GWADAR – LASBELA
LIVELIHOODS SUPPORT PROJECT – PHASE II

WORKING DRAWING

CONSTRUCTION OF B/T ROAD FROM BARA BAGH ROAD HAJI MOOSA GOTH BELA

Infrastructure Specialist
Gwadar-Lasbela
Livelihoods Support
Project, Gwadar

PLAN & PROFILE RD 0+000 TO 1+804.440
PLAN & PROFILE RD 0+000 TO 0+195.172(LINK ROAD)

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

QUETTA OFFICE
CONSULTING ENGINEERS ARCHITECTS & PLANNERS.
44-A CHAMAN HOUSING SCHEME AIRPORT ROAD QUETTA.
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CONSULTING ENGINEERS ARCHITECTS & PLANNERS, AGRICULTURE, SOCIAL DEVELOPMENT & HRD CONSULTANTS

S.No	X	Y	Z	REMARKS
1	231051.279	2911047.977	1000.177	BM1
2	231067.622	2911034.23	1000.081	BM2
3	231094.738	2912030.004	1009.099	BM3
4	231087.621	2912025.215	1009.085	BM4
5	231311.035	2912369.876	1013.499	BM5
6	231343.995	2912414.251	1013.385	BM6
7	231407.436	2912502.567	1013.755	BM7
8	231451.276	2912563.902	1014.18	BM8
9	231523.303	2912730.492	1014.664	BM9

Infrastructure Specialist
Gwadar-Lasbela
Livelihoods Support
Project Gwadar

CLIENT: GLLSP-II

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

PROJECT: GWADAR-LASBELA LIVELIHOODS SUPPORT PROJECT PHASE-II
CONSTRUCTION OF B/T ROAD FROM BARA BAGH ROAD HAJI MOOSA GOTH BELA

DRAWING TITLE:- BM -LIST

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

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.

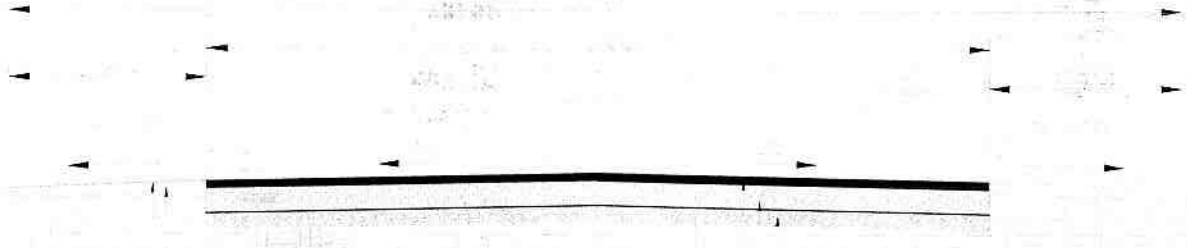
Compaction: =

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

Grading required: =

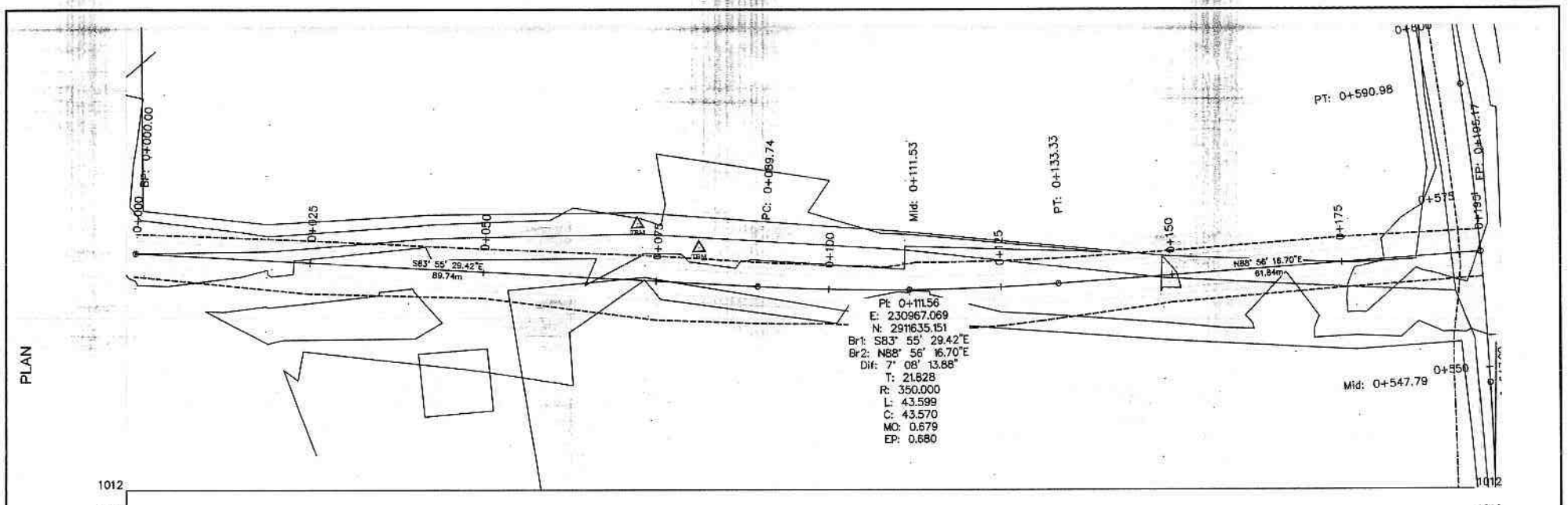
The gradation curve of the material shall be smooth and within the envelope limits' for Grading (A or B) given below:

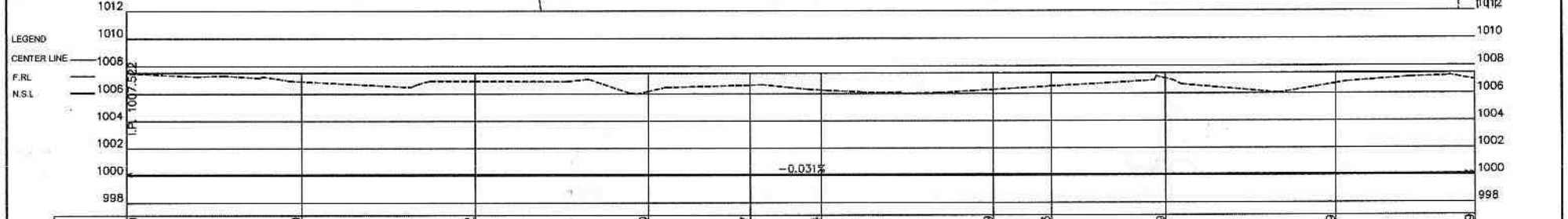
Sieve designation Standard/ Alternate mm / (inches)	Mass Percent Passing Grading	
	A	B
50.0 (2 inches)	10	100
25.0 (1 inch)	7	75-95
9.5 (3/8 inch)	30-65	40-75
4.75 (No. 4)	25-55	30-60
2.0 (No. 10)	15-40	20-50
0.425 (No. 40)	8-20	12-25
0.075 (No. 200)	2-8	5-10



Infrastructure Specialist
Gwadar-Lasbela
Livelihoods Support
Project, Gwadar

CLIENT:	CONSULTANTS:	PROJECT:	DRAWING TITLE:	NOTES:	DRAWN BY: HABIB UR REHMAN	DESIGNED BY: FARIA	
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 OF B/T ROAD FROM BARA BAGH ROAD HAJI MOOSA GOTH BELA	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	





PROFILE

CUT/FILL	+0.000	+0.610	+0.582	+1.320	+0.867	+1.224	+1.189	+0.953	+0.389	+0.759	+0.499
DESIGN SURFACE	1007.522	1007.514	1007.507	1007.499	1007.494	1007.491	1007.484	1007.481	1007.476	1007.468	1007.462
EXISTING SURFACE	1007.522	1006.904	1006.925	1006.179	1006.627	1006.267	1006.295	1006.528	1007.087	1006.709	1006.963
CHAINAGE	0.000	25.000	50.000	75.000	89.735	100.000	125.000	133.334	150.000	175.000	195.172

LINK ROAD Ch 0.000 to Ch 195.172

LONGITUDINAL SECTION

SCALES: HORIZONTAL 1:300 VERTICAL 1:150

CLIENT: GLLSP-II

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

PROJECT: GWADAR-LASBELA LIVELIHOODS SUPPORT PROJECT PHASE-II
CONSTRUCTION OF B/T ROAD FROM BARA BAGH ROAD HAJI MOOSA GOTH BELA

DRAWING TITLE:- PLAN & PROFILE

NOTES:
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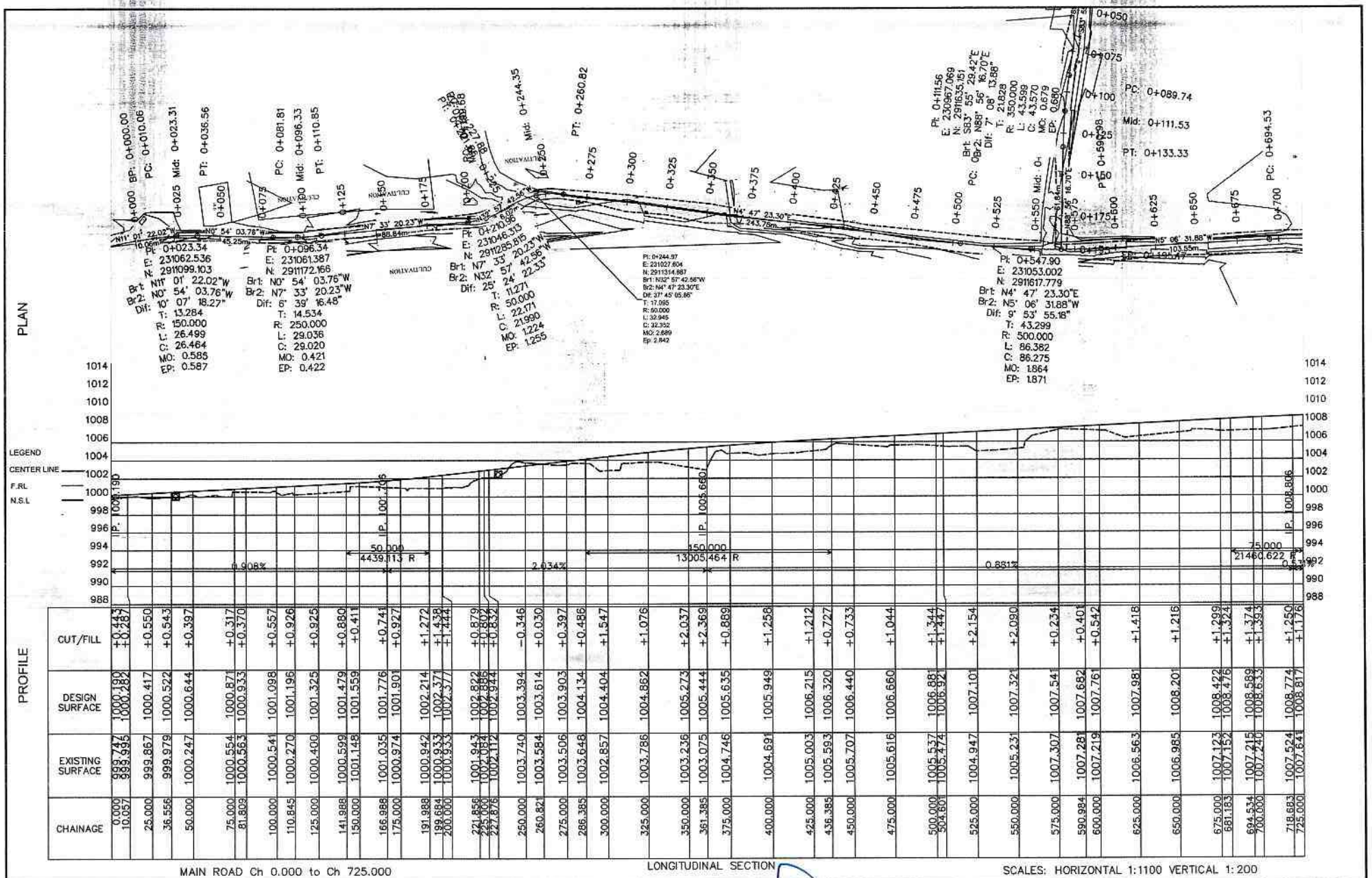
DRAWN BY:	HABIB UR REHMAN	DESIGNED BY:	FARIA
CHECKED BY:	ASADULLAH JAN	SCALE:	AS SHOWN
FILE PATH:	2022-D-GLLSP-II	DATE:	2022
DRAWING NO:		PLOT DATE:	2022

Infrastructure Specialist
Gwadar-Lasbela
Livelihoods Support
Project, Gwadar



CHAINAGE	DESIGN SURFACE	EXISTING SURFACE	CUT/FILL
0.000	1000.190	999.747	+0.443
10.057	1000.282	999.995	+0.287
25.000	1000.417	999.867	+0.550
36.556	1000.522	999.979	+0.543
50.000	1000.644	1000.247	+0.397
75.000	1000.871	1000.554	+0.317
81.809	1000.933	1000.563	+0.370
100.000	1001.098	1000.541	+0.557
110.845	1001.196	1000.270	+0.926
125.000	1001.325	1000.400	+0.925
141.988	1001.479	1000.599	+0.880
150.000	1001.559	1001.148	+0.411
166.988	1001.776	1001.035	+0.741
175.000	1001.901	1000.974	+0.927
191.988	1002.214	1000.942	+1.272
199.684	1002.371	1000.933	+1.438
200.000	1002.377	1000.933	+1.444
221.856	1002.822	1001.943	+0.879
225.000	1002.886	1002.084	+0.802
227.876	1002.944	1002.112	+0.832
250.000	1003.394	1003.740	−0.346
260.82	1003.614	1003.584	+0.030
275.000	1003.903	1003.506	+0.397
286.385	1004.134	1003.648	+0.486
300.000	1004.404	1002.857	+1.547
325.000	1004.862	1003.786	+1.076
350.000	1005.273	1003.236	+2.037
361.385	1005.444	1003.075	+2.369
375.000	1005.635	1004.746	+0.889
400.000	1005.949	1004.691	+1.258
425.000	1006.215	1005.003	+1.212
436.385	1006.320	1005.593	+0.727
450.000	1006.440	1005.707	+0.733
475.000	1006.660	1005.616	+1.044
500.000	1006.881	1005.537	+1.344
504.601	1006.92	1005.474	+1.447
525.000	1007.101	1004.947	+2.154
550.000	1007.321	1005.231	+2.090
575.000	1007.541	1007.307	+0.234
590.984	1007.682	1007.281	+0.401
600.000	1007.761	1007.219	+0.542
625.000	1007.981	1006.563	+1.418
650.000	1008.201	1006.985	+1.216
675.000	1008.422	1007.123	+1.299
681.183	1008.476	1007.152	+1.324
694.534	1008.589	1007.215	+1.374
700.000	1008.633	1007.240	+1.393
718.683	1008.774	1007.524	+1.250
725.000	1008.817	1007.641	+1.176

MAIN ROAD Ch 0.000 to Ch 725.000

LONGITUDINAL SECTION

SCALES: HORIZONTAL 1:1100 VERTICAL 1: 200

CLIENT: GLLSP-II

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

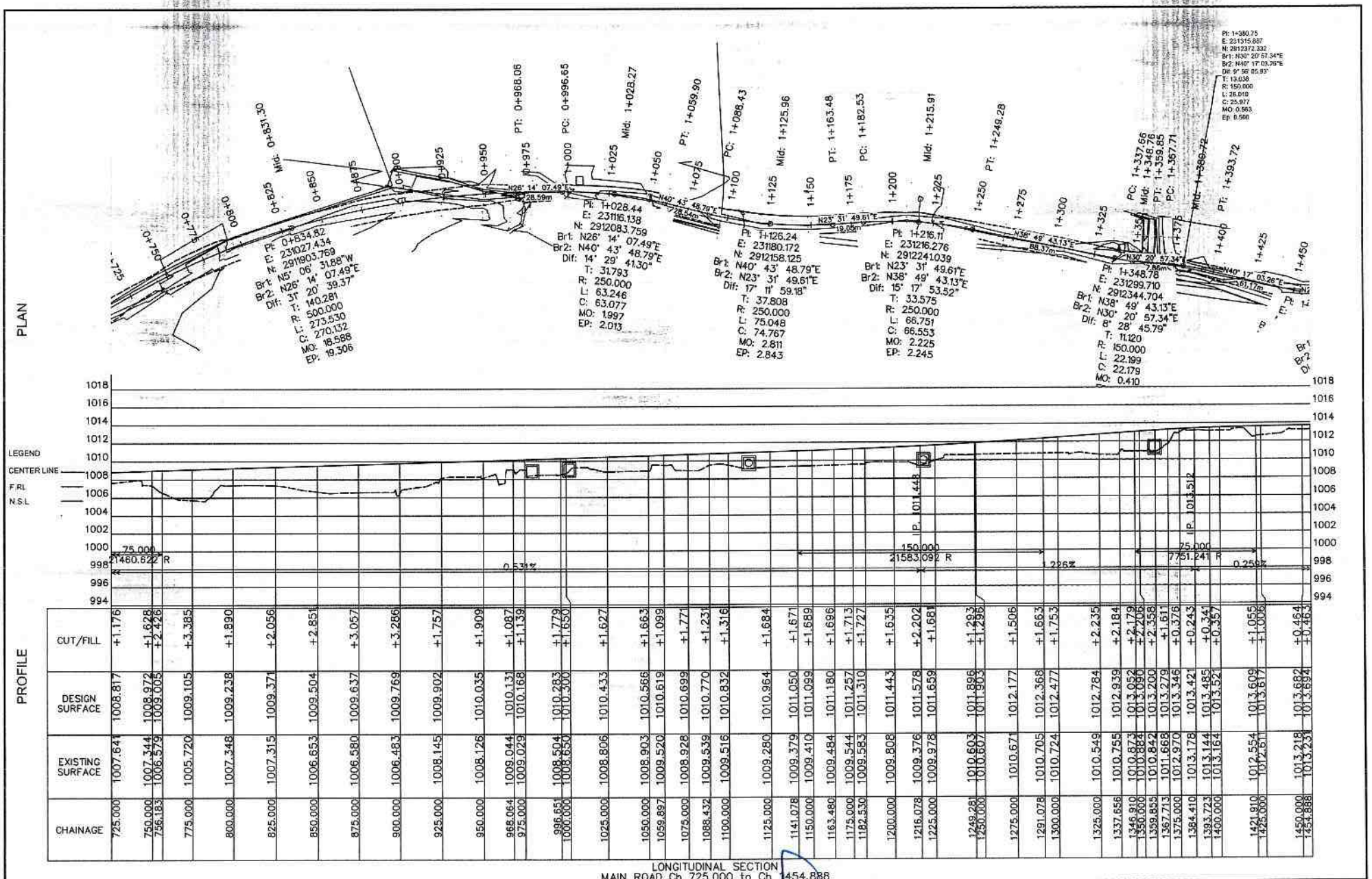
PROJECT: GWADAR-LASBELA LIVELIHOODS SUPPORT PROJECT PHASE-II
CONSTRUCTION OF B/T ROAD FROM BARA BAGH ROAD HAJI MOOSA GOTH BE

DRAWING TITLE:- PLAN & PROFILE

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

DRAWN BY:	HABIB UR REHMAN	DESIGNED BY:	FARIA
CHECKED BY:	ASADULLAH JAN	SCALE:	AS SHOWN
FILE PATH:	2022-D-GLLSP-II	DATE:	2022
DRAWING NO:		PLOT DATE:	2022

Infrastructure Specialist
Gwadar-Lasbela
Livelihoods Support
Project, Gwadar



CHAINAGE	EXISTING SURFACE	DESIGN SURFACE	CUT/FILL
725.000	1007.641	1008.817	+1.176
750.000	1007.344	1008.972	+1.628
756.183	1006.579	1009.005	+2.426
775.000	1005.720	1009.105	+3.385
800.000	1007.348	1009.238	+1.890
825.000	1007.315	1009.371	+2.056
850.000	1006.653	1009.504	+2.851
875.000	1006.580	1009.637	+3.057
900.000	1006.483	1009.769	+3.286
925.000	1008.145	1009.902	+1.757
950.000	1008.126	1010.035	+1.909
968.064	1009.044	1010.131	+1.087
975.000	1009.029	1010.168	+1.139
996.651	1008.504	1010.283	+1.779
1000.000	1008.650	1010.300	+1.650
1025.000	1008.806	1010.433	+1.627
1050.000	1008.903	1010.566	+1.663
1059.897	1009.520	1010.619	+1.099
1075.000	1008.928	1010.699	+1.771
1088.432	1009.539	1010.770	+1.231
1100.000	1009.516	1010.832	+1.316
1125.000	1009.280	1010.964	+1.684
1141.078	1009.379	1011.050	+1.671
1150.000	1009.410	1011.099	+1.689
1163.480	1009.484	1011.180	+1.696
1175.000	1009.544	1011.257	+1.713
1182.530	1009.583	1011.310	+1.727
1200.000	1009.808	1011.443	+1.635
1216.078	1009.376	1011.578	+2.202
1225.000	1009.978	1011.659	+1.681
1249.281	1010.603	1011.896	+1.293
1250.000	1010.607	1011.903	+1.296
1275.000	1010.671	1012.177	+1.506
1291.078	1010.705	1012.368	+1.663
1300.000	1010.724	1012.477	+1.753
1325.000	1010.549	1012.784	+2.235
1337.656	1010.755	1012.939	+2.184
1346.910	1010.873	1013.052	+2.179
1350.000	1010.884	1013.090	+2.206
1359.855	1010.842	1013.200	+2.358
1367.713	1011.668	1013.279	+1.611
1375.000	1012.970	1013.346	+0.376
1384.410	1013.178	1013.421	+0.243
1393.723	1013.144	1013.485	+0.341
1400.000	1013.164	1013.521	+0.357
1421.910	1012.554	1013.609	+1.055
1425.000	1012.611	1013.617	+1.006
1450.000	1013.218	1013.682	+0.464
1454.888	1013.231	1013.694	+0.463

LONGITUDINAL SECTION
MAIN ROAD Ch 725.000 to Ch 1454.888
SCALES: HORIZONTAL 1:1000 VERTICAL 1:200

CLIENT: GLLSP-II

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

PROJECT: GWADAR-LASBELA LIVELIHOODS SUPPORT PROJECT PHASE-II
CONSTRUCTION OF B/T ROAD FROM BARA BAGH ROAD HAJI MOOSA GOTH BELA

PLAN & PROFILE

NOTES:
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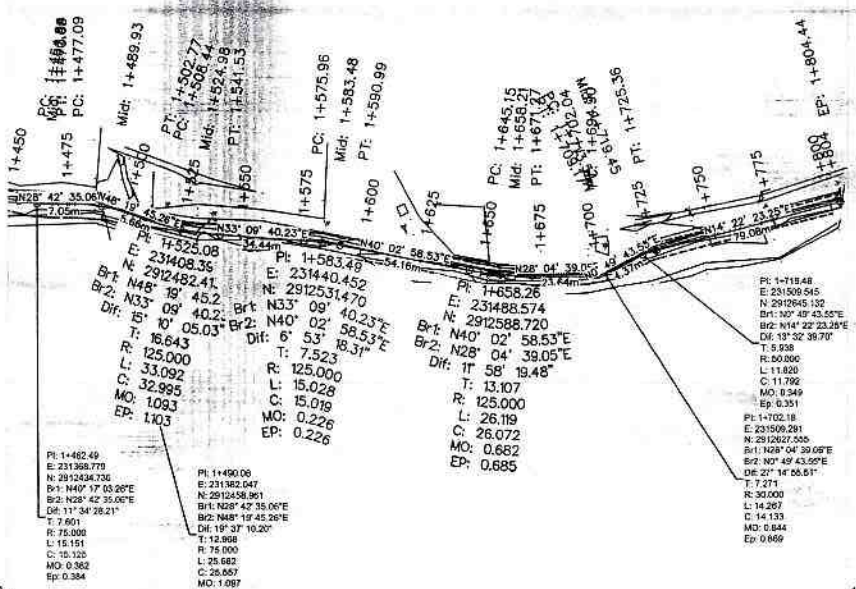
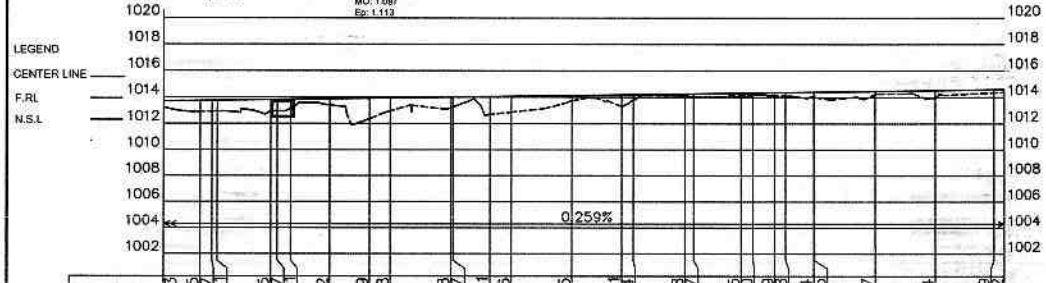
DRAWN BY:	HABIB UR REHMAN	DESIGNED BY:	FARIA
CHECKED BY:	ASADULLAH JAN	SCALE:	AS SHOWN
FILE PATH:	2022-D-GLLSP-II	DATE:	2022
DRAWING NO:		PLOT DATE:	2022

Infrastructure Specialist
Gwadar-Lasbela Livelihoods Support Project, Gwadar

PLAN



PROFILE



CHAINAGE	CUT/FILL	DESIGN SURFACE	EXISTING SURFACE
1454.888	+0.463	1013.694	1013.231
1470.038	+0.835	1013.733	1012.898
1475.000	+0.817	1013.746	1012.929
1477.090	+0.811	1013.752	1012.941
1500.000	+0.865	1013.811	1012.946
1502.772	+0.867	1013.818	1012.951
1508.436	+0.691	1013.833	1013.142
1525.000	+0.472	1013.876	1013.404
1541.527	+1.549	1013.918	1012.369
1550.000	+0.988	1013.940	1012.952
1575.000	+0.798	1014.005	1013.207
1575.962	+0.737	1014.007	1013.270
1590.990	+1.351	1014.046	1012.695
1600.000	+1.196	1014.069	1012.873
1625.000	+0.405	1014.134	1013.729
1645.148	+0.871	1014.186	1013.315
1650.000	+0.424	1014.199	1013.775
1671.267	+0.138	1014.254	1014.116
1675.000	+0.207	1014.263	1014.056
1694.904	+0.195	1014.315	1014.120
1700.000	+0.160	1014.328	1014.168
1709.172	+0.229	1014.352	1014.123
1713.541	+0.258	1014.363	1014.105
1725.000	+0.384	1014.393	1014.009
1725.361	+0.395	1014.394	1013.999
1750.000	+0.247	1014.457	1014.210
1775.000	+0.624	1014.522	1013.898
1800.000	+0.239	1014.587	1014.348
1804.440	+0.212	1014.598	1014.386

LONGITUDINAL SECTION
MAIN ROAD Ch 1454.888 to Ch 1804.440
SCALES: HORIZONTAL 1:1100 VERTICAL 1:200

CLIENT:
G L L S P-II

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

PROJECT:
GWADAR-LASBELA LIVELIHOODS SUPPORT PROJECT PHASE-II
CONSTRUCTION OF B/T ROAD FROM BARA BAGH ROAD HAJI MOOSA GOTH BELA

DRAWING TITLE:-
PLAN & PROFILE

NOTES:
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DRAWN BY:	HABIB UR REHMAN	DESIGNED BY:	FARIA
CHECKED BY:	ASADULLAH JAN	SCALE:	AS SHOWN
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DRAWING NO:		PLOT DATE:	2022

Infrastructure Specialist
Gwadar Lasbela Livelihoods Support Project, Gwadar

Construction of B/T Road from Bara Bagh road haji Moosa goth bela

S.No	RD	Cell	Span	height	Remarks
1	0+225	0.9144 Dia			Pipe Culvert
2	0+964	2	3	1.5	BOX CULVERT
3	0+998	2	3	1.5	BOX CULVERT
4	1+215	0.9144 Dia			Pipe Culvert
5	1+360	2	3	1.5	BOX CULVERT

CLIENT: GLLSP-II

CONSULTANTS: CAMEOS CONSULTANTS
CONSULTING ENGINEERS, ARCHITECTS & PLANNERS
27-A, STREET NO. 28 F-10/1 ISLAMABAD.
44-A CHAMAN HOUSING SCHEME AIRPORT ROAD QUETTA

PROJECT: GWADAR-LASBELA LIVELIHOODS SUPPORT PROJECT PHASE-II
CONSTRUCTION OF B/T ROAD FROM BARA BAGH ROAD HAJI MOOSA GOTH

DRAWING TITLE:- LIST OF BOX CULVERT

NOTES:
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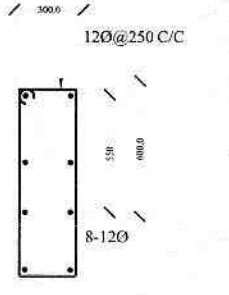
DRAWN BY:	ASIM	DESIGNED BY:	ALI AKBAR
CHECKED BY:	A SADULLAH JAN	SCALE:	AS SHOWN
FILE PATH:	D:\DATA	DATE:	2018
DRAWING NO:	00	SHEET:	0

Infrastructure Specialist
Gwadar-Lasbela
Project Support

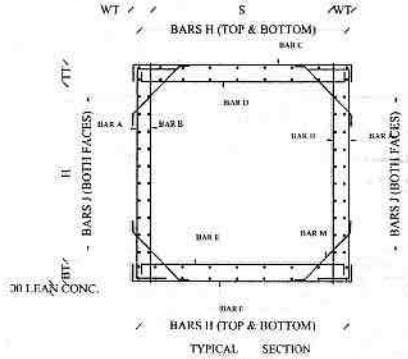
S.NO.	TYPE OF REINFORCEMENT	BAR MARK A (420 mm) X=H+BT+Tt-100	BAR MARK B X=H+BT+Tt-100	BAR MARK C (300 mm) X=H+Bt+Tt-100	BAR MARK D (300 mm) X=2(WT+S)+WT1-100	BAR MARK E (X-Tt-50) X=2(WT+S)-WT1-100	BAR MARK F (X-Bt-50) X=2(WT-S)-WT1-100	BAR MARK G (102 mm) X=2(WT-S)+WT1-100	BAR MARK H STRAIGHT X VARIES	BAR MARK J STRAIGHT X VARIES	BAR MARK K X=2*(S/3)+WT1	BAR MARK L X=2*(S/3)+WT1	BAR MARK M (150) X= (2xHt)/2 +(BT-50)/SIC 45 (150)
1	DB 30	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 150 C/C	12 Ø @ 150 C/C	12 Ø @ 150 C/C	12 Ø @ 150 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 150 C/C	12 Ø @ 150 C/C	12 Ø @ 230 C/C +(Ht-50)/ SEC 45
2	SA 1	17 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C		12 Ø @ 230 C/C	12 Ø @ 230 C/C			12 Ø @ 230 C/C
3	SA 6	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C		12 Ø @ 230 C/C	12 Ø @ 230 C/C			12 Ø @ 230 C/C
4	SA 3	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C		12 Ø @ 230 C/C	12 Ø @ 230 C/C			12 Ø @ 230 C/C
5	SA 2	12 Ø @ 230C/C	12 Ø @ 230C/C	12 Ø @ 230C/C	12 Ø @ 230C/C	12 Ø @ 230C/C	12 Ø @ 230C/C		12 Ø @ 230 C/C	12 Ø @ 230 C/C			12 Ø @ 230 C/C
6	TC 17	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C
7	SA 9	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C		12 Ø @ 230 C/C	12 Ø @ 230 C/C			12 Ø @ 230 C/C
8	SA 16	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C		12 Ø @ 230 C/C	12 Ø @ 230 C/C			12 Ø @ 230 C/C
9	DB 8	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C
10	MD 32	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	16 Ø @ 230 C/C	16 Ø @ 230 C/C	16 Ø @ 230 C/C	16 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	16 Ø @ 230 C/C	16 Ø @ 230 C/C	12 Ø @ 230 C/C
11	MD 29	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 150 C/C	12 Ø @ 150 C/C	12 Ø @ 150 C/C	12 Ø @ 150 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 150 C/C	12 Ø @ 150 C/C	12 Ø @ 230 C/C
12	DB 15	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	17 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C
13	MD 30	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 150 C/C	12 Ø @ 150 C/C	12 Ø @ 150 C/C	12 Ø @ 150 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 150 C/C	12 Ø @ 150 C/C	12 Ø @ 230 C/C
14	SA 15	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C		12 Ø @ 230 C/C	12 Ø @ 230 C/C			12 Ø @ 230 C/C
15	DB 16	12 Ø @ 230 C/C	12 Ø @ 230 C/C	17 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	17 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	17 Ø @ 230 C/C
16	MD 31	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 150 C/C	12 Ø @ 150 C/C	12 Ø @ 150 C/C	12 Ø @ 150 C/C	12 Ø @ 230 C/C	12 Ø @ 230 C/C	12 Ø @ 150 C/C	12 Ø @ 150 C/C	12 Ø @ 230 C/C



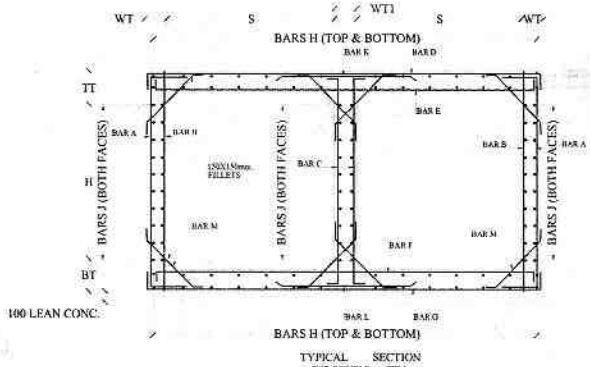
DETAIL 'A'

TYPICAL DETAIL OF R.C.C. PARAPET

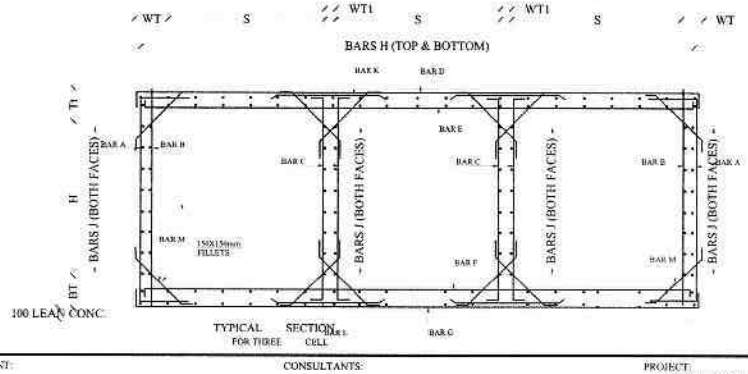
'A'



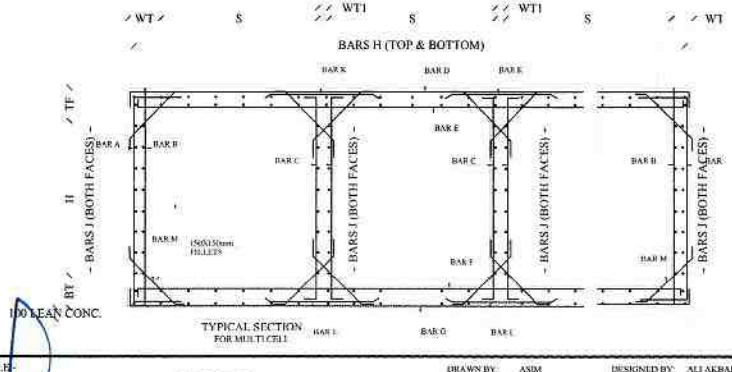
TYPICAL SECTION FOR SINGLE CELL



TYPICAL SECTION FOR DOUBLE CELL



TYPICAL SECTION FOR THREE CELL



TYPICAL SECTION FOR MULTI CELL

CLIENT:

G L L S P- II

CONSULTANTS:

CAMEOS CONSULTANTS
CONSULTING ENGINEERS,ARCHITECTS & PLANNERS
27-A, STREET. NO. 28 F-10/1 ISLAMABAD.
44-A CHAMAN HOUSING SCHEME AIRPORT ROAD QUETTA.

PROJECT:

GWADAR-LASBELA LIVELIHOODS SUPPORT PROJECT PHASE-II

CONSTRUCTION OF B/T ROAD FROM BARA BAGH ROAD HAJI MOOSA GOTH BELA

DRAWING TITLE:

BOX CULVERT REINFORCEMENT

NOTES:

ALL LEVELS AND DIMENSIONS ARE IN METERS UNLESS INDICATED OTHERWISE.

DRAWN BY:	ASIM	DESIGNED BY:	ALI AKBAR
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FILE PATH	D:\DATA	DATE:	2018
DRAWING NO:	05	SHEET:	0

Infrastructure Specialist
Gwadar-Lasbela Livelihoods Support Project, Gwadar

DIMENSIONS & SCHEDULE OF WING WALLS

S.No	DIMENSIONS H (M)	A (M)	B (M)	C (M)	D (M)	E (M)	F (M)	BAR 'A' DIA MM	BAR 'A' SPACING MM	BAR 'B' DIA MM	BAR 'B' SPACING MM	BAR 'C' DIA MM	BAR 'C' SPACING MM	BAR 'D' DIA MM	BAR 'D' SPACING MM	BAR 'E' DIA MM	BAR 'E' SPACING MM	BAR 'F' DIA MM	BAR 'F' SPACING MM
01	1	0.250	0.250	0.300	0.300	0.914	2.330	12	230	10	230	12	230	12	230	10	230	10	230
02	1.5	0.250	0.250	0.300	0.381	1.067	2.900	12	175	10	230	12	150	12	230	10	230	10	230
03	2	0.250	0.250	0.300	0.533	1.219	3.400	16	175	10	230	16	175	12	230	10	230	10	230
04	2.5	0.250	0.250	0.381	0.686	1.448	4.000	16	125	10	230	16	150	12	230	10	230	10	230
05	3	0.300	0.300	0.381	0.838	1.600	4.550	20	170	10	230	20	150	12	200	10	230	10	230
06	3.5	0.381	0.381	0.457	0.991	1.829	5.050	20	170	10	230	20	125	12	175	10	230	10	230
07	4	0.381	0.381	0.533	1.219	1.981	5.550	20	130	10	230	20	130	16	230	10	230	10	230
08	4.5	0.381	0.381	0.610	1.524	2.134	6.050	25	170	10	230	25	200	16	175	10	230	10	230

AHGLE F SPLAY FOR SKEW CULVERTS

ANGLE θ	ANGLE θ	ANGLE θ
5°	47.5	42.5
10°	50	40
15°	52.5	37.5
25°	57.5	32.5
30°	30	60
45°	30	60
50°	30	60
60°	30	60

LENGTH OF WING WALLS FOR NORMAL CULVERTS

H	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	
X	2.2	3.2	4.2	5.2	6.2	7.2	8.4	9.2	

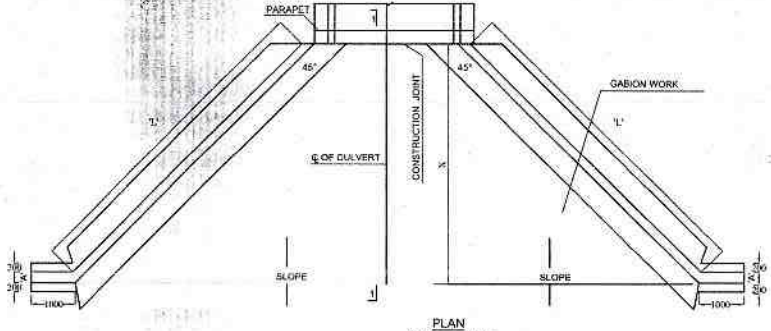
NOTE:-

1:- FOR SKEW CULVERTS LENGTH OF WING WALLS SHALL BE CALCULATED AS BELOW:-

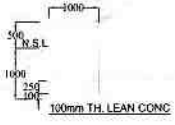
L = X / COS 45°

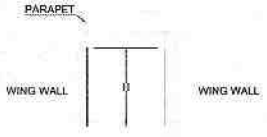
L1 = X / COS θ1

L2 = X / COS θ2

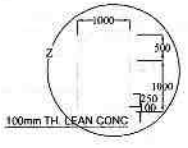


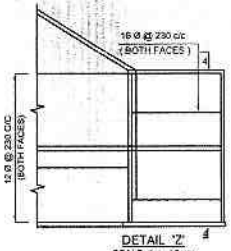
PLAN
SCALE = 1m=10mm



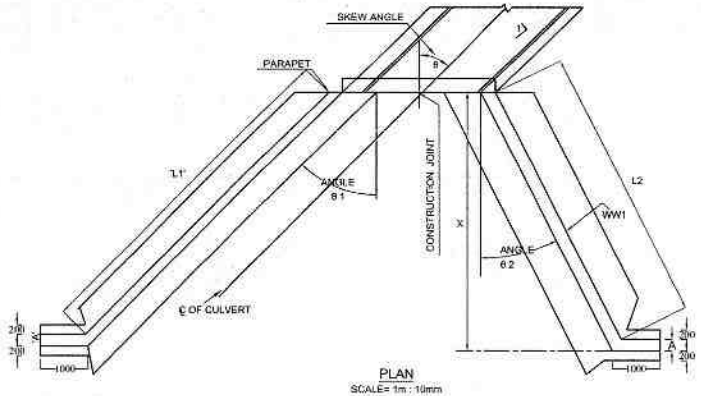


ELEVATION
SCALE=1m : 10mm

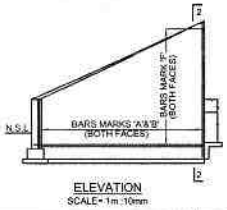




DETAIL 'Z'
SCALE=1m : 10mm

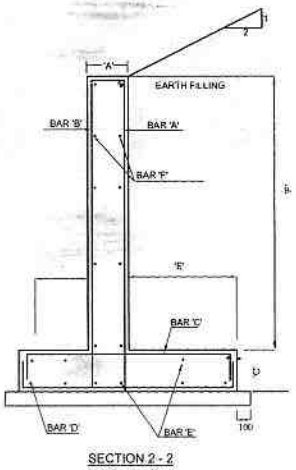


PLAN
SCALE= 1m : 10mm

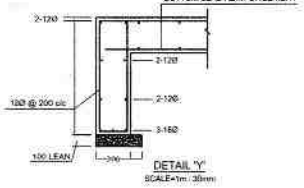


ELEVATION
SCALE= 1m :10mm

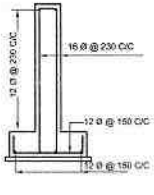
SECTION 1-1
SCALE= 1m:10mm



SECTION 2 - 2
SCALE = 1m : 30mm



DETAIL 'Y'
SCALE=1m : 30mm



SECTION 4- 4
SCALE= 1m : 20mm

CLIENT:

G L L S P-II

CONSULTANTS:

CAMEOS CONSULTANTS
CONSULTING ENGINEERS, ARCHITECTS & PLANNERS.
27-A, STREET NO. 28 F-10/1 ISLAMABAD.
46-A CHAMAN HOUSING SCHEME AIRPORT ROAD QUETTA.

PROJECT:

GAWADAR-LASBELALIVELIHOODS SUPPORT PROJECT PHASE-II

CONSTRUCTION OF B/T ROAD FROM BAGH ROAD HAJI MOOSA GOTH BELA

DRAWING TITLE:-

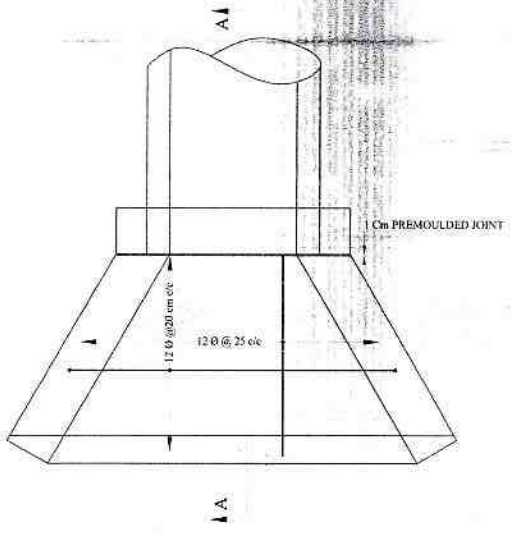
DETAIL OF WING WALL

NOTES:

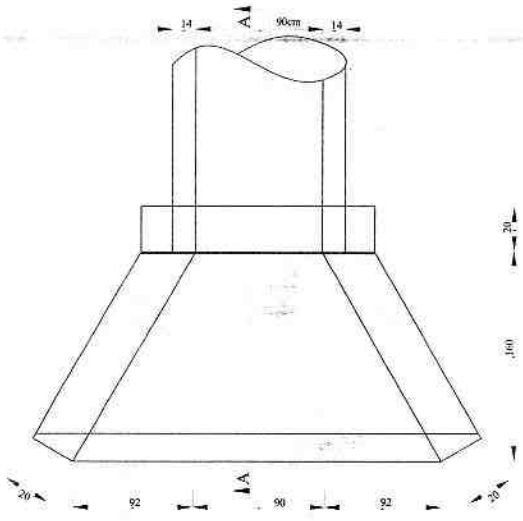
ALL LEVELS AND DIMENSIONS ARE IN METERS UNLESS INDICATED OTHERWISE.

DRAWN BY:	ASIM	DESIGNED BY:	ALI AKBAR
CHECKED BY:	ASADULLAH JAN	SCALE:	AS SHOWN
FILE PATH:	D:\DATA	DATE:	2022
DRAWING NO:	00	SHEET:	0

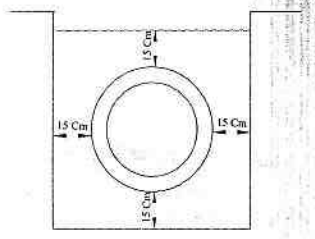
Infrastructure Specialist
Gwadar-Lasbela
Livelihoods Support
Project, Gwadar



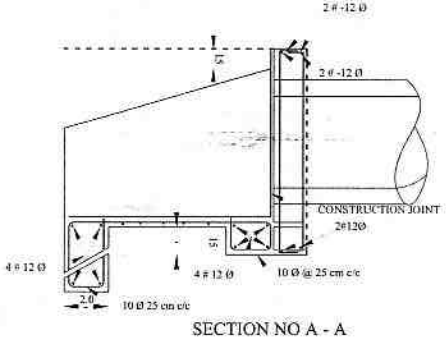
PLAN



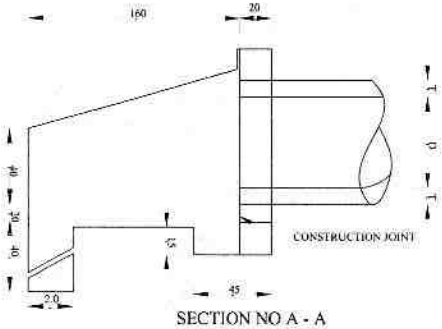
PLAN



TRENCH AND BEDDING
FOR REINFORCED CONCRETE PIPE COLVERT



SECTION NO A - A



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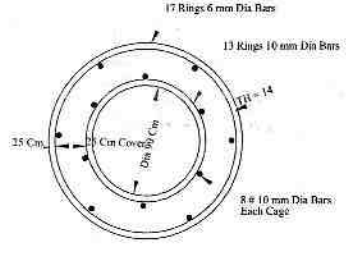
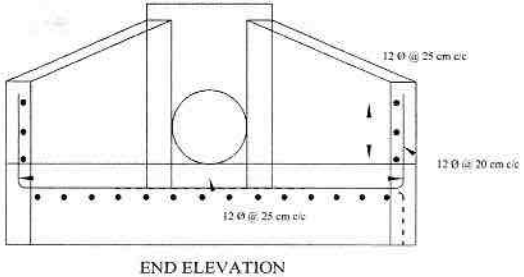
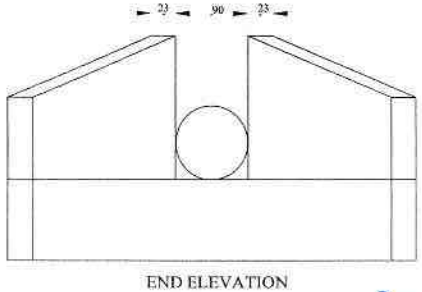


CROSS SECTION FOR REINFORCED PIPE



END ELEVATION



END ELEVATION

NOTES :

1. Reinforcement shall conform to requirments of AASHTO M 31 M53 grade 60
2. Circumferencial steel in pipesshall be welded with longitudinal steel. and the joint must have sterngth equal to or greater than steel.
3. Pipe have been designed in accordance with AASHTO DESIGNATION M170 OR M 86.
4. Reinforcement of pipes is according to the minimum requiredment of the specifications in case these pipes fail in test, The circumferencial steel must be increased.
5. Concrete for wing walls and apronsshall be of class-A type haveing 28 days 15 cm x 30 cm cylinder strength of 210 kg/cm squre (3000 psi).
6. concrete for pipe shall be class-D type haveing 28 days 15 cm x 30 cm cylander strength of 350 kg/cm squre (5000 psi)
7. All exposed faces of wing wall and head walls shall be fair faced.
8. Lean concrete (having 28 days) 15 cm x 30 cm cylinder strength of 100 kg/cm squre (1400 psi) to a minimum thickness of 10 cm shall be provided beneath aprone.
9. All dimensions unless otherwise noted are in centemeter axcept reinforcement bardiameters which area in millimeters.

CLIENT:

GLLSP-II

CONSULTANTS:

CAMEOS
CONSULTANTS
CONSULTING ENGINEERS,ARCHITECTS & PLANNERS
27-A, STREET, NO. 28 F-10/1 ISLAMABAD
44-A CHAMAN HOUSING SCHEME AIRPORT ROAD QUETTA

PROJECT:
GAWADAR-LASBELALIVELIHOODS SUPPORT PROJECT PHASE-II

CONSTRUCTION OF B/T ROAD FROM BARA BAGH ROAD HAJI MOOSA GOTH BELA

DRAWING TITLE:-

PIPE CULVERTS

Infrastructure Specialist
Gwadar-Lasbela
Livelihoods Support

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

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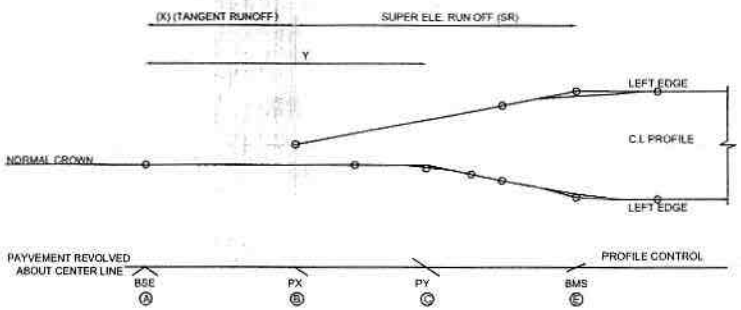
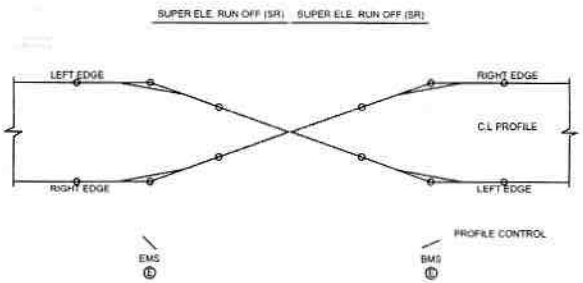
FILE PATH:	D:\DATA	DATE:	2022
DRAWING NO:	00	SHEET:	6



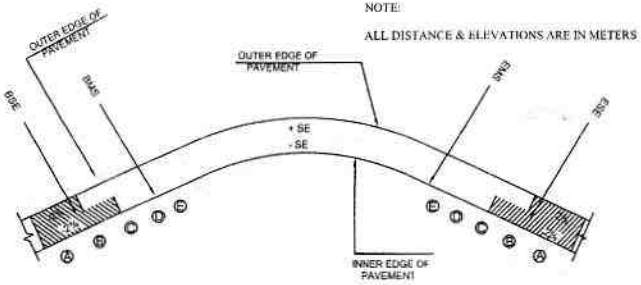
TYPICAL SUPER ELEVATION DIAGRAM



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)

CLIENT:

GLLSP-II

CONSULTANTS:

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

PROJECT:

GWADAR-LASBELA LIVELIHOODS SUPPORT PROJECT PHASE-II

CONSTRUCTION OF B/T ROAD FROM BARA BAGH ROAD HAJI MOOSA GOTH BELA

DRAWING TITLE:

SUPER ELEVATION DIAGRAM

Infrastructure Specialist
Gwadar-Lasbela
Livelihoods Support

NOTES:

ALL LEVELS AND DIMENSIONS ARE IN METERS UNLESS INDICATED OTHERWISE.

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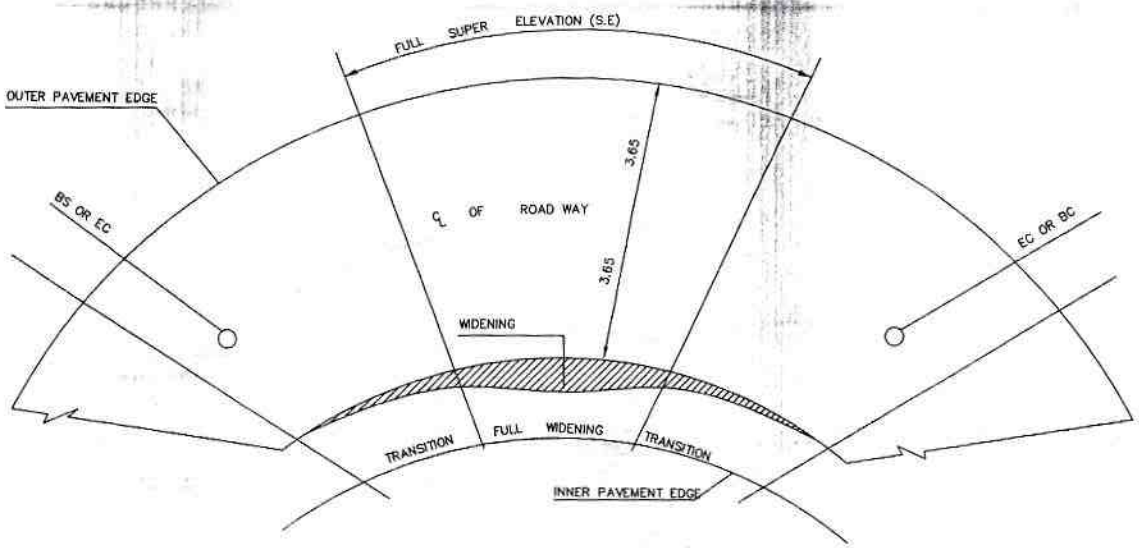
CHECKED BY:	DATE: 2021	SCALE:	AS SHOWN
FILE PATH:	E/N-2020-RW-D	DATE:	2022
DRAWING NO:		PLOT DATE:	2022



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*

CLIENT:

GLLSP-II

CONSULTANTS:

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

PROJECT:

GWADAR-LASBELA LIVELIHOODS SUPPORT PROJECT PHASE-II

CONSTRUCTION OF B/T ROAD FROM BARA BAGH ROAD HAJI MOOSA GOTH BELA

DRAWING TITLE:-

STANDARD TYPICAL DRAWING

Infrastructure Specialist
Gwadar Lasbela
Livelihoods Support
Project

NOTES:

ALL LEVELS AND DIMENSIONS ARE IN METERS UNLESS INDICATED OTHERWISE.

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CHECKED BY:	DATE: 2021	SCALE:	AS SHOWN
FILE PATH:	E/N-2020-RW-D	DATE:	2022
DRAWING NO:		PLOT DATE:	2022