GWADAR – LASBELA
LIVELIHOODS SUPPORT PROJECT – PHASE II

WORKING DRAWING

CONSTRUCTION AND REHABILITATION OF B/T ROAD FROM COASTAL HIGHWAY TO SAPAT

PLAN & PROFILE RD 0+000 TO 1+718.752

Infrastructure Specialist
Gwadar-Lasbela
Livelihoods Support
Project, Gwadar

CAMEOS
CONSULTANTS
CONSULTING ENGINEERS ARCHITECTS & PLANNERS.
44-A CHAMAN HOUSING SCHEME AIRPORT ROAD QUETTA.

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S.No	E	N	El	REMARKS
1	789941.6	2823821.8	1000	BM1
2	789780.334	2822662.055	1007.09	BM10
3	789721.047	2822240.231	1002.521	BM11
4	789727.779	2822236.839	1002.576	BM12
5	789930.831	2823837.859	1000.343	BM2
6	789941.106	2823793.599	999.521	BM3
7	789930.363	2823787.768	1000.028	BM4
8	789863.842	2823244.581	999.908	BM5
9	789855.234	2823253.098	999.363	BM6
10	789813.877	2822919.166	1000.493	BM7
11	789820.89	2822915.476	1000.406	BM8
12	789783.823	2822686.787	1007.411	BM9

CLIENT: GLLSP-II

CONSULTANTS: CAMEOS CONSULTANTS
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44-A CHAMAN HOUSING SCHEME AIRPORT ROAD QUETTA

PROJECT: GWADAR-LASBELA LIVELIHOODS SUPPORT PROJECT PHASE-II
CONSTRUCTION AND REHABILITATION OF B/T ROAD FROM COASTAL HIGHWAY TO SAPAT

DRAWING TITLE:- BM -LIST

NOTES:
ALL LEVELS AND DIMENSIONS ARE IN METERS UNLESS INDICATED OTHERWISE.

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Livelihoods Support
Project, Gwadar

DRAWN BY:	HABIB UR REHMAN	DESIGNED BY:	FARIA
CHECKED BY:	ASADULLAH JAN	SCALE:	AS SHOWN
FILE PATH:	E/N-2020-RW-D	DATE:	2022
DRAWING NO.		PLOT DATE:	2022

MATERIAL REQUIREMENTS

EMBANKMENT CONSTRUCTION

Minimum CBR: =

The material for embankment, except the top thirty (30cm), shall have a minimum soaked CBR value of five (5) % unless otherwise stated on the Drawings.

Material having a C.B.R value less than 7% determined according to AASHTO T-193, for the embankment depth of 30 cm below sub-grade.

Compaction: = The Material shall have a CBR value of at least 95%

Material required: =

The Contractor shall use AASHTO Class A-1, A-2, A-3, A-4 soil as specified in AASHTO M 145 or other material as defined in AASHTO Soil Classification System Table given before.

%age of maximum dry density as Determine by AASHTO T-180

Depth in centimetres below sub-grade level	Percent of Maximum Dry Density as Determined by
0 to 30	95
30 to 75	93
Over 75	90

SUB BASE CONSTRUCTION

Minimum CBR: =

The Material shall have a CBR value of at least 50%

Compaction: =

Density corresponding to Ninety eight (98) percent of the maximum dry density determined according to AASHTO T-180 Method-D.

Grading specifications : =

The sub-base material shall have a gradation curve within the limits for grading A, Band C given below.

Grading Requirements for Sub-base Material			
Sieve designation Standard / Alternate	Mass Percent Passing Grading		
(mm.) / inches	A	B	C
60.0(2 ½ inches)	100	-	-
50.0(2 inches)	90-100	100	-
25.0(1 inch)	50-80	55-85	100
9.5(3/8 inch)	-	40-70	50-85
4.75 (No. 4)	35-70	30-60	35-65
2.0 (No. 10)	-	20-50	25-50
0.425 (No. 40)	-	10-30	15-30
0.075 (No. 200)	5-15	5-15	5-15

BASE CONSTRUCTION

Minimum CBR: =

The material passing the 19 mm sieve shall have a CBR value of a minimum eighty (80) percent, tested according to the AASHTO T-193.

Compaction: =

The CBR value shall be obtained at the maximum 100% dry density determined according to AASHTO T-180, Method D.

Grading required: =

The gradation curve of the material shall be smooth and within the envelope limits' for Grading (A or B) given below:

Sieve designation Standard/ Alternate mm / (inches)	Mass Percent Passing Grading	
	A	B
50.0 (2 inches)	10	100
25.0 (1 inch)	7	75-95
9.5 (3/8 inch)	30-65	40-75
4.75 (No. 4)	25-55	30-60
2.0 (No. 10)	15-40	20-50
0.425 (No. 40)	8-20	12-25
0.075 (No. 200)	2-8	5-10

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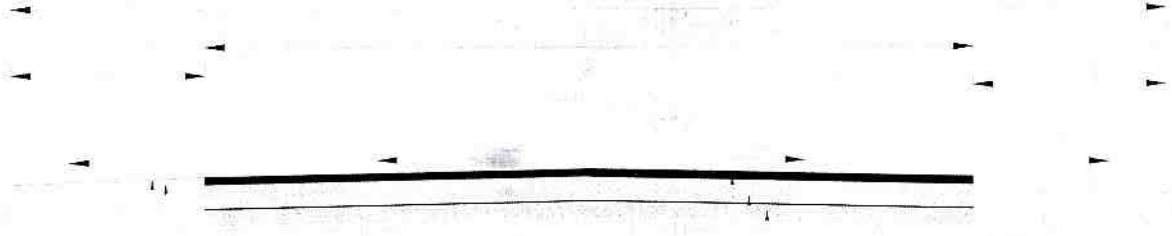

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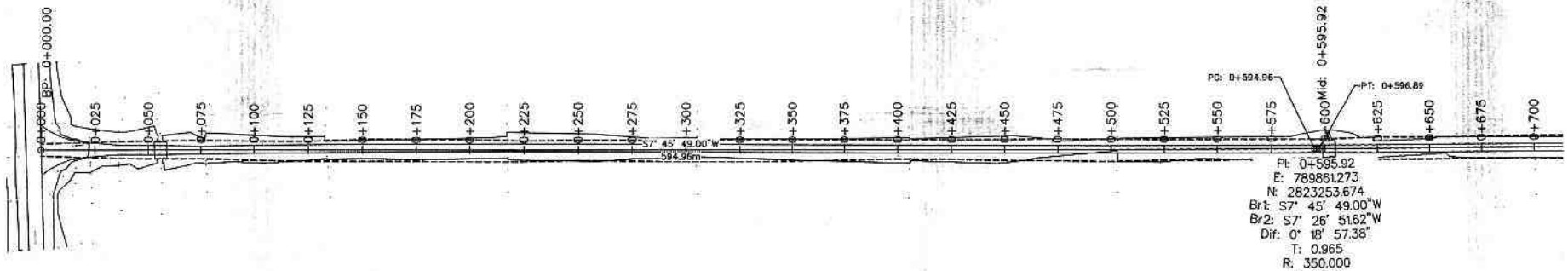
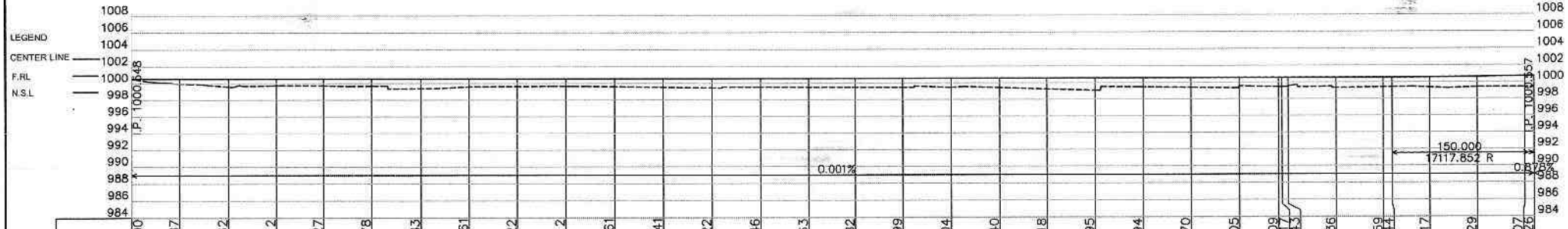
GLLSP-II	CAMEOS CONSULTANTS CONSULTING ENGINEERS,ARCHITECTS & PLANNERS. 27-A, STREET. NO. 28 F-10/1 ISLAMABAD. 44-A CHAMAN HOUSING SCHEME AIRPORT ROAD QUETTA.	GWADAR-LASBELA LIVELIHOODS SUPPORT PROJECT PHASE-II CONSTRUCTION AND REHABILITATION OF B/T ROAD FROM COASTAL HIGHWAY TO SAPAT	TYPICAL SECTION OF ROAD	ALL LEVELS AND DIMENSIONS ARE IN METERS UNLESS INDICATED OTHERWISE.	CHECKED BY:	A SADULLAH JAN	SCALE: AS SHOWN
					FILE PATH:	D:DATA	DATE: 2022
					DRAWING NO:	00	SHEET: 8

PLAN



PI: 0+595.92
E: 789861.273
N: 2823253.674
Br1: S7° 45' 49.00"W
Br2: S7° 26' 51.62"W
Dif: 0° 18' 57.38"
T: 0.965
R: 350.000
L: 1.930
C: 1.930
MO: 0.001
EP: 0.001

PROFILE



CHAINAGE	CUT/FILL	DESIGN SURFACE	EXISTING SURFACE
0.000	+0.000	1000.548	1000.548
25.000	+0.587	1000.548	999.961
50.000	+0.962	1000.549	999.587
75.000	+0.812	1000.549	999.737
100.000	+0.827	1000.549	999.722
125.000	+0.878	1000.550	999.672
150.000	+1.183	1000.550	999.367
175.000	+0.961	1000.550	999.589
200.000	+0.922	1000.550	999.628
225.000	+0.912	1000.551	999.639
250.000	+0.961	1000.551	999.590
275.000	+1.041	1000.551	999.510
300.000	+1.122	1000.552	999.430
325.000	+1.046	1000.552	999.506
350.000	+1.063	1000.552	999.489
375.000	+1.082	1000.553	999.471
400.000	+1.099	1000.553	999.454
425.000	+1.104	1000.553	999.449
450.000	+1.140	1000.554	999.414
475.000	+1.318	1000.554	999.236
500.000	+1.495	1000.554	999.059
525.000	+1.094	1000.554	999.460
550.000	+1.170	1000.555	999.385
575.000	+1.005	1000.555	999.550
594.959	+1.109	1000.555	999.446
596.889	+1.117	1000.555	999.438
600.000	+1.043	1000.555	999.512
625.000	+1.236	1000.556	999.320
650.000	+1.159	1000.556	999.397
654.763	+1.144	1000.556	999.412
675.000	+1.217	1000.588	999.351
700.000	+1.229	1000.616	999.387
725.000	+1.307	1000.701	999.394
729.763	+1.326	1000.721	999.395

SCALES: HORIZONTAL 1:1100 VERTICAL 1:250

LONGITUDINAL SECTION
Sapat Ch 0.000 to Ch 729.763

CLIENT: GLLSP-II

CONSULTANTS: CAMEOS CONSULTANTS
CONSULTING ENGINEERS ARCHITECTS & PLANNERS
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DRAWING TITLE: LONGITUDINAL SECTION

Infrastructure Specialist
Gwadar-Lasbela Livelihoods Support Project, Gwadar

NOTES:
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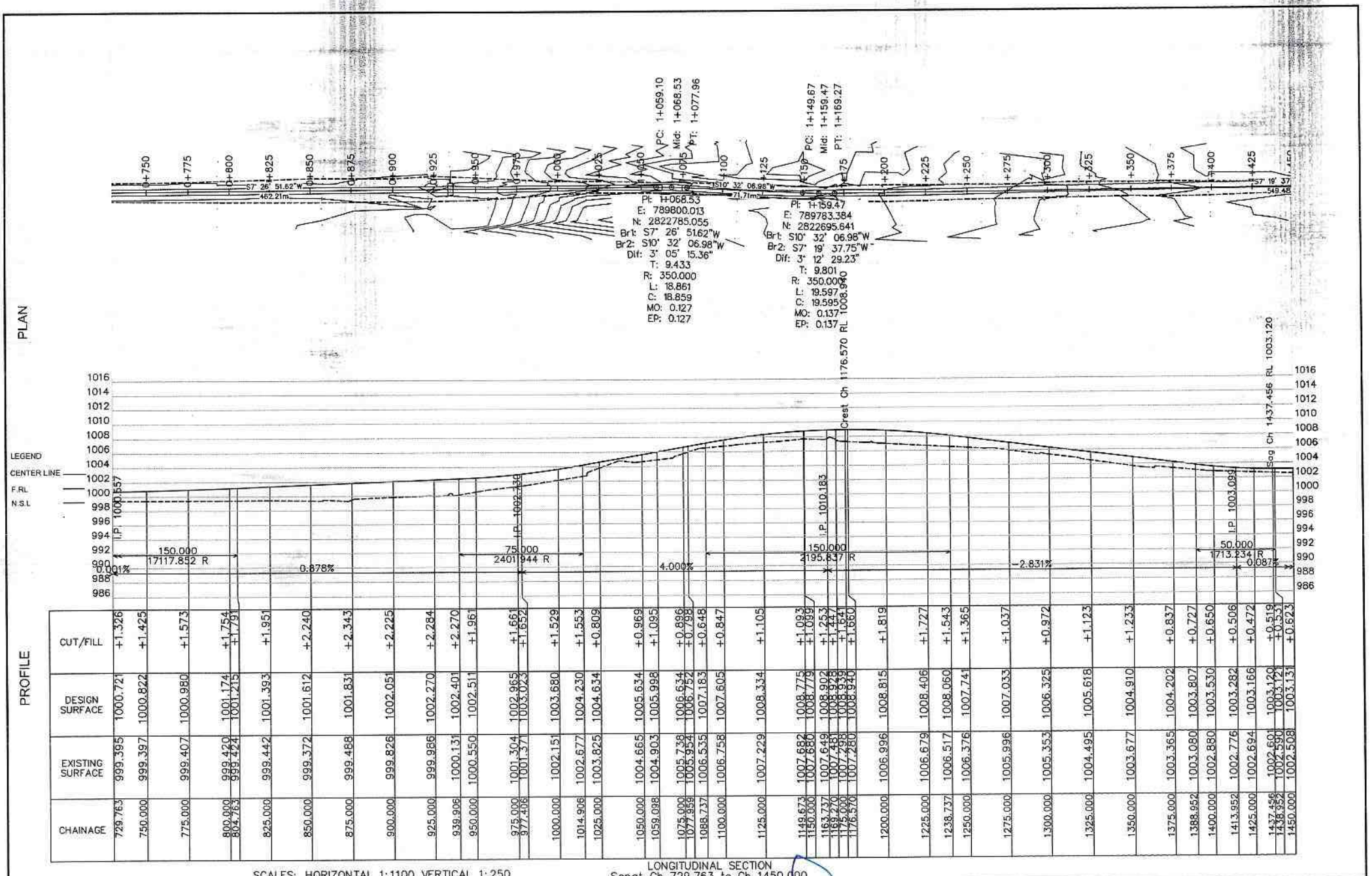

SCALES: HORIZONTAL 1:1100 VERTICAL 1:250

LONGITUDINAL SECTION
Sapat Ch 729.763 to Ch 1450.000

CLIENT:
G.L.L.S.P-II

CONSULTANTS:
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DRAWING TITLE:-
PLAN & PROFILE

Infrastructure Specialist
Gwadar-Lasbela Livelihoods Support Project, Gwadar

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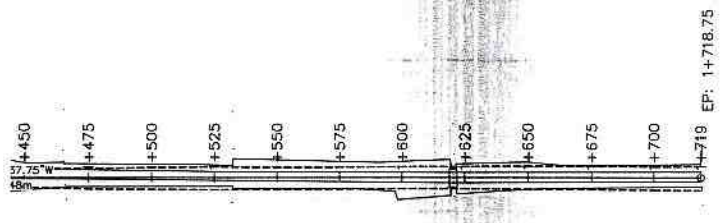
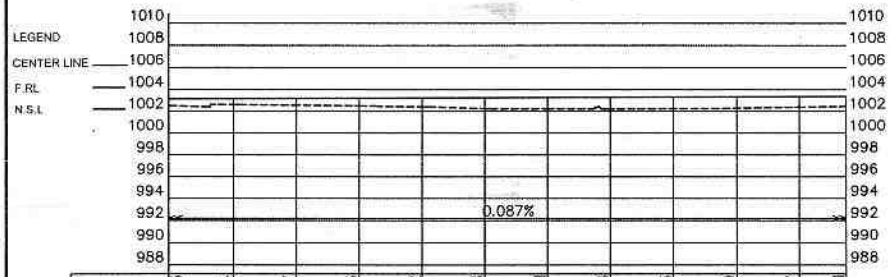
PLAN



PROFILE



CUT/FILL	+0.623	+0.554	+0.627	+0.703	+0.812	+1.008	+1.051	+1.078	+1.076	+1.050	+0.977	+0.921
DESIGN SURFACE	1003.131	1003.153	1003.174	1003.196	1003.218	1003.240	1003.262	1003.284	1003.305	1003.327	1003.349	1003.365
EXISTING SURFACE	1002.508	1002.599	1002.547	1002.493	1002.406	1002.232	1002.211	1002.206	1002.229	1002.277	1002.372	1002.444
CHAINAGE	1450.000	1475.000	1500.000	1525.000	1550.000	1575.000	1600.000	1625.000	1650.000	1675.000	1700.000	1718.752

LONGITUDINAL SECTION
Sapat Ch 1450.000 to Ch 1718.752

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SCALES: HORIZONTAL 1:1100 VERTICAL 1:250

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G L L S P -II

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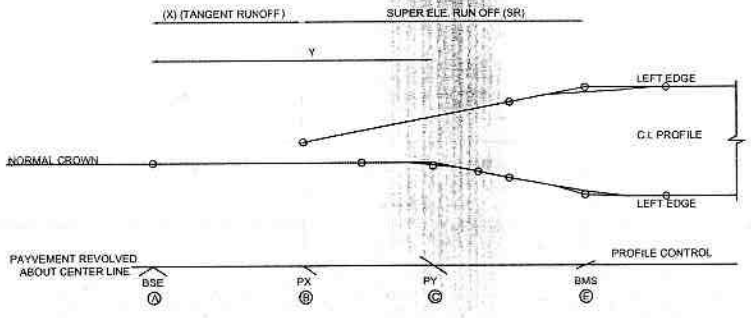
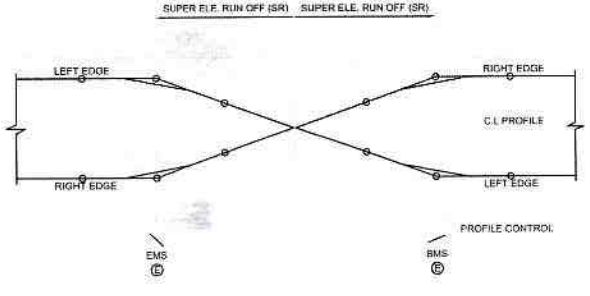


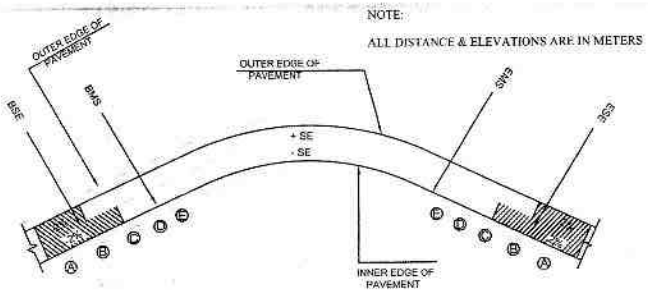
TYPICAL SUPER ELEVATION DIAGRAM



TYPICAL SUPER ELEVATION DIAGRAM ON REVERSE CURVES

NOTE:

ALL DISTANCE & ELEVATIONS ARE IN METERS



PLAN OF TYPICAL SUPER ELEVATION TRANSITIONS

SHOULDER	PAVEMENT	PAVEMENT (F.G.L)	SHOULDER
-4%	-2%	-2%	-4%
-4%	0%	-2%	-4%
-3%	+1%	-2%	-4%
-2%	+2%	-2%	-4%
-1%	+3%	-3%	-4%
0%	+4%	-4%	-4%
+1%	+5%	-5%	-5%
+2%	+6%	-6%	-6%

SECTION OF TYPICAL DISTRIBUTION OF SUPERELEVATION

$$\text{PAVEMENT S.E} = \left[\frac{\text{MSE \% BSE \%}}{\text{MSE STA. - BSE STA.}} \times \text{REQUIRED DISTANCE} \right] - 2\%$$

LEGEND

BSE BEGINING OF SUPER ELEVATION
PX POINT AT DISTANCE X AFTER BS
PY POINT AT DISTANCE Y AFTER BS
BMS (in) POINT AT WHICH MAXIMUM SUPER ELEVATION BEGINS
EMS (out) POINT AT WHICH MAXIMUM SUPER ELEVATION ENDS
PY POINT AT DISTANCE Y BEFORE ES
PX POINT AT DISTANCE X BEFORE ES
ESE END OF SUPERELEVATION
- MSE CROSS SLOPE AT MAXIMUM SUPERELEVATION
- SR (DISTANCE FROM PX TO WHERE MAXIMUM SUPER ELEVATION IS ACHIVED)

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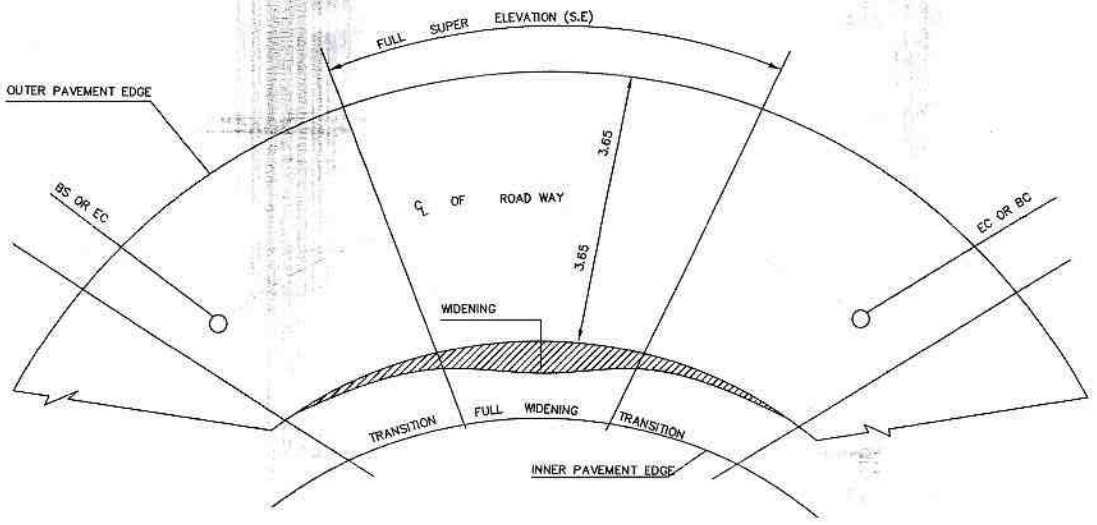

ROADWAY WIDENING

TYPICAL PAVEMENT WIDENING AT CURVES				
RADIUS (M)	UP TO 20	21 - 30	31 - 40	41 - ABOVE
INCREASE IN PAVEMENT WIDTH (M)	1.0	0.7	0.5	0.3

NOTE:-

BC (BEGINING OF CURVE)
EC (END OF CURVE)
BS (BEGINING OF SUPER ELEVATION)
ES (END OF SUPER ELEVATION)
* WIDENING SHALL BE PROVIDED ONLY INSIDE OF THE CURVE
* WIDENING SHALL BE PROVIDED ONLY TO CURVES UP TO 100 METERS RADIUS

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