SCHEDULE - A

(See Clauses 2.1 and 8.1)

SITE OF THE PROJECT

1 The Site

(i) Site of the Two-Lane Project Highway shall include the land, buildings, structures and road works as described in Annex-I of this Schedule-A.

(ii) The dates of handing over the Right of Way to the Contractor are specified in Annex-II of this Schedule-A.

(iii) An inventory of the Site including the land, buildings, structures, road works, trees and any other immovable property on, or attached to, the Site shall be prepared jointly by the Authority Representative and the Contractor, and such inventory shall form part of the memorandum referred to in Clause 8.2 (i) of this Agreement.

(iv) The alignment plans of the Project Highway are specified in Annex-III. In the case of sections where no modification in the existing alignment of the Project Highway is contemplated, the alignment plan has not been provided. Alignment plans have only been given for sections where the existing alignment is proposed to be upgraded. The proposed profile of the Project Highways shall be followed by the contractor with minimum FRL as indicated in the alignment plan. The contractor, however, improve/upgrade the Road Profile as indicated in Annexure-III based on site/design requirement.

(v) The status of the environment clearances obtained or awaited is given in Annex IV.

Annex - I
(Schedule-A)

Site

[Note: Through suitable drawings and description in words, the land, buildings, structures and road works comprising the Site shall be specified briefly but precisely in this Annex-I. All the chainages/location referred to in Annex-I to Schedule-A shall be existing chainages.]

1. Site

The Site of the [Two-Lane] Project Highway comprises the section of [National Highway 44A] commencing from km 0+000 to km 16.290 i.e. the Manu - Lalchera section in the State of Tripura. The land, carriageway and structures comprising the Site are described below.

2. Land

The Site of the Project Highway comprises the land (sum total of land already in possession and land to be possessed) as described below:

S. No.	Chainage (km)		Right of Way (m)	Remarks
	From	To		
1.	0	100	48.4	
2.	100	200	38.3	Manu village
3.	200	300	46.6	
4.	300	400	45.1	
5.	400	500	46.1	
6.	500	600	36.6	
7.	600	700	46.5	
8.	700	800	46.9	
9.	800	900	45.8	
10.	900	1000	45.6	
11.	1000	1100	47.0	
12.	1100	1200	45.7	
13.	1200	1300	46.0	
14.	1300	1400	45.9	
15.	1400	1500	44.8	
16.	1500	1600	44.1	
17.	1600	1700	47.8	
18.	1700	1800	47.1	
19.	1800	1900	46.2	
20.	1900	2000	48.9	
21.	2000	2100	45.4	
22.	2100	2200	48.0	
23.	2200	2300	46.4	

24.	2300	2400	43.8	
25.	2400	2500	47.3	
26.	2500	2600	46.4	
27.	2600	2700	45.4	
28.	2700	2800	49.2	
29.	2800	2900	52.0	Mainama Village
30.	2900	3000	51.8	
31.	3000	3100	50.9	
32.	3100	3200	48.5	
33.	3200	3300	49.2	
34.	3300	3400	30.1	
35.	3400	3500	36.5	
36.	3500	3600	46.0	
37.	3600	3700	46.5	
38.	3700	3800	49.0	
39.	3800	3900	46.7	
40.	3900	4000	47.0	
41.	4000	4100	44.1	
42.	4100	4200	42.6	
43.	4200	4300	46.0	
44.	4300	4400	56.7	
45.	4400	4500	46.9	
46.	4500	4600	43.9	
47.	4600	4700	47.9	
48.	4700	4800	47.2	
49.	4800	4900	48.6	
50.	4900	5000	49.2	
51.	5000	5100	44.4	
52.	5100	5200	53.9	
53.	5200	5300	40.3	
54.	5300	5400	42.9	
55.	5400	5500	47.1	
56.	5500	5600	45.0	
57.	5600	5700	53.1	
58.	5700	5800	50.7	
59.	5800	5900	50.6	
60.	5900	6000	48.9	
61.	6000	6100	35.0	
62.	6100	6200	30.3	
63.	6200	6300	36.6	Chalengta Village
64.	6300	6400	30.0	
65.	6400	6500	30.5	
66.	6500	6600	30.0	
67.	6600	6700	30.0	

68.	6700	6800	30.0	
69.	6800	6900	32.3	
70.	6900	7000	30.6	
71.	7000	7100	35.8	
72.	7100	7200	39.8	
73.	7200	7300	39.9	
74.	7300	7400	39.6	
75.	7400	7500	33.7	
76.	7500	7600	37.6	
77.	7600	7700	40.1	
78.	7700	7800	53.0	
79.	7800	7900	71.3	
80.	7900	8000	53.4	
81.	8000	8100	34.9	
82.	8100	8200	30.3	
83.	8200	8300	36.6	
84.	8300	8400	30.0	
85.	8400	8500	30.5	
86.	8500	8600	30.0	
87.	8600	8700	30.0	
88.	8700	8800	30.0	
89.	8800	8900	37.6	
90.	8900	9000	42.6	
91.	9000	9100	46.9	Chalengta Village
92.	9100	9200	46.0	
93.	9200	9300	48.5	
94.	9300	9400	36.0	
95.	9400	9500	36.0	
96.	9500	9600	36.0	
97.	9600	9700	36.0	
98.	9700	9800	36.0	
99.	9800	9900	36.0	
100.	9900	10000	36.0	
101.	10000	10100	36.0	Lalchera Village
102.	10100	10200	36.0	
103.	10200	10300	45.8	
104.	10300	10400	47.3	
105.	10400	10500	45.7	
106.	10500	10600	48.9	
107.	10600	10700	50.3	
108.	10787	16290	24.0	

3. Carriageway

The present carriageway of the Project Highway is [Single Lane]. The type of the existing pavement is [flexible].

4. Major Bridges

The Site includes the following Major Bridges:

S.No.	Chainage (km)	Type of Structure			No. of Spans with span length (m)	Width (m)
		Foundation	**Sub-structure**	**Superstructure**		
NIL						

5 Road over-bridges (ROB)/ Road under-bridges (RUB)

The Site includes the following ROB (road over railway line)/RUB (road under railway line):

S.No.	**Chainage (km)**	**Type of Structure**		**No. of Spans with span length (m)**	**Width (m)**	**ROB/ RUB**
		Foundation	**Superstructure**			
1.	2+150	Slab	4x8	4x8	8	RUB

6 Grade separators

The Site includes the following grade separators:

S.No.	**Chainage (km)**	**Type of Structure**		**No. of Spans with span length (m)**	**Width (m)**
		Foundation	**Superstructure**		
NIL					

7 Minor bridges

The Site includes the following minor bridges:

S.No.	**Chainage (km)**	**Type of Structure**			**No. of Spans with span length (m)**	**Width (m)**
		Foundation	**Sub-structure**	**Superstructure**		
1	3+315	-	-	Bailey Bridge	1X40	3.40
2	7+105	-	-	Bailey Bridge	1X21.50	3.40
3	11+180	-	-	Bailey Bridge	1X18.50	3.40
4	11+750	-	-	Bailey Bridge	1X39.60	3.40
5	13+800	-	-	Bailey Bridge	1X26.00	3.45

6	14+725	-	-	Bailey Bridge	1X24.60	4.15
7	15+215	-	-	Bailey Bridge	1X30.70	5.60
8	15+690	-	-	Bailey Bridge	1X19.60	5.00
9	16+100	-	-	Bailey Bridge	1X19.80	5.00

8 Railway level crossings

The Site includes the following railway level crossings:

S. No.	Location (km)	Remarks
NIL		

9 Underpasses (vehicular, non vehicular)

The Site includes the following underpasses:

S. No.	Chainage (km)	Type of Structure	No. of Spans with span length (m)	Width (m)
NIL				

10 Culverts

The Site has the following culverts:

S.No.	Chainage (km)	Type of Culvert	Span /Opening with span length (m)	Width (m)
1.	0+210	HPC	1X0.900	12.50
2.	0+280	Burried	-	-
3.	0+300	RCC SLAB	1X0.75	11.70
4.	0+330	Burried	-	-
5.	0+720	RCC SLAB	1X2.90	11.60
6.	0+830	HPC	1X0.90	11.60
7.	1+100	HPC	1X0.90	11.65
8.	1+245	RCC SLAB	1X2.00	12.00
9.	1+560	RCC SLAB	1X3.00	12.50
10.	1+860	HPC	1X0.900	10.40
11.	2+540	HPC	1X0.900	12.50
12.	2+775	HPC	1X0.90	12.50
13.	4+450	HPC	1X0.90	15.10

14.	4+670	HPC	2X0.90	12.10
15.	7+480	Burried	-	-
16.	7+515	PIPE	1X0.60	7.50
17.	7+800	RCC SLAB	1X5.75	12.10
18.	8+060	HPC	2X0.90	12.40
19.	8+580	RCC SLAB	1X3.00	12.00
20.	8+660	RCC SLAB	1X2.00	12.00
21.	8+960	Burried	-	-
22.	11+405	RCC SLAB	1X1.10	8.50
23.	11+470	RCC SLAB	1X5.80	5.95
24.	11+620	RCC SLAB	1X0.90	5.90
25.	12+160	HPC	1X0.90	7.50
26.	13+495	HPC	1X0.90	7.50
27.	13+685	HPC	1X0.90	7.50
28.	14+165	HPC	1X0.90	7.50
29.	14+340	Burried	-	-
30.	14+535	HPC	1X0.90	7.50
31.	14+590	HPC	1X0.90	7.50
32.	14+695	HPC	1X0.90	7.50
33.	15+295	HPC	1X0.90	7.50
34.	15+630	HPC	1X0.90	7.50
35.	15+765	HPC	1X0.90	7.50
36.	15+840	HPC	1X0.90	7.50
37.	15+965	HPC	1X0.90	7.50
38.	16+040	HPC	1X0.90	7.50
39.	16+700	HPC	2X0.90	7.55
40.	16+870	HPC	1X0.90	7.55
41.	17+130	HPC	1X0.90	7.55

11 Bus bays

The details of bus bays on the Site are as follows:

S. No.	Chainage (km)	Length (m)	Left Hand Side	Right Hand Side
NIL				

12 Truck Lay byes

The details of truck lay byes are as follows:

S. No.	Chainage (km)	Length (m)	Left Hand Side	Right Hand Side
NIL				

13 Road side drains

The details of the roadside drains are as follows:

S. No.	Location		Type	
	From km	to km	Masonry/cc (Pucca)	Earthen (Kutcha)
1	0+000	0+200	Stone Masonry	-

14 Major junctions

The details of major junctions are as follows:

S. No.	Location		At grade	Separated	Category of Cross Road			
	From km	To km			NH	SH	MDR	Others
1	0+000	0+000	Yes	-	NH – 44	-	-	-

(NH: National Highway, SH: State Highway, MDR: Major District Road)

15 Minor junctions

The details of the minor junctions are as follows:

S. No.	Location		Type	
	From km	To km	T -junction	Cross road
1	0+000	0+100	T	Village Road
2	0+130	0+230	T	Village Road
3	0+265	0+365	T	Village Road

4	0+565	0+665	T	Village Road
5	0+900	1+000	T	Village Road
6	1+315	1+415	T	Village Road
7	2+570	2+670	T	Village Road
8	3+330	3+430	T	Village Road
9	3+810	3+910	T	Village Road
10	3+935	4+035	T	Village Road
11	4+160	4+260	T	Village Road
12	4+310	4+410	T	Village Road
13	4+790	4+890	T	Village Road
14	5+090	5+190	T	Village Road
15	5+640	5+740	T	Village Road
16	5+800	5+900	T	Village Road
17	5+950	6+050	T	Village Road
18	6+450	6+550	T	Village Road
19	6+630	6+730	T	Village Road
20	6+880	6+980	T	Village Road
21	6+900	7+000	T	Village Road
22	7+010	7+110	T	Village Road
23	7+190	7+290	T	Village Road
24	7+640	7+740	T	Village Road
25	8+440	8+540	T	Village Road
26	8+840	8+940	T	Village Road
27	9+880	9+980	T	Village Road
28	10+750	10+850	T	Village Road
29	11+700	11+800	T	Village Road
30	11+770	11+870	T	Village Road

16 Bypasses

The details of the existing road sections proposed to be bypassed are as follows:

S. No.	Name of bypass (town)	Chainage (km) From km to km	Length (in Km)
NIL			

[17 Other structures] -NIL

Annex – II

(Schedule-A)

Dates for providing Right of Way

The dates on which the Authority shall provide Right of Way of Construction Zone to the Contractor on different stretches of the Site are stated below:

Sl. No	**From km to km**	**Length (km)**	**Width (m)**	**Date of providing ROW***
1	**2**	**3**	**4**	**5**
(i) Full Right of Way (full width) (a) Stretch (b) Stretch (c) Stretch				ROW will be provided before appointed date
(ii) Part Right of Way (part width) (a) Stretch (b) Stretch (c) Stretch				
(iii) Balance Right of Way (width) a) Stretch b) Stretch c) Stretch				

* The dates specified herein shall in no case be beyond 150 (one hundred and fifty) days after the Appointed Date.

Annex - III

(Schedule-A)

Alignment Plans

The existing alignment of the Project Highway shall be modified in the following sections as per the alignment plan indicated below:

(i) The alignment of the Project Highway is enclosed in alignment plan. Finished road level indicated in the alignment plan shall be followed by the contractor as minimum FRL. In any case, the finished road level of the project highway shall not be less than those indicated in the alignment plan. The contractor shall, however, improve/upgrade the Road profile as indicated in Annex-III based on site/design requirement.

(ii) Traffic Signage plan of the Project Highway showing numbers & location of traffic signs is enclosed. The contractor shall, however, improve/upgrade upon the traffic signage plan as indicated in Annex-III based on site/design requirement as per IRC: SP: 99 & IRC: 67.

Annex - IV

(Schedule-A)

Environment Clearances

The following environment clearances have been obtained:

- Environmental Clearance is not required as per new Notification of MoEF dated 22/08/2013.

SCHEDULE - B

(See Clause 2.1)

Development of the Project Highway

1 Development of the Project Highway

Development of the Project Highway shall include design and construction of the Project Highway as described in this Schedule-B and in Schedule-C.

2 [Rehabilitation and augmentation]

[Rehabilitation and augmentation] shall include [Two-Laning and strengthening] of the Project Highway as described in Annex-I of this Schedule-B and in Schedule-C.

3 Specifications and Standards

The Project Highway shall be designed and constructed in conformity with the Specifications and Standards specified in Annex-I of Schedule-D.

Annex - I

(Schedule-B)

Description of Two-Laning

[Note: Description of the Project Highway shall be given by the Authority in detail together with explanatory drawings (where necessary) to explain the Authority's requirements precisely in order to avoid subsequent changes in the Scope of the Project. The particulars that must be specified in this Schedule-B are listed below as per the requirements of the Manual of Specifications and Standards for [Two Laning of Highways (IRC:SP:73-2015)], referred to as the Manual. If any standards, specifications or details are not given in the Manual, the minimum design/construction requirements shall be specified in this Schedule. In addition to these particulars, all other essential project specific details, as required, should be provided in order to define the Scope of the Project clearly and precisely.]

1 WIDENING OF THE EXISTING HIGHWAY

(i) The Project Highway shall follow the existing alignment unless otherwise specified by the Authority and shown in the alignment plans specified in Annex III of Schedule-A. Geometric deficiencies, if any, in the existing horizontal and vertical profiles shall be corrected as per the prescribed standards for [plain/rolling] terrain to the extent land is available.

(ii) Width of Carriageway

a) Two-Lane with paved shoulder in Plain/Rolling Terrain in open Country area: - The Carriageway shall be 7.0 m. wide with 1.50 m. paved shoulder both side and 2.0 m earthen shoulder both side shall be provided. The width of carriage way shall be specified in following table:

Sl. No.	Built-up stretch (Township)	Design Chainage	Width (m)	Length (km)	Typical cross section (Ref. to Manual)
1	Manu Village Builtup	0 - 2400	7+1.5x2+2x2=14 m	2.400	Fig 2.2
2	Mainama Village Builtup	2650 - 4700	7+1.5x2+2x2=14 m	2.050	Fig 2.2
3	Chalengta Village Builtup	5950 - 7650	7+1.5x2+2x2=14 m	1.700	Fig 2.2
4	Lalchara Village Builtup	10400-11450	7+1.5x2+2x2=14 m	1.050	Fig 2.2
5	-	12900 - 13400	7+1.5x2+2x2=14 m	0.500	Fig 2.2
6	-	14600 - 15000	7+1.5x2+2x2=14 m	0.400	Fig 2.2
	Total Length			8.100	

b) Two Lane Road with Paved shoulders in Hilly Terrain with Hill side drain :- The Carriageway shall be 7.0 m wide with 1.5 m paved shoulder both side and 1.0 m earthen shoulder Both side shall be provided. The width of carriageway specified following table-

S.No.	Built-up stretch (Township)	Design Chainage	Width (m)	Length (km)	TCS as per IRC:SP: 73:2015
1	-	2400 - 2650	7+1.5x2+1x2=12 m	0.250	Fig. 2.19 (New)
2	-	4700 - 5950	7+1.5x2+1x2=12 m	1.250	Fig. 2.19 (New)
3	-	7650 - 10100	7+1.5x2+1x2=12 m	2.450	Fig. 2.19 (New)
4	-	11450 - 12900	7+1.5x2+1x2=12 m	1.450	Fig. 2.19 (New)
5	-	13400 - 14600	7+1.5x2+1x2=12 m	1.200	Fig. 2.19 (New)
6	-	15000 - 16290	7+1.5x2+1x2=12 m	1.290	Fig. 2.19 (New)
	Total Length			7.890	

$ The contents of this Annex-I may be modified in accordance with the structure of the Project.

c) Two Lane Road with Paved shoulders in Hilly Terrain with Hill side drain and breast wall :- The Carriageway shall be 7.0 m wide with 1.5 m paved shoulder both side and 1.0 m earthen shoulder Both side shall be provided. The width of carriageway specified following table-

S.No.	Built-up stretch (Township)	Design Chainage	Width (m)	Length (km)	TCS as per IRC:SP: 73:2015
1	-	10100 - 10400	7+1.5x2+1x2=12 m	0.300	Fig. 2.20 (New)
	Total Length			0.300	

d) Except as otherwise provided in this Agreement, the width of the paved carriageway and cross-sectional features shall conform to paragraph 1.1 above.

2 GEOMETRIC DESIGN AND GENERAL FEATURES

(i) General

Geometric design and general features of the Project Highway shall be in accordance with Section 2 of the Manual.

(ii) Design speed

The design speed shall be the minimum design speed of [80 km per hr for plain / rolling terrain].

(iii) Improvement of the existing road geometrics

[Refer to paragraph 2.1 (v) of the Manual and provide details]

In the following sections, where improvement of the existing road geometrics to the prescribed standards is not possible, the existing road geometrics shall be improved to the

extent possible within the given right of way and proper road signs and safety measures shall be provided:

Sl. No.	Stretch		Type of deficiency	Remarks
	From	To		
1.	15	188	Radius-155	P/R (Built up)
2.	222	456	Radius-155	P/R (Built up)
3.	547	648	Radius-155	P/R (Built up)
4.	651	825	Radius-155	P/R (Built up)
5.	851	1005	Radius-155	P/R (Built up)
6.	6582	6808	Radius-155	P/R (Built up)
7.	6989	7164	Radius-155	P/R (Built up)
8.	7318	7496	Radius-155	P/R (Built up)
9.	10586	10949	Radius-155	P/R (Built up)

(iv) Right of Way

[Refer to paragraph 2.3 of the Manual]. Details of the Right of Way are given in Annex II of Schedule-A.

(v) Type of shoulders

[Refer to paragraph 2.5.2 of the Manual and specify]

(a) In open country paved shoulder of 1.5m & earthen shoulder of 2.0m width both sides shall be provided (plain/Rolling terrain).

S.No.	Design Chainage		Length km	Paved Shoulder	Earthen Shoulder	Reference to cross section
	From km	To km				
1	0	2400	2.400	2x1.5=3.0m	2x2=4.0m	Fig. 2.2
2	2650	4700	2.050	2x1.5=3.0m	2x2=4.0m	Fig. 2.2
3	5950	7650	1.700	2x1.5=3.0m	2x2=4.0m	Fig. 2.2
4	10400	11450	1.050	2x1.5=3.0m	2x2=4.0m	Fig. 2.2
5	12900	13400	0.500	2x1.5=3.0m	2x2=4.0m	Fig. 2.2
6	14600	15000	0.400	2x1.5=3.0m	2x2=4.0m	Fig. 2.2
	Total		=8.100			

(b) In open country paved shoulder of 1.5m both side & earthen shoulder of 1.0m width on both side shall be provided (Hilly terrain).

S.No.	Design Chainage		Length km	Paved Shoulder	Earthen Shoulder	Reference to cross section
	From km	To km				
1	2400	2650	0.250	2x1.5=3.0m	1x2=2.0m	Fig. 2.19 (New)
2	4700	5950	1.250	2x1.5=3.0m	1x2=2.0m	Fig. 2.19 (New)
3	7650	10100	2.500	2x1.5=3.0m	1x2=2.0m	Fig. 2.19 (New)
4	10100	10400	0.300	2x1.5=3.0m	1x2=2.0m	Fig. 2.20 (New)
5	11450	12900	1.450	2x1.5=3.0m	1x2=2.0m	Fig. 2.19 (New)
6	13400	14600	1.200	2x1.5=3.0m	1x2=2.0m	Fig. 2.19 (New)
7	15000	16290	1.290	2x1.5=3.0m	1x2=2.0m	Fig. 2.19 (New)
	Total		=8.240			

(c) Design and specifications of paved shoulders and granular material shall conform to the requirements specified in paragraphs 5.9.9 and 5.9.10 of the Manual.

(vi) Lateral and vertical clearances at underpasses

(a) Lateral and vertical clearances at underpasses and provision of guardrails/crash barriers shall be as per paragraph 2.11 of the Manual.

(b) Lateral clearance: The width of the opening at the underpasses shall be as follows:

Sl. No.	**Location (chainage)** (from km to km)	**Span/opening (m)**	**Remarks**
NIL			

(vii) Lateral and vertical clearances at overpasses

(a) Lateral and vertical clearances at overpasses shall be as per paragraph 2.12 of the Manual.

(b) Lateral clearance: The width of the opening at the overpasses shall be as follows:

Sl. No.	**Location (chainage)** (from km to km)	**Span/opening (m)**	**Remarks**
NIL			

(viii) Service roads

Service roads shall be constructed at the locations and for the lengths indicated below: [Refer to paragraph 2.13 of the Manual and provide details]

Sl No.	Location of service road (from km to km)	Right hand side (RHS)/Left hand side (LHS)/ or Both sides	Length (km) of service road
NIL			

(ix) Grade separated structures

(a) Grade separated structures shall be provided as per paragraph 2.14 of the Manual. The requisite particulars are given below:

[Refer to paragraphs 2.14.1 of the Manual and provide details]

Sl. No.	Location of structure	Length (m)	Number and length of spans (m)	Approach gradient	Remarks, if any
NIL					

(b) In the case of grade separated structures, the type of structure and the level of the Project Highway and the cross roads shall be as follows: [Refer to paragraphs 2.14.2 of the Manual and specify the type of vehicular under pass/ overpass structure and whether the cross road is to be carried at the existing level, raised or lowered]

Sl. No.	Location	Type of structure Length (m)	Cross road at			Remarks, if any
			Existing Level	Raised Level	Lowered Level	
NIL						

(x) Cattle and pedestrian underpass /overpass

Cattle and pedestrian underpass/ overpass shall be constructed as follows: [Refer to paragraphs 2.14.3 of the Manual and specify the requirements of cattle and pedestrian underpass/ overpass]

Sl. No.	Location	Type of crossing
NIL		

(xi) Typical cross-sections of the Project Highway

Des Ch From (Km)	Des Ch To (Km)	Length (km)	TCS type	Remarks
0	2400	2.4	TCS 2.2	Manu Village
2400	2650	0.3	TCS 2.19 (New)	Open Country
2650	4700	2.1	TCS 2.2	Mainama Village
4700	5950	1.3	TCS 2.19 (New)	Open Country
5950	7650	1.7	TCS 2.2	Chalengta Village
7650	10100	2.5	TCS 2.19 (New)	Open Country
10100	10400	0.3	TCS 2.20 (New)	Open Country
10400	11450	1.1	TCS 2.2	Lalchara Village
11450	12900	1.5	TCS 2.19 (New)	Open Country
12900	13400	0.5	TCS 2.2	Open Country
13400	14600	1.2	TCS 2.19 (New)	Open Country
14600	15000	0.4	TCS 2.2	Open Country
15000	16290	1.3	TCS 2.19 (New)	Open Country

3 INTERSECTIONS AND GRADE SEPARATORS

All intersections and grade separators shall be as per Section 3 of the Manual. Existing intersections which are deficient shall be improved to the prescribed standards.

[Refer to paragraphs 3.1.1, 3.1.2 and 3.3 of the Manual and specify the requirements. Explain where necessary with drawings/sketches/general arrangement]

Properly designed intersections shall be provided at the locations and of the types and features given in the tables below:

(i) At-grade intersections

Sl. No.	Location of intersection	Type of intersection	Other features
1	0+000	T-Type	NH-44
2	0+060	Y-Type	Village Road
3	0+200	Y-Type	Village Road
4	0+340	T-Type	Village Road
5	0+650	Y-Type	Village Road
6	1+015	T-Type	Village Road
7	1+425	T-Type	Village Road
8	2+740	Y-Type	Village Road
9	3+520	T-Type	Village Road
10	4+000	T-Type	Village Road
11	4+130	T-Type	Village Road
12	4+360	Y-Type	Village Road
13	4+510	Y-Type	Village Road
14	5+000	T-Type	Village Road

15	5+315	T-Type	Village Road
16	5+960	T-Type	Village Road
17	6+140	T-Type	Village Road
18	6+300	T-Type	Village Road
19	6+805	T-Type	Village Road
20	7+000	Y-Type	Village Road
21	7+290	T-Type	Village Road
22	7+305	T-Type	Village Road
23	7+440	Y-Type	Village Road
24	7+620	Y-Type	Village Road
25	8+080	T-Type	Village Road
26	8+900	T-Type	Village Road
27	9+300	T-Type	Village Road
28	10+365	Y-Type	Village Road
29	11+400	T-Type	Village Road
30	12+410	T-Type	Village Road
31	12+475	Y-Type	Village Road

(ii) Grade separated intersection with/without ramps

Sl. No.	Location	Salient features	Minimum length of viaduct to be provided	Road to be carried over/under the structures
NIL				

4 ROAD EMBANKMENT AND CUT SECTION

(i) Widening and improvement of the existing road embankment/cuttings and construction of new road embankment/ cuttings shall conform to the Specifications and Standards given in section 4 of the Manual and the specified cross sectional details. Deficiencies in the plan and profile of the existing road shall be corrected.

Note:-

1. Disposal of extra earth obtained by cutting is sole responsibility of contractor.

2. Indicative Muck disposal sites has been given in drawing volume but actual identification & finalization of disposal site is sole responsibility of contractor. The contractor has to acquire land if it is required.

(ii) Raising of the existing road [Refer to paragraph 4.2.2 of the Manual and specify sections to be raised]

The existing road shall be raised in the following sections:

Sl. No.	Section (from km to km)	Length	Extent of raising [Top of finished road level]
NIL			

5 PAVEMENT DESIGN

(i) Pavement design shall be carried out in accordance with Section 5 of the Manual.

(ii) Type of pavement

[Refer to paragraph 5.1 of the Manual and state specific requirement, if any, of providing cement concrete pavement.]

(iii) Design requirements

[Refer to paragraph 5.4, 5.9 and 5.10 of the Manual and specify design requirements and strategy]

(a) *Design Period and strategy*

Flexible pavement for new pavement or for widening and strengthening of the existing pavement shall be designed for a minimum design period of 15 years. Stage construction shall not be permitted.

(b) *Design Traffic*

Notwithstanding anything to the contrary contained in this Agreement or the Manual, the Contractor shall design the pavement for a design traffic of **30 million standard axles**.

(iv) Reconstruction of stretches

[Refer to paragraph 5.9.7 of the Manual and specify the stretches, if any, to be reconstructed.]

The following stretches of the existing road shall be reconstructed. These shall be designed as new pavement.

S.No.	Stretch		Remark
	From km	To km	
1.	0+000	16+290	-

6 ROADSIDE DRAINAGE

Drainage system including surface and subsurface drains for the Project Highway shall be provided as per Section 6 of the Manual.

a) Catch water drain

Sr. No.	Type of TCS	Chainage		Length (m) for both side	Total Length (m)
		From km	To km		
1.	TCS 2.19 (New)	2400	2650	1x250	250
2.	TCS 2.19 (New)	4700	5950	1x1250	1250
3.	TCS 2.19 (New)	7650	10100	1x2450	2450
4.	TCS 2.20 (New)	10100	10400	1x300	300
5.	TCS 2.19 (New)	11450	12900	1x1450	1450
6.	TCS 2.19 (New)	13400	14600	1x1200	1200
7.	TCS 2.19 (New)	15000	16290	1x1290	1290
Total Length					**= 8190 m**

b) Hill side Drain

Sr. No.	Type of TCS	Chainage		Length (m)	Total Length(m)
		From km	To km		
1.	TCS 2.19 (New)	2400	2650	1x250	250
2.	TCS 2.19 (New)	4700	5950	1x1250	1250
3.	TCS 2.19 (New)	7650	10100	1x2450	2450
4.	TCS 2.20 (New)	10100	10400	1x0300	300
5.	TCS 2.19 (New)	11450	12900	1x1450	1450
6.	TCS 2.19 (New)	13400	14600	1x1200	1200
7.	TCS 2.19 (New)	15000	16290	1x1290	1290
Total Length					**= 8.190 km**

7 DESIGN OF STRUCTURES

(i) General

(a) All bridges, culverts and structures shall be designed and constructed in accordance with section 7 of the Manual and shall conform to the cross-sectional features and other details specified therein.

(b) Width of the carriageway of new bridges and structures shall be as follows:

[Refer to paragraph 7.1 (ii) of the Manual and specify the width of carriageway of new bridges and structures of more than 60 (sixty) meter length, if the carriageway width is different from 7.5 (seven point five) meters in the table below.

Sl No.	Bridge at km	Width of carriageway and cross-sectional features@
1.	3+185	(0.5 x 2) + 11 = 12
2.	6+750	(0.5 x 2) + 11 = 12
3.	7+420	(0.5 x 2) + 11 = 12
4.	10+605	(0.5 x 2) + 11 = 12
5.	10+855	(0.5 x 2) + 11 = 12
6.	11+115	(0.5 x 2) + 11 = 12
7.	13+100	(0.5 x 2) + 11 = 12
8.	13+850	(0.5 x 2) + 11 = 12
9.	14+325	(0.5 x 2) + 11 = 12
10.	14+400	(0.5 x 2) + 11 = 12
11.	14+770	(0.5 x 2) + 11 = 12
12.	15+170	(0.5 x 2) + 11 = 12

(c) The following structures shall be provided with footpaths:

[Refer to paragraph 7.1 (iii) of the Manual and provide details of new Structures with footpath.]

Sl No.	Location at km	Remark
NIL		

(d) All bridges shall be high-level bridges.

[Refer to paragraph 7.1 (iv) of the Manual and state if there is any exception]

(e) The following structures shall be designed to carry utility services specified in table below:

[Refer to paragraph 7.1 (viii) of the Manual and provide details]

Sl. No.	Bridge at km	Utility service to be carried	Remarks
NIL			

(f) Cross-section of the new culverts and bridges at deck level for the Project Highway shall conform to the typical cross-sections given in section 7 of the Manual.

(ii) Culverts

(a) Overall width of all culverts shall be equal to the roadway width of the approaches.

(b) *Reconstruction of existing culverts:*

The existing culverts at the following locations shall be re-constructed as new culverts:

[Refer to paragraph 7.3 (i) of the Manual and provide details]

Hume Pipe Culvert – 17 Nos

Sl. No.	**Culvert Location**	**Span/Opening** (m)	**Remarks, if any***
1	0+190	1x1.2	14.000 (Proposed width)
2	0+255	1x1.2	14.000 (Proposed width)
3	0+350	1x1.2	14.000 (Proposed width)
4	1+795	1x1.2	14.000 (Proposed width)
5	7+110	1x1.2	14.000 (Proposed width)
6	7+140	1x1.2	14.000 (Proposed width)
7	8+550	1x1.2	12.000 (Proposed width)
8	10+790	1X1.2	14.000 (Proposed width)
9	10+990	1X1.2	14.000 (Proposed width)
10	12+945	1X1.2	14.000 (Proposed width)
11	13+360	1x1.2	14.000 (Proposed width)
12	13+670	1x1.2	12.000 (Proposed width)
13	13+715	1x1.2	12.000 (Proposed width)
14	14+710	1x1.2	14.000 (Proposed width)
15	14+845	1x1.2	14.000 (Proposed width)
16	15+110	1x1.2	12.000 (Proposed width)
17	15+905	1x1.2	12.000 (Proposed width)

Slab Culvert – 07.

Sl. No.	**Culvert Location**	**Span/Opening** (m)	**Remarks, if any***
1	11+510	1x2	12.000 (Proposed width)
2	12+760	1x2	14.000 (Proposed width)
3	13+820	1x2	12.000 (Proposed width)
4	14+920	1x2	14.000 (Proposed width)
5	15+040	1x2	14.000 (Proposed width)
6	15+745	1x2	12.000 (Proposed width)
7	16+140	1x2	12.000 (Proposed width)

Box Culvert - 13 Nos.

Sl. No.	**Culvert Location**	**Span/Opening** (m)	**Remarks, if any***
1	0+275	1X2X2	14.000(Proposed width)
2	0+680	1X4X3	14.000(Proposed width)
3	0+770	1X2X2	14.000(Proposed width)

4	1+040	1X2X2	14.000(Proposed width)
5	1+185	1X3X3	14.000(Proposed width)
6	1+500	1x4X4	14.000(Proposed width)
7	2+450	1X2X2	14.000(Proposed width)
8	2+665	1X2X3	12.000(Proposed width)
9	4+310	1X2X2	14.000(Proposed width)
10	4+525	1X3X3	14.000(Proposed width)
11	7+665	1X3X3	14.000(Proposed width)
12	8+170	1X3X3	12.000(Proposed width)
13	8+250	1x4X4	12.000(Proposed width)

*[Specify modifications, if any, required in the road level, etc.]

(c) *Widening of existing culverts*

All existing culverts which are not to be reconstructed shall be widened to the roadway width of the Project Highway as per the typical cross section given in section 7 of the Manual. Repairs and strengthening of existing structures where required shall be carried out.

Sl. No.	**Culvert Location**	**Type, span, height and width of existing culvert** (m)	**Repairs to be carried out [specify]**
NIL			

(d) Additional new culverts shall be constructed as per particulars given in the table below:

Hume Pipe Culvert –10 Nos**.**

Sl No.	**Culvert Location**	**Span/Opening** (m)
1	1+560	1x1.2
2	4+250	1x1.2
3	6+040	1x1.2
4	9+080	1x1.2
5	9+165	1x1.2
6	10+060	1x1.2
7	11+550	1X1.2
8	11+735	1x1.2
9	11+945	1x1.2

10	15+460	1x1.2

Slab Culvert –03

Sl No.	**Culvert Location**	**Span/Opening** (m)
1	12+090	1x2
2	12+290	1x2
3	13+540	1x2

Box Culvert – 04 Nos.

Sl No.	**Culvert Location**	**Span/Opening** (m)
1	2+740	1 no. 2x2
2	4+950	1no. 3X3
3	5+445	1 no. 2x2
4	10+555	1 no. 2x2

(e) Repairs/replacements of railing/parapets, flooring and protection works of the existing culverts shall be undertaken as follows:

Sl. No.	**Location at km**	**Type of repair required**
NIL		

(f) Floor protection works shall be as specified in the relevant IRC Codes and Specifications.

(iii) Bridges

(a) *Existing bridges to be re- constructed/widened*

[(i) The existing bridges at the following locations shall be re-constructed as new Structures:]

[Refer to paragraph 7.3.2 of the Manual and provide details]

(a) Major Bridge – NIL

Sl. No.	**Bridge location (km)**	**Salient details of existing bridge**	**Adequacy or otherwise of the existing waterway, vertical clearance, etc***	**Remarks**
NIL				

(b) Minor Bridge – 12 Nos.

Sl. No.	**Bridge location (km)**	**Salient details of existing bridge**	**Span Arrangement**	**Remarks**
1	3+185	Steel Bailey Bridge	1X40	12.000(Proposed width)
2	6+750	Steel Bailey Bridge	1X10	12.000(Proposed width)

3	7+420	RCC SLAB	1x8	12.000(Proposed width)
4	10+605	Steel Bailey Bridge	1x21	12.000(Proposed width)
5	10+855	RCC SLAB	1x6	12.000(Proposed width)
6	11+115	Steel Bailey Bridge	1x16	12.000(Proposed width)
7	13+100	Steel Bailey Bridge	1x10	12.000(Proposed width)
8	13+850	Steel Bailey Bridge	1x16	12.000(Proposed width)
9	14+325	Steel Bailey Bridge	1x10	12.000(Proposed width)
10	14+400	HPC	1x6	12.000(Proposed width)
11	14+770	Steel Bailey Bridge	1x8	12.000(Proposed width)
12	15+170	Steel Bailey Bridge	1x10	12.000(Proposed width)

*Attach GAD

(ii) The following narrow bridges shall be widened:

Sl. No.	Location (km)	Existing width (m)	Extent of widening (m)	Cross-section at deck level for widening @
NIL				

@ Attach cross-section

(b) *Additional new bridges*

New bridges at the following locations on the Project Highway shall be constructed. GADs for the new bridges are attached in the drawings folder.

Sl. No.	Location (km)	Total length (m)	Remarks, if any
NIL			

(c) The railings of existing bridges shall be replaced by crash barriers at the following locations:

[Refer to paragraph 7.18 (iv) the Manual and provide details:]

Sl. No.	Location at km	Remarks
NIL		

(d) Repairs/replacements of railing/parapets of the existing bridges shall be undertaken as follows:

Sl. No.	Location at km	Remarks
NIL		

(e) *Drainage system for bridge decks*

An effective drainage system for bridge decks shall be provided as specified in paragraph 7.21 of the Manual

(f) *Structures in marine environment*

[Refer to paragraph 7.22 of the Manual and specify the necessary measures / treatments for protecting structures in marine environment, where applicable]

(iv) Rail-road bridges

(a) Design, construction and detailing of ROB/RUB shall be as specified in section 7 of the Manual. [Refer to paragraph 7.19 of the Manual and specify modification, if any]

(b) *Road over-bridges*

Road over-bridges (road over rail) shall be provided at the following level crossings, as per GAD drawings attached:

Sl. No.	**Location of Level crossing** (chainage km)	**Length of bridge** (m)
NIL		

(c) *Road under-bridges*

Road under-bridges (road under railway line) shall be provided at the following level crossings, as per GAD drawings attached:

Sl. No.	**Location of Level crossing** (chainage km)	**Number and length of span** (m)
NIL		

(v) Grade separated structures

[Refer to paragraph 7.20 of the Manual]

The grade separated structures shall be provided at the locations and of the type and length specified in paragraphs 2.9 and 3 of this Annex-I.

(vi) Repairs and strengthening of bridges and structures

[Refer to paragraph 7.23 of the Manual and provide details]

The existing bridges and structures to be repaired/strengthened, and the nature and extent of repairs /strengthening required are given below:

A. Bridges

Sl. No.	**Location of bridge** (km)	**Nature and extent of repairs /strengthening to be carried out**
NIL		

B. ROB / RUB

Sl. No.	**Location of ROB/RUB** (km)	**Nature and extent of repairs /strengthening to be carried out**
NIL		

C. Overpasses/Underpasses and other structures

Sl. No.	Location of Structure (km)	Nature and extent of repairs /strengthening to be carried out
NIL		

(vii) List of Major Bridges and Structures

The following is the list of the Major Bridges and Structures:

Sl. No.	Location
NIL	

8 TRAFFIC CONTROL DEVICES AND ROAD SAFETY WORKS

(i) Traffic control devices and road safety works shall be provided in accordance with Section 9 of the Manual.

(ii) Specifications of the reflective sheeting. [Refer to paragraph 9.3 of the Manual and specify]

9. Roadside Furniture

(i) Roadside furniture shall be provided in accordance with the provisions of Section 11 of the Manual. However the Contractor shall provide minimum numbers of Cautionary, Mandatory, Warning and Informatory Traffic Sign Boards as mentioned below:

S.No.	Location	Numbers	Size
1	At Junction	20	90 cm Equilateral Triangle
2	At Curves	100	60 cm Equilateral Triangle
3	At Curves	240	60 cm Circular
4	At Junction, Village, Curve	90	80X60 cm Rectangular
7	At Junction	30	60X45 cm Rectangular
8	At Village	10	60X60 cm Square
9	At Junction	30	90 cm High Octagon
11	Route Marker Sign	At Every 10 Km.	0.9 Sqm
12	Hazard Marker	Both Side on every Bridge	As per IRC

(ii) Overhead traffic signs: location and size
As per paragraph 11.5 of the Manual

10 COMPULSORY AFFORESTATION

[Refer to paragraph 12.1 of the Manual and specify the number of trees which are required to be planted by the Contractor as compensatory a forestation.]

11 HAZARDOUS LOCATIONS

The crash barriers shall also be provided at the following hazardous locations**:**

Sl. No.	Location stretch		LHS/RHS
	From (km)	To (km)	
1	2400	2650	On Valley Side as per TCS
2	4700	5950	On Valley Side as per TCS
3	7650	10100	On Valley Side as per TCS
4	10100	10400	On Valley Side as per TCS
5	11450	12900	On Valley Side as per TCS
6	13400	14600	On Valley Side as per TCS
7	15000	16290	On Valley Side as per TCS

12 SPECIAL REQUIREMENT FOR HILL ROADS

[Refer to paragraphs 14.5 and 14.8 of the Manual and provide details where relevant and required.]

Special requirement for hill roads in accordance with the provisions of section 14 of the manual shall be provided in the following locations:-

a) Retaining Wall

S.No.	Existing Chainage (In km.)		Design Chainage (In km.)		Length (km)	Remarks
	From	To	From	To		
1	2.810	3.015	2.700	2.900	0.200	Hilly portion. Retaining wall shall be designed and provided as per the technical requirement in consultation with the Authority Engineer subject to minimum length of 2730 metre.
2	4.270	4.300	4.120	4.150	0.030	
3	4.340	4.370	4.190	4.220	0.030	
4	4.475	4.470	4.275	4.320	0.045	
5	4.440	4.500	4.290	4.350	0.060	
6	4.540	4.575	4.390	4.425	0.035	
7	4.620	4.700	4.470	4.550	0.080	
8	4.790	4.840	4.640	4.690	0.100	
9	5.660	5.875	5.480	5.600	0.240	
10	5.875	5.970	5.600	5.700	0.100	
11	7.405	7.680	7.050	7.300	0.250	
12	8.405	8.480	8.000	8.070	0.070	
13	8.590	8.680	8.180	8.280	0.100	
14	9.250	9.275	8.840	8.870	0.030	
15	9.545	9.660	9.120	9.230	0.110	
16	10.265	10.330	9.830	9.890	0.060	
17	10.385	10.470	9.950	10.030	0.080	

18	10.470	10.640	10.030	10.100	0.140	
19	10.700	11.000	10.100	10.400	0.300	
20	12.225	12.355	11.575	11.700	0.125	
21	12.860	13.025	12.175	12.300	0.125	
22	13.000	13.065	12.280	12.350	0.070	
23	13.100	13.180	12.380	12.450	0.070	
24	13.180	13.280	12.450	12.550	0.100	
25	13.410	13.440	12.680	12.710	0.030	
26	16.335	16.445	15.400	15.550	0.150	
		Total			=2.730	

b) Breast wall

Sl. No.	Type of TCS	Location stretch		Length (m) for both side	Total Length (m)
		From (km)	To (km)		
1	TCS 2.20 (New)	10.100	10.400	1 x 300	300
Total Length					= 0.300 (km)

13 CHANGE OF SCOPE

The length of Structures and bridges specified hereinabove shall be treated as an approximate assessment. The actual lengths as required on the basis of detailed investigations shall be determined by the Contractor in accordance with the Specifications and Standards. Any variations in the lengths specified in this Schedule-B shall not constitute a Change of Scope, save and except any variations in the length arising out of a Change of Scope expressly undertaken in accordance with the provisions of Article 13.

Schedule - H
(See Clauses10.1 (iv) and 19.3)
Contract Price Weightages

1. The Contract Price for this Agreement is Rs. ******

1.2 Proportions of the Contract Price for different stages of Construction of the Project Highway shall be as specified below:

Item	Weightage in percentage to the Contract Price	Stage for Payment	Percentage weightage
1	2	3	4
Road works including culverts, widening and repair of culverts.	[67.30%]	**A- Widening and strengthening of existing road**	
		(1)Earthwork up to top of the sub-grade	[0%]
		(2)Earthwork in shoulder	[0%]
		(3) sub-base Course	[0%]
		(4) Non Bituminous base Course	[0%]
		(5) Bituminous Base Course	[0%]
		(6) Wearing coat	[0%]
		(7) Widening and repair of culvert	[0%]
		B.1- Reconstruction New 2-lane realignment/bypass (Flexible pavement)	
		(1) Earthwork up to top of the sub-grade	[3.65%]
		(2) Earthwork in Shoulder	[0.59%]
		(3) sub-base Course	[24.50%]
		(4) Non Bituminous base Course	[25.62%]
		(5) Bituminous Base Course	[21.70%]
		(6) Wearing coat	[10.46%]
		B.2- Reconstruction/ New 2-lane realignment/bypass (Rigid pavement)	
		(1)Earthwork up to top of the sub-grade	
		(2)Earthwork in Shoulder	[0%]
		(3) sub-base Course	[0%]
		(4)Dry lean concrete (DLC) Course	[0%]
		(5) Pavement quality control (PQC) course	[0%]
			[0%]
		C.1- Reconstruction/ New Service Road (Flexible pavement)	
		(1) Earthwork up to top of the sub-grade	
		(2) Earthwork in Shoulder	
		(3) sub-base Course	[0%]
		(4) Non Bituminous base Course	[0%]
		(5) Bituminous Base Course	[0%]
		(6) Wearing coat	[0%]
			[0%]
		C.2-Reconstruction/ New Service Road (Rigid pavement)	[0%]

		(1) Earthwork up to top of the sub-grade (2) sub-base Course (3)Dry lean concrete (DLC) Course (4) Pavement quality control (PQC) course **D-Re-construction/ New culverts on existing road, realignments, bypasses:** Culvert (Length<6m)	[0%] [0%] [0%] [0%] [13.48%]
Minor Bridge/ Underpasses/Overpasses	19.57%	**A.1- Widening and repairs of Minor Bridges (length>6m and <60m)** Minor bridges **A.2 New Minor Bridges (length>6m and <60m)** **(1) Foundation** On completion of the foundation work including foundations for wing and return walls, abutments, piers. (2)**Substructure:** On completion of abutments, piers upto the abutment/pier cap including wing/ return/ retaining wall upto top (3)**Super Structure:** On completion of the super-structure in all respects including Girder, Deck slab, bearings (4)**Approaches:** On completion of approaches including Retaining walls, stone pitching, protection works complete in all respect, tests on completion in all respect and fit for use (5)**Guide Bunds and River Training Works:** On completion of Guide Bunds and River Training Works complete in all respect. (6) Other Ancilliary Works: On completion of wearing coat, expansion joints, hand rails, crash barriers, road signs & markings, tests on completion in all respect. **B-1 Widening and repair of underpasses/ overpasses** Underpasses/ Overpasses **B-2 New underpasses/ overpasses** **(1) Foundation +Substructure:** On completion of the foundation work including foundation for wing and return wall, abutments, piers upto the abutment/pier cap.	[0%] [14.43%] [62.31%] [9.47%] [2.57%] [1.67%] [9.55%] [0%] [0%]

		(2) Sub-structure: On completion of abutments, piers upto the abutment/ pier cap including wing/ return/retaining wall upto top **(3)Super Structure:** On completion of the super-structure in all respects including Girder, Deck slab, bearings.t. (4) On completion of Retaining /Reinforced earth walls, complete in allrespect and fit for use (5) Approaches and Other AncilliaryWorks: On completion of wearing coat,expansion joints, hand rails, crash barriers, stone pitching, protection works, road signs & markings, tests on completion in all respect. **Wearing Coat** (a) in case of Overpasswearing coat including expansion joints complete in all respects asspecified and (b) in case of underpass-rigid pavement including drainage facility complete in all respects as specified	[0%] [0%] [0%] [0%]
Major Bridges (length>60m) work and ROB/RUB/elevated section/ flyover including viaducts, if any	0%	**A-1 Widening and repair of Major Bridges** 1) Foundation On completion of the foundation work including foundations for return walls, abutments, piers. (2) Sub-structure On completion of abutments, piers upto the abutment/ pier cap (3) Super-structure On completion of the super-structure in all respects including Girder, Deck slab, bearings. (4) wearing coat including expansion joints (5) Miscellaneous Items like hand rails, crash barriers, road markings etc.) (6)Wing walls/return walls up to top (7) Guide bunds, river Training works etc. (8)Approaches (including Retaining walls, stone pitching and protection works) **A.2New Major Bridges** (1) Foundation On completion of the foundation work including foundations for return walls, abutments, piers. (2) Sub-structure On completion of abutments, piers upto the abutment/pier cap (3) Super-structure On completion of the super-structure in all respects including Girder, Deck slab, bearings. (4) wearing coat including expansion	[0%] [0%] [0%] [0%] [0%] [0%] [0%] [0%] [0%] [0%]

		joints	
		(5) Miscellaneous Items like hand rails, crash barriers, road markings etc.)	[0%]
		(6)Wing walls/return walls up to top	[0%]
		(7) Guide bunds, river Training works etc.	
		(8)Approaches (including Retaining walls, stone pitching and protection works)	[0%] [0%]
		B.1- Widening and repair of	
		(a) ROB	[0%]
		(b) RUB	
		(1) Foundation	
		(2) Sub-structure	
		(3) Super-structure (including bearings)	
		(4) wearing coat: (a) in case of ROB- wearing coat including expansion joints complete in all respects as specified and	[0%] [0%]
		(b) in case of RUB- rigid pavement under RUB including drainage facility complete in all respects as specified and specified.	[0%] [0%]
		(5) Miscellaneous Items like hand rails, crash barriers, road markings etc.)	
		(6)Wing walls/return walls	
		(7)Retaining/Reinforced Earth Wall	
		(8)Approaches and other ancillary Works (wearing coat, expansion joint, hand rails, crash barriers, road Signs & marking, stone pitching, protection works, etc.)	[0%] [0%] [0%]
		B.2- New ROB/ RUB	[0%]
		(a) ROB	
		(b) RUB	
		(1) Foundation	
		(2) Sub-structure	
		(3) Super-structure (including bearings)	
		(4) wearing coat: (a) in case of ROB- wearing coat including expansion joints complete in all respects as specified and	[0%]
		(b) in case of RUB- rigid pavement under RUB including drainage facility complete in all respects as specified and specified.	[0%] [0%] [0%]
		(5) Miscellaneous Items like hand rails, crash barriers, road markings etc.)	
		(6)Wing walls/return walls	
		(7)Retaining/Reinforced Earth Wall	
		(8)Approaches and other ancillary Works (wearing coat, expansion joint, hand rails, crash barriers, road Signs & marking, stone pitching, protection works, etc.)	[0%] [0%]
		C.1- Widening and repair of Elevated Section/Flyovers/Grade separators	[0%]
		1) Foundation	
		(2) Sub-structure	
		(3) Super-structure (including bearings)	
		(4) wearing coat including expansion joints	

		(5) Miscellaneous Items like hand rails, crash barriers, road markings etc.) (6)Wing walls/return walls (7)Retaining/Reinforced Earth Wall (8)Approaches and other ancillary Works (wearing coat, expansion joint, hand rails, crash barriers, road Signs & marking, stone pitching, protection works, etc.) **C.2- New Elevated Section/Flyovers/Grade separators** 1) Foundation (2) Sub-structure (3) Super-structure (including bearings) (4) wearing coat including expansion joints (5) Miscellaneous Items like hand rails, crash barriers, road markings etc.) (6)Wing walls/return walls (7)Retaining/Reinforced Earth Wall (8)Approaches and other ancillary Works (wearing coat, expansion joint, hand rails, crash barriers, road Signs & marking, stone pitching, protection works, etc.)	[0%] [0%] [0%] [0%] [0%] [0%] [0%] [0%] [0%] [0%] [0%] [0%] [0%] [0%] [0%] [0%]
Other works	13.13%	(i) Toll Plaza (ii) Road side drains a)lined drain b)unlined drain (iii) Road signs, safety devices, Road Furniture etc. (iv) Road Markings & studs (v) Crash Barrier (vi) Project facilities (a) Bus bays (b) Way side amenities excluding slip roads & but including all internal roads (service areas including truck lay byes) (c) Others (to be specified) (vii) Retaining Wall (viii) RE Wall (ix) Street Lighting (x) Utility Ducts (xi) Boundary Wall (xii)ATMS (xiii) Rain Water Harvesting	[0%] [13.44%] [0%] [2.45%] [1.37%] [12.78%] [0%] [0%] [0%] [66.44%] [0%] [0%] [0%] [0%] [0%] [0%]

		(xiv)Road side plantation including horticulture in way side amenities (xv) Protection works other than approaches to the bridges, elevated sections/flyovers/grade separators and ROBs/ RUBs (xvi) Safety and traffic management during construction (xvii) Other Misc Works Including connecting Road & Junction under grade separator	[0%] [1.50%] [0.07%] [1.95%]

Procedure of estimating the value of work done

(i) Road works

Procedure for estimating the value of road work done shall be as follows:

Table 1.3.1

Stage of Payment	**Percentage -weightage**	**Payment Procedure**
A-Widening and strengthening of road (1) Earthwork up to top of the sub-grade	0 %	Unit of measurement is linear length. Payment of each stage shall be made on pro rata basis on completion of a stage in a length of not less than 10 (ten) percent of the total length.
(2) Earthwork in shoulders	0 %	
(3) sub-base Course	0 %	
(4) Non Bituminous Base course	0 %	
(5) Bituminous Base course	0 %	
(6) Wearing Coat	0 %	
(7) Widening and repair of culverts	0%	Cost of ten completed culverts shall be determined on pro rata with respect to the total number of culverts. The Payment shall be made on the

		completion of atleast five culverts.
B.1Reconstruction/ New 2-lane realignment, bypass (flexible pavement) (1) Earthwork up to top of the sub-grade	3.65%	Unit of measurement is linear length. Payment of each stage shall be made on pro rata basis on completion of a stage in full length or 5 (five) km length, Whichever is less.
(2) Earthwork in shoulders	0.59%	
(3) sub-base Course	24.50%	
(4) Non Bituminous Base course	25.62%	
(5) Bituminous Base course	21.70%	
(6) Wearing Coat	10.46%	
B.2Reconstruction/ New 2-lane realignment, bypass **(Rigid pavement)** (1)Earthwork up to top of the sub-grade	0 %	Unit of measurement is linear length. Payment of each stage shall be made on pro rata basis on completion of a stage in full length or 5 (five) km length, Whichever is less.
(2) Earthwork in shoulders	0 %	
(3) sub-base Course	0 %	
(4)Dry lean concrete (DLC) Course	0 %	
(5) Pavement quality control (PQC) course	0 %	
C.1-Reconstruction/ New Service Road (flexible pavement) (1) Earthwork up to top of the sub-grade	0 %	Unit of measurement is linear length. Payment of each stage shall be made on pro rata basis on completion of a stage in full length or 5 (five) km length, Whichever is less.
(2) Earthwork in shoulders	0 %	
(3) sub-base Course	0%	
(4) Non Bituminous Base course	0 %	
(5) Bituminous Base course	0%	
(6) Wearing Coat	0 %	
C.2Reconstruction/ New Service Road **(Rigid pavement)** (1)Earthwork up to top of the sub-	0 %	Unit of measurement is linear length. Payment of each stage shall be made on pro rata basis on completion of a stage in full length or 5 (five) km length, Whichever is less.

grade		
(2) sub-base Course	0 %	
(3)Dry lean concrete (DLC) Course	0 %	
(4) Pavement quality control (PQC) course	0 %	
D. Re-construction and new culverts on existing road, realignments, bypasses: (1)Culvert (length<6m)	13.48 %	Cost of each culvert shall be determined on pro rata basis with respect to the total number of culverts. Payment shall be made on the completion of five culverts.

@. For example, if the total length of bituminous work to be done is 100 km, the cost per km of bituminous work shall be determined as follows:

Cost per km = P x weightage for road work x weightage for bituminous work x (1/L)

Where P= Contract Price

L = Total length in km

Similarly, the rates per km for stages shall be worked out accordingly.

Note: The length affected due to law and order problems or litigation during execution due to which the contractor is unable to execute the work, may be deducted from the total project length for payment purposes. The total length calculated here is only for payment purposes and will not affected and referred in other clauses of the contract Agreement.

(ii) Minor Bridge and underpasses/Overpasses.

Procedure for estimating the value of minor Bridge and underpasses/Overpasses shall be as stated in table 1.3.2:

Table 1.3.2

Stage of Payment	Weightage	Payment Procedure

A- Widening and repairs of minor bridges (length>6m and < 60m)	0%	Cost of each minor Bridge shall be determined on pro rata basis with respect to the total linear length of the minor Bridges. Payment shall be made on completion of widening & repair works of a minor Bridge.
A.2-New Minor bridges (length>6m and < 60m) **(i)Foundation:** On completion of the foundation work including foundations for wing and return walls abutments, piers.	14.43%	**Foundation:** Cost of each Minor Bridge shall be determined on pro rata basis with respect to the total linear length (m) of the Minor Bridges. payment against foundation shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of foundation of each bridge In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
(2)Substructure: On completion of the Abutments, Piers upto the abutment/pier cap including wing/return/ retaining wall upto top.	62.31%	**Substructure:** Cost of each Minor Bridge shall be determined on pro rata basis with respect to the total linear length (m) of the Minor Bridges. payment against substucture shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of substructure of each bridge.
(3) Super-structure: On completion of the super structure in all respects including girder, Deck Slab, bearings.	9.47%	**Super-structure:** Payment shall be made on pro rata basis on completion of a stage i.e. completion of super-structure of at least one span in all respects as specified in the column of "Stage of payment" in this sub clause. In case of structures where pre cast girders have been proposed by the contractor, 50% of the stage payment shall be due and payable on casting of girders of

		each span & Balance 50% of the stage payment shall be made on completion of stage specified as above.
(4) Approaches: On completion of approaches including retaining wall, stone pitching, protection work complete in all respects & fit for use.	2.57%	**Approaches:** Payment shall be made on pro rata basis on completion of a stage i.e. completion of approaches in all respects as specified in the column of "Stage of payment" in this sub clause.
(5) Guide Bunds and River Training works: On completion Guide Bunds and River Training works complete in all respects	1.67%	**Guide Bunds and River Training works:** Payment shall be made on pro rata basis on completion of a stage i.e. completion of Guide Bunds and River Training works complete in all respects as specification.
(6) Other ancillary works: On Completion of Wearing coat, Expansion Joint, Hand Rails, Crash Barriers, Road Signs & Markings, Tests on Completion in all respect.	9.55%	**Other ancillary works:** Payment shall be made on Pro rata basis on Completion of a stage in all respect as specified.
B.1 Widening and repairs of underpasses/overpasses	0%	Cost of each underpasses/overpasses shall be determined on pro rata basis with respect to the total linear length of the underpasses/overpasses. Payment shall be made on completion of widening & repair works of a underpasses/overpass.

B.2-New underpasses/overpasses: **(i)Foundation:** On completion of the foundation work including foundations for wing and return walls abutments, piers.	0%	**Foundation:** Cost of each underpass/overpass shall be determined on pro rata basis with respect to the total linear length (m) of the underpass/overpass. payment against foundation shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of foundation of each underpass/overpass. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
(2)Substructure: On completion of the Abutments, Piers upto the abutment/pier cap including wing/return/ retaining wall upto top.	0%	**Substructure:** Cost of each underpass/overpass shall be determined on pro rata basis with respect to the total linear length (m) of the underpass/overpass. payment against substructure shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of substructure of each underpass/overpass.
(3) Super-structure: On completion of the super structure in all respects including girder, Deck Slab, bearings.	0%	**Super-structure:** Payment shall be made on pro rata basis on completion of a stage i.e. completion of super-structure of at least one span in all respects as specified in the column of "Stage of payment" in this sub clause. In case of structures where pre cast girders have been proposed by the contractor, 50% of the stage payment shall be due and payable on casting of girders of each span & Balance 50% of the stage payment shall be made on completion of stage specified as above.

(4) On Completion of Retaining/Reinforced Earth Wall Complete in all respect & Fit for use.	0%	Payment shall be made on pro rata basis on completion of 20% of total area.
(5) Approaches & other Ancillary Works: On completion of wearing coat, expansion joint, Hand rails, crash barriers, road signs & Markings, Stone pitching, Protection Works, Tests on Completion in all respect.	0%	Payment shall be made on pro rata basis on completion of a stage in all respect as specified.

(iii) Major Bridge works ROB/RUB and Structures.

Procedure for estimating the value of major Bridge works, ROB/RUB and Structures shall be as stated in table 1.3.3:

Table 1.3.3

Stage of Payment	Weightage	Payment Procedure
A.1- Widening and repairs of Major bridges **(i)Foundation:** On completion of the foundation work including foundations for return walls, abutments, piers.	0%	**Foundation:** Cost of each Major Bridge shall be determined on pro rata basis with respect to the total linear length (m) of the Major Bridges. payment against foundation shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of foundation of the major bridge In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.

(2)Substructure: On completion of the Abutments, Piers upto the abutment/pier cap	0%	**Substructure:** payment against substructure shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of substructure of major bridge.
(3) Super-structure: On completion of the super structure in all respects including girder, Deck Slab, bearings.	0%	**Super-structure:** Payment shall be made on pro rata basis on completion of a stage i.e. completion of super-structure including bearing of at least one span in all respects as specified. In case of structures where pre cast girders have been proposed by the contractor, 50% of the stage payment shall be due and payable on casting of girders of each span & Balance 50% of the stage payment shall be made on completion of stage specified as above.
(4) Wearing Coat including expansion Joints	0%	**Wearing Coat:-** Payment shall be made on completion of wearing coat including expansion joint complete in all respects as specified.
(5) Miscellaneous Items like Hand Rails, Crash Barriers, Road Markings etc.	0%	**Miscellaneous:** Payment shall be made on Completion of all Misc Works like Hand Rails, Crash Barriers, Road Markings etc. complete in all respects as specified.
(6) Wing Walls/Return Walls up to top	0%	**Wing Walls/Return Walls :** Payment shall be made on Completion of all wing walls/Return walls complete in all respects as specified.

(7) Guide Bunds and River Training works, etc.	0%	**Guide Bunds and River Training works:** Payment shall be made on completion of all Guide Bunds/River Training works etc. complete in all respects as specified.
(8) Approaches: (including retaining walls, stone pitching, protection works)	0%	**Approaches:** Payment shall be made on pro rata basis on completion of 10% of the scope of each stage.
A.2- New Major bridges **(i)Foundation:** On completion of the foundation work including foundations for return walls, abutments, piers.	0%	**Foundation:** Cost of each Major Bridge shall be determined on pro rata basis with respect to the total linear length (m) of the Major Bridges. payment against foundation shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of foundation of the major bridge In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
(2)Substructure: On completion of the Abutments, Piers upto the abutment/pier cap	0%	**Substructure:** payment against substructure shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of substructure of major bridge.
(3) Super-structure: On completion of the super structure in all respects including girder, Deck Slab, bearings.	0%	**Super-structure:** Payment shall be made on pro rata basis on completion of a stage i.e. completion of super-structure including bearing of at least one span in all respects as specified. In case of structures where pre cast girders have been proposed by the contractor, 50% of the stage payment shall be due and payable on casting of girders of each span & Balance 50% of the stage payment shall be made on completion of stage specified

		as above.
(4) Wearing Coat including expansion Joints	0%	**Wearing Coat:-** Payment shall be made on completion of wearing coat including expansion joint complete in all respects as specified.
(5) Miscellaneous Items like Hand Rails, Crash Barriers, Road Markings etc.	0%	**Miscellaneous:** Payment shall be made on Completion of all Misc Works like Hand Rails, Crash Barriers, Road Markings etc. complete in all respects as specified.
(6) Wing Walls/Return Walls up to top	0%	**Wing Walls/Return Walls :** Payment shall be made on Completion of all wing walls/Return walls complete in all respects as specified.
(7) Guide Bunds and River Training works, etc.	0%	**Guide Bunds and River Training works:** Payment shall be made on completion of all Guide Bunds/River Training works etc. complete in all respects as specified.
(8) Approaches: (including retaining walls, stone pitching, protection works)	0%	**Approaches:** Payment shall be made on pro rata basis on completion of 10% of the scope of each stage.
B.1- Widening and repairs of **(a) ROB** **(b) RUB** (1)Foundation	0%	(i) Foundation: Cost of each ROB/RUB shall be determined on pro rata basis with respect to the total linear length (m) of the ROB/RUB. Payment against foundation shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the ROB/RUB. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.

(2) Sub-structure:	0%	**(ii) Sub-structure:** Payment against Sub- structure shall be made on pro rata basis on completion of a stage i.e. not less than 25% of the scope of sub-structure of the ROB/RUB.
(3) Super-structure (including bearings)	0%	**(iii) Super-structure:** Payment shall be made on pro rata basis on completion of a stage i.e. completion of super-structure including bearings of atleast one span in all respects as specified. In case of structures where pre cast girders have been proposed by the contractor, 50% of the stage payment shall be due and payable on casting of girders of each span & Balance 50% of the stage payment shall be made on completion of stage specified as above.
(4) Wearing coat including expansion joints in case of ROB. In case of RUB, rigid pavement under RUB including drainage facility as Specified.	0%	**(iv) Wearing coat:** Payment shall be made on completion of (a) in case of ROB- wearing coat including expansion joints complete in all respects as specified and (b) in case of RUB- rigid pavement under RUB including drainage facility complete in all respects as specified.
(5) Miscellaneous Items like hand rail, crash barriers, road markings etc.	0%	**(v) Miscellaneous:** Payment shall be made on completion of miscellaneous work like hand rail, crash barriers, road markings etc. complete in all respects as specified.
(6) Wing walls/return walls	0%	**(vi) Wing walls/return walls:** Payment shall be made on completion of all wing walls/return walls complete in all respects as specified.
(7) On Completion of Retaining/Reinforced Earth Wall Complete in all respect & Fit for use.	0%	Payment shall be made on pro rata basis on completion of 20% of total area.

(8) Approaches & other Ancillary Works: On completion of wearing coat, expansion joint, Hand rails, crash barriers, road signs & Markings, Stone pitching, Protection Works, Tests on Completion in all respect.	0%	Payment shall be made on pro rata basis on completion of a stage in all respect as specified.
B.2- New ROB/RUB (1)Foundation	0%	(i) Foundation: Cost of each ROB/RUB shall be determined on pro rata basis with respect to the total linear length (m) of the ROB/RUB. Payment against foundation shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the ROB/RUB. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
(2) Sub-structure:	0%	**(ii) Sub-structure:** Payment against Sub- structure shall be made on pro rata basis on completion of a stage i.e. not less than 25% of the scope of sub-structure of the ROB/RUB.
(3) Super-structure (including bearings)	0%	**(iii) Super-structure:** Payment shall be made on pro rata basis on completion of a stage i.e. completion of super-structure including bearings of atleast one span in all respects as specified. In case of structures where pre cast girders have been proposed by the contractor, 50% of the stage payment shall be due and payable on casting of girders of each span & Balance 50% of the stage payment shall be made on completion of stage specified as above.
(4) Wearing coat including expansion joints in case of ROB. In case of RUB, rigid pavement under RUB including drainage facility as Specified.	0%	**(iv) Wearing coat:** Payment shall be made on completion of (a) in case of ROB- wearing coat including expansion joints complete in all respects as specified and (b) in case of RUB- rigid

		pavement under RUB including drainage facility complete in all respects as specified.
(5) Miscellaneous Items like hand rail, crash barriers, road markings etc.	0%	**(v) Miscellaneous:** Payment shall be made on completion of miscellaneous work like hand rail, crash barriers, road markings etc. complete in all respects as specified.
(6) Wing walls/return walls	0%	**(vi) Wing walls/return walls:** Payment shall be made on completion of all wing walls/return walls complete in all respects as specified.
(7) On Completion of Retaining/Reinforced Earth Wall Complete in all respect & Fit for use.	0%	Payment shall be made on pro rata basis on completion of 20% of total area.
(8) Approaches & other Ancillary Works: On completion of wearing coat, expansion joint, Hand rails, crash barriers, road signs & Markings, Stone pitching, Protection Works, Tests on Completion in all respect.	0%	Payment shall be made on pro rata basis on completion of a stage in all respect as specified.
C.1- Widening & Repairs of Elevated Section/Flyovers/Grade Seperators. (1)Foundation	0%	(i) Foundation: Cost of each Structure shall be determined on pro rata basis with respect to the total linear length (m) of the Structure. Payment against foundation shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the Scope of Foundation of Structure. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
(2) Sub-structure:	0%	**(ii) Sub-structure:** Payment against Sub- structure shall be made on pro rata basis on completion of a stage i.e. not less than 25% of the scope of sub-structure of the Structure.

(3) Super-structure : On Completion of the superstructure in all respects including Girder, Deck Slab, Bearings.	0%	**(iii) Super-structure:** Payment shall be made on pro rata basis on completion of a stage i.e. completion of super-structure including bearings of atleast one span in all respects as specified. In case of structures where pre cast girders have been proposed by the contractor, 50% of the stage payment shall be due and payable on casting of girders of each span & Balance 50% of the stage payment shall be made on completion of stage specified as above.
(4) Wearing coat including expansion joints.	0%	**(iv) Wearing coat:** Payment shall be made on completion of wearing coat including expansion Joints Complete in all respect as specified.
(5) Miscellaneous Items like hand rail, crash barriers, road markings etc.	0%	**(v) Miscellaneous:** Payment shall be made on completion of miscellaneous work like hand rail, crash barriers, road markings etc. complete in all respects as specified.
(6) Wing walls/return walls	0%	**(vi) Wing walls/return walls:** Payment shall be made on completion of all wing walls/return walls complete in all respects as specified.
(7) On Completion of Retaining/Reinforced Earth Wall Complete in all respect & Fit for use.	0%	Payment shall be made on pro rata basis on completion of 20% of total area.
(8) Approaches & other Ancillary Works: On completion of wearing coat, expansion joint, Hand rails, crash barriers, road signs & Markings, Stone pitching, Protection Works, Tests on Completion in all respect.	0%	Payment shall be made on pro rata basis on completion of a stage in all respect as specified.

C.2- New Elevated Section/Flyovers/Grade Seperators. (1)Foundation	0%	(i) Foundation: Cost of each Structure shall be determined on pro rata basis with respect to the total linear length (m) of the Structure. Payment against foundation shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the Scope of Foundation of Structure. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
(2) Sub-structure:	0%	**(ii) Sub-structure:** Payment against Sub- structure shall be made on pro rata basis on completion of a stage i.e. not less than 25% of the scope of sub-structure of the Structure.
(3) Super-structure : On Completion of the superstructure in all respects including Girder, Deck Slab, Bearings.	0%	**(iii) Super-structure:** Payment shall be made on pro rata basis on completion of a stage i.e. completion of super-structure including bearings of atleast one span in all respects as specified. In case of structures where pre cast girders have been proposed by the contractor, 50% of the stage payment shall be due and payable on casting of girders of each span & Balance 50% of the stage payment shall be made on completion of stage specified as above.
(4) Wearing coat including expansion joints.	0%	**(iv) Wearing coat:** Payment shall be made on completion of wearing coat including expansion Joints Complete in all respect as specified.
(5) Miscellaneous Items like hand rail, crash barriers, road markings etc.	0%	**(v) Miscellaneous:** Payment shall be made on completion of miscellaneous work like hand rail, crash barriers, road markings etc. complete in all respects as specified.

(6) Wing walls/return walls	0%	**(vi) Wing walls/return walls:** Payment shall be made on completion of all wing walls/return walls complete in all respects as specified.
(7) On Completion of Retaining/Reinforced Earth Wall Complete in all respect & Fit for use.	0%	Payment shall be made on pro rata basis on completion of 20% of total area.
(8) Approaches & other Ancillary Works: On completion of wearing coat, expansion joint, Hand rails, crash barriers, road signs & Markings, Stone pitching, Protection Works, Tests on Completion in all respect.	0%	Payment shall be made on pro rata basis on completion of a stage in all respect as specified.

Note: (1) In case of innovate Major Bridge projects like cable suspension/cable stayed/ Extra Dozed and exceptionally long span bridges, the schedule may be modified as per site requirements before bidding with due approval of DG(RD)&SS, MoRT&H.

(2) The Schedule for exclusive tunnel projects may be prepared as per site requirements before bidding with due approval of DG(RD)&SS, MoRT&H.

(iv) Other works.

Procedure for estimating the value of other works done shall be as stated in table 1.3.4.

Table 1.3.4

Stage of Payment	**Weightage**	**Payment Procedure**
(i) Toll plaza	0%	Unit of measurement is each completed toll plaza. Payment of each toll plaza shall be made on pro rata basis with respect to the total of all toll plazas.
(ii) Road side drains		Unit of measurement is linear length in km. Payment shall be made on pro rata basis on completion of a stage in a length of not less than 10 % (ten per cent) of the total length.
Lined Drain	13.44%	
Unlined Drain	0%	
(iii) Road signs, safety devices, Road Furniture etc.	2.45%	

(iv) Road Markings & studs	1.37%	
(v) Crash Barrier	12.78%	
(vii) Project Facilities a) Bus bays b) Way side amenities excluding slip roads & but including all internal roads (service areas including truck lay byes) c) others	 0% 0% 0%	Payment shall be made on pro rata basis for completed facilities.
(vii) Retaining Wall	66.44%	Unit of measurement is linear length. Payment shall be made on pro rata basis on completion of a stage in a length of not less than 10% (ten per cent) of the total length.
(viii) RE Wall	0%	
(ix) Street Lighting	0%	
(x) Utility Ducts	0%	
(xi) Boundary Wall	0%	
(xii)ATMS	0%	
(xiii) Rain Water Harvesting	0%	
(xiv)Road side plantation including horticulture in way side amenities	0%	
(xv) Protection works other than approaches to the bridges, elevated sections/flyovers/grade separators and ROBs/ RUBs	1.51%	
(xvi) Safety and traffic management during construction	0.07%	Payment shall be made on prorata basis every six months.
(viii) Other Misc Works Including connecting Road & Junction under grade separator	1.95%	Payment shall be made on pro rata basis on completion of a each stage.

2. Procedure for payment for Maintenance

a) The cost for maintenance shall be as stated in Clause 14.1.1.

b) Payment for Maintenance shall be made in quarterly instalments in accordance with the provisions of Clause 19.7