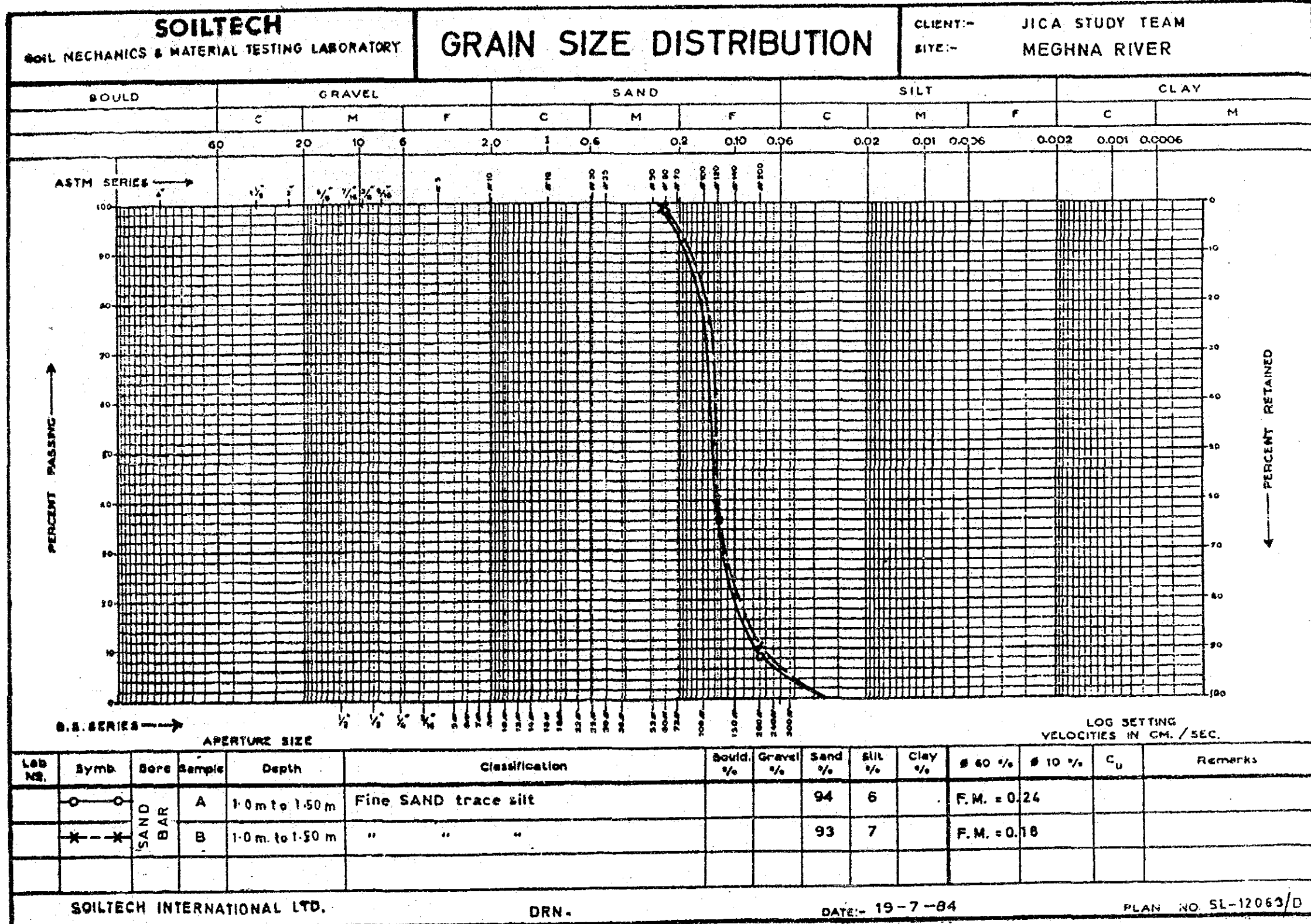


PROJECT	DRAWING. No	TOTAL SHEET
MEGHNA	14	
SIEVE ANALYSIS OF SANDBAR-A&B		



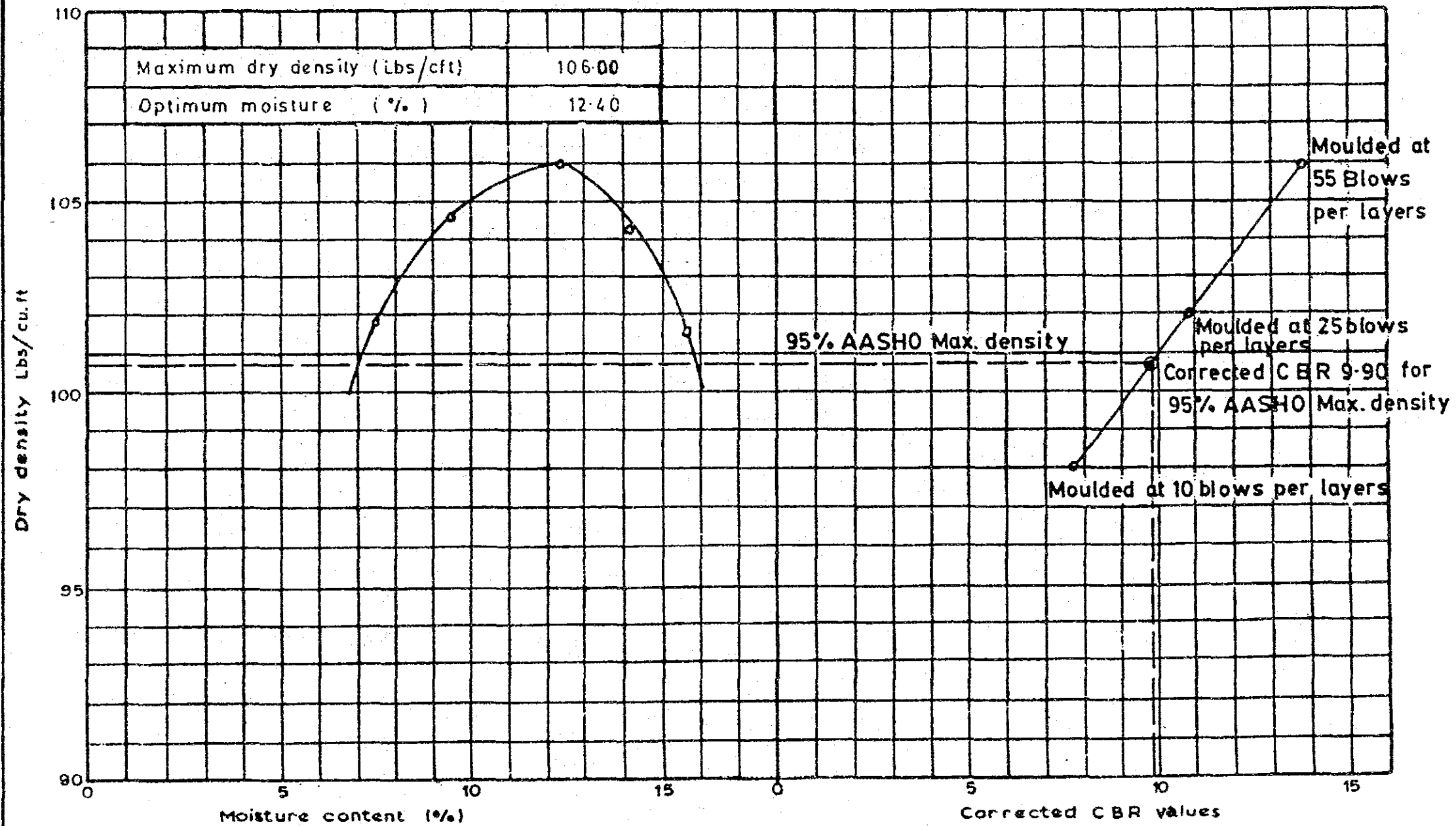
PROJECT	DRAWING. No	TOTAL SHEET
MEGHNA	15	
CBR OF SAMPL FROM SANDBAR-A		

SOILTECH
INTERNATIONAL LIMITED
DHAKA

COMPACTION & CBR TEST

SAND BAR-A DEPTH 1.00m to 1.50m

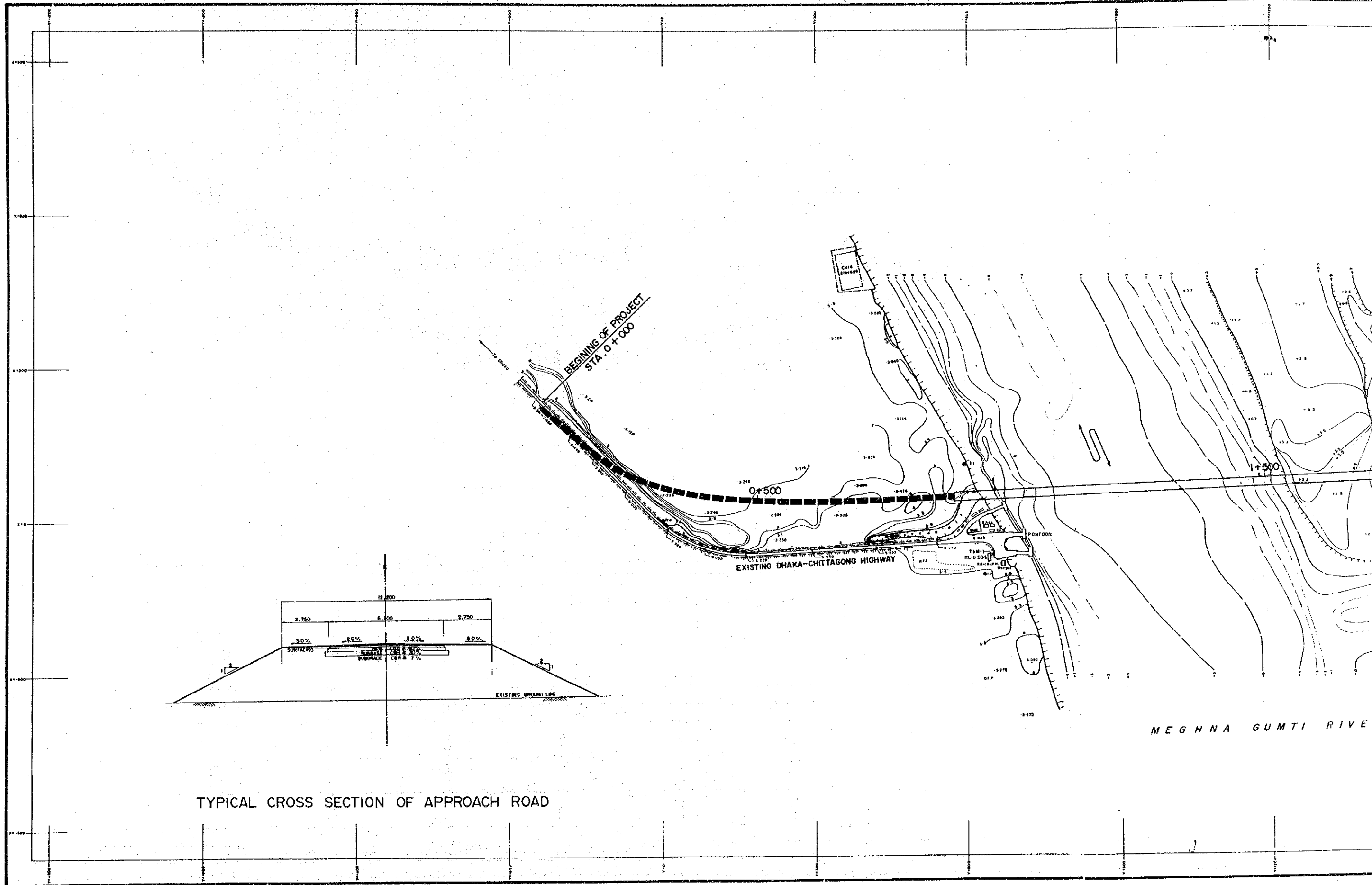
JICA STUDY TEAM
MEGHNA RIVER



DRE

DATE:-

PLAN No. SL-12061/D

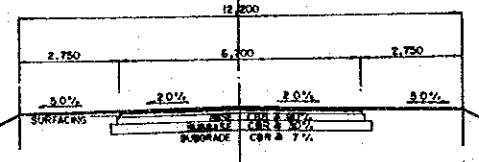


BEGINNING OF PROJECT
STA. 0+000

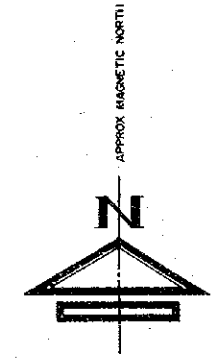
EXISTING DHAKA-CHITTAGONG HIGHWAY

MEGHNA GUMTI RIVER

TYPICAL CROSS SECTION OF APPROACH ROAD



PROJECT	DRAWING No	TOTAL SHEET
MEGHNA-GUMTI	16	
MAP OF PROJECT ROAD		



LEGEND

Trees
 Power Line (Under Construction)

NOTE:

All the elevations appearing in the sheet are with reference to P.W.D. BM, which is situated in the village PRACHAK PRAMSHA in between Meghna & Daudkandi Ferryghat and connected TBM-1 & TBM-2.

TBM-1

Established on the pillar of the railing in front of Rest-house at Daudkandi Ferryghat Dhaka bank as shown on plan R.L-6-934 (P.W.D.).

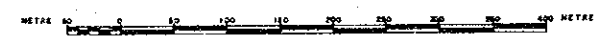
TBM-2

Established on the platform of 'Khoda Hafiz' pillar which is about 70 metre from the Daudkandi Ferryghat Comilla bank as shown on plan R.L-5-954m (P.W.D.).

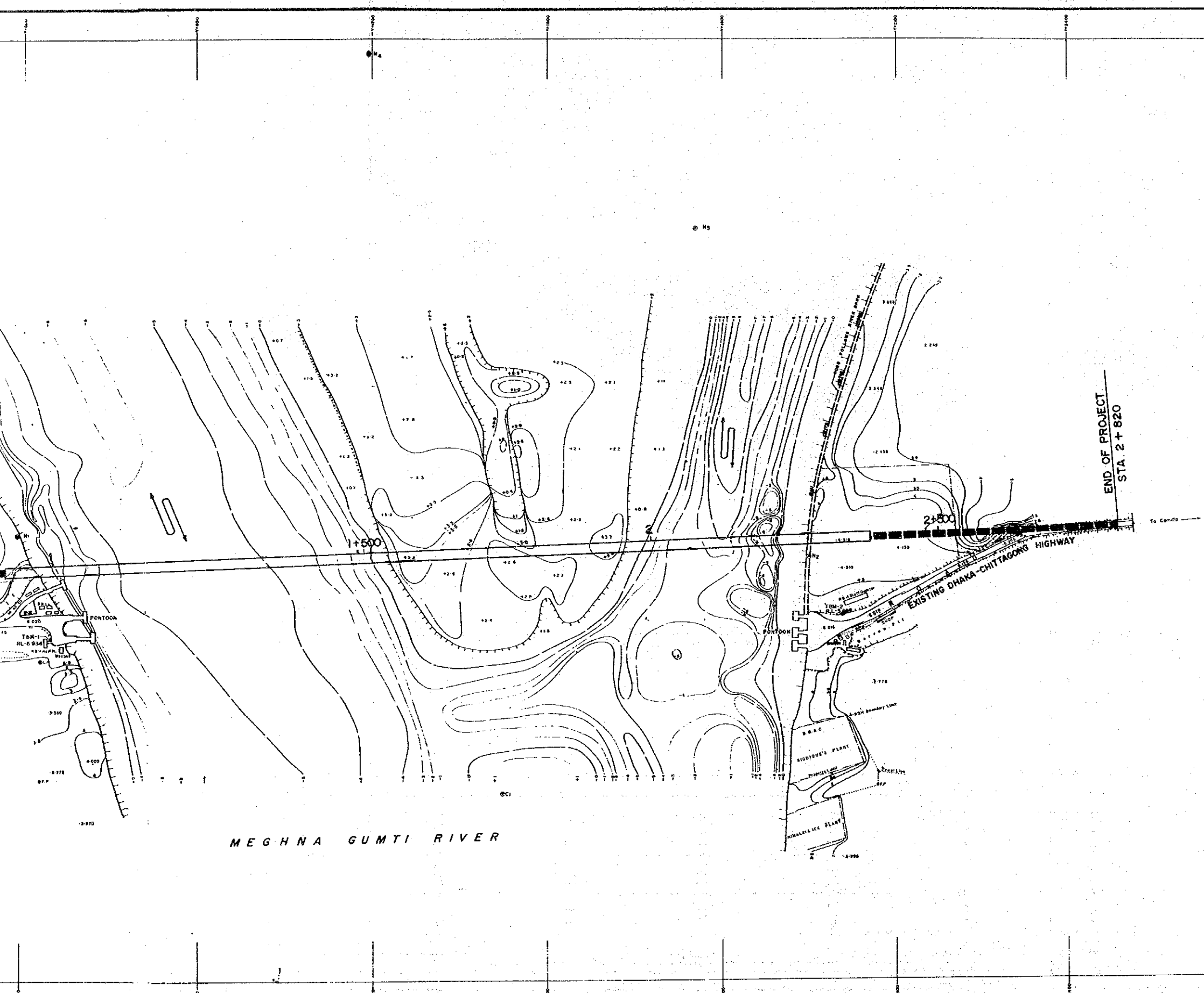
H.F.L. ... 6.024m on 10-8-1974

Contour Interval 0.50m

Local Coordinates are shown in this sheet

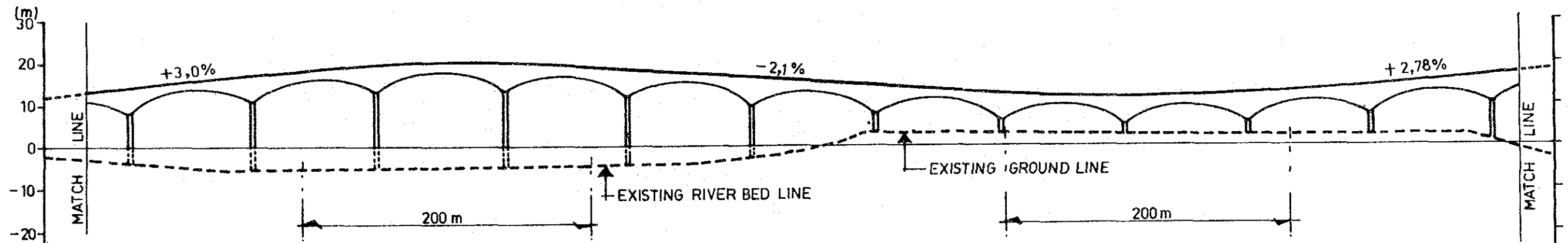
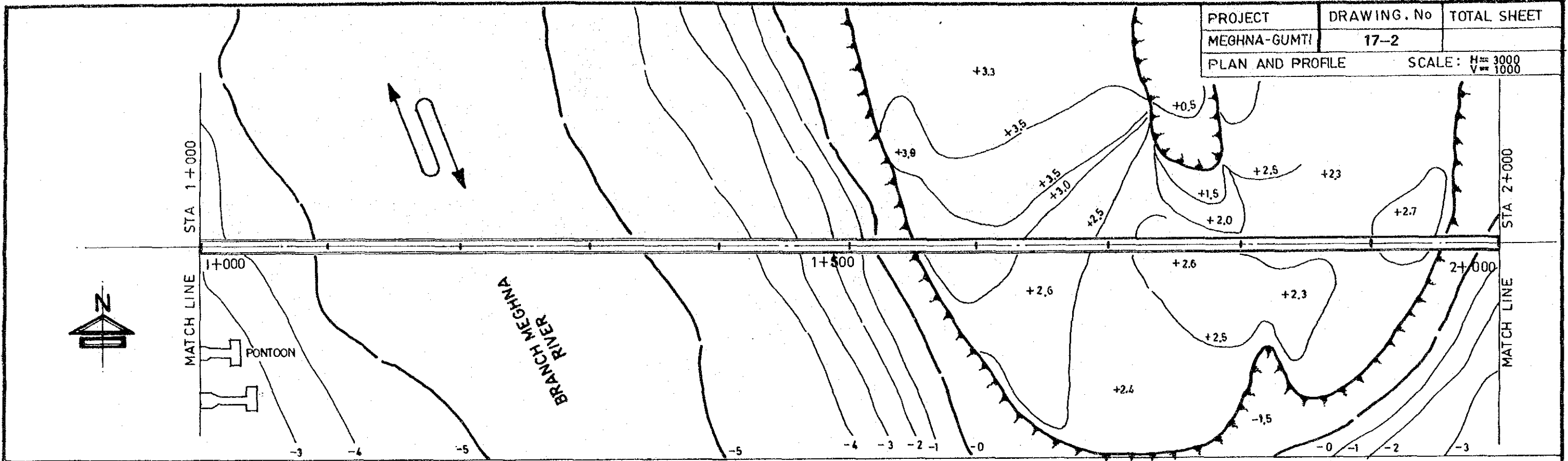


SCALE 1:3000



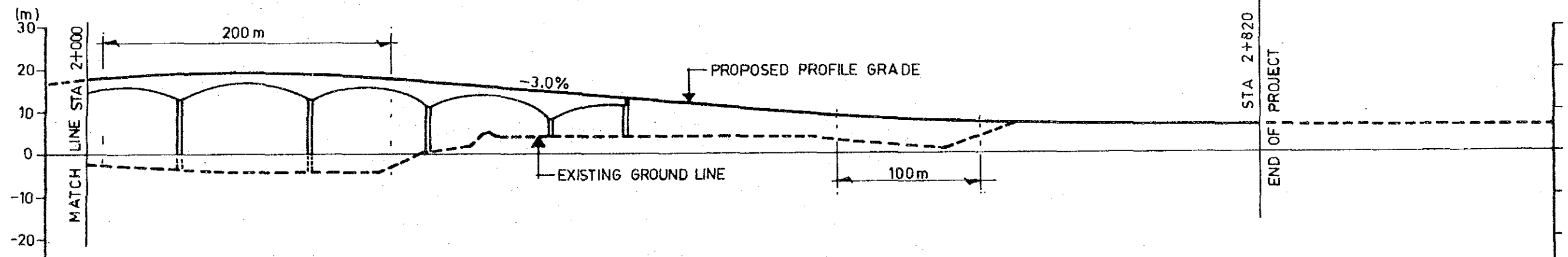
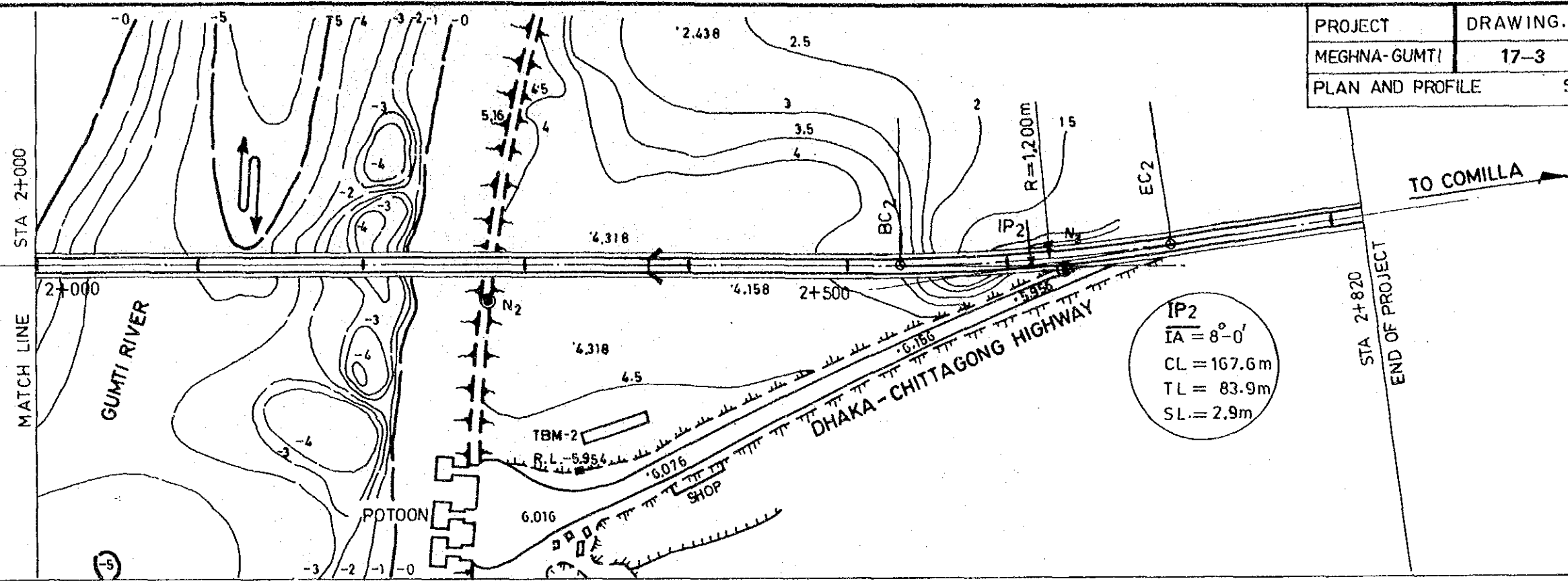
MEGHNA GUMTI RIVER

PROJECT	DRAWING. No	TOTAL SHEET
MEGHNA-GUMTI	17-2	
PLAN AND PROFILE		SCALE: H# 3000 V# 1000

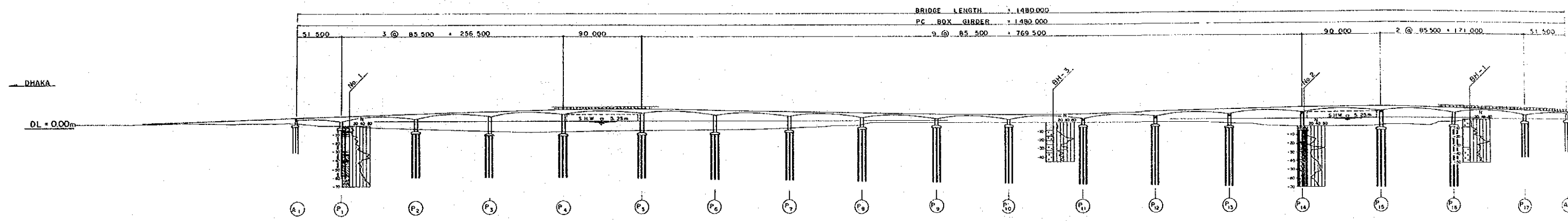


LONGITUDINAL GRADE (m%)	3.0%										2.1%				2.78%					
PROPOSED HEIGHT (m)	-13.11	-16.11	-17.61	-18.78	-19.33	-20.68	-19.33	-18.50	-17.45	-15.35	-13.25	-12.41	-11.76	-11.52	-10.30	-12.16	-13.08	-14.75	-2.50	-17.50
GROUND HEIGHT (m)										-3.00	-2.80	-2.50	-2.10	-1.50	-1.00	-0.50	-0.20	-0.10	-0.05	-0.02
DISTANCE (m)	0	100	150	200	250	300	350	400	500	600	640	700	740	800	840	900	940	1000	1050	1100
CURVE	---										---				---					

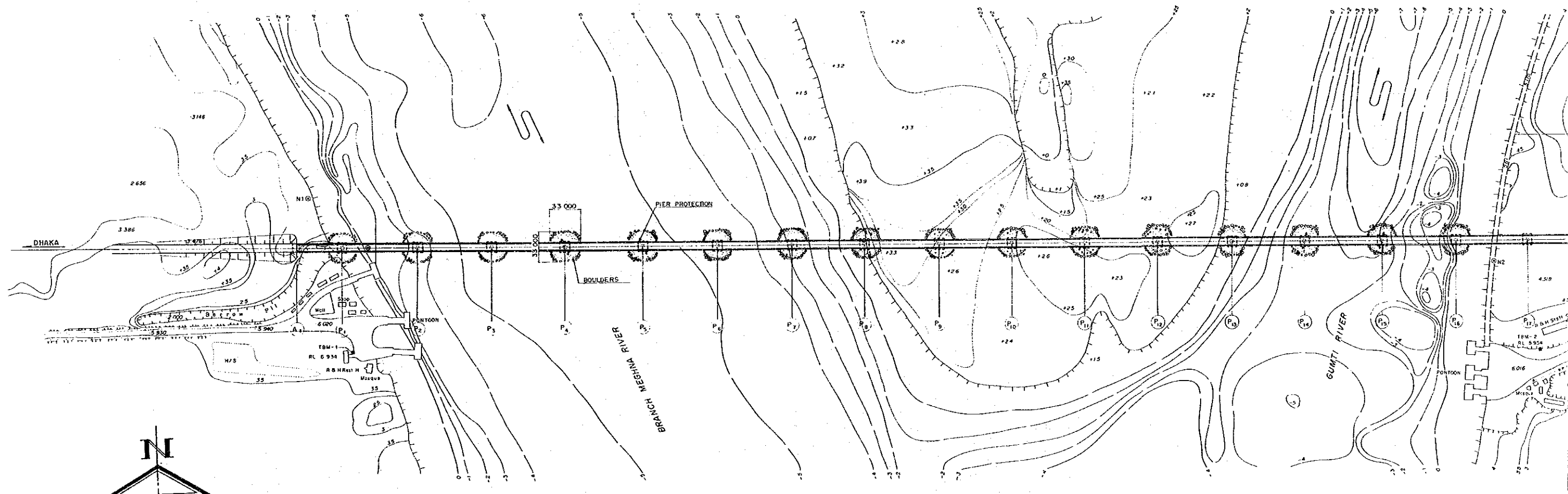
PROJECT	DRAWING. No	TOTAL SHEET
MEGHNA-GUMTI	17-3	
PLAN AND PROFILE		SCALE: H=3000 V=1000



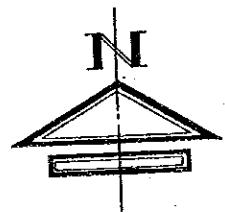
LONGITUDINAL GRADE (m%)																	
PROPOSED HEIGHT (m)	17.53	17.82	19.14	19.16	17.89	17.60	14.90	11.90	8.90	8.20	7.08	6.79	6.70	6.70	6.70	6.70	6.70
GROUND HEIGHT (m)							4.31	4.20			2.50			6.67	6.67	6.67	6.70
DISTANCE (m)	2000	2010	2010	2010	2200	2210	2300	2400	2500	2520	2574	2600	2624	2700	2800	2820	2900
CURVE											R = 1,200 m						



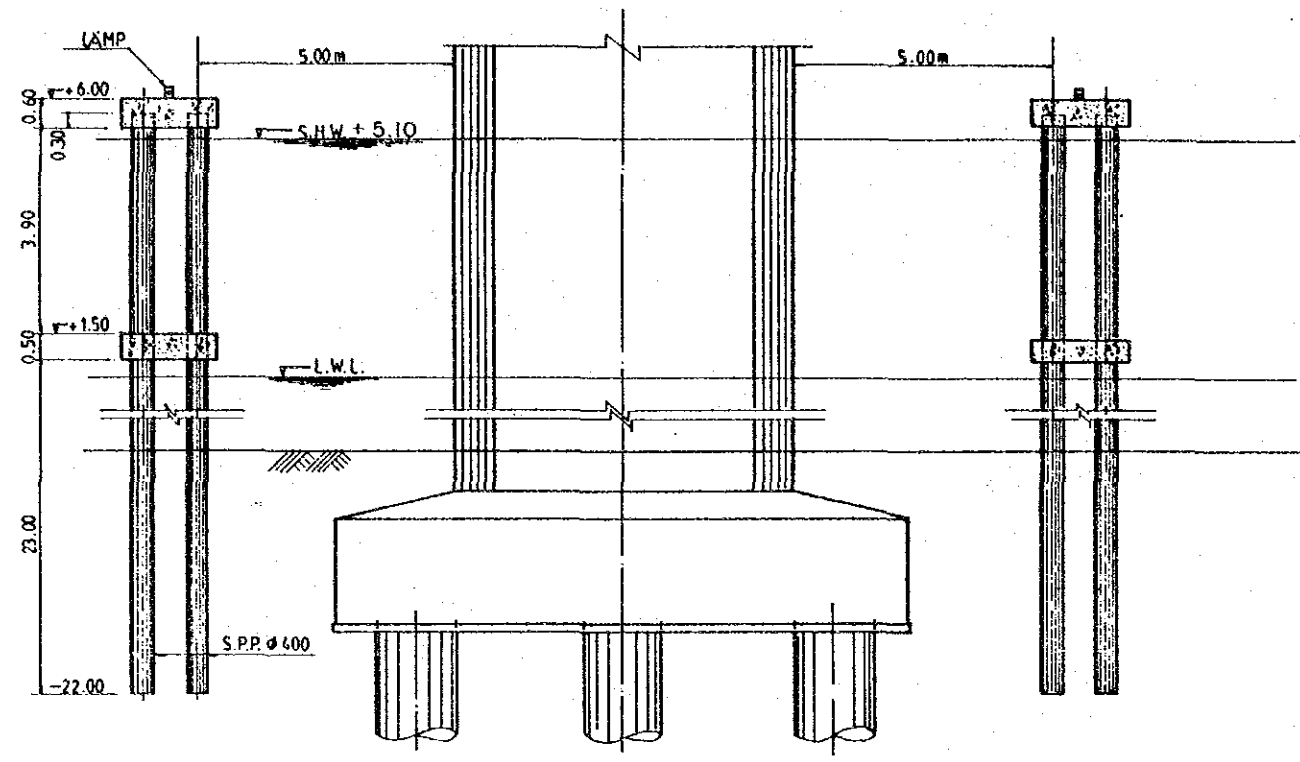
PROFILE



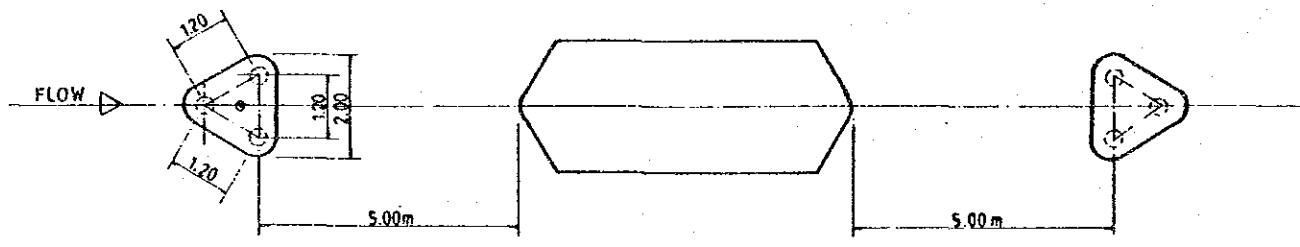
PLAN



PROJECT	DRAWING. No	TOTAL SHEET
MEGHNA-GUMTI	19	
CROSS SECTION AND PIER PROTECTION		

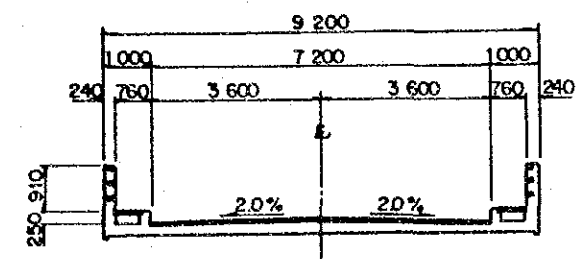


SIDE ELEVATION

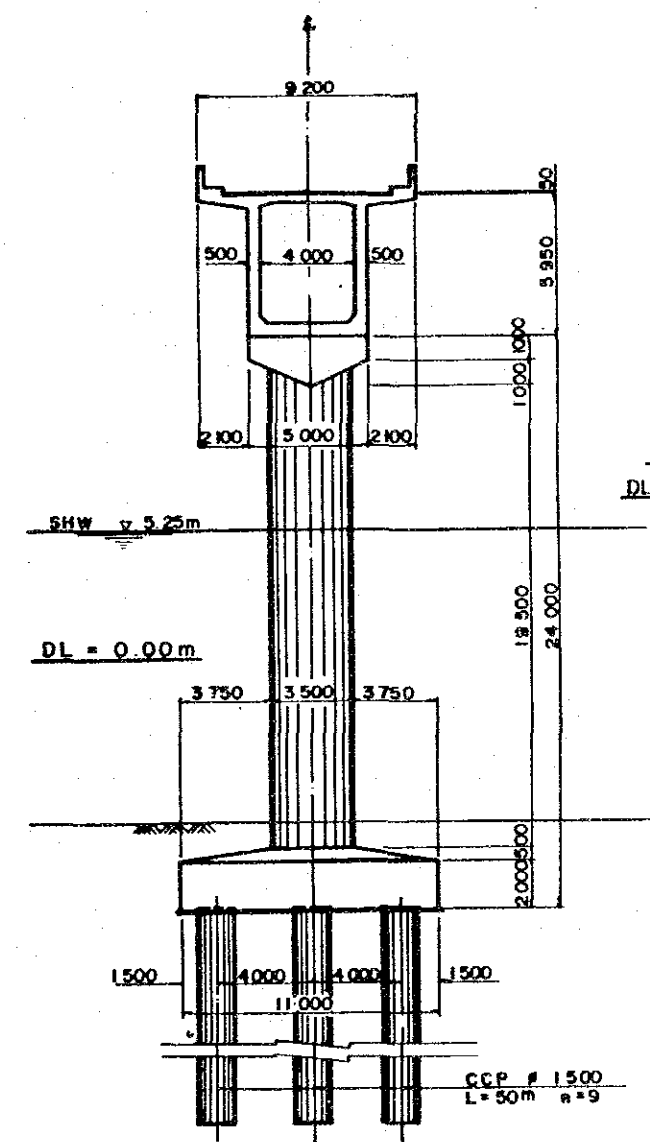


PLAN

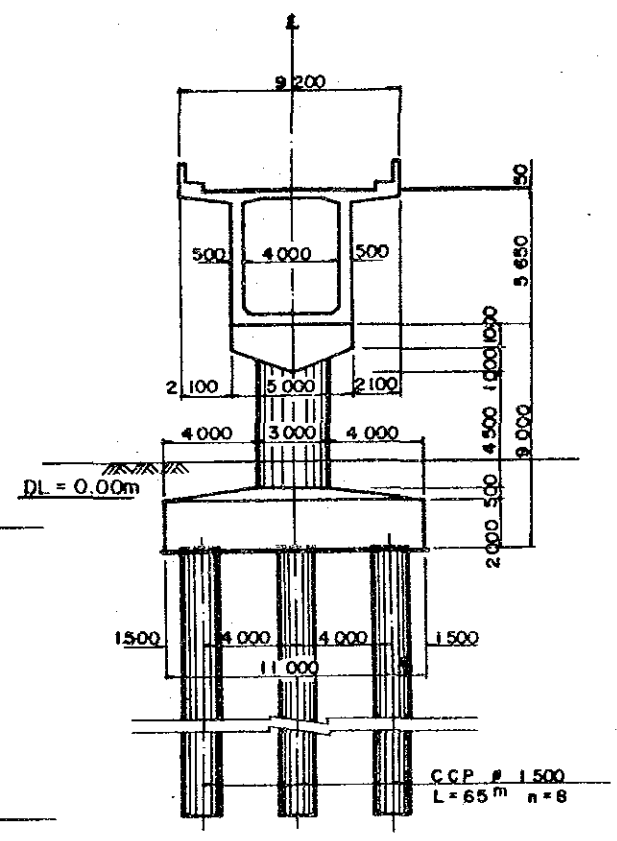
PIER PROTECTION



TYPICAL CROSS SECTION OF BRIDGE DECK

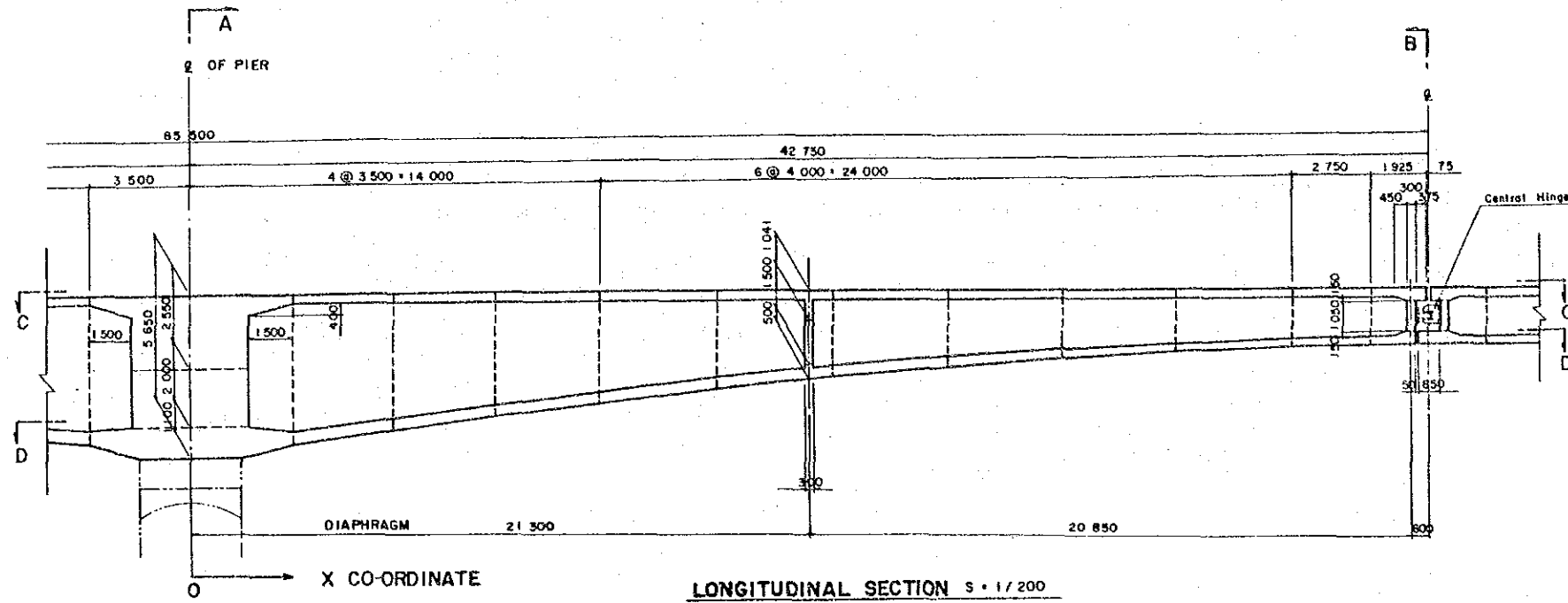


TYPICAL CROSS SECTION IN RIVER

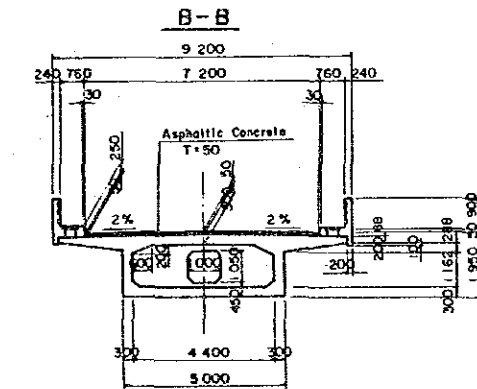
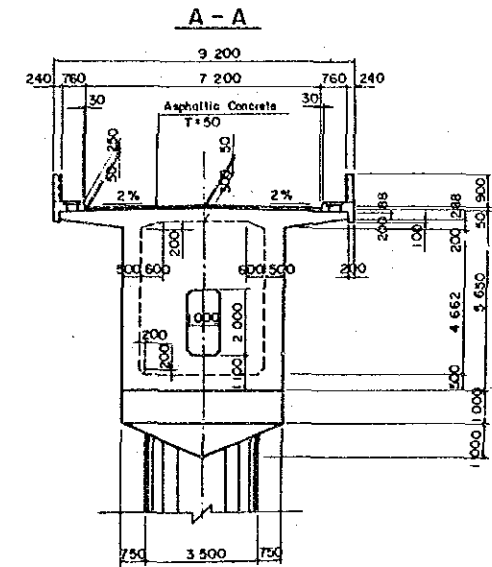
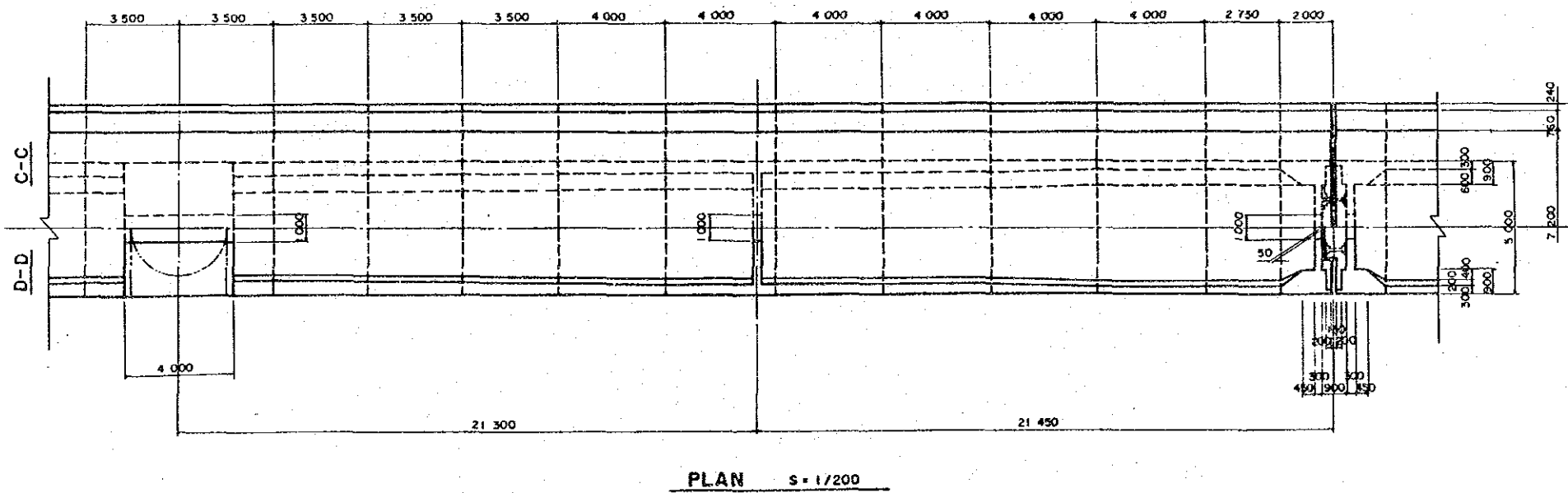


TYPICAL CROSS SECTION ON SAND BAR

PROJECT	DRAWING NO.	TOTAL SHEET
MEGHNA-GUMTI BR	20	
STANDARD ELEMENT OF SUPERSTRUCTURE		



DEPTH OF GIRDER	X CO-ORDINATE
5 650	0
5 175	3 500
4 709	7 000
4 258	10 500
3 829	14 000
3 377	18 000
3 041	21 300
2 974	22 000
2 629	26 000
2 349	30 000
2 140	34 000
2 006	38 000
1 960	40 750
1 950	42 675

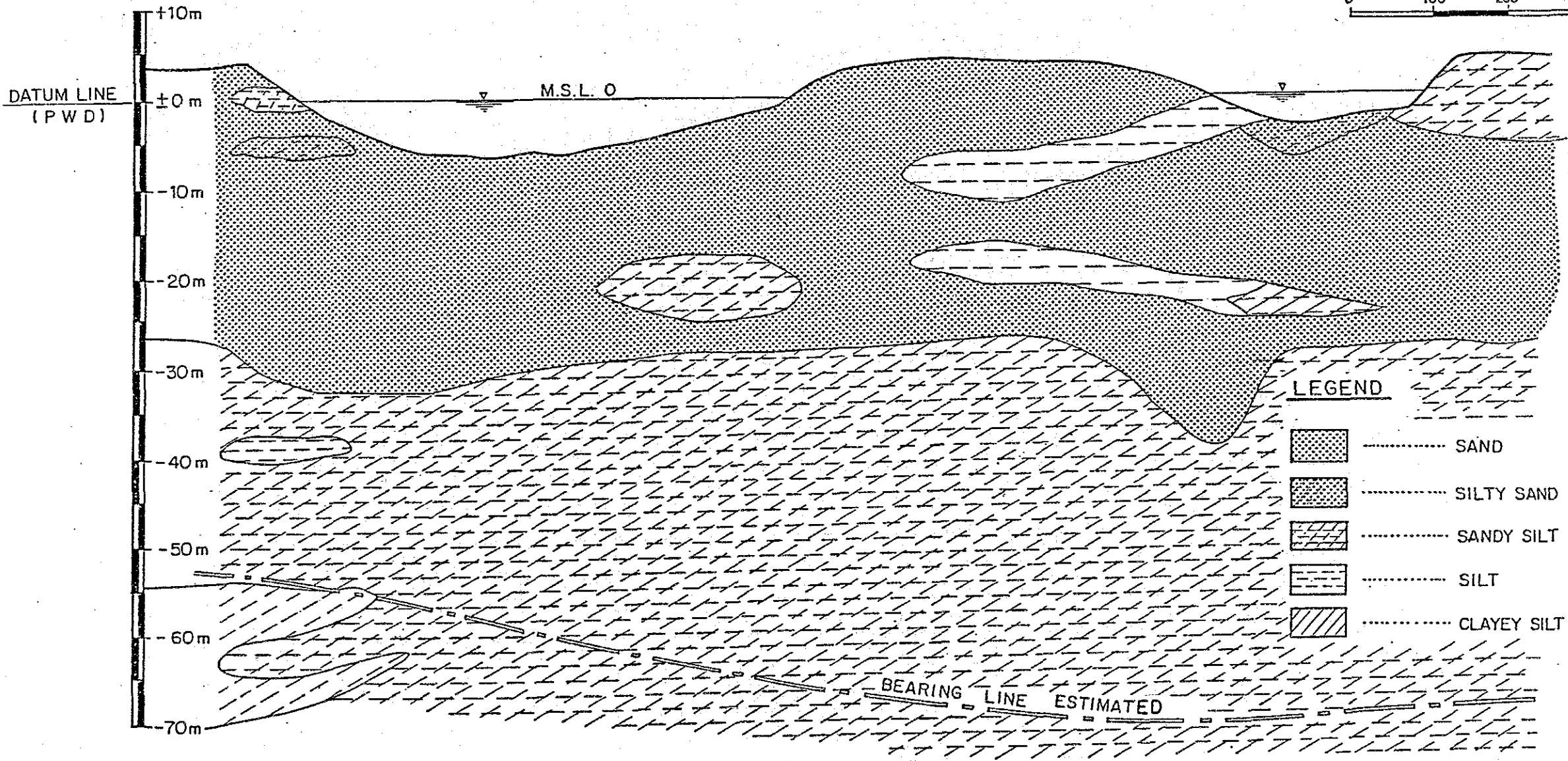
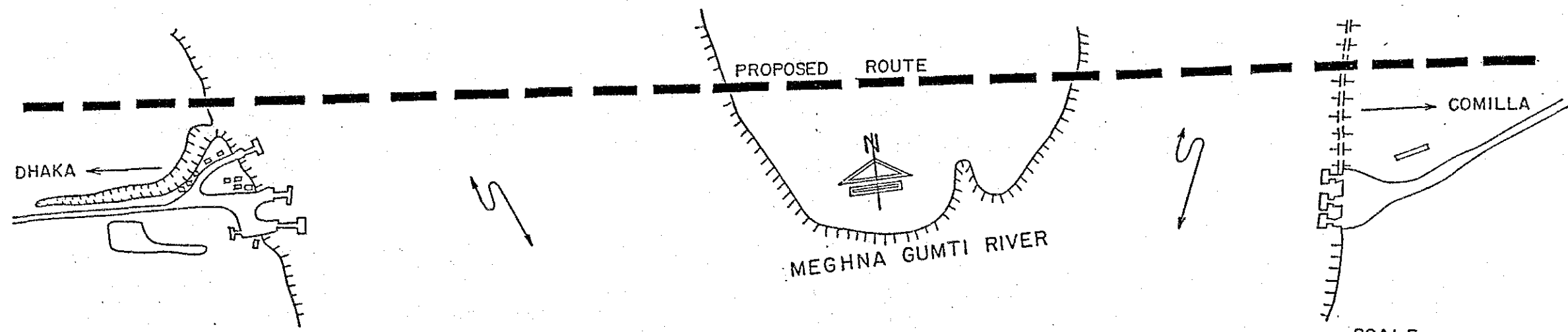


CROSS SECTION S = 1/200

NOTE :

1. THIS DRAWING COVERS THE CONFIGURATION OF STANDARD SPAN BRIDGE ONLY.
2. ALL DIMENSIONS ARE SHOWN IN MILLIMETRES (MM).

PROJECT	DRAWING NO.	TOTAL SHEET
MEGHNA-GUMTI	21	
SOIL PROFILE	SCALE : H=1/5,000 V=1/500	



LEGEND

	SAND
	SILTY SAND
	SANDY SILT
	SILT
	CLAYEY SILT

Source:
The Study Team

PROJECT	DRAWING No	TOTAL SHEET
MEGHNA-GUMTI	22	
TEST RESULTS OF MG I/A (BOTTOM)		

SOILTECH

SOIL MECHANICS & MATERIAL TESTING LABORATORY
DHAKA

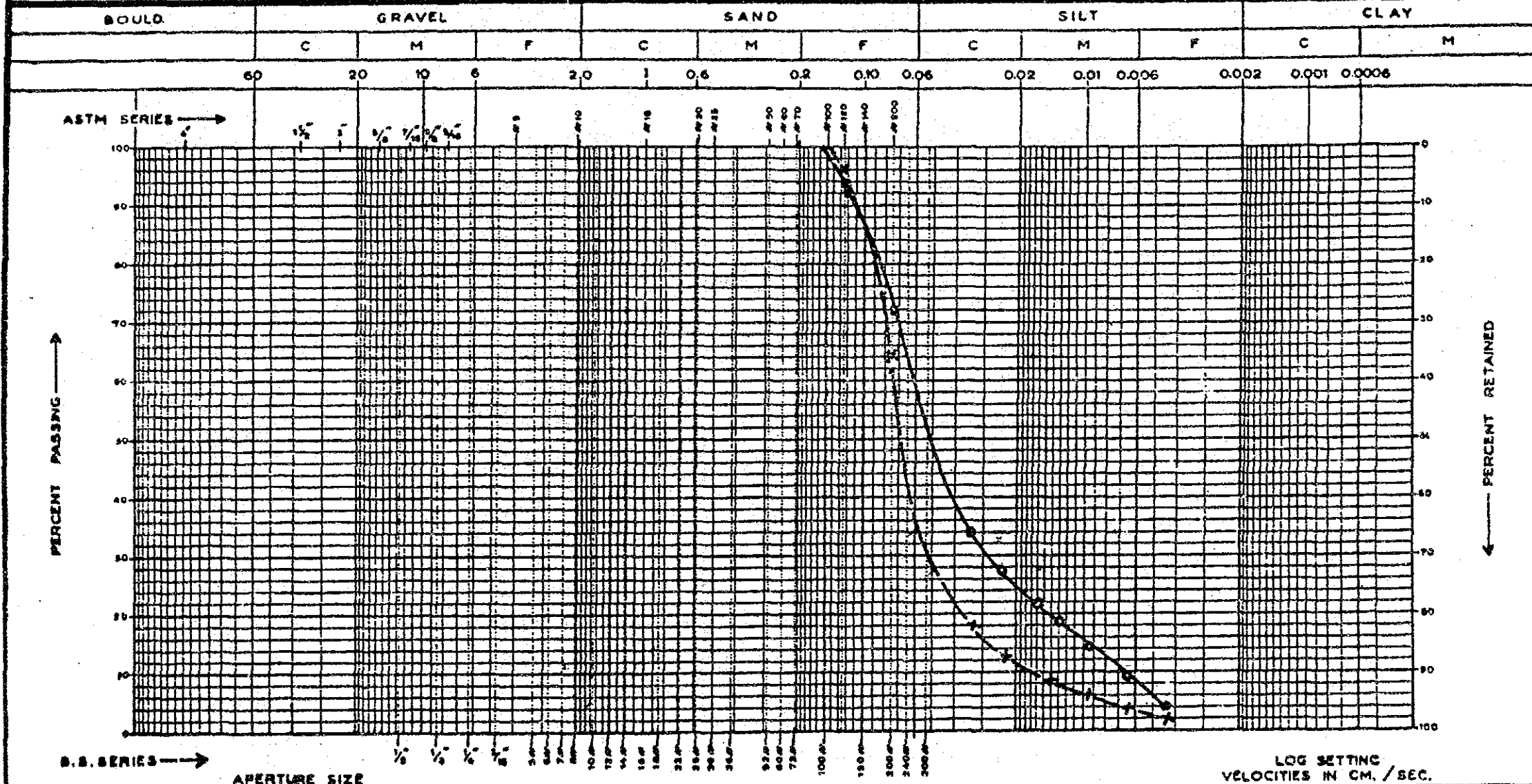
SUMMARY OF LABORATORY TEST RESULTS

JICA STUDY TEAM
MEGHNA-GUMTI RIVER

Borehole No.		M-G1/A										
Sample No.		D-25	D-26	D-27	D-28	D-29	D-30	D-31	D-32	D-33	D-34	D-35
Depth in test		48.60 to 49.00	50.60 to 51.00	52.60 to 53.00	54.60 to 55.00	56.60 to 57.00	58.60 to 59.00	60.60 to 61.00	62.60 to 63.00	64.60 to 65.00	66.60 to 67.00	69.60 to 70.00
Moisture content (Natural)		33.50	33.14	38.80	30.80	35.25	41.28	41.16	42.11	32.91	31.60	32.23
Specific gravity			2.659	2.660	2.665		2.660	2.659	2.665		2.662	
Atterberg limits	Liquid limit, L _w	41.80	44.50	44.20	41.30	43.20		N.P.		N.P.		N.P.
	Plastic limit, P _w	24.70	26.00	25.20	24.50	24.80						
Density	Wet (lbs/cft)											
	Dry (lbs/cft)											
Grain size analysis	Gravel (%)											
	Sand (%)	13		13		11		61		42		62
	Silt (%)	78		78		78		39		58		37
	Clay (%)	9		9		11		-		-		-
Consolidation tests	Natural void ratio, e ₀											
	Compression index, C _c											
Unconfined compression tests	Strain at failure (%)											
	Stress undist. (lbs/sq.inch)											
	Stress remould. (lbs/sq.inch)											
	Sensitivity											
Tri-axial compression Qc tests	φ (degree)											
	C (p.s.i.)											
F.M. TESTS												

PROJECT	DRAWING . No	TOTAL SHEET
MEGHNA-GUMT	23	
SIEVE ANALYSIS OF M G I/A (BOTTOM)		

SOILTECH SOIL MECHANICS & MATERIAL TESTING LABORATORY	GRAIN SIZE DISTRIBUTION	CLIENT:- JICA STUDY TEAM SITE:- MEGHNA-GOMTI RIVER
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Lab No.	Symb.	Bore	Sample	Depth in m.	Classification	Bould. %	Gravel %	Sand %	Silt %	Clay %	# 60 %	# 10 %	C _u	Remarks
	○—○	M-G	D-33	64.60 to 65.00	SILT & fine SAND			42	58					(Sandy SILT)
	×—×	"	D-35	66.60 to 67.00	Silty fine SAND			63	37					(Silty SAND)

PROJECT	DRAWING No	TOTAL SHEET
MEGHNA-GUMTI	24	
TEST RESULTS OF MG 2 (BOTTOM)		

SOILTECH
SOIL MECHANICS & MATERIAL TESTING LABORATORY
DHAKA

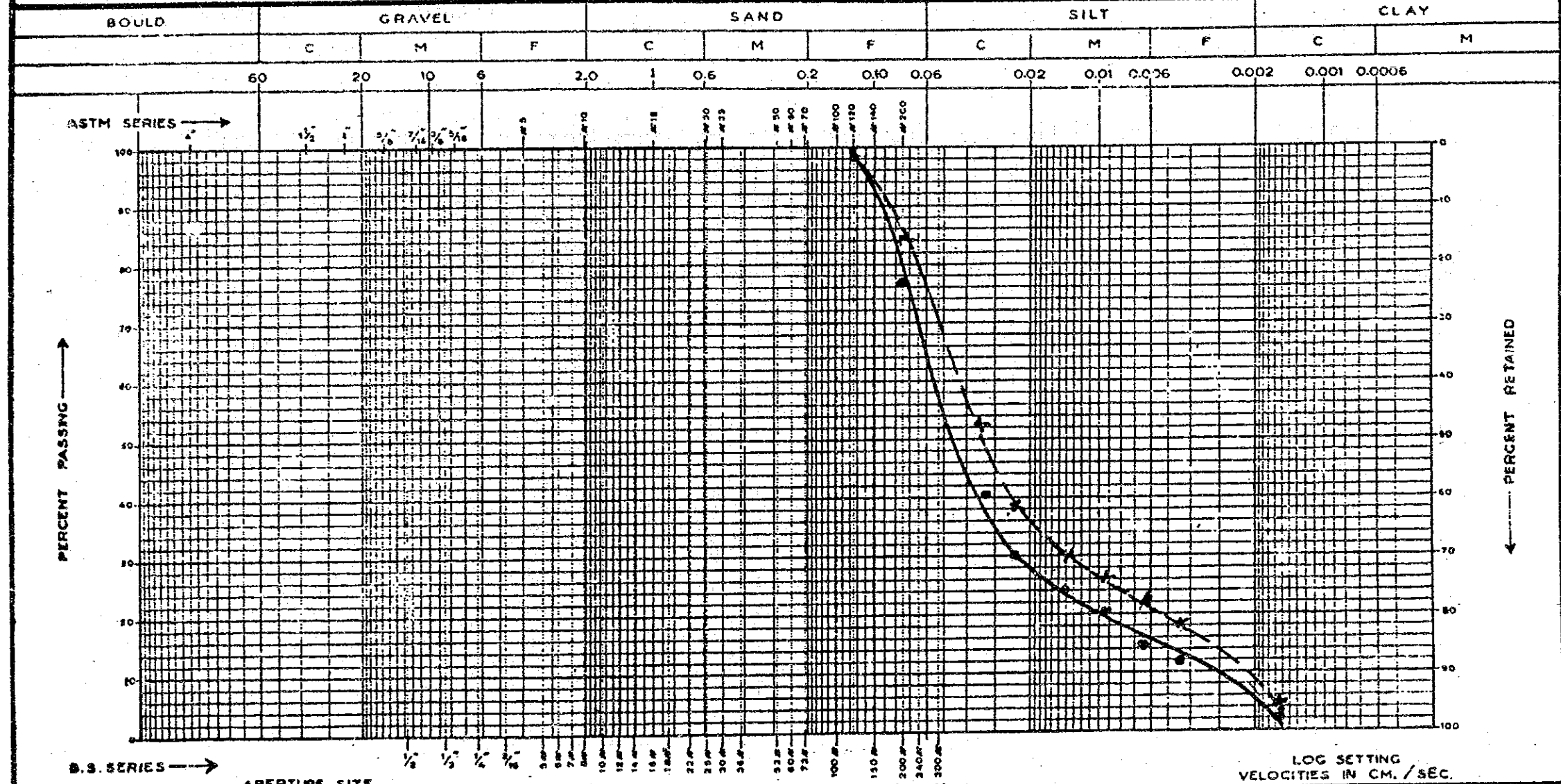
**SUMMARY OF
LABORATORY TEST RESULTS**

JICA STUDY TEAM
MEGHNA-GUMTI RIVER

Borehole No.		M-G 2										
Sample No.		D-25	D-26	D-27	D-28	D-29	D-30	D-31	D-32	D-33	D-34	D-35
Depth in metre		48.66 to 49.00	50.66 to 51.00	52.66 to 53.00	54.66 to 55.00	56.66 to 57.00	58.66 to 59.00	60.66 to 61.00	62.66 to 63.00	64.66 to 65.00	66.66 to 67.00	69.66 to 70.00
Moisture content (Natural)		33.20	32.20	35.00	34.00	45.40	31.30	35.60	31.70	25.80	34.13	30.75
Specific gravity			2.657	2.657	2.659		2.651		2.660		2.659	
Atterberg limits	Liquid limit, L _w	42.00	38.00	50.40	45.20	38.55		42.86	35.50	34.60		37.00
	Plastic limit, P _w	24.00	22.10	28.20	26.60	23.80		25.20	20.50	20.00		22.70
Density	Wet (lbs/cft)											
	Dry (lbs/cft)											
Grain size analysis	Gravel (%)											
	Sand (%)	18		16		18		13		36		25
	Silt (%)	76		75		76		79		59		66
	Clay (%)	6		9		6		8		5		9
Consolidation tests	Natural void ratio, e ₀											
	Compression index, C _c											
Unconfined compression tests	Strain at failure (%)											
	Stress undist. (lbs/sq. inch)											
	Stress remould. (lbs/sq. inch)											
	Sensitivity											
Tri-axial compression Qc tests	φ (degree)											
	C (p. s. i.)											
F. M. TESTS												

PROJECT	DRAWING No	TOTAL SHEET
MEGHNA-GUMT	25	
SIEVE ANALYSIS OF M G 2 (BOTTOM)		

SOILTECH SOIL MECHANICS & MATERIAL TESTING LABORATORY	GRAIN SIZE DISTRIBUTION	CLIENT:- JICA STUDY TEAM SITE:- MEGHNA-GUMTI RIVER
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Lab No.	Symb	Bore	Sample	Depth (m)	Classification	Bould. %	Gravel %	Sand %	Silt %	Clay %	# 60 %	# 10 %	C _u	Remarks
	●-●	M:G2	D-33	64.60 to 65.00	Fine sandy SILT, tr. clay			36	59	5				(Sandy SILT)
	-X-X-	"	D-35	69.60 to 70.00	" " " " "			25	66	9				(Sandy SILT)

PROJECT	DRAWING No	TOTAL SHEET
MEGHNA-GUMT	26	
TEST RESULTS OF MG I (BOTTOM)		

SOILTECH
SOIL MECHANICS & MATERIAL TESTING LABORATORY
DHAKA

**SUMMARY OF
LABORATORY TEST RESULTS**

JICA STUDY TEAM
MEGHNA-GUMTI RIVER

Borehole No.		M-G 1												
Sample No.		D-1	D-2	D-3	D-4	D-5	D-6	D-7	D-8	D-9	D-10	D-11	D-12	D-13
Depth in metre		0.60 to 1.00	2.60 to 3.00	4.60 to 5.00	6.60 to 7.00	8.60 to 9.00	10.60 to 11.00	12.60 to 13.00	14.60 to 15.00	16.60 to 17.00	18.60 to 19.00	20.60 to 21.00	22.60 to 23.00	24.60 to 25.00
Moisture content (Natural)		23.60	25.50	21.00	23.82	21.30	25.75	21.30	38.20	35.40	27.60	29.40	17.65	31.40
Specific gravity			2.659		2.665		2.668			2.668		2.671		2.674
Atterberg limits	Liquid limit, L _w			N.P.			N.P.			N.P.		N.P.		N.P.
	Plastic limit, P _w													
Density	Wet (lbs/cft)													
	Dry (lbs/cft)													
Grain size analysis	Gravel (%)													
	Sand (%)		86		95			82			43		91	
	Silt (%)		14		5			18			57		9	
	Clay (%)		-		-			-			-		-	
Consolidation tests	Natural void ratio, e ₀													
	Compression index, C _c													
Unconfined compression tests	Strain at failure (%)													
	Stress undist. (lbs/sq. inch)													
	Stress remould. (lbs/sq. inch)													
	Sensitivity													
Tri-axial compression qc tests	φ (degree)													
	C (p. s. i.)													
F. M. TESTS			FM=0.50		FM=0.90			FM=0.22			FM=0.08		FM=1.33	

PROJECT	DRAWING . No	TOTAL SHEET
MEGHNA-GUMT	27	
CBR TESTS FOR MEGHNA-GUMTI APPROACH ROAD		

SOILTECH
INTERNATIONAL LIMITED
DHAKA

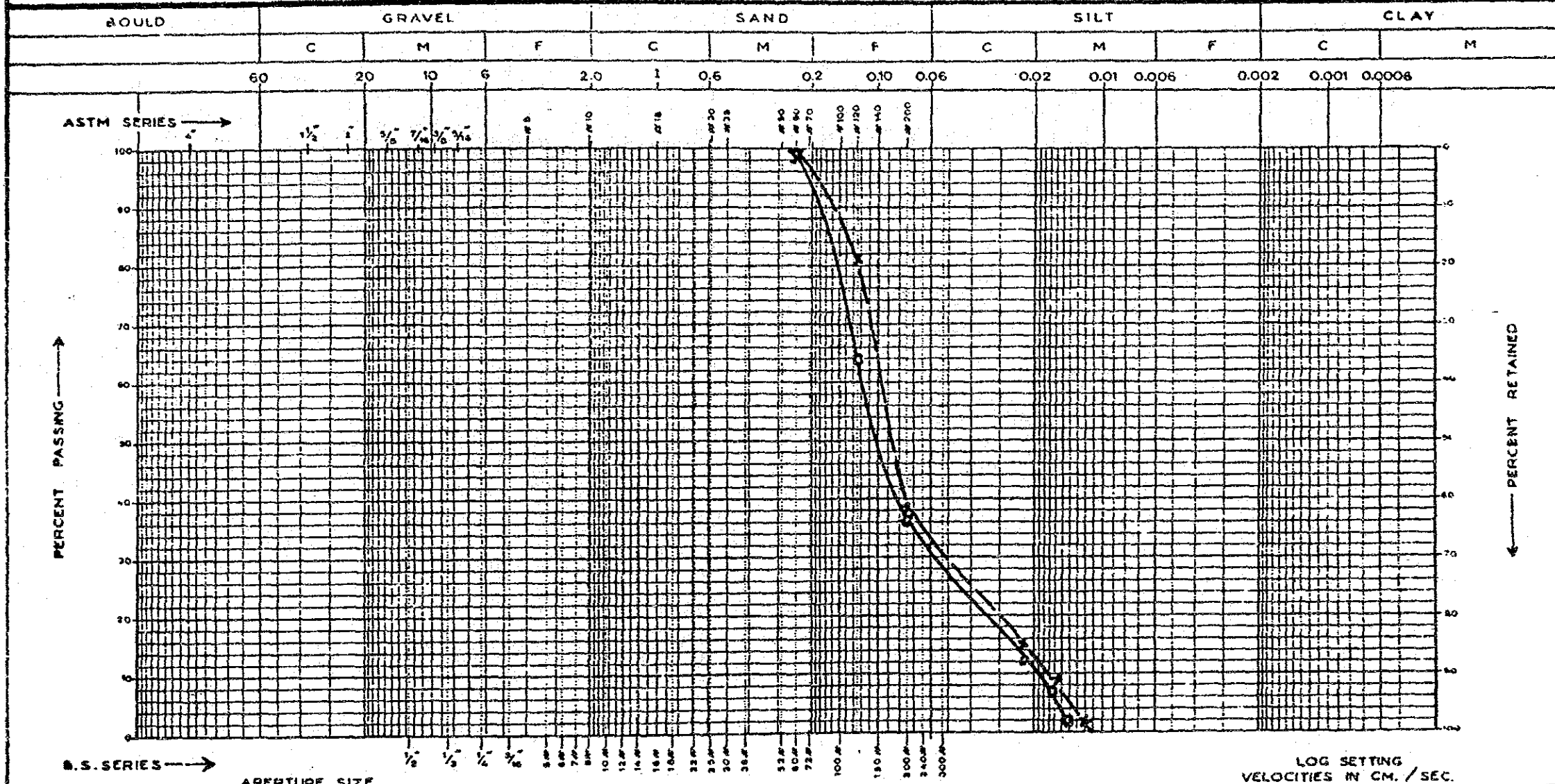
**SUMMARY OF
COMPACTION & C B R TEST RESULTS**

JICA STUDY TEAM
MEGHNA-GUMTI RIVER

SAMPLE NUMBER	M-G- 1/A				PADY FIELD	
	A	B	C	D	A	B
MOISTURE CONTENT (Natural)	24.80	26.20	23.90	25.30	28.40	29.50
SPECIFIC GRAVITY	2.662	2.665	2.660	2.665	2.657	2.659
ATTERBERG LIMITS	Liquid Limit, Lw	N.P.	N.P.	N.P.	39.20	35.00
	Plastic Limit, Pw				23.50	23.00
MAXIMUM DRY DENSITY Lbs/cu. ft	109.50	109.60	108.00	106.20	111.40	110.70
OPTIMUM MOISTURE CONTENT (%)	14.90	14.00	16.20	15.15	15.80	15.00
CORRECTED C B R VALUES	10.20	9.20	10.80	8.80	10.95	10.30
GRAIN SIZE ANALYSIS	SAND (%)	70	73	69	67	12
	SILT (%)	30	27	31	33	81
	CLAY (%)	—	—	—	—	7

PROJECT	DRAWING No	TOTAL SHEET
MEGHNA-GUMTI	28	
SIEVE ANALYSIS OF M G I/A(SURFACE)		

SOILTECH SOIL MECHANICS & MATERIAL TESTING LABORATORY	<h2>GRAIN SIZE DISTRIBUTION</h2>	CLIENT:- JICA STUDY TEAM SITE:- MEGHNA-GUMTI RIVER
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Lab No.	Symb	Bore	Sample	Depth in m.	Classification	Bould. %	Gravel %	Sand %	Silt %	Clay %	C_u	Remarks
	○—○	M-G	C	1.00 to 1.50	Silty fine SAND			69	31			F.M. = 0.24
	—	II.	D	1.00 to 1.50	" "			67	33			F.M. = 0.13

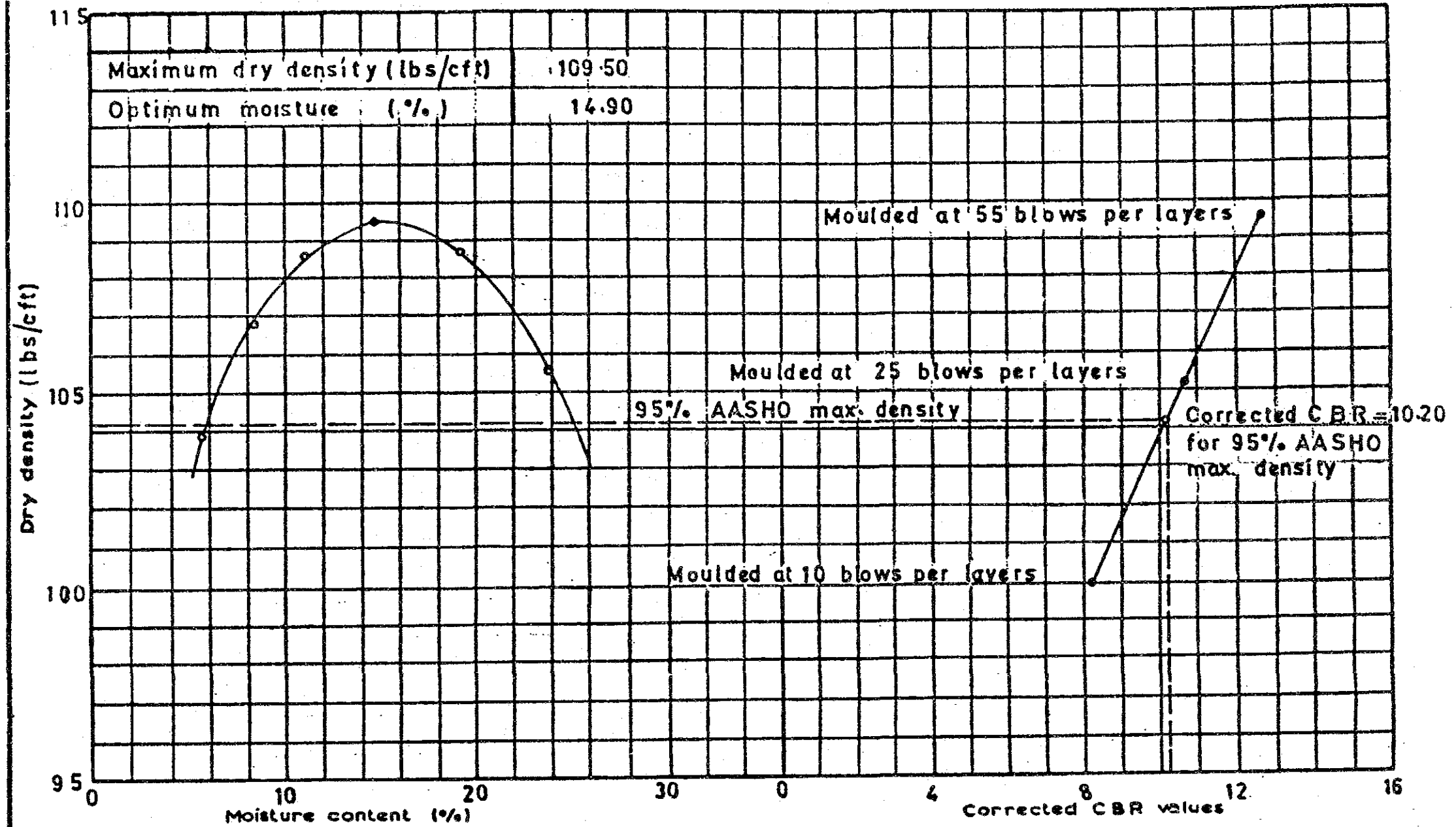
PROJECT	DRAWING No	TOTAL SHEET
MEGHNA-GUMTI	29	
CBR OF SAMPLE FROM MG I/A (SURFACE)		

SOILTECH
INTERNATIONAL LIMITED
DHAKA

COMPACTION & CBR TEST

M-G 1/A Sample Number - A. Depth :- 1.00m. to 1.50m.

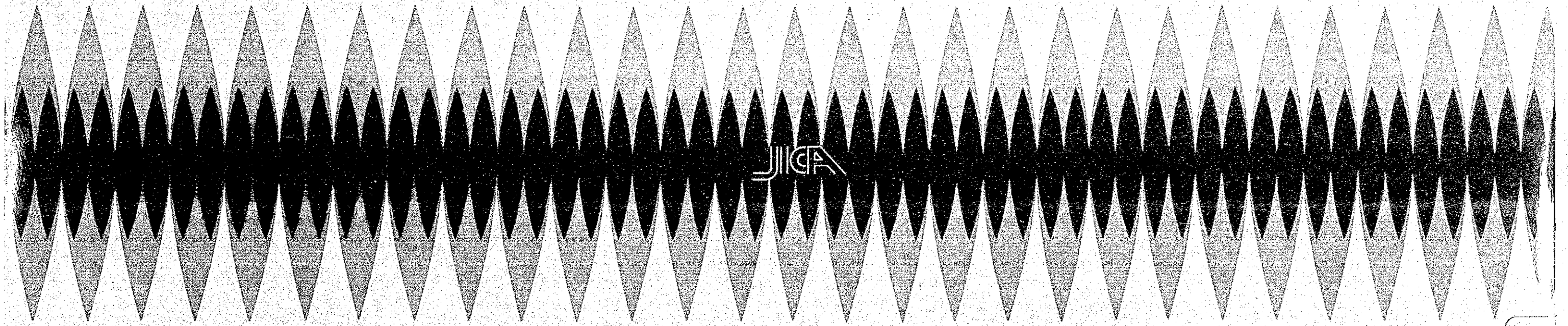
JICA STUDY TEAM
MEGHNA-GUMTI RIVER



DRN.

DATE:- 8 - 8 - 84

PLAN No. SL-12094/D



JICA

