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 Annex-III based onsite/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 NH-53commencing from km 33+396 to km 50+070i.e. K. Senam Village to Pongringlong Village in the state of Manipur.
The land, carriageway and structures comprising the Site are described below.

2. Land

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

SL No.	Chainage (Km)		Existing Right of Way (m)	Proposed Right of Way (m)	Remarks
	From	To			
1	33.375	33.475	12	24	
2	33.475	33.575	12.2	24	
3	33.575	33.675	13.6	24	
4	33.675	33.775	11.8	24	
5	33.775	33.875	13.4	24	
6	33.875	33.975	17.1	24	
7	33.975	34.075	11.2	24	
8	34.075	34.175	11.2	24	
9	34.175	34.275	11.1	24	
10	34.275	34.375	14.4	24	
11	34.375	34.475	15.8	24	
12	34.475	34.575	9.7	24	
13	34.575	34.675	12	24	
14	34.675	34.775	10.6	24	
15	34.775	34.875	12.2	24	
16	34.875	34.975	10.7	24	
17	34.975	35.075	10.9	24	
18	35.075	35.175	11.5	24	
19	35.175	35.275	9.8	24	
20	35.275	35.375	12.6	24	
21	35.375	35.475	17	24	
22	35.475	35.575	13.7	24	
23	35.575	35.675	11.5	24	
24	35.675	35.775	12.1	24	
25	35.775	35.875	15.3	24	
26	35.875	35.975	10.5	24	
27	35.975	36.075	13.7	24	
28	36.075	36.175	11.5	24	
29	36.175	36.275	10.5	14	

SL No.	Chainage (Km)		Existing Right of Way (m)	Proposed Right of Way (m)	Remarks
	From	To			
30	36.275	36.375	10.2	14	
31	36.375	36.475	14.8	14	
32	36.475	36.575	12.1	24	
33	36.575	36.675	13.8	24	
34	36.675	36.775	13	24	
35	36.775	36.875	17.8	24	
36	36.875	36.975	11.8	24	
37	36.975	37.075	11.5	24	
38	37.075	37.175	13.4	24	
39	37.175	37.275	11.9	24	
40	37.275	37.375	10.4	24	
41	37.375	37.475	12	24	
42	37.475	37.575	12.8	24	
43	37.575	37.675	11.1	24	
44	37.675	37.775	10.2	24	
45	37.775	37.875	11.3	24	
46	37.875	37.975	12.1	24	
47	37.975	38.075	11.7	24	
48	38.075	38.175	10.2	24	
49	38.175	38.275	11.1	24	
50	38.275	38.375	11.4	24	
51	38.375	38.475	10.9	24	
52	38.475	38.575	11.7	24	
53	38.575	38.675	10.7	24	
54	38.675	38.775	11.6	24	
55	38.775	38.875	12.4	24	
56	38.875	38.975	11.3	24	
57	38.975	39.075	10.4	24	
58	39.075	39.175	10.3	24	
59	39.175	39.275	10.4	24	
60	39.275	39.375	9.3	24	
61	39.375	39.475	10.6	24	
62	39.475	39.575	10.4	24	
63	39.575	39.675	14.3	24	
64	39.675	39.775	11.3	24	
65	39.775	39.875	12.2	24	
66	39.875	39.975	11.8	24	
67	39.975	40.075	14.7	24	
68	40.075	40.175	11.7	24	
69	40.175	40.275	10.7	24	
70	40.275	40.375	10.7	24	
71	40.375	40.475	12	24	
72	40.475	40.575	11.6	24	
73	40.575	40.675	11.1	24	
74	40.675	40.775	12.4	24	
75	40.775	40.875	10.3	24	
76	40.875	40.975	10.7	24	
77	40.975	41.075	9.8	24	
78	41.075	41.175	10.6	24	
79	41.175	41.275	13.6	24	

SL No.	Chainage (Km)		Existing Right of Way (m)	Proposed Right of Way (m)	Remarks
	From	To			
80	41.275	41.375	11.5	24	
81	41.375	41.475	11.8	24	
82	41.475	41.575	13.2	24	
83	41.575	41.675	10.8	24	
84	41.675	41.775	10.9	24	
85	41.775	41.875	10.7	24	
86	41.875	41.975	12.4	24	
87	41.975	42.075	12.6	24	
88	42.075	42.175	10.7	24	
89	42.175	42.275	11.8	24	
90	42.275	42.375	10	24	
91	42.375	42.475	11	24	
92	42.475	42.575	11.3	24	
93	42.575	42.675	10.4	24	
94	42.675	42.775	13.4	24	
95	42.775	42.875	16.9	14	
96	42.875	42.975	24.7	14	
97	42.975	43.075	15.2	24	
98	43.075	43.175	11.3	24	
99	43.175	43.275	11.4	24	
100	43.275	43.375	11.5	24	
101	43.375	43.475	12.4	24	
102	43.475	43.575	11.1	24	
103	43.575	43.675	11.2	24	
104	43.675	43.775	11.1	24	
105	43.775	43.875	12.8	24	
106	43.875	43.975	11.4	24	
107	43.975	44.075	14.1	24	
108	44.075	44.175	11.1	24	
109	44.175	44.275	11.7	24	
110	44.275	44.375	11.5	24	
111	44.375	44.475	11.9	24	
112	44.475	44.575	12.6	24	
113	44.575	44.675	12.9	24	
114	44.675	44.775	13.5	24	
115	44.775	44.875	10.5	24	
116	44.875	44.975	12.5	24	
117	44.975	45.075	11.3	24	
118	45.075	45.175	13.8	24	
119	45.175	45.275	13.4	24	
120	45.275	45.375	12	24	
121	45.375	45.475	11.9	24	
122	45.475	45.575	10.3	24	
123	45.575	45.675	11.5	24	
124	45.675	45.775	12.1	24	
125	45.775	45.875	16	24	
126	45.875	45.975	12.6	24	
127	45.975	46.075	10.6	24	
128	46.075	46.175	11.4	24	
129	46.175	46.275	10.5	24	

SL No.	Chainage (Km)		Existing Right of Way (m)	Proposed Right of Way (m)	Remarks
	From	To			
130	46.275	46.375	13.6	24	
131	46.375	46.475	14.1	24	
132	46.475	46.575	12.6	24	
133	46.575	46.675	13.2	24	
134	46.675	46.775	11.3	24	
135	46.775	46.875	12.3	24	
136	46.875	46.975	11.8	24	
137	46.975	47.075	19.7	24	
138	47.075	47.175	13.1	24	
139	47.175	47.275	13.2	24	
140	47.275	47.375	12	24	
141	47.375	47.475	11.6	24	
142	47.475	47.575	11.8	24	
143	47.575	47.675	12.6	24	
144	47.675	47.775	13.1	24	
145	47.775	47.875	12.8	24	
146	47.875	47.975	12.3	24	
147	47.975	48.075	12.2	24	
148	48.075	48.175	13.9	24	
149	48.175	48.275	15.5	24	
150	48.275	48.375	12.9	24	
151	48.375	48.475	14.3	24	
152	48.475	48.575	12.6	24	
153	48.575	48.675	14.4	24	
154	48.675	48.775	12.4	24	
155	48.775	48.875	11.7	24	
156	48.875	48.975	11.5	24	
157	48.975	49.075	11.2	24	
158	49.075	49.175	11.5	24	
159	49.175	49.275	13	24	
160	49.275	49.375	12.8	24	
161	49.375	49.475	12.7	24	
162	49.475	49.575	11.1	24	
163	49.575	49.675	14.2	24	
164	49.675	49.775	10.4	24	
165	49.775	49.875	11.2	24	
166	49.875	49.975	12.4	24	
167	49.975	50.070	12.6	24	
168	50.070	50.125	12	14	
169	50.125	50.175	12	14	
170	50.175	50.225	12	14	
171	50.225	50.275	12	14	
172	50.275	50.325	12.1	14	
173	50.325	50.375	12	14	
174	50.375	50.425	12	24	
175	50.425	50.475	12.1	24	
176	50.475	50.525	12.1	24	
177	50.525	50.575	12	24	
178	50.575	50.625	12	24	
179	50.625	50.675	12	24	

SL No.	Chainage (Km)		Existing Right of Way (m)	Proposed Right of Way (m)	Remarks
	From	To			
180	50.675	50.725	12	24	
181	50.725	50.775	11.2	24	
182	50.775	50.825	11.1	24	
183	50.825	50.875	10.3	24	
184	50.875	50.925	10.8	24	
185	50.925	50.975	11.2	24	
186	50.975	51.025	12	24	
187	51.025	51.075	12	24	
188	51.075	51.125	12	24	
189	51.125	51.175	10.5	24	
190	51.175	51.225	11.9	24	
191	51.225	51.275	11.8	24	
192	51.275	51.325	12	14	
193	51.325	51.375	12	14	
194	51.375	51.425	12	14	
195	51.425	51.475	12	14	
196	51.475	51.525	12	14	
197	51.525	51.575	12	14	
198	51.575	51.625	11.4	14	
199	51.625	51.675	13	14	
200	51.675	51.725	13.4	14	
201	51.725	51.775	12	14	
202	51.775	51.825	12	14	
203	51.825	51.875	15.3	24	
204	51.875	51.925	12.8	24	
205	51.925	51.975	12.2	24	
206	51.975	52.025	11.8	24	
207	52.025	52.075	12.1	24	
208	52.075	52.125	13.2	24	
209	52.125	52.175	14.2	24	
210	52.175	52.225	10.2	24	
211	52.225	52.275	13.3	24	
212	52.275	52.325	12.5	24	
213	52.325	52.375	11.8	24	
214	52.375	52.425	10.2	24	
215	52.425	52.475	10.1	24	
216	52.475	52.525	11.7	24	
217	52.525	52.575	11.2	24	
218	52.575	52.625	19.6	24	
219	52.625	52.675	18	24	
220	52.675	52.725	13.2	24	
221	52.725	52.775	10	24	
222	52.775	52.825	10.6	24	
223	52.825	52.875	11.1	24	
224	52.875	52.925	12.5	24	
225	52.925	52.975	12.2	24	
226	52.975	53.025	12	24	
227	53.025	53.075	12	24	
228	53.075	53.125	12	24	
229	53.125	53.175	12.1	24	

SL No.	Chainage (Km)		Existing Right of Way (m)	Proposed Right of Way (m)	Remarks
	From	To			
230	53.175	53.225	10.7	24	
231	53.225	53.275	12	24	
232	53.275	53.325	12	24	
233	53.325	53.375	14.4	24	
234	53.375	53.425	11.2	24	
235	53.425	53.475	12.3	24	
236	53.475	53.525	10.4	24	
237	53.525	53.575	11	24	
238	53.575	53.625	11.6	24	
239	53.625	53.675	18.1	24	
240	53.675	53.725	12	24	
241	53.725	53.775	12.6	24	
242	53.775	53.825	12.4	24	
243	53.825	53.875	12.2	24	
244	53.875	53.925	10.4	24	
245	53.925	53.975	12.1	24	
246	53.975	54.025	11.5	24	
247	54.025	54.075	11.3	24	
248	54.075	54.125	11.3	24	
249	54.125	54.175	13.1	24	
250	54.175	54.225	11.4	24	
251	54.225	54.275	10.5	24	
252	54.275	54.325	11.4	24	
253	54.325	54.375	14	24	
254	54.375	54.425	12.2	24	
255	54.425	54.475	11.3	24	
256	54.475	54.525	11	24	
257	54.525	54.575	11.1	24	
258	54.575	54.625	9.5	24	
259	54.625	54.675	9.3	24	
260	54.675	54.725	12	24	
261	54.725	54.775	12	24	
262	54.775	54.825	10.6	24	
263	54.825	54.875	12	24	
264	54.875	54.925	12	14	
265	54.925	54.975	12	14	
266	54.975	55.025	12	14	
267	55.025	55.075	12	14	
268	55.075	55.125	12	14	
269	55.125	55.175	12	14	
270	55.175	55.225	12	14	
271	55.225	55.275	12	14	
272	55.275	55.325	12.7	14	
273	55.325	55.375	11.8	24	
274	55.375	55.425	12.4	24	
275	55.425	55.475	13.8	24	
276	55.475	55.525	9.6	24	
277	55.525	55.575	13	24	
278	55.575	55.625	12	24	
279	55.625	55.675	10	24	

SL No.	Chainage (Km)		Existing Right of Way (m)	Proposed Right of Way (m)	Remarks
	From	To			
280	55.675	55.725	11.6	24	
281	55.725	55.775	12.8	24	
282	55.775	55.825	9.6	24	
283	55.825	55.875	11.7	24	
284	55.875	55.925	10.1	24	
285	55.925	55.975	19.3	24	
286	55.975	56.025	15.1	24	
287	56.025	56.075	12.8	24	
288	56.075	56.125	10.9	24	
289	56.125	56.175	12	24	
290	56.175	56.225	15.5	24	
291	56.225	56.275	12.2	24	
292	56.275	56.325	13.2	24	
293	56.325	56.375	13.1	24	
294	56.375	56.425	12.2	24	
295	56.425	56.475	11.1	24	
296	56.475	56.525	17.3	24	
297	56.525	56.575	11.6	24	
298	56.575	56.625	11.7	24	
299	56.625	56.675	11.1	24	
300	56.675	56.725	11.7	24	
301	56.725	56.775	15.2	24	
302	56.775	56.825	14.1	24	
303	56.825	56.875	12.3	24	
304	56.875	56.925	13.9	24	
305	56.925	56.975	10.5	24	
306	56.975	57.025	14.5	24	
307	57.025	57.075	11.6	24	
308	57.075	57.125	12.3	24	
309	57.125	57.175	11.8	24	
310	57.175	57.225	12	24	
311	57.225	57.275	12	24	
312	57.275	57.325	12	24	
313	57.325	57.375	15	24	
314	57.375	57.425	11.8	24	
315	57.425	57.475	14.3	24	
316	57.475	57.525	12.6	24	
317	57.525	57.575	18.5	24	
318	57.575	57.625	12	24	
319	57.625	57.675	11.8	24	
320	57.675	57.725	12.1	24	
321	57.725	57.775	12.4	24	
322	57.775	57.825	12.2	24	
323	57.825	57.875	13.3	24	
324	57.875	57.925	12.6	24	
325	57.925	57.975	12.2	24	
326	57.975	58.025	10.7	24	
327	58.025	58.075	13.1	24	
328	58.075	58.125	11.7	24	
329	58.125	58.175	12.6	24	

SL No.	Chainage (Km)		Existing Right of Way (m)	Proposed Right of Way (m)	Remarks
	From	To			
330	58.175	58.225	20.9	24	
331	58.225	58.275	12.1	24	
332	58.275	58.325	10.4	24	
333	58.325	58.375	20.5	24	
334	58.375	58.425	18.5	24	
335	58.425	58.475	16.9	24	
336	58.475	58.525	14.3	24	
337	58.525	58.575	17.9	24	
338	58.575	58.625	16.7	24	
339	58.625	58.675	15.6	24	
340	58.675	58.725	13.3	24	
341	58.725	58.775	11	24	
342	58.775	58.825	12.4	24	
343	58.825	58.875	13.4	24	
344	58.875	58.925	10.7	24	
345	58.925	58.975	19.4	24	
346	58.975	59.025	11.7	24	
347	59.025	59.075	10.9	24	
348	59.075	59.125	11.6	24	
349	59.125	59.175	11.7	24	
350	59.175	59.225	10.9	24	
351	59.225	59.275	11.9	24	
352	59.275	59.325	12.5	24	
353	59.325	59.375	11.8	24	
354	59.375	59.425	11.5	24	
355	59.425	59.475	10.5	24	
356	59.475	59.525	12	24	
357	59.525	59.575	12.1	24	
358	59.575	59.625	14.5	24	
359	59.625	59.675	11.9	24	
360	59.675	59.725	10.5	24	
361	59.725	59.775	12	24	
362	59.775	59.825	11.4	24	
363	59.825	59.875	11.8	24	
364	59.875	59.925	14.6	24	
365	59.925	59.975	12.3	24	
366	59.975	60.025	11	24	
367	60.025	60.075	12	24	
368	60.075	60.125	12	14	
369	60.125	60.175	12	14	
370	60.175	60.225	12	14	
371	60.225	60.275	10.6	14	
372	60.275	60.325	11.6	14	
373	60.325	60.375	15.8	14	
374	60.375	60.425	15	14	
375	60.425	60.475	13.8	14	
376	60.475	60.525	11.2	14	
377	60.525	60.575	10.3	14	
378	60.575	60.625	12.7	14	
379	60.625	60.675	23.4	14	

SL No.	Chainage (Km)		Existing Right of Way (m)	Proposed Right of Way (m)	Remarks
	From	To			
380	60.675	60.725	12	14	
381	60.725	60.775	12	14	
382	60.775	60.825	12	14	
383	60.825	60.875	12	14	
384	60.875	60.925	12	14	
385	60.925	60.975	12	14	
386	60.975	61.025	12	14	
387	61.025	61.075	12	14	
388	61.075	61.125	12	14	
389	61.125	61.175	12	14	
390	61.175	61.225	12	14	
391	61.225	61.275	12	14	
392	61.275	61.325	12	14	
393	61.325	61.375	12.4	14	
394	61.375	61.425	12	14	
395	61.425	61.475	12	14	
396	61.475	61.525	12	14	
397	61.525	61.575	12	14	
398	61.575	61.625	12	14	
399	61.625	61.675	12	14	
400	61.675	61.725	12	14	
401	61.725	61.775	12	14	
402	61.775	61.825	12	14	
403	61.825	61.875	12	14	
404	61.875	61.925	12	14	
405	61.925	61.975	12	14	
406	61.975	62.025	12	14	
407	62.025	62.075	12	14	
408	62.075	62.125	12	14	
409	62.125	62.175	12	14	
410	62.175	62.225	12	14	
411	62.225	62.275	12	14	
412	62.275	62.325	12	14	
413	62.325	62.375	12	14	
414	62.375	62.425	12	14	
415	62.425	62.475	12	14	
416	62.475	62.525	12	14	
417	62.525	62.575	12	14	
418	62.575	62.625	12	14	
419	62.625	62.675	12	14	
420	62.675	62.725	12	14	
421	62.725	62.775	12	14	
422	62.775	62.825	12	14	
423	62.825	62.875	12	14	
424	62.875	62.925	12	14	
425	62.925	62.975	12	14	
426	62.975	63.025	12	14	
427	63.025	63.075	12	14	
428	63.075	63.125	12	14	
429	63.125	63.175	12	14	

SL No.	Chainage (Km)		Existing Right of Way (m)	Proposed Right of Way (m)	Remarks
	From	To			
430	63.175	63.225	12.2	14	
431	63.225	63.275	12	14	
432	63.275	63.325	12	14	
433	63.325	63.375	12	14	
434	63.375	63.425	12	24	
435	63.425	63.475	12	24	
436	63.475	63.525	12	24	
437	63.525	63.575	12	24	
438	63.575	63.625	12	24	
439	63.625	63.675	11.2	24	
440	63.675	63.725	11.3	24	
441	63.725	63.775	11.3	24	
442	63.775	63.825	12.2	24	
443	63.825	63.875	14.1	24	
444	63.875	63.925	13.3	24	
445	63.925	63.975	12.3	24	
446	63.975	64.025	12	24	
447	64.025	64.075	12	24	
448	64.075	64.125	11.1	24	
449	64.125	64.175	12.4	24	
450	64.175	64.225	11.6	24	
451	64.225	64.275	12.6	24	
452	64.275	64.325	14.2	24	
453	64.325	64.375	10.1	24	
454	64.375	64.425	12	24	
455	64.425	64.475	11.2	24	
456	64.475	64.525	11.9	24	
457	64.525	64.575	12.5	24	
458	64.575	64.625	12	24	
459	64.625	64.675	12.8	24	
460	64.675	64.725	12	14	
461	64.725	64.775	12	14	
462	64.775	64.825	12	14	
463	64.825	64.875	12	14	
464	64.875	64.925	12	14	
465	64.925	64.975	12	14	
466	64.975	65.025	12	14	
467	65.025	65.075	12	14	
468	65.075	65.125	12.2	14	
469	65.125	65.175	12	14	
470	65.175	65.225	12	14	
471	65.225	65.275	12	14	
472	65.275	65.325	12.1	14	
473	65.325	65.375	12	14	
474	65.375	65.425	12	14	
475	65.425	65.475	12	14	
476	65.475	65.525	12	14	
477	65.525	65.575	12	14	
478	65.575	65.625	12.2	24	
479	65.625	65.675	12	24	

SL No.	Chainage (Km)		Existing Right of Way (m)	Proposed Right of Way (m)	Remarks
	From	To			
480	65.675	65.725	12	24	
481	65.725	65.775	12	24	
482	65.775	65.825	12	24	
483	65.825	65.875	12	24	
484	65.875	65.925	12	24	
485	65.925	65.975	12	24	
486	65.975	66.025	12	24	
487	66.025	66.075	12	24	
488	66.075	66.125	12	24	
489	66.125	66.175	12	24	
490	66.175	66.225	12	24	
491	66.225	66.275	12	24	
492	66.275	66.325	12	24	
493	66.325	66.375	12	24	
494	66.375	66.425	12	24	
495	66.425	66.475	12	24	
496	66.475	66.525	12	24	
497	66.525	66.575	12	24	
498	66.575	66.625	12	24	
499	66.625	66.675	12	24	
500	66.675	66.725	13.3	24	
501	66.725	66.775	11.7	24	
502	66.775	66.825	12.4	24	
503	66.825	66.875	10.7	24	
504	66.875	66.925	11.4	24	
505	66.925	66.975	14.4	24	
506	66.975	67.025	11.1	24	
507	67.025	67.075	11.6	24	
508	67.075	67.125	12.4	24	
509	67.125	67.175	13.7	24	
510	67.175	67.225	12.6	24	
511	67.225	67.275	12	24	
512	67.275	67.325	12	24	
513	67.325	67.375	12	24	
514	67.375	67.425	12	24	
515	67.425	67.475	12	24	

3. Carriageway

The present carriage way of the Project Highway is Two Lane from km 33+396 to km 67+495. 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. Roadover-bridges(ROB)/Roadunder-bridges(RUB)

The Site includes the following ROB(roadoverrailway line)/RUB(road underrailway line):

S. No.	**Chainage (km)**	**TypeofStructure**		**No.ofSpans withspan length(m)**	**Width (m)**	**ROB/ RUB**
		Foundation	**Superstructure**			
Nil						

6. Gradeseparators

The Site includes the followinggrade separators:

S. No.	**Chainage (km)**	**TypeofStructure**		**No.ofSpanswith spanlength(m)**	**Width (m)**
		Foundation	**Superstructure**		
Nil					

7. Minorbridges

The Site includes the following minor bridges:

Sl. No.	**Survey Chainage (Km)**	**Type of Structure**			**No. of Spans with span length (m)**	**Width (m)**
		Foundation	**Sub-structure**	**Super- structure**		
1	36+568	Open	Wall	RCC Slab Bridge	1x6.5M	7.2
2	42+381	Open	Wall	RCC Slab Bridge	1x6.5M	6.8
3	51+425	Open	Wall	PSC BOX GIRDER	1X40.3M	8.5
4	53+215	Open	Wall	RCC SLAB BRIDGE	1X10.0M	10.8
5	55+243	Open	Wall	RCC SLAB BRIDGE	1X10.0M	10
6	61+145	Open	Wall	RCC SLAB BRIDGE	1X7.0M	7.7
7	61+342	Open	Wall	RCC SLAB BRIDGE	1X7.0M	10.2
8	66+290	Open	Wall	RCC SLAB BRIDGE	1X6.3M	11

8. Railwaylevelcrossings

The Site includes the followingrailway levelcrossings:

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.	**Chainage (km)**	**Type of Culvert**	**Span/Opening with Span Length**	**Width of Culvert (m)**
1	33.225	HP	1 X 0.90 Dia	15.2
2	33.763	HP	1X1.50m	15

Sl. No.	Chainage (km)	Type of Culvert	Span/Opening with Span Length	Width of Culvert (m)
3	33.823	HP	1 X 1.00 Dia	10
4	34.625	HP	1 X 1.00 Dia	12
5	34.664	HP	1 X 0.90 Dia	13
6	34.772	HP	2 X 1.00 Dia	14
7	35.249	HP	1 X 1.00 Dia	11.3
8	35.764	HP	1 X 0.90 Dia	9.7
9	36.189	HP	1 X 1.00 Dia	10.8
10	36.417	Box	1x1.50m	12
11	36.772	R.C.C SLAB	1 X 2.0m	15.8
12	36.86	R.C.C SLAB	1 X 2.0m	12.8
13	37.076	R.C.C SLAB	1 X 4.18m	13.7
14	37.714	HP	1 X 0.40 Dia	8
15	37.764	HP	1 X 1.20 Dia	12.5
16	38.264	HP	1 X 1.20 Dia	14.5
17	38.529	R.C.C SLAB	1 X 2.33m	9
18	38.642	HP	1 X 1.00 Dia	10
19	38.938	HP	1 X 0.30 Dia	15.2
20	39.132	HP	1 X 0.30 Dia	15
21	39.257	HP	1 X 1.20 Dia	10
22	39.653	HP	1 X 1.20 Dia	12
23	41.01	HP	1 X 0.60 Dia	13
24	42.907	HP	1 X 1.50 Dia	14
25	43.342	HP	1 X 1.00 Dia	11.3
26	43.451	HP	1 X 1.00 Dia	9.7
27	43.663	HP	1 X 1.00 Dia	10.8
28	44.644	HP	1 X 1.00 Dia	12
29	45.058	HP	1 X 0.90 Dia	15.8
30	45.161	R.C.C SLAB	1X1.70m	12.8
31	45.261	R.C.C SLAB	1X2.43m	13.7
32	45.833	HP	1 X 1.00 Dia	8
33	46.444	HP	1 X 0.60 Dia	12.5
34	46.993	HP	1X1.20m	14.5
35	47.455	HP	1 X 0.90 Dia	9
36	47.658	R.C.C SLAB	1X3.27m	10
37	48.617	HP	1 X 1.50 Dia	15.2
38	48.987	HP	1 X 1.00 Dia	15
39	50.236	HP	1 X 0.90 Dia	12.5
40	50.527	R.C.C SLAB	1 X 4.00m	12.5
41	50.551	HP	1X1.20m	12.4
42	50.671	R.C.C SLAB	1 X 2.14m	18.6
43	51.079	HP	1 X 0.60 Dia	16.6
44	51.159	HP	1 X 0.90 Dia	11.3
45	51.387	HP	1 X 1.50 Dia	8.83
46	51.623	HP	1 X 0.90 Dia	10.1
47	51.686	HP	1 X 0.90 Dia	11.55
48	51.817	HP	1 X 0.90 Dia	11.55
49	51.994	HP	1 X 0.60 Dia	10
50	52.097	HP	1 X 0.90 Dia	7.5
51	52.198	R.C.C SLAB	1 X 1.48m	9.3
52	52.512	HP	1 X 0.60 Dia	15

Sl. No.	Chainage (km)	Type of Culvert	Span/Opening with Span Length	Width of Culvert (m)
53	52.682	R.C.C SLAB	1 X 2.50m	11.6
54	52.875	R.C.C SLAB	1 X 2.00m	12
55	53.015	R.C.C SLAB	1 X 1.19 Dia	9.6
56	53.444	HP	1 X 0.90 Dia	10
57	53.757	HP	1 X 0.60 Dia	13
58	53.821	HP	1 X 0.60 Dia	12.4
59	53.944	HP	1 X 1.00 Dia	12.4
60	54.16	HP	1 X 2.98m	11.3
61	54.531	HP	1 X 1.20 Dia	15.2
62	54.664	HP	1 X 1.00 Dia	15
63	54.737	HP	1 X 0.90 Dia	10
64	54.81	HP	1 X 0.90 Dia	10
65	54.855	HP	1 X 1.00 Dia	12
66	55.301	HP	1 X 1.20 Dia	13
67	55.505	HP	1 X 1.00 Dia	14
68	55.655	HP	1 X 1.00 Dia	11.3
69	55.915	R.C.C SLAB	1X2.48m	9.7
70	56.097	R.C.C SLAB	1X1.80m	10.8
71	56.219	HP	1 X 0.90 Dia	12
72	56.299	HP	1 X 0.90 Dia	15.8
73	56.501	HP	1 X 0.90 Dia	12.8
74	56.656	HP	2 X 0.60 Dia	13.7
75	56.831	HP	1 X 0.60 Dia	8
76	57.104	HP	1 X 0.80 Dia	12.5
77	57.124	HP	1 X 0.60 Dia	14.5
78	57.619	HP	1 X 1.50 Dia	9
79	57.754	HP	1 X 0.90 Dia	10
80	58.203	HP	1 X 1.00 Dia	11.3
81	58.31	HP	1 X 0.60 Dia	15.2
82	58.445	HP	1 X 1.20 Dia	15
83	58.653	HP	1 X 1.20 Dia	10
84	58.781	HP	1 X 0.80 Dia	12
85	59.061	HP	1 X 1.20 Dia	13
86	59.195	HP	1 X 1.00 Dia	14
87	59.527	HP	1 X 1.20 Dia	11.3
88	59.663	HP	1 X 0.60 Dia	9.7
89	59.706	R.C.C SLAB	1X1.50m	9.7
90	59.785	HP	1 X 0.60 Dia	10.8
91	60.183	HP	1 X 0.60 Dia	12
92	60.264	HP	1 X 1.00 Dia	15.8
93	60.345	R.C.C SLAB	1X2.0m	15.8
94	60.759	HP	1 X 0.60 Dia	12.8
95	60.872	HP	2 X 0.60 Dia	13.7
96	60.959	HP	1 X 0.60 Dia	8
97	61.044	R.C.C SLAB	1X5.10m	12.5
98	61.272	HP	1 X 0.40 Dia	12.5
99	61.367	HP	1 X 0.60 Dia	14.5
100	61.554	HP	1 X 0.60 Dia	9
101	61.64	HP	1 X 0.90 Dia	10
102	61.895	HP	1 X 0.90 Dia	12

Sl. No.	Chainage (km)	Type of Culvert	Span/Opening with Span Length	Width of Culvert (m)
103	62.136	Box	1X2.50m	15.8
104	63.234	Box	1X4.70m	12.8
105	63.419	HP	1 X 0.64 Dia	13.7
106	63.866	HP	1 X 0.90 Dia	8
107	64.206	HP	1 X 0.90 Dia	12.5
108	64.382	Box	3.20X4.20m	14.5
109	64.469	R.C.C SLAB	1X4.45m	9
110	64.744	R.C.C SLAB	1X4.50m	10
111	64.851	Box	2.50X1.70m	11.3
112	64.944	HP	1 X 1.00 Dia	15.2
113	65.12	R.C.C SLAB	1X5.00m	15
114	65.219	HP	1 X 0.90 Dia	10
115	65.318	R.C.C SLAB	1X4.10m	12
116	65.45	R.C.C SLAB	1X3.90m	13
117	65.503	R.C.C SLAB	1X3.70m	14
118	66.006	HP	1 X 0.90 Dia	14
119	66.148	R.C.C SLAB	1X1.80m	11.3
120	66.219	R.C.C SLAB	1X1.20m	11.3
121	66.426	R.C.C SLAB	1X3.10m	10.8
122	66.599	HP	1 X 0.80 Dia	12
123	66.739	HP	1 X 0.90 Dia	15.8
124	66.812	R.C.C SLAB	1X2.60m	12.8
125	66.935	HP	1 X 0.60 Dia	13.7
126	67.197	R.C.C SLAB	1X1.54m	8
127	67.398	R.C.C SLAB	1X1.50m	12.5
128	67.45	R.C.C SLAB	1X1.40m	14.5

11. Busbays

The details of bus bays onthe Site are as follows:

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

12. Truck Laybyes

The details of trucklay byes are as follows:

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

13. Roadsidedrains

The details of the roadside drains are as follows:

Sl. No.	Location		Length (km)	Type	
	From km	To km		Masonry/cc (Pucca)	Earthen (Kutcha)
1	34.17	34.31	0.14		Kachha (Single Side)
2	34.4	34.865	0.465		Kachha (Single Side)
3	34.99	35.225	0.235		Kachha (Single Side)
4	35.525	36	0.475		Kachha (Single Side)
5	36.44	37.05	0.61		Kachha (Single Side)
6	38.1	39.33	1.23		Kachha (Single Side)
7	39.5	40.26	0.76		Kachha (Single Side)

Sl. No.	Location		Length (km)	Type	
	From km	To km		Masonry/cc (Pucca)	Earthen (Kutcha)
8	40.475	40.7	0.225		Kachha (Single Side)
9	40.84	42.775	1.935		Kachha (Single Side)
10	42.775	42.875	0.1	Pucca (Single Side)	
11	42.875	43.2	0.325		Kachha (Single Side)
12	43.31	43.75	0.44		Kachha (Single Side)
13	43.85	44.34	0.49		Kachha (Single Side)
14	44.41	47.975	3.565		Kachha (Single Side)
15	48.025	50.075	2.05		Kachha (Single Side)
16	50.07	50.36	0.29		Kachha (Single Side)
17	50.04	50.825	0.785		Kachha (Single Side)
18	51.075	51.175	0.1		Kachha (Single Side)
19	51.175	51.4	0.225	Pucca (Single Side)	
20	51.5	51.625	0.125		Kachha (Single Side)
21	51.68	51.775	0.095	Pucca (Single Side)	
22	51.775	51.875	0.1		Kachha (Single Side)
23	51.875	52.325	0.45	Pucca (Single Side)	
24	52.4	52.675	0.275		Kachha (Single Side)
25	52.775	52.825	0.05		Kachha (Single Side)
26	52.825	53	0.175	Pucca (Single Side)	
27	53.05	53.2	0.15		Kachha (Single Side)
28	53.275	53.9	0.625		Kachha (Single Side)
29	54.125	54.94	0.815		Kachha (Single Side)
30	54.94	55.23	0.29		Kachha (Single Side)
31	55.23	55.875	0.645		Kachha (Single Side)
32	55.875	55.925	0.05	Pucca (Single Side)	
33	55.925	56.675	0.75		Kachha (Single Side)
34	56.775	60.075	3.3		Kachha (Single Side)
35	60.225	61.25	1.025		Kachha (Single Side)
36	61.4	62.39	0.99		Kachha (Single Side)
37	62.39	62.475	0.085	Pucca (Single Side)	
38	62.725	62.87	0.145	Pucca (Single Side)	
39	62.87	63.225	0.355		Kachha (Single Side)
40	63.225	63.5	0.275	Pucca (Single Side)	
41	63.5	63.625	0.125		Kachha (Single Side)
42	63.825	64.075	0.25		Kachha (Single Side)
43	64.175	65.05	0.875		Kachha (Single Side)
44	65.05	65.1	0.05	Pucca (Single Side)	
45	65.14	65.225	0.085		Kachha (Single Side)
46	65.225	65.275	0.05	Pucca (Single Side)	
47	65.275	65.875	0.6		Kachha (Single Side)
48	65.875	66.25	0.375	Pucca (Single Side)	
49	66.425	66.575	0.15	Pucca (Single Side)	
50	66.575	66.675	0.1		Kachha (Single Side)
51	66.675	66.925	0.25	Pucca (Single Side)	
52	67.275	67.495	0.22	Pucca (Single Side)	

14. Majorjunctions

The details ofmajor junctions are as follows:

S. No.	Location		At grade	Separated	Category of Cross Road			
	From km	to km			NH	SH	MDR	Others

S. No.	Location		At grade	Separated	Category of Cross Road			
	From km	to km			NH	SH	MDR	Others
Nil								

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

15. Minorjunctions

The details of the minor junctions are as follows:

Sl. No.	Location		Type of intersection	
	From Km	To Km	T-Junction	Cross Road
1	33+470		Y	3-Legged
2	46+957		Y	3-Legged
3	51.375		Y	3-Legged
4	51.464		Y	3-Legged
5	51.483		T	3-Legged
6	52.340		Y	3-Legged
7	55.975		Y	3-Legged
8	57.197		Y	3-Legged
9	58.013		T	3-Legged
10	58.766		Y	3-Legged
11	60.769		Y	3-Legged
12	61.333		Y	3-Legged
13	61.356		Y	3-Legged
14	61.602		T	3-Legged
15	62.056		Y	3-Legged
16	62.147		X	4-Legged
17	62.417		Y	3-Legged
18	62.467		Y	3-Legged
19	62.628		Y	3-Legged
20	62.837		Y	3-Legged
21	63.174		Y	3-Legged
22	63.243		Y	3-Legged
23	63.275		Y	3-Legged
24	64.652		T	3-Legged
25	64.729		T	3-Legged
26	64.825		Y	3-Legged

6. Bypasses

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

Sl.No.	Nameofbypass (town)	Chainage(km)From kmtokm	Length (inKm)
Nil			

17. Otherstructures

[Provide details of other structures, if any.]

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 is stated below:

The Construction of Project Highway will be implemented as per Manual, details of which are already given in Article-2 of Annexure – I of Schedule –A.

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 onsite/design requirement.

(ii) TrafficSignageplanoftheProjectHighwayshowingnumbers&locationoftraffic signs is enclosed. The contractor shall, however, improve/upgrade upon the traffic signageplanasindicatedinAnnex-IIIbasedonsite/designrequirementasperthe relevant specifications/IRC Codes/Manual.

Annex – IV

(Schedule-A)

Environment Clearances

The following environment clearances have beenobtained: [***]

The following environment clearances are awaited:[***]

Environmental Clearances are not required for the project.

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.

(Schedule-B)

Description of [Two-Lanning]

[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:73-2018)], 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 Hilly terrain to the extent land is available.

(ii) Width of Carriageway

(a) Two-Lanning [with] paved shoulders shall be undertaken. The paved carriageway shall be [7(seven) m] wide.

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

Sl. No.	Built-up stretch (Township)	Location		Width (m)	Typical Cross Section (Refer to Manual)	Remarks
1	K. Senam	35+730	36+030	7	As per attached TCS drawing	7 m Carriageway
2	Sehjang	42+130	42+350	7	As per attached TCS drawing	7 m Carriageway
3	Pongringlong	49+250	49+580	7	As per attached TCS drawing	7 m Carriageway
4	Tupul	50+610	50+930	7	As per attached TCS drawing	7 m Carriageway
5	Nanduangjang	54+230	54+530	7	As per attached TCS drawing	7 m Carriageway
6	Longmai IV	59+280	59+380	7	As per attached TCS drawing	7 m Carriageway
7	Longmai V	59+980	60+280	7	As per attached TCS drawing	7 m Carriageway
8	Noney	60+430	60+630	7	As per attached TCS drawing	7 m Carriageway
9	Noney Market	60+730	60+930	7	As per attached TCS drawing	7 m Carriageway
10	Noney Market	61+130	61+310	7	As per attached TCS drawing	7 m Carriageway
11	Khumji Market	61+310	62+100	7	As per attached TCS drawing	7 m Carriageway
12	Khumji	62+750	62+810	7	As per attached TCS drawing	7 m Carriageway
13	Khumji	63+920	64+210	7	As per attached TCS drawing	7 m Carriageway
14	Khumji	64+280	64+580	7	As per attached TCS drawing	7 m Carriageway

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

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

For Mountainous terrain design speed shall be the minimum design speed of 40-60 km/hr and for sharp curve and hair pin bend locations speed reduces up to 30kmph & 20 kmph, respectively.

(iii) Improvement of the existing road geometrics

The stretches where design speed reduces below 40kmph are summarized below:

Sl. No.	Stretch (from km to km)	Type of Deficiency	Remarks
1	33+309 to 33+315	Sharp Bend	Design Speed = 30 Kmph
2	33+359 to 33+386	Sharp Bend	Design Speed = 30 Kmph
3	33+537 to 33+554	Sharp Bend	Design Speed = 30 Kmph
4	33+631 to 33+665	Sharp Bend	Design Speed = 30 Kmph
5	34+289 to 34+299	Sharp Bend	Design Speed = 30 Kmph
6	34+346 to 34+364	Sharp Bend	Design Speed = 30 Kmph
7	34+526 to 34+570	Sharp Bend	Design Speed = 30 Kmph
8	34+793 to 34+816	Sharp Bend	Design Speed = 30 Kmph
9	34+906 to 34+946	Sharp Bend	Design Speed = 30 Kmph
10	35+090 to 35+135	Sharp Bend	Design Speed = 30 Kmph
11	35+172 to 35+271	Sharp Bend	Design Speed = 30 Kmph
12	35+401 to 35+419	Sharp Bend	Design Speed = 30 Kmph
13	35+480 to 35+492	Sharp Bend	Design Speed = 30 Kmph
14	35+588 to 35+595	Sharp Bend	Design Speed = 30 Kmph
15	35+700 to 35+742	Sharp Bend	Design Speed = 20 Kmph
16	35+804 to 35+822	Sharp Bend	Design Speed = 20 Kmph
17	35+908 to 35+997	Sharp Bend	Design Speed = 30 Kmph
18	36+123 to 36+159	Sharp Bend	Design Speed = 30 Kmph
19	36+182 to 36+213	Sharp Bend	Design Speed = 20 Kmph
20	36+567 to 36+600	Sharp Bend	Design Speed = 30 Kmph
21	36+692 to 36+740	Sharp Bend	Design Speed = 20 Kmph
22	36+791 to 36+802	Sharp Bend	Design Speed = 30 Kmph
23	36+842 to 36+853	Sharp Bend	Design Speed = 30 Kmph
24	36+913 to 36+942	Sharp Bend	Design Speed = 30 Kmph
25	37+232 to 37+249	Sharp Bend	Design Speed = 30 Kmph
26	37+481 to 37+508	Sharp Bend	Design Speed = 30 Kmph
27	37+656 to 37+670	Sharp Bend	Design Speed = 30 Kmph
28	37+721 to 37+727	Sharp Bend	Design Speed = 30 Kmph
29	37+774 to 37+792	Sharp Bend	Design Speed = 30 Kmph
30	37+906 to 37+926	Sharp Bend	Design Speed = 30 Kmph
31	38+191 to 38+207	Sharp Bend	Design Speed = 30 Kmph
32	38+247 to 38+251	Sharp Bend	Design Speed = 30 Kmph
33	38+325 to 38+367	Sharp Bend	Design Speed = 30 Kmph
34	38+411 to 38+416	Sharp Bend	Design Speed = 30 Kmph
35	38+458 to 38+475	Sharp Bend	Design Speed = 30 Kmph
36	38+505 to 38+522	Sharp Bend	Design Speed = 30 Kmph
37	38+667 to 38+671	Sharp Bend	Design Speed = 30 Kmph

Sl. No.	Stretch (from km to km)	Type of Deficiency	Remarks
38	38+728 to 38+740	Sharp Bend	Design Speed = 30 Kmph
39	38+801 to 38+812	Sharp Bend	Design Speed = 30 Kmph
40	39+268 to 39+283	Sharp Bend	Design Speed = 30 Kmph
41	39+338 to 39+366	Sharp Bend	Design Speed = 30 Kmph
42	39+800 to 39+822	Sharp Bend	Design Speed = 30 Kmph
43	40+440 to 40+473	Sharp Bend	Design Speed = 30 Kmph
44	40+524 to 40+571	Sharp Bend	Design Speed = 30 Kmph
45	40+653 to 40+657	Sharp Bend	Design Speed = 30 Kmph
46	40+699 to 40+708	Sharp Bend	Design Speed = 30 Kmph
47	41+144 to 41+149	Sharp Bend	Design Speed = 30 Kmph
48	41+189 to 41+192	Sharp Bend	Design Speed = 30 Kmph
49	41+251 to 41+254	Sharp Bend	Design Speed = 30 Kmph
50	41+314 to 41+325	Sharp Bend	Design Speed = 30 Kmph
51	41+989 to 42+021	Sharp Bend	Design Speed = 30 Kmph
52	42+067 to 42+076	Sharp Bend	Design Speed = 30 Kmph
53	42+113 to 42+122	Sharp Bend	Design Speed = 30 Kmph
54	42+200 to 42+220	Sharp Bend	Design Speed = 30 Kmph
55	42+265 to 42+274	Sharp Bend	Design Speed = 30 Kmph
56	42+357 to 42+378	Sharp Bend	Design Speed = 30 Kmph
57	42+528 to 42+609	Sharp Bend	Design Speed = 30 Kmph
58	42+948 to 43+005	Sharp Bend	Design Speed = 30 Kmph
59	43+038 to 43+064	Sharp Bend	Design Speed = 20 Kmph
60	43+095 to 43+106	Sharp Bend	Design Speed = 20 Kmph
61	43+139 to 43+150	Sharp Bend	Design Speed = 20 Kmph
62	43+252 to 43+274	Sharp Bend	Design Speed = 20 Kmph
63	43+463 to 43+500	Sharp Bend	Design Speed = 20 Kmph
64	43+533 to 43+546	Sharp Bend	Design Speed = 20 Kmph
65	43+583 to 43+593	Sharp Bend	Design Speed = 30 Kmph
66	43+690 to 43+733	Sharp Bend	Design Speed = 30 Kmph
67	44+323 to 44+346	Sharp Bend	Design Speed = 30 Kmph
68	44+397 to 44+400	Sharp Bend	Design Speed = 30 Kmph
69	44+808 to 44+816	Sharp Bend	Design Speed = 30 Kmph
70	44+862 to 44+884	Sharp Bend	Design Speed = 30 Kmph
71	44+952 to 44+981	Sharp Bend	Design Speed = 30 Kmph
72	45+034 to 45+058	Sharp Bend	Design Speed = 30 Kmph
73	45+176 to 45+192	Sharp Bend	Design Speed = 30 Kmph
74	45+247 to 45+253	Sharp Bend	Design Speed = 30 Kmph
75	45+310 to 45+387	Sharp Bend	Design Speed = 20 Kmph
76	45+502 to 45+531	Sharp Bend	Design Speed = 20 Kmph
77	45+973 to 45+976	Sharp Bend	Design Speed = 30 Kmph
78	46+026 to 46+031	Sharp Bend	Design Speed = 30 Kmph
79	46+073 to 46+102	Sharp Bend	Design Speed = 30 Kmph
80	46+457 to 46+474	Sharp Bend	Design Speed = 30 Kmph
81	46+646 to 46+675	Sharp Bend	Design Speed = 30 Kmph
82	47+055 to 47+062	Sharp Bend	Design Speed = 30 Kmph
83	47+124 to 47+162	Sharp Bend	Design Speed = 30 Kmph
84	47+578 to 47+622	Sharp Bend	Design Speed = 20 Kmph
85	47+653 to 47+730	Sharp Bend	Design Speed = 30 Kmph
86	47+782 to 47+826	Sharp Bend	Design Speed = 30 Kmph
87	48+084 to 48+217	Sharp Bend	Design Speed = 20 Kmph

Sl. No.	Stretch (from km to km)	Type of Deficiency	Remarks
88	48+247 to 48+310	Sharp Bend	Design Speed = 20 Kmph
89	48+354 to 48+452	Sharp Bend	Design Speed = 30 Kmph
90	48+492 to 48+502	Sharp Bend	Design Speed = 30 Kmph
91	48+713 to 48+766	Sharp Bend	Design Speed = 20 Kmph
92	48+801 to 48+847	Sharp Bend	Design Speed = 20 Kmph
93	49+289 to 49+295	Sharp Bend	Design Speed = 30 Kmph
94	49+343 to 49+353	Sharp Bend	Design Speed = 30 Kmph
95	49+421 to 49+434	Sharp Bend	Design Speed = 30 Kmph
96	49+482 to 49+496	Sharp Bend	Design Speed = 30 Kmph
97	49+544 to 49+553	Sharp Bend	Design Speed = 30 Kmph
98	49+616 to 49+650	Sharp Bend	Design Speed = 20 Kmph
99	49+683 to 49+703	Sharp Bend	Design Speed = 20 Kmph
100	49+777 to 49+793	Sharp Bend	Design Speed = 30 Kmph
101	49+843 to 49+883	Sharp Bend	Design Speed = 30 Kmph
102	49+926 to 49+965	Sharp Bend	Design Speed = 30 Kmph
103	50+140 to 50+161	Sharp Bend	Design Speed = 20 Kmph
104	50+197 to 50+211	Sharp Bend	Design Speed = 20 Kmph
105	50+242 to 50+261	Sharp Bend	Design Speed = 20 Kmph
106	50+295 to 50+307	Sharp Bend	Design Speed = 20 Kmph
107	50+428 to 50+507	Sharp Bend	Design Speed = 30 Kmph
108	50+610 to 50+634	Sharp Bend	Design Speed = 20 Kmph
109	52+203 to 52+227	Sharp Bend	Design Speed = 30 Kmph
110	52+285 to 52+311	Sharp Bend	Design Speed = 30 Kmph
111	52+360 to 52+396	Sharp Bend	Design Speed = 30 Kmph
112	52+774 to 52+812	Sharp Bend	Design Speed = 20 Kmph
113	52+856 to 52+892	Sharp Bend	Design Speed = 20 Kmph
114	52+996 to 53+005	Sharp Bend	Design Speed = 30 Kmph
115	53+051 to 53+058	Sharp Bend	Design Speed = 30 Kmph
116	53+774 to 53+797	Sharp Bend	Design Speed = 30 Kmph
117	53+843 to 53+871	Sharp Bend	Design Speed = 30 Kmph
118	53+937 to 53+943	Sharp Bend	Design Speed = 30 Kmph
119	54+981 to 54+991	Sharp Bend	Design Speed = 30 Kmph
120	55+072 to 55+091	Sharp Bend	Design Speed = 30 Kmph
121	55+131 to 55+161	Sharp Bend	Design Speed = 30 Kmph
122	55+505 to 55+515	Sharp Bend	Design Speed = 30 Kmph
123	55+552 to 55+562	Sharp Bend	Design Speed = 30 Kmph
124	55+608 to 55+616	Sharp Bend	Design Speed = 30 Kmph
125	55+713 to 55+764	Sharp Bend	Design Speed = 30 Kmph
126	55+825 to 55+848	Sharp Bend	Design Speed = 30 Kmph
127	56+168 to 56+175	Sharp Bend	Design Speed = 30 Kmph
128	56+227 to 56+236	Sharp Bend	Design Speed = 30 Kmph
129	56+509 to 56+529	Sharp Bend	Design Speed = 30 Kmph
130	56+587 to 56+601	Sharp Bend	Design Speed = 30 Kmph
131	56+672 to 56+685	Sharp Bend	Design Speed = 30 Kmph
132	56+749 to 56+765	Sharp Bend	Design Speed = 30 Kmph
133	57+699 to 57+704	Sharp Bend	Design Speed = 30 Kmph
134	57+755 to 57+760	Sharp Bend	Design Speed = 30 Kmph
135	58+909 to 58+915	Sharp Bend	Design Speed = 30 Kmph
136	58+961 to 58+968	Sharp Bend	Design Speed = 30 Kmph
137	59+022 to 59+040	Sharp Bend	Design Speed = 30 Kmph

Sl. No.	Stretch (from km to km)	Type of Deficiency	Remarks
138	60+333 to 60+340	Sharp Bend	Design Speed = 30 Kmph
139	60+405 to 60+419	Sharp Bend	Design Speed = 30 Kmph
140	61+242 to 61+357	Sharp Bend	Design Speed = 30 Kmph
141	61+506 to 61+548	Sharp Bend	Design Speed = 30 Kmph
142	61+716 to 61+827	Sharp Bend	Design Speed = 30 Kmph
143	61+860 to 61+896	Sharp Bend	Design Speed = 30 Kmph
144	62+257 to 62+303	Sharp Bend	Design Speed = 30 Kmph
145	62+404 to 62+423	Sharp Bend	Design Speed = 30 Kmph
146	62+494 to 62+563	Sharp Bend	Design Speed = 30 Kmph
147	62+609 to 62+616	Sharp Bend	Design Speed = 30 Kmph
148	62+862 to 62+874	Sharp Bend	Design Speed = 30 Kmph
149	62+916 to 62+933	Sharp Bend	Design Speed = 30 Kmph
150	63+454 to 63+492	Sharp Bend	Design Speed = 30 Kmph
151	63+555 to 63+644	Sharp Bend	Design Speed = 30 Kmph
152	63+710 to 63+733	Sharp Bend	Design Speed = 30 Kmph
153	63+855 to 63+998	Sharp Bend	Design Speed = 30 Kmph
154	64+068 to 64+107	Sharp Bend	Design Speed = 30 Kmph
155	64+166 to 64+231	Sharp Bend	Design Speed = 30 Kmph
156	64+845 to 64+864	Sharp Bend	Design Speed = 30 Kmph
157	64+915 to 64+922	Sharp Bend	Design Speed = 30 Kmph
158	65+421 to 65+431	Sharp Bend	Design Speed = 30 Kmph
159	65+493 to 65+522	Sharp Bend	Design Speed = 30 Kmph
160	65+584 to 65+633	Sharp Bend	Design Speed = 30 Kmph
161	66+074 to 66+106	Sharp Bend	Design Speed = 30 Kmph

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 existing right of way and proper road signs and safety Measures shall be provided.

(iv) Right of Way

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

(v) Type of shoulders

[Refer to provision of relevant Manual and specify]

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

Sl. No.	Stretch (from Km to Km)	Fully Paved shoulders/footpaths	Reference to cross section
1	35+730 to 36+030	2X1.5 m paved shoulder & 2X1.0 m footpath	TCS-7
2	42+130 to 42+350	2X1.5 m paved shoulder & 2X1.0 m footpath	TCS-6
3	43+720 to 43+855	2X1.5 m paved shoulder & 1X1.0 m footpath	TCS-7
4	49+250 to 49+580	2X1.5 m paved shoulder & 1X1.0 m footpath	TCS-7
5	50+610 to 50+930	2X1.5 m paved shoulder & 2X1.0 m footpath	TCS-6
6	54+230 to 54+530	2X1.5 m paved shoulder & 1X1.0 m footpath	TCS-7
7	59+280 to 59+380	2X1.5 m paved shoulder & 1X1.0 m footpath	TCS-7
8	59+980 to 60+280	2X1.5 m paved shoulder & 2X1.0 m footpath	TCS-6
9	60+430 to 60+630	2X1.5 m paved shoulder & 1X1.0 m footpath	TCS-7
10	60+730 to 60+930	2X1.5 m paved shoulder & 1X1.0 m footpath	TCS-7
11	61+130 to 61+310	2X1.5 m paved shoulder & 1X1.0 m footpath	TCS-7

Sl. No.	Stretch (from Km to Km)	Fully Paved shoulders/footpaths	Reference to cross section
12	61+310 to 62+100	2X1.5 m paved shoulder & 2X1.0 m footpath	TCS-6
13	62+750 to 62+810	2X1.5 m paved shoulder & 1X1.0 m footpath	TCS-7
14	63+920 to 64+210	2X1.5 m paved shoulder & 1X1.0 m footpath	TCS-7
15	64+280 to 64+580	2X1.5 m paved shoulder & 1X1.0 m footpath	TCS-7

(b) Earthen shoulders of 1.0 m width shall be provided with selected earth wherever applicable as per TCS drawing.

(c) Design andspecificationsofpavedshouldersandgranularmaterialshallconformtotherequirements specifiedintherelevant 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 requirements specified in the relevant Manual.

(b) Lateral clearance: The width of the opening at the under passes 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) Lateralandverticalclearancesatoverpassesshallbeasperrequirementsspecifiedinthe relevant 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

Serviceroadsshallbeconstructedatthelocationsandforthelengthsindicatedbelow: [Refer requirements specified in the relevant Manual]

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 provision of the Manual. The requisite particulars are given below:

[Refer to requirements specified in the relevant Manual]

Sl. No.	Location of Structure (VUP)	Length (m)	Number and length of spans	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 provision 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 provision of the relevant 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

[Give typical cross-sections of the Project Highway by reference to the Manual] As per attached Drawings

TCS Number	TCS Description	Length (km)
TCS-1	Typical Cross Section of Two Lane Carriageway with Paved Shoulder in Built up area with Both side covered drain cum footpath in plain terrain (Reconstruction)	0
TCS-2	Typical Cross Section of Two Lane Carriageway with Paved Shoulder in Rural area in Plain Terrain (Reconstruction)	0
TCS-2A	Typical Cross Section of Two Lane Carriageway with Paved Shoulder in Rural area in Hilly Terrain (Reconstruction)	0
TCS-3	Typical Cross Section of Two Lane Carriageway with Paved Shoulder in Rural area with trapezoidal open drain on hill side and earthen shoulder on valley side (Reconstruction)	25.105
TCS-3A	Typical Cross Section of Two Lane Carriageway with Paved Shoulder in Rural area with trapezoidal open drain on hill side and earthen shoulder on valley side (New Construction)	1.405
TCS-4	Typical Cross Section of Two Lane Carriageway In Rural Area With Retaining Wall on Valley Side And Trapezoidal Open drain on Hill side (Reconstruction)	0.825
TCS-4A	Typical Cross Section of Two Lane Carriageway In Rural Area With Retaining Wall on Valley Side And Trapezoidal Open drain on Hill side (New Construction)	0.08
TCS-5	Typical Cross Section of Two Lane Carriageway In Rural Area With Breast Wall on Hill Side And Earthen Shoulder on Valley side (Reconstruction)	0.84
TCS-6	Typical Cross Section of Two Lane Carriageway In Built Up Area With Both Side Footpath Cum RCC Rectangular Covered Drain in Hilly Terrain (Reconstruction)	1.63
TCS-7	Typical Cross Section of Two Lane Carriageway In Built-Up Area With Breast Wall on Hill Side And Footpath Cum RCC Rectangular Covered Drain on Valley side (Reconstruction)	2.395
TCS-8	Typical Cross Section of Two Lane Carriageway In Rural Area With Retaining Wall on One Side And Earthen Shoulder on other side (Reconstruction)	0
TCS-9A	Typical Cross Section of Two Lane Carriageway In Rural Area With Breast Wall on both sides (New Construction)	0.13
TCS-10	Typical Cross Section of Two Lane Carriageway In Rural Area With Cut and Cover Tunnel and Retaining Wall on Valley side (New Construction)	0
TCS-11	Typical Cross Section of Two Lane Carriageway In Rural Area With Retaining Wall on Valley Side And Breast Wall on Hill side (Reconstruction)	0.15
TCS-12	Typical Cross Section of Two Lane Carriageway In Rural Area With Breast Wall on Hill Side and gabion Wall on Valley side (Reconstruction)	0.83
Total =		**33.390**

Design Chainage (m)		Length of CD (m)	Net Length (m)	TCS No.
From	To			
33000	33600	5.2	594.8	TCS-3
33600	33875		275	TCS-12
33875	33965		90	TCS-9A
33965	34470		505	TCS-12
34470	34510		40	TCS-9A
34510	34560		50	TCS-12
34560	35000	8	432	TCS-5
35000	35080		80	TCS-4A
35080	35130		50	TCS-3A
35130	35730	3.96	596.04	TCS-3
35730	36030	2.6	297.4	TCS-7
36030	36230	2.7	197.3	TCS-3
36230	36380		150	TCS-5
36380	36480	3.96	96.04	TCS-3
36480	36580		100	TCS-3A
36580	36830	2.6	247.4	TCS-3
36830	37010	8	172	TCS-3A
37010	37060	2.7	47.3	TCS-3
37060	37160	2.6	97.4	TCS-3A
37160	38405	20.72	1224.28	TCS-3
38405	38755	2.7	347.3	TCS-3A
38755	38840	3.84	81.16	TCS-3
38840	38910		70	TCS-3A
38910	40580	32.8	1637.2	TCS-3
40580	40680		100	TCS-4
40680	40780		100	TCS-3A
40780	41155	5.2	369.8	TCS-3
41155	41205		50	TCS-4
41205	41500	2.6	292.4	TCS-3
41500	41555	2.6	52.4	TCS-4
41555	41680		125	TCS-3
41680	41780		100	TCS-3A
41780	42130	2.6	347.4	TCS-3
42130	42350	2.6	217.4	TCS-6
42350	42690	10.6	329.4	TCS-3
42690	42745		55	TCS-3A
42745	43720	10.6	964.4	TCS-3
43720	43855	2.7	132.3	TCS-7
43855	43905		50	TCS-4
43905	44245	2.6	337.4	TCS-3
44245	44295		50	TCS-4
44295	45165	10.5	859.5	TCS-3
45165	45215		50	TCS-3A
45215	46990	22.44	1752.56	TCS-3
46990	47040		50	TCS-3A
47040	48955	26.2	1888.8	TCS-3
48955	49250	5.2	289.8	TCS-4
49250	49580	3.96	326.04	TCS-7
49580	50610	18.12	1011.88	TCS-3
50610	50930	60.84	259.16	TCS-6

Design Chainage (m)		Length of CD (m)	Net Length (m)	TCS No.
From	To			
50930	52905	43.16	1931.84	TCS-3
52905	52955		50	TCS-11
52955	54230	26.3	1248.7	TCS-3
54230	54530	10	290	TCS-7
54530	56205	29.32	1645.68	TCS-3
56205	56255		50	TCS-4
56255	59280	50.94	2974.06	TCS-3
59280	59380		100	TCS-7
59380	59980	13.1	586.9	TCS-3
59980	60280	12.72	287.28	TCS-6
60280	60430	8	142	TCS-3
60430	60630	13.2	186.8	TCS-7
60630	60730		100	TCS-3
60730	60930	5.3	194.7	TCS-7
60930	61130	2.6	197.4	TCS-3
61130	61310		180	TCS-7
61310	62100	89.84	700.16	TCS-6
62100	62300	2.6	197.4	TCS-3
62300	62350		50	TCS-4
62350	62750	10.1	389.9	TCS-3
62750	62810		60	TCS-7
62810	62930		120	TCS-3
62930	62980		50	TCS-11
62980	63500	5.2	514.8	TCS-3
63500	63550		50	TCS-3A
63550	63920	11.06	358.94	TCS-3
63920	64210	12.84	277.16	TCS-7
64210	64280		70	TCS-4
64280	64580	13.74	286.26	TCS-7
64580	64630		50	TCS-3A
64630	64730	10.12	89.88	TCS-3
64730	64880		150	TCS-5
64880	64930		50	TCS-3A
64930	64980	2.6	47.4	TCS-5
64980	65695	19.64	695.36	TCS-3
65695	65745		50	TCS-3A
65745	65800	2.7	52.3	TCS-3
65800	65850		50	TCS-11
65850	65900	2.6	47.4	TCS-5
65900	65955		55	TCS-4
65955	66390	14.34	420.66	TCS-3
Total Length =		**704**	**32686**	

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 the provision 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

Major Intersections

Sl. No.	Location of intersection (Km)	Type of intersection	Other features	Remarks
Nil				

Minor Intersections

Sl. No.	Location of intersection (Km)	Type of intersection	Other features
1	33+470	Y-Type	3-Legged
2	46+350	Y-Type	3-Legged
3	50.678	Y-Type	3-Legged
4	50.78	Y-Type	3-Legged
5	50.797	T-Type	3-Legged
6	51.655	Y-Type	3-Legged
7	55.248	Y-Type	3-Legged
8	56.46	Y-Type	3-Legged
9	57.259	T-Type	3-Legged
10	58.007	Y-Type	3-Legged
11	59.988	Y-Type	3-Legged
12	60.55	Y-Type	3-Legged
13	60.574	Y-Type	3-Legged
14	60.82	T-Type	3-Legged
15	61.272	Y-Type	3-Legged
16	61.364	X-Type	4-Legged
17	61.634	Y-Type	3-Legged
18	61.684	Y-Type	3-Legged
19	61.847	Y-Type	3-Legged
20	62.057	Y-Type	3-Legged
21	62.39	Y-Type	3-Legged
22	62.461	Y-Type	3-Legged
23	62.492	Y-Type	3-Legged
24	63.846	T-Type	3-Legged
25	63.92	T-Type	3-Legged
26	64.01	Y-Type	3-Legged

(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.

(ii) Raising of the existing road [Refer to provision of the relevant 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 (km)	Extent of raising [Top of finished road level]
Nil			

5. Pavement Design

(i) Pavement design shall be carried out in accordance with provision of the relevant manual.

(ii) Type of pavement

Flexible Pavement

(iii) Design requirements

[Refer to provision of the relevant 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 of20 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 design traffic of 20msa.

(iv) Reconstruction of stretches.

[Refer to provision of the relevant 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.

SL NO.	Stretch from Km to Km	Remarks	TCS Type
1	33+000 to 33+600	Reconstruction	TCS-3
2	33+600 to 33+875	Reconstruction	TCS-12
3	33+965 to 34+470	Reconstruction	TCS-12
4	34+510 to 34+560	Reconstruction	TCS-12
5	34+560 to 35+000	Reconstruction	TCS-5
6	35+130 to 35+730	Reconstruction	TCS-3
7	35+730 to 36+030	Reconstruction	TCS-7
8	36+030 to 36+230	Reconstruction	TCS-3
9	36+230 to 36+380	Reconstruction	TCS-5
10	36+380 to 36+480	Reconstruction	TCS-3
11	36+580 to 36+830	Reconstruction	TCS-3
12	37+010 to 37+060	Reconstruction	TCS-3
13	37+160 to 38+405	Reconstruction	TCS-3
14	38+755 to 38+840	Reconstruction	TCS-3
15	38+910 to 40+580	Reconstruction	TCS-3
16	40+580 to 40+680	Reconstruction	TCS-4
17	40+780 to 41+155	Reconstruction	TCS-3

SL NO.	Stretch from Km to Km	Remarks	TCS Type
18	41+155 to 41+205	Reconstruction	TCS-4
19	41+205 to 41+500	Reconstruction	TCS-3
20	41+500 to 41+555	Reconstruction	TCS-4
21	41+555 to 41+680	Reconstruction	TCS-3
22	41+780 to 42+130	Reconstruction	TCS-3
23	42+130 to 42+350	Reconstruction	TCS-6
24	42+350 to 42+690	Reconstruction	TCS-3
25	42+745 to 43+720	Reconstruction	TCS-3
26	43+720 to 43+855	Reconstruction	TCS-7
27	43+855 to 43+905	Reconstruction	TCS-4
28	43+905 to 44+245	Reconstruction	TCS-3
29	44+245 to 44+295	Reconstruction	TCS-4
30	44+295 to 45+165	Reconstruction	TCS-3
31	45+215 to 46+990	Reconstruction	TCS-3
32	47+040 to 48+955	Reconstruction	TCS-3
33	48+955 to 49+250	Reconstruction	TCS-4
34	49+250 to 49+580	Reconstruction	TCS-7
35	49+580 to 50+610	Reconstruction	TCS-3
36	50+610 to 50+930	Reconstruction	TCS-6
37	50+930 to 52+905	Reconstruction	TCS-3
38	52+905 to 52+955	Reconstruction	TCS-11
39	52+955 to 54+230	Reconstruction	TCS-3
40	54+230 to 54+530	Reconstruction	TCS-7
41	54+530 to 56+205	Reconstruction	TCS-3
42	56+205 to 56+255	Reconstruction	TCS-4
43	56+255 to 59+280	Reconstruction	TCS-3
44	59+280 to 59+380	Reconstruction	TCS-7
45	59+380 to 59+980	Reconstruction	TCS-3
46	59+980 to 60+280	Reconstruction	TCS-6
47	60+280 to 60+430	Reconstruction	TCS-3
48	60+430 to 60+630	Reconstruction	TCS-7
49	60+630 to 60+730	Reconstruction	TCS-3
50	60+730 to 60+930	Reconstruction	TCS-7
51	60+930 to 61+130	Reconstruction	TCS-3
52	61+130 to 61+310	Reconstruction	TCS-7
53	61+310 to 62+100	Reconstruction	TCS-6
54	62+100 to 62+300	Reconstruction	TCS-3
55	62+300 to 62+350	Reconstruction	TCS-4
56	62+350 to 62+750	Reconstruction	TCS-3
57	62+750 to 62+810	Reconstruction	TCS-7
58	62+810 to 62+930	Reconstruction	TCS-3
59	62+930 to 62+980	Reconstruction	TCS-11
60	62+980 to 63+500	Reconstruction	TCS-3
61	63+550 to 63+920	Reconstruction	TCS-3
62	63+920 to 64+210	Reconstruction	TCS-7
63	64+210 to 64+280	Reconstruction	TCS-4
64	64+280 to 64+580	Reconstruction	TCS-7
65	64+630 to 64+730	Reconstruction	TCS-3
66	64+730 to 64+880	Reconstruction	TCS-5
67	64+930 to 64+980	Reconstruction	TCS-5
68	64+980 to 65+695	Reconstruction	TCS-3

SL NO.	Stretch from Km to Km	Remarks	TCS Type
69	65+745 to 65+800	Reconstruction	TCS-3
70	65+800 to 65+850	Reconstruction	TCS-11
71	65+850 to 65+900	Reconstruction	TCS-5
72	65+900 to 65+955	Reconstruction	TCS-4
73	65+955 to 66+390	Reconstruction	TCS-3

6. Road side Drainage

Drainage system including surface and subsurface drains for the Project Highway has been provided in the table given below

RCC Covered Drain

Design Chainage (m)		Length of CD	Net Length (m)	Side
From	To			
35730	36030	2.6	297.4	Valley
42130	42350	2.6	434.8	Both
43720	43855	2.7	132.3	Valley
49250	49580	3.96	326.0	Valley
50610	50930	60.84	518.3	Both
54230	54530	10	290.0	Valley
59280	59380	0	100.0	Valley
59980	60280	12.72	574.6	Both
60430	60630	13.2	186.8	Valley
60730	60930	5.3	194.7	Valley
61130	61310	0	180.0	Valley
61310	62100	89.84	1400.3	Both
62750	62810	0	60.0	Valley
63920	64210	12.84	277.2	Valley
64280	64580	13.74	286.3	Valley
Total =			**5259**	

RR Masonry Trapezoidal Drain

Chainage (m)		Length of CD	Net Length (m)	Side
From	To			
33000	33600	5.2	594.8	Hill
35000	35080	0	80	Hill
35080	35130	0	50	Hill
35130	35730	3.96	596	Hill
36030	36230	2.7	197.3	Hill
36380	36480	3.96	96	Hill
36480	36580	0	100	Hill
36580	36830	2.6	247.4	Hill
36830	37010	8	172	Hill
37010	37060	2.7	47.3	Hill
37060	37160	2.6	97.4	Hill
37160	38405	20.72	1224.3	Hill
38405	38755	2.7	347.3	Hill
38755	38840	3.84	81.2	Hill

Chainage (m)		Length of CD	Net Length (m)	Side
From	To			
38840	38910	0	70	Hill
38910	40580	32.8	1637.2	Hill
40580	40680	0	100	Hill
40680	40780	0	100	Hill
40780	41155	5.2	369.8	Hill
41155	41205	0	50	Hill
41205	41500	2.6	292.4	Hill
41500	41555	2.6	52.4	Hill
41555	41680	0	125	Hill
41680	41780	0	100	Hill
41780	42130	2.6	347.4	Hill
42350	42690	10.6	329.4	Hill
42690	42745	0	55	Hill
42745	43720	10.6	964.4	Hill
43855	43905	0	50	Hill
43905	44245	2.6	337.4	Hill
44245	44295	0	50	Hill
44295	45165	10.5	859.5	Hill
45165	45215	0	50	Hill
45215	46990	22.44	1752.6	Hill
46990	47040	0	50	Hill
47040	48955	26.2	1888.8	Hill
48955	49250	5.2	289.8	Hill
49300	50330	18.12	1011.9	Hill
50650	52625	43.16	1931.8	Hill
52675	53950	26.3	1248.7	Hill
54250	55925	29.32	1645.7	Hill
55925	55975	0	50	Hill
55975	59000	50.94	2974.1	Hill
59100	59700	13.1	586.9	Hill
60000	60150	8	142	Hill
60350	60450	0	100	Hill
60650	60850	2.6	197.4	Hill
61820	62020	2.6	197.4	Hill
62020	62070	0	50	Hill
62070	62470	10.1	389.9	Hill
62530	62650	0	120	Hill
62700	63220	5.2	514.8	Hill
63220	63270	0	50	Hill
63270	63640	11.06	358.9	Hill
63930	64000	0	70	Hill
64300	64350	0	50	Hill
64350	64450	10.12	89.9	Hill
64600	64650	0	50	Hill
64700	65415	19.64	695.4	Hill
65415	65465	0	50	Hill
65465	65520	2.7	52.3	Hill
65620	65675	0	55	Hill
65675	66110	14.34	420.7	Hill
Total =			**26955**	

CatchwaterDrain

Chainage (m)		Length of CD	Net Length (m)
From	To		
33600	33875	0	275
33875	33965	0	90
33965	34470	0	505
34470	34510	0	40
34510	34560	0	50
34560	35000	8	432
35730	36030	2.6	297.4
36230	36380	0	150
43720	43855	2.7	132.3
49420	49580	3.96	156.04
54230	54530	10	290
59280	59380	0	100
60430	60630	13.2	186.8
60730	60930	5.3	194.7
61130	61310	0	180
62750	62810	0	60
63920	64210	12.84	277.16
64280	64580	13.74	286.26
64730	64880	0	150
64930	64980	2.6	47.4
65850	65900	2.6	47.4
Total =			1975.76
Total =			**5923**

Total Length of Trapezoidal Drain = 30902 m

Chute Drain(of avg 8 m height @ 50m Interval) = 631 m

7. Design of Structures

(i)General

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

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

[Refer to provision of the relevant 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/Structure at km	Width of carriageway and cross-sectional features
1	36+731	**Carriageway Width = 11.0m** **Width of Railings = 1.0m (2x0.50m)** **Overall width = 12 m**
2	42+529	
3	50+568	
4	52+320	
5	54+337	
6	60+167	
7	60+363	
8	61+620	

9	65+197	

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

[Refer to provision of the relevant Manual and provide details of new Structures with footpath]

Sl. No.	Bridge/Structure at km	Width of carriageway and cross-sectional features
Nil		

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

[Refer to provision of the relevant Manual and state if there is any exception]

(e) Thefollowingstructuresshallbedesignedtocarryutilityservicesspecifiedin Table below:

[Refer to provision of the relevant Manualand 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 lf or the Project Highway shall conform to the typical cross-sections given in provision of the relevant Manual.

(iii) 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:

Sl. No.	Culvert Location	Span /Opening (m)	Remarks*
1	33.106	2.0 X 2.0	Single Span
2	34.425	2.0 X 2.0	Single Span
3	34.931	2.0 X 2.0	Single Span
4	35.404	3.0 X 4.0	Single Span
5	35.92	2.0 X 3.0	Single Span
6	36.355	3.0 X 4.0	Single Span
7	36.58	2.0 X 2.0	Single Span
8	36.935	2.0 X 3.0	Single Span
9	37.02	2.0 X 2.0	Single Span
10	37.24	4.0 X 3.0	Single Span
11	37.875	3.0 X 4.0	Single Span
12	37.925	3.0 X 4.0	Single Span
13	38.425	2.0 X 3.0	Single Span
14	38.69	3.0 X 3.0	Single Span
15	38.802	3.0 X 4.0	Single Span
16	39.1	3.0 X 4.0	Single Span
17	39.29	3.0 X 4.0	Single Span
18	39.4	3.0 X 4.0	Single Span
19	39.798	3.0 X 4.0	Single Span
20	41.158	2.0 X 2.0	Single Span
21	43.054	2.0 X 3.0	Single Span

Sl. No.	Culvert Location	Span /Opening (m)	Remarks*
22	43.485	2.0 X 3.0	Single Span
23	43.59	2.0 X 3.0	Single Span
24	43.81	2.0 X 2.0	Single Span
25	44.79	2.0 X 3.0	Single Span
26	45.203	2.0 X 3.0	Single Span
27	45.308	2.0 X 3.0	Single Span
28	45.408	3.0 X 3.0	Single Span
29	45.98	2.0 X 3.0	Single Span
30	46.59	2.0 X 3.0	Single Span
31	47.14	2.0 X 3.0	Single Span
32	47.598	2.0 X 3.0	Single Span
33	47.798	3.0 X 3.0	Single Span
34	48.617	3.0 X 4.0	Single Span
35	49.105	2.0 X 2.0	Single Span
36	49.576	3.0 X 4.0	Single Span
37	49.857	4.0 X 3.0	Single Span
38	49.882	2.0 X 2.0	Single Span
39	49.994	3.0 X 4.0	Single Span
40	50.394	2.0 X 2.0	Single Span
41	50.470	3.0 X 4.0	Single Span
42	50.701	3.0 X 3.0	Single Span
43	50.937	2.0 X 3.0	Single Span
44	51.000	2.0 X 3.0	Single Span
45	51.132	2.0 X 3.0	Single Span
46	51.310	2.0 X 3.0	Single Span
47	51.412	2.0 X 3.0	Single Span
48	51.514	2.0 X 2.0	Single Span
49	51.819	3.0 X 4.0	Single Span
50	51.987	3.0 X 3.0	Single Span
51	52.180	2.0 X 3.0	Single Span
52	52.320	2.0 X 2.0	Single Span
53	52.749	3.0 X 4.0	Single Span
54	53.056	2.0 X 3.0	Single Span
55	53.122	3.0 X 4.0	Single Span
56	53.245	2.0 X 3.0	Single Span
57	53.456	3.0 X 3.0	Single Span
58	53.821	2.0 X 2.0	Single Span
59	53.950	2.0 X 2.0	Single Span
60	54.023	2.0 X 3.0	Single Span
61	54.093	2.0 X 2.0	Single Span
62	54.140	2.0 X 2.0	Single Span
63	54.582	2.0 X 3.0	Single Span
64	54.785	2.0 X 2.0	Single Span
65	54.933	2.0 X 3.0	Single Span
66	55.189	3.0 X 4.0	Single Span
67	55.369	3.0 X 4.0	Single Span
68	55.482	2.0 X 3.0	Single Span
69	55.564	2.0 X 3.0	Single Span
70	55.768	2.0 X 3.0	Single Span
71	55.925	2.0 X 3.0	Single Span
72	56.090	2.0 X 2.0	Single Span

Sl. No.	Culvert Location	Span /Opening (m)	Remarks*
73	56.360	2.0 X 3.0	Single Span
74	56.384	2.0 X 2.0	Single Span
75	56.879	3.0 X 4.0	Single Span
76	57.009	2.0 X 2.0	Single Span
77	57.448	2.0 X 2.0	Single Span
78	57.553	2.0 X 2.0	Single Span
79	57.688	3.0 X 3.0	Single Span
80	57.892	2.0 X 3.0	Single Span
81	58.022	2.0 X 2.0	Single Span
82	58.299	2.0 X 2.0	Single Span
83	58.434	2.0 X 2.0	Single Span
84	58.761	2.0 X 3.0	Single Span
85	58.896	2.0 X 2.0	Single Span
86	58.939	3.0 X 3.0	Single Span
87	59.020	2.0 X 2.0	Single Span
88	59.418	2.0 X 2.0	Single Span
89	59.490	2.0 X 2.0	Single Span
90	59.570	2.0 X 3.0	Single Span
91	59.978	2.0 X 2.0	Single Span
92	60.092	2.0 X 3.0	Single Span
93	60.177	3.0 X 4.0	Single Span
94	60.262	5.0 X 4.0	Single Span
95	60.490	2.0 X 2.0	Single Span
96	60.584	2.0 X 2.0	Single Span
97	60.771	2.0 X 2.0	Single Span
98	60.858	2.0 X 3.0	Single Span
99	61.112	2.0 X 2.0	Single Span
100	61.353	3.0 X 3.0	Single Span
101	62.450	5.0 X 3.0	Single Span
102	62.630	3.0 X 4.0	Single Span
103	63.075	2.0 X 2.0	Single Span
104	63.416	2.0 X 2.0	Single Span
105	63.570	4.0 X 3.0	Single Span
106	63.660	5.0 X 4.0	Single Span
107	63.934	5.0 X 5.0	Single Span
108	64.042	3.0 X 3.0	Single Span
109	64.135	2.0 X 2.0	Single Span
110	64.308	5.0 X 3.0	Single Span
111	64.406	2.0 X 2.0	Single Span
112	64.564	4.0 X 3.0	Single Span
113	64.633	4.0 X 3.0	Single Span
114	64.691	4.0 X 4.0	Single Span
115	65.164	2.0 X 2.0	Single Span
116	65.307	2.0 X 2.0	Single Span
117	65.378	2.0 X 2.0	Single Span
118	65.592	3.0 X 3.0	Single Span
119	65.764	2.0 X 3.0	Single Span
120	65.898	2.0 X 2.0	Single Span
121	65.972	3.0 X 3.0	Single Span
122	66.096	2.0 X 2.0	Single Span
123	66.355	2.0 X 3.0	Single Span

Sl. No.	Culvert Location	Span /Opening (m)	Remarks*
124	66.553	2.0 X 2.0	Single Span
125	66.606	2.0 X 2.0	Single Span

*[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 provision of the relevant 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:

Sl. No.	Culvert Location	Span /Opening (m)	Remarks*
1	33.400	2.0 X 2.0	Single Span
2	33.970	2.0 X 2.0	Single Span
3	35.645	2.0 X 2.0	Single Span
4	37.435	2.0 X 2.0	Single Span
5	37.702	2.0 X 2.0	Single Span
6	38.160	2.0 X 2.0	Single Span
7	39.485	2.0 X 2.0	Single Span
8	39.705	2.0 X 2.0	Single Span
9	40.065	2.0 X 2.0	Single Span
10	40.265	2.0 X 2.0	Single Span
11	40.395	2.0 X 2.0	Single Span
12	40.697	2.0 X 2.0	Single Span
13	40.960	2.0 X 2.0	Single Span
14	41.422	2.0 X 2.0	Single Span
15	41.760	2.0 X 2.0	Single Span
16	42.067	2.0 X 2.0	Single Span
17	42.310	2.0 X 2.0	Single Span
18	42.822	2.0 X 2.0	Single Span
19	43.324	2.0 X 2.0	Single Span
20	44.195	2.0 X 2.0	Single Span
21	44.535	2.0 X 2.0	Single Span
22	45.020	2.0 X 2.0	Single Span
23	45.648	2.0 X 2.0	Single Span
24	46.318	2.0 X 2.0	Single Span
25	46.852	2.0 X 2.0	Single Span
26	47.405	2.0 X 2.0	Single Span
27	47.998	2.0 X 2.0	Single Span
28	48.195	2.0 X 2.0	Single Span
29	48.38	2.0 X 2.0	Single Span
30	48.575	2.0 X 2.0	Single Span
31	48.918	2.0 X 2.0	Single Span
32	56.672	2.0 X 2.0	Single Span
33	57.215	2.0 X 2.0	Single Span
34	59.139	2.0 X 2.0	Single Span
35	59.874	2.0 X 2.0	Single Span

Sl. No.	Culvert Location	Span /Opening (m)	Remarks*
36	62.105	2.0 X 2.0	Single Span
37	64.943	2.0 X 2.0	Single Span

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

[Refer provision of the relevant Manualand provide details]

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]

Sl. No.	Bridge location (km)	Salient details of existing bridge		Adequacy or otherwise of the existing waterway, vertical clearance etc.*	Remarks
		Type of Structures	Span Arrangement and Total Vent way (No. x Length) (m)		
	34+563	RCC SLAB	1x7.97M	Insufficient width and not conform to IRC Loading	Proposed as RCC SLAB (1 X 8m)
1	36+731	RCC SLAB	1x6.5M	Insufficient width and not conform to IRC Loading	Proposed as RCC SLAB (1 X 8m)
2	42+529	RCC SLAB	1x6.5M	Insufficient width and not conform to IRC Loading	Proposed as RCC SLAB (1 X 8m)
3	52+320	RCC SLAB BRIDGE	1X10.0M	Insufficient width and not conform to IRC Loading	Proposed as RCC SOLID SLAB (1X10.0 m)
4	54+337	RCC SLAB BRIDGE	1X10.0M	Insufficient width and not conform to IRC Loading	Proposed as RCC SOLID SLAB (1X10.0 m)
5	60+167	RCC SLAB BRIDGE	1X7.0M	Insufficient width and not conform to IRC Loading	Proposed as RCC SOLID SLAB (1X8.0 m)
6	60+363	RCC SLAB BRIDGE	1X7.0M	Insufficient width and not conform to IRC Loading	Proposed as RCC SOLID SLAB (1X8.0 m)
7	65+197	RCC SLAB BRIDGE	1X6.3M	Insufficient width and not conform to IRC Loading	Proposed as RCC SOLID SLAB (1X8.0 m)

(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				

(b) Additional new bridges

[Specify additional new bridges if required. And attach GAD]

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
1	50+568	1X8.0+1X41.0+1X8.0 m = 57.0 m	RCC SLAB+ PSC I-GIRDER

2	61+620	2X43.0 m = 86.0 m	PSC I-GIRDER

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

[Refer provision of the relevant Manualand provide details:]

Sl.No.	Location at km	Remarks
Nil		

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

[Refer to provision of the relevant Manualand provide details]

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

(e) Drainage system for bridge decks

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

(f) Structures in marine environment

[Refer to provision of the relevant Manual and specify the necessary measures/ treatments for protecting structures in marine environment. Where applicable]

(v) Rail-road bridges

(a) Design, construction and detailing of ROB/RUB shall be as specified in section 7 of the Manual. [Refer to provision of the relevant 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 separatedstructures

[Refer provisionofthe relevant Manual]

Thegradeseparatedstructuresshallbeprovidedatthelocationsandofthetypeand length specified in paragraphs 2(ix) and3 of this Annex-I.

(vi) Repairsandstrengthening of bridges andstructures

[Refer to provisionofthe relevant Manual and provide details]

Theexistingbridgesandstructurestoberepaired/strengthenedandthenatureand extent of repairs /strengtheningrequired aregiven 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)	Natureandextentofrepairs/strengtheningtobecarriedout
Nil		

(c) Overpasses/Underpasses and otherstructures

Sl. No.	Location of Structure(km)	Natureandextentofrepairs/strengtheningtobecarriedout
Nil		

(vii) List of Major Bridges and Structures

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

Sl. No.	Location (Km)
1	61+620 [Proposed as PSC I GIRDER (2X43.0 = 86.0 m)]

8. Traffic Control Devices and Road Safety Works

(i) Trafficcontroldevicesandroadsafetyworksshallbeprovidedinaccordancewith provisions of relevant Manual.

Sl. No	Traffic Signages, Road Marking and other appurtenances	unit	Quantity
1	Total Nos. of Street Light=	Nos	203
2	Kilometre stones=	Nos	27
3	5th Kilometre stones=	Nos	6
4	Boundary Stones=	Nos	337
5	Delineators (100 cm long and circular shaped) +Hazard marker =	Nos	3428
6	Road Stud=	Nos	19542
7	900 mm Octagonal	Nos	19
8	600 mm circular	Nos	100
9	900 mm Triangular	Nos	480
10	800 mm x 600 mm rectangular	Nos	10
11	Convex Mirror for Blind Curve	Nos	20
12	Rumble Strip=	sqm	149

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

9. Roadside Furniture

(i) Road side furniture shall be provided in accordance with article 8(i) of this schedule.

(ii) Overhead traffic signs: location and size

Sl. No.	Location (Km)	Size
Nil		

10. Compulsory Afforestation

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

11. Hazardous Locations

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

a) Retaining Wall

Chainage (m)		Length of CD	Net Length (m)	TCS No.	Side	Avg. Height (m)
From	To					
35000	35080	0	80.0	TCS-4A	Valley	2
40580	40680	0	100.0	TCS-4	Valley	3
41155	41205	0	50.0	TCS-4	Valley	2
41500	41555	2.6	52.4	TCS-4	Valley	2
43855	43905	0	50.0	TCS-4	Valley	2
44245	44295	0	50.0	TCS-4	Valley	2
48955	49250	5.2	289.8	TCS-4	Valley	2
52905	52955	0	50.0	TCS-11	Valley	2
56205	56255	0	50.0	TCS-4	Valley	2
62300	62350	0	50.0	TCS-4	Valley	2
62930	62980	0	50.0	TCS-11	Valley	2
64210	64280	0	70.0	TCS-4	Valley	2
65800	65850	0	50.0	TCS-11	Valley	2
65900	65955	0	55.0	TCS-4	Valley	2
Total =			**1047**			
Length of 2.0 m Retaining Wall =			**947**	**m**		
Length of 3.0 m Retaining Wall =			**100**	**m**		

b) Breast Wall

Chainage (m)		Length of CD	Net Length (m)	TCS No.	Side	Avg. Height (m)
From	To					
33600	33875	0	275.0	TCS-12	Hill	3
33875	33965	0	180.0	TCS-9A	Both	3
33965	34470	0	505.0	TCS-12	Hill	3
34470	34510	0	80.0	TCS-9A	Both	3
34510	34560	0	50.0	TCS-12	Hill	3
34560	35000	8	432.0	TCS-5	Hill	2
35730	36030	2.6	297.4	TCS-7	Hill	2
36230	36380	0	150.0	TCS-5	Hill	2
43720	43855	2.7	132.3	TCS-7	Hill	2
49250	49580	3.96	326.0	TCS-7	Hill	2
52905	52955	0	50.0	TCS-11	Hill	2
54230	54530	10	290.0	TCS-7	Hill	2
59280	59380	0	100.0	TCS-7	Hill	2
60430	60630	13.2	186.8	TCS-7	Hill	2
60730	60930	5.3	194.7	TCS-7	Hill	2
61130	61310	0	180.0	TCS-7	Hill	2
62750	62810	0	60.0	TCS-7	Hill	2
62930	62980	0	50.0	TCS-11	Hill	2

63920	64210	12.84	277.2	TCS-7	Hill	2
64280	64580	13.74	286.3	TCS-7	Hill	2
64730	64880	0	150.0	TCS-5	Hill	2
64930	64980	2.6	47.4	TCS-5	Hill	2
65800	65850	0	50.0	TCS-11	Hill	2
65850	65900	2.6	47.4	TCS-5	Hill	2
Total =			**4398**			

c) Metal Beam Crash Barrier

Chainage (m)		**Net Length (m)**	**Side**
From	**To**		
33150	33250	100.0	Valley
33440	33540	100.0	Valley
35300	35400	100.0	Valley
35800	35950	150.0	Valley
36650	36800	150.0	Valley
36900	37000	100.0	Valley
37200	37300	100.0	Valley
37550	37700	150.0	Valley
37750	37950	200.0	Valley
38300	38400	100.0	Valley
38450	38650	200.0	Valley
38830	38930	100.0	Valley
38430	38550	120.0	Valley
40550	40700	150.0	Valley
41620	41780	160.0	Valley
44800	44930	130.0	Valley
45000	45300	300.0	Valley
45700	45850	150.0	Valley
46770	46900	130.0	Valley
47550	47700	150.0	Valley
48200	48430	230.0	Valley
48950	49050	100.0	Valley
53330	53480	150.0	Valley
53980	54080	100.0	Valley
55380	55480	100.0	Valley
55950	56030	80.0	Valley
56900	57000	100.0	Valley
58180	58280	100.0	Valley
62980	63080	100.0	Valley
63480	63530	50.0	Valley
63730	63880	150.0	Valley
Total =		**4100**	

Total no. of Bridges on the project=	7 nos.
Approach length on valley side for each bridge (25 m on both side)	50 m
Hence, Crash barrier length for 7 bridges =	700 m
Therefore, total length of crash barrier =	**4800 m**

d) Hydro seeding

Chainage (m)		**Side**
From	**To**	
33600	33875	Valley

Chainage (m)		Side
From	To	
33875	33965	Both
33965	34470	Valley
34470	34510	Both
34510	34560	Valley
34560	35000	Hill
35730	36030	Hill
36230	36380	Hill
43720	43855	Hill
49250	49580	Hill
52905	52955	Hill
54230	54530	Hill
59280	59380	Hill
60430	60630	Hill
60730	60930	Hill
61130	61310	Hill
62750	62810	Hill
62930	62980	Hill
63500	63550	Hill
63920	64210	Hill
64280	64580	Hill
64580	64630	Hill
64730	64880	Hill
64880	64930	Hill
64930	64980	Hill
65695	65745	Hill
65800	65850	Hill
65850	65900	Hill

Total Area of Hydro Seeding= **38145sqm**

e) Gabion Wall

Chainage		side	Length (m)
From	To		
33600	33875	Valley	275
33965	34470	Valley	505
34510	34560	Valley	50
Total =			**830**

12. Special Requirement for Hill Roads

a) Double Twisted Mesh with Anchoring

Design Chainage (m)		TCS No.	Side
From	To		
33600	33875	TCS-12	Hill
33600	33875	TCS-12	Valley
33875	33965	TCS-9A	Hill
33965	34470	TCS-12	Hill
33965	34470	TCS-12	Valley
34470	34510	TCS-9A	Hill

34510	34560	TCS-12	Hill
34510	34560	TCS-12	Valley

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-B1)

1. The shifting of utilities and felling of trees shall be carried out by the concerned department. The cost of the same shall be borne by the concerned department.

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[s]

(b) Road side furniture;

(c) Pedestrian facilities;

(d) Truck Lay byes;

(e) Bus-bays and passenger shelters;

(f) Rest areas; and

(g) Others to be specified

2. Description of Project Facilities

Each of the Project Facilities is described below:

a) TollPlaza: -

Sl. No.	Design Chainage(km)	Name of the Place
Nil		

b) Roadsidefurniture: -

Sl. No.	Description	Location	Design Standard
1	Traffic sign & pavement marking	Entire Length (As per Schedule B)	As per Manual
2	Km Stone, 5th kilometre stone	Entire Length	As per Manual
3	Boundary Stone	Entire Length	As per Manual
4	Roadside Delineator, marker & Road Stud	As per Schedule B	As per Manual
5	Metal beam crash barrier	As per Schedule B	As per Manual

C) Pedestrian Facility:-

Pedestrian facilities in the form of foot path shall be provided in the built up area (refer typical cross – section drawing). Pedestrian facilities shall be provided at the locations of urban sections in order to ensure safety of pedestrians while crossing in consultation with NHIDCL.

d) Truck Lay bye:-

Sl. No.	Truck lay bye Chainage(Both Side)	Name of the Place
Nil		

e) Bus Bay &Passenger shelter: -

Sl. No.	Project Facility	Location (km)	Design Requirements	Other Essential Details
1	Bus Bay & Passenger shelter	35+835 (Both side)	Bus Bays & Passenger shelter have been placed on both side of proposed roadway	Dimension of Bus Bay (L X B = 59.0 m X 3.0 m) Dimension of Passenger Shelter (L X B = 6.0 m X 2.0 m) (Refer Passenger Shelter Drawing)
2	Bus Bay & Passenger shelter	41+880 (Both side)		
3	Bus Bay & Passenger shelter	50+890 (Both side)		
4	Bus Bay & Passenger shelter	62+650 (Both side)		

f) Rest Areas

Sl. No.	Rest Area Chainage	Name of the Place
Nil		

g) Others to be specified

Street Lighting:
Total 329 Nos. Street lighting shall be provided in built-upareas, bus bays and passenger shelters locations.

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 the Manual.

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 Two Lanning of Highways (IRC: SP: 73-2018), referred to herein as the Manual]

[Note: Specify the relevant Manual, Specifications and Standards]

Annex – I

(Schedule-D)

Specifications and Standards for Construction

1. Specifications and Standards

All Materials, works and construction operations shall conform to the Manual of Specifications and Standards for [Two-Lanning of Highways (IRC:SP:73-2018)], 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's Engineer.

2. Deviations from the Specifications and Standards

(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 forth below:]

<table>
<tr><th>Item</th><th>Manual Clause Reference</th><th colspan="5">Provision as per Manual</th><th colspan="5">Modified Provision</th></tr>
<tr><td rowspan="4">Shoulder</td><td rowspan="4">2.6</td><td colspan="5"><u>Mountainous Terrain</u></td><td colspan="5"><u>Mountainous Terrain</u></td></tr>
<tr><td rowspan="2">Type of Section</td><td rowspan="2">Side</td><td colspan="3">Width of Shoulder (m)</td><td rowspan="2">Type of Section</td><td rowspan="2">Side</td><td colspan="3">Width of Shoulder (m)</td></tr>
<tr><td>Paved</td><td>Earthen</td><td>Total</td><td>Paved</td><td>Earthen</td><td>Total</td></tr>
<tr><td>Open Country with Isolated Built-up Area</td><td>Hill Side</td><td>1.5</td><td>-</td><td>1.5</td><td>Open Country with Isolated Built-up Area</td><td>Hill Side</td><td>1.5</td><td>-</td><td>1.5</td></tr>
<tr><td>Valley Side</td><td>1.5</td><td>1</td><td>2.5</td><td>Valley Side</td><td>1.5</td><td>1.0 m</td><td>2.5</td></tr>
<tr><td>Built-up Area and Approaches to grade separated structures/ bridges</td><td>Hill Side</td><td>0.25 m + 1.5 m (Raised)</td><td>-</td><td>1.75</td><td>Built-up Area and Approaches to grade separated structures/ bridges</td><td>Hill Side</td><td>1.5</td><td>-</td><td>1.5</td></tr>
<tr><td></td><td>Valley Side</td><td>0.25 m + 1.5 m (Raised)</td><td>-</td><td>1.75</td><td></td><td>Valley Side</td><td>1.5</td><td>-</td><td>1.5</td></tr>
<tr><td>Design Speed</td><td>2.2</td><td colspan="5"><u>Mountainous Terrain:</u>
Ruling : 60 Kmph
Minimum : 40 Kmph</td><td colspan="5"><u>Mountainous Terrain:</u>
Design Speed followed 40-60 kmph in general. However design speed has been reduced to 20 kmph due to site constraints and to accommodate the proposal within EROW.
(Refer Horizontal Alignment Drawing and Table 1.1 below)</td></tr>
<tr><td>Extra Widening</td><td>2.7</td><td colspan="5">Extra Widening has been proposed as per IRC: SP: 73-2018
Radius | Extra Widening
75-100 m | 0.9 m
101-300 m | 0.6 m</td><td colspan="5">Extra Widening has been proposed as per IRC: SP: 48-1998 (Table 6.9) of Hill Road Manual.
Radius | Extra Widening
21-40 m | 1.5 m
41-60 m | 1.2 m
61-100 m | 0.9 m</td></tr>
</table>

Item	Manual Clause Reference	Provision as per Manual	Modified Provision		
			75-100 m	0.9 m	
			101-300 m	0.6 m	
			Above 300 m	NIL	
Radii Of Horizontal Curve	2.9.4	**Mountainous Terrain:** Desirable Minimum Radius: 150 m Absolute Minimum Radius: 75 m	Radius below 75 m has been provided in the location listed in table 1.		

Table 1.1: Locations where Design Speed is less than40 kmph

Sl. No.	Stretch (from km to km)	Type of Deficiency	Remarks
1	33+309 to 33+315	Sharp Bend	Design Speed = 30 Kmph
2	33+359 to 33+386	Sharp Bend	Design Speed = 30 Kmph
3	33+537 to 33+554	Sharp Bend	Design Speed = 30 Kmph
4	33+631 to 33+665	Sharp Bend	Design Speed = 30 Kmph
5	34+289 to 34+299	Sharp Bend	Design Speed = 30 Kmph
6	34+346 to 34+364	Sharp Bend	Design Speed = 30 Kmph
7	34+526 to 34+570	Sharp Bend	Design Speed = 30 Kmph
8	34+793 to 34+816	Sharp Bend	Design Speed = 30 Kmph
9	34+906 to 34+946	Sharp Bend	Design Speed = 30 Kmph
10	35+090 to 35+135	Sharp Bend	Design Speed = 30 Kmph
11	35+172 to 35+271	Sharp Bend	Design Speed = 30 Kmph
12	35+401 to 35+419	Sharp Bend	Design Speed = 30 Kmph
13	35+480 to 35+492	Sharp Bend	Design Speed = 30 Kmph
14	35+588 to 35+595	Sharp Bend	Design Speed = 30 Kmph
15	35+700 to 35+742	Sharp Bend	Design Speed = 20 Kmph
16	35+804 to 35+822	Sharp Bend	Design Speed = 20 Kmph
17	35+908 to 35+997	Sharp Bend	Design Speed = 30 Kmph
18	36+123 to 36+159	Sharp Bend	Design Speed = 30 Kmph
19	36+182 to 36+213	Sharp Bend	Design Speed = 20 Kmph
20	36+567 to 36+600	Sharp Bend	Design Speed = 30 Kmph
21	36+692 to 36+740	Sharp Bend	Design Speed = 20 Kmph
22	36+791 to 36+802	Sharp Bend	Design Speed = 30 Kmph
23	36+842 to 36+853	Sharp Bend	Design Speed = 30 Kmph
24	36+913 to 36+942	Sharp Bend	Design Speed = 30 Kmph
25	37+232 to 37+249	Sharp Bend	Design Speed = 30 Kmph
26	37+481 to 37+508	Sharp Bend	Design Speed = 30 Kmph
27	37+656 to 37+670	Sharp Bend	Design Speed = 30 Kmph
28	37+721 to 37+727	Sharp Bend	Design Speed = 30 Kmph
29	37+774 to 37+792	Sharp Bend	Design Speed = 30 Kmph
30	37+906 to 37+926	Sharp Bend	Design Speed = 30 Kmph
31	38+191 to 38+207	Sharp Bend	Design Speed = 30 Kmph
32	38+247 to 38+251	Sharp Bend	Design Speed = 30 Kmph
33	38+325 to 38+367	Sharp Bend	Design Speed = 30 Kmph
34	38+411 to 38+416	Sharp Bend	Design Speed = 30 Kmph
35	38+458 to 38+475	Sharp Bend	Design Speed = 30 Kmph
36	38+505 to 38+522	Sharp Bend	Design Speed = 30 Kmph
37	38+667 to 38+671	Sharp Bend	Design Speed = 30 Kmph
38	38+728 to 38+740	Sharp Bend	Design Speed = 30 Kmph
39	38+801 to 38+812	Sharp Bend	Design Speed = 30 Kmph

Sl. No.	Stretch (from km to km)	Type of Deficiency	Remarks
40	39+268 to 39+283	Sharp Bend	Design Speed = 30 Kmph
41	39+338 to 39+366	Sharp Bend	Design Speed = 30 Kmph
42	39+800 to 39+822	Sharp Bend	Design Speed = 30 Kmph
43	40+440 to 40+473	Sharp Bend	Design Speed = 30 Kmph
44	40+524 to 40+571	Sharp Bend	Design Speed = 30 Kmph
45	40+653 to 40+657	Sharp Bend	Design Speed = 30 Kmph
46	40+699 to 40+708	Sharp Bend	Design Speed = 30 Kmph
47	41+144 to 41+149	Sharp Bend	Design Speed = 30 Kmph
48	41+189 to 41+192	Sharp Bend	Design Speed = 30 Kmph
49	41+251 to 41+254	Sharp Bend	Design Speed = 30 Kmph
50	41+314 to 41+325	Sharp Bend	Design Speed = 30 Kmph
51	41+989 to 42+021	Sharp Bend	Design Speed = 30 Kmph
52	42+067 to 42+076	Sharp Bend	Design Speed = 30 Kmph
53	42+113 to 42+122	Sharp Bend	Design Speed = 30 Kmph
54	42+200 to 42+220	Sharp Bend	Design Speed = 30 Kmph
55	42+265 to 42+274	Sharp Bend	Design Speed = 30 Kmph
56	42+357 to 42+378	Sharp Bend	Design Speed = 30 Kmph
57	42+528 to 42+609	Sharp Bend	Design Speed = 30 Kmph
58	42+948 to 43+005	Sharp Bend	Design Speed = 30 Kmph
59	43+038 to 43+064	Sharp Bend	Design Speed = 20 Kmph
60	43+095 to 43+106	Sharp Bend	Design Speed = 20 Kmph
61	43+139 to 43+150	Sharp Bend	Design Speed = 20 Kmph
62	43+252 to 43+274	Sharp Bend	Design Speed = 20 Kmph
63	43+463 to 43+500	Sharp Bend	Design Speed = 20 Kmph
64	43+533 to 43+546	Sharp Bend	Design Speed = 20 Kmph
65	43+583 to 43+593	Sharp Bend	Design Speed = 30 Kmph
66	43+690 to 43+733	Sharp Bend	Design Speed = 30 Kmph
67	44+323 to 44+346	Sharp Bend	Design Speed = 30 Kmph
68	44+397 to 44+400	Sharp Bend	Design Speed = 30 Kmph
69	44+808 to 44+816	Sharp Bend	Design Speed = 30 Kmph
70	44+862 to 44+884	Sharp Bend	Design Speed = 30 Kmph
71	44+952 to 44+981	Sharp Bend	Design Speed = 30 Kmph
72	45+034 to 45+058	Sharp Bend	Design Speed = 30 Kmph
73	45+176 to 45+192	Sharp Bend	Design Speed = 30 Kmph
74	45+247 to 45+253	Sharp Bend	Design Speed = 30 Kmph
75	45+310 to 45+387	Sharp Bend	Design Speed = 20 Kmph
76	45+502 to 45+531	Sharp Bend	Design Speed = 20 Kmph
77	45+973 to 45+976	Sharp Bend	Design Speed = 30 Kmph
78	46+026 to 46+031	Sharp Bend	Design Speed = 30 Kmph
79	46+073 to 46+102	Sharp Bend	Design Speed = 30 Kmph
80	46+457 to 46+474	Sharp Bend	Design Speed = 30 Kmph
81	46+646 to 46+675	Sharp Bend	Design Speed = 30 Kmph
82	47+055 to 47+062	Sharp Bend	Design Speed = 30 Kmph
83	47+124 to 47+162	Sharp Bend	Design Speed = 30 Kmph
84	47+578 to 47+622	Sharp Bend	Design Speed = 20 Kmph
85	47+653 to 47+730	Sharp Bend	Design Speed = 30 Kmph
86	47+782 to 47+826	Sharp Bend	Design Speed = 30 Kmph
87	48+084 to 48+217	Sharp Bend	Design Speed = 20 Kmph
88	48+247 to 48+310	Sharp Bend	Design Speed = 20 Kmph

Sl. No.	Stretch (from km to km)	Type of Deficiency	Remarks
89	48+354 to 48+452	Sharp Bend	Design Speed = 30 Kmph
90	48+492 to 48+502	Sharp Bend	Design Speed = 30 Kmph
91	48+713 to 48+766	Sharp Bend	Design Speed = 20 Kmph
92	48+801 to 48+847	Sharp Bend	Design Speed = 20 Kmph
93	49+289 to 49+295	Sharp Bend	Design Speed = 30 Kmph
94	49+343 to 49+353	Sharp Bend	Design Speed = 30 Kmph
95	49+421 to 49+434	Sharp Bend	Design Speed = 30 Kmph
96	49+482 to 49+496	Sharp Bend	Design Speed = 30 Kmph
97	49+544 to 49+553	Sharp Bend	Design Speed = 30 Kmph
98	49+616 to 49+650	Sharp Bend	Design Speed = 20 Kmph
99	49+683 to 49+703	Sharp Bend	Design Speed = 20 Kmph
100	49+777 to 49+793	Sharp Bend	Design Speed = 30 Kmph
101	49+843 to 49+883	Sharp Bend	Design Speed = 30 Kmph
102	49+926 to 49+965	Sharp Bend	Design Speed = 30 Kmph
103	50+140 to 50+161	Sharp Bend	Design Speed = 20 Kmph
104	50+197 to 50+211	Sharp Bend	Design Speed = 20 Kmph
105	50+242 to 50+261	Sharp Bend	Design Speed = 20 Kmph
106	50+295 to 50+307	Sharp Bend	Design Speed = 20 Kmph
107	50+428 to 50+507	Sharp Bend	Design Speed = 30 Kmph
108	50+610 to 50+634	Sharp Bend	Design Speed = 20 Kmph
109	52+203 to 52+227	Sharp Bend	Design Speed = 30 Kmph
110	52+285 to 52+311	Sharp Bend	Design Speed = 30 Kmph
111	52+360 to 52+396	Sharp Bend	Design Speed = 30 Kmph
112	52+774 to 52+812	Sharp Bend	Design Speed = 20 Kmph
113	52+856 to 52+892	Sharp Bend	Design Speed = 20 Kmph
114	52+996 to 53+005	Sharp Bend	Design Speed = 30 Kmph
115	53+051 to 53+058	Sharp Bend	Design Speed = 30 Kmph
116	53+774 to 53+797	Sharp Bend	Design Speed = 30 Kmph
117	53+843 to 53+871	Sharp Bend	Design Speed = 30 Kmph
118	53+937 to 53+943	Sharp Bend	Design Speed = 30 Kmph
119	54+981 to 54+991	Sharp Bend	Design Speed = 30 Kmph
120	55+072 to 55+091	Sharp Bend	Design Speed = 30 Kmph
121	55+131 to 55+161	Sharp Bend	Design Speed = 30 Kmph
122	55+505 to 55+515	Sharp Bend	Design Speed = 30 Kmph
123	55+552 to 55+562	Sharp Bend	Design Speed = 30 Kmph
124	55+608 to 55+616	Sharp Bend	Design Speed = 30 Kmph
125	55+713 to 55+764	Sharp Bend	Design Speed = 30 Kmph
126	55+825 to 55+848	Sharp Bend	Design Speed = 30 Kmph
127	56+168 to 56+175	Sharp Bend	Design Speed = 30 Kmph
128	56+227 to 56+236	Sharp Bend	Design Speed = 30 Kmph
129	56+509 to 56+529	Sharp Bend	Design Speed = 30 Kmph
130	56+587 to 56+601	Sharp Bend	Design Speed = 30 Kmph
131	56+672 to 56+685	Sharp Bend	Design Speed = 30 Kmph
132	56+749 to 56+765	Sharp Bend	Design Speed = 30 Kmph
133	57+699 to 57+704	Sharp Bend	Design Speed = 30 Kmph
134	57+755 to 57+760	Sharp Bend	Design Speed = 30 Kmph
135	58+909 to 58+915	Sharp Bend	Design Speed = 30 Kmph
136	58+961 to 58+968	Sharp Bend	Design Speed = 30 Kmph
137	59+022 to 59+040	Sharp Bend	Design Speed = 30 Kmph

Sl. No.	Stretch (from km to km)	Type of Deficiency	Remarks
138	60+333 to 60+340	Sharp Bend	Design Speed = 30 Kmph
139	60+405 to 60+419	Sharp Bend	Design Speed = 30 Kmph
140	61+242 to 61+357	Sharp Bend	Design Speed = 30 Kmph
141	61+506 to 61+548	Sharp Bend	Design Speed = 30 Kmph
142	61+716 to 61+827	Sharp Bend	Design Speed = 30 Kmph
143	61+860 to 61+896	Sharp Bend	Design Speed = 30 Kmph
144	62+257 to 62+303	Sharp Bend	Design Speed = 30 Kmph
145	62+404 to 62+423	Sharp Bend	Design Speed = 30 Kmph
146	62+494 to 62+563	Sharp Bend	Design Speed = 30 Kmph
147	62+609 to 62+616	Sharp Bend	Design Speed = 30 Kmph
148	62+862 to 62+874	Sharp Bend	Design Speed = 30 Kmph
149	62+916 to 62+933	Sharp Bend	Design Speed = 30 Kmph
150	63+454 to 63+492	Sharp Bend	Design Speed = 30 Kmph
151	63+555 to 63+644	Sharp Bend	Design Speed = 30 Kmph
152	63+710 to 63+733	Sharp Bend	Design Speed = 30 Kmph
153	63+855 to 63+998	Sharp Bend	Design Speed = 30 Kmph
154	64+068 to 64+107	Sharp Bend	Design Speed = 30 Kmph
155	64+166 to 64+231	Sharp Bend	Design Speed = 30 Kmph
156	64+845 to 64+864	Sharp Bend	Design Speed = 30 Kmph
157	64+915 to 64+922	Sharp Bend	Design Speed = 30 Kmph
158	65+421 to 65+431	Sharp Bend	Design Speed = 30 Kmph
159	65+493 to 65+522	Sharp Bend	Design Speed = 30 Kmph
160	65+584 to 65+633	Sharp Bend	Design Speed = 30 Kmph
161	66+074 to 66+106	Sharp Bend	Design Speed = 30 Kmph

Table 1.2: Locations where Radii of Horizontal Curve is less than 75 m

Sl. No.	HIP NO.	CHAINAGE (KM)		RADIUS (m)
		From	To	
1	186	33.181	33.204	50
2	188	33.359	33.386	50
3	190	33.631	33.665	30
4	194	34.346	34.364	60
5	195	34.526	34.57	30
6	196	34.793	34.816	30
7	197	34.906	34.946	30
8	199	35.172	35.271	60
9	200	35.401	35.419	30
10	201	35.480	35.492	40
11	202	35.588	35.595	40
12	203	35.700	35.742	20
13	204	35.804	35.822	30
14	205	35.908	35.997	65
15	207	36.182	36.213	20
16	208	36.299	36.368	60
17	209	36.567	36.6	30
18	210	36.692	36.74	23
19	211	36.791	36.802	50
20	212	36.842	36.853	70
21	213	36.913	36.942	30

Sl. No.	HIP NO.	CHAINAGE (KM)		RADIUS (m)
		From	To	
22	214	37.083	37.134	60
23	215	37.232	37.249	30
24	218	37.481	37.508	40
25	220	37.656	37.67	40
26	221	37.721	37.727	40
27	222	37.774	37.792	50
28	223	37.906	37.926	30
29	224	37.995	38.017	60
30	226	38.191	38.207	50
31	227	38.247	38.251	60
32	228	38.325	38.367	70
33	229	38.411	38.416	40
34	230	38.458	38.475	70
35	233	38.667	38.671	40
36	234	38.728	38.74	30
37	235	38.801	38.812	40
38	238	39.197	39.21	60
39	239	39.268	39.283	50
40	240	39.338	39.366	30
41	241	39.625	39.65	60
42	243	39.8	39.822	30
43	248	40.243	40.255	70
44	249	40.44	40.473	30
45	250	40.524	40.571	60
46	251	40.653	40.657	40
47	252	40.699	40.708	60
48	253	40.757	40.778	70
49	256	41.144	41.149	60
50	257	41.189	41.192	40
51	258	41.251	41.254	30
52	259	41.314	41.325	70
53	260	41.447	41.459	70
54	261	41.537	41.553	50
55	262	41.624	41.638	70
56	265	41.989	42.021	40
57	266	42.067	42.076	50
58	267	42.113	42.122	60
59	268	42.2	42.22	50
60	269	42.265	42.274	60
61	270	42.357	42.378	50
62	272	42.528	42.609	36
63	273	42.731	42.752	50
64	274	42.854	42.866	60
65	276	43.038	43.064	30
66	277	43.095	43.106	30
67	278	43.139	43.15	40
68	279	43.252	43.274	50
69	280	43.357	43.383	50
70	281	43.463	43.5	30

Sl. No.	HIP NO.	CHAINAGE (KM)		RADIUS (m)
		From	To	
71	282	43.533	43.546	30
72	283	43.583	43.593	50
73	284	43.69	43.733	60
74	289	44.323	44.346	40
75	290	44.397	44.4	40
76	294	44.677	44.752	70
77	295	44.808	44.816	40
78	296	44.862	44.884	50
79	297	44.952	44.981	50
80	298	45.034	45.058	30
81	299	45.176	45.192	40
82	300	45.247	45.253	40
83	303	45.593	45.657	50
84	305	45.973	45.976	30
85	306	46.026	46.031	60
86	310	46.457	46.474	60
87	311	46.646	46.675	50
88	312	46.761	46.811	50
89	314	47.055	47.062	40
90	315	47.124	47.162	50
91	317	47.43	47.516	70
92	318	47.578	47.622	30
93	320	47.782	47.826	30
94	321	48.084	48.217	50
95	322	48.247	48.31	30
96	324	48.492	48.502	50
97	325	48.618	48.628	50
98	326	48.713	48.766	30
99	327	49.009	49.015	50
100	328	49.063	49.073	50
101	329	49.141	49.154	40
102	330	49.202	49.216	50
103	331	49.264	49.273	50
104	332	49.336	49.37	30
105	333	49.403	49.423	30
106	334	49.497	49.513	40
107	335	49.563	49.603	60
108	336	49.646	49.685	60
109	338	49.86	49.881	30
110	339	49.917	49.931	40
111	340	49.962	49.981	40
112	341	50.015	50.027	50
113	342	50.148	50.227	70
114	343	50.33	50.354	25
115	353	51.923	51.947	50
116	354	52.005	52.031	30
117	355	52.08	52.116	60
118	357	52.494	52.532	25
119	358	52.576	52.612	20

Sl. No.	HIP NO.	CHAINAGE (KM)		RADIUS (m)
		From	To	
120	359	52.716	52.725	50
121	360	52.771	52.778	50
122	361	52.875	52.899	70
123	366	53.333	53.354	70
124	368	53.494	53.517	50
125	369	53.563	53.591	50
126	370	53.657	53.663	35
127	371	53.781	53.8	70
128	375	54.192	54.209	70
129	376	54.3	54.314	50
130	378	54.579	54.603	70
131	379	54.701	54.711	35
132	380	54.792	54.811	50
133	381	54.851	54.881	70
134	384	55.225	55.235	50
135	385	55.272	55.282	60
136	386	55.328	55.336	35
137	387	55.433	55.484	30
138	388	55.545	55.568	30
139	391	55.888	55.895	30
140	392	55.947	55.956	50
141	393	56.008	56.032	70
142	394	56.126	56.155	70
143	395	56.229	56.249	40
144	396	56.307	56.321	50
145	397	56.392	56.405	30
146	398	56.469	56.485	30
147	399	56.601	56.619	70
148	402	56.908	56.939	70
149	405	57.193	57.211	70
150	406	57.334	57.345	70
151	407	57.419	57.424	30
152	408	57.475	57.48	50
153	409	57.538	57.552	70
154	410	57.767	57.777	70
155	412	57.967	57.99	70
156	419	58.629	58.635	50
157	420	58.681	58.688	40
158	421	58.742	58.76	40
159	426	59.338	59.389	70
160	430	59.789	59.795	70
161	433	60.053	60.06	70
162	434	60.125	60.139	35
163	443	61.226	61.268	40
164	445	61.58	61.616	50
165	447	61.847	61.86	70
166	448	61.977	62.023	30
167	449	62.124	62.143	30
168	450	62.214	62.283	70

Sl. No.	HIP NO.	CHAINAGE (KM)		RADIUS (m)
		From	To	
169	451	62.329	62.336	30
170	453	62.582	62.594	50
171	454	62.636	62.653	50
172	457	62.984	63.002	70
173	458	63.174	63.212	30
174	459	63.275	63.364	40
175	460	63.43	63.453	30
176	462	63.788	63.827	30
177	463	63.886	63.951	40
178	464	64.058	64.157	60
179	465	64.24	64.267	70
180	467	64.565	64.584	30
181	468	64.635	64.642	50
182	469	64.875	65.003	60
183	470	65.141	65.151	30
184	471	65.213	65.242	30
185	472	65.304	65.353	30
186	476	65.652	65.687	70
187	477	65.794	65.826	30
188	478	65.886	65.944	70

(iii) [Note1: Deviations fromtheaforesaidSpecificationsand Standards shallbe listedout here. Suchdeviations shall bespecified only ifthey are considered essential in viewof project-specific requirements.]

Schedule - H

(See Clauses 10.1 (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 specified below:

Item	Weightage in % of CP	Stage for Payment	Percentage
1	2	3	4
Road Works including Culverts, widening and repair of culverts	66.50 %	**A- Widening and strengthening of existing road**	
		(1) Earthwork up to top of the sub- grade	[Nil]
		(2) Sub-base Course	[Nil]
		(3) Non bituminous Base course	[Nil]
		(4) Bituminous Basecourse	[Nil]
		(5) Wearing Coat	[Nil]
		(6) Widening and repair of culverts	[Nil]
		B.1-Reconstruction/New 2-Lane Realignment /Bypass (Flexible Pavement)	
		(1) Earthwork up to top of the sub- grade	24.97%
		(2) Sub-base Course	13%
		(3) Non bituminous Base course	16.32%
		(4) Bituminous Basecourse	16.28%
		(5) Wearing Coat	9.07%
		B.2-Reconstruction/New 8-Lane Realignment/ Bypass (Rigid Pavement)	
		(1) Earthwork up to top of the 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)	
		(1) Earthwork up to top of the sub- grade	[Nil]
		(2) Sub-base Course	[Nil]
		(3) Non bituminous Base course	[Nil]
		(4) Bituminous Basecourse	[Nil]
		(5) Wearing Coat	[Nil]

Item	Weightage in % of CP	Stage for Payment	Percentage
		C.2- Reconstruction/New Service road (Rigid Pavement)	
		(1) Earthwork up to top of the sub- grade	[Nil]
		(2) Sub-base Course	[Nil]
		(3) Dry Lean Concrete (DLC) Course	[Nil]
		(4) Pavement Quality Control (PQC) Course	[Nil]
		D- Reconstruction & New Culverts on existing road, realignments, bypasses Culverts (length <6m)	20.35%
Minor bridge/ Underpasses/ Overpasses	5.33%	**A.1-widening and repairing of Minor Bridges (length >6 m&<60m)**	
		Minor Bridges	[Nil]
		A.2- New Minor bridges (length >6 mand<60m)	
		(1) Foundation + Sub-Structure: On completion of the foundation work including foundations for wing and return walls, abutments, piers up to the abutment/pier cap.	62.21%
		(2) Super-structure: On completion of the super-structure in all respects including wearing coat, bearings, expansion joints, hand rails, crash barriers, road, signs & markings, tests on completion etc. complete in all respect.	33.77%
		(3) Approaches: On completion of approaches including Retaining walls, stone pitching, protection works complete in all and fit for use	4.02%
		(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 repairs of underpasses/overpasses	
		Underpasses/ Overpasses	[Nil]
		B.2-NewUnderpasses/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 & markings, 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.	[Nil]
		(3) Approaches: On completion of approaches including Retaining walls/ Reinforced Earth walls, stone pitching, protection works complete in all	[Nil]

Item	Weightage in % of CP	Stage for Payment	Percentage
		respect and fit for use.	
Major bridge(length>60 m) works and ROB/RUB/elevated sections/flyovers including viaducts, if any	4.319 %	**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 handrails, crash barrier, 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-NewMajorBridges	
		(1)Foundation	20.45%
		(2)Sub-structure	18.17%
		(3)Super-structure(including bearings)	53.22%
		(4)Wearing Coat including expansion joints	3.3%
		(5) Miscellaneous Items like handrails, crash barrier, road markings etc.	1.26%
		(6) Wing walls/return walls	[Nil]
		(7)Guide Bunds, River Training works etc.	[Nil]
		(8)Approaches(including Retaining walls, stone pitching and protection works)	3.6%
		B.1-Wideningandrepairsof (a) ROB (b) RUB	
		(1) Foundations	[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 handrails, crash barrier, road markings etc.	[Nil]
		(6) Wing walls/Return walls	[Nil]
		(7) Approaches (Including Retaining walls, Stone Pitching and protection works)	[Nil]
		B.2-NewROB/RUB	
		(1) Foundations	[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]

Item	Weightage in % of CP	Stage for Payment	Percentage
		(5) Miscellaneous Items like handrails, crash barrier, 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.1- Widening and repair of Elevated Section/Flyovers/Grade Separators	
		(1) Foundations	[Nil]
		(2) Sub-Structure	[Nil]
		(3)Super-Structure(Including bearings)	[Nil]
		(4)Wearing Coat including expansion joints	[Nil]
		(5) Miscellaneous Items like handrails, crash barrier, 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) Foundations	[Nil]
		(2) Sub-Structure	[Nil]
		(3)Super-Structure(Including bearings)	[Nil]
		(4)Wearing Coat including expansion joints	[Nil]
		(5) Miscellaneous Items like handrails, crash barrier, 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	23.85 %	(i) Toll Plaza	[Nil]
		(ii) Road side drains	30.27%
		(iii) Road signs, markings, km stones, safety devices etc	4.62%
		(iv) Project facilities	
		a) Bus Bays	1.48%
		b) Truck Lay-byes	[Nil]
		c) Passenger Shelter	0.21%
		d) Rest Area	[Nil]
		e) Diversion Works	1.83%
		(v) Road side Plantation	[Nil]
		(vi) Repair of Protection Works other than approaches to the bridges, elevated sections/flyover/grade separators and ROBs/ RUBs	[Nil]
		(vii) Safety &Traffic Management during const.	[Nil]
		(viii) Breast Wall	20.3%

Item	Weightage in % of CP	Stage for Payment	Percentage
		(ix) Toe Wall	[Nil]
		(x) Retaining Wall	3.7%
		(xi) Crash Barrier	2.25%
		(xi) Boundary wall	[Nil]
		(xii) Site Clearance & Dismantling	5.7%
		(xiii) Protection Works	29.63%
		(xiv) Tunnel	[Nil]

1.3 Procedure of estimating the value of work done

1.3.1 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 & Strengthening of 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 the sub-grade	[Nil]	
(2) Sub-base Course	[Nil]	
(3) Non bituminous Base course	[Nil]	
(4) Bituminous Base course	[Nil]	
(5) Wearing Coat	[Nil]	
(6) Widening and repair of culverts	[Nil]	Cost of ten completed culverts shall be determined on pro-rata basis with respect to the total number of culverts.
B.1- Reconstruction/New2-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 0.5(half) km length, whichever is less.
(1)Earthwork up to top of the sub-grade	24.97%	
(2) Sub-base Course	13%	
(3) Non bituminous Base course	16.32%	
(4) Bituminous Base course	16.28%	
(5) Wearing Coat	9.07%	
B.2- Reconstruction/New 8-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 the 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/ Slip 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 5(five) km length, whichever is less.
(1)Earthwork up to top of the sub-grade	[Nil]	
(2) Sub-base Course	[Nil]	
(3) Non bituminous Base course	[Nil]	
(4) Bituminous Basecourse	[Nil]	
(5) Wearing Coat	[Nil]	
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 the sub-grade	[Nil]	
(2) Sub-base Course	[Nil]	
(3) Dry Lean Concrete (DLC)Course	[Nil]	
(4) Pavement Quality Control (PQC) Course	[Nil]	
D-Reconstruction & 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
Culverts (length <6m)	20.35%	

Stage of Payment	Percentage weightage	Payment Procedure
		least one 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 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 Contract Agreement.

1.3.2 Minor Bridges 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
1	2	3
A.1-Widening and repairs of Minor Bridges(length>6m&<60m)	Nil	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 the completion of widening & repair works of a minor bridge
A.2- New Minor Bridges (length > 6m & < 60m)		
(1)Foundation + Sub-Structure: On completion of the foundation work including foundations for wing and return walls, abutments, piers up to the abutment/pier cap.	62.21%	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)Super-structure: On completion of the super-structure in all respects including wearing coat, bearings, expansion joints, hand rails, crash barriers, road,signs & markings, tests on completion etc. complete in all respect.	33.77%	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 for each span and balance 50% of the stage payment shall be made on completion of

Stage of Payment	Weightage	Payment Procedure
		stage specified as above
(3)Approaches :On completion of approaches including Retaining walls, stone pitching, protection works complete in all and fit for use	4.02%	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]	Guide Bunds and River Training Works: Payment shall be made on pro-rata basis on completion of a stage i.e. completion of Guide Bund sand River training Works in all respects as specified
B.1- Widening and repairs of underpasses/overpasses	[Nil]	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.
B.2- New Underpasses/Overpasses		
(1)Foundation + Sub-Structure: On completion of the foundation work including foundations for wing and return walls, abutments, piers up to the abutment/pier cap.	[Nil]	Foundation: 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 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 Underpasses/ Overpasses. 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 & markings, 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.	[Nil]	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 for each span and balance 50% of the stage payment shall be made on completion of stage specified as above
(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]	Payment shall be made on pro-rata basis on completion of a stage in all respects as specified

1.3.3 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		
(1) Foundation	[Nil]	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. 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]	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 major bridge.
(3)Super-structure(including bearings)	[Nil]	Super-structure: Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super- structure including bearings 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 for each span and balance 50% of the stage payment shall be made on completion of stage specified as above
(4)Wearing Coat including expansion joints	[Nil]	Wearing Coat: Payment shall be made on completion of wearing coat including expansion joints complete in all respects as specified.
(5) Miscellaneous Items like handrails, crash barrier, road markings etc.	[Nil]	Miscellaneous: Payments shall be made on completion of all miscellaneous works like handrails, crash barriers, road markings etc. complete in all respects as specified.
(6) Wing walls/return walls	[Nil]	Wingwalls/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]	Guide Bunds, River Training works: Payments 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]	Approaches: Payments shall be made on pro-rata basis on completion of 10% of the scope of each stage.
A.2-NewMajorBridges		
(1)Foundation	20.45%	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. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
(2)Sub-structure	18.17%	Sub-structure: Payment against sub- structure shall be made on pro-rata basis on completion of a stage i.e. not

Stage of Payment	Weightage	Payment Procedure
		lessthan25% of the scope of sub- structure of major bridge.
(3)Super-structure(including bearings)	53.22%	Super-structure: Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super- structure including bearings 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 for each span and balance 50% of the stage payment shall be made on completion of stage specified as above
(4)Wearing Coat including expansion joints	3.3%	Wearing Coat: Payment shall be made on completion of wearing coat including expansion joints complete in all respects as specified.
(5) Miscellaneous Items like handrails, crash barrier, road markings etc.	1.26%	Miscellaneous: Payments shall be made on completion of all miscellaneous works like handrails, crash barriers, road markings. complete in all respects as specified.
(6) Wing walls/return walls	[Nil]	Wingwalls/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]	Guide Bunds, River Training works: Payments 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)	3.6%	Approaches: Payments 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) Foundations	[Nil]	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 scope of foundation 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]	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 ROB/RUB.
(3) Super-Structure (Including bearings)	[Nil]	Super-structure: Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super- structure including bearings 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%ofthe stage payment shall be due and payable on casting of girders for each span and balance 50% of the stage payment shall be made on completion of stage specified as above
(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]	Wearing Coat: Payment shall be made on completion (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

Stage of Payment	Weightage	Payment Procedure
		drainage facility complete in all respects as specified.
(5) Miscellaneous Items like handrails, crash barrier, road markings etc.	[Nil]	Miscellaneous: Payments shall be made on completion of all miscellaneous works like handrails, crash barriers, road markings etc. complete in all respects as specified.
(6) Wing walls/Return walls	[Nil]	Wingwalls/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]	Payments shall be made on pro-rata basis on completion of 20% of the total area.
B.2-NewROB/RUB		
(1) Foundation	[Nil]	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 scope of foundation of the ROB/RUB.
(2) Sub-structure	[Nil]	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 ROB/RUB.
(3) Super-structure (including bearing)	[Nil]	Super-structure: Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super- structure including bearings 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 for each span and balance 50% of the stage payment shall be made on completion of stage specified as above
(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]	Wearing Coat: Payment shall be made on completion (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 handrails, crash barrier, road markings etc.	[Nil]	Miscellaneous: Payments shall be made on completion of all miscellaneous works like handrails, crash barriers, road markings etc. Complete in all respects as specified.
(6) Wing walls/Return walls	[Nil]	Wingwalls/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]	Payment shall be made on pro-rata basis on completion of a stage in all respects as specified
C.1-Wideningandrepairs of Elevated Section/ Flyovers/Grade Separators		
(1) Foundations	[Nil]	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.

Stage of Payment	Weightage	Payment Procedure
		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]	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 structure.
(3) Super-Structure(Including bearings)	[Nil]	Super-structure: Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super- structure including bearings 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 for each span and balance 50% of the stage payment shall be made on completion of stage specified as above
(4) Wearing Coat including expansion joints	[Nil]	Wearing Coat: Payment shall be made on completion of wearing coat including expansion joints complete in all respects as specified.
(5) Miscellaneous Items like handrails, crash barrier, road markings etc.	[Nil]	Miscellaneous: Payments shall be made on completion of all miscellaneous works like handrails, crash barriers, road markings etc. Complete in all respects as specified.
(6) Wing walls/Return walls	[Nil]	Wingwalls/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]	Payment shall be made on pro-rata basis on completion of a stage in all respects as specified
C.2- New Elevated Section/ Flyovers/Grade Separators		
(1) Foundations	[Nil]	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. 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]	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 structure.
(3)Super-Structure(Including bearings)	[Nil]	Super-structure: Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super- structure including bearings 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 foreach span and balance 50% of the stage payment shall be made on completion of stage specified as above
(4)Wearing Coat including expansion joints	[Nil]	Wearing Coat: Payment shall be made on completion of wearing coat including expansion joints complete in all respects as specified.
(5) Miscellaneous Items like handrails, crash barrier, road	[Nil]	Miscellaneous: Payments shall be made on completion of all miscellaneous works like handrails, crash barriers, road

Stage of Payment	Weightage	Payment Procedure
markings etc.		markings etc. complete in all respects as specified.
(6) Wing walls/Return walls	[Nil]	Wingwalls/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]	Payments shall be made on pro-rata basis on completion of 20% of the total area.

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 Competent Authority.

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

1.3.4 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
1	2	3
(1) Toll Plaza	[Nil]	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 plaza.
(2) Roadside drains	30.27%	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 5% (five percent)of the total length.
(3) Road signs, markings, km stones, safety devices etc.	4.62%	
(4) Project Facilities		Payment shall be made on pro-rata basis for completed facilities.
a) Bus Bays	1.48%	
b) Truck Lay-byes	[Nil]	
c) Passenger Shelter	0.21%	
d) Rest Area	[Nil]	
e) Diversion Works	1.83%	
(5) Road side Plantation including Horticulture in Wayside Amenities	[Nil]	Unit of measurement is linear length
(6) Repair of Protection Works other than approaches to the bridges, elevated sections/flyover/grade separators and ROBs/ RUBs	[Nil]	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 5% (five percent)of the total length.
(7) Safety and traffic management during construction	[Nil]	Payment shall be made on prorate basis every six months.

Stage of Payment	Weightage	Payment Procedure
(8) Protection Works		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 5% (five percent)of the total length.
(a) Breast Wall	20.3%	
(b) Toe Wall	[Nil]	
(c)Retaining Wall	3.7%	
(c) Crash Barrier	2.25%	
(9) Site Clearance & Dismantling	5.7%	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 5% (five percent)of the total length.
(10) Protection Works	29.63%	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 5% (five percent)of the total length.
(11) Tunnel	[Nil]	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 5% (five percent)of the total length.

2. Procedure for payment for Maintenance

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

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