Schedules

Schedule-A

(See Clauses 2.1 and 8.1)

Site of the Project

1 TheSite

(i) Site of the 4-lane at-grade road Project Highway shall include the land, buildings, structures and road works as described in Annex-I of thisSchedule-A.

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

(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 Annex-III based on site/design requirement.

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

Annex – I

(Schedule-A)

Site

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.

1. Site

The Site of the 4-Lane at-grade road Project comprises the section ofNH-29 (Old NH-36) commencing from design ch.km 65+923(existing Ch. km 66+000 of NH 29) to km 80+930 (existing Ch. km 81+000 of NH 29) i.e.Daboka -Manja section in the State ofAssam. The land, carriageway and structures comprising the Site are described below. The design Ch. Corresponding to existing Ch. is presented below. All chainages in this section are design chainages.

Sl No.	Existing KM Stone (NH-29)	Design Ch.(km)
1	66	65+923
2	67	66+910
3	68	67+910
4	69	68+910
5	70	69+910
6	71	70+920
7	72	71+920
8	73	72+915
9	74	73+920
10	75	74+920
11	76	75+925
12	77	76+930
13	78	77+930
14	79	78+920
15	80	NA
16	81	80+930

2. Land

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

Sl no.	Design Chainage(km)	Distance from Existing centre line (ECL) to EROW(m)		EROW (m)
		Left	Right	
1	65+923	26.50	30.00	56.50
2	65+950	26.00	28.00	54.00
3	66+000	30.00	22.00	52.00
4	66+050	29.50	21.50	51.00
5	66+100	28.50	22.00	50.50
6	66+150	28.00	30.50	58.50
7	66+200	28.50	31.00	59.50
8	66+250	28.00	31.00	59.00
9	66+300	27.00	31.00	58.00
10	66+350	27.00	31.00	58.00
11	66+400	27.00	31.50	58.50
12	66+450	27.00	25.00	52.00
13	66+500	26.00	21.00	47.00
14	66+550	26.00	19.50	45.50
15	66+600	25.50	20.50	46.00
16	66+650	25.50	22.00	47.50
17	66+700	26.50	23.05	49.55
18	66+750	28.00	22.00	50.00
19	66+800	29.00	21.00	50.00
20	66+850	29.00	21.50	50.50
21	66+900	30.00	22.50	52.50
22	66+950	30.50	25.00	55.50
23	67+000	30.50	27.00	57.50
24	67+050	30.50	31.50	62.00
25	67+100	30.00	28.00	58.00
26	67+150	30.00	26.00	56.00
27	67+200	36.00	26.00	62.00
28	67+250	33.00	25.00	58.00
29	67+300	30.00	26.00	56.00
30	67+350	27.00	27.00	54.00
31	67+400	25.00	26.00	51.00
32	67+450	23.00	22.00	45.00
33	67+500	24.00	20.00	44.00
34	67+550	24.00	28.00	52.00
35	67+600	25.00	26.50	51.50
36	67+650	24.00	25.50	49.50
37	67+700	24.00	27.00	51.00
38	67+750	23.50	28.00	51.50
39	67+800	23.00	28.00	51.00
40	67+850	22.00	28.00	50.00
41	67+900	21.00	27.50	48.50
42	67+950	21.00	26.00	47.00
43	68+000	20.00	25.00	45.00

Sl no.	Design Chainage(km)	Distance from Existing centre line (ECL) to EROW(m)		EROW (m)
		Left	Right	
44	68+050	19.00	24.00	43.00
45	68+100	18.00	23.00	41.00
46	68+150	18.00	27.00	45.00
47	68+200	17.50	29.00	46.50
48	68+250	18.00	29.50	47.50
49	68+300	18.00	28.50	46.50
50	68+350	19.50	24.00	43.50
51	68+400	21.00	28.00	49.00
52	68+450	23.00	24.00	47.00
53	68+500	26.50	25.00	51.50
54	68+550	27.00	28.00	55.00
55	68+600	25.00	26.00	51.00
56	68+650	24.00	28.00	52.00
57	68+700	24.00	28.00	52.00
58	68+750	24.00	27.00	51.00
59	68+800	24.00	24.00	48.00
60	68+850	24.50	21.00	45.50
61	68+900	25.00	20.00	45.00
62	68+950	25.00	20.00	45.00
63	69+000	24.50	20.00	44.50
64	69+050	22.00	22.00	44.00
65	69+100	21.00	23.50	44.50
66	69+150	24.00	23.00	47.00
67	69+200	22.50	20.00	42.50
68	69+250	21.00	17.00	38.00
69	69+300	14.50	14.00	28.50
70	69+350	15.00	15.00	30.00
71	69+400	13.00	17.00	30.00
72	69+450	12.00	17.00	29.00
73	69+500	11.00	16.50	27.50
74	69+550	9.00	14.00	23.00
75	69+600	10.00	12.00	22.00
76	69+650	11.00	13.00	24.00
77	69+700	12.00	13.00	25.00
78	69+750	12.00	13.50	25.50
79	69+800	12.50	14.00	26.50
80	69+850	13.00	14.00	27.00
81	69+900	12.00	13.50	25.50
82	69+950	11.50	13.00	24.50
83	70+000	11.00	13.00	24.00
84	70+050	10.00	13.00	23.00
85	70+100	9.00	13.00	22.00
86	70+150	10.00	13.00	23.00

Sl no.	Design Chainage(km)	Distance from Existing centre line (ECL) to EROW(m)		EROW (m)
		Left	Right	
87	70+200	11.00	13.00	24.00
88	70+250	11.50	14.00	25.50
89	70+300	13.00	14.00	27.00
90	70+350	12.50	15.00	27.50
91	70+400	12.00	16.00	28.00
92	70+450	12.00	17.00	29.00
93	70+500	12.00	18.50	30.50
94	70+550	12.00	19.00	31.00
95	70+600	11.50	20.00	31.50
96	70+650	11.50	19.00	30.50
97	70+700	11.50	19.00	30.50
98	70+750	12.00	19.00	31.00
99	70+800	11.50	19.00	30.50
100	70+850	12.00	20.00	32.00
101	70+900	12.00	20.00	32.00
102	70+950	13.00	19.00	32.00
103	71+000	13.00	18.50	31.50
104	71+050	14.00	18.00	32.00
105	71+100	14.00	18.00	32.00
106	71+150	15.00	18.00	33.00
107	71+200	15.00	18.00	33.00
108	71+250	15.00	16.50	31.50
109	71+300	16.00	14.00	30.00
110	71+350	16.00	15.00	31.00
111	71+400	17.50	14.50	32.00
112	71+450	18.00	15.00	33.00
113	71+500	19.00	14.00	33.00
114	71+550	20.00	14.00	34.00
115	71+600	21.00	14.00	35.00
116	71+650	21.50	15.00	36.50
117	71+700	22.00	16.50	38.50
118	71+750	22.00	18.00	40.00
119	71+800	21.00	21.00	42.00
120	71+850	22.00	21.00	43.00
121	71+900	28.00	18.00	46.00
122	71+950	27.00	16.00	43.00
123	72+000	23.00	18.50	41.50
124	72+050	23.00	23.00	46.00
125	72+100	24.00	24.00	48.00
126	72+150	26.00	22.00	48.00
127	72+200	26.00	23.00	49.00
128	72+250	14.00	11.00	25.00
129	72+300	11.00	11.00	22.00

Sl no.	Design Chainage(km)	Distance from Existing centre line (ECL) to EROW(m)		EROW (m)
		Left	Right	
130	72+350	9.00	12.00	21.00
131	72+400	10.00	11.00	21.00
132	72+450	13.00	12.00	25.00
133	72+500	9.50	13.00	22.50
134	72+550	7.00	15.00	22.00
135	72+600	7.00	15.00	22.00
136	72+650	7.00	13.00	20.00
137	72+700	9.00	11.00	20.00
138	72+750	10.00	12.00	22.00
139	72+800	10.00	14.00	24.00
140	72+850	10.00	15.00	25.00
141	72+900	11.50	15.00	26.50
142	72+950	12.00	14.00	26.00
143	73+000	10.00	13.50	23.50
144	73+050	11.00	16.00	27.00
145	73+100	13.00	16.00	29.00
146	73+150	12.00	15.00	27.00
147	73+200	13.00	14.50	27.50
148	73+250	11.50	14.00	25.50
149	73+300	11.00	13.50	24.50
150	73+350	11.00	14.00	25.00
151	73+400	11.00	14.00	25.00
152	73+450	11.00	14.00	25.00
153	73+500	11.00	14.00	25.00
154	73+550	10.00	13.00	23.00
155	73+600	10.00	13.00	23.00
156	73+650	10.00	11.00	21.00
157	73+700	11.00	11.50	22.50
158	73+750	11.00	11.50	22.50
159	73+800	12.00	11.00	23.00
160	73+850	11.00	11.00	22.00
161	73+900	11.00	11.00	22.00
162	73+950	10.00	11.50	21.50
163	74+000	10.00	12.00	22.00
164	74+050	11.00	12.00	23.00
165	74+100	11.00	12.00	23.00
166	74+150	12.00	11.00	23.00
167	74+200	12.00	11.00	23.00
168	74+250	13.00	11.00	24.00
169	74+300	13.00	11.00	24.00
170	74+350	13.00	11.00	24.00
171	74+400	13.00	10.00	23.00
172	74+450	13.00	10.00	23.00

Sl no.	Design Chainage(km)	Distance from Existing centre line (ECL) to EROW(m)		EROW (m)
		Left	Right	
173	74+500	12.50	10.00	22.50
174	74+550	12.00	10.00	22.00
175	74+600	12.00	10.00	22.00
176	74+650	11.00	11.00	22.00
177	74+700	12.00	12.00	24.00
178	74+750	12.00	13.00	25.00
179	74+800	13.00	13.00	26.00
180	74+850	19.00	12.00	31.00
181	74+900	20.00	17.00	37.00
182	74+950	19.00	17.00	36.00
183	75+000	19.00	19.50	38.50
184	75+050	19.00	21.00	40.00
185	75+100	17.00	18.00	35.00
186	75+150	17.00	26.00	43.00
187	75+200	17.00	27.00	44.00
188	75+250	17.50	25.00	42.50
189	75+300	18.00	24.00	42.00
190	75+350	19.50	22.00	41.50
191	75+400	20.50	20.50	41.00
192	75+450	20.50	19.00	39.50
193	75+500	20.00	18.00	38.00
194	75+550	20.00	17.50	37.50
195	75+600	20.00	17.00	37.00
196	75+650	20.00	17.00	37.00
197	75+700	21.00	16.00	37.00
198	75+750	21.00	15.00	36.00
199	75+800	21.50	15.00	36.50
200	75+850	21.00	16.00	37.00
201	75+900	22.00	17.00	39.00
202	75+950	21.00	18.00	39.00
203	76+000	19.00	20.00	39.00
204	76+050	17.50	21.50	39.00
205	76+100	16.00	23.00	39.00
206	76+150	16.00	23.50	39.50
207	76+200	16.00	23.00	39.00
208	76+250	15.00	23.00	38.00
209	76+300	13.00	14.00	27.00
210	76+350	12.00	12.00	24.00
211	76+400	13.00	17.00	30.00
212	76+450	14.00	14.50	28.50
213	76+500	14.00	13.00	27.00
214	76+550	15.00	12.50	27.50
215	76+600	15.00	10.00	25.00

Sl no.	Design Chainage(km)	Distance from Existing centre line (ECL) to EROW(m)		EROW (m)
		Left	Right	
216	76+650	16.00	8.50	24.50
217	76+700	15.50	9.00	24.50
218	76+750	15.50	9.00	24.50
219	76+800	15.50	9.00	24.50
220	76+850	16.00	10.00	26.00
221	76+900	18.00	10.50	28.50
222	76+950	18.00	11.50	29.50
223	77+000	17.00	13.00	30.00
224	77+050	17.00	13.00	30.00
225	77+100	17.00	13.00	30.00
226	77+150	16.00	13.00	29.00
227	77+200	16.00	13.50	29.50
228	77+250	16.00	13.00	29.00
229	77+300	16.00	12.00	28.00
230	77+350	15.00	11.00	26.00
231	77+400	15.00	13.00	28.00
232	77+450	14.00	15.50	29.50
233	77+500	13.50	11.00	24.50
234	77+550	12.00	11.00	23.00
235	77+600	12.00	11.00	23.00
236	77+650	11.50	11.00	22.50
237	77+700	11.00	10.50	21.50
238	77+750	10.00	10.50	20.50
239	77+800	10.00	10.50	20.50
240	77+850	9.00	10.00	19.00
241	77+900	10.00	5.00	15.00
242	77+950	11.00	8.00	19.00
243	78+000	12.00	7.00	19.00
244	78+050	13.00	8.00	21.00
245	78+100	13.00	10.00	23.00
246	78+150	11.50	11.00	22.50
247	78+200	9.00	11.00	20.00
248	78+250	8.50	11.50	20.00
249	78+300	9.00	12.00	21.00
250	78+350	10.00	12.00	22.00
251	78+400	10.00	12.00	22.00
252	78+450	10.00	11.00	21.00
253	78+500	10.00	11.00	21.00
254	78+550	10.00	11.00	21.00
255	78+600	10.00	16.00	26.00
256	78+650	8.00	22.00	30.00
257	78+700	9.00	23.00	32.00
258	78+750	10.50	21.00	31.50

Sl no.	Design Chainage(km)	Distance from Existing centre line (ECL) to EROW(m)		EROW (m)
		Left	Right	
259	78+800	10.00	18.50	28.50
260	78+850	9.00	16.00	25.00
261	78+900	9.00	14.00	23.00
262	78+950	8.50	13.00	21.50
263	79+000	8.00	12.50	20.50
264	79+050	8.00	12.00	20.00
265	79+100	8.00	12.00	20.00
266	79+150	8.00	12.50	20.50
267	79+200	8.50	13.00	21.50
268	79+250	8.50	13.00	21.50
269	79+300	8.50	13.00	21.50
270	79+350	8.50	14.00	22.50
271	79+400	8.00	14.00	22.00
272	79+450	8.00	14.00	22.00
273	79+500	10.00	14.00	24.00
274	79+550	11.00	13.00	24.00
275	79+600	11.00	13.00	24.00
276	79+650	11.00	13.00	24.00
277	79+700	9.50	13.00	22.50
278	79+750	8.00	14.50	22.50
279	79+800	9.00	15.00	24.00
280	79+850	9.00	15.00	24.00
281	79+900	10.00	14.00	24.00
282	79+950	10.00	14.00	24.00
283	80+000	10.00	14.00	24.00
284	80+050	9.00	15.00	24.00
285	80+100	8.50	15.00	23.50
286	80+150	9.00	17.00	26.00
287	80+200	11.00	16.00	27.00
288	80+250	12.00	13.50	25.50
289	80+300	13.50	12.00	25.50
290	80+350	13.00	12.00	25.00
291	80+400	12.00	12.50	24.50
292	80+450	10.00	17.00	27.00
293	80+500	10.00	16.00	26.00
294	80+550	10.00	10.00	20.00
295	80+600	9.00	10.50	19.50
296	80+650	10.00	11.00	21.00
297	80+700	11.00	11.00	22.00
298	80+750	12.00	12.00	24.00
299	80+800	12.50	11.00	23.50
300	80+850	13.50	12.00	25.50
301	80+900	14.00	13.00	27.00

3. Carriageway

The present carriageway of the Project Highway is double Lane with paved shoulder. Average width of the carriageway is9 to 10.0 m. The type of the existing pavement is flexible.

4. MajorBridges

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	Super-structure		
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			
NIL						

6. Gradeseparators

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. Minorbridges

The Site includes the following minor bridges:

SL NO.	Existing Chainage	No. of Spans	Span Arrangement (m)	Clear Span (m)	Length of Bridge (m)	Clear Roadway Width (m) between kerbs	Total Width (m)	Width of Footpath (m)	Super structure Type
1	67+700	4	4x5.8	5.5	23.2	7.5	8.2	NA	RCC Slab
2	69+300	3	1x5.8+1x23.7+1x5.8	5.1 & 23.0	35.3	7.5	8.3	NA	RCC Slab
3	73+000	4	4x5.8	5.30	23.2	7.5	8.10	NA	RCC Slab

8. Railway levelcrossings

The Site includes the following railway level crossings:

S. No.	Location (km)	Remarks
NIL		

9. Underpasses (vehicular, non-vehicular)

The Site includes the followingunderpasses:

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:

Sl. No.	Existing Chainage (km)	Type of Structures	Thickness of Slab/Dia of Pipe(m)	No. of Span x Span Length (m)	Carriageway Width (m)	Width of Culvert (m)	Overall Condition
1	66+300	RCC Slab	0.25	1X2.5	10.0	12.0	Fair
2	66+700	RCC Slab	0.55	1X5.5	10.0	12.0	Fair
3	66+800	HP Culvert	1.2	2X1.2	10.0	17.4	Poor
4	67+200	HP Culvert	1.2	2X1.2	10.0	17.4	Poor
5	67+400	HP Culvert	1.2	2X1.2	10.0	17.8	Poor

Sl. No.	Existing Chainage (km)	Type of Structures	Thickness of Slab/Dia of Pipe(m)	No. of Span x Span Length (m)	Carriageway Width (m)	Width of Culvert (m)	Overall Condition
6	67+800	HP Culvert	1.2	2X1.2	10.0	17.6	Fair
7	67+990	HP Culvert	1.2	2X1.2	10.0	17.2	Fair
8	68+500	RCC Slab	0.6	1X5.8	10.0	12.0	Fair
9	68+800	RCC Slab	0.25	1X2.7	10.0	12.0	Fair
10	68+950	RCC Slab	0.25	1X2.7	10.0	12.0	Fair
11	69+200	HP Culvert	1.2	2X1.2	10.0	17.2	Fair
12	69+990	HP Culvert	0.7	3X0.7	10.0	18.0	Poor
13	70+400	HP Culvert	1.2	1X1.2	10.0	17.6	Poor
14	70+800	N.V	-	-	10.0	17.6	Poor
15	71+020	HP Culvert	1.2	2X1.2	10.0	17.4	Poor
16	71+700	HP Culvert	1.2	1X1.2	10.0	16.4	Poor
17	71+900	HP Culvert	1.2	1X1.2	10.0	14.0	Poor
18	72+200	HP Culvert	0.6	2X0.6	10.0	17.6	Poor
19	72+400	Chocked	-	-	10.0	17.6	Poor
20	72+500	HP Culvert	1.0	2X1.0	10.0	17.6	Fair
21	73+400	HP Culvert	1.2	2X1.2	10.0	17.6	Fair
22	73+700	HP Culvert	1.2	2x1.2	10.0	18.2	Poor
23	73+900	HP Culvert	1.2	2x1.2	10.0	18.2	Poor
24	74+030	HP Culvert	1.2	2x1.2	10.0	18.2	Poor
25	74+300	HP Culvert	1.2	2x1.2	10.0	17.6	Poor
26	74+510	HP Culvert	1.0	2x1.0	10.0	17.6	Poor
27	74+560	HP Culvert	1.0	2x1.0	10.0	17.6	Poor
28	74+600	HP Culvert	0.9	2x0.9	10.0	17.6	Fair
29	74+790	HP Culvert	1.2	2x1.2	10.0	17.6	Fair
30	74+800	HP Culvert	1.2	2x1.2	10.0	17.6	Fair
31	74+900	HP Culvert	1.0	2x1.0	10.0	17.6	Fair
32	75+010	HP Culvert	1.0	2x1.0	10.0	17.6	Fair
33	76+400	RCC Slab	0.6	1x6.0	10.0	12.0	Fair
34	77+030	HP Culvert	1.0	2x1.0	10.0	17.4	Poor
35	78+500	HP Culvert	1.2	2x1.2	10.0	18.2	Poor
36	79+070	N.V	-	-	10.0	18.2	-
37	79+200	HP Culvert	1.2	2x1.2	10.0	18.2	Poor
38	80+000	HP Culvert	1.2	1x1.2	10.0	18.4	Fair
39	80+400	HP Culvert	1.2	2x1.2	10.0	18.4	Fair

11. Busbays

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 Laybyes

The details of truck lay byes are as follows:

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

13. Road sidedrains

The details of the roadside drains are as follows:

S. No.	Location		Type	
	From km	to km	Masonry/cc (Pucca)	Earthen (Kutcha)
NIL				

14. Majorjunctions

The details of major junctions are as follows:

Chainage (km)	Road Segment	Type of Intersection	Type	Side	Remarks
NIL					

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

15. Minorjunctions

The details of the minor junctions are as follows:

Sl No.	Existing Chainage (km)	Road Segment	Side	Destination	Surfacing Type	Carriageway Width (m)
1	71+350	NH-29	LHS	To Village	Bituminous	3.5
2	71+450	NH-29	LHS	To Village	Bituminous	3.5
3	71+900	NH-29	LHS	To Village	Bituminous	3.5
4	72+090	NH-29	RHS	To Village	Bituminous	3.5
5	72+610	NH-29	LHS	To Village	Bituminous	3.5
6	73+100	NH-29	LHS	To Village	Bituminous	3.5

Sl No.	Existing Chainage (km)	Road Segment	Side	Destination	Surfacing Type	Carriageway Width (m)
7	74+300	NH-29	LHS	To Village	Bituminous	3.5
8	75+050	NH-29	LHS	To Village	Bituminous	3.5
9	45+240	NH-29	RHS	To Village	Bituminous	3.5
10	77+650	NH-29	LHS	To Village	Bituminous	3.5
11	78+090	NH-29	RHS	To Village	Bituminous	3.5

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			

Annex – II

(As per Clause 8.3 (i))

(Schedule-A)

Dates for providing Right of Way of Construction Zone

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	**Chainage(KM)**		**Length (km)**	**Width (m)**	**Date of providing Right of Way**
(1)	**FROM**	**TO**	**(3)**	**(4)**	**(5)**
(i) Full Right of Way (full width)	65+923	66+400	0+477	42	At appointed date
	66+400	66+700	0+300	35.5	
	66+700	67+900	1+200	42	
	67+900	68+400	0+500	35.5	
	68+400	69+350	0+950	42	
	69+350	71+950	2+600	47	
	71+950	72+450	0+500	42	
	72+450	72+800	0+350	47	
	72+800	74+900	2+100	42	
	74+900	76+100	1+200	35.5	
	76+100	77+400	1+300	42	
	77+400	77+450	0+050	73	
	77+450	77+900	0+450	131	
	77+900	78+130	0+230	117	
	78+130	80+700	2+570	42	
	80+700	80+930	0+230	47	
(ii) Part Right of Way (part width)	NIL				
(a) Stretch					
(b) Stretch					
(c) Stretch					
(iii) Balance Right of Way (width)	NIL				
(a) Stretch					
(b) Stretch					
(c) Stretch					

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 the relevant specifications/IRCCodes/Manual.

Annex – IV

(Schedule-A)

Environment Clearances

The following environment clearances have been obtained:

Environment Clearances is not applicable for the project

The following environment clearances are awaited:

-NIL-

Schedule - B

(See Clause 2.1)

Development of the Project Highway

1. Development of the ProjectHighway

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 andaugmentation

Rehabilitation and augmentationshall include four lane at grade improvement of the Project Highway as described in Annex-I of this Schedule-B and in Schedule-C.

3. Specifications andStandards

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 Project highway

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 FourLaning of Highways (IRC: SP:84-2019), 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 andprecisely.

1. Widening of the ExistingHighway

(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) In rural areas, at grade four-Laning with paved shoulders shall be undertaken. The paved carriageway shall be 7(seven) m (excluding paved shoulder and kerb shyness) wide on either side in accordance with the typical cross section's drawings in the Manual.

Provided that in the built-up areas: the width of the carriageway (either side) shall be as specified in the following table:

Sl. No.	Built-up stretch	Location (km to km)	Width(m)	Typical cross section
1	Langhin	69+350 to 71+950	10.0 (including paved shoulder &kerb shyness)	TCS-3
2	Langhin	72+450 to 72+800	10.0 (including paved shoulder &kerb shyness)	TCS-3
3	Loringthepi	80+700 to 80+930	10.0 (including paved shoulder &kerb shyness)	TCS-3

(b) 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 hour for this project except the following location:

Sl.No.	HIP chainage (km)	Speed(kmph)
1	72+851	65

(iii) Improvement of the existing road geometrics

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:

Details of Realignments:

Sl. No.	Design Ch.(km)		Length (m)	Remarks
	From	To		
NIL				

Details of Bypasses:

Sl. No.	Design Ch.(km)		Length (m)	Remarks
	From	To		
NIL				

(iv) Right of Way

Details of the Right of Way are given in Annex II of Schedule-A.

(v) Type of shoulders

(a) In built-up sections, footpaths/fully paved shoulders shall be provided in either side in the following stretches:

Sl. NO	Stretch		Fully paved shoulders/ footpaths	Width (m)		Reference to cross section
	From (km)	To (km)		Paved shoulder	Footpath	
1	69+350	71+950	Paved Shoulder	2.5	1.5	TCS-3

Sl. NO	Stretch		Fully paved shoulders/ footpaths	Width (m)		Reference to cross section
	From (km)	To (km)		Paved shoulder	Footpath	
			&Footpath			
2	72+450	72+800	Paved Shoulder & Footpath	2.5	1.5	TCS-3
3	80+700	80+930	Paved Shoulder & Footpath	2.5	1.5	TCS-3

(b) In open country area, 2.5 m width paved shoulder on either side and 1.5m width Earthen shoulder has been proposed in TCS-1, 2, 4

(c) Design and specifications of paved shoulders and granular material shall conform to the requirements specified in the relevantManual.

(vi) Lateral and vertical clearances at underpasses

(a) Lateral and vertical clearances at junctions & median opening and provision of guardrails/crash barriers shall be as per the provision of the Manual.

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

Sl. No	Chainage (km)	Type	Lateral clearance (m)	Minimum vertical clearance (m)
Nil				

(vii) Lateral and vertical clearances atoverpasses

(a) Lateral and vertical clearances at overpasses shall be as per the provision 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:

Sl No.	Location of Service Road (km)		Right Hand Side (RHS) / Left Hand Side (LHS) / Both Sides	Length (km) of Service Road
	From	To		
1	69+350	71+950	Both	2.60

2	72+450	72+800	Both	0.35
3	80+700	80+930	Both	0.23

(ix) Grade separatedstructures

(a) Grade separated structures shall be provided as per provision of the relevant Manual. The requisite particulars are givenbelow:

Sl no.	Start Chainage(km)	End Chainage(km)	Span Arrangement (m)	Structure width	Type of Superstructure	Length (m)
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:

Sl. No.	Location	Type of structure Length (m)	Cross road			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:

Sl. No.	Location	Type of crossing
NIL		

(xi) Typical cross-sections of the ProjectHighway

Typical cross section details are given below:

Sl. No.	Design Ch(km)		Length(m)	TCS No.	Description
	From	To			
1	65+923	66+400	477	2	Typical Cross Section of 4-Lane Divided Carriageway with 1.5 m Wide Raised Median in Rural Area (Eccentric Widening)
2	66+400	66+700	300	4	Typical Cross Section of 4-Lane Divided Carriageway with 1.5 m Wide Raised Median in Rural Area (Concentric Widening)
3	66+700	67+498	798.4	2	Typical Cross Section of 4-Lane Divided Carriageway with 1.5 m Wide Raised Median in Rural Area (Eccentric Widening)

Sl. No.	Design Ch(km)		Length(m)	TCS No.	Description
	From	To			
4	67+498	67+522	23.2	STR	MNB
5	67+522	67+700	178.4	2	Typical Cross Section of 4-Lane Divided Carriageway with 1.5 m Wide Raised Median in Rural Area (Eccentric Widening)
6	67+700	67+900	200	1	Typical Cross Section of 4-Lane Divided Carriageway with 1.5 m Wide Raised Median in Rural Area (Concentric Widening)
7	67+900	68+400	500	4	Typical Cross Section of 4-Lane Divided Carriageway with 1.5 m Wide Raised Median in Rural Area (Concentric Widening)
8	68+400	69+000	600	1	Typical Cross Section of 4-Lane Divided Carriageway with 1.5 m Wide Raised Median in Rural Area (Concentric Widening)
9	69+000	69+187	187.35	2	Typical Cross Section of 4-Lane Divided Carriageway with 1.5 m Wide Raised Median in Rural Area (Eccentric Widening)
10	69+187	69+223	35.3	STR	MNB
11	69+223	69+350	127.35	2	Typical Cross Section of 4-Lane Divided Carriageway with 1.5 m Wide Raised Median in Rural Area (Eccentric Widening)
12	69+350	71+950	2600	3	Typical Cross Section of 4-Lane Divided Carriageway (Concentric widening) with 7.5m Service Road on Both Sides in Built-Up Area
13	71+950	72+450	500	2	Typical Cross Section of 4-Lane Divided Carriageway with 1.5 m Wide Raised Median in Rural Area (Eccentric Widening)
14	72+450	72+800	350	3	Typical Cross Section of 4-Lane Divided Carriageway (Concentric widening) with 7.5m Service Road on Both Sides in Built-Up Area
15	72+800	72+939	139.4	2	Typical Cross Section of 4-Lane Divided Carriageway with 1.5 m Wide Raised Median in Rural Area (Eccentric Widening)
16	72+939	72+963	23.2	STR	MNB
17	72+963	73+630	667.4	2	Typical Cross Section of 4-Lane Divided Carriageway with 1.5 m Wide Raised Median in Rural Area (Eccentric Widening)

Sl. No.	Design Ch(km)		Length(m)	TCS No.	Description
	From	To			
18	73+630	74+900	1270	2	Typical Cross Section of 4-Lane Divided Carriageway with 1.5 m Wide Raised Median in Rural Area (Eccentric Widening)
19	74+900	76+100	1200	4	Typical Cross Section of 4-Lane Divided Carriageway with 1.5 m Wide Raised Median in Rural Area (Concentric Widening)
20	76+100	76+350	250	2	Typical Cross Section of 4-Lane Divided Carriageway with 1.5 m Wide Raised Median in Rural Area (Eccentric Widening)
21	76+350	76+550	200	1	Typical Cross Section of 4-Lane Divided Carriageway with 1.5 m Wide Raised Median in Rural Area (Concentric Widening)
22	76+550	77+430	880	2	Typical Cross Section of 4-Lane Divided Carriageway with 1.5 m Wide Raised Median in Rural Area (Eccentric Widening)
23	77+430	78+130	700		Toll Plaza
24	78+130	79+450	1320	2	Typical Cross Section of 4-Lane Divided Carriageway with 1.5 m Wide Raised Median in Rural Area (Eccentric Widening)
25	79+450	79+550	100	1	Typical Cross Section of 4-Lane Divided Carriageway with 1.5 m Wide Raised Median in Rural Area (Concentric Widening)
26	79+550	80+700	1150	2	Typical Cross Section of 4-Lane Divided Carriageway with 1.5 m Wide Raised Median in Rural Area (Eccentric Widening)
27	80+700	80+930	230	3	Typical Cross Section of 4-Lane Divided Carriageway (Concentric widening) with 7.5m Service Road on Both Sides in Built-Up Area

Refer to Typical cross section drawing in Annexure III of schedule A

3. Intersections and GradeSeparators

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

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

(i) At-gradeintersections

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

Sl. No.	Design Chainage (km)	Type of Intersection	Type	Side	Improvement Proposals
1	68+030	Minor	3 legged	Right	At Grade
2	68+135	Minor	3 legged	Left	At Grade
3	70+620	Minor	3 legged	Right	At Grade
4	71+030	Minor	3 legged	Left	At Grade
5	71+410	Minor	4 legged	Both	At Grade
6	71+835	Minor	3 legged	Left	At Grade
7	72+550	Minor	3 legged	Left	At Grade
8	72+790	Minor	3 legged	Left	At Grade
9	73+020	Minor	3 legged	Left	At Grade
10	74+950	Minor	3 legged	Left	At Grade
11	75+125	Minor	4 legged	Both	At Grade
12	75+200	Minor	3 legged	Right	At Grade
13	75+750	Minor	3 legged	Left	At Grade
14	76+140	Minor	3 legged	Left	At Grade
15	77+160	Minor	3 legged	Right	At Grade
16	77+660	Minor	3 legged	Left	At Grade
17	78+850	Minor	3 legged	Right	At Grade
18	78+880	Minor	3 legged	Left	At Grade

(ii) Grade separated intersection with/withoutramps

Sl no.	Start Chainage(km)	End Chainage(km)	Span Arrangement (m)	Structure width	Type of Superstructure	Length (m)
Nil						

4. Road Embankment and CutSection

(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 becorrected.

(ii) Raising of the existing road as per Section 4 of the Manual

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 the provision of section 5 of the Manual.

(ii) Type ofpavement

Flexible pavement shall be proposed at the entire project road.

(iii) Design requirements

Design of new pavement has been carried out based on IRC: 37-2018 "Guidelines for the design of Flexible Pavements"

(a) Design Period andstrategy

Flexible pavement for new pavement or for widening and strengthening of the existing pavement shall be designed for a minimum design period of 20 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 minimum design traffic of 20 msa. However, in case the traffic is more than 20 msa at the time of design of project highway, then the higher design traffic will be adopted for pavement design.

Service Roads/ Slip Roads shall be designed for 10 msa design traffic.

(iv) Reconstruction ofstretches

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

Sl. No.	Stretch From km to km	Remarks
NIL		

6. Roadside Drainage

Drainage system including surface and subsurface drains for the Project Highway shall be provided as per section 6 of the manual and as per cross section schedule provided as Annexure -I to this schedule.
RCC covered drain should be provided in following locations.

Sl no.	Design chainage (km)		Length (km)	Side(LHS/RHS/Both Side)
	From	To		
1	69+350	71+950	2+600	Both
2	72+450	72+800	0+350	Both
3	80+700	80+930	0+230	Both

7. Design ofStructures

(i) General

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

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

Sl. No.	Bridge at km	Width of carriageway and cross-sectional features*
NIL		

(c) The following structures shall be provided withfootpaths:

Sl N-o.	Design Chainage (km)	Remarks
1	67+510	-
2	69+205	-
3	72+951	-

(d) All bridges shall be high-levelbridges: NIL

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

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

(f) Cross-section of the new culverts for the Project Highway shall conform to the typical cross-sections given in the 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 existingculverts:

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

Sl. No.	Design Chainage (km)	Type of Existing Culvert	Ex. Span Arrangement/Dia. (m)	Type of Proposed Culvert	Span Arrangement (m)	Improvement Proposal
1	69+033	Pipe Culvert	2x1.2	Pipe Culvert	2x1.2	New 4Lane
2	69+876	Pipe Culvert	4x1.2	Pipe Culvert	4x1.2	New 4Lane
3	70+213	Pipe Culvert	1x1.2	Pipe Culvert	1x1.2	New 4Lane
4	70+945	Pipe Culvert	2x1.2	Pipe Culvert	2x1.2	New 4Lane
5	71+600	Pipe Culvert	2x0.9	Pipe Culvert	2x1.2	New 4Lane
6	71+707	Pipe Culvert	1x1.2	Pipe Culvert	1x1.2	New 4Lane
7	78+007	Pipe Culvert	2x0.9	Pipe Culvert	2x1.2	New 4Lane

(c) Widening of existingculverts:

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

Sl. No.	Design Chainage (km)	Type of Existing Culvert	Ex. Span Arrangement /Dia. (m)	Type of Proposed Culvert	Span Arrangement (m)	Improvement Proposal
1	66+120	Pipe Culvert	1x1.2	Pipe Culvert	1x1.2	Ex Retain & repairing +New 2Lane
2	66+492	Pipe Culvert	1x1.2	Pipe Culvert	1x1.2	Ex Retain & repairing +New 2Lane
3	66+663	Pipe Culvert	2x0.9	Pipe Culvert	2x0.9	Ex Retain & repairing +New 2Lane
4	67+013	Pipe Culvert	2x1.2	Pipe Culvert	2x1.2	Ex Retain & repairing +New 2Lane
5	67+242	Pipe Culvert	2x1.2	Pipe Culvert	2x1.2	Ex Retain & repairing +New 2Lane
6	67+695	Pipe Culvert	2x0.9	Pipe Culvert	2x0.9	Ex Retain & repairing +New 2Lane
7	67+863	Pipe Culvert	2x1.2	Pipe Culvert	2x1.2	Ex Retain & repairing +New 2Lane
8	68+353	Slab Culvert	1x5.6	Box Culvert	1x5.6	Ex Retain & repairing +New 2Lane
9	68+644	Slab Culvert	1x2.6	Box Culvert	1x2.6	Ex Retain & repairing +New 2Lane
10	68+820	Slab Culvert	1x2.9	Box Culvert	1x2.9	Ex Retain & repairing +New 2Lane
11	72+053	Pipe Culvert	2x0.9	Pipe Culvert	2x0.9	Ex Retain & repairing +New 2Lane
12	72+359	Pipe Culvert	2x1.2	Pipe Culvert	2x1.2	Ex Retain & repairing +New 2Lane

Sl. No.	Design Chainage (km)	Type of Existing Culvert	Ex. Span Arrangement /Dia. (m)	Type of Proposed Culvert	Span Arrangement (m)	Improvement Proposal
13	73+213	Pipe Culvert	2x1.2	Pipe Culvert	2x1.2	Ex Retain & repairing +New 2Lane
14	73+452	Pipe Culvert	2x1.2	Pipe Culvert	2x1.2	Ex Retain & repairing +New 2Lane
15	73+590	Pipe Culvert	2x1.2	Pipe Culvert	2x1.2	Ex Retain & repairing +New 2Lane
16	73+749	Pipe Culvert	2x1.2	Pipe Culvert	2x1.2	Ex Retain & repairing +New 2Lane
17	73+947	Pipe Culvert	2x1.2	Pipe Culvert	2x1.2	Ex Retain & repairing +New 2Lane
18	74+106	Pipe Culvert	2x1.2	Pipe Culvert	2x1.2	Ex Retain & repairing +New 2Lane
19	74+269	Pipe Culvert	2x1.2	Pipe Culvert	2x1.2	Ex Retain & repairing +New 2Lane
20	74+320	Pipe Culvert	2x0.9	Pipe Culvert	2x0.9	Ex Retain & repairing +New 2Lane
21	74+446	Pipe Culvert	2x0.9	Pipe Culvert	2x0.9	Ex Retain & repairing +New 2Lane
22	74+593	Pipe Culvert	2x1.2	Pipe Culvert	2x1.2	Ex Retain & repairing +New 2Lane
23	74+617	Pipe Culvert	2x1.2	Pipe Culvert	2x1.2	Ex Retain & repairing +New 2Lane
24	74+807	Pipe Culvert	2x1.2	Pipe Culvert	2x1.2	Ex Retain & repairing +New 2Lane
25	74+931	Pipe Culvert	2x1.2	Pipe Culvert	2x1.2	Ex Retain & repairing +New 2Lane
26	75+371	Pipe Culvert	2x1.2	Pipe Culvert	2x1.2	Ex Retain & repairing +New 2Lane
27	75+820	Pipe Culvert	1x1.2	Pipe Culvert	1x1.2	Ex Retain & repairing +New 2Lane
28	76+254	Slab Culvert	1x4.8	Box Culvert	1x4.8	Ex Retain & repairing +New 2Lane
29	76+660	Pipe Culvert	2x1.2	Pipe Culvert	2x1.2	Ex Retain & repairing +New 2Lane
30	76+946	Pipe Culvert	2x1.2	Pipe Culvert	2x1.2	Ex Retain & repairing +New 2Lane
31	77+378	Pipe Culvert	2x1.2	Pipe Culvert	2x1.2	Ex Retain & repairing +New 2Lane
32	77+528	Pipe Culvert	2x1.2	Pipe Culvert	2x1.2	Ex Retain & repairing +New 2Lane
33	77+685	Pipe Culvert	1x1.2	Pipe Culvert	1x1.2	Ex Retain & repairing +New 2Lane
34	78+387	Pipe Culvert	2x1.2	Pipe Culvert	2x1.2	Ex Retain & repairing +New 2Lane
35	78+557	Pipe Culvert	2x1.2	Pipe Culvert	2x1.2	Ex Retain & repairing +New 2Lane
36	80+240	Pipe Culvert	2x1.2	Pipe Culvert	2x1.2	Ex Retain & repairing +New 2Lane

Sl. No.	Design Chainage (km)	Type of Existing Culvert	Ex. Span Arrangement /Dia. (m)	Type of Proposed Culvert	Span Arrangement (m)	Improvement Proposal
37	80+601	Pipe Culvert	2x1.2	Pipe Culvert	2x1.2	Ex Retain & repairing +New 2Lane
38	80+760	Pipe Culvert	2x1.2	Pipe Culvert	2x1.2	Ex Retain & repairing +New 2Lane

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

Sl. No.	Design chainage (km)	Type of Culvert	Cell Arrangement a x b	Carriageway (m)	Overall Width (m)
NIL					

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

Sl. No.	Location at km	Type of repair required
Locations as mentioned in Para 7 II-(c), above. All necessary repairs as per Manual		

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

(iii) Bridges: NIL

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

(i) The existing bridges at the following locations shall be re-constructed as newStructures

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

(ii) The following narrow bridges shall bewidened:

Sl. No.	Design Chainage (km)	Proposed Span Arrang. (No. of Span x Span length in m)	Proposed Total Length (m)	Width of proposed structure (m)	Proposed Type of Superstructure	Improvement Proposal	Remarks
1	67+510	4x5.8	23.20	2x13.5	RCC Box	New 2 lane Bridge	Widened
2	69+205	1x35.3	35.30	2x13.5	PSC I Girder	New 2 lane Bridge	Retained & Repair
3	72+951	4x5.8	23.20	2x13.5	RCC Box	New 2 lane Bridge	Widened

(b) Additional newbridges: NIL

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 followinglocations:

Sl. No.	Design Chainage (km)	Proposed Span Arrang (No. of Span x Span length in m)	Proposed Total Length (m)	Width of proposed structure (m)	Proposed Type of Superstructure	Remarks
1	69+205	1x35.3	35.30	2x13.5	PSC I Girder	Retained & Repair

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

Sl. No.	Design Chainage (km)	Proposed Span Arrang (No. of Span x Span length in m)	Proposed Total Length (m)	Width of proposed structure (m)	Proposed Type of Superstructure	Remarks
1	69+205	1x35.3	35.30	2x13.5	PSC I Girder	Retained & Repair

(e) Drainage system for bridgedecks

An effective drainage system for bridge decks shall be provided as specified in section 7 of the Manual

(f) Structures in marineenvironment

NIL

(iv) Rail-roadbridges: NIL

(a) Design, construction and detailing of ROB/RUB shall be as specified in the provision of Manual.

(b) Roadover-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) Roadunder-bridges

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

Sl.	**Location of Level crossing (Chainage**	**Number and length of**
NIL		

(v) Grade separatedstructures

Design of grade separator shall be as per section 7 of the manual. Locations and type of the grade separated structures specified in paragraphs 2 (ix).

(vi) Repairs and strengthening of bridges andstructures

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**
1	69+205	As decided by AE as per site requirement

(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 otherstructures

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

(vii) List of Major Bridges andStructures

The following is the list of the Major Bridges andStructures:

Sl. No.	Location
NIL	

8. Traffic Control Devices and Road SafetyWorks

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

(ii) Specificationsofthereflectivesheeting should be of high intensity grade with encapsulated lens or with micro prismatic retro reflective element in accordance with ASTM Standard D 4956 – 04

9. RoadsideFurniture

(i) Roadside furniture shall be provided in accordance with the provision of section 9 of the Manual.

(ii) Overhead traffic signs:

Minimum 4 nos. overhead traffic signs shall be provided for the project stretch.

Note: The exact location of Signs and size shall be finalized as per provisions in Manual and as per site conditions.

10. CompulsoryAfforestation

Compulsory afforestation should be as per section 11 of the manual

11. HazardousLocations

NIL.

12. Special Requirement for HillRoads

NIL

13. Change ofScope

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 B-1)

1. The shifting of utilities and felling of trees shall be carried out by the Contractor. The cost of the same shall be borne by the Authority. The details of utilities are as follows:

Sr. No	Type of Utility	Unit	Quantity
A			
A1	33 KV HT Line	Meter	7000
A2	LT Line	Meter	15000
A3	11 KV Line	Meter	30000
A4	Transformers	Nos.	7
B			
B1	Water Pipe Line	meters	15000
B2	Hand Pump	Nos.	7
C	***Felling of Tress***	***Nos.***	***2262***

Schedule - C

(See Clause 2.1)

Project Facilities

1. Project Facilities

The Contractor shall construct the Project Facilities in accordance with the provisions of this Agreement. Such Project Facilities shall include:

(a) Toll plaza;

(b) Road side furniture;

(c) Street lighting;

(d) Pedestrian facilities;

(e) Tree plantation;

(f) Truck-lay byes;

(g) bus-bays and bus shelters;

(h) rest areas; and

(i) others to be specified

2. Description of ProjectFacilities

Each of the Project Facilities is described below:

(a) Toll Plaza

Toll plaza shall be designed as per the guidelines of the manual and it is provided at following locations: -

Sl.No.	Location(Design km)
1	**77+780**

(b) Road side Furniture

The roadside furniture shall include the provision of the;

i. Traffic Signs

Traffic signs include roadside signs, overhead signs, curb mounted signs etc provided for the entire Project Highway as per Manual.

ii. Pavement Markings

Pavement markings shall cover road marking provided for the entire Project Highway as per Manual.

iii. LED Traffic Blinkers

LED Traffic Blinker signal provided for entire project as per Manual.

iv. Delineators

Delineators for the entire Project Highway at the locations as suggested in IRC Manual.

v. Boundary stones

For the entire Project Highway as suggested in relevant IRC Manual.

vi. Hectometer / Kilometer stones

For the entire Project Highway as suggested in relevant IRC Manual.

(c) Street Lighting

Lighting shall be provided at the following locations:

i. Lighting shall be provided at built up areas, bus stops, and as per manual recommended in Schedule D.

ii. High Mast Lighting shall be provided at Major Junction,

(d) pedestrianfacilities;

Pedestrian facilities shall be provided at the locations of urban sections in order to ensure safety of pedestrians while crossing in consultation with NHIDCL and as per manual

(e) treeplantation;

Landscaping and Tree plantation shall be provided. The location for these provisions shall be finalized in consultation with Authority's Engineer

(f) Truck-lay-byes;

Truck lay bays shall be provided at locations given below:

Sl.No.	Design Chainages (km)	Side
1	66+900	LHS
2	67+220	RHS

(g) bus-bays and busshelters;

Bus bays shall be provided at locations given below:

Sl no.	Design Chainage(km)	Side
1	68+680	RHS
2	68+800	LHS
3	73+260	LHS
4	73+360	RHS
5	75+600	LHS
6	75+760	RHS
7	80+400	RHS

(h) Rest Areas

NIL

Note: Provide adequate details of each Project Facility to ensure their design and completion in accordance with the project-specific requirements and the provisions of theManual.

Schedule - D

(See Clause 2.1)

Specifications and Standards

1. Construction

The Contractor shall comply with the Specifications and Standards set forth in Annex-I of this Schedule-D for construction of the Project Highway.

2. Design Standards

The Project Highway including Project Facilities shall conform to design requirements set out in the following documents:

Manual of Specifications and Standards for FourLaning of Highways (IRC: SP: 84 2019), referred to herein as the Manual

Annex – I

(Schedule-D)

Specifications and Standards for Construction

1. Specifications andStandards

All Materials, works and construction operations shall conform to the Manual of Specifications and Standards for Four-Laning of Highways (IRC: SP:84-2019), referred to as the Manual, and MORTH Specifications for Road and Bridge Works. Where the specification for a work is not given, Good Industry Practice shall be adopted to the satisfaction of the Authority'sEngineer.

2. Deviations from the Specifications andStandards

(i) The terms "Concessionaire", "Independent Engineer" and "Concession Agreement" used in the Manual shall be deemed to be substituted by the terms "Contractor", "Authority's Engineer" and "Agreement"respectively.

(ii) Notwithstanding anything to the contrary contained in Paragraph 1 above, the following Specifications and Standards shall apply to the Project Highway, and for purposes of this Agreement, the aforesaid Specifications and Standards shall be deemed to be amended to the extent set forthbelow:

Sl no.	Clause Referred in Manual	Item	Provision as per Manual	Modified provision	Remarks
1	2.5	Median	Table 2.2 of IRC: SP:84-2019	Width of median in rural area is 1.5 m (Excluding 0.5 m kerb shyness on either side)	

SCHEDULE - H

See Clauses10.1 (iv) and 19.3

Contract Price Weightages

1.1 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 specifiedbelow:

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	59.81	**A- Widening and strengthening of existing road**	
		(1) Earthwork up to top of sub-grade	8.44
		(2) Sub Base Course	15.24
		(3) Non Bituminous Base Course	16.25
		(4) Bituminous Base Course	30.91
		(5) Wearing Coat	12.27
		(6) Widening and repair of culvert	NIL
		B.1- Reconstruction / New 2-Lane realignment/ bypass (Flexible Pavement)	
		(1)) Earthwork up to top of sub-grade	NIL
		(2) Sub Base Course	NIL
		(3) Non-Bituminous Base Course	NIL
		(4) Bituminous Base Course	NIL
		(5) Wearing Coat	NIL
		B.2- Reconstruction / New 2-Lane realignment/ bypass (Rigid Pavement)	
		(1) Earthwork up to top of sub-grade	NIL
		(2) Sub Base Course	NIL
		(3) Dry Lean Concrete (DLC) Course	NIL
		(4) Pavement Quality Control (PQC) Course	NIL

Item	Weightage in percentage to the Contract Price	Stage for Payment	Percentage weightage
		C.1- Reconstruction / New Service road (Flexible Pavement)	
		(1)) Earthwork up to top of sub-grade	1.65
		(2) Sub Base Course	2.64
		(3) Non-Bituminous Base Course	3.49
		(4) Bituminous Base Course	3.54
		(5) Wearing Coat	2.04
		C.2- Reconstruction / New Service road (Rigid Pavement)	
		(1)) Earthwork up to top of sub-grade	NIL
		(2) Sub Base Course	NIL
		(3) Dry Lean Concrete (DLC) Course	NIL
		(4) Pavement Quality Control (PQC) Course	NIL
		D- Re-Construction and New culverts on existing road, realignments, bypasses:	
		Culverts (Length <6 m)	3.53
Minor Bridges/ Underpasses/ Overpasses	5.48	**A.1- Widening and repairs of Minor Bridges (length>6m and <60m)**	
		Minor Bridges	100.00
		A.2- New Minor Bridges (length>6m and <60m)	
		(1) **Foundation + Sub-Structure:** On completion of the foundation work including foundation for wing and return walls, abutments, piers upto the abutment/pier cap.	NIL
		(2) **Super-Structure:** On completion of the super structure in all respects including wearing coat, bearings, expansion joints, hand rails, crash barriers, road sign & markings tests	NIL

Item	Weightage in percentage to the Contract Price	Stage for Payment	Percentage weightage
		on completion etc. complete in all respect.	
		(3) **Approaches:** On completion of approaches including retaining walls, stone pitching, protection works complete in all respect and fit for use.	NIL
		(4) **Guide Bunds and River Training works:** On completion of Guide Bunds and river Training works complete in all respects	NIL
		B.1- Widening and Repair of underpasses/overpasses	
		Underpasses/ Overpasses	NIL
		B.2- New underpasses/ overpasses	
		(1) Foundation +Sub-Structure: On completion of the foundation work including foundations for wing and return walls, abutments, piers upto the abutment/pier cap.	NIL
		(2) Super-structure: On completion of the super-structure in all respects including wearing coat, bearings, expansion joints, hand rails, crash barriers, road signs & makings, tests on completion etc. complete in all respect. Wearing Coat (a) in case of Overpass- wearing coat including expansion joints complete in all respects as specified and (b) in case of underpass- rigid pavement including drainage facility complete in all respects as specified as specified.	NIL
		(3) Approaches: On completion of approaches including	NIL

Item	Weightage in percentage to the Contract Price	Stage for Payment	Percentage weightage
		Retaining walls/ Reinforced Earth walls, stone pitching, protection works complete in all respect and fit for use.	
Major Bridges (Length >60m) works and ROB/RUB/elevated section/flyover including viaducts if any.	0.00	**A.1 - Widening and repairs of Major Bridges**	
		(1) Foundation	NIL
		(2) Sub-structure	NIL
		(3) Super-structure (including bearings)	NIL
		(4) Wearing Coat including expansion joints	NIL
		(5) Miscellaneous Items like hand rails, crash barriers, road markings etc.)	NIL
		(6) Wing walls/return walls	NIL
		(7) Guide Bunds, River Training works etc	NIL
		(8) Approaches (including Retaining walls, stone pitching and protection works)	NIL
		A.2- New Major Bridges	
		(1) Foundation	NIL
		(2) Sub-structure	NIL
		(3) Super-structure (including bearings)	NIL
		(4) Wearing Coat including expansion joints	NIL
		(5) Miscellaneous Items like hand rails, crash barriers, road markings etc.)	NIL
		(6) Wing walls/return walls	NIL
		(7) Guide Bunds, River Training works etc.	NIL
		(8) Approaches (including Retaining walls, stone pitching and protection works)	NIL
		B.1- Widening and Repair of **(a) ROB** **(b) RUB**	
		(1) Foundation	NIL
		(2) Sub-structure	NIL
		(3) Super-structure (including bearings)	NIL

Item	Weightage in percentage to the Contract Price	Stage for Payment	Percentage weightage
		(4) Wearing Coat: (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.	NIL
		(5) Miscellaneous Items like hand rails, crash barriers, road markings etc.)	NIL
		(6) Wing walls/return walls	NIL
		(7) Approaches (including Retaining walls, stone pitching and protection works)	NIL
		B.2- New ROB/RUB **(a) ROB** **(b) RUB**	
		(1) Foundation	NIL
		(2) Sub-structure	NIL
		(3) Super-structure (including bearings)	NIL
		(4) Wearing Coat: (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.	NIL
		(5) Miscellaneous Items like hand rails, crash barriers, road markings etc.)	NIL
		(6) Wing walls/return walls	NIL
		(7) Approaches (including Retaining walls, stone pitching and protection works)	NIL
		C.1- Widening and repair of Elevated Section/Flyovers/Grade Separators	
		(1) Foundation	NIL
		(2) Sub-structure	NIL
		(3) Super-structure	NIL

Item	Weightage in percentage to the Contract Price	Stage for Payment	Percentage weightage
		(including bearings)	
		(4) Wearing Coat including expansion joints.	NIL
		(5) Miscellaneous Items like hand rails, crash barriers, road markings etc.)	NIL
		(6) Wing walls/return walls	NIL
		(7) Approaches (including Retaining walls/ Reinforced Earth wall, stone pitching and protection works)	NIL
		C.2- New Elevated Section/Flyovers/Grade Separators	
		(1) Foundation	NIL
		(2) Sub-structure	NIL
		(3) Super-structure (including bearings)	NIL
		(4) Wearing Coat including expansion joints.	NIL
		(5) Miscellaneous Items like hand rails, crash barriers, road markings etc.)	NIL
		(6) Wing walls/return walls	NIL
		(7) Approaches (including Retaining walls/ Reinforced Earth wall, stone pitching and protection works)	NIL
Other works	34.96	(i) Toll Plaza	46.44
		(ii) Road side drains	21.08
		(iii) Road signs, markings, km stones, safety devices, ….	13.46
		(iv) Project facilities	
		(a) Bus Bays & Bus Shelter	1.71
		(b) Truck lay-byes	0.99
		(c) Rest areas	NIL
		(d) Electrical Works	2.18
		(e) Junctions	6.33
		(f) others	NIL
		(v) Road side plantation	2.25
		(vi) Protection works other than elevated sections/ flyovers/grade separators and	NIL

Item	Weightage in percentage to the Contract Price	Stage for Payment	Percentage weightage
		ROBs/RUBs.	
		(vii) Safety and traffic management during construction	NIL
		(viii) Maintenance of Existing Road	4.43
		(ix) Median & Island Filling	1.13

1.3 Procedure of estimating the value of workdone

1.3.1 Roadworks.

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

Table 1.3.1

Stage for Payment	Percentage weightage	Payment Procedure
A- Widening and strengthening of existing road		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 5 (Five) percent of the total length.
(1) Earthwork up to top of sub-grade	8.44	
(2) Sub Base Course	15.24	
(3) Non-Bituminous Base Course	16.25	
(4) Bituminous Base Course	30.91	
(5) Wearing Coat	12.27	
(6) Widening and repair of culvert	NIL	Cost of completed culverts shall be determined pro rata with respect to the total number of culverts. Payment shall be made on the completion of at least five culverts.
B.1- Reconstruction / New 2-Lane realignment/ bypass (Flexible Pavement)		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.
(1) Earthwork up to top of sub-grade	NIL	
(2) Sub Base Course	NIL	
(3) Non-Bituminous Base Course	NIL	
(4) Bituminous Base Course	NIL	
(5) Wearing Coat	NIL	
B.2- Reconstruction / New 2-		

Stage for Payment	Percentage weightage	Payment Procedure
Lane realignment/ bypass (Rigid Pavement)		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.
(1) Earthwork up to top of sub-grade	NIL	
(2) Sub Base Course	NIL	
(3) Dry Lean Concrete (DLC) Course	NIL	
(4) Pavement Quality Control (PQC) Course	NIL	
C.1- Reconstruction / New Service road (Flexible Pavement)		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 1 (one) km. length whichever is less.
(1) Earthwork up to top of sub-grade	1.65	
(2) Sub Base Course	2.64	
(3) Non-Bituminous Base Course	3.49	
(4) Bituminous Base Course	3.54	
(5) Wearing Coat	2.04	
C.2- Reconstruction / New Service road (Rigid Pavement)		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.
(1) Earthwork up to top of sub-grade	NIL	
(2) Sub Base Course	NIL	
(3) Dry Lean Concrete (DLC) Course	NIL	
(4) Pavement Quality Control (PQC) Course	NIL	
D- Re-Construction and New culverts on existing road, realignments, bypasses:		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 at least one culverts.
Culverts (Length <6 m)	3.53	

@. 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 other 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 affect and referred in other clauses of the ContractAgreement.

1.3.2 Minor Bridges andUnderpasses/Overpasses.

Procedure for estimating the value of Minor bridge and Underpasses/ Overpasses shall be as stated in table1.3.2:

Table 1.3.2

Stage for Payment	Percentage weightage	Payment Procedure
A.1- Widening and repairs of Minor Bridges (length>6m and <60m) Minor Bridges	100.00	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 each minor bridge.
A.2- New Minor Bridges (length>6m and <60m)		
(1) **Foundation + Sub-Structure:** On completion of the foundation work including foundation for wing and return walls, abutments, piers upto the abutment/pier cap.	NIL	(i) **Foundation +Sub-Structure:** 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 + sub-structure shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of foundation +sub-structure of each bridge subject to completion of atleast two foundations along with sub-structure upto abutment/pier cap level 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) **Super-Structure:** On completion of the super structure in all respects including wearing coat, bearings, expansion joints, hand rails, crash barriers, road sign & markings tests on completion etc. complete in all respect.	NIL	(ii) **Super-structure:** Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super-structure of atleast one span in all respects as specified in the column of "Stage of Payment" in this sub-clause.

Stage for Payment	Percentage weightage	Payment Procedure
(3) **Approaches:** On completion of approaches including retaining walls, stone pitching, protection works complete in all respect and fit for use.	NIL	(iii) **Approaches:** Payment shall be made on pro-rata basis on completion of a stage i.e. completion of approaches in all respect as specified in the column of "Stage of Payment" in this sub-clause.
(4) **Guide Bunds and River Training works :** On completion of Guide Bunds and river Training works complete in all respects	NIL	(iv) **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 in all respects as specified.
B.1- Widening and Repair of underpasses/overpasses		Cost of each underpass/overpass shall be determined on pro rata basis with respect to the total linear length of the underpasses/overpasses. Payment shall be made on the completion of widening & repair works of a underpass/overpass.
Underpasses/ Overpasses	NIL	
B.2- New underpasses/ overpasses		
(1) Foundation +Sub-Structure: On completion of the foundation work including foundations for wing and return walls, abutments, piers upto the abutment/pier cap.	NIL	(i) **Foundation +Sub-Structure:** cost of each Underpass/Overpass shall be determined on pro rata basis with respect to the total linear length (m) of the Underpasses/ Overpasses. Payment against foundation + sub-structure shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of foundation + sub-structure of each Underpasses/ Overpasses subject to completion of atleast two foundations along with sub-structure upto abutment/pier cap 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) Super-structure: On completion of the super-structure in all respects including wearing coat, bearings, expansion joints, hand rails, crash barriers, road signs & makings, tests on completion etc. complete in all respect. Wearing Coat (a) in case of	NIL	(ii) **Super-structure:** Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super-structure of atleast one span in all respects as specified in the column of "Stage of Payment" in this sub-clause.

Stage for Payment	Percentage weightage	Payment Procedure
Overpass- wearing coat including expansion joints complete in all respects as specified and (b) in case of underpass- rigid pavement including drainage facility complete in all respects as specified as specified.		
(3) Approaches: On completion of approaches including Retaining walls/ Reinforced Earth walls, stone pitching, protection works complete in all respect and fit for use.	NIL	(iii) **Approaches:** Payment shall be made on pro-rata basis on completion of a stage i.e. completion of approaches in all respect as specified.

1.3.3 Major Bridge works, ROB/RUB andStructures.

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 for Payment	Percentage weightage	Payment Procedure
A.1 - Widening and repairs of Major Bridges		
(1) Foundation	NIL	(i) **Foundation:** Cost of each Major Bridge shall be determined on pro rata basis with respect to the total linear length (m) of the Major Bridge. 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 subject to completion of atleast two foundations 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) Sub-structure	NIL	(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

Stage for Payment	Percentage weightage	Payment Procedure
		the scope of sub-sructure of the major bridge subject to completion of at least two sub-structures of abutments/piers upto abutment/pier cap level of the major bridge.
(3) Super-structure (including bearings)	NIL	(iii) **Super-structure :** Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super-structures including bearings of at least one span in all respects as specified.
(4) Wearing Coat including expansion joints	NIL	(iv) **Wearing Coat :** Payment shall be made on completion of wearing coat including expansion joints complete in all respects as specified.
(5) Miscellaneous Items like hand rails, crash barriers, road markings etc.)	NIL	(v) **Miscellaneous :** Payment shall be made on completion of all miscellaneous works like hand rails, crash barriers, road markings etc. complete in all respects as specified.
(6) Wing walls/return walls	NIL	(vi) **Wing walls/return walls:** Payments shall be made on completion of all wing walls/ return walls complete in all respects as specified.
(7) Guide Bunds, River Training works etc.	NIL	(vii) **Guide Bunds, 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 and protection works)	NIL	(viii) **Approaches :** Payment shall be made on completion of both approaches including stone pitching, protection works, etc. complete in all respects as specified.
A.2- New Major Bridges		
(1) Foundation	NIL	(i) **Foundation:** Cost of each Major Bridge shall be determined on pro rata basis with respect to the total linear length (m) of the Major Bridge. 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 subject to completion of at least two foundations 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) Sub-structure	NIL	(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

Stage for Payment	Percentage weightage	Payment Procedure
		the scope of sub-sructure of the major bridge subject to completion of at least two sub-structures of abutments/piers upto abutment/ pier cap level of the major bridge.
(3) Super-structure (including bearings)	NIL	(iii) **Super-structure :** Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super-structures including bearings of at least one span in all respects as specified.
(4) Wearing Coat including expansion joints	NIL	(iv) **Wearing Coat :** Payment shall be made on completion of wearing coat including expansion joints complete in all respects as specified.
(5) Miscellaneous Items like hand rails, crash barriers, road markings etc.)	NIL	(v) **Miscellaneous :** Payment shall be made on completion of all miscellaneous works like hand rails, crash barriers, road markings etc. complete in all respects as specified.
(6) Wing walls/return walls	NIL	(vi) **Wing walls/return walls:** Payments shall be made on completion of all wing walls/return walls complete in all respects as specified.
(7) Guide Bunds, River Training works etc.	NIL	(vii) **Guide Bunds, 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 and protection works)	NIL	(viii) **Approaches :** Payment shall be made on completion of both approaches including stone pitching, protection works, etc. complete in all respects as specified.
B.1- Widening and Repair of **(a) ROB** **(b) RUB**		
(1) Foundation	NIL	(i) **Foundation:** Cost of each ROB/RUB shall be determined on pro rata basis with respect to the total linear length (m) of the ROBs/RUBs. 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 ROB/RUB subject to completion of at least two foundations 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	NIL	(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

Stage for Payment	Percentage weightage	Payment Procedure
		the scope of sub-sructure of the ROB/RUB subject to completion of at least two sub-structures of abutments/piers upto abutment/pier cap level of the ROB/RUB.
(3) Super-structure (including bearings)	NIL	(iii) **Super-structure :** Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super-structures including bearings of atleast one span in all respects as specified.
(4) Wearing Coat: (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.	NIL	(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 as specified.
(5) Miscellaneous Items like hand rails, crash barriers, road markings etc.)	NIL	(v) **Miscellaneous :** Payment shall be made on completion of all miscellaneous works like hand rails, crash barriers, road markings etc. complete in all respects as specified.
(6) Wing walls/return walls	NIL	(vi) **Wing walls/return walls:** Payments shall be made on completion of all wing walls/ return walls complete in all respects as specified.
(7) Approaches (including Retaining walls, stone pitching and protection works)	NIL	(vii) **Approaches :** Payment shall be made on completion of both approaches including stone pitching, protection works, etc. complete in all respects as specified.
B.2- New ROB/RUB **(a) ROB** **(b) RUB**		
(1) Foundation	NIL	(i) **Foundation:** Cost of each ROB/RUB shall be determined on pro rata basis with respect to the total linear length (m) of the ROBs/RUBs. 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 ROB/RUB subject to completion of atleast two foundations 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	NIL	(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-sructure of the ROB/RUB subject to completion of atleast two sub-

Stage for Payment	Percentage weightage	Payment Procedure
		structures of abutments/piers upto abutment/pier cap level of the ROB/RUB.
(3) Super-structure (including bearings)	NIL	(iii) **Super-structure :** Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super-structures including bearings of atleast one span in all respects as specified.
(4) Wearing Coat: (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.	NIL	(iv) **Wearing Coat :** Payment shall be made on completion of (a) in case of ROB- wearing coat including expansion jointds 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 as specified.
(5) Miscellaneous Items like hand rails, crash barriers, road markings etc.)	NIL	(v) **Miscellaneous :** Payment shall be made on completion of all miscellaneous works like hand rails, crash barriers, road markings etc. complete in all respects as specified.
(6) Wing walls/return walls	NIL	(vi) **Wing walls/return walls:** Payments shall be made on completion of all wing walls/return walls complete in all respects as specified.
(7) Approaches (including Retaining walls, stone pitching and protection works)	NIL	(vii) **Approaches :** Payments shall be made on completion of both approaches including stone pitching, protection works, etc. complete in all respects as specified.
C.1- Widening and repair of Elevated Section/Flyovers/Grade Separators		
(1) Foundation	NIL	(i) **Foundation:** Cost of each Major Bridge shall be determined on pro rata basis with respect to the total linear length (m) of the Major Bridge. 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 subject to completion of at least two foundations 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) Sub-structure	NIL	(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-sructure of the major bridge subject to completion of at least two sub-structures of abutments/piers

Stage for Payment	Percentage weightage	Payment Procedure
		uptoabutment/pier cap level of the structure.
(3) Super-structure (including bearings)	NIL	(iii) **Super-structure :** Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super-structures including bearings of at least one span in all respects as specified.
(4) Wearing Coat including expansion joints .	NIL	(iv) **Wearing Coat :** Payment shall be made on completion of wearing coat including expansion joints complete in all respects as specified.
(5) Miscellaneous Items like hand rails, crash barriers, road markings etc.)	NIL	(v) **Miscellaneous :** Payment shall be made on completion of all miscellaneous works like hand rails, crash barriers, road markings etc. complete in all respects as specified.
(6) Wing walls/return walls	NIL	(vi) **Wing walls/return walls:** Payments shall be made on completion of all wing walls/return walls complete in all respects as specified.
(7) Approaches (including Retaining walls/ Reinforced Earth wall, stone pitching and protection works)	NIL	(vii) **Approaches :** Payment shall be made on completion of both approaches including stone pitching, protection works, etc. complete in all respects as specified.
C.2- New Elevated Section/Flyovers/Grade Separators		
(1) Foundation	NIL	(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 the structure subject to completion of at least two foundations of the 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	NIL	(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-sructure of the structure subject to completion of at least two sub-structures of abutments/piers upto abutment/pier cap level of the structure.
(3) Super-structure (including bearings)	NIL	(iii) **Super-structure :** Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super-structures including bearings of at least one span in all respects as specified.
(4) Wearing Coat including	NIL	(iv) **Wearing Coat :**

Stage for Payment	Percentage weightage	Payment Procedure
expansion joints.		Payment shall be made on completion of wearing coat including expansion joints complete in all respects as specified.
(5) Miscellaneous Items like hand rails, crash barriers, road markings etc.)	NIL	(v) **Miscellaneous :** Payment shall be made on completion of all miscellaneous works like hand rails, crash barriers, road markings etc. complete in all respects as specified.
(6) Wing walls/return walls	NIL	(vi) **Wing walls/return walls:** Payments shall be made on completion of all wing walls/return walls complete in all respects as specified.
(7) Approaches (including Retaining walls/ Reinforced Earth wall, stone pitching and protection works)	NIL	(vii) **Approaches :** Payment shall be made on completion of both approaches including stone pitching, protection works, etc. complete in all respects 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 CompetentAuthority.

(2) The Schedule for exclusive tunnel projects may be prepared as per site requirements before bidding with due approval of CompetentAuthority.

1.3.4 Otherworks.

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

Table 1.3.4

Stage for Payment	Percentage weightage	Payment Procedure
(i) Toll Plaza	46.44	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	21.08	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.
(iii) Road signs, markings, km stones, safety devices, ….	13.46	
(iv) Project facilities		Payment shall be made on pro rata basis for completed facilities.
(a) Bus Bays & Bus Shelter	1.71	
(b) Truck lay-byes	0.99	
(c) Rest areas	NIL	
(d) Electrical Works	2.18	
(e) Junctions	6.33	
(f) others	NIL	

Stage for Payment	Percentage weightage	Payment Procedure
(v) Road side plantation	2.25	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.
(vi) Repair of protection works other than elevated sections/ flyovers/grade separators and ROBs/RUBs.	NIL	
(vii) Safety and traffic management during construction	NIL	Payment shall be made on pro rata basis every six months.
(viii) Maintenance of Existing Road	4.43	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.
(ix) Median & island Filling	1.13	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.

Schedule - J

(See Clause 10.3 (ii))

Project Completion Schedule

1. Project Completion Schedule

During Construction period, the Contractor shall comply with the requirements set forth in this Schedule-J for each of the Project Milestones and the Scheduled Completion Date. Within 15 (fifteen) days of the date of each Project Milestone, the Contractor shall notify the Authority of such compliance along with necessary particulars thereof.

2. Project Milestone-I

(i) Project Milestone-I shall occur on the date falling on the [35% of the Scheduled Construction Period] day from the Appointed Date (the "Project Milestone- I").

(ii) Prior to the occurrence of Project Milestone-I, the Contractor shall have commenced construction of the Project Highway and submitted to the Authority duly and validly prepared Stage Payment Statements for an amount not less than 10% (ten per cent) of the Contract Price.

3. Project Milestone-II

(i) Project Milestone-II shall occur on the date falling on the [60% of the Scheduled Construction Period] day from the Appointed Date (the "Project Milestone- II").

(ii) Prior to the occurrence of Project Milestone-II, the Contractor shall have continued with construction of the Project Highway and submitted to the Authority duly and validly prepared Stage Payment Statements for an amount not less than 35% (thirty five per cent) of the Contract Price and should have started construction of all bridges

4. Project Milestone-III

(i) Project Milestone-III shall occur on the date falling on the [85% of the Scheduled Construction Period] day from the Appointed Date (the "Project Milestone- III").

(ii) Prior to the occurrence of Project Milestone-III, the Contractor shall have continued with construction of the Project Highway and submitted to the Authority duly and validly prepared Stage Payment Statements for an amount not less than 70% (seventy per cent) of the Contract Price and should have started construction of all project facilities.

5. Scheduled Completion Date

(i) The Scheduled Completion Date shall occur on the 540 day from the Appointed Date.

(ii) On or before the Scheduled Completion Date, the Contractor shall have completed construction in accordance with this Agreement.

6. Extension of time

Upon extension of any or all of the aforesaid Project Milestones or the Scheduled Completion Date, as the case may be, under and in accordance with the provisions of this Agreement, the Project Completion Schedule shall be deemed to have been amended accordingly.