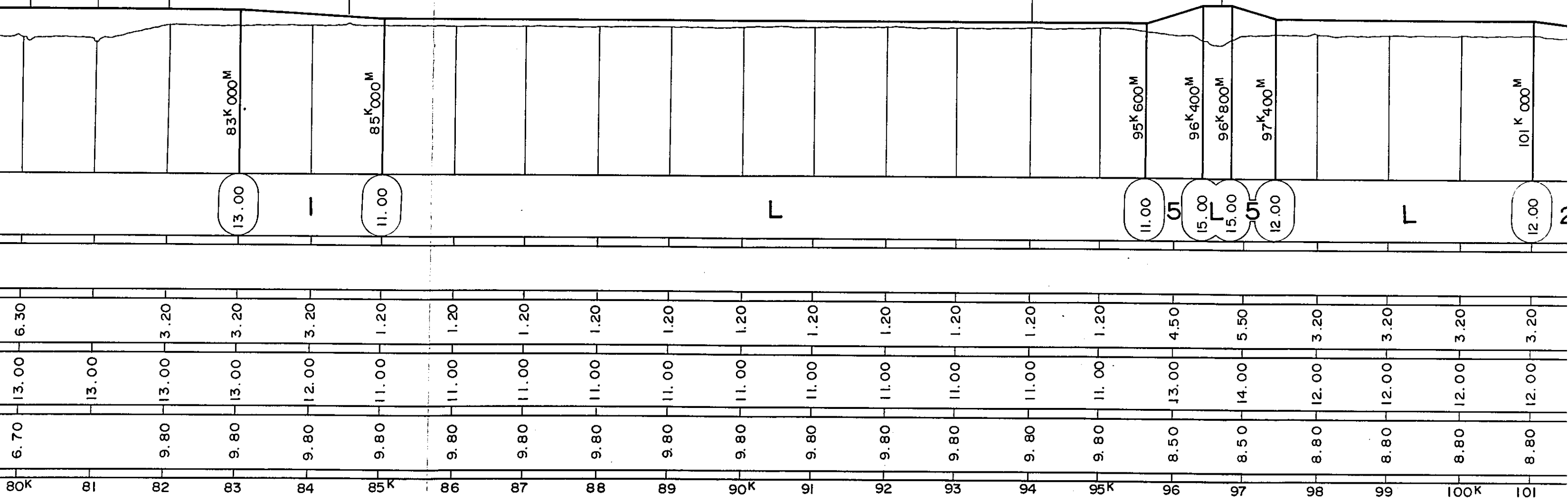


60.00
500x3 L=15.00
L=200.00
B(Cb) 500x12 L=60.00
B(Cfp) 300x2 L=60.00
KALIAKAIR R.S
82'000M

R.C

BAIMAT R.S
94'000M

TURAG B(TI) 600x5 L=300.00



83'000M
13.00

85'000M
11.00

95'600M
11.00

96'400M
15.00

96'800M
15.00

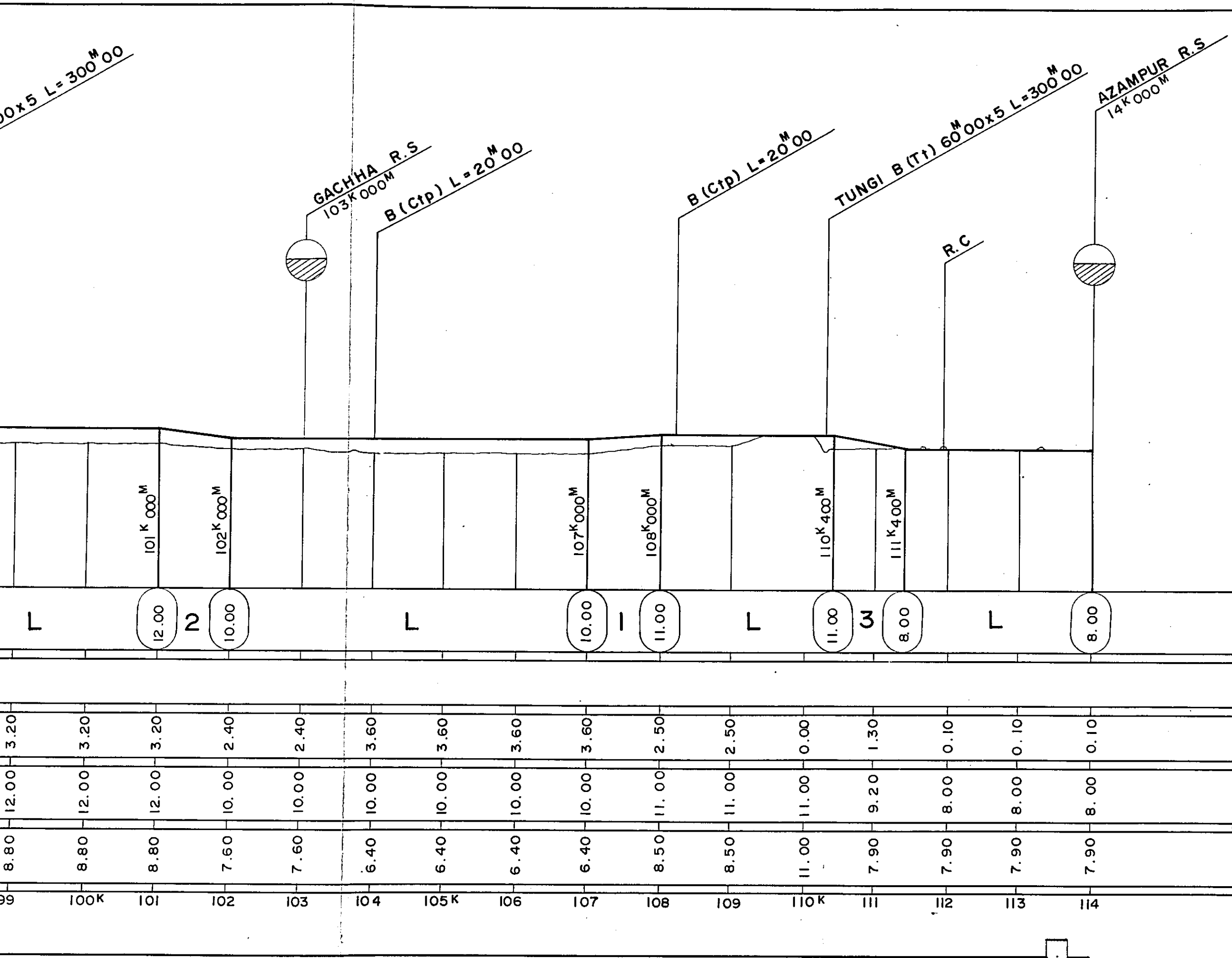
97'400M
12.00

101'000M
12.00

R = 2 000

R = 2 000

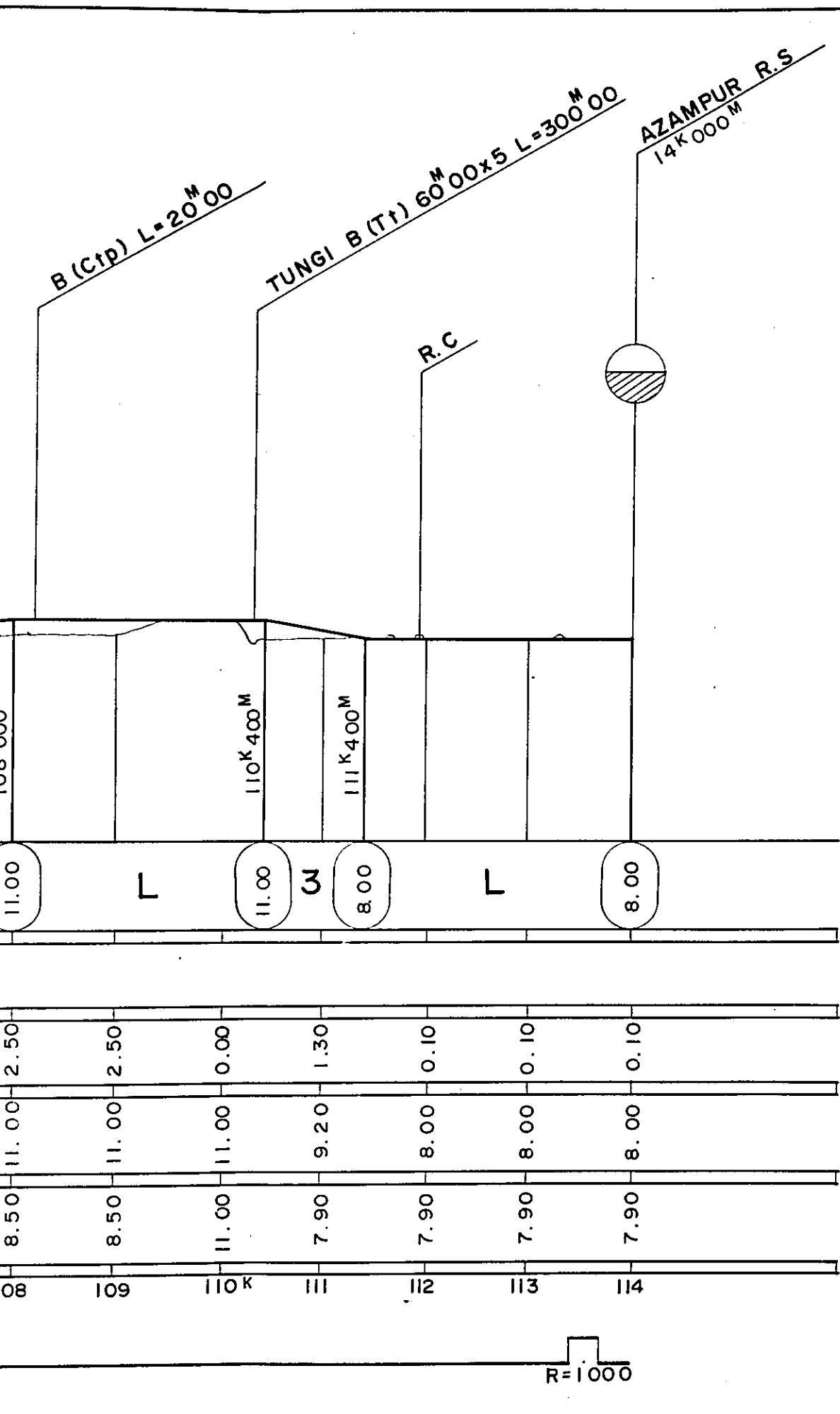
R = 2 000



99	100K	101	102	103	104	105K	106	107	108	109	110K	111	112	113	114
8.80	8.80	8.80	7.60	7.60	6.40	6.40	6.40	6.40	6.40	8.50	8.50	11.00	7.90	7.90	7.90
12.00	12.00	12.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	11.00	11.00	9.20	8.00	8.00	8.00
3.20	3.20	3.20	2.40	2.40	3.60	3.60	3.60	3.60	3.60	2.50	2.50	0.00	1.30	0.10	0.10

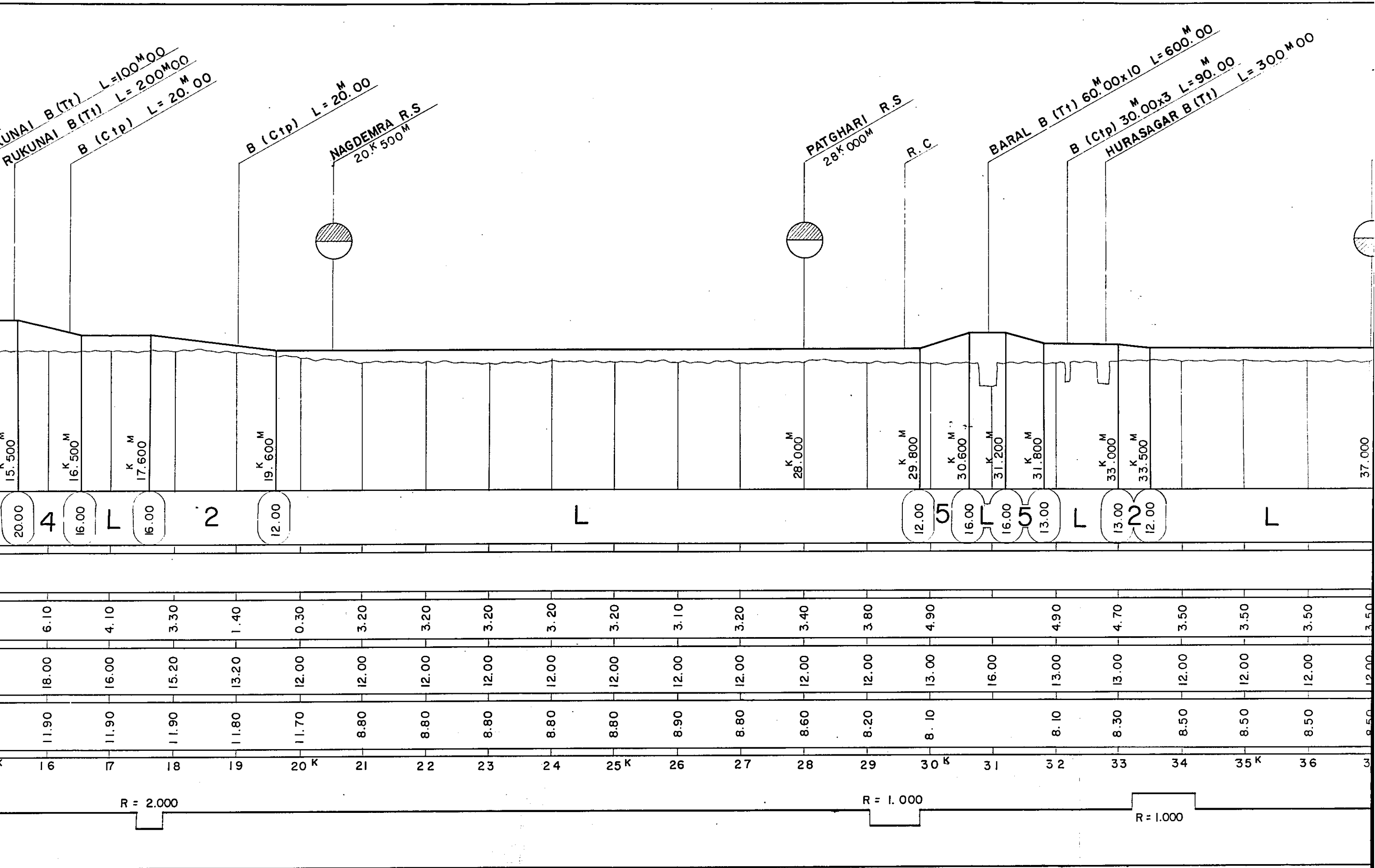
R=1000

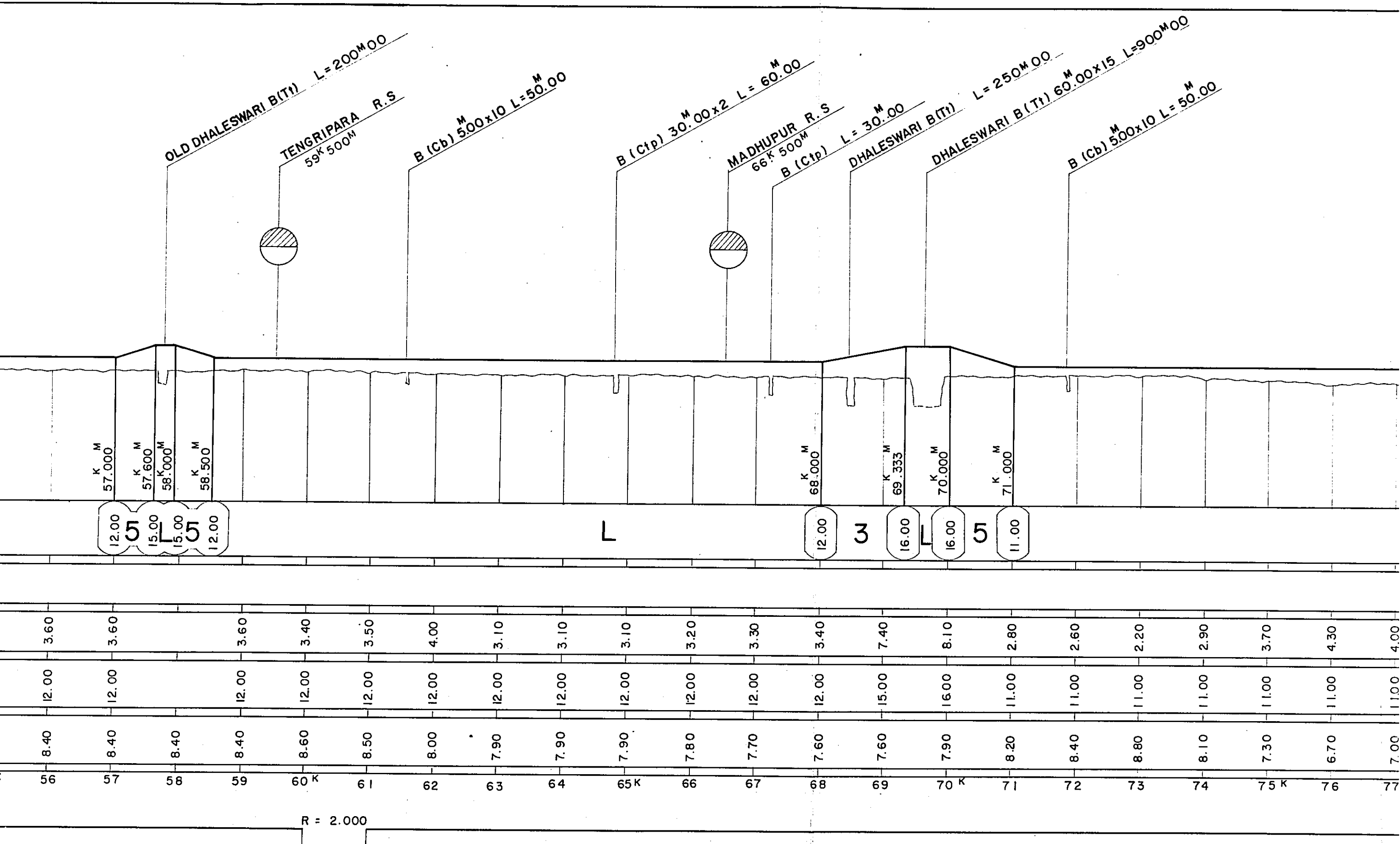
G.T.S. DATUM L
JAPAN INTERNATIONAL
PEOPLE'S REPUBLIC OF CHINA
JAMUNA RIVER BRIDGE
NO. 3 SITE
RAILWAY VERIFICATION
SCALE HOR : 1:1000
Drawn
Approved
PACIFIC CONSULTANTS



G.T.S. DATUM LEVEL

JAPAN INTERNATIONAL COOPERATION AGENCY	
PEOPLES REPUBLIC OF BANGLADESH	
JAMUNA RIVER BRIDGE PROJECT NO.3 SITE (SIRAJGANJ) RAILWAY VERTICAL ALIGNMENT SCALE HOR : 1/50000 VER : 1/800	
Drawn	Date
Approved	Date
PACIFIC CONSULTANTS INTERNATIONAL	Fig II





OLD DHALESWARI B(T)^M L=200M⁰⁰

TENGRIPARA R.S
59K 500M

B (Cb)^M 500x10 L=50.00

B (Ctp) 30^M.00x2 L= 60.00

MADHUPUR R.S
66K 500M

B (Ctp) L= 30^M.00

DHALESWARI B(T)^M L= 250M⁰⁰

B (Cb)^M 500x10 L=900M⁰⁰

57.000^{K M}
57.600^{K M}
58.000^{K M}
58.500^{K M}
12.00
5
15.00
L
15.00
5
12.00

68.000^{K M}
69.333^{K M}
70.000^{K M}
71.000^{K M}
12.00
3
16.00
L
16.00
5
11.00

3.60	3.60	3.60	3.40	3.50	4.00	3.10	3.10	3.10	3.20	3.30	3.40	7.40	8.10	2.80	2.60	2.20	2.90	3.70	4.30	4.00	
12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	15.00	16.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	
8.40	8.40	8.40	8.40	8.60	8.50	8.00	7.90	7.90	7.80	7.70	7.60	7.60	7.90	8.20	8.40	8.80	8.10	7.30	6.70	7.00	
56	57	58	59	60 ^K	61	62	63	64	65 ^K	66	67	68	69	70 ^K	71	72	73	74	75 ^K	76	77

R = 2.000

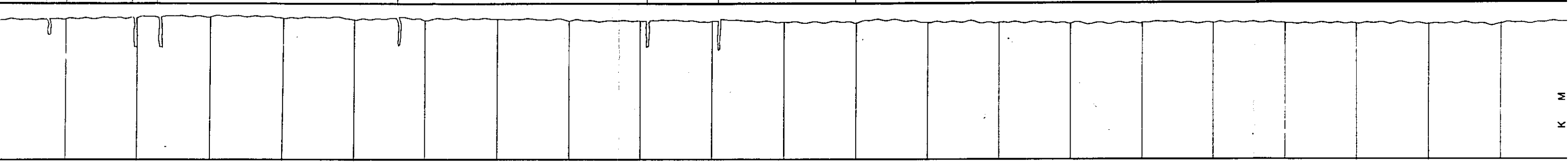
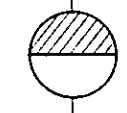
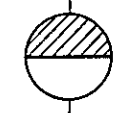
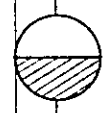
B L = 100M 00
 BAHVO R.S
 78K 000M
 B (Ctp) L = 30.00
 B (Ctp) L = 30.00

B (Ctp) L = 20.00

B (Ctp) L = 20.00
 B (Ctp) L = 20.00

NAOHATTA R.S
 89K 000M

DHAMRA
 98K 000M



L

3.90	3.70	3.40	3.50	3.70	3.90	4.10	4.30	4.50	4.60	4.70	4.80	4.90	4.90	4.90	4.90	4.10	4.30	4.70	4.70	4.60
11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00	11.00
7.10	7.30	7.60	7.50	7.30	7.10	6.90	6.70	6.50	6.40	6.30	6.20	6.10	6.10	6.10	6.10	6.90	6.70	6.30	6.30	6.40
78	79	80 ^K	81	82	83	84	85 ^K	86	87	88	89	90 ^K	91	92	93	94	95 ^K	96	97	98

R = 2.000

R = 2.000

R = 2.000

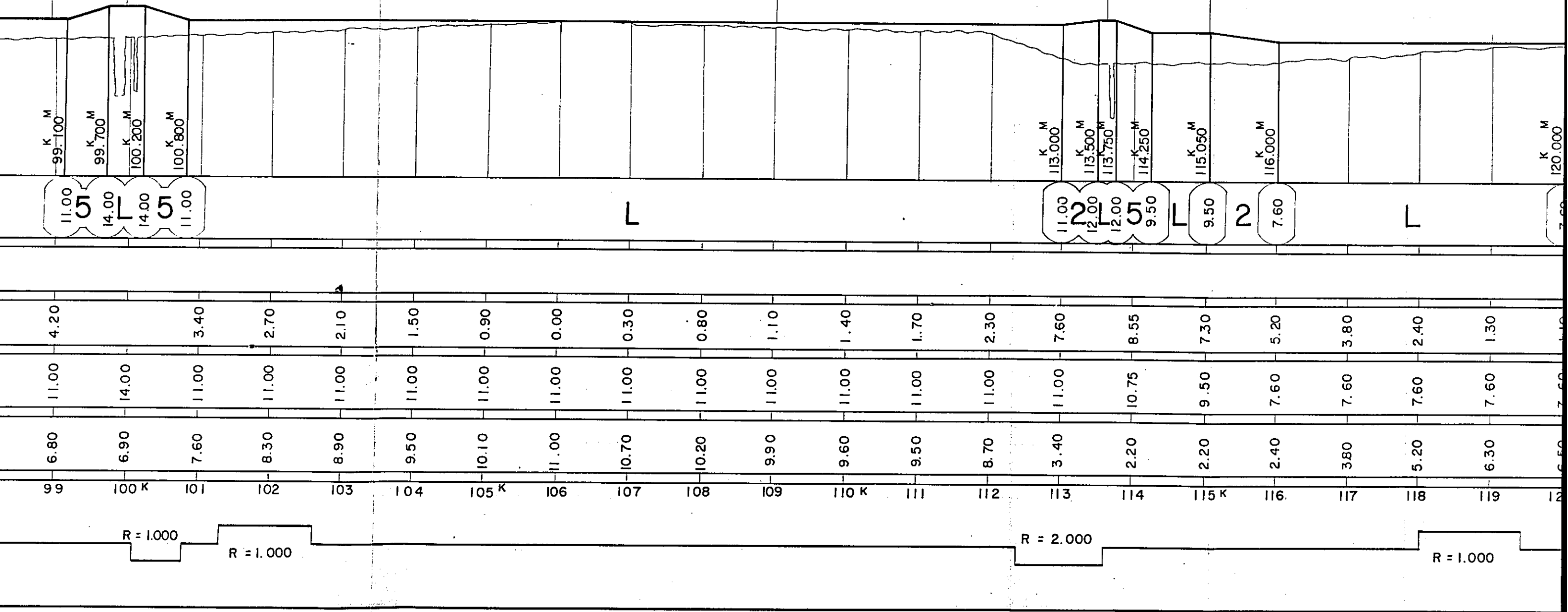
DHAMRAI R.S
98K000M
R.C

BANSI B(Tt) L=250M00

SADARPUR R.S
109K000M

TURAG B(Tt) L=150M00
B(Ctp) L=20.00

R.C

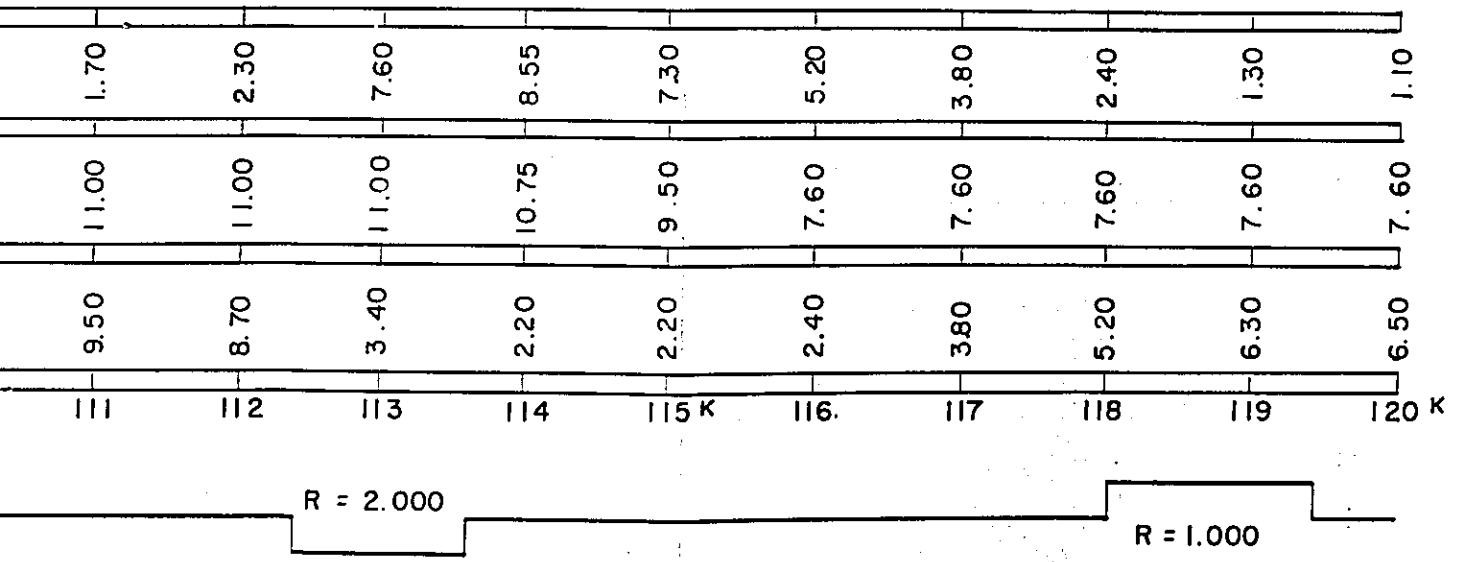
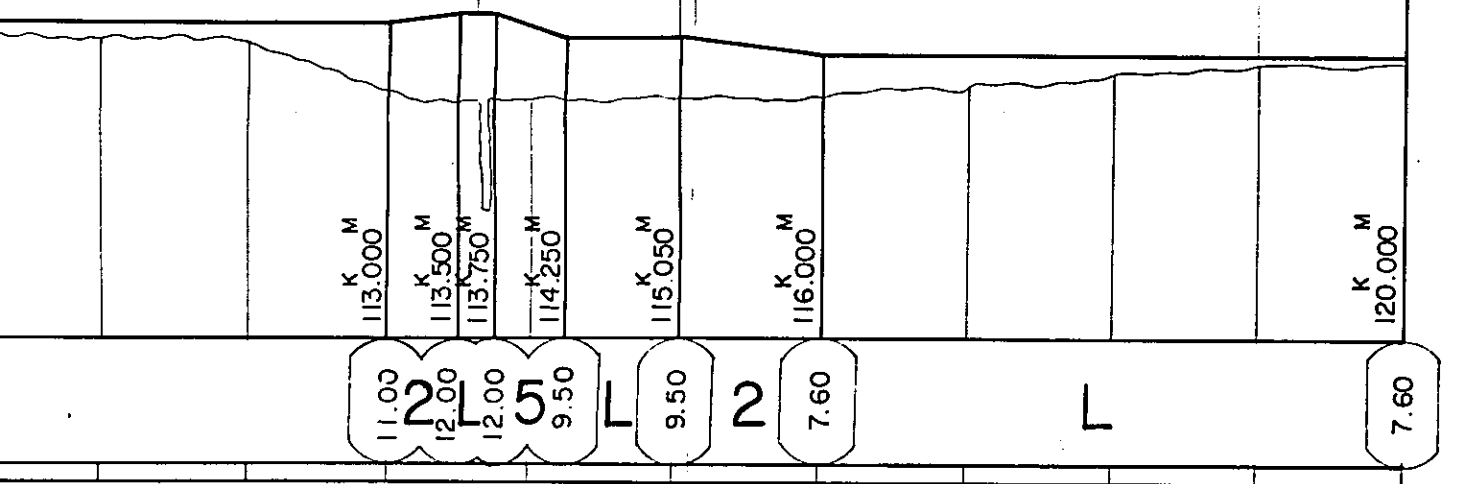


R.S

AZAMPUR R.S
120.000M

TURAG B(Tt) L=150M00
B(Ctp) L=20.00M

R.C



G.T.S. DATUM LEVEL

JAPAN INTERNATIONAL COOPERATION AGENCY	
PEOPLE'S REPUBLIC OF BANGLADESH	
JAMUNA RIVER BRIDGE PROJECT NO. 4 SITE (NAGARBARI) RAILWAY HORIZONTAL ALIGNMENT SCALE HOR : 1/50 000 VER : 1/800	
Drawn	Date
Approved	Date
PACIFIC CONSULTANTS INTERNATIONAL Fig 12	

ABBREVIATION FOR FIGURE

R.S.	RAILWAY STATION
B	BRIDGE
L	LENGTH
Cb	CONCRETE BOX
Ctp	PRESTRESSED CONCRETE GIRDER
Cs	CONCRETE SLAB
Tt	THROUGH TRUSS GIRDER
R.C.	ROAD CROSSING GATE
GRADES(5)	PER-MILLAGE (5/1000)
R	RADIUS OF CURVATURE

APPENDIX "5"

RECORD OF DISCUSSION

AT

TOKYO MEETING

FOR

JAMUNA BRIDGE PROJECT, BANGLADESH

PART VI: RAILWAY

SEPTEMBER, 1974

1. Route Location

B: Generally agreed. However, during the succeeding step it shall be studied for river crossing, embankment over low laying marshy lands, blockade of water way, highest flood level, connecting places of commercial importance, etc.

J: Due attention will be paid.

B: The reduction of the number of transshipment yards at way side place will be desirable from the point of view of rail operational efficiency.

A uniform gauge track line from the west through to Dacca will be wished to be maintained.

For this purpose the existing meter gauge line will have to be widened to broad gauge if one of sites No. 1 and 2 is decided.

All railway lines are to be taken to Dacca which is a terminal station.

J: Due consideration will be given to the transshipment facilities when the final route is decided, together with the volume of transportation and the improvement plans of the existing rail lines.

2. Double Track

B: The cross-sectional space for the future provision of double track from proposed single track shall be kept.

J: The traffic study has been and will be conducted.

With the results of the study, double track plan will carefully be elaborated, taking into consideration distances between station, required daily carrying capacity of the line, etc.

If the traffic study results reveal the necessity of double track in later years the possibility of a double track bridge which requires a huge amount of construction cost, will be fully considered in connection with the bridge structure.

B: Traffic will be projected for long future and provision will be kept in foundation and substructure of the bridge for putting in double track in the super-structure in some future days if economic study and traffic operation justify it.

J: Full consideration will be given.

3. Gradient of Bridge Access

B: The gradient 1 in 200 shall be flattened from the point of the train motive power. One in 300 or 400 is desirable.

J: Generally accepted. However, we will study more about this with the distance between stations and the location of station, etc.

4. Provision for Railway Study

B: Second stage, study of access railway line may be conducted according to provision of Code of Practice for Engineering Department of Bangladesh Railway.

J: Agreed.

5. Structures and Earthwork

B: For embankment on Railway links, soil test, spillway bridges, flood openings, freeboard over normal flood level, etc. should have some considerations as those for road links.

In case of a future double track, provision should be kept for borrow pits on one side only.

J: Agreed.

