The Government of the People's Republic of Bangladesh
Roads and Highways Department (RHD)

Data and Information Sheet for Road Design
(Geometric & Pavement Structural Design)
For
Road ID & Name :

Authorized by

Road Design & Standard Division and Road Safety Division
Road Design & Safety Circle
Technical Services Wing
Sarak Bhavan, Tejgaon, Dhaka

January 2022

GENERAL DATA & INFORMATION SHEET FOR PAVEMENT DESIGN

Sl.No.	Description of Information		Field Information			
1)	**Road ID & Name of the road**	:				
2)	**Name of Road Zone**	:				
3)	Name of the Project / Work	:				
4)	Reason for Requirement of Pavement Design [PMP Major Work / Field Office ADP work / DP Under Separate Project Office / Others(Describe in separate sheet)]	:				
5)	Project/Work consists of Single / Multiple Road [If multiple roads please provide data & information seperately for each roads]	:				
6)	Please provide explanation if the road has no Number or does not belong to RHD or any proposal for changing of road category:	:				
7)	**Completion Year of the proposed work**	:				
8)	Provide type of construction requirement over pavement [New construction / Re-Construction / Strengthening / Widening / Surfacing / Rigid / Others(Specific)]	:				
9)	Data & Information sheet for **Pavement Structural Design (use FORMAT-P1)** [Provide Required Chainagewise information like existing width & Layers Th., RoW, F.L., CBR, Proposed width etc.	:				
10)	**Geometric Design Requirements**					
	a) Area of the road to be design [Urban / Rural / Bazar]	:				▨
	b) Terrain Type [Plain / Rolling / Hilly]	:				▨
	c) Required design for [New Alignment / Intersection / Junction design /Curve Straightening / Correction / Bus Bay Design]	:				
	d) Existing & Proposed Information on Road Geometry (Provide information in Format-P1)	:				
	e) For Horizontal & Vertical Curve, Bus Bay & Intersection/ Junction design and others information related to Road Geometry (Provide information in Format-G1)	:				
11)	**Traffic Data Information** (Provide information in Format-C1)	:				
12)	Formation Level (F.L.) (Provide information in Format-C2) [This information mendatory only if it is less than 1.0m]	:				
13)	Decision(s) / Meeting Minutes of the Higher Authority to take: [PMP Major Work / Field Office ADP work / DP Under Separate Project Office / Others(Describe)]	:				

Sub-Assistant Engineer,RHD -1, 2 & 3 Road Sub-Division, ……………....	Sub-Divisional Engineer, RHD Road Sub-Division, ……………....	Executive Engineer, RHD Road Division, …………..

** All data and information must be signed / countersigned by concerned Field Officials.*

FORMAT-P1 (Data & Information sheet for Pavement Structural Design)

Road ID & Name :

Road Division : **Road Circle** **Zone :** **ACE Office Memo. No. :** **Date :**

Chainage & Length for Design Required					Existing Pavement Data & Information																				Proposed Pavement Information										
Sl No.	Chainage of Data collecting point	Representing Chainage		Representing Length (meter)	Pavement Type (Existing)	Formation Level (F.L.) (m)	Width of Existing (m)						Sub grade CBR (4 days Soaked) Under		Existing Pavement Layer Thickness (mm)									Comments on Physical Condition	Pavement type (Proposed)	Number of Lane	Width of Proposed						Total Width of Crest	Comments on Special requirement	Comments on LA Requirement
		From	To				Carriage way (L+R)	Median	Hard Shoulder	Verge	Drain	Total RoW	In Situ (undisturb)	Lab (Disturbed)	ISG	HBB/ soling	Sub Base	WBM	ABT-II	ABT-I	Asphalt Layer	CC	RCC				Carriage way	Median	Hard Shoulder	Verge	Drain	Other			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
1				0				-	-																						-	-	0.00		
2				0				-	-																						-	-	0.00		
3				0				-	-																						-	-	0.00		
4				0				-	-																						-	-	0.00		
5				0				-	-																						-	-	0.00		
6				0				-	-																						-	-	0.00		
7				0				-	-																						-	-	0.00		
8				0				-	-																						-	-	0.00		
9				0				-	-																						-	-	0.00		
10				0				-	-																						-	-	0.00		

** All data and information must be signed / countersigned by concerned Field Officials.*

* Formation level (FL) is the Difference of Height Between Bottom of Sub-Base to HFL (HFL R.L. (Avg. of 30 Years Return Period for Regional & Zila Road, 50 Years for National Highways) based on competent authority))

* L= Left; R= Right; RoW= Right of Way; HFL= Highest Flood Level; ISG= Improved Sub Grade, ES= Earthen Shoulder, V= Verge, CW= Carriageway, FL= Formation level.

*Please attached logitudinal profile information in Excel format of at least 100 m interval if formation level height of any section of road is below 1.0 m

*Use additional page(s) for more data

Sub-Assistant Engineer-1, RHD
Road Sub-Division, ……….

Sub-Assistant Engineer-2, RHD
Road Sub-Division, ……….

Sub-Assistant Engineer-3, RHD
Road Sub-Division, ……….

Sub-Divisional Engineer, RHD
Road Sub-Division, ……….

Executive Engineer, RHD
Road Division, ……….

Date of Format Development : 19 January 2022

TRAFFIC DATA INFORMATION (FORMAT-C1)

Road ID & Name :	**0**				
Road Division :	-	**Road Circle :**	-	**Zone :**	-

BASE TRAFFIC :

i.a) If traffic data is missing in RHD RMMS Data Base , then source from local Road Division's traffic survey

Chainage of Data collecting Point : **Location Name :**

Sl. No.	Survey Date	Heavy Truck	Medi. Truck	Small Truck	Large Bus	Medi. Bus	Micro Bus	Utility Jeep	Car	Auto Rickshaw	Motor Cycle	Bi-Cycle	Cycle Rickshaw	Cart	Total AADT
1															0
2															0
3															0
4															0
5															0
6															0
7															0
	Average Traffic =	#####	#####	#####	#####	#####	#####	#####	#####	#DIV/0!	#####	#####	#DIV/0!	####	**#DIV/0!**

i.b) If having Traffic Data in RHD RMMS Database :

RMMS Link No. of the Road:	Heavy Truck	Medi. Truck	Small Truck	Large Bus	Medi. Bus	Micro Bus	Utility Jeep	Car	Auto Rickshaw	Motor Cycle	Bi-Cycle	Cycle Rickshaw	Cart	Total AADT
														0

TRAFFIC FORECASTING :

ii.a) Diverted Traffic-1 (adding more table as diverted traffic-2,3,4.... etc., if having possibilities of more than one divertion towards this road)

Link ID & Name from where diverted :														
Vehicle Type	Heavy Truck	Medi. Truck	Small Truck	Large Bus	Medi. Bus	Micro Bus	Utility Jeep	Car	Auto Rickshaw	Motor Cycle	Bi-Cycle	Cycle Rickshaw	Cart	Total AADT
Link Traffic														
Probable % of traffic to be Diverted-1														
Diverted Traffic -1	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

ii.b) Diverted Traffic-2 (adding more table as diverted traffic-2,3,4.... etc., if having possibilities of more than one divertion towards this road)

Link ID & Name from where diverted :														
Vehicle Type	Heavy Truck	Medi. Truck	Small Truck	Large Bus	Medi. Bus	Micro Bus	Utility Jeep	Car	Auto Rickshaw	Motor Cycle	Bi-Cycle	Cycle Rickshaw	Cart	Total AADT
Link Traffic														
Probable % of traffic to be Diverted-1														
Diverted Traffic -2	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

ii.c) Diverted Traffic-3 (adding more table as diverted traffic-2,3,4.... etc., if having possibilities of more than one divertion towards this road)

Link ID & Name from where diverted :														
Vehicle Type	Heavy Truck	Medi. Truck	Small Truck	Large Bus	Medi. Bus	Micro Bus	Utility Jeep	Car	Auto Rickshaw	Motor Cycle	Bi-Cycle	Cycle Rickshaw	Cart	Total AADT
Link Traffic														
Probable % of traffic to be Diverted-1														
Diverted Traffic -3	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

iii) Generated Traffic (if any)

Generated Traffic based on Base Traffic / Assumed														
Probable % of traffic to be generated														
Generated Traffic	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

TRAFFIC CONSIDERED FOR GEOMETRIC & PAVEMENT LAYER THICKNESS DESIGN :

Vehicle Type	Heavy Truck	Medi. Truck	Small Truck	Large Bus	Medi. Bus	Micro Bus	Utility Jeep	Car	Auto Rickshaw	Motor Cycle	Bi-Cycle	Cycle Rickshaw	Cart	Total AADT
Base Traffic ia or ib	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Traffic -1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Traffic -2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Traffic -3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Generated Traffic	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Traffic =	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Sub-Assistant Engineer, RHD
Road Sub-Division, ……….

Sub-Divisional Engineer, RHD
Road Sub-Division, ……….

Executive Engineer, RHD
Road Division, ……….

**Use additional page(s) for more data*

LONG SECTION INFORMATION OF THE ROAD FOR PAVEMENT DESIGN (FORMAT-C2)

Name & ID of the Road :	0					
Road Division :	-	Circle :	-	Zone :	-	
Source of Data :	**Data collected by Narail Road Division**					
Location Chainage :		**To**		=	**0.000 Km**	

HFL R.L. [as per GDSM(Revised)2005, clause-4.10, to be calculated for a 30 Years Return Period based on hydrological data and cross-checked with the recorded HFL in the locality can be obtained from RHD Operational Divisions and respective offices of Water Development Board.]

BMRL : Permanent marks on an outer wall of the Division Offices or Other Govt. building within the division, etc..... =

Note : As per GDSM(Rivesed)2005, Clause-4.10, the bottom level of the pavement(sub-base) will have a freeboard of 1.0m from HFL

Road Chainage	Pavement Top R.L. (m)	Thickness of Pavement Layers								R.L. of bottom level of Pavement (sub-base) (m)	Up/Down From HFL ("+" means Up, "-" means Down)	
		Bituminus Surfacing (mm)	Aggr. Base Type-I (mm)	Aggr. Base Type-II (mm)	WBM (mm)	Sub-Base (mm)	ISG (mm)	Others (mm)	Total Layer Thickness (mm)			
1	2	3	4	5	6	7	8	9	10	11	12	13
									0 mm	0.000 m	0.000 m	Raising Req.
									0 mm	0.000 m	0.000 m	Raising Req.
									0 mm	0.000 m	0.000 m	Raising Req.
									0 mm	0.000 m	0.000 m	Raising Req.
									0 mm	0.000 m	0.000 m	Raising Req.
									0 mm	0.000 m	0.000 m	Raising Req.
									0 mm	0.000 m	0.000 m	Raising Req.
									0 mm	0.000 m	0.000 m	Raising Req.
									0 mm	0.000 m	0.000 m	Raising Req.
									0 mm	0.000 m	0.000 m	Raising Req.
									0 mm	0.000 m	0.000 m	Raising Req.
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									0 mm	0.000 m	0.000 m	Raising Req.
									0 mm	0.000 m	0.000 m	Raising Req.
									0 mm	0.000 m	0.000 m	Raising Req.
									0 mm	0.000 m	0.000 m	Raising Req.
									0 mm	0.000 m	0.000 m	Raising Req.
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									0 mm	0.000 m	0.000 m	Raising Req.
									0 mm	0.000 m	0.000 m	Raising Req.
									0 mm	0.000 m	0.000 m	Raising Req.

Surveyor Road Division, ...	Sub-Assistant Engineer, RHD Road Sub-Division, ...	Sub-Divisional Engineer, RHD Road Sub-Division, ...	Executive Engineer, RHD Road Division, ...

FORMAT-G1 (Data & Information sheet for Road Geometry Design, P1)

Road ID & Name : 0

Road Division : - **Road Circle :** - **Zone :** -

ACE Office Memo. No. : -

Location Chainage : 000+000 **To** 000+000 = **0.000 Km**

A) Horizontal Alignment & Bus Bay Design Informations

Sl. No.	**Description**		**Existing**	**Proposed**	Remarks
1	Number of horizontal curvature in the alignment	:			
2	Radius of horizontal curvature (Please use separate table for each horizontal curvature)				
	at chainage Radius	:		▨	
	at chainage Radius	:		▨	
	at chainage Radius	:		▨	
	at chainage Radius	:		▨	
	at chainage Radius	:		▨	
3	Is there any safety concern along the curve? [Pick ☐Yes / ☐No from drop down]	:		▨	
4	If Yes, please provide reason.	:			
5	Number of pedestrian crossings	:			
6	Number of bus stops/bus bays	:			
7	Distance of intersections (signalized/unsignalized) from the				
8	Area available at the proposed location [Pick ☐Yes / ☐No from drop down]		▨		
9	Justification of selecting such location				
10	Number of parking/rest area facilities	:			

B) Vertical Alignment / Gradient Informations

Sl. No.	**Description**		**Existing**	**Proposed**	Remarks
1	Number of vertical curve	:			
2	Gradient details (Please use separate table for where gradient changes)				
	at chainage gradient %	:		▨	
	at chainage gradient %	:		▨	
	at chainage gradient %	:		▨	
	at chainage gradient %	:		▨	
	at chainage gradient %	:		▨	
3	Number of Bridges	:			
4	Number of Culverts	:			
5	Number of Overpasses	:			
6	Number of Railway Overpasses	:			
7	Is there any safety concern on these structures or vertical curves?	:		▨	
8	If Yes, please provide reason.	:			

1) Attach **AutoCAD file of detailed topography drawing of existing alignment** (Mandatory field)

1. Please ensure that detailed drawing (layout) of topographic map showing well demarcated existing alignment and proposed alignment in single map is attached with the design request in pdf and .dwg (AutoCAD) format.
2. Please ensure that locations of curves/bus bays/pedestrian crossings/parking facilities/rest areas are shown in the layout plan

FORMAT-G1 (Data & Information sheet for Road Geometry Design, P2)

C) Informations for Intersection / Junction Design

Sl. No.	Description		Existing	Proposed	Remarks
1	Number of existing intersections/junctions (Please use separate table for each intersection/junction)	:			
2	Type of road forming the intersection/junction (mention the number in information column)				
	☐ National to National	:			
	☐ National to Regional	:			
	☐ National to Zila	:			
	☐ Regional to Regional	:			
	☐ Regional to Zila	:			
	☐ Zila to Zila	:			
3	Type of intersection/junction				
	☐ Round About	:			
	☐ Crossroad	:			
	☐ T-junction	:			
	☐ Y-junction	:			

Please provide the following required information/documents/maps-

1. Attach softcopy (.dwg file) of AutoCAD drawing (to the scale) of the intersection up to 500 meters of the road on all sides from the proposed intersection.
2. Please ensure that detailed Topographic Survey is shown in the drawing.
3. Please ensure that approved Right of Way (ROW) is illustrated in the drawing.
4. Cross-section of the approved pavement design.
5. Names and numbers of the side roads (along with the name of the controlling organization)
6. AADT data of all the roads connected to the intersection
7. Still photographs of the intersection (2 photographs of each leg of the intersection)
8. Other information such as, future expansion, adjacent schools, hospitals, growth centers, mosques, bus stops, accident data etc.

[1] [Mandatory information]

Surveyor	Sub-Assistant Engineer, RHD	Sub-Divisional Engineer, RHD	Executive Engineer, RHD
Road Division, ...	Road Sub-Division, ...	Road Sub-Division, ...	Road Division, ...