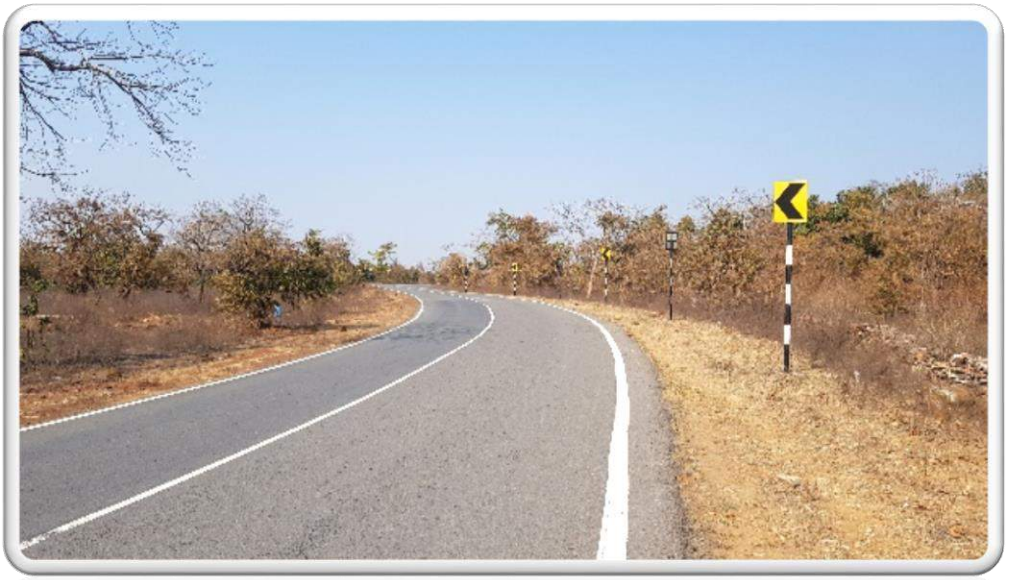
SHREM FINANCIAL PRIVATE LIMITED

Development of Uchera-Nagod-Singhpur-Kalinjer Section (SH-56) Road in the State of Madhya Pradesh on BOT (Toll+Annuity) basis.

TECHNICAL DUE DILIGENCE REPORT



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SUBMITTED BY

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Development of Uchera-Nagod-Singhpur-Kalinjer Section (SH-56) Road in the State of Madhya Pradesh on BOT (Toll+Annuity) basis.

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CHAPTER 1. INTRODUCTION

1.1 General

DBL UCHERA-NAGOD TOLLWAYS LIMITED (herein after referred to as the "**Concessionaire**") had augmented the existing road "Uchera-Nagod-Singhpur-Kalinjer" section of SH in the state of Madhya Pradesh, in accordance with the provisions of the Concession Agreement (CA) executed with Madhya Pradesh Road Development Corporation Limited (herein after referred to as the "MPRDC") on 24th September, 2012.

The project Highway starts at Km.32+000 and ends at Km 87+000 Near UP Border on Design, Build, Finance, Operate and Transfer (DBFOT) Toll + Annuity basis. Project Location map is given at **Figure 1.1.**

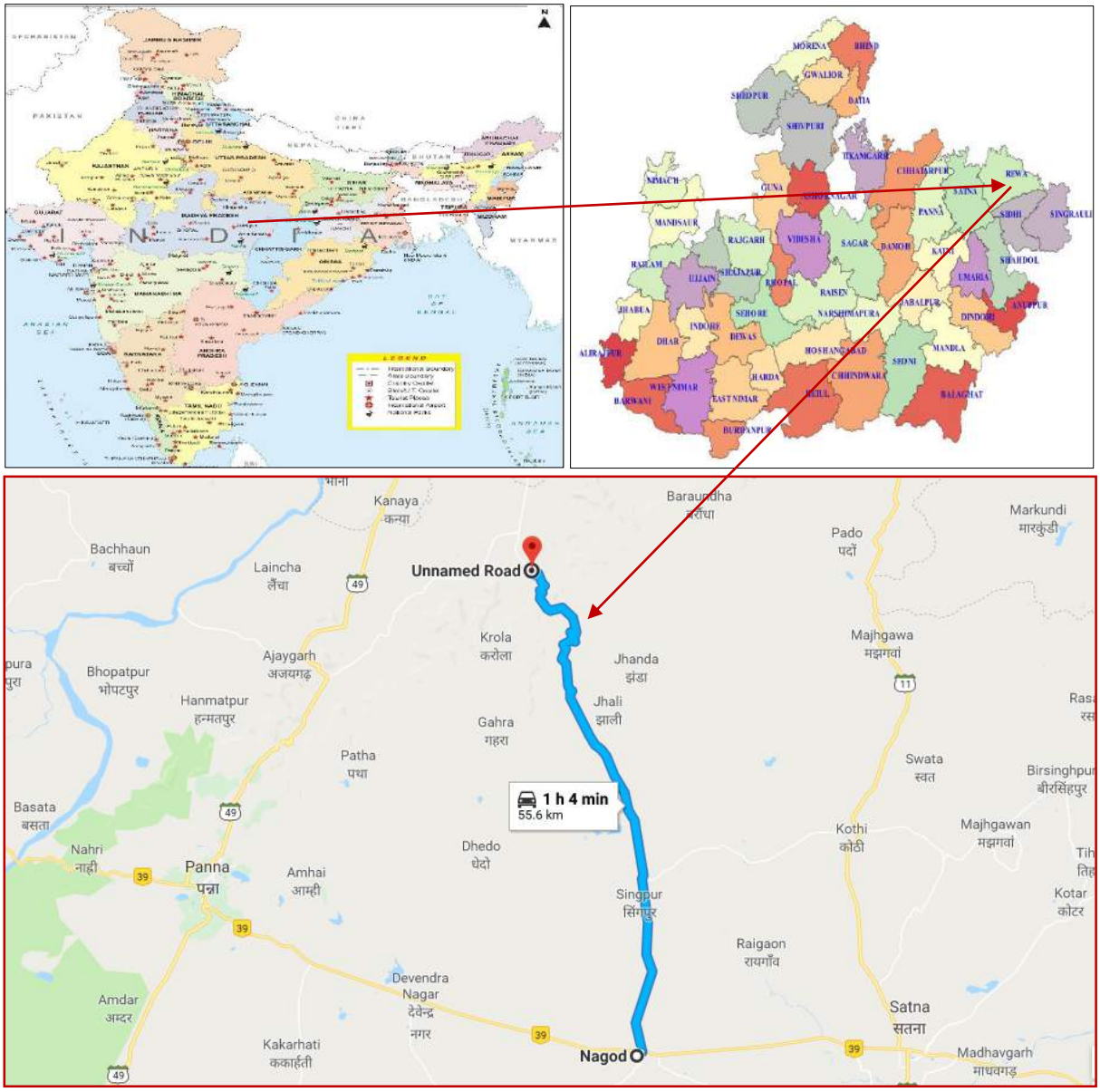


Figure 1.1: Project Location Map

SHREM ROADWAYS PVT. LTD. (SRPL) acquired DBL UCHERA NAGOD TOLLWAYS LIMITED vide agreement dated 26.03.2018.

SHREM FINANCIAL PVT. LTD. (SFPL) appointed RUKY Projects Pvt. Ltd. as consultants for detailed Technical Due Diligence services of the above Road Project to know-how the present condition of Carriageway and Structures, probable costs of Operations and Maintenance during balance Concession period, additional road safety requirements if any and to review the traffic potential and to estimate the projected Toll Collection Etc.

1.2 Salient features of the Project

Table 1.1: Project Data

S. No.	Particulars	Details
1	Name of the project	Development of Uchera Nagod Kalinjar (SH-56) Road of SH-56 in the State of Madhya Pradesh on BOT (Toll + Annuity) basis.
2	Road Type	State Highway.
3	Name of the Authority	Madhya Pradesh Road Development Corporation Limited
4	Name of the Concessionaire	DBL Uchera - Nagod Tollways Ltd.
5	Name of the EPC Contractor	Dilip Buildcon Limited
6	Design Length as per Schedule B of CA	55.600 Km.
7	Date of LOA	08.08.2012
8	Date of Agreement	24.09.2012
9	EPC Cost	Rs. 97.85 Cr.
10	Nature of contract	BOT (Toll + Annuity)
11	Toll collected by	Concessionaire
12	Concession Period	15 years from the Appointed date
13	Appointed date	20.11.2012
14	Concession end date	19.11.2027
14	Construction Period	730 days from the Appointed date.
15	Schedule Completion Date	19.11.2014
16	Date of issuance of Provisional Certificate (Commercial Operation Date)	15.05.2014
17	Date of issuance of Completion Certificate	5.08.2014
18	Annuity Amount (every six months)	Rs 8.46 Cr
19	Total Number of Annuities payable	26 Nos.
20	First Annuity Payment Date	15.11.2014
21	Total Number of Annuities Paid	13 Nos

1.3 Scope of Consultancy services

The scope of work includes providing Technical Due Diligence of the Project Highway and providing estimate of the anticipated maintenance works. Scope of the work as defined in the consultancy work order is listed below:

- Review of various contractual documents
- Collection of historic/past toll revenue data
- Collection of historic/past classified Traffic data from toll plaza and to estimate the projected traffic to arrive at revenue projections.
- Carryout detailed assessment of pavement condition and propose maintenance plan along with BOQ.
- Review of latest BBD/BI test report
- Carrying out inventory & condition survey of all elements of road like embankment slope, plantation, road furniture, tolling system etc., of the project.
- Carrying out inventory & condition survey of all structures (Major Bridges, Minor Bridges, ROB, RE Wall, Flyovers, VUPs, PUPs, Culverts etc.), suggest any rehabilitation & maintenance requirements along with BOQ.
- Carryout review of tolling system to evaluate the efficiency and functionality of tolling system and to identify and give suggestions to improve if any setbacks in the system.
- Carryout out road safety audit on Project highway and provide suggestions for improvement.
- Assess and Provide BOQ and cost estimate for routine & periodic maintenance including O&M.
- Review of punch list items, NCR's to identify any uncompleted works as on date of submission of report.
- Review of validity of insurance and statutory compliances related to Project.
- Review of correspondences exchanged between parties on contract related issues etc.
- Submission of detailed report on technical due diligence of the project.

CHAPTER 2. PROJECT DESCRIPTION & TECHNICAL DETAILS

2.1 Salient Features of the Project:

The salient features as per schedule B and Schedule C of CA including Change of scope are given in the following table.

Table 2.1: Salient Features

S. No.	Particulars	As per CA	COS*	As per Site
1	Total Length	55.600 Kms.	---	55.600 Kms.
2	Length of 2-Lane without paved shoulder	51.800 kms.	---	51.800 Kms.
3	Length of 2-Lane with paved shoulder	3.800 Kms.	---	3.800 Kms.
4	Length of Nagod Bypass	1.700 Kms.	---	1.700 Kms.
5	Toll Plaza	1 No.	---	1 No.
6	Bus Bays / Bus Shelters	7 Nos.	---	7 Nos.
7	Truck Lay Bays	1 Nos.	---	1 No.
8	Major Junction	4 Nos.	---	4 Nos.
9	Minor Junctions	9 Nos.	---	9 Nos.
10	Major Bridges	0 Nos.	2 Nos.	2 Nos.
11	Minor Bridges	7 Nos.	3 Nos.	10 Nos.
12	Box/Slab Culverts	35 Nos.	(+6, -11) Nos.	30 Nos.
13	Pipe Culverts	58 Nos.	(+45, -11) Nos.	92 Nos.

2.2 Typical Cross Section (TCS) Schedule

The Concessionaire has followed the Typical Cross Sections shown below as per schedule D of CA, during the construction.

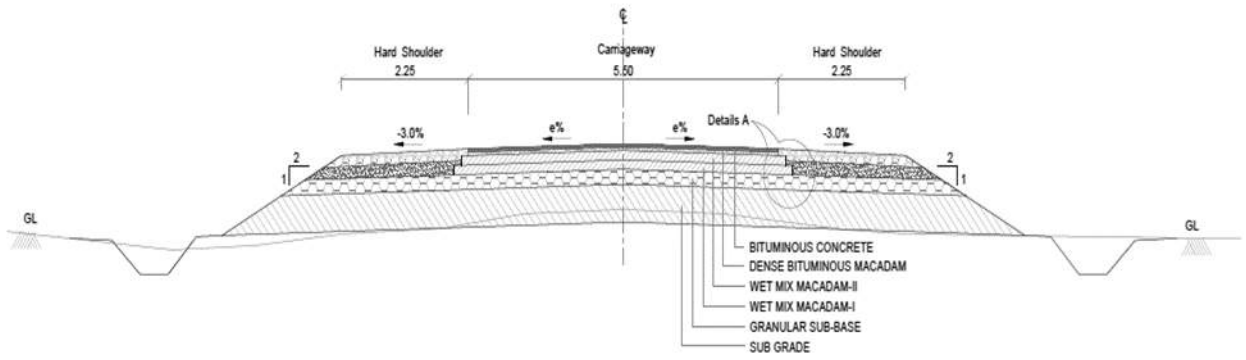


Figure 2.1: TCS 2.1 2 Lane with Granular Shoulder. (Cross Section in Open Country)

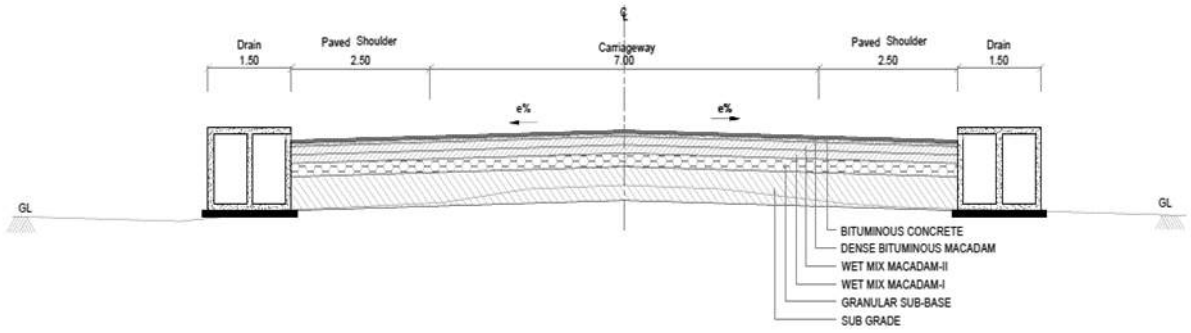


Figure 2.2: TCS 2.3 The Carriageway shall be 7.0 m with Paved shoulder (In Built up Areas)

TCS Schedule is provided below.

Table 2.2: TCS Schedule

S. No.	From Chainage (Km.)	To Chainage (Km.)	Type of TCS
1	0+000	1+700	TCS 2.1
2	33+100	34+400	TCS 2.1
3	34+400	35+600	TCS 2.3
4	35+600	54+900	TCS 2.1
5	54+900	55+300	TCS 2.3
6	55+300	67+400	TCS 2.1
7	67+400	68+400	TCS 2.3
8	68+400	69+000	TCS 2.1
9	69+000	69+800	TCS 2.3
10	69+800	85+200	TCS 2.1
11	85+200	85+600	TCS 2.3
13	85+600	87+000	TCS 2.1

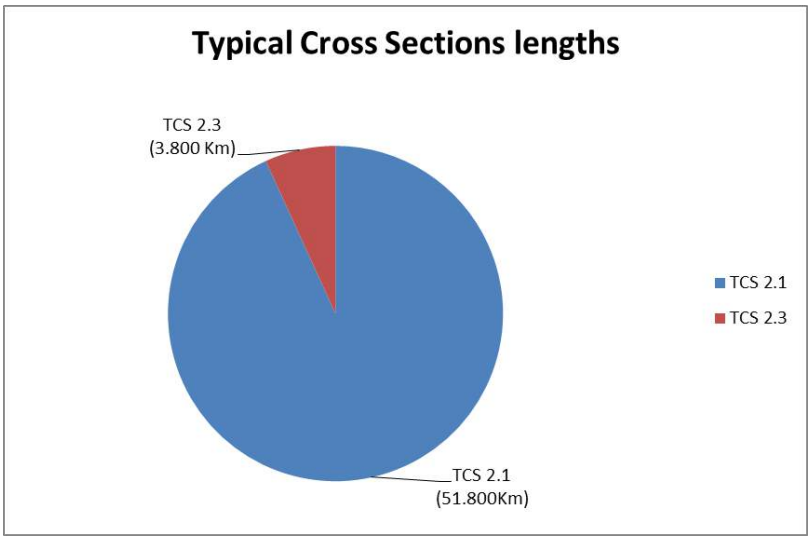


Figure 2.3: Pictorial Diagram of TCS Lengths.

2.3 Road Side Drainage

- To facilitate quick disposal of storm water from the Carriageway and to avoid accumulation of drainage from the Carriageway, drains are accommodated along the main carriage way on both flanks as specified in Schedule B of CA in strict adherence to the Standard Specifications set forth in Schedule D of CA.

- The Concessionaire has provided RCC covered drains with footpath in built up areas while earthen drains are in open and rural areas.

2.4 Service Roads

Service roads are not provided along the entire stretch of the project road as per provisions of Schedule B of the Concession Agreement.

2.5 Bypass/Realignment

Bypass is constructed for a length of 1.7 Km as per the provisions of Schedule B of the Concession Agreement.

2.6 Intersections

As per Schedule B of the Concession Agreement 4 Major Junctions and 9 Minor Junctions are developed. Details are given below

Table 2.3: Summary of Junctions

S. No.	Chainage (Km.)	Side	Type	Major /Minor
1	32+000	BHS	T	Major
2	33+100	BHS	T	Major
3	35+500	RHS	T	Minor
4	38+100	LHS	T	Minor
5	47+200	LHS	T	Minor
6	48+800	LHS	T	Major
7	50+500	RHS	T	Major
8	50+800	LHS	T	Minor
9	66+700	RHS	T	Minor
10	67+100	LHS	T	Minor
11	67+500	RHS	T	Minor
12	70+000	RHS	T	Minor
13	79+300	RHS	T	Minor

2.7 Grade Separated Structures and Uunderpasses

There are no Grade separated structures in the Project, as per provisions of Schedule B of the Concession Agreement.

2.8 Road Over Bridge

There are no Road Over Bridge in the Project, as per provisions of Schedule B of the Concession Agreement.

2.9 Summary of the Carriageway and pavement Details

The details of Pavement are shown in the following table.

Table 2.4: Summary of Carriageway and Pavement Details

S. No.	Description	Flexible (Km.)	TCS Type
1	2 Lane with Earthen shoulder	51.800	TCS 2.1 of Schedule D
2	2 Lane with Paved shoulder	3.800	TCS 2.3 of Schedule D
3	Bypass Length	1.700	
4	Total Length of the Project	55.600	
5	New Alignment	-	
6	Realignment	-	
7	Strengthening	-	
8	Reconstruction	55.600	
9	Total Length of the Project	55.600	

2.10 Summary of Structures

Summary of Structures as per provisions of schedule B of the CA is given below.

Table 2.5: Summary of Structures

S. No.	Description	Major Bridges	Minor Bridges	Hume Pipe Culverts	Box/Slab Culverts
1	Retained	-	-	-	-
2	Widening	-	2	30	14
3	Reconstruction	-	5	9	21
4	New	-	-	19	-
5	Improvement	-	-	-	-
Total		**-**	**7**	**58**	**35**

2.11 Toll Plaza

As per Schedule C provisions of the Concession Agreement one Toll Plaza has been constructed at Km. 47+950. Salient features of Toll Plaza are provided below.

- Each side comprises of 1 Normal Lanes, 1 extra wide lane and bike lane.
- The lane width in normal lanes is 3.20m.
- The width of islands provided is 1.8m.
- The single canopy is provided to cover the toll lanes.
- Toll plaza building is G+1 building which houses control room, UPS and Pantry.

Figure 2.4: Toll Plaza at Km. 47+950

2.12 Bus shelters and truck lay byes

As per the provisions of Schedule C of the Concession Agreement (CA), 7 Nos. bus shelters and 1 No truck lay bye are provided in the entire length of Project. Details such as Chainage Location are listed in the following table.

Table 2.6: List of Bus shelter & Truck Lay bays

S. No.	Chainage (Km.)	Bus shelter/Truck lay bye
1	40+000	Bus shelter
2	44+600	Bus shelter
3	55+000	Bus shelter
4	67+900	Bus shelter
5	69+500	Bus shelter
6	85+500	Bus shelter
7	55+000	Bus shelter
8	86+500	Truck lay bye

2.13 Other Project Facilities Provided as per Schedule C of CA

- Roadside furniture: Sign Boards, KM. stones, Road Marking and Object/Hazard Markers are provided in accordance with IRC-SP: 73-2007.
- Traffic safety devices: W Beam Crash barriers, parapet walls are provided as per the provisions of Schedule C of CA.
- Landscaping: Provided at Toll Plaza location and being maintained
- Tree Plantation: Tree plantation is provided on both sides of the Project Corridor all along the way and is being maintained.
- Medical Aid Post: Provided at Toll Plaza location and is operational
- Highway Lighting: Highway lighting is provided at Toll Plaza and is functional.

CHAPTER 3. ROAD INVENTORY & PAVEMENT CONDITION

3.1 General

Road Inventory and pavement condition surveys were carried out by a team of Engineers and the features noted at site are presented below.

3.2 Road Inventory

Inventory of the project road was carried out physically and is summarized in Error! Not a valid bookmark self-reference. and few representative photographs are given below.

Table 3.1: Road Inventory

S. No.	Features	Remarks
1	Terrain	Plain Rolling and Hilly Terrain
2	Land Use	Built Up, Agriculture and Forest
3	Total length of the Road	55.600 km
4	Earthen shoulder	1.0 m to 1.5m Width on site
5	Bypasses	1 Nos
6	Junctions	13 Nos.
7	Toll Plaza	Km.47+950
8	Sign boards	Sign boards are provided as per requirement
9	Road Markings	Lane markings are provided as per requirement
10	Bus Bays /shelters	07 Nos.
11	Truck Lay bye	01 Nos.
12	Street Lighting	Highway lighting provided as per requirement
13	Avenue plantation	Provided along the Project Corridor

3.3 Pavement Condition

Pavement condition survey was carried out on the project road, based on observations supplemented by simple measurements. The criteria adopted for the classification of the pavement is as per 4.2.1 of IRC 81-1997.

Table 3.2: Pavement condition Classification

Classification	Pavement condition
Good	No cracking, rutting less than 10mm
Fair	No cracking or cracking confined to single crack in the wheel track with rutting between 10mm and 20mm.
Poor	Extensive cracking and/or rutting greater than 20mm sections with cracking exceeding 20% shall be treated as failed.

Assessment of the condition of Pavement surface is a key component of infrastructure asset management. The information used across a wide range of business processes which includes: Monitoring the performance of the road; Predicting future pavement conditions and assessing long term needs; Identifying rehabilitation and maintenance treatment options; investigate causes of

pavement deterioration and evaluating specific treatment options; The purpose of the pavement condition survey is to provide a more accurate and detailed investigation of the pavement deterioration in order to assist in determining appropriate rehabilitation treatments.

3.4 Pavement Condition Survey

The survey on general pavement condition was primarily undertaken by means of slow drive- over survey, and supplemented with measurements wherever necessary. Pavement assessment was done with the help of simple instruments using measuring tape, Straight edge. It was carried out to quantify pavement deficiency on a representative basis. Aspects of pavement condition assessment include surface defects, rut depth, cracking, potholes, patched areas, shoulder conditions etc. An overall assessment of performance serviceability of the road was also done to rate the existing pavement and shoulder condition qualitatively.

The pavement condition was measured under the following sub-heads:

- Shoulder- (Composition/Condition)
- Riding Quality (Good/Fair/Poor/Very Poor)
- Pavement Condition-
  - Cracking (% of Surface area)
  - Ravelling (% of Surface area)
  - Potholes (% of Surface area)
  - Patching (% of Surface area)
  - Rut depth (Moderate 10 to 20 mm & Severe >20 mm)
  - Pavement edge drop (mm)
- Road Side Drain (Non-Existing/ Partially Functional/ Functional)

Upon verification of the Pavement condition in the above said manner, it is observed that the Pavement condition of Project road is good. The field measurements of the Pavement Condition survey are tabulated in the standard proforma as per IRC: SP 19 and is given in **ANNEXURE 1**. The summary of Pavement condition is given below.

Table 3.3: Pavement Condition Summary

From (Km.)	To (Km.)	Length (Km)	Condition
Km. 0+000	Km. 1+700	55.600	Good
Km. 33+100	Km. 87+000		

Km.35+900

Km. 48+500

Km.72+400

Km. 73+250

Figure 3.1: Representative Photos of Pavement Condition.

CHAPTER 4. INVENTORY AND CONDITION OF STRUCTURES

4.1 General Assessment and Condition of the structures

Inspection of existing structures on the project section was carried out, detailed inventory and condition is examined during the site visit as per the guide lines provided in IRC SP: 52-1999 & IRC SP: 35-1990.

4.2 Inventory of Structures

There are 02 Nos. Major Bridge, 10 Nos. Minor Bridges, 92 Nos. Pipe culverts and 30 Nos. Slab/ Box culverts are there along this project road.

Table 4.1: List of Structures

S. No.	Type of Structure	Numbers
1	Major bridges	2 Nos
2	Minor Bridge	10 Nos
3	Pipe culverts	92 Nos
4	Slab/Box Culverts	30 Nos

For major bridges the superstructure is PSC T beam with RCC wall type piers and abutments resting on Open foundation. For minor bridges the superstructure is RCC solid slab and the substructures are of CR masonry wall type resting on open foundations. Detailed inventory and condition survey of bridges are given in **ANNEXURE 2.** The culverts observed along the project road are mainly of two types viz. pipe culverts and RCC slab/box culverts. Condition of most of the culverts is fair except in few locations. Detailed inventory and condition survey of culverts are given in **ANNEXURE 3.**

4.3 Details of Major Bridges

The total length of the major bridge at Km 0+274 is 60.0m with 2 spans. The superstructure consists of PSC T Beam with RCC column type piers and wall type abutments resting on open foundations. The Superstructure is seated on elastomeric / Neoprene bearings. Expansion joints are of strip seal type. RCC crash barrier have been provided on both sides of the deck.

The total length of the major bridge at Km 82+263 is 100.0m with 4 spans. The superstructure consists PSC T Beam with RCC column type piers and wall type abutments resting on Open / Pile foundations. Superstructure is seated on elastomeric / Neoprene bearings. Expansion joints are of strip seal type. RCC crash barrier have been provided on both sides of the deck.

Table 4.2: List of Major Bridges

S. No.	Chainage (Km)	Span	Total Length of Bridge (m)
1	Km. 0+274	2 x 30.0	60.0
2	Km. 82+263	4 x 25.0	100.0

The condition of the superstructure and substructure is good.

Km.82+263

Km.0+274

Figure 4.1: Representative photos of Major Bridges

4.4 Details of Minor Bridges

There are 10 minor bridges in the project stretch. The type of superstructure for minor bridges is RCC solid slab and the substructure is PCC conventional wall type, supported on open foundations. Expansion joints are buried type and bearings are tar paper and neoprene bearings. RCC crash barriers are provided on all structures.

Table 4.3: Inventory of Minor Bridges

S. No.	Chainage (Km)	Span	Total Length of Bridge (m)	Description
1	Km. 6+000	3 x 10	30	The Minor bridge has RCC solid slab superstructure supported on RCC wall type piers and abutments resting on open foundations.
2	Km. 16+950	3x15.0	45.0	The Minor bridge has girder type superstructure supported on RCC wall type piers and abutments resting on open foundations. It has RCC crash barrier with elastomeric bearings and buried type expansion joints.
3	Km. 21+600	5x7.5	37.5	The Minor bridge has arch type superstructure supported on CRM wall type abutment and piers resting on open foundations.
4	Km. 30+900	3x7.0	21.0	The Minor bridge has RCC Box structure. It has RCC crash barrier, bituminous wearing coat.
5	Km. 42+600	3x15.0	45.0	The Minor bridge has RCC girder type superstructure supported on PCC / RCC wall type piers and abutments resting on open foundations. It has RCC railing. Elastomeric Bearings and buried type expansion joints.
6	Km. 48+787	1x10.0	10.0	The Minor bridge has RCC solid slab superstructure supported on RCC wall type abutments resting on open foundations. It has RCC crash barrier with Tar Paper Bearings and buried type expansion joints.
7	Km. 59+013	1x10.0	10.0	The Minor bridge has RCC solid slab superstructure supported on RCC wall type abutments resting on open foundations. It has RCC crash barrier with Tar Paper Bearings and buried type expansion joints.

S. No.	Chainage (Km)	Span	Total Length of Bridge (m)	Description
8	Km. 69+000	3x20.0	60.0	The minor bridge has RCC girder type superstructure supported on PCC / RCC wall type piers and abutments resting on open foundations. It has RCC crash barrier with Elastomeric Bearings and buried type expansion joints.
9	Km. 69+779	3x6.0	18.0	The Minor bridge has RCC Box structure. It has RCC crash barrier, bituminous wearing coat.
10	Km. 80+100	1x10.0	10.0	The minor bridge has RCC solid slab superstructure supported on RCC wall type abutments resting on open foundations. It has RCC crash barrier with Tar Paper Bearings and buried type expansion joints.

Km.16+950

Km. 30+900

Figure 4.2: Representative photos for minor bridges

4.5 Details of Culverts

The culverts observed along the project road are mainly of two types' viz. RCC Slab/Box culverts and Pipe culverts. The condition of culverts is generally good. For some of the pipe culverts vegetation and vent cleaning is required. In general, the condition of all the structures is found satisfactory. The detailed condition of the same are given the following sections. Detailed inventory and condition survey of culverts are given in **ANNEXURE 3.**

4.5.1. Slab/Box Culverts

There are 30 No's of slab / box culverts present in the project stretch. The details of the culverts are as given below.

Table 4.4: List of Slab/Box Culverts

S. No.	Chainage (Km)	Span (m)	Vent Size (m)
1	Km. 34+173	1 x 2.0	4.5
2	Km. 35+200	1 x 3.0	3.0
3	Km. 36+100	1 x 2.0	3.0
4	Km. 36+800	1 x 3.0	2.5
5	Km. 48+800	1 x 3.0	2.0
6	Km. 54+700	1 x 4.0	2.5
7	Km. 59+400	1 x 6.0	3.0

S. No.	Chainage (Km)	Span (m)	Vent Size (m)
8	Km. 59+800	1 x 4.0	3.0
9	Km. 60+700	1 x 6.0	4.0
10	Km. 61+100	1 x 6.0	3.5
11	Km. 61+200	1 x 6.0	2.5
12	Km. 62+000	1 x 4.0	2.0
13	Km. 62+400	1 x 4.0	2.0
14	Km. 65+900	1 x 3.0	3.0
15	Km. 66+600	1 x 3.0	2.2
16	Km. 69+100	1 x 3.0	2.5
17	Km. 71+500	1 x 4.0	3.2
18	Km. 71+900	1 x 3.0	1.5
19	Km. 72+500	1 x 3.0	1.5
20	Km. 74+800	1 x 4.0	1.5
21	Km. 80+191	1 x 3.0	2.0
22	Km. 81+443	1 x 3.0	1.5
23	Km. 82+600	1 x 4.0	1.5
24	Km. 86+200	1 x 1.0	2.0
25	Km. 86+400	1 x 1.0	1.5
26	Km. 86+500	1 x 1.0	1.2
27	Km. 86+800	1 x 1.0	1.5
28	Km. 87+200	1 x 1.0	1.3
29	Km. 87+400	1 x 1.0	1.25
30	Km. 88+700	1 x 1.0	1.2

4.5.2. Condition of the Slab/Box Culverts

The general condition of above slab / box culverts is good. Maintenance is to be carried out before monsoon for vent clearance, Protection works etc.

Km.35+200

Km.74+800

Km.71+500

Km.74+800

Figure 4.3: Representative photos for Box/Slab Culverts

4.5.3. General Description of the Pipe Culverts

There are 92 No's of pipe culverts in the project stretch. The details of the culverts are as given below.

Table 4.5: List of Pipe Culverts

S. No	Chainage @ Km.	No. of Rows& Dia(m)	S. No	Chainage @ Km.	No. of Rows& Dia(m)	S. No	Chainage @ Km.	No. of Rows& Dia(m)
1	0+200	1 x 1.2	32	63+700	1 x 1.0	63	68+586	1 x 1.2
2	0+500	1 x 1.2	33	72+900	1 x 1.0	64	68+767	1 x 1.2
3	0+900	1 x 1.2	34	73+200	1 x 1.2	65	69+343	1 x 1.0
4	1+350	1 x 1.2	35	73+500	1 x 1.0	66	69+913	1 x 1.0
5	34+300	1 x 1.0	36	73+900	1 x 1.2	67	71+989	2 x 0.9
6	34+800	1 x 1.0	37	74+300	1 x 1.0	68	72+343	1 x 1.2
7	38+500	1 x 1.0	38	76+100	1 x 1.2	69	72+486	1 x 1.2
8	41+500	1 x 1.0	39	76+900	1 x 1.2	70	72+676	1 x 1.0
9	44+800	1 x 1.0	40	77+500	1 x 1.0	71	72+741	1 x 1.2
10	46+500	1 x 1.0	41	83+100	1 x 1.0	72	72+817	1 x 1.2
11	49+800	1 x 1.0	42	83+600	1 x 1.0	73	72+931	1 x 1.0
12	49+800	1 x 1.0	43	84+400	1 x 1.2	74	73+051	1 x 1.2
13	50+500	1 x 1.0	44	84+400	1 x 1.2	75	73+302	1 x 1.0
14	50+800	1 x 1.0	45	84+900	1 x 1.2	76	73+394	1 x 1.2
15	51+900	2 x 1.0	46	84+900	1 x 1.0	77	73+625	1 x 1.2
16	52+500	1 x 1.0	47	85+200	1 x 1.0	78	73+734	1 x 1.0
17	52+700	2 x 1.0	48	34+823	2 x 0.9	79	73+827	1 x 1.0
18	55+500	1 x 1.0	49	37+146	1 x 1.2	80	74+114	1 x 1.0
19	56+200	1 x 1.0	50	57+735	1 x 1.2	81	74+635	1 x 1.2
20	56+500	1 x 1.0	51	57+827	1 x 1.0	82	74+903	1 x 1.2
21	56+800	1 x 1.0	52	57+906	1 x 1.2	83	74+99	1 x 1.2
22	57+400	1 x 1.0	53	58+187	1 x 1.2	84	75+313	1 x 1.0
23	58+100	1 x 1.2	54	58+390	1 x 1.0	85	75+403	1 x 1.0
24	58+200	1 x 1.0	55	58+773	1 x 1.2	86	75+500	2 x 0.9

S. No	Chainage @ Km.	No. of Rows& Dia(m)
25	58+500	1 x 1.0
26	58+900	1 x 1.0
27	59+200	1 x 1.2
28	59+600	1 x 1.0
29	60+200	2 x 0.9
30	60+400	1 x 1.2
31	60+900	1 x 1.2

S. No	Chainage @ Km.	No. of Rows& Dia(m)
56	59+130	1 x 1.0
57	59+220	1 x 1.2
58	65+173	1 x 1.2
59	66+819	1 x 1.0
60	67+500	1 x 1.0
61	68+079	1 x 1.0
62	68+327	1 x 1.2

S. No	Chainage @ Km.	No. of Rows& Dia(m)
87	77+675	1 x 1.2
88	78+063	1 x 1.2
89	79+799	1 x 1.0
90	80+992	1 x 1.2
91	81+582	1 x 1.2
92	84+616	1 x 1.0

4.5.4. Condition of the Pipe Culverts

The general condition of above pipe culverts is good. Maintenance is to be carried out before monsoon for vent clearance, Protection works etc.

The culverts are in fair condition and can be retained in the present condition with following repairs/rehabilitation measures.

- Chocked culverts must be cleared.
- Debris and garbage near outside the vents must be removed.

CHAPTER 5. PAVEMENT DESIGN VALIDATION AND OVERLAY SCHEDULES

5.1 General

Review of Pavement design report, providing insights on design life of pavement, crust thickness, history of overlays over the existing pavement etc., Based on pavement condition and Concession Agreement (CA) provisions recommendation for the upcoming renewal cycles.

5.2 Pavement design validation

The flexible pavement has low flexural strength and hence layers reflect the deformation of the lower layers / sub-grade on to the surface layer after the withdrawal of wheel load. In order to control the deflections in the sub-grade so that no permanent deflections result, the pavement thickness is so designed that the stresses on the sub-grade soil are kept within its bearing capacity. Loading of bituminous pavement requires the stiffest layers to be placed at the surface with successive weaker layers down to sub-grade.

The project road is already operational and the standards applicable during the design development phase of the project road are taken into account for this review. Therefore, the design of pavement has been validated based on IRC: 37-2001 publication while the current publication is IRC: 37-2018.

Pavement design (Crust Thickness)

The new pavement shall be designed in accordance with the IRC:37. “Guidelines for the Design of Flexible Pavements”. Rigid pavement shall be designed in accordance with the method prescribed in IRC:58. “Guidelines for the Design of Plain Jointed Rigid Pavements for Highways”.

Pavement design validation as per actual traffic from COD. As per IRC 37, Vehicle Damage Factor (VDF), Distribution of commercial vehicles and growth rate values are 3.5, 0.75 and 5% respectively. Summary is given below.

Table 5.1: Real Time Traffic from COD and Project Traffic Current years with 5% growth for CMSA

FY Year	AADT in Vehicles					CVPD (Veh.)	MSA	CMSA	Year	Remarks
	Car	LCV	BUS	2-AT	MAV					
2015	204	52	5	14	77	150	0.14	0.14	3	Actual
2016	273	73	9	12	107	200	0.19	0.33	4	Actual
2017	235	78	7	15	94	194	0.19	0.52	5	Actual
2018	395	140	16	21	101	278	0.27	0.79	6	Actual
2019	455	142	12	33	231	419	0.40	1.19	7	Actual
2020	422	97	16	50	255	418	0.40	1.59	8	Actual
2021	443	102	17	53	267	439	0.42	2.01	9	Projected
2022	465	107	18	56	281	461	0.44	2.45	10	Projected
2023	488	112	19	58	295	484	0.46	2.92	11	Projected
2024	513	118	20	61	309	508	0.49	3.40	12	Projected
2025	538	124	21	64	325	534	0.51	3.91	13	Projected
2026	565	130	22	68	341	560	0.54	4.45	14	Projected
2027	594	136	23	71	358	588	0.56	5.02	15	Projected

Pavement crust thickness in the pavement design report for flexible pavement is as follows: -

Table 5.2: Flexible Pavement Design summary

S. No.	Description/ Pavement layer	Design Parameters
1	Sub Grade CBR (%)	7%
2	Design Life (Years)	15 years
3	Design Traffic (MSA)	1.59 MSA for 8 Years 5.86 MSA for 15 Years 10 MSA Adopted
4	Surface course (BC)	40 mm
5	Binder course (DBM)	60 mm
6	Base course (WMM)	250 mm
7	Sub Base course (GSB)	230 mm

MSA has been adopted based on existing crust as per IRC 37 (Back Calculations)

Pavement crust thickness in the pavement design report for rigid pavement is as follows: -

Table 5.3: Rigid Pavement Design for Toll Plaza

Description	Designed Parameters
CBR of sub grade	7 %
Design life in years	30
Pavement Quality Concrete (PQC) - mm	250
Dry Lean Concrete (DLC) - mm	150
Drainage Layer (GSB) - (mm)	150
Diameter of Dowel Bar (mm)	32
Length of Dowel Bar (mm)	450
Spacing of Dowel Bars (mm)	300
Diameter of Tie Bar (mm)	12 (Deformed)
Length of Tie Bar (mm)	640
Spacing of Tie Bars (mm)	600

The Pavement crust has been designed according to IRC specification and found in order, the adopted/ designed traffic is more than the actual traffic. Hence pavement crust is safe

5.3 Overlay during operation and maintenance

The pavement has been designed to cater traffic of 10 MSA for a design life of 15 years (up to end of the year 2027) as discussed in **Table 5.2**, whereas the actual traffic is 1.59 MSA and 5.86 MSA for 8 years and 15 years respectively. This implies that pavement will be structurally adequate to cater the future traffic with periodic renewal carried out under the maintenance program.

However, it is recommended to carry out traffic survey, pavement condition and pavement strength evaluation before the end of stage-I of design life (as per pavement design report) and prior to end of concession period to evaluate the requirement of overlay.

5.4 Maintenance/ Overlay schedule

Periodic Maintenance includes Profile corrective course overlaid with the periodic renewal of the wearing course of SDBC. The detailed maintenance schedule is summarized below.

Routine maintenance - Every year
Periodic Renewal for Flexible Pavement – Proposed on or before 2021.
Periodic Maintenance for Rigid Pavement – Re-texturing shall be done at least once in 10 years from construction (as per IRC 58-2015).

CHAPTER 6. SAFETY AUDIT OF ROAD

6.1 General

Road Safety Audit (RSA) is defined as "the formal safety performance examination of an existing or future road or intersection by an independent, multidisciplinary team. It qualitatively estimates and reports on potential road safety issues and identifies opportunities for improvements in safety for all road users".

Road Safety is a multi- sectorial and multi- dimensional issues. It incorporates the development and management of road infrastructure, provisions of safer vehicles, legislations and law enforcements, mobility planning, provisions of health and hospital services, child safety, urban land use planning.

A Key feature of a road safety audit is the use of a team of professionals with varied expertise. The team shall include highway safety engineers, highway design engineers, maintenance personal, and law enforcement. Additional specialties shall be added to the team as needed.

Central Road Research Institute (CRRI) has studied road safety elements extensively in the past and has come up with various manuals such as manual for safety in road design (1998), Road safety Audit Manual (2003) and Revised Road Safety Audit manual (2010). Indian Road Congress (IRC) has published Special provision SP-88, Manual on road Safety Audit. The methodology used for the design stage audit process is based on these manuals like Type Designs for Intersections on National Highways, 1992.

Table 6.1: Referred IRC Publications

IRC Code No.	IRC Code Name
IRC: 35	Code of Practice for Road Markings
IRC: 38	Guidelines for Design of Horizontal curves for highways and Design tables
IRC: 67	Code of Practice for Road signs
IRC: 73	Geometric Design standards for rural highways (non-urban)
IRC:103	Guidelines for Pedestrian Facilities
IRC: SP-15	Ribbon Development along highways and its prevention
IRC: SP-23	Vertical curves for highways
IRC: SP-41	Guidelines on design of at-grade intersections in Rural and Urban areas
IRC: SP-55	Guidelines for safety in construction zones
IRC: SP- 88	Manual of Road Safety Audit

6.2 Existing Road Safety Audit

During the site visit it is observed that all safety items are provided as shown in the following table

Table 6.2: Road Safety Audit

S. No.	Item Description		Status	Condition
Road Furniture				
1	Sign Boards	Chevron Signs	Available as per site requirement	Good
		Village sign boards		
		Information Boards		

S. No.	Item Description		Status	Condition
		Other Sign Boards		
		Gantry Sign Boards		
2	Road Marking	Studs &Lane marking	Available as per site requirement	Fair
3	Metal Beam Crash Barriers	At High embankments	Available as per site requirement	Fair

This Project Section is part of an important corridor. It is the Concessionaire's duty and responsibility to provide safe road for the commuters by assuring safe and hindrance free movement for both Traffic and Pedestrians along urban locations & habitations.

6.3 Conclusion

Safety arrangements are made for road users along the Project road are found to be in conformity with project road requirements and good industry practice. However, a continuous monitoring on safety arrangements is required during the operation and maintenance period.

S-curve ahead Km. 85+300

Cross Road at Km. 48+500

W Beam MCB at approaches of MJB at Km.41+600

OH marker board before the Head wall of Box MJB at km.41+600

Figure 6.1: Representative photos during road safety audit

CHAPTER 7. TOLL PLAZA & HTMS

7.1 General

There is one Toll Plaza on the project road at Km.47+950. Each side comprises of 1 normal lane, 1 extra wide lane. The lane width in normal lanes was 3.2 m and extra wide lane was 4.5 m. The width of islands provided is 1.8 m. The single canopy is provided to cover the toll lanes. Toll plaza building is G+1 floor building which houses control room, UPS and Pantry.

7.2 Tolling Equipment and Control Room Equipment

List of equipment provided at toll plaza and control room is given below.

Table 7.1: List of Equipment's at toll plaza and control room

S. No	Description	Normal Lanes	Extra Wide Lanes	Total
1	Toll Lane Controller	2	2	4
2	AVC Controller	2	2	4
3	Height Sensor	2	2	4
4	Toll Collector keyboard	2	2	4
5	Toll Collector Display TFT monitor	2	2	4
6	Traffic light	2	2	4
7	User fare display	2	2	4
8	Overhead Lane Status Light (OHLS)	2	2	4
9	Thermal receipt printer	2	2	4
10	Lane incident capture camera	4	4	8
11	Lane Exit barrier	2	2	4
12	Violation alarm switch	2	2	4
13	Amber and siren light	2	2	4
14	Slow Speed Weight in Motion	0	0	0
15	Booth CCTV camera	2	2	4
16	Lane Software	2	2	4
17	Intercom Slave Unit	2	2	4
Plaza room equipment				
1	TMS Server with monitor			1
2	Joystick			1
3	16 Channel NVR for central booth CCTV monitoring			1
4	PTZ Camera with pole			1
5	Incident Management Work Station			1
6	Intercom Master Unit			1
7	Computer			1
8	Printer			1
9	Scanner			1
10	42" TV			1
UPS				

S. No	Description	Normal Lanes	Extra Wide Lanes	Total
1	7 KVA			1
Generator				
1	62.5 KVA			1

7.3 Vehicles

Few vehicles are required for operation of the highway as per IRC and as per Contract document of the project. The list of vehicles which were observed at site are presented in the below Table.

Table 7.2: List of Vehicles

S. No	Vehicle Type	No
1	Patrol Vehicle	1
2	Ambulance	1
3	Crane	1

Toll Plaza at 47+950

Toll Building at 47+950

Figure 7.1: Photographs of Toll Plaza

CHAPTER 8. TRAFFIC CENSUS AND TOLL REVENUE

8.1 Traffic Census

In accordance with clause 22.1, the Concessionaire shall install, maintain and operate electronic/computerized traffic counters at each of the Toll Plazas and collect data relating to the number and types of vehicles using the Project Highway. A weekly statement of such data shall be complied and furnished forthwith by the Concessionaire to MPRDC substantially in the form specified in Schedule N of CA.

Accordingly, the Concessionaire provided toll plaza details. Based on the data made available the summarized annual classified Traffic census details for the past five years are provided in Table 8.1 below. The Actual traffic data recorded below has been taken as a basis to calculate AACGR % (Annual Average Compound Growth Rate).

Table 8.1: Year wise Traffic (Vehicles) Details

FY Year	Car	LCV	Bus	Truck	MAV	Total Traffic
2016	99821	26544	3354	4227	39007	172889
2017	85854	28358	2691	5330	34390	156320
2018	144158	51160	5970	7624	36845	245862
2019	165918	52005	4544	12121	84368	329044
2020	154420	35459	6003	18459	93150	300705
AACGR* (%)						**18.23%**

*AACGR- Annual Average Compound Growth Rate

8.2 Actual Revenue Collection

In accordance with clause 19.5, "During the operation period, the Concessionaire shall furnish to MRPDC within 7 days of completion of each month, a statement of fee substantially in the form set forth in Schedule-M (Monthly fee statement)". As per provisions of CA the concessionaire submitted monthly fee statement and the summary of form submitted under Schedule M during the financial year 2019-20 is given under as Table 8.2.

Table 8.2: Summary of 2019-20 Tollable traffic and revenue collected at Toll Plaza

Description	Car	Car(pass)	LCV	Bus	Truck	MAV	Total
In Nos.	84519	739	22096	4365	13659	90509	215887
Toll Revenue collection in Rs.	2535570	59101	1657200	681360	2563085	33707815	41204131

The figures shown in Table 8-1 are Real time traffic data on project road for the past five years and the growth rate is calculated to be 18.23%. It is pertinent to note that the figures given in table 8.1 are inclusive of exempted /non tollable traffic.

The figures shown in Table 8.2 are actual tollable traffic based on which the toll revenue collected and is excluding of exempted/non tollable traffic. For the realistic estimate of the traffic growth and projected revenue calculation actual traffic based on which FY 2019-20 revenue collected (table 8.2) is considered as a base year traffic and the projected traffic growth rate is restricted to 5%.

Based on the base year traffic and growth rate as explained above traffic projections from year 2019-20 to till end of Concession period toll plaza wise are calculated and summarized below in Table 8.3.

Table 8.3: Projected traffic

FY Year	AADT in Vehicles					CVPD* (Veh.)	AADT in PCU					CVPD* (PCU)	Remarks
	Car	LCV	BUS	2-AT	MAV		Car	LCV	BUS	2-AT	MAV		
PCU Factor							1	1.5	3	3	4.5		
2020	234	61	12	37	248	358	234	91	36	112	1116	1355	Actual
2021	245	64	13	39	260	376	245	95	38	118	1172	1423	Projected
2022	258	67	13	41	273	395	258	100	40	124	1230	1494	Projected
2023	270	70	14	43	287	414	270	105	42	130	1292	1568	Projected
2024	284	74	15	45	301	435	284	110	44	136	1356	1647	Projected
2025	298	77	15	48	316	457	298	116	46	143	1424	1729	Projected
2026	313	81	16	50	332	480	313	122	48	150	1495	1816	Projected
2027	329	85	17	53	349	504	329	128	50	158	1570	1906	Projected
2028	345	89	18	55	366	529	345	134	53	166	1649	2002	Projected

*CVPD: Commercial vehicle per day (LCV+BUS+2 AT+MAV)

8.3 Toll Revenue Calculations

The toll revenue for horizon year is calculated based on the input from the above data, actual toll rates collected on base year (2019-20), with Traffic growth, WPI growth and toll efficiency has been assumed 5%, 4% and 100% respectively and other inputs considered in revenue calculations is given in **Table 8.4**

Table 8.4: Toll Revenue inputs

Particular	Toll plaza 1
Location	Km.47+950
4 lane length in km	0
2 lane length in km	53.8
Agreement Date	24-09-2012
Appointed Date	20-11-2012
Concession period	15
Commercial operation date	05-08-2014
Concession End Date	19-11-2027
Traffic study year	2020
Vehicle Type	**AADT**
Car/Jeep/Van	234
2-axle Bus	61
LCV/LGV	12
2A-Truck	37
MAV (2A-6A)	248
Growth Rate (%)	5%

The split trip type based on the available toll data from Concessionaire is used to derive the annual toll collection for each plaza. The revenue estimated and presented below. Detailed toll revenue estimation is given in **ANNEXURE 4.**

Table 8.5 Toll Revenue Estimated (in Rs. lakhs)

Financial Year	Annual Revenue of TP1 Km.47+950	Remarks
2019-20	412.041	Actual
2020-21	450.294	Projected
2021-22	489.704	Projected
2022-23	537.1	Projected
2023-24	582.361	Projected
2024-25	631.297	Projected
2025-26	684.928	Projected
2026-27	745.416	Projected
2027-28	514.957	233 Days

CHAPTER 9. OPERATION AND MAINTENANCE

9.1 General

As per Article 17 of the Concession Agreement, the Concessionaire will operate and maintain the Project Highways by itself or through O&M Contractors and comply with specification and standards, and other requirements set forth in this Agreement, Good Industry Practice, Applicable Laws, applicable permits and manufacturer guidelines and instructions with respect to toll system.

9.2 Inspection

Inspection system followed is illustrated as divided into the following 3 types.

- **Visual Inspection:** Visual inspections are done at frequent intervals, and are intended to determine any potential traffic hazards to the road user or hampering the aesthetics of the project stretch. Visual inspections are meant to identify defects that constitute an imminent or immediate hazard to the public.

- **Detailed Inspection:** Detailed Inspections often require some measuring instruments, are done less frequently and are intended more towards determining performance and behavior of various elements. These inspections also indicate, need (if any) for thorough inspections. Detailed inspections are carried out primarily to establish programs of periodic or major maintenance tasks, and enhancement requirements not requiring urgent execution

- **Thorough Inspection:** Thorough Inspections are aimed at finding the cause and remedy of specific problems and at specific locations. Specialist's inspections are required once in a while. Thorough Inspections shall be carried out with highly sophisticated instruments

The inspection procedures will assist in identifying the need for replacement or renewal under planned program of maintenance and rehabilitation. The elements viz pavement, drainage, shoulders / slopes / Earthworks, structures and buildings are covered.

Maintenance program will be submitted to authority not later than 45 days prior to each accounting year.

9.3 Operations

Traffic Flow Operation & Traffic Management Plan

Following are the obligations of the Concessionaire for the regular and emergency operations of the Project Highway and Project Facilities.

1 Permitting smooth and uninterrupted flow of traffic during normal operating conditions.
2 Functioning of the Toll System including charging and collecting the fees from the road user in accordance with the CA.
3 Carrying out preventive and periodic maintenance of the Project Road;
4 Undertaking routine maintenance including prompt repairs of potholes, cracks, joints, drains, embankments, structures, pavement markings, lighting, road signs and other traffic control devices;
5 Undertaking major maintenance such as resurfacing of pavements, repairs to structures, and repairs and refurbishment of tolling system and other equipment;

6 Functioning of the lighting System
7 Functioning of the Patrolling System
8 Functioning of rescue and medical aid services
9 Ambulance as and when required
10 Functioning of the Project Facilities
11 Administrative, Operational and Maintenance Base Camp
12 Truck Lay bays
13 Pickup Bus stops / Bus Bays
14 Protection of the environment and provision of equipment and materials therefor;
15 Operation and maintenance of all communication, control and administrative systems necessary for the efficient operation of the Project Road.
16 Complying with Safety Requirements in accordance with Article 18.

9.4 Operation of Toll Plaza

There are two lanes in each direction operating at toll plaza, middle lanes are used by Car/LCV for collecting toll and extra wide lanes are utilized by wide vehicles like Bus/Trucks/Tractors and toll exempted vehicles. The cash collected is deposited on daily basis to the escrow account. In case of ETC system Toll collection is connected with Network system and directly deposited into the Escrow account.

9.5 Maintenance of Project Highway

The maintenance methodology and yearly maintenance Programme will guide the Maintenance team to undertake the routine & periodic maintenance works of the Project Facilities. This Programme is the basic indicator of the intended works to be carried out by the Maintenance Team over a period of one year. Road maintenance can be carried out in four ways as listed below.

1. Preventive Maintenance
2. Routine Maintenance
3. Periodic Maintenance
4. Special repairs

Preventive Maintenance

Preventive maintenance is an organized, systematic process of applying a series of preventive treatments over the life of the pavement to minimize life cycle costs.

The strategy of applying periodic treatments at appropriate times in a pavement's life is economical than applying treatment at the end of pavement's life. Preventive maintenance is designed to retard pavement deterioration. Regular preventive maintenance will be carried out to ensure adherence to the Design Requirements and specifications throughout the Concession period.

The flexible pavement is in good condition and hence doesn't require any immediate or preventive interventions.

Routine Maintenance

Routine maintenance, which involves repairing of cracks, replacement of safety girders along the highway, clearance of debris following accidents, ensuring functionality of sign posts, maintenance of a security set-up, and such other activities.

Periodic Maintenance

In contrast to preventive maintenance treatments, periodic maintenance treatments are ideally applied on pavements to improve surface integrity and waterproofing, or to improve skid resistance, without increasing the strength of the pavement significantly. They are sometimes referred to as "functional overlays," as they are intended to restore or enhance the ability of the roadway to serve its purpose (function), but do not increase the load-carrying capabilities. If the pavement failure is more and demands for a "structural overlay" they are intended to increase load-carrying capabilities of the project road. The details of periodic maintenance schedule are given below.

Table 9.1: Schedule and status of for Major Maintenance

Description	Schedule of Major Maintenance	Status of Major Maintenance
1st Major Maintenance - Highway Phase 1	18 Km- 2018	18 Km-Executed with micro surfacing
1st Major Maintenance - Highway Phase 2	26 Km- 2019	26 Km-Executed with BC Overlay
1st Major Maintenance - Highway Phase 3	13 Km- 2021	Scheduled
1st Major Maintenance - Highway Phase 4	15 Km- 2022	Scheduled
2nd Major Maintenance - Highway	56 km- 2028	Scheduled

Special Repairs

The group of activities performed to restore the roadway following damage due to natural calamities such as heavy floods, sand storms, hurricanes, cyclones, earthquakes or landslides which shall be unpredictable. The affected Project Highway shall be rectified, and the system shall be restored to function as per programme prepared in consultation with Independent Engineer. Typical activities include,

a. Culvert and bridge repairs
b. Retaining wall repairs and construction;
c. Construction of Diversions;
d. Floodway repairs; and
e. Flood damage restoration works, etc.

9.6 Review of Test Reports

9.6.1. Bump Integrator Test (BI)

Maintenance of road is dependent on several factors, one of which is the condition of Pavement surface. As such Roughness is the measurement of the riding quality, which in turn is the effect of total surface deterioration. Bump Integrator (BI) is one of the equipment needed for roughness measurement. The roughness of pavement surface is designated as uneven index value and expressed as surface roughness from which the condition of the road can be assessed.

The test was conducted in October 2020. As per Schedule K, If the value exceeds 3000 mm in a KM, the stretch shall be rectified. No stretch exceeded the permissible limit of 3000 mm in the Project road.

9.6.2. Benkelman Beam Deflection (BBD)

The performance of flexible pavement is closely related to the elastic deflection of pavement under the wheel loads. The deformation or elastic deflection under a given load depends upon subgrade soil type, its moisture content and compaction, the thickness and the quality of pavement courses, drainage conditions, pavement surface temperatures etc. BBD method is widely followed to evaluate the structural capacity of pavement and for estimation and design of overlay for strengthening of any weak pavement.

As per the Concession Agreement (CA) BBD tests shall be conducted every year after rainy season which falls during month of October to May. Concessionaire has conducted test in November 2020. The values of deflection are within the limits as per laid down specifications. Hence overlay is not required.

9.7 O&M Forecast

The O&M costs were estimated based on various parameters of CA and project corridor. The cost summary is given below, and detailed cost estimations are given in **ANNEXURE 5.**

Table 9.2: Proposed Plan for Future Operation & Maintenance Cost (In Crores)

Year	Routine maintenance (In crores)	Incidental maintenance (In crores)	Periodic / Major maintenance	Operational Expenses	Total cost per year
2020	0.215	0.313		0.47	**0.99**
2021	0.221	0.323	1.87	0.48	**2.89**
2022	0.228	0.333	5.79	0.49	**6.84**
2023	0.235	0.343		0.51	**1.09**
2024	0.242	0.353		0.52	**1.12**
2025	0.249	0.363		0.54	**1.15**
2026	0.257	0.374		0.56	**1.19**
2027	0.264	0.385	4.53	0.57	**5.75**
2028	0.174	0.253	4.64	0.38	**5.44**
Total	**2.08**	**3.04**	**16.83**	**4.52**	**26.47**

CHAPTER 10. REVIEW OF CONCESSION AGREEMENT

10.1 Scope of Work (Article 2)

Article 2 provides the scope of work which includes the following.

- Construction of the Project Highway on the Site set forth in Schedule-A and as specified in Schedule-B together with provision of Project Facilities as specified in Schedule-C, and in conformity with the Specifications and Standards set forth in Schedule-D;
- Operation and maintenance of the Project Highway in accordance with the provisions of Concession Agreement (CA)
- Performance and fulfillment of all other obligations of the Concessionaire in accordance with the provisions of this Concession Agreement (CA) and matters incidental

10.2 Letter of Award

After evaluation of the bids received, Authority will select one bidder considering their score in technical and financial bids. Further Authority will issue a Letter called LOA (Letter of Award) to the selected bidder requiring the execution of agreement within stipulated time. The issued LOA copy given in **ANNEXURE 6.**

10.3 Conditions precedent (Article 4):

Conditions precedent to be fulfilled by the Authority:

- Providing adequate Right of Way
- Providing necessary approvals as per the Concession Agreement (CA)

Conditions precedent to be fulfilled by the Concessionaire:

Provide performance security to the Authority

- Executed and procured Escrow Agreement & Substitution Agreement
- Procured all applicable permits specified in Schedule E
- Executed financing Agreements and delivering 3 copies of Financial Package
- Delivered to the Authority confirmation in original of the correctness of their representations and warranties set forth in Agreement and a legal opinion from the legal opinion from the legal counsel of the Concessionaire

10.4 Major Obligations of the Concessionaire (Clause 5.1)

- The Concessionaire shall obtain necessary permits in conformity with the applicable laws
- Procure appropriate rights for obtaining materials
- Perform and fulfill its obligations under financing Agreements
- To make reasonable efforts to facilitate the acquisition of land required for execution
- Transfer the Project Highway upon termination of the Contract Agreement (CA)

10.5 Obligations relating to the Competing Roads (Clause 6.3)

Neither Authority nor any Governmental Instrumentality shall construct the Competing Road before 10th Anniversary of the Appointed Date.

10.6 Performance Security (Article 9)

- The Concessionaire shall submit the Performance security to the Authority within 180 days from the date of the Agreement
- The Performance security shall remain in force and effect for a period of one year from the Appointed Date
- Performance Security shall be released upon the Concessionaire expending on Project Construction an Aggregate sum that is not less than 20% of the Total Project Cost.

10.7 Provisional Completion Certificate (Clause 14.3)

- Upon completion of works in accordance with the specifications and standards set forth in the Schedule B, C and D and after determining the tests on completion successful the Independent engineer shall issue the Completion Certificate in the form set forth in Schedule J of the Concession Agreement (CA).

A copy of PCOD is enclosed in **Annexure-7.**

10.8 Completion Certificate (Clause 14.4)

- Upon completion of Punch list items appended to the Provisional Completion Certificate within 90 days of issuance of Provisional Complete Certificate, Completion Certificate shall be issued to the Concessionaire. A copy of Completion Certificate is enclosed in **Annexure-8.**

10.9 Commercial Operation Date (COD) (Clause 15.1)

- COD shall be the date on which the Provisional Completion Certificate is issued by the Independent Engineer.
- With COD the Project shall enter into commercial service and the Concessionaire is entitled to demand and collect Fee.

10.10 Change of scope (Article 16)

Change of Scope Proposal during Construction period and consented by the Authority are given in **ANNEXURE 10.**

10.11 O&M Obligations of the Concessionaire (Clause 17.1)

- Permitting safe, smooth and uninterrupted flow of traffic on the Project road
- Collecting and appropriating the Fee
- Minimizing the disruption to traffic in the event of accidents
- Undertaking routine maintenance including prompt repairs of pot holes, cracks, joints, drains, embankments, structures, pavement markings, lighting, road signs and other traffic control devices
- Undertaking major maintenance such as resurfacing of pavements, repairs and refurbishments of tolling system and other equipment
- Preventing any unauthorized use of the Project road.

- Protection of environment and provision of equipment and materials
- Complying with safety Requirements in accordance with the provisions of the CA.

10.12 Maintenance Requirements (Clause 17.2)

The Contractor shall procure that at all times during the Operations Period; the Project Highway conforms to the maintenance requirements set forth in Schedule K (the "**Maintenance Requirements**").

10.13 Maintenance Manual (Clause 17.3)

No later than 180 (one hundred and eighty days prior to the Scheduled Two Lanning Date, the Contractor shall, in consultation with the Independent Engineer, evolve a repair and maintenance manual (the "**Maintenance Manual**") for the regular and preventive maintenance of the Project in conformity with the Specifications and Standards, Maintenance Requirements, Safety Requirements and Good Industry Practice, and shall provide 5 (five) copies thereof to the Authority and 2 (two) copies to the Independent Engineer. The Maintenance Manual shall be revised and updated once every 3 (three) years and the provisions of this Clause shall apply, mutatis mutandis, to such revision.

10.14 Maintenance Programme (Clause 17.4)

On or before COD and no later than 45 days prior to the beginning of each Accounting year during the Operation Period as the case may be the Concessionaire shall provide to the Authority and Independent Engineer its proposed annual programme of preventive, urgent and the schedule maintenance. The Concessionaire has been submitting the Annual Maintenance Programme regularly as per the above clause.

10.15 Damages for breach of Maintenance Obligations (Clause 17.8)

In the event that the Contractor fails to repair or rectify any defect or deficiency set forth in the Maintenance Requirements within the period specified therein, it shall be deemed to be in breach of this Agreement and the Concessionaire shall be entitled to recover Damages, to be calculated and paid for each day of delay until the breach is cured, at the higher of the following.

- 0.5% (zero decimal five percent) of the Average Daily Fee, and
- 0.1% (zero point one per cent) of the cost of such repair or rectification as estimated by the Independent Engineer.

10.16 Monthly Status Reports (Clause 19.1)

During the Operation Period, the Contractor shall, no later than 7 (seven) days after the close of each month, furnish to the Concessionaire, the Authority and the Independent Engineer a monthly report stating in reasonable detail the condition of the Project including its compliance or otherwise with the Maintenance Requirements, Maintenance Manual, Maintenance Program and Safety Requirements, and shall promptly give such other relevant information as may be required by the Concessionaire, Independent Engineer or the Authority. In particular, such report shall separately identify and state in reasonable detail the defects and deficiencies that require rectification.

10.17 Monthly Fee Statement (Clause 19.5)

During the Operations Period, the Contractor shall furnish to the Concessionaire and the Authority, if required by the Contractor, within 7 (seven) days of completion of each month, a statement of Fee substantially in the format set out in the Concession Agreement ("Monthly Fee Statement").

10.18 Annuity (Clause 25.1.1)

The Authority agrees and undertakes to pay the Concessionaire for each annuity Payment period on each annuity payment date as set forth in schedule Y the sum of Rs 8.46 Crores.
As per Clause 25.2.1, In case the COD is different from the Schedule Y, then the annuity payment schedule shall be suitably modified to be a period of 6 months from the preceding Annuity Payment date. Total annuity nos. during the concession period are 26.

Table 10.1: Status of Annuity Payments

S. No.	Particulars	Payment Paid on
1	1st Annuity	1-Dec-14
2	2nd Annuity	28-May-15
3	3rd Annuity	30-Nov-15
4	4th Annuity	8-Jun-16
5	5th Annuity	22-Nov-16
6	6th Annuity	29-May-17
7	7th Annuity	17-Feb-18
8	8th Annuity	29-May-18
9	9th Annuity	29-Nov-18
10	10th Annuity	21-May-19
11	11th Annuity	20-Nov-19
12	12th Annuity	22-May-20
13	13th Annuity	18-Nov-20

10.19 Concession Fee (Article 26)

- In consideration of the grant of Concession the Concessionaire shall pay Concession Fee of Rs. 1.00 per year during the Concession Period
- Concession Fee shall be paid in advance within 90 days of the commencement of the Accounting Year.
- Yearly the Concessionaire is paying the Concession Fee to the MPRDC

10.20 Toll Fee (Clause 27.1.1)

Toll Fees Shall be revised annually in accordance with Clause 27.2.1.

10.21 Change in Law (Article 41)

The Contractor acknowledges that the Contractor shall be responsible for any consequences arising from any Change in Law and the Contractor shall at its own costs and expenses, undertake the compliance with any such Change in Law, however, in the event any receivables are obtained by the Concessionaire from the Authority, towards the losses incurred by the Concessionaire on account of Change in Law, then the Contractor shall ensure that such receivables are passed to the Concessionaire.

CHAPTER 11. INSURANCE

11.1 Details of Insurance

As per clause 32.1 of the Concession Agreement, the Concessionaire shall effect and maintain at its own cost during the Operation Period such insurances for such maximum sums as may be required under the Financing Agreements and the Applicable laws, and such insurances as may be necessary or prudent in accordance with Good Industry Practice.

Accordingly, the Concessionaire has procured the following insurances for mitigating the risks. The copies of Insurance are attached in **Annexure-9.**

Table 11.1: Insurance Details

Name of the Policy	Insurance Company	Policy No	Effective Period		Description of the Policy
			From	To	
Civil Engineering Completed Risk Policy	Aspire Insurance Brokers Pvt Ltd	321300441910001988	27.3.2020	26.3.2021	Road and structure, Toll Building & Booths, Road furniture, Sign Boards
Employees Compensation Policy	HDFC ERGO General Insurance Co Ltd	3114203387691200000	19.05.2020	18.05.2021	Employees compensation
Electronic Equipment Insurance Policy Schedule	The Oriental Insurance Company Limited	171200/44/2021/37	08.09.2020	07.09.2021	EEI Equipment installed in the Project Highway

CHAPTER 12. CONCLUSION

12.1 General

Based on detailed site inspection, review of various documents and reports as described in the preceding chapters technical over view of the Project is provided below.

12.2 Pavement Condition

The overall project pavement condition is good. RCC drains are constructed in built up locations and earthen drains in rural locations resulting in, effective drainage system along the project road. Shoulder condition is fair.

12.3 Condition of Structures

General condition of Bridges is good. No major structural defects were noticed. General condition of Culverts is good. Observed vegetation growth in vents of Box and Hume Pipe culverts and they are getting cleared during regular maintenance period.

12.4 Traffic Growth

Based on real time, traffic data was extracted from Schedule N of CA, the traffic growth observed is 18.23%, however 5% growth is considered while evaluating forecast of traffic volumes.

12.5 Project Facilities:

Toll Plaza is located at Km. 47+950 and is operational. Toll Plaza is operated by ETC Toll collection system and connected by network system monitored in administrative building. Truck lay byes/Bus bays are in good condition. Medical Aid posts found functional. Avenue plantation and landscaping at Toll Plaza is provided and being maintained. Highway lighting is provided at truck laybys and toll plaza locations and found functional.

12.6 Road safety

Pavement marking is in good condition and number of sign boards are provided as per IRC SP 73-2007. The condition of signboards & other road appurtenances like metal beam crash barriers is fair.

12.7 Maintenance

- The routine maintenance being carried out by O&M contractor effectively, based on documents reviewed, time to time observations made by client/Authority, being complied and no outstanding NCR's are to be attended as on date.

- Major maintenance (MM) /Periodic maintenance will be carried out in 2021 and 2028.

12.8 Epilogue

The project is designed and constructed as per the stipulated specifications besides maintenance work is being carried out timely and effectively to keep the road in traffic worthy and safe at all time.

Annexure 1: Pavement Condition

Condition: G=Good, F=Fair, P=Poor & VP=Very poor Rutting: M=Moderate & S=Severe Drain: LD=Lined open Drain, ULD=Unlined Drain, CD=Covered Drain, NO=No drain, PF=Partial Function, F= Functional

Chainage (Km.)		Pavement Condition						Riding Quality		Pavement Edge Drop (cm)	Shoulder		Embankment Condition (Good/Fair / Poor)	Road Side Drain		Remarks
From	To	Cracking (%)	Raveling (%)	Potholing (%)	Bleeding (%)	Rutting	Patching (%)	Speed (km/hr)	Quality (G/F/P /VP)		Composition	Condition (Fair / Poor/ Damaged)		Type (LD/ULD/CD/NO)	Condition (PF/F)***	
0+000	1+700								G		E	F	F	ULD	F	
32+000	33+000								G		E	F	F	ULD	F	
33+000	34+000								G		E	F	F	ULD	F	
34+000	35+000								G		E/E+P	F	F	LD	PF	
35+000	36+000								G		E/E+P	F	F	LD	PF	
36+000	37+000								G		E	F	F	ULD	PF	
37+000	38+000								G		E	F	F	ULD	PF	
38+000	39+000								G		E	F	F	ULD	F	
39+000	40+000								G		E	F	F	ULD	F	
40+000	41+000								G		E	F	F	ULD	PF	
41+000	42+000								G		E	F	F	ULD	F	
42+000	43+000								G		E	F	F	ULD	F	
43+000	44+000								G		E	F	F	ULD	PF	
44+000	45+000								G		E	F	F	ULD	F	
45+000	46+000								G		E	F	F	ULD	F	
46+000	47+000								G		E	F	F	ULD	F	
47+000	48+000								G		E	F	F	ULD	F	
48+000	49+000								G		E	F	F	ULD	F	
49+000	50+000								G		E	F	F	ULD	F	
50+000	51+000								G		E	F	F	ULD	PF	
51+000	52+000								G		E	F	F	ULD	PF	
52+000	53+000								G		E	F	F	ULD	PF	
53+000	54+000								G		E	F	F	ULD	PF	
54+000	55+000								G		E/E+P	F	F	LD	PF	
55+000	56+000								G		E/E+P	F	F	LD	PF	
56+000	57+000								G		E	F	F	ULD	F	
57+000	58+000								G		E	F	F	ULD	F	
58+000	59+000								G		E	F	F	ULD	PF	
59+000	60+000								G		E	F	F	ULD	F	
60+000	61+000								G		E	F	F	ULD	F	
61+000	62+000								G		E	F	F	ULD	PF	
62+000	63+000								G		E	F	F	ULD	F	
63+000	64+000								G		E	F	F	ULD	F	
64+000	65+000								G		E	F	F	ULD	F	
65+000	66+000								G		E	F	F	ULD	PF	
66+000	67+000								G		E	F	F	ULD	F	

Condition: G=Good, F=Fair, P=Poor & VP=Very poor Rutting: M=Moderate & S=Severe Drain: LD=Lined open Drain, ULD=Unlined Drain, CD=Covered Drain, NO=No drain, PF=Partial Function, F= Functional

Chainage (Km.)		Pavement Condition						Riding Quality		Pavement Edge Drop (cm)	Shoulder		Embankment Condition (Good/Fair / Poor)	Road Side Drain		Remarks
From	To	Cracking (%)	Raveling (%)	Potholing (%)	Bleeding (%)	Rutting	Patching (%)	Speed (km/hr)	Quality (G/F/P /VP)		Composition	Condition (Fair / Poor/ Damaged)		Type (LD/ULD/CD/NO)	Condition (PF/F)***	
67+000	68+000								G		E/E+P	F	F	LD	PF	
68+000	69+000								G		E/E+P	F	F	LD	F	
69+000	70+000								G		E/E+P	F	F	LD	PF	
70+000	71+000								G		E	F	F	ULD	F	
71+000	72+000								G		E	F	F	ULD	PF	
72+000	73+000								G		E	F	F	ULD	F	
73+000	74+000								G		E	F	F	ULD	F	
74+000	75+000								G		E	F	F	ULD	F	
75+000	76+000								G		E	F	F	ULD	PF	
76+000	77+000								G		E	F	F	ULD	F	
77+000	78+000								G		E	F	F	ULD	PF	
78+000	79+000								G		E	F	F	ULD	F	
79+000	80+000								G		E	F	F	ULD	PF	
80+000	81+000								G		E	F	F	ULD	F	
81+000	82+000								G		E	F	F	ULD	F	
82+000	83+000								G		E	F	F	ULD	PF	
83+000	84+000								G		E	F	F	ULD	F	
84+000	85+000								G		E	F	F	ULD	F	
85+000	86+000								G		E/E+P	F	F	LD	PF	
86+000	87+000								G		E/E+P	F	F	LD	PF	

Annexure 2 : Condition of Bridges

S. No.	Chainage	Type of Structure	Substructure	Superstructure	Expansion Joint	Approach slabs	Drainage spouts	Wearing coat	Bearings	Quadrant Pitching	Toe wall	Aprons
1	Km. 0+274	Major Bridge	Good	Good	Fair	Good	Fair	Good	Good	Fair	Fair	Fair
2	Km. 6+000	Minor Bridge	Good	Good	Fair	Good	Fair	Good	Good	Fair	Fair	Fair
3	Km. 16+950	Minor Bridge	Good	Good	Fair	Good	Fair	Good	Good	Fair	Fair	Fair
4	Km. 21+600	Minor Bridge	Good	Good	Fair	Good	Fair	Good	Good	Fair	Fair	Fair
5	Km. 30+900	Minor Bridge	Good	Good	Fair	Good	Fair	Good	Good	Fair	Fair	Fair
6	Km. 42+600	Minor Bridge	Good	Good	Fair	Good	Fair	Good	Good	Fair	Fair	Fair
7	Km. 48+787	Minor Bridge	Good	Good	Fair	Good	Fair	Good	Good	Fair	Fair	Fair
8	Km. 59+013	Minor Bridge	Good	Good	Fair	Good	Fair	Good	Good	Fair	Fair	Fair
9	Km. 69+000	Minor Bridge	Good	Good	Fair	Good	Fair	Good	Good	Fair	Fair	Fair
10	Km. 69+779	Minor Bridge	Good	Good	Fair	Good	Fair	Good	Good	Fair	Fair	Fair
11	Km. 80+100	Minor Bridge	Good	Good	Fair	Good	Fair	Good	Good	Fair	Fair	Fair
12	Km. 82+263	Major Bridge	Good	Good	Fair	Good	Fair	Good	Good	Fair	Fair	Fair

Annexure 3: Condition of Box/Slab/Pipe culverts
Condition of Box/Slab culverts

S. No	Chainage (Km.)	Box/slab	Return wall	Quadrant pitching	Toe wall	Aprons	Parapet Wall
1	35+200	Good	Good	Fair	Fair	Fair	Fair
2	35+200	Good	Good	Fair	Fair	Fair	Fair
3	36+100	Good	Good	Fair	Fair	Fair	Fair
4	36+800	Good	Good	Fair	Fair	Fair	Fair
5	48+800	Good	Good	Fair	Fair	Fair	Fair
6	54+700	Good	Good	Fair	Fair	Fair	Fair
7	59+400	Good	Good	Fair	Fair	Fair	Fair
8	59+800	Good	Good	Fair	Fair	Fair	Fair
9	60+700	Good	Good	Fair	Fair	Fair	Fair
10	61+100	Good	Good	Fair	Fair	Fair	Fair
11	61+200	Good	Good	Fair	Fair	Fair	Fair
12	62+000	Good	Good	Fair	Fair	Fair	Fair
13	62+400	Good	Good	Fair	Fair	Fair	Fair
14	65+900	Good	Good	Fair	Fair	Fair	Fair
15	66+600	Good	Good	Fair	Fair	Fair	Fair
16	69+100	Good	Good	Fair	Fair	Fair	Fair
17	71+500	Good	Good	Fair	Fair	Fair	Fair
18	71+900	Good	Good	Fair	Fair	Fair	Fair
19	72+500	Good	Good	Fair	Fair	Fair	Fair
20	74+800	Good	Good	Fair	Fair	Fair	Fair
21	80+191	Good	Good	Fair	Fair	Fair	Fair
22	81+443	Good	Good	Fair	Fair	Fair	Fair
23	82+600	Good	Good	Fair	Fair	Fair	Fair
24	86+200	Good	Good	Fair	Fair	Fair	Fair
25	86+400	Good	Good	Fair	Fair	Fair	Fair
26	86+500	Good	Good	Fair	Fair	Fair	Fair
27	86+800	Good	Good	Fair	Fair	Fair	Fair
28	87+200	Good	Good	Fair	Fair	Fair	Fair
29	87+400	Good	Good	Fair	Fair	Fair	Fair
30	88+700	Good	Good	Fair	Fair	Fair	Fair

Condition of Hume Pipe Culverts

S. No.	Chainage (Km.)	Hume Pipe	Head wall	Protection works	Toe wall
1	0+200	Good	Good	Fair	Fair
2	0+500	Good	Good	Fair	Fair
3	0+900	Good	Good	Fair	Fair
4	1+350	Good	Good	Fair	Fair
5	34+300	Good	Good	Fair	Fair
6	34+800	Good	Good	Fair	Fair
7	38+500	Good	Good	Fair	Fair
8	41+500	Good	Good	Fair	Fair
9	44+800	Good	Good	Fair	Fair
10	46+500	Good	Good	Fair	Fair
11	49+800	Good	Good	Fair	Fair
12	49+800	Good	Good	Fair	Fair
13	50+500	Good	Good	Fair	Fair
14	50+800	Good	Good	Fair	Fair
15	51+900	Good	Good	Fair	Fair
16	52+500	Good	Good	Fair	Fair
17	52+700	Good	Good	Fair	Fair
18	55+500	Good	Good	Fair	Fair
19	56+200	Good	Good	Fair	Fair
20	56+500	Good	Good	Fair	Fair
21	56+800	Good	Good	Fair	Fair
22	57+400	Good	Good	Fair	Fair
23	58+100	Good	Good	Fair	Fair
24	58+200	Good	Good	Fair	Fair
25	58+500	Good	Good	Fair	Fair
26	58+900	Good	Good	Fair	Fair
27	59+200	Good	Good	Fair	Fair
28	59+600	Good	Good	Fair	Fair
29	60+200	Good	Good	Fair	Fair
30	60+400	Good	Good	Fair	Fair
31	60+900	Good	Good	Fair	Fair
32	63+700	Good	Good	Fair	Fair
33	72+900	Good	Good	Fair	Fair
34	73+200	Good	Good	Fair	Fair
35	73+500	Good	Good	Fair	Fair
36	73+900	Good	Good	Fair	Fair
37	74+300	Good	Good	Fair	Fair

S. No.	Chainage (Km.)	Hume Pipe	Head wall	Protection works	Toe wall
38	76+100	Good	Good	Fair	Fair
39	76+900	Good	Good	Fair	Fair
40	77+500	Good	Good	Fair	Fair
41	83+100	Good	Good	Fair	Fair
42	83+600	Good	Good	Fair	Fair
43	84+400	Good	Good	Fair	Fair
44	84+400	Good	Good	Fair	Fair
45	84+900	Good	Good	Fair	Fair
46	84+900	Good	Good	Fair	Fair
47	85+200	Good	Good	Fair	Fair
48	34+823	Good	Good	Fair	Fair
49	37+146	Good	Good	Fair	Fair
50	57+735	Good	Good	Fair	Fair
51	57+827	Good	Good	Fair	Fair
52	57+906	Good	Good	Fair	Fair
53	58+187	Good	Good	Fair	Fair
54	58+390	Good	Good	Fair	Fair
55	58+773	Good	Good	Fair	Fair
56	59+130	Good	Good	Fair	Fair
57	59+220	Good	Good	Fair	Fair
58	65+173	Good	Good	Fair	Fair
59	66+819	Good	Good	Fair	Fair
60	67+500	Good	Good	Fair	Fair
61	68+079	Good	Good	Fair	Fair
62	68+327	Good	Good	Fair	Fair
63	68+586	Good	Good	Fair	Fair
64	68+767	Good	Good	Fair	Fair
65	69+343	Good	Good	Fair	Fair
66	69+913	Good	Good	Fair	Fair
67	71+989	Good	Good	Fair	Fair
68	72+343	Good	Good	Fair	Fair
69	72+486	Good	Good	Fair	Fair
70	72+676	Good	Good	Fair	Fair
71	72+741	Good	Good	Fair	Fair
72	72+817	Good	Good	Fair	Fair
73	72+931	Good	Good	Fair	Fair
74	73+051	Good	Good	Fair	Fair
75	73+302	Good	Good	Fair	Fair

S. No.	Chainage (Km.)	Hume Pipe	Head wall	Protection works	Toe wall
76	73+394	Good	Good	Fair	Fair
77	73+625	Good	Good	Fair	Fair
78	73+734	Good	Good	Fair	Fair
79	73+827	Good	Good	Fair	Fair
80	74+114	Good	Good	Fair	Fair
81	74+635	Good	Good	Fair	Fair
82	74+903	Good	Good	Fair	Fair
83	74+990	Good	Good	Fair	Fair
84	75+313	Good	Good	Fair	Fair
85	75+403	Good	Good	Fair	Fair
86	75+500	Good	Good	Fair	Fair
87	77+675	Good	Good	Fair	Fair
88	78+063	Good	Good	Fair	Fair
89	79+799	Good	Good	Fair	Fair
90	80+992	Good	Good	Fair	Fair
91	81+582	Good	Good	Fair	Fair
92	84+616	Good	Good	Fair	Fair

Annexure 4: Toll Revenue Calculations

Toll Plaza-I:

1. **Tollable Traffic considered for Toll Revenue in No.s (AADT):**

Table-1: Details of Tollable Traffic (Base Year 2019-20)

Vehicle Type	Traffic (AADT)
	Km.47.950
Car/Taxi/Van	234
LCV	61
Bus	12
Truck	37
MAV	248

2. **Traffic Growth Rates**

Table-2: Details of Growth rates adopted

Year	Car	LCV	BUS	Truck	MAV
2019-25	5.00	5.00	5.00	5.00	5.00
2025-30	5.00	5.00	5.00	5.00	5.00

3. **Trip Distribution Ratio as per the Toll Data.**

Table-3: Details of Trip Distribution (Base Year 2019-20)

Vehicle Type	Single Trip	Local Pass	Total
Car/Taxi/Van	99%	1%	100%
LCV	100%	0%	100%
Bus	100%	0%	100%
Truck	100%	0%	100%
MAV	100%	0%	100%

4. **Toll Rates :**

Table-4: Details of Toll Fee (Base Year 2019-20)

Vehicle Type	Toll Fee at Km. 47+950
Car/Taxi/Van	30
LCV	75
Bus	155
Truck	190
MAV	375

Toll Plaza-1 Revenue:

Years	Car/Jeep	Car/Jeep (local pass)	LCV	Bus	Trucks	MAV	Total in RS	Total in Lakh.	Cumulative (in Lacs)
2019-20	2535570	59101	1657200	681360	2563085	33707815	41204131	412.041	412.041
2020-21	2662349	65935	1856064	733320	2796680	36915076	45029423	450.294	862.336
2021-22	2795466	69231	1948867	818110	3087105	40251630	48970410	489.704	1352.040
2022-23	3424446	76969	2174205	884281	3320520	43829553	53709974	537.100	1889.139
2023-24	3595668	85307	2282915	955023	3652572	47664639	58236125	582.361	2471.501
2024-25	3775451	89573	2538065	1030629	3922364	51773660	63129742	631.297	3102.798
2025-26	3964224	99001	2813022	1140656	4301526	56174421	68492850	684.928	3787.727
2026-27	4757069	103951	2953673	1228399	4612700	60885824	74541616	745.416	4533.143
2027-28	4994922	114606	3264586	1322064	5045141	65927931	51495713	514.957	5048.100

Annexure 5: O & M Costs

Routine Maintenance cost for 1 year

S. No.	Item		Unit	No	Frequency per year	Quantity	Rate	Amount	Remarks
1	General Cleaning in Carriageway & Shoulders Rural area	Monthly	Km	55.6	12	4	350	934,080	04 nos of Labour
2	General Cleaning in Carriageway & Shoulders Urban area	Twice in a month	Km	3.8	24	4	350	127,680	04 nos of Labour
3	Watering in Median Plants	Once in Week	Km	3.8	52	1	1939	383,146	01 nos of Labour
4	Watering in Avenue plants	Once in Week	Km	0	52	0	1939	-	
5	Median Maintenance (Grass cutting and plant trimming)	Once in Month	Km	3.8	12	0	21000	-	02 nos of Labour - 2 x 350 = 700 x 30 = 2,52,000
6	ROW Cleaning	Half yearly	Km	27.8	2	5	350	97,300	5 Nos of labour per KM (50% of the Project length)
7	Cleaning of Culverts	Half yearly	Nos	122	2	2	650	317,200	3 nos of Labour along with JCB or Excavator
8	Road Furniture Cleaning	Quarterly	Km	55.6	4	1	350	77,840	02 nos of Labour
9	Maintenance of Bus shelters	Monthly	Nos	7	6	1	350	14,700	2 nos/ Bus shelter/month
10	General Cleaning in Building & Facilities	Daily	Nos	2.00	6	15	350	63,000	02 nos of Labour for 30 days
11	Bridges	Half yearly	Nos	10	2	2	350	14,000	02 nos of Labour for removal of vegetation/Structure
								2,028,946	

1	TRUCK TIPPER 6-8 CUM CAPACITY	Monthly	Nos	1	12	1	15000	15,000	(2000000 is the cost of vehicle, considering 10% Rental per year) including maintenance

S. No.	Item		Unit	No	Frequency per year	Quantity	Rate	Amount	Remarks
2	Water Tanker Cap 12 KL for Median	Monthly	Nos	1.2	12	0	440000	-	(2200000 is the cost of vehicle, considering 20% Rental per year) including maintenance
3	Tractor Mounted Water tanker Cap 6 KL for RoW	Monthly	Nos		12		160000	-	(800000 is the cost of vehicle, considering 20% Rental per year) including maintenance
4	Mechanical Sweeper	Monthly	Nos		12		500000	-	(2500000 is the cost of vehicle, considering 20% Rental per year) including maintenance
5	Grass cutter	Monthly	Nos	1.2	12	0	12000	720	(12000/year)
6	Manhoise/ Skyscrapper	Monthly	Nos		12		400000	-	(2000000 is the cost of vehicle, considering 20% Rental per year) including maintenance
7	Bikes	Monthly	Nos	1.2	12	0	2500	2,400	Per Supervisor/Per Month
8	Building Maintenance	Yearly			12	1		-	
9	Toll plaza AMC	Yearly	Nos		12	1	5000	60,000	10000/month
								78,120	

1	Patrolling vehicle	Monthly	Nos	12			150000	0	(1500000 is the cost of vehicle, considering 10% Rental per year) including maintenance

S. No.	Item		Unit	No	Frequency per year	Quantity	Rate	Amount	Remarks
2	Ambulance	Monthly	Nos	12		1	10000	10000	(1200000 is the cost of vehicle, considering 10% Rental per year) including maintenance (1 Ambulance/toll plaza)
3	Tow away trucks and Crane	Monthly	Nos	12		1	20000	20000	(2000000 is the cost of vehicle, considering 10% Rental per year) including maintenance
4	Consumables for Medical Aid Post and Ambulance	Monthly	Nos	12		1	500	6000	2500 Per month for per set (Per set - Per toll plaza)
5	Consumables for Route Patrolling & Crane	Monthly	Nos	12		1	500	6000	2500 Per month for per set (Per set - Per toll plaza)
								42,000	
								2,149,066.00	

Incidental cost for 1 year

	Item		Unit	No	Frequency	Quantity	Rate	Amount	Remarks
1	Road marking	Half yearly	Sqm.	1	1	4368	516	22,53,888	10 % of Total Project length on B/S for 1 year
2	Carriageway Maintenance (Pot Holes etc)	Yearly	Sqm.	1	1	295	168	49,560	5% of Flexible Pavement
3	Maintenance of Earthen Shoulder	Half yearly	Cum.	1	3	834	225	5,62,950	5% of total Shoulder length throughout the project
4	Sign Board	Quarterly	Km.	1	1	13	4000	52,000	2.5 % of Total sign boards per half year (considerd 500 nos)
5	MBCB	Monthly	RMT			37.5	2400	90,000	2.5% of Total qty per year - (considered 2400 per number)
6	Mile Stone (KM Stone/ HM Stone / ROW stone etc.)	Quarterly	Nos.	55.6	4	14	2250	1,26,000	5 % of total stones per year (unable to understand the backup)
7	ROW Fencing (If available)	Quarterly	Km.		4			-	10 % of total ROW fencing per year
8	Kerb	Yearly	Km.	5895	1	0.0	250	-	2 % of total Kerbings per year
9	Electrical Poles	Yearly	Nos.	0	1	0	55000	-	3 % of total poles per year
10	Replacement of Rigid pavement Panels	Yearly	Ls.	1	1	0.00	4000	-	Considered 1% of the total volume
11	Providing Reinforced cement concrete crash barrier at the edges of the bridge structures constructed with M-40 grade concrete with HYSD-Fe 500 TMT reinforcement concrete per Rmt conforming to IRC:21 and fixing with dowel bars 16 mm dia to old concrete using epoxy grout as per drawing and	Yearly	Rmt.	0		0	3985	-	3% of Length replacement in every 5 years (Quantity to be estimated)

	Technical Specifications and as directed by the Engineer.								
	Total amount for 1 Year							**31,34,398**	

Operational Expenses

S. No.	PARTICULARS	Amount
1	Man Power	₹ 2,976,000
2	Fuel for Generator & Vehicles	₹ 1,236,000
3	Electricity	₹ 330,000
4	Stationary	₹ 10,000
5	Replacement of Electrical Fixtures	₹ 30,080
6	Refurbishment of Toll Plaza Equipment	₹ 75,000
	Total Amount	**₹ 4,657,080**

Major Maintenance BOQ

S. No.	DESCRIPTION	Unit	QUANTITY	RATE	AMOUNT	QUANTITY	RATE	AMOUNT
	Pavement (Asphalt & Concrete)							
1	Providing and applying tack coat with Rapid Setting Bitumen Emulsion using emulsion pressure distributor on the prepared bituminous/granular surface cleaned with mechanical broom, Ref. to Technical specification 503.			-			-	
(a)	On Bituminous surface @ 2.0 kg to 3.0 kg/10 sq.m.	Sqm	-	14.00		-	14.00	
2	Providing and laying bituminous concrete using a batch type Hot Mix Plant using crushed aggregates of size (table 500-17), premixed with VG Grade Bitumen and filler, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers, Pneumatic	Cum	-	7,480.00		-	7,480.00	

S. No.	DESCRIPTION	Unit	QUANTITY	RATE	AMOUNT	QUANTITY	RATE	AMOUNT
	Tyre Rollers to achieve the desired compaction as per Technical specification clause No. 507 and mix design conforming the IRC - 111 and IRC 37.							
3	Providing and laying bituminous concrete using a batch type Hot Mix Plant using crushed aggregates of size	Cum	5,171.25	6,800.00	3,51,64,500	5,171.25	6,800.00	3,51,64,500
4	Providing Micro surfacing	Sqm	2,03,350.00	160.00	3,25,36,000	2,03,350.00	160.00	3,25,36,000
5	Repair of joint Grooves with Epoxy Mortar Repair of spalled joint grooves of contraction joints, longitudinal joints and expansion joints in concrete pavements using epoxy mortar or epoxy concrete)	MTRS	-	250.00			250.00	
6	Texturing of Rigid pavement (considering 50% for 7 years)	Sqm	-	130.00		-	130.00	
	Total				**6,77,00,500**			**6,77,00,500**
	Chapter 9 Junctions, Traffic Signs Marking and Other Appurtenances			-			-	
1	Providing and laying of cement concrete kerb without channel (M-20 Grade) over WMM foundation using kerb laying machine & proper curing complete, as per drawing & technical specification clause no.409, 1700 and as per the instructions of Employer's representative. - Consider 5% for construction period.	Rmt	-	380.00		-	380.00	
2	Providing and laying lane markings of hot applied thermoplastic compound 2.5 mm thick including reflectorizing glass beads @ 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35 .The finished surface to be level, uniform and free from streaks and holes, Ref. to Technical specification 803.	Sqm	13,236.67	516.00	68,30,120	13,236.67	516.00	68,30,120
3	Road Studs	Nos	-	750.00		-	750.00	
4	Kerb painting		-	250.00		-	250.00	
	Total Chapter 9			**-**	**68,30,120**		**-**	**68,30,120**
	Grand Total				**7,45,30,620**			**7,45,30,620**

Annexure 6: Letter of Award

MADHYA PRADESH ROAD DEVELOPMENT CORPORATION LIMITED
(Govt. of M.P. Undertaking)
16-A, Arera Hills, Bhopal - 462 011
Tel.: (O) 0755-2765196, 205, 213, 216 (EPBX) Fax : 91-755-2572643
Website : www.mprdc.nic.in.

No. MPRDC/BOT/U-N-S-K/2012/ 5797
Bhopal, dated 08 August,2012

M/s Dilip Buildcon Ltd.,
E-5/99, Arera Colony,
Bhopal
Fax: 4247574

Sub: **Regarding, Strengthening, Widening, Maintaining and Operating of Uchera-Nagod-Singhpur-Kalinjer (SH-56) Road on BOT (Toll + Annuity)basis**

In response to your Pre-Qualification you have submitted Technical and Financial Bid for development of **Uchera-Nagod-Singhpur-Kalinjer (SH-56) Road on BOT (Toll + Annuity) basis.** In this connection, kindly refer to the clarification, addendum etc. issued from time to time before submission of the tender document.

Also refer to your bid documents containing an unconditional price bid of **₹ 8,46,00,000.00 (Rupees eight crores forty six lacs only)** as Annuity Amount payable in terms of Clause 25 of the Concession Agreement.

Pursuant to our acceptance of your tender and decision to award the work to you, we request you to send your acceptance and sign the Concession Agreement within the time stipulated in the Tender.

Yours faithfully,

Encl: **Duplicate copy of LoA**

(Arun Paliwal)
Dy. General Manager

Connecting People Through quality infrastructure

Annexure 7: Provisional Completion Certificate

REDECON (INDIA) PRIVATE LIMITED
A MULTI-DISCIPLINARY CONSULTANCY AND CONSTRUCTION MANAGEMENT ORGANISATION
Registered Office : H-54 A, Kalkaji, New Delhi - 110 019 (India) Fax : 91-11-26239888
Tel. : 41605600, 41605601, 41605602 E-mail : redecon1@rediffmail.com www.redeconindia.com

Project Office: - Duplex No. 2 Sunny Residency, Mathura Vihar, Near Ghadi Chowk, Vijay Nagar, Jabalpur
Phone:-0761- 4040854, Email: - redeconjabalpur@gmail.com

Letter no: -MPRDC /IE/MP/45/2014 Date: - 15.05.2014

To,

The Project Manager
M/S DBL Nagod Kalinjer Tollways Limited
Site Office 52 mile stone village Maihtain
Block – Nagod, Dist – Satna (M.P.) Nagod Kalinjer
Road 45 km on Satna (M.P.)

Project: Development of Uchera-nagod-kalinjer (SH-56) on BOT (Toll+Annuity) ***Basis*** *road section km* ***32+000 to 85+803***

Subj.:- ***Issue of Provisional Certificate of above road project section km 32+000 to 85+803***

Ref:- Your letter no. DBL/IE/2014/108 on dated 14.04.2014

Dear Sir,

As per Concession Agreement dated 24th September 2012 Article 14 Clause 14.3 read in Conjunction with Schedule 'J' the **Provisional Certificate** of Section km 32+000 to 85+803 is Forwarded as Appendix –A with Punch List as Appendix-B for your information and necessary Action please.

REDECON (INDIA) Pvt. Ltd.

Your's

R. D. Dohare
Team Leader
15-5-2014

R.D.DOHARE
Team Leader
Redecon (India) Private Limited

Encl: **1. Provisional Certificate Appendix-A**
2. Punch List Appendix-B

Copy To: 1. Chief Engineer (BOT), MPRDC, Bhopal.
2. General Manager (North), MPRDC, Jabalpur.
3. Divisional Manager, MPRDC, Rewa (Division-1)

Annexure 8: Completion Certificate

REDECON (INDIA) PRIVATE LIMITED
A MULTI-DISCIPLINARY CONSULTANCY AND CONSTRUCTION MANAGEMENT ORGANISATION
Registered Office : H-54A, Kalkaji, New Delhi - 110 019 (India) Fax : 91-11-26239888
Tel. : 41605600, 41605601, 41605602 E-mail : redecon1@rediffmail.com www.redeconindia.com
Project Office: - Duplex No. 2 Sunny Residency, Mathura Vihar, Near Ghadi Chowk, Vijay Nagar, Jabalpur
Phone:-0761- 4040854, Email: - redeconjabalpur@gmail.com

Letter no: -MPRDC /IE/MP/72/2014 Date: - 05.08.2014

To

The Project Manager
M/S DBL Nagod Kalinjer Tollways Limited
Site Office 52 Mile Stone Village Maihtain
Nagod, Dist- Satna(M.P) Nagod Kalinjer
Road 45 Km On satna (M.P)

Project : Development of Uchera- Nagod-Kalinjer (SH-56) On BOT (Toll+Annuity) Basis
road Section Km. 32+000 to 85+803

Sub: - Issue of Completion Certificate of above road project section km. 32+000 to 85+803

Ref:- (1) Your Letter No. – MPRDC/IE/MP/45/2014
(2) Our Letter No. – DBL/MPRDC/UNK/2014/124
(3) Our Letter No. – DBL/IE/UNK/2014/127

Dear Sir,

With reference to above letter, I the I.E, Redecon (India) Private Limited carried out the Joint Visit of project in presence of MPRDC and concessionaire on dated 04/08/2014

We are all satisfied with the completed balance work of "Punch List" and final certificate may be Issued.

R.D. DOHARE
TEAM LEADER
REDECON (INDIA) PRIVATE LIMITED
05.8.2014
R.D. DOHARE
TEAM LEADER
REDECON INDIA PVT. LTD
JABALPUR

Enclosed:-

1. COMPLIETION CERTIFICATE
2. STATUS OF PUNCH LIST

COPY TO:-

1. THE CHIEF ENGINEER (BOT + TOLL) MPRDC LTD. BHOPAL
2. THE GENERAL MANAGER (NORTH) MPRDC, JABALPUR
3. THE DIVISIONAL MANAGER MPRDC REWA DIVISION 1ST

Annexure 9: Insurance

पॉलिसी अनुसूची/ Policy Schedule - Civil Engineering Completed Risk

Policy Number:
321300441910001988

जारीकरण कार्यालय/Issuing Office

कार्यालय कोड /Office Code: 321300

कार्यालय पता /Office Address: BHOPAL DIVISION II B-8, Indrapuri, B H E L, Bhopal, Madhya Pradesh - 462022.
State Code: 23 , Madhya Pradesh
GSTIN: 23AACN0967F1ZB
Contact Number: 755 2682822
eMail: 321300@nic.co.in
Mobile Number:

व्यवसाय स्रोत/Business Source: 910355

बिक्री चैनल/Sales Channel Code: 91035500000001

नाम /Name: Aspire Insurance Brokers Pvt Ltd - HO Contact Number: 8291914810

सह दलाल कोड / Co Broker Code:

Customer Care Toll Free Number:
1800 345 0330
email:customer.support@nic.co.in

ग्राहक का नाम /Customer Name: DBL UCHERA NAGOD TOLLWAYS LTD

ग्राहक आईडी/Customer ID: 9701881839

पैन /PAN: AALCD3778L

पता/ Address: PLOT NO 5, INSIDE GOVIND NARAYAN SINGH GATE,CHUNA BHATTI, KOLAR ROAD, BHOPAL, City: BHOPAL, District: BHOPAL, State: MADHYA PRADESH, PIN: 462016 Cell: 9826292328

फोन /Phone:

ई-मेल /E-Mail:

पॉलिसी: 27/03/2020 के 00:00 से 26/03/2021 की मध्य रात्रि तक प्रभावी/Policy Effective from 00:00 hours, on 27/03/2020 to midnight of 26/03/2021

प्रीमियम/ Premium	₹ 9,93,322.00	कवर नोट संख्या और तारीख/ Cover Note Number and Date	NA
CGST	₹ 89,399.00		
SGST/UTGST	₹ 89,399.00		
IGST	₹ 0.00		
केरला बाढ़ उपकर/Kerala Flood Cess	₹ 0.00	प्रस्ताव संख्या और तारीख/Proposal Number and Date	8888200327086067 Dt. 27/03/2020
कम:जीएसटी_टीडीएस / Less:GST_TDS	₹ 0.00		
पुनर्प्राप्त योग्य स्टाम्प ड्यूटी /Recoverable Stamp Duty	₹ 0.00	रसीद संख्या और तारीख/Receipt Number and Date	321300811910007666 Dt. 27/03/2020
कुल /Total Amount	₹ 11,72,120.00	पिछली पॉलिसी संख्या और समाप्ती तारीख/ Previous Policy Number and Expiry Date	NA

(Rupees Eleven Lakh Seventy Two Thousand One Hundred Twenty Only.)
Location: Uchera-Nagod-Singhpur-Kalinjer (SH-56) Road, Madhya Pradesh Satna, Satna, 485001.

Sr.No	Type of Risk	Description Of Risk	Earthquake Zone	Sum Insured of the risk(₹)	Excess(₹)
1	Roads	ROAD AND STRUCTURE Toll Building & Booths, TMS, HTMS, Office & It Equipment, Electronic	Zone IV	92,34,45,000.00	1,00,000.00
2	Roads	Equipment, Road Furniture, Fixtur, Electrical Poles Lighting & Fittings, Signboard & Safety Barrier	Zone IV	6,96,55,000.00	1,00,000.00

क्लाउ खंडों,पृष्ठांकनों एवं वारंटी / Clauses, Endorsements and Warranties Applicable:Policy is subject to following conditions : POLICY IS SUBJECT TO THE FOLLOWING CONDITIONS:

1.Excess applicable under the policy is: (a) Upto SI of Rs 500 Cr = 10% of Claim subject to Minimum of Rs 5 lacs & (b) SI above 500 Cr & upto 1500 Cr = 10% of Claim subject to Minimum of Rs 10 lacs. Entire Road package will be treated as One location for application of Excess.
2 Policy is Applicable for Roads & Road side structures & Toll plazas & Bridges & Flyovers on Land.
3.No Coverage for (Road) Transportaion Tunnels
4.No Coverage for Marine Vessel Impact Damage.
5.Each 72 hour period will be treated as One occurrenceIevent for STFI & EQ for application of Excess.

PROJECT DETAILS COVERED UNDER THE POLICY AS FOLLOWS:

Printed on 27/03/2020 by ID: 75159

Page no: 1

HDFC ERGO General Insurance Company Limited

May 13, 2020

DBL UCHERA NAGOD TOLLWAYS LTD

PLOT NO. 5, GOVIND NARAYAN SINGH GATE,
CHUNA BHATTI, BHOPAL,
BHOPAL,
MADHYA PRADESH,462016.

Dear Customer,

Sub: Employees Compensation Insurance Policy No: 3114203387691200000

We thank you for having preferred us for your *Insurance* requirements. We at HDFC ERGO General Insurance believe "***Insurance***" as not only to be an assurance to indemnify in the event of unfortunate circumstances, but one that signifies protection and support, which you can count on when you need it most.

The Insurance Policy enclosed herewith is a written agreement providing confirmation of our responsibility towards you that puts insurance coverage into effect against stipulated perils.

Please note that the policy has been issued based on the information contained in the proposal form and / or documents received from you or your representative / broker.

Name of the Intermediary	:	GLOBAL INSURANCE BROKERS PVT LTD
Intermediary Code	:	200113159601

Where the proposal form is not received, information obtained from you or your representative /broker, whether orally or otherwise, is captured in the policy document.

If you wish to contact us in reference to your existing policy and /or other general insurance solutions offered by us, you may write to our correspondence address as mentioned below. Alternatively, you may visit our website www.hdfcergo.com . To enable us to serve you better, you are requested to quote your Policy Number in all correspondences.

Thanking you once again for choosing HDFC ERGO General Insurance Company Limited and looking forward to many more years of association.

Yours sincerely,

Rasgotra

Authorised Signatory

HDFC ERGO General Insurance Company Limited (Formerly HDFC General Insurance Limited) | UIN : IRDAN125P0017V02201112 | IRDAI Reg No.146 | CIN : U66030MH2007PLC177117

Registered & Corporate Office: 1st Floor,HDFC House, 165 - 166 Backbay Reclamation, H. T. Parekh Marg, Churchgate, Mumbai - 400 020

Customer Service Address: D-301, 3rd Floor, Eastern Business District (Magnet Mall), LBS Marg, Bhandup (West), Mumbai - 400 078

Toll Free Number: 1800 2700 700
Telephone : +91 22 6638 3600 Fax: 91 22 6638 3699
Email : care@hdfcergo.com

HDFC ERGO General Insurance Company Limited

Certificate of Insurance cum Policy Schedule

Policy No. 3114203387691200000 **Employees Compensation Insurance**

Insured Name	DBL UCHERA NAGOD TOLLWAYS LTD (PAN Number:AACCD6124B)	**Business**	OTHERS
Correspondence Address	PLOT NO. 5, GOVIND NARAYAN SINGH GATE,CHUNA BHATTI, BHOPAL,BHOPAL,MADHYA PRADESH,462016.		

Mobile		**Phone**		**E Mail**		**Policy Issuance Date**	13/05/2020

Period of Insurance	From Date & Time	19/05/2020 00:01 AM	To Date & Time	18/05/2021 Midnight

LAW

The Policy covers Liability of the Insured under the following Law(s) shown as covered, subject to claim being otherwise admissible as per terms, conditions and exclusions of the Policy and subject to Limit of Indemnity as stipulated against each Law:

Sr. No.	Law	Limit of Indemnity
a.	Employee's Compensation Act, 1923 and subsequent amendments thereof prior to the date of issue of this Policy	Subject otherwise, to the terms, conditions & Exclusions of the Policy, the amount of liability incurred by the Insured
b.	Common Law	Subject otherwise, to the terms, conditions & Exclusions of the Policy, the amount of liability incurred by the Insured, but not exceeding:-
		a) Limit Per Employee for any number of accidents during Period of Insurance ₹. Unlimited
		b) Limit Per Accident for any number of Employees ₹.Unlimited
		c) Aggregate Limit for all accidents and claims arising there from during the Period of Insurance ₹.Unlimited

EC-13-0005
3114203387691200000 Page 2 of 13

Signer: ATUL JERATH
Date: Fri, Nov 6, 2020 14:00:26 IST
Location: NOIDA
Reason: Signing Policy for OICL

ELECTRONIC EQUIPMENT INSURANCE POLICY SCHEDULE

Policy No	: **171200/44/2021/37**	**Prev Policy No**	:
Cover Note No	: ER1700203535	Cover Note Dt	: 08/09/2020
Insured's Code	: 114390109	Issuing Office Code	: 171200
Insured's Name	: DBL Uchera Nagod Tollways Ltd (GSTIN: 23AAECD3779L1ZC)	Issuing Office Name	: CBU Vadodara (GSTIN: 24AAACT06
Address	: Plot No 5, Inside Govind Naryan Singh Gate, Chuna Bhatti, Kolar Road, Bhopal, Madhya Pradesh, 462016	Address	: Ist FLOOR, KIRTI TOWER, TILAK ROAD VADODARA GUJARAT 390001
Tel /Fax /Email	: BHOPAL.462016@unisoninsurance.net	Tel /Fax /Email	: 0265-2427075 / 0265-2436654 / 171200@orientalinsurance.co.in

Agent/Broker Details

Dev.Off.Code :

Agent/Broker : LC0000000179 (1149)UNISON INSURANCE BROKING SERVICES P LTD

Address : 601-602 ,6TH FLOOR AURAM NR VASNA,HP PETROL PUMP MARKAND DESAI RAOD VADODARA 390015 GUJARAT INDIA,MOB NO 9898295111 PHONE NO 0265-2252274,BARODA,GUJARAT,396007

Tel/Fax/Email : 0265-2252274/0265-2357445/0265-2356033/

Period of Insurance : FROM 00:00 ON 08/09/2020 TO MIDNIGHT OF 07/09/2021

Collection No & Dt : DC_I_INDCSH 3214000845 - 17/09/2020 GST INVOICE NO :2419487404 UIN :0

Gross Premium : 1,252 GST : 225 Stamp Duty : 1 Total : 1,477

RISK DETAILS

Section I : EEI - EQUIPMENT

Sum Insured : 27,79,478

1 Location of the Risk : AS PER LIST ATTACHED
Road and bridge stretch connecting from Uchera to Nagod

MADHYA PRADESH - 485001

Sl No.	Description of Items	Manufacturer Name	Year of Manufacture	Annual Maintenance Contract	Identification No.	Escalation %	Sum Insured
1	AS PER LIST	AS PER LIST	2018		AS PER LIST		27,79,478

Deductible / Excess for : AS PER LIST ATTACHED

Excess :

(a) For equipment with value upto Rs. 1 lakh
1) For PC : 5% of claim amount subject to minimum of Rs.2500/-
2) For Equipment other than PC :
(i) Equipment (other than Winchester Drive and/or Hard Disc)- 5% of claim amount subject to a minimum of Rs.1000/-
(ii) Winchester Drive and/or Hard Disc-10% of claim amount subject to a minimum of Rs.2500/-

(b) For equipment with value more Rs. 1 lakh -
1) Equipment (other than Winchester Drive) - 5% of claim amount subject to a minimum of Rs.2,500/-

Place : -
Date : 17/09/2020

For and on behalf of
The Oriental Insurance Company Limited

This is an electronically generated document (Policy Schedule).The Policy document duly stamped will be sent by post.

In case of any query regarding the Policy please call Toll Free No. 1800 11 8485 and 011 33208485.

Authorised Signatory

CIN: U66010DL1947GOI007158 All the Amounts mentioned in this policy are in Indian Rupee

Attached to and forming part of policy number 171200/44/2021/37

Signer: ATUL JERATH
Date: Fri, Nov 6, 2020 14:08:26 I
Location: NOIDA
Reason: Signing Policy for OICL

2) Winchester Drive and/or Hard Disc-25% of claim amount subject to a minimum of Rs.10,000/-

In case of computers, the term 'equipment' shall include the entire computer system comprising of CPU, Key boards, Monitors, Printers, Stabilizers, UPS.

SCHEDULE OF PREMIUM

Cover Description	Premium
TOTAL PREMIUM	1,252
ADD :IGST	225
STAMP DUTY	1
TOTAL AMOUNT	1,477

Total Sum Insured In Words : Indian Rupees Twenty-Seven Lakhs Seventy-Nine Thousand Four Hundred Seventy-Eight Only
Total Amount Paid : Indian Rupees One Thousand Four Hundred Seventy-Seven Only

The Insurance under this policy is extended to cover risks of (as per forms attached):

STFI Inclusion Cover
EAR - EARTHQUAKE COVER

Excess / Deductible :
The following minimum deductibles are applicable based on Sum Insured of the policy

The Insurance under this policy is subject to warranties & Clauses (as per forms attached) :

In the event of a claim under the policy exceeding Rs.1lac or a claim for refund of premium exceeding Rs1lac,the insured will comply with the provisions of the AML policy of the Company.The AML policy is available in all our operaing Offices as well as company's website.
Communicable Disease Exclusion Clause
Exclusion-Any Direct or indirect loss by infectious or contagious disease

The insurance under this policy is subject to conditions, clauses, warranties, endorsements as per forms attached.

Warranted that in case of dishonour of premium cheque(s) the Company shall not be liable under the policy and the policy shall be void abinitio (from inception).

In witness whereof the undersigned being authorised by and on behalf of the company has/have herein to set his/their hands at CBU Vadodara (GSTIN: 24AAACT0627R2Z4) on 17TH DAY OF SEPTEMBER 2020

For and on behalf of
The Oriental Insurance Company Limited

Entered By : AKSHAY ASHOKRAO HIWALE
Examined By : A K Parmar

Authorised Signatory

Place : -
Date : 17/09/2020

For and on behalf of
The Oriental Insurance Company Limited

This is an electronically generated document (Policy Schedule).The Policy document duly stamped will be sent by post.

In case of any query regarding the Policy please call Toll Free No. 1800 11 8485 and 011 33208485.

Authorised Signatory

CIN: U66010DL1947GOI007158 All the Amounts mentioned in this policy are in Indian Rupee

Page 2 of 2

Annexure 10: Change of Scope

MADHYA PRADESH ROAD DEVELOPMENT CORPORATION LTD.
(Govt. of M.P. Undertaking)
45-A, Arera Hills, Bhopal-462 011
Tel.: (O) 0755-2765196, 205, 213, 216 (EPABX), 0755-2550995, Fax : 91-755-2572643
Website : www.mprdc.nic.in

Letter no. ...../Uchehara-Nagod Road/COS/06/2013, Bhopal Date .09.2014

To,

1. **Independent Engineer,**
   Redicon (India) Pvt. Ltd.,
   H-54-a, Kalkaji,
   New Delhi

2. **Divisional Manager,**
   M.P.R.D.C., Div.-1,
   Rewa (M.P.)

Sub. :- Approval of variation/Change of Scope for Uchehara-Nagod Road Road on BOT (Toll+Annuity) basis.

Ref. :- Your letter no. MPRDC/IE/MP/3014/2013, Date 26.09.2013.

Please find enclosed herewith the copy of the minutes of the meeting, for Change of Scope held on 15.10.2013. In-principle approval is granted accordingly for Change of Scope for the said project. You are hereby advised to send the financial implication &valuation of negative and positive variation on the basis of as built drawings and actual work done on site to this office within 15 days time positively.

Encl. :- As above.

-Sd-
Chief Engineer (BOT)
MPRDC, Bhopal

Endt. no. 7590 /Uchehara-Nagod Road/COS/06/2013, Bhopal Date 23.09.2014

Copy to :-

1. Shri Arun Paliwal, General Manager (Finance), MPRDC, Bhopal for information and necessary action please.
2. General Manager (North), MPRDC, Jabalpur for information and necessary action please.
3. Shri Dilip Singh Bhadoria, Concessionaire Representative M/s DBL Uchehara-Nagod Tollways Pvt. Ltd., for information and necessary action please.

Chief Engineer (BOT)
MPRDC, Bhopal

Connecting People Through quality infrastructure

फाईल क्रमांक File No. Uchera-Nagod/change of scope/06/2013 | विषय Subject Variation proposal in structure | पृष्ठ क्रमांक Page No. (3)

Sm. Thakur ji – Pl. put up draft for meeting for 11/10/2013 as instructed

7/10

NB Sonal

Calling for meeting on 11/10/13 Draft for approval pls.

7/10/13

Sonal (MPRDC)

put up with fair

7/10

Mr. Sonal

fair for sign pls.

7/10/13

DGM (MPRDC)

GM (BOT)

7/10

DGM (R) Sonal

7/10

7/10/13

Concessionaire representative & IE's representative are present on today 15/10/13. The meeting outcome are minuted & placed below for further necessary [illegible]

GM (BOT)

15/10

N. - 8813-13 Dt 07.10.13

MPRDC

फाईल क्रमांक Change of Scope file विषय Minutes of Meeting. पृष्ठ क्रमांक
File No. Subject Page No.

MINUTES OF MEETING AT MPRDC BHOPAL

Regarding Change of Scope of Uchehra–Nagod–Singhpur-Kalinger Road.

Meeting of Advisory committee of MPRDC has been conducted in the office of the MPRDC on dated 15.10.2013 for consideration of change of scope for Rehabilitation and Strengthening of **Uchera-Nagod-Singhpur-Kalinger road** on BOT basis, in view of the letter submitted by the Team Leader of Independent Engineer of the project vide letter no. MPRDC/IE/MP/3014/2013, dated 26-09-2013.

Fcllowing officials were present in the meeting :-

1. Shri . A.S. Chendke, (Technical Advisor) MPRDC
2. Shri Anil Chansoria (Chief Enginer)(BOT) MPRDC.
3. Shri Arun Paliwal, GM (Finance), MPRDC Bhopal.
4. Shri P.K. Chaturvedi, GM (BOT), MPRDC, Bhopal.
5. Divisional Manger, MPRDC Rewa Division-I
6. ~~Shri~~ R. K. Das a, Authorized Representative of Independent Engineer M/s Redecon India Pvt. Ltd. (Vide letter no. MPRDC/IE/MP/2424/48-49 dated 14/10/2013)
7. Shri. Dilip Singh Bhadoria, Authorized Representative & Project Manager M/s DBL Uhera Nagod Tollway Ltd.

The change of scope recommended by Independent Engineer vide letter above, has been discussed by the committee & recommendations on each point of Change of Scope are recorded and enclosed herewith on subsequent page no. 1 to 18.

In principle approval under change of scope is recommended for above works as per remarks of last column. Further, it is instructed to Independent Engineer and Concessionaire to prepare complete ~~as~~ designs, drawings & financial implication and submit within 15 days time positively.

Dilip Singh Bhadoria
Authorized Representative
& Project Manager M/s
DBL Uhera Nagod
Tollway Ltd

R. K. Das
Authorized Representative,
M/s Redecon India Pvt. Ltd.

Arun Paliwal
GM (F)
MPRDC, Bhopal

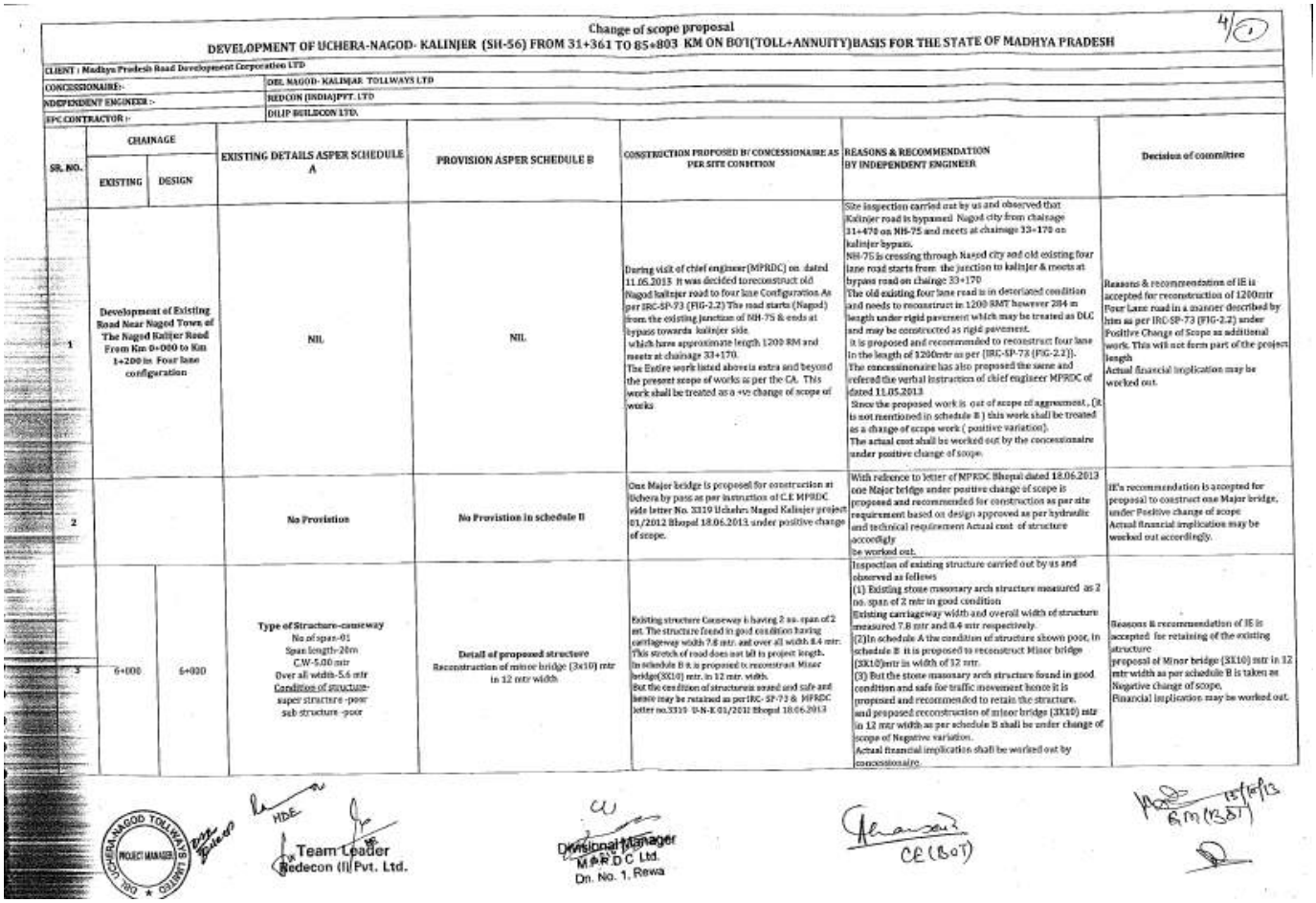
P.K. Chaturvedi
GM (BOT)
MPRDC, Bhopal

Divisional Manager
Dn. No. – I
MPRDC, Rewa

Anil Chansoria
Chief Engineer (BOT)
MPRDC, Bhopal

A.S. Chendke
Technical Advisor
MPRDC, Bhopal

MPRDC



Change of scope proposal

DEVELOPMENT OF UCHERA-NAGOD- KALINJER (SH-56) FROM 31+361 TO 85+803 KM ON BOT(TOLL+ANNUITY)BASIS FOR THE STATE OF MADHYA PRADESH

4/0

CLIENT : Madhya Pradesh Road Development Corporation LTD	
CONCESSIONAIRE:-	DEL NAGOD- KALINJAR TOLLWAYS LTD
INDEPENDENT ENGINEER :-	REDCON (INDIA)PVT. LTD
EPC CONTRACTOR :-	DILIP BUILDCON LTD.

SR. NO.	CHAINAGE EXISTING	CHAINAGE DESIGN	EXISTING DETAILS ASPER SCHEDULE A	PROVISION ASPER SCHEDULE B	CONSTRUCTION PROPOSED BY CONCESSIONAIRE AS PER SITE CONDITION	REASONS & RECOMMENDATION BY INDEPENDENT ENGINEER	Decision of committee
1	Development of Existing Road Near Nagod Town of The Nagod Kalijer Road From Km 0+000 to Km 1+200 to Four lane configuration		NIL	NIL	During visit of chief engineer(MPRDC) on dated 11.05.2013 It was decided toreconstruct old Nagod kalinjer road to four lane Configuration As per IRC-SP-73 (FIG-2.2) The road starts (Nagod) from the existing junction of NH-75 & ends at bypass towards kalinjer side. which have approximate length 1200 RM and meets at chainage 33+170. The Entire work listed above is extra and beyond the present scope of works as per the CA. This work shall be treated as a +ve change of scope of works	Site inspection carried out by us and observed that Kalinjer road is bypassed Nagod city from chainage 31+470 on NH-75 and meets at chainage 33+170 on kalinjer bypass. NH-75 is crossing through Nagod city and old existing four lane road starts from the junction to kalinjer & meets at bypass road on chainge 33+170 The old existing four lane road is in deteriated condition and needs to reconstruct in 1200 RMT however 284 m length under rigid pavement which may be treated as DLC and may be constructed as rigid pavement. It is proposed and recommended to reconstruct four lane in the length of 1200mtr as per (IRC-SP-73 (FIG-2.2)). The concessionaire has also proposed the same and refered the verbal instruction of chief engineer MPRDC of dated 11.05.2013 Since the proposed work is out of scope of aggreement, (It is not mentioned in schedule B) this work shall be treated as a change of scope work (positive variation). The actual cost shall be worked out by the concessionaire under positive change of scope.	Reasons & recommendation of IE is accepted for reconstruction of 1200mtr Four Lane road in a manner described by him as per IRC-SP-73 (FIG-2.2) under Positive Change of Scope as additional work. This will not form part of the project length Actual financial implication may be worked out.
2			No Provision	No Provision in schedule B	One Major bridge is proposed for construction at Uchera by pass as per instruction of C.E MPRDC vide letter No. 3319 Uchera- Nagod Kalinjer project 01/2012 Bhopal 18.06.2013 under positive change of scope.	With reference to letter of MPRDC Bhopal dated 18.06.2013 one Major bridge under positive change of scope is proposed and recommended for construction as per site requirement based on design approved as per hydraulic and technical requirement Actual cost of structure accordigly be worked out.	IE's recommendation is accepted for proposal to construct one Major bridge, under Positive change of scope Actual financial implication may be worked out accordingly.
3	6+000	6+020	Type of Structure-causeway No of span-01 Span length-20m C.W-5.00 mtr Over all width-5.6 mtr Condition of structure- super structure -poor sub structure -poor	Detail of proposed structure Reconstruction of minor bridge (3x10) mtr in 12 mtr width	Existing structure Causeway is having 2 no. span of 2 mt. The structure found in good condition having carriageway width 7.8 mtr. and over all width 8.4 mtr. This stretch of road does not fall in project length. In schedule B it is proposed to reconstruct Minor bridge(3X10) mtr. in 12 mtr. width. But the condition of structurein sound and safe and hence may be retained as per IRC- SP-73 & MPRDC letter no.3319 U-N-K 01/2012 Bhopal 18.06.2013	Inspection of existing structure carried out by us and observed as fellews (1) Existing stone masonary arch structure measured as 2 no. span of 2 mtr in good condition Existing carriageway width and overall width of structure measured 7.8 mtr and 8.4 mtr respectively. (2)In schedule A the condition of structure shown poor, in schedule B it is proposed to reconstruct Minor bridge (3X10)mtr in width of 12 mtr. (3) But the stone masonary arch structure found in good condition and safe for traffic inovevment hence it is proposed and recommended to retain the structure. and proposed reconstruction of minor bridge (3X10) mtr in 12 mtr width as per schedule B shall be under change of scope of Negative variation. Actual financial implication shall be worked out by concessionaire.	Reasons & recommendation of IE is accepted for retaining of the existing structure proposal of Minor bridge (3X10) mtr in 12 mtr width as per schedule B is taken as Negative change of scope. Financial implication may be worked out.

DEL UCHERA-NAGOD TOLLWAYS LIMITED PROJECT MANAGER

Team Leader
Redecon (I) Pvt. Ltd.

Divisional Manager
M.P.R.D.C Ltd.
Dn. No. 1, Rewa

CE(BOT)

15/10/13

SR. NO.	CHAINAGE		EXISTING DETAILS ASPER SCHEDULE A	PROVISION ASPER SCHEDULE B	CONSTRUCTION PROPOSEDBY CONCESSIONAIRE AS PER SITE CONDITION	REASONS & RECOMMENDATION BY INDEPENDENT ENGINEER	Decision of committee
	EXISTING	DESIGN					
4	21+600		**Type of Structure- Stone Arch** No of span-05 Span length-7.5m C.W-5.00 mtr Over all width-6.0 mtr Condition of structure- super structure -fair sub structure - fair	**Detail of proposed structure** widening 5 x 7.5 mtr in 12 mtr width	Structure is stone arch bridgeas mentioned in schedule A. Existing bridge is in good condition having carrige way width 7.0 mtr. and overall width 8.4 mtr. In schedule B it is proposed to widen the Structure (5x7.5m) minor bridge in 12 mtr. width. Over all condition of bridge isound and safe hence may be retained as per clause IRC-73 and MPRDC vide letter no.3319 U-N-K 01/2012 Bhopal 18.06.2013	Inspection of existing structure carried out by us and observed as follows (1) The measurement of structure found as mentioned in schedule A & schedule B (2)In schedule B it is proposed to widen in 12 mtr width (3) The condition of bridge is found sound and safe for traffic movement (4) Therefore considering the overall condition of bridge, which is in good condition and safe for traffic, it is proposed and recommended to retain under Negative change of scope. (a) Existing structure may be retained & proposed widening of Minor bridge (5X7.5) mtr in 12 mtr width as per schedule B shall be under change of scope of Negative variation. Whose financial implication shall be worked out by	Reasons & recommendation of IE for retaining of this structure proposed in schedule B to be taken as negative change of scope is accepted Financial implication may be worked out.
5	30+900	30+900	**Type of Structure- Stone arch** No of span-03 Span length-7m C.W-5.00 mtr Over all width-6 mtr Condition of structure- super structure -fair sub structure -fair	Detail of proposed structure Proposed - widening in 12 mtr. width With span of (1X17) mtr	Existing structure is an arch bridge having 3 no. span of 6.5 mtr. The carriage width is 7.0 mtr.and over all width of structure is 8.4 mtr. It is mentioned in schedule B to widen Minor bridge (1x17) mtr. in 12 mtr width. Over all condition of bridge is sound and safe hence may be retained as per clause IRC-73 and MPRDC vide letter no.3319 U-N-K 01/2012 Bhopal 18.06.2013	Inspection of existing structure carried out by us and observed as follows (1) 3 no. of span 6.5 mtr have been found (2) The measurement of carriageway width and overall width of structure found 7.0 mtr 8.4 mtr respectively (3) In schedule B it is proposed to widen Minor bridge (1X17)mtr in 12 mtr width. (4) The condition of bridge is found sound and safe for traffic movement (5) Considering the overall condition of bridge which is in good condition and safe for traffic, it is proposed and recommended as follows (a)Existing structure may be retained & proposed widening of Minor bridge (1X17) mtr in 12 mtr width as per schedule B shall be under change of scope of Negative variation. Financial implication shall be worked out by concessionaire.	Reasons & recommendation of IE is accepted for retaining of this structure proposed in schedule B as negative change of scope, Financial implication may be worked out.
6	35+200	33+170	Type of Structure-Slab No of span-01 Span length-3mtr C.W-6.5 mtr Over all width-8.4 mtr Condition of structure- slab -fair head wall/wing wall -fair return wall/parapet-fair	Type of Structure Slab Culvert Proposed- widening in 12 mtr. width	During inventory it is found (1X3) slab is poor condition. Length -7.5mtr., Width/Span-3mtr. Height - 1.95mtr of existing structure (1) It is proposed to widen the structure in schedule B Existing road is changing in to four lane therefore it is required to be reconstructed (1X3X3.4) box culvert according to four lane standard. Hence it is proposed to reconstruct (1X3X3.4) box culvert of four lane standard.	Site inspection at this location carried out by us. Agreed with the comments of concessionaire. Observing the above condition it is proposed & recommended to reconstruct structure to four lane standards as follows. (a) Proposed Structure in schedule B shall be under change of scope of Negative variation. (b) Proposed and recommended to re-construct structure of box (1X3X3.4) of four lane standards shall be under change of positive variation. (c) Net cost in variation shall be worked out by the concessionaire for financial implication.	Reasons & recommendation of IE is accepted for widening of slab culvert in 12 mtr. width proposed in schedule B taken as negative variation and construction of four lane standard structure as positive variation. Net Financial implication may be worked out accordingly
7		33+160 (ON BYPASS)	**Not Mentioned in schedule A**	**No Provision in scheduled B**	During site inventory it is found bypass road is adjacent to existing road, crossing obliquely. The same Nallah which is on existing road is crossing through bypass. So it is needed to construct a New structure(1x3) Box culvert as the foundation condition dictating of two lane standards in down stream of Nallah. Width of structure shall be more than 12 mtr. being on the oblique road and may be decided as per site requirement. Therefore it proposed to construct New box culvert (1X3X2.8)mtr at this location	Site inspection at bypass road at the chainage carried out by us. Agreed with the comments of concessionaire Structure is not mentioned in schedule A and there is no provision of structure in schedule B Hence it is proposed and recommended to construct a New box culvert (1X3X2.8)mtr in 12 mtr width, at this chainagas follows. (a) structure proposed for New construction shall be under change of scope of positive variation. Actual cost of structure shall be worked out by concessionaire for financial implication. 8	Reasons & recommendation of IE is accepted for New construction of (1X3X2.8)mtr Box culvert in 12 mtr width, under positive change of scope. Actual financial implication may be worked out accordingly.

HDE

Team Leader
Redecon (I) Pvt. Ltd.

Divisional Manager
MPRDC Ltd.
Dn. No. 1, Rewa

EE(BOT)

SR. NO.	CHAINAGE		EXISTING DETAILS ASPER SCHEDULE A	PROVISION ASPER SCHEDULE B	CONSTRUCTION PROPOSED BY CONCESSIONAIRE AS PER SITE CONDITION	REASONS & RECOMMENDATION BY INDEPENDENT ENGINEER	Decision of committee
	EXISTING	DESIGN					
8	36+100	34+173	Type of Structure-Slab No of span-01 Span length-2mtr C.W-6.5 mtr Over all width-8.4 mtr **Condition of structure-** slab -fair head wall/wing wall -fair return wall/parapet-fair	Type of structure- RCC culvert proposed- widening up to-12.0 mtr width	During inventory existing structure stone slab (1X1.6) is found in very poor condition at site. Length -8.2mtr , Width/Span -1.6mtr , Height - 1.95mtr of existing structure. In schedule B it is proposed to widen the structure in 12mtr width. Since the condition of structure is not good and unsafe for traffic hence it is proposed to re-construct (1X2X4.5)mtr box culvert having 12 mtr width as the foundation condition dictating.	Inspection of Existing structure carried out by us Agreed with the comments of concessionaire Therefore it is proposed and recommended to reconstruct (1x2) Box culvert in width of 12 mtr. at this location as follows (a) In schedule B proposed widening in 12 mtr. width of structure shall be under change of scope of Negative variation (b) proposed and recommended box culvert (1x2X4.5)mtr in 12 mtr width shall be under change of scope of positive variation. (c)Net cost in variation shall be worked out by the concessionaire for financial implication The work is under progress .	Reasons & recommendation of IE is accepted for widening existing RCC culvert to 12mtr width proposed in schedule B is taken as negative variation and reconstruction of (1X2X4.5) Box culvert in 12 mtr width as positive variation. Net financial implication may be worked out accordingly.
9	36+800	34+823	Type of Structure-Slab No of span-01 Span length-3mtr C.W-7 mtr Over all width-8.4 mtr **Condition of structure-** slab -fair head wall/wing wall -fair return wall/parapet-fair	Type of structure(1X3) RCC slab culvert Proposed-Widening up to-12.0 mtr width	During inventory existing structure is found H.P.C (2X0.9) in very poor condition. The detail of existing structure is given below. Length -5.5mtr , 2 row Dia -0.9mtr In schedule B there is a provision to be widened (1X 3) slab in width of 12 mtr. Local enquiry of people at this location considered, which reveals water overtops. Therefore larger cross sectional area is provided to overcome this. Hence it is proposed to reconstruct (3X1.2)HPC in width of 12 mtr.	Inspection of Existing structure carried out by us Agreed with the comments of concessionaire. Therefore it is proposed and recommended to reconstruct (3X1.2) HPC in the width of 12 mtr at this location as follows (a) In schedule B proposed widening structure in the width of 12 mtr shall be under change of scope of Negative variation (b) proposed structure (3X1.2)HPC shall be under change of positive variation (c) Net cost in variation shall be worked out by the concessionaire for financial implication. The work is under progress.	Reasons & recommendation of IE is accepted for widening of RCC slab to 12mtr width proposed in schedule B taken as negative variation and proposed construction of 3 rows HPC 1.2 mtr. Dia of pipe to 12 mtr width as positive variation. Net financial implication may be worked out accordingly.
10	Extra	37+146	NIL	No provision in schedule B	During inventory existing structure is found HPC (1X0.9) mtr in good condition. The detail of existing structure is given below. Length -7.5mtr , 1 row Dia -0.9mtr Since it is not proposed in schedule A & B and for the reconstruction of highway it is required to widen the structure in 12 mtr width Hence it is proposed for widening to 12 mtr. width with existing HPC of (1X0.9) mtr.	Site inspection carried out by us. Agreed with the comments of concessionaire. (1) Since it is not mentioned in schedule A hence there is no provision in schedule B Therefore it is proposed & recommended to widen the structure in 12 mtr width as per site condition. (2) Complete widening of HPC shall be under positive change of scope. Actual financial implication shall be worked out by concessionaire [illegible]	Reasons & recommendation of IE is accepted for widening of HPC (1X1)mtr to 12 mtr. width taken as positive variation. Actual Financial implication may be work out accordingly.
11	42+600	40+724	Type of Structure- Minor Bridge No of span-03 Span length-15mtr C.W-6.7 mtr Over all width-8.3 mtr **Condition of structure-** super structure -poor sub structure -poor	Type of Structure (3X15) mtr. Minor Bridge Proposed-- Re-construction in 12 mtr. Width	As per detailed inventory (3X17) box girder bridge is existing in good condition. The carriage way width is 7.0 mtr. and over all width of structure is 8.4 mtr. In schedule B it is proposed to re-construct (3X15) mtr. minor bridge in width of 12mtr. The Existing bridge is in good condition hence may be retained. as per clause IRC-73. The retaining wall LHS Kalinjar Side is required to be re-constructed in length of 40 mtr. and average height aproximately 5 mtr. which is collapsed. Hence a positive variation is considerd for re-construction of retainingwall.	Site inspection carried out by us. Agreed with the comments of concessionaire. Existing Bridge found in sound condition, hence it is proposed & recommended to retain. (1)- (a) Proposed reconstruction of structure in schedule B (3 X 15) mtr. minor bridge in width of 12 mtr. with 3 no quadrant high toe wall shall be under change of scope of negative variation one No. quadarant wall shall be reconstructed (b) Actual financial implication shall be work out by concessionaire.	Reasons & recommendation of IE is accepted for retaining (3X15) minor bridge in width of 12 mtr. with 3 no. quadrant high toe wall taken as Negative variation Net financial implication may be work out accordingly.
12	44+800	42+859	Type of Structure- HPC No of pipe-01 Dia of pipe-1000mm C.W-6.5 mtr Over all width-7.5 mtr Condition of structure- pipe-fair Head wall -fair Return wall-fair	Type of structure-H.P.C(1x1.00)mtr. Proposed - widening up to 12 mtr width.	During inventory 2 row of 1.0 mtr. HPC, overall width 9.5mtr is found in fair condition. (1) In schedule B it is proposed to widen (1X1.0) HPC up to 12 mtr width. But at site the existing structure have 2 Row of 1.00mtr. HPC Hence due to this difference it is required to widen additional one Row from scheduled B and proposed to widen the existing HPC in 2 row of 12 mtr. width.	The site Inspection carried out by us. Agreed with the comment of concessionaire. In schedule B HPC (1x1.0)mtr is proposed to widen and in inventory2 row of 1mtr HPC found in fair condition. Due to this diffrence and as per site condition it is proposed with recommendation to widen (2X1) HPC up to 12 mtr width under following condition. (1) Extra one row widening shall be change of scope of positive variation. The actual cost of variation shall be worked out by [illegible]	Reasons & recommendation of IE is accepted for additional one Row HPC width (1x1.00)mtr. to 12 mtr width taken as positive variation. Actual financial implication may be worked out accordingly.

SR. NO.	CHAINAGE		EXISTING DETAILS ASPER SCHEDULE A	PROVISION ASPER SCHEDULE B	CONSTRUCTION PROPOSED BY CONCESSIONAIRE AS PER SITE CONDITION	REASONS & RECOMMENDATION BY INDEPENDENT ENGINEER	Decision of committee
	EXISTING	DESIGN					
13	48+800	48+868	Type of Structure-Slab No of span-01 Span length-3mtr C/W-6.5 mtr Over all width-7.5 mtr Condition of structure-slab -fair head wall/wing wall -fair return wall/parapet-fair	Type of Structure-RCC culvert(1x3)mtr. Proposed-widening up to 12 mtr width	During inventory existing structure slab culvert (1x1.8)mtr is found in poorcondition. Details of existing structureas given below Length -6.1mtr , W.0.0t/Span -1.6mtr , Height - 1.6mtr . In schedule B it is proposedto widen the structure (1X3) RCC slab culvert in 12 mtr width. Since the condition of structure is very poor hence it is proposed to re-construct box culvert (1X2X2.88)mtr upto 12 mtr width as foundation condition dictating.Design and drawing is submitted to IE.	Inspection carried out by us. Agreed with the comments of concessionaire.Existing structure found is in deteriated condition Hence it is proposed & recommend to reconstruct (1X2X2.88)mtr Box culvert in width of 12 mtr. as follows (a) In schedule B widening of structure shall be under change of scope of Negative variation. (b) Proposed box culvert shall be under change of scope of positive variation. Net cost shall be worked out by concessionaire for financial implication.	Reasons & recommendation of IE is accepted for widening of RCC culvert(1X3)mtr to 12 mtr width proposed in schedule B taken as negative variation and construction of (1X2X2.88) mtr Box Culvert up to 12 mtr width as positive variation. Net financial implication may be worked out accordingly.
14	50+800	48+787	Type of Structure- HPC No of pipe-02 Dia of pipe-1000mm C/W-6.5 mtr Over all width-7.5 mtr Condition of structure-pipe-fair Head wall -fair Return wall-fair	Type of Structure- HPC (01X1000) Proposed-- widening up to 12 mtr width	During inventory existing structure is found (2x0.6) HPC in width of 7.5 mtr in poor condition. In schedule B it is proposedto widen the structure (1X1.0) HPC in 12 mtr width. It is observed in rainy season water flows above the existing culvert and the catchment area for this culvert is quite large. The Hydraulic calculation is schematised and accordingly a minor bridge (1X10) mtr width of 12 mtr is proposed for construction. Also it is decided during site visit of CE (MPRDC) dt. 11.05.2013 Hydraulic data is given below. (1) Effecting water way = 9.33mtr (2) Afflux = 0.162mtr (3) Design discharge = 46.31 m^3/s (4) Velocity = 1.5 m/s	Inspection at this chainage is carried out by us. Agreed with the comments of concessionaire It is observed that water overtops at this culvert and also it has large catchment area. As per hydraulic calculation and also the requirement of site condition it is proposed and recommended a minor bridge (1X10) mtr in 12 mtr width as follows (a) In schedule B mentioned widening of HPC structure shall be change of scope of Negative variation. (b) Proposed minor bridge of (1X10) mtr of 12 mtr width shall be change of scope of positive variation. Net cost shall be worked out by concessionaire for financial implication.	Reasons & recommendation of IE is accepted for widening to 12 mtr width (1X1.0) HPC proposed in schedule B taken as negative variation and construction of (1X10) mtr minor bridge up to 12 mtr width as positive variation. Net financial implication may be worked out accordingly.
15	51+900	49+880	Type of Structure- HPC No of pipe-01 Dia of pipe-1000mm C/W-6.5 mtr Over all width-8.4 mtr Condition of structure-pipe-fair Head wall -fair Return wall-fair	Type of Structure- HPC (2X1.0) mtr Proposed-- widening up to 12 mtr width	During site inventory existing structure (1X0.9) HPC in width of 7.5 mtr is found in fair condition. It is efficient to drainout the rain water. In Schedule B it is mentioned to widen (2X1.0) HPC up to 12 mtr width. There is difference in existing structure and proposal in schedule B Hence as per site condition existing structure (1X0.9) mtr HPC is proposed to widen in 12 mtr width	Site inspection carried out by us. Agreed with the comments of concessionaire since the condition of structure is good and there is no requirement of Extra one row of HPC as per site situation. Since there is difference between existing HPC (1X0.9), and proposed HPC (2X1.0) in schedule A & B respectively. Therefore it is proposed and recommended to widen the existing structure (1X0.9) mtr HPC in 12 mtr width as follows (a) As per mentioned in schedule B there is saving of one row HPC for widening hence it shall be under change of scope of Negative variation. (b) The actual cost of variation shall be worked out by concessionaire for financial implication.	Reasons & recommendation of IE is accepted for widening to 12 mtr width (1X0.9) HPC proposed in schedule B taken as Negative variation. Actual financial implication may be worked out accordingly.
16	52+700	50+703	Type of Structure- HPC No of pipe-02 Dia of pipe-1000mm C/W-6.5 mtr Over all width-7.5 mtr Condition of structure-pipe-poor Head wall -poor Return wall-poor	Type of Structure- HPC(2X1.00)mtr. proposed -width Reconstruction in 12.0 mtr width	In inventory it is found (2X .8)mtr HPC overall width 6.4 mtr. In schedule B it is proposed to construct (2X1.2)mtr HPC. It is observed the existing bulkh is live because the catchment area on this location is large also a small dam is constructed on upstreamside. In rainy season water flows above the existing culvert Hydrological data has also shown the quantum of discharge which is submitted. Hence (1X8) mtr minor bridge in width of 12 mtr is proposed Also it is decided during site visit of CE (MPRDC) dt. 11.05.2013. Hydraulic data is given below. (1) Effective water way=8.03mtr (2) Afflux = 0.066mtr (3) Discharge = 43.03 m^3/s (4) Velocity = 1.84 m/s	Inspection carried out by us. Agreed with the comments of concessionaire Hydraulic data is submitted by the concessionaire (1)(i) In schedule A (2X1.0)mtr HPC is shown in fair condition. (ii) In schedule B (2X1.2)mtr HPC is proposed in 12 mtr width Seeing the above condition and considering the hydraulic data (1X8)mtr Minor bridge in 12 mtr width is proposed and recommended to construct as follows. (i) Proposed structure In schedule B shall be change of scope of Negative variation. (ii) Proposed and recommended structure minor bridge(1X8) mtr shall be change of scope positive variation. Net cost shall be worked out by concessionaire for financial implication. The work is under progress	Reasons & recommendation of IE is accepted for reconstruction to (2x1.2)mtr HPC in 12 mtr width taken as negative variation and construction of (1x8)mtr minor bridge in width of 12 mtr as positive variation.Net financial implication may be worked out accordingly.

DBC UCHERA-NAGOD TOLLWAYS LIMITED PROJECT MANAGER

HDE Team Leader Redecon (I) Pvt. Ltd.

Divisional Manager M.P.R.D.C. Ltd. Dn. No. Rewa

CE(BOT)

SR. NO.	EXISTING	DESIGN	EXISTING DETAILS ASPER SCHEDULE A	PROVISION ASPER SCHEDULE B	CONSTRUCTION PROPOSED BY CONCESSIONAIRE AS PER SITE CONDITION	REASONS & RECOMMENDATION BY INDEPENDENT ENGINEER	Decision of committee
17	55+580	53+366	Type of Structure- HPC No of pipe-01 Dia of pipe-1000 C/W-6.5 mtr Over all width-7.5 mtr Condition of structure- pipe-fair Head wall -fair Return wall-fair	Type of Structure- HPC(1x1.0)mtr Proposed -widening upto12 mtr width	During site inventory existing structure (1X0.6) HPC in width of 7.5mtr found in poor condition . It is in sufficient to drain out the rain water. As schedule B it is proposed to widen (1X1.0) HPC up to 12 mtr width. There is a difference in existing structure and proposed structure in schedule B. Hence (1X1.2)mtr HPC is proposed to reconstruct at this chainage in 12 mtr width.	Site inspection carried out by us. Agreed with the comments of concessionaire. Since the existing HPC and proposed HPC in schedule B is not resembling with each other hence it is proposed & recommended to reconstruct (1X1.2)mtr HPC in width of 12 mtr whose cross sectional area is more compare to the existing structure. (a) Structure proposed in schedule B shall be under change of scope of Negative variation. (b) The proposed & recommended structure shall be under change of scope of positive variation. (c) Net cost of variation shall be worked out by concessionaire for financial implication.	Reasons & recommendation of IE is accepted for proposed structure in schedule B, widening of HPC (1X1.0)mtr in 12mtr width taken as Negative variation and reconstruction of (1x1.2)mtr HPC in 12 mtr width as positive variation. Net financial implication may be worked out accordingly.
18	Extra	57+735	Not Mentioned in schedule A	No proposal inShedule B	In inventory existing structure (1x0.6)mtr HPC in width of 6.0 mtr found in poor condition. As per schedule A & B, structure is not Proposed. Observing Nallah at this chainage location it is required to provide larger cross sectional area. Also local enquiry regarding flow of water during rainy season which overtops the existing structure. Therefore considering the location of structure it is proposed to reconstruct (2X1.0) HPC in width of 12 mtr.	Inspection carried out by us. Agreed with the comments of concessionaire.Structure is not mentioned in schedule A and there is no provision of structure in schedule B. Local enquiry reveals that at this location water overtops the existing structure in rainy season. Hence it is proposed and recommended to reconstruct (2X1.0) mtr HPC in 12 mtr width whose cross sectional area is more compare to the existing structure. (i) The proposed and recommended structure shall be under change of scope of positive variation. The actual cost of structure shall be worked out by concessionaire for financial implication.	Reasons & recommendation of IE is accepted for reconstruction to (2x1.0)mtr HPC in 12 mtr width taken as positive variation . Actual financial implication may be worked out accordingly.
19	Extra	57+827	Not Mentioned in schedule A	No proposal inShedule B	In inventory existing structure (1x0.85)mtr stone slab found in poor condition. Details of existing structure is given below Length -6mtr , Width/Span -0.85mtr . Height - 0.85mtr As per schedule A & B structure is not Proposed. But structure is required at his location for safety and traffic of road Hence it is proposed to reconstruct (1x1.0) mtr HPC in 12 mtr width.	Inspection carried out by us Agreed with the comments of concessionaire. Structure is not mentioned is schedule A and there is no provision of structure in schedule B Hence as per site condition (1X1.0) mtr HPC in width of 12 mtr width is proposed whose cross sectional area is more compare to the existing structure (i) The proposed and recommended structure shall be under change of scope of positive variation. The actual cost of structure shall be worked out by concessionaire for financial implication.	Reasons & recommendation of IE is accepted for reconstruction to (1x1.0)mtr HPC in 12 mtr width taken as positive variation . Actual financial implication may be worked out accordingly.
20	Extra	57+906	Not Mentioned in schedule A	No proposal inShedule B	In inventory existing structure (1x0.65)mtr stone slab found in poor condition. Details of existing structure is given below Length -7.2mtr , Width/Span -0.65mtr . Height - 1.5mtr As per schedule A & B structure is not Proposed. But structure is required at his location for safety and traffic of road Hence it is proposed to reconstruct (1x1.0) mtr HPC in 12 mtr width.	Inspection carried out by us Agreed with the comments of concessionaire. As per schedule A & B structure is not Proposed. Hence as per site condition (1X1.0) mtr HPC in width of 12 mtr is proposed whose cross sectional area is more compare to the existing structure . The proposed and recommended structure shall be under change of scope of positive variation. The actual cost of structure shall be worked out by concessionaire for financial implication.	Reasons & recommendation of IE is accepted for reconstruction to (1x1.0)mtr HPC in 12 mtr width taken as positive variation. Actual financial implication may be worked out accordingly.
21	Extra	58+187	Not Mentioned in schedule A	No proposal inShedule B	In inventory existing structure (1x0.35)mtr stone slab found in poor condition. Details of existing structure is given below Length -7mtr , Width/Span -0.35mtr . Height - 1.5mtr As per schedule A & B structure is not Proposed. But structure is required at his location for safety and traffic of road Hence it is proposed to reconstruct (1x1.0) mtr HPC in 12 mtr width.	Inspection carried out by us Agreed with the comments of concessionaire. As per schedule A & B structure is not Proposed. Hence as per site condition (1X1.0) mtr HPC in 12 mtr width is proposed whose cross sectional area is more compare to the existing structure. The proposed and recommended structure shall be under change of scope of positive variation. The actual cost of structure shall be worked out by the concessionaire for financial implication.	Reasons & recommendation of IE is accepted for reconstruction to (1x1.0)mtr HPC in 12 mtr width taken as positive variation . Actual financial implication may be worked out accordingly.

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Redecon (I) Pvt. Ltd.

Divisional Manager
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Dn. No. 1, Rewa

CE(BOT)

SR. NO.	CHAINAGE		EXISTING DETAILS ASPER SCHEDULE A	PROVISION ASPER SCHEDULE B	CONSTRUCTION PROPOSED BY CONCESSIONAIRE AS PER SITE CONDITION	REASONS & RECOMMENDATION BY INDEPENDENT ENGINEER	Decision of committee
	EXISTING	DESIGN					
22	Extra	58+199	Not Mentioned in schedule A	No proposal inShedule B	In inventory existing structure (1x1.0)mtr stone slab found in poor condition . Details of existing structureis given below Length -7.2mtr , Width/Span -0.8mtr . Height - 1.0mtr As per schedule A & B structure is not Proposed . But structure is required at this location for safety and traffic of road Hence it is proposed to reconstruct (1x1.0) mtr HPC in 12 mtr width.	Inspection carried out by us Agreed with the comments of concessionaire. Structure is not mentioned in schedule A and there is no provision of structure in schedule B Hence as per site condition (1X1.0) mtr HPC in 12 mtr width is proposed whose cross sectional area is equivalent to the existing structure. The proposed and recommended structure shall be under change of scope of positive variation. The actual cost of structure shall be worked out by concessionaire for financial implication.	Reasons & recommendation of IE is accepted for reconstruction to (1x1.0)mtr HPC in 12 mtr width taken as positive variation . Actual financial implication may be worked out accordingly.
23	Extra	58+773	Not Mentioned in schedule A	No proposal in Shedule B	In inventory existing structure (1x1.05)mtr stone slab found in poor condition . Details of existing structureis given below Length -7mtr . Width/Span -1.05mtr . Height - 1.05mtr As per schedule A & B structure is not Proposed . Observing Nallah at this chainage location, and flow of water during rainy season this required to provide larger cross sectional area. Hence it is proposed to reconstruct (2x1.0) mtr HPC in 12 mtr width.	Inspection carried out by us Agreed with the comments of concessionaire.As per schedule A & B structure is not Proposed. Local enquiry reveals that during rainy season sometimes water overtops at this location . Hence as per site condition (2X1.0) mtr HPC in 12 mtr width whose cross sectional area is more compare to the existing structure. The proposed and recommended structure shall be under change of scope of positive variation. The actual cost of structure shall be worked out by concessionaire for financial implication.	Reasons & recommendation of IE is accepted for reconstruction to (2x1.0)mtr HPC in 12 mtr width taken as positive variation . Actual financial implication may be worked out accordingly.
24	60+200	59+013	Type of Structure-Arch No of span-01 Span length-10mtr C.W-6.5 mtr Over all width-7.5 mtr Condition of structure- slab -fair head wall/wing wall -fair return wall/parapet-fair	Type of Structure-RCC slab(1x6) mtr span Proposal - Reconstruction in(1x6)mtr RCC slab in 12.0 mtr width	As per site inventory existing structure (152.5)mtr Stone slab is found in poor condition. In schedule B it is proposed to reconstruct (136)mtr Minor bridge in 12 mtr width. The proposed structure has same span compared to existing bridge. Hydraulic cal culation is considered and accordingly (138) mtr Minor bridge in width 12 mtr is proposed to reconstruct. Also during visit of CE MPRDC on dated 11-05-2013 decided and proposed (138 mtr Minor bridge the for construction	Inspection carried out by us and Agreed with the comments of concessionaire. The existing structure is located in deep hilly terrain where water flows suddenly high during rainy season,hydrological data also shows the same. Hence as per site condition it is proposed and recommended to reconstruct (138)mtr minor bridge as follows . (i) Structure mentioned in schedule B shall be under change of scope of negative variation. (ii) Proposed and recommended structure shall be under change of scope of positive variation. Net cost shall be worked out by concessionaire for net financial implication.	Reasons & recommendation of IE is accepted for reconstruction to (1x6)mtr minor bridge in 12 mtr width proposed in schedule B taken as negative variation and proposal for reconstruction of (1x6) mtr minor bridge in 12 mtr width as positive variation. Net financial implication may be worked out accordingly.
25	Extra	59+130	Not Mentioned in schedule A	No proposal in schedule B	During inventory no structure found at this location In rainy season it is observed that water flows on road, due to location of chainage is hilyterrain In schedule B and A structure is not proposed Therefore to safeguard the road in rainy season a New structure is required. Hence it is proposed to New construction of (1x1.0) mtr HPC in 12 mtr width.	Inspection carried out by us Agreed with the comments of concessionaire.It is observed that in rainy season water overtops the road at this location. There is no provision of structure in schedule A & B Hence as per site condition (1X1.0) mtr HPC in 12 mtr width is proposed and recommended to Newconstruction follows (i) The proposed and recommended structure shall be under change of scope of positive variation. The actual cost of structure shall be worked out by concessionaire for financial implication.	Reasons & recommendation of IE is accepted for reconstruction to (1x1.0)mtr HPC in 12 mtr width taken as positive variation . Actual financial implication may be worked out accordingly.
26	Extra	59+228	Not Mentioned in schedule A	No proposal in schedule B	In inventory existing structure (1x0.75)mtr stone slab found in poor condition. Details of existing structure is given below Length -5.0mtr , Width/Span -0.75mtr . Height - 1.4mtr As per schedule A & B structure is not Proposed . Observing Nallah at this chainage location, and flow of water during rainy season it is required to provide larger cross sectional area. Hence it is proposed to reconstruct (2x1.0) mtr HPC in 12 mtr width.	Inspection carried out by us Agreed with the comments of concessionaire.Local enquiry reveals that during rainy season sometimes water overtops at this location . Structure is not mentioned in schedule A and there is no provision of structure in schedule B. Hence as per site condition (2X1.0) mtr HPC upto 12 mtr width is proposed to reconstruct whose cross sectional area is more compare to the existing structure. (i) The proposed and recommended structure shall be under change of scope of positive variation. The actual cost of structure shall be worked out by concessionaire for financial implication.	IE recommendation is accepted for reconstruction to (2x1.0)mtr HPC in 12 mtr width taken as positive variation . Actual financial implication may be worked out accordingly.

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SR. NO.	CHAINAGE		EXISTING DETAILS ASPER SCHEDULE A	PROVISION ASPER SCHEDULE B	CONSTRUCTION PROPOSED BY CONCESSIONAIRE AS PER SITE CONDITION	REASONS & RECOMMENDATION BY INDEPENDENT ENGINEER	Decision of committee
	EXISTING	DESIGN					
27	63+000	64+752	Type of Structure- HPC No of pipe-01 Dia of pipe-1000mm C.W-7.5 mtr Over all width-8.5 mtr Condition of structure- pipe-fair Head wall -fair Return wall-fair	Type of Structure- HPC (1x1.0)mtr Proposed - widening up to 12 mtr width	As per site inventory existing structure (1X1.2)mtr. Stone slab is found in poor condition. Details of existing structure is given below Length -7.3mtr , Width/Span -1.2mtr . Height - 1.1mtr (3 no nos) It is mentioned in schedule B (1X1.0) mtr HPC in 12 mtr width to be widened. Also local enquiry reveals that the flow of water during rainy season is high . Therefore the safety of road and requirement of site condition it is proposed to reconstruct (1X10X2.0) box culvert in width of 12 mtr	Inspection carried out by us Agreed with the comments of concessionaire.As per local enquiry it is found that the existing structure has sufficient area of vents for clearance of rainy water therefore As per requirement and safety of road for traffic movement it is proposed and recommended to reconstruct (1X10X2.0)mtr box culvert in width of 12 mtr as follows . (a) The structure proposed in schedule B shall be under change of scope of Negative variation. (b) The proposed and recommended structure shall be under change of scope of Positive variation. (c) Net cost in variation shall be worked out by the concessionaire for financial implication.	Reasons & recommendation of IE is accepted for widening to (1x1.0)mtr HPC in 12 mtr width proposed in Sheduled B taken as negative variation .and proposal for reconstruction of (1x10X2.0) mtr Box culvert in 12 mtr width as positive variation . Actual financial implication may be worked out accordingly.
28	Extra	65+173	Not Mentioned in schedule A	No proposal in Shedule B	During inventory existing structure (2X0.9)mtr HPC found in poor condition Detail of existing structure it given below. Length -9.2mtr ,2 row pipe Dia -0.9mtr . As per schedule A & B structure is not Proposed . Observing Nallah at this chainage location, and flow of water during rainy season it is required to provide larger cross sectional area. The structure is located in pahadikheda village Hence it is proposed to reconstruct (2x1.2) mtr HPC in 12 mtr width.	The mentioned chainage inspected by us Agreed with the comments of concessionaire. Structure is not mentioned in schedule A and there is no provision of structure in schedule B Hence as per site condition (2X1.2) mtr HPC upto 12 mtr width is proposed whose cross sectional area is sufficient compare to the Existing structure. (.) The proposed and recommended structure shall be under change of scope of positive variation. The actual cost of structure shall be worked out by concessionaire for financial implication.	Reasons & recommendation of IE is accepted for reconstruction to (2x1.2)mtr HPC in 12 mtr width taken as positive variation . Financial implication may be worked out accordingly.
29	67+668	68+519	Type of Structure- HPC No of pipe-01 Dia of pipe-1000mm C.W-6.5 mtr Over all width-8.2 mtr Condition of structure- pipe-fair Head wall -fair Return wall-fair	Type of Structure- HPC (1x1.0)mtr Proposed -widening up to 12 mtr width	As per site inventory existing structure (1X1.6)mtr. Stone slab is found in poor condition. Details of existing structure is given below Length -9.2mtr , Width/Span -1.6mtr . Height - 2.5mtr It is proposed in schedule B (1X1.0) mtr HPC in 12 mtr width to be widened. The structure is located in Pahdikheda village Therefore for the safety of road and requirement of site condition it is proposed to reconstruct (1X10X2.95) box culvert in width of 12 mtr	The mentioned chainage inspected by us Agreed with the comments of concessionaire.The structure is located in pahardikhera village. Local enquiry regarding flow of water during rainy season is considered which overtops at this chainage location. Hence as per requirment of site condition and safety for road & traffic movement it is proposed & recommended to reconstruct (1X10) mtr box culvert in 12 mtr width as follows. (a)The structure mentioned in schedule B shall be under change of scope of Negative variation. (b) Proposed and recommended box culvert (1X10X2.95) shall be under change of scope of positive variation. (c) Net cost in variation shall be worked out by the concessionaire for financial implication	Reasons & recommendation of IE is accepted for widening to (1x1.0)mtr HPC in 12 mtr width proposed in schedule B taken as negative variation .and proposal for reconstruction of (1x10X2.95) mtr Box culvert in 12 mtr width as positive variation. Net financial implication may be worked out accordingly.
30	67+950	65+627	Type of Structure- HPC No of pipe-02 Dia of pipe-1000mm C.W-6.5 mtr Over all width-8.2 mtr Condition of structure- pipe-poor Head wall -poor Return wall-poor	Type of Structure-HPC(2x1.2) proposed - Reconstruction in 12.0 mtr width	As per site inventory existing structure (1X2.7)mtr. Arch culvert is found in poor condition. Details of existing structure is given below Length -8.6mtr , Width/Span -2.7mtr . Height - 1.3mtr It is proposed in schedule B(2X1.2) mtr HPC in 12 mtr width to be Reconstructed. The structure is located in PahdiKheda village Therefore for the safety of road and requirement of site condition it is proposed to reconstruct (1X10X3.4) box culvert in width of 12 mtr.	The mentioned chainage inspected by us and Agreed with the comments of concessionaire.The structure is located in pahadikhera village therefore for the clearance of water in rainy seasons it is preferred to construct slab culvert. Hence it is proposed & recommended to construct (1X10X3.4)mtr Box culvert upto 12 mtr width for the safety of road and movement of traffic as follows. (a) Structure in mentioned in schedule B shall be under change of scope of Negative variation. (b) Structure proposed and recommended for construction shall be under change of scope of positive variation. (c) Net cost in variation shall be worked out by the concessionaire for financial implication.	Reasons & recommendation of IE is accepted for widening to (2x1.0)mtr HPC in 12 mtr width proposed in Sheduled B taken as negative variation .and proposal for reconstruction of (1x10X3.4) mtr Box culvert in 12 mtr width as positive variation. Net financial implication may be worked out accordingly.

HDE

Team Leader
Redecon (I) Pvt. Ltd.

Divisional Manager
M.P.R.D.C. Ltd.
Dn. No. 1, Rewa

CELBOT

SR. NO.	CHAINAGE		EXISTING DETAILS ASPER SCHEDULE A	PROVISION ASPER SCHEDULE B	CONSTRUCTION PROPOSED BY CONCESSIONAIRE AS PER SITE CONDITION	REASONS & RECOMMENDATION BY INDEPENDENT ENGINEER	Decision of committee (8)
	EXISTING	DESIGN					
31	66+100	66+013	Type of Structure-Stone No of span-01 Span length-1mtr C.W-6 mtr Over all width-6.7 mtr Condition of structure- slab -fair head wall/wing wall -fair return wall/parapet-fair	Type of Structure-Stone slab culvert(1x3.0)mtr Proposed – Reconstruction in 12.0 mtr width	During inventory existing structure (100.95)mtr stone slab is found in poor condition.Details of existing structure is given below Length -6.6mtr., Width/Span -8.95mtr., Height - 0.55mtr In schedule B it is proposed to reconstruct (1X3)mtr slab culvert in width of 12 mtr . As per site condition and consideration of local people opinion (2X1.2)mtr HPC upto 12 mtr width is proposed	The mentioned chainage inspected by us and Agreed with the comments of concessionaire.In rainy season flow of water at this location is observed and it seems that the proposed construction(1x3) mtr slab culvert is on higher side compare to water flow. As per site condition (2X1.2) mtr HPC in width of 12 mtr is sufficient for drainage of water at this location hence it is proposed and recommended to construct (2X1.2)mtr HPC in 12 mtr width. (a) Structure proposed in schedule B(RCC slab culvert 1x3)mtr in width of 12 mtr is deleted shall be change of scope of Negative variation. (b) structure proposed and recommended to reconstruct shall be change of scope of positive variation. Net cost shall be worked out by concessionaire	Reasons & recommendation of IE is accepted for reconstruction of (1x3)mtr slab in 12 mtr width proposed in schedule B taken as negative variation and proposal for reconstruction of (2x1.2) mtr HPC in 12 mtr width as positive variation. Net financial implication may be worked out accordingly.
32	Extra	67+500	Not Mentioned in schedule A	No provision is scheduled B	During inventory as structure is found at this location in rainy season it is observed that water flown on road, in schedule A & B structure is not proposed Therefore to safeguard the road in rainy season a New structure is required. Hence it is proposed Newconstruction of (1x1.0) mtr HPC in 12 mtr width.	Inspection carried out by us Agreed with the comments of concessionaire. There is no provision of structure in schedule A & B Hence as per site condition (1X1.0) mtr HPC in 12 mtr width whose cross sectional area is sufficient compare to the existing structure. (i) The proposed and recommended structure shall be under change of scope of positive variation. The actual cost of structure shall be worked out by concessionaire for financial implication.	Reasons & recommendation of IE recommendation is accepted for Newconstruction of (1x1.0)mtr HPC in 12 mtr width taken as positive variation . Actual financial implication may be worked out accordingly.
33	Extra	68+070	Not Mentioned in schedule A	No proposal in Shedule B	In inventory existing structure (2x1.10)mtr stone slab is found in poor condition. Details of existing structure is given below Length -7.9mtr., Width/Span -1.10mtr., Height - 0.9mtr(Two nos vent) As per schedule A & B structure is not Proposed . Observing Nallah at this chainage location, and flow of water during rainy season itis required to provide a structure to safeguard road and traffic. Hence it is proposed to reconstruct (2x1.0) mtr HPC in 12 mtr width.	The mentioned chainage inspected by us. Agreed with the comments of concessionaire. Structure is not mentioned in schedule A and there is no provision of structure in schedule B Hence it is proposed and recommended to reconstruct (2X1.0)mtr HPC up to 12 mtr width whose cross sectional area is equivalent compare to the existing structure. (i) The proposed and recommended structure shall be under change of scope of positive variation. The actual cost of structure shall be worked out by concessionaire for financial implication.	Reasons & recommendation of IE is accepted for reconstruction of (2x1.0)mtr HPC in 12 mtr width taken as positive variation . Financial implication may be worked out accordingly.
34	Extra	69+327	Not Mentioned in schedule A	No proposal in Shedule B	During inventory existing structure (100.95)mtr stone slab is found in poor condition Detail of existing structure is given below. Length -9.1mtr ,width-0.95 height -0.65mtr . As per schedule A & B structure is not Proposed . Observing Nallah at this chainage location, and flow of water during rainy season itis required to provide structure to safeguard road and traffic. Hence it is proposed to reconstruct (1x1.0) mtr HPC in 12 mtr width.	The mentioned chainage inspected by us and Agreed with the comments of concessionaire. Structure is not mentioned in schedule A and there is no provision of structure in schedule B Hence it is proposed and recommended to reconstruct (1X1.0) mtr HPC upto 12 mtr width whose cross sectional area is equivalent to the existing structure. (i) The proposed and recommended structure shall be under change of scope of positive variation. The actual cost of structure shall be worked out by concessionaire for financial implication.	Reasons & recommendation of IE recommendation is accepted for reconstruction of (1x1.0)mtr HPC in 12 mtr width taken as positive variation . Financial implication may be worked out accordingly.
35	Extra	69+586	Not Mentioned in schedule A	no proposal in Shedule B	During inventory existing structure (100.65)mtr stone slab is found is poor condition Detail of existing structure is given below. Length -7.2mtr ,width-0.65 height -1.2mtr . As per schedule A & B structure is not Proposed . Observing Nallah at this chainage location, and flow of water during rainy season itis required to provide structure, to safeguard road and traffic. Hence it is proposed to reconstruct (2x1.0) mtr HPC in 12 mtr width.	The mentioned chainage inspected by us and Agreed with the comments of concessionaire. Structure is not mentioned in schedule A and there is no provision of structure in schedule B Hence it is proposed and recommended to reconstruct (2X1.0)mtr HPC is proposed whose cross sectional area is more compare to the existing structure. (i) The proposed and recommended structure shall be under change of scope of positive variation. The actual cost of structure shall be worked out by concessionaire for financial implication.	Reasons & recommendation of IE is accepted for reconstruction of (2x1.0)mtr HPC in 12 mtr width taken as positive variation . Actual financial implication may be worked out accordingly.

HDE

UCHERA-NAGOD TOLLWAYS (P) LTD. PROJECT MANAGER

Team Leader
Redecon (I) Pvt. Ltd

Divisional Manager
M.P.R.D.C. Ltd.
Dn. No. 1, Rewa

15/10/15

SR. NO.	CHAINAGE		EXISTING DETAILS ASPER SCHEDULE A	PROVISION ASPER SCHEDULE B	CONSTRUCTION PROPOSED BY CONCESSIONAIRE AS PER SITE CONDITION	REASONS & RECOMMENDATION BY INDEPENDENT ENGINEER	Decision of committee
	EXISTING	DESIGN					
36	Intra	68+767	Not Mentioned in schedule A	No proposal in Shedule B	During inventory existing structure (1X1.2)mtr stone slab is found in poor condition Detail of existing structure isgiven below. Length -5mtr ,width-3.2 height -1.15mtr . As per schedule A & B structure is not Proposed . Observing Nallah at this chainage location, and flow of water during rainy season water overtops the existing structure .Hence it is required to provide structure, to safeguard road and traffic. Therefore it is proposed to reconstruct (2x1.0) mtr HPC in 12 mtr width.	The mentioned chainage inspected by us. Agreed with the comments of concessionaire. Structure is not mentioned in schedule A and there is no provision of structure in schedule B Hence it is proposed & recommended as per site condition to reconstruct (2X1.0) mtr HPC upto 12 mtr width ,whose cross sectional area is sufficient compare to the existing structure (i) The proposed and recommended structure shall be under change of scope of positive variation. The actual cost of structure shall be worked out by concessionaire for financial implication.	Reasons & recommendation of IE is accepted for reconstruction of (2x1.0)mtr HPC in 12 mtr width taken as positive variation . Actual financial implication may be worked out accordingly.
37	71+908	69+343	Type of Structure-Stone No of span-01 Span length-1.5mtr C.W-5.0 mtr Over all width-6.5 mtr Condition of structure- slab -poor head wall/wing wall -poor return wall/parapet-poor	Type of Structure- RCC(1x3)mtr slab Proposed -Reconstruction in 12.0 mtr width	During inventory existing structure (1X0.9)mtr stone slab is found in poor condition Detail of existing structure isgiven below. Length -5.5mtr ,width-0.9 height -1.35mtr . (1) In schedule B it is proposed to reconstruct (1X3) slab in 12 mtr width. Observing a narrow Nallah at this chainage location, and flow of water during rainy season it is required to provide structure, to safeguard road and traffic. Proposed structure in schedule B may be changed as per requirement of site condition. Hence it is proposed to reconstruct (2x1.2) mtr HPC in 12 mtr width.	The mentioned chainage inspected by us. Agreed with the comments of concessionaire. As per site condition (2X1.2) HPC is sufficient for drainage of water at this location hence it is proposed and recommended to reconstruct (2X1.2) mtr HPC upto 12 m widthas follows (a) Structure proposed in schedule B(1x3)mtr slab in 12 mtr width is deleted, shall be change of scope of Negative variation. (b) structure proposed and recommended to reconstruct shall be change of scope of positive variation. Net cost variation of structure shall be worked out by concessionaire for financial implication.	Reasons & recommendation of IE is accepted for deletion of (reconstruction of (1x3)mtr slab in 12 mtr width) proposed in schedule B taken as negative variation and proposal for reconstruction of (2x1.2) mtr HPC in 12 mtr width as positive variation. Net financial implication may be worked out accordingly.
38	72+508	69+913	Type of Structure-Stone No of span-01 Span length-1.0 mtr C.W-5.7 mtr Over all width-6.7 mtr Condition of structure- slab -poor head wall/wing wall -poor return wall/parapet-poor	Type of Structure-RCC slab(1x3.0) mtr Proposal -Reconstruction in 12.0 mtr width	During inventory existing structure (2X0.6)mtr stone slab is found in poor condition Detail of existing structure isgiven below. Length -7.4mtr ,width-0.6 height -0.8mtr . (1) In schedule B it is proposed to reconstruct (1X3) slab in 12 mtr width. Observing a narrow Nallah at this chainage location, and flow of water during rainy season it is required to provide structure, to safeguard road and traffic. Proposed structure in schedule B may be changed as per requirement of site condition. Hence it is proposed to reconstruct (2x1.2) mtr HPC in 12 mtr width.	The mentioned chainage inspected by us. Agreed with the comments of concessionaire. As per site condition (2X1.2) HPC is sufficient for drainage of water at this location hence it is proposed and recommended to reconstruct (2X1.2) mtr HPC upto 12 m width as follows. (a) Structure proposed in schedule B (1x3) slab culvert is deleted shall be change of scope of Negative variation. (b) structure proposed and recommended to reconstruct shall be change of scope of positive variation. Net cost of structure of structure shall be worked out by concessionaire for financial implication.	Reasons & recommendation of IE is accepted for widening of (1x3.0)slab culvert in 12 mtr width proposed in schedule B taken as negative variation and proposal for reconstruction of (2x1.2) mtr HPC in 12 mtr width as positive variation. Net financial implication may be worked out accordingly.
39	72+908	-	Not Mentioned in schedule A	Type of structure- HPC (1x1.2)mtr HPC proposed -Newconstruction in 12.0 mtr width	During inventory no structure found at existing chainage In schedule B it is proposed to Newconstruct (1X1.2) mtr HPC upto 12 mtr width As per site observation the structure is not required at this location Hence the structure is canceled	The mentioned chainage inspected by us and Agreed with the comments of concessionaire. As per favourable condition of site no structure is required at this location because both side ground (upstream and downstream) is in sloping type hence it is proposed and recommended to delete the structure(1x1.2)mtr HPC New construction is 12 mtr width (a) Structure mentioned in schedule B shall be change of scope of Negative variation. Actual cost of structure shall be worked out by concessionaire for financial implication.	Reasons & recommendation of IE for deleting this structure HPC (1X1.2) mtr in width of 12 mtr taken as negative change of scope. Financial implication may be worked out.
40	73+608	71+343	Type of Structure- HPC No of pipe-01 Dia of pipe-1000mm C.W-6.5 mtr Over all width-8.4 mtr Condition of structure- pipe-fair Head wall -fair Return wall-fair	Type of Structure- HPC (1x1.0)mtr Proposed- widening up to 12 mtr width	During inventory existing structure (1X0.9)mtr HPC is found in poor condition Detail of existing structure isgiven below. Length -7.4mtr ,one row Dia -0.9 As per schedule B it is proposed to widen (1X1.0)mtr HPC to 12 mtr width. Since the existing HPC is in poor condition Hence it is proposed to reconstruct (1X1.2) mtr HPC in 12 mtr width	The mentioned chainage inspected by us and Agreed with the comments of concessionaire. Due to detoriated condition of H.P.C it is proposed & recommended to reconstruct H.P.C (1X1.2)mtr in 12 mtr width (a) Structure in mentioned in schedule B shall be under change of scope of Negative variation. (b) Structure proposed and recommended for construction shall be under change of scope of positive variation. (c) Net cost of structure shall be worked out by the concessionaire for financial implication.	Reasons & recommendation of IE is accepted for widening of (1x1.0)HPC in 12 mtr width proposed in schedule B taken as negative variation and proposal for reconstruction of (1x1.2) mtr HPC in 12 mtr width as positive variation. Net financial implication may be worked out accordingly.

UCHERA-NAGOD TOLLWAYS LIMITED PROJECT MANAGER

Team Leader
Redecon (I) Pvt. Ltd.

HDE

Divisional Manager
M/s BBC & Ltd

CE (BOT)

GM (NAT)

SR. NO.	CHAINAGE		EXISTING DETAILS ASPER SCHEDULE A	PROVISION ASPER SCHEDULE B	CONSTRUCTION PROPOSED BY CONCESSIONAIRE AS PER SITE CONDITION	REASONS & RECOMMENDATION BY INDEPENDENT ENGINEER	Decision of committee
	EXISTING	DESIGN					
41	74+180	-	Not Mentioned in schedule A	Type of structure- HPC (1x1.2)mtr Proposed -Newconstruction in 12.0 mtr width	During inventory no structure found at existing chainage In schedule B it is proposed to Newconstruct (1X1.2)mtr HPC upto 12 mtr width. As per site observation this structure is not required at this location Hence the structure is deleted	The mentioned chainage inspected by us and Agreed with the comments of concessionaire. As per favourable condition of site no structure is required at this location because both side (upstrem and downstream) is sloping type , hence it is proposed and recommended to delete the HPC (1x1.2) mtr new construction in 12 m width. (a) Structure proposed in schedule B shall be change of scope of Negative variation. Actual cost of structure shall be worked out by concessionaire for financial implication.	Reasons & recommendation of IE for deleting of this structure HPC(1X1.2) mtr in 12 mtr width taken as negative change of scope. Financial implication may be worked out.
42	74+300	71+757	Type of Structure- HPC No of pipe-01 Dia of pipe-1.000 C.W-6.5 mtr Over all width-8.2 mtr Condition of structure- pipe-fair Head wall -fair Return wall-fair	Type of Structure- HPC (1x1.0)mtr Proposed widening of HPC in 12 mtr width	During inventory existing structure (1X0.9)mtr HPC is found in poor condition Detail of existing structure is given below. Length -9.6mtr ,one row Dia - 0.9 As per schedule B it is proposed to widen (1X1.0)mtr HPC in 12 mtr width. Since the of existing HPC is in poor condition Hence it is proposed to reconstruct (1X1.2) mtr HPC in 12 mtr width	The mentioned chainage inspected by us and Agreed with the comments of concessionaire. keeping in view the safety of traffic under following condition (a) Structure in mentioned in schedule B shall be under change of scope of Negative variation. (b) Structure proposed and recommended (1x1.2)mtr HPC to 12 mtr width for construction shall be under change of scope of positive variation. (c) Net cost of structure shall be worked out by the concessionaire for financial implication.	Reasons & recommendation of IE is accepted for widening of (1x1.0)HPC to 12 mtr width proposed in schedule B taken as negative variation ,and proposal for reconstruction of (1x1.2) mtr HPC in 12 mtr width as positive variation. Net financial implication may be worked out accordingly.
43	Extra	71+989	Not Mentioned in schedule A	No proposal in Shedule B	During inventory existing structure (2X0.6)mtr stone slab is found in poor condition Detail of existing structure is given below. Length -9mtr ,width-0.6 height -1.0mtr (two no vents). In schedule A & B it is not proposed. As per site condition and safety of the road, structure is required at this chainage location. Hence it is proposed to reconstruct (1x1.0) mtr HPC upto 12 mtr width	The mentioned chainage inspected by us. Agreed with the comments of concessionaire. The structure is neither shown in schedule A Nor proposed in schedule B Hence it is proposed and recommended to reconstruct (1X1.0) mtr HPC in width of 12 mtr, whose cross sectional area is equivalent to the existing structure. (i) The proposed and recommended structure shall be under change of scope of positive variation. The actual cost of structure shall be worked out by concessionaire for financial implication.	Reasons & recommendation of IE is accepted for re construction of (1x1.0)mtr HPC in the width of 12 mtr taken as positive variation. Actual financial implication may be worked out
44	Extra	72+363	Not Mentioned in schedule A	No proposal in Shedule B	During inventory existing structure (1X0.6)mtr stone slab is found in poor condition Detail of existing structure is given below. Length -9.2mtr ,width-0.6 height -0.5mtr . In schedule A & B it is not proposed. As per site condition and safety of the road, structure is required at this chainage location. Hence it is proposed to reconstruct (1x1.0) mtr HPC upto 12 mtr width	The mentioned chainage inspected by us. Agreed with the comments of concessionaire. Structure is not mentioned in schedule A and there is no provision of structure in schedule B Hence it is proposed and recommended to reconstruct (1X1.0)mtr HPC upto 12 mtr width whose cross sectional area is sufficient compare to the existing structure. (i) The proposed and recommended structure shall be under change of scope of positive variation. The actual cost of structure shall be worked out by concessionaire for financial implication.	Reasons & recommendation of IE is accepted for re construction of (1x1.0)mtr HPC in the width of 12 mtr taken as positive variation. Actual financial implication may be worked out
45	Extra	72+606	Not Mentioned in schedule A	No proposal in Shedule B	During inventory existing structure (1X0.65)mtr stone slab is found in poor condition Detail of existing structure is given below. Length -9.2mtr ,width-0.65 height -0.44mtr . In schedule A & B it is not proposed. As per site condition and safety of the road, structure is required at this chainage location. Hence it is proposed to reconstruct (1x1.0) mtr HPC upto 12 mtr width	The mentioned chainage inspected by us. Agreed with the comments of concessionaire. Structure is not mentioned in schedule A and there is no provision of structure in schedule B Hence it is proposed and recommended to reconstruct (1X1.0) mtr HPC upto 12 mtr width whose cross sectional area is sufficient compare to the existing structure. (i) The proposed and recommended structure shall be under change of scope of positive variation. The actual cost of structure shall be worked out by concessionaire for financial implication.	Reasons & recommendation of IE recommendation is accepted for re construction of (1x1.0)mtr HPC in the width of 12 mtr taken as positive variation. Actual financial implication may be worked out

Team Leader
Redecon (I) Pvt. Ltd.

Divisional Manager
MPRDC Ltd.
Dn. No. 1, Rewa

CE (Bot)

SR. NO.	CHAINAGE		EXISTING DETAILS ASPER SCHEDULE A	PROVISION ASPER SCHEDULE B	CONSTRUCTION PROPOSED BY CONCESSIONAIRE AS PER SITE CONDITION	REASONS & RECOMMENDATION BY INDEPENDENT ENGINEER	Decision of committee
	EXISTING	DESIGN					
46	Extra	72+678	Not Mentioned in schedule A	No proposal in Shedule B	During inventory existing structure (1X8.7)mtr stone slab is found in poor condition Detail of existing structure is given below. Length -0.6mtr ,width-0.7 height -0.35mtr . In schedule A & B it is not proposed. As per site condition and safety of the road, structure is required at this chainage location. Hence it is proposed to reconstruct (1x1.0) mtr HPC upto 12 mtr width	The mentioned chainage inspected by us. Agreed with the comments of concessionaire. Structure is not mentioned in schedule A and there is no provision of structure in schedule B Hence it is proposed and recommended to reconstruct (1X1.0)mtr HPC upto 12 mtr width whose cross sectional area is sufficient compare to the existing structure. (i) The proposed and recommended structure shall be under change of scope of positive variation. The actual cost of structure shall be worked out by concessionaire for financial implication.	Reasons & recommendation of IE is be accepted for re construction of (1x1.0)mtr HPC in the width of 12 mtr taken as positive variation. Actual financial implication may be worked out
47	Extra	72+761	Not Mentioned in schedule A	No proposal in Shedule B	During inventory existing structure (1X0.65)mtr stone slab is found in poor condition Detail of existing structure is given below. Length -0.8mtr ,width-0.65 height -0.65mtr . In schedule A & B it is not proposed. As per site condition and safety of the road, structure is required at this chainage location. Hence it is proposed to reconstruct (1x1.0) mtr HPC upto 12 mtr width	The mentioned chainage inspected by us Agreed with the comments of concessionaire. Structure is not mentioned in schedule A and there is no provision of structure in schedule B Hence it is proposed and recommended to reconstruct (1X1.0)mtr HPC upto 12 mtr width whose cross sectional area is sufficient compare to the existing structure. (i) The proposed and recommended structure shall be under change of scope of positive variation. The actual cost of structure shall be worked out by concessionaire for financial implication.	Reasons & recommendation of IE is accepted for re construction of (1x1.0)mtr HPC in the width of 12 mtr taken as positive variation. Actual financial implication may be worked out
48	Extra	72+817	Not Mentioned in schedule A	No proposal in Shedule B	During inventory existing structure (1X0.65)mtr stone slab is found in poor condition Detail of existing structure is given below. Length -0.5mtr ,width-0.65 height -0.55mtr . In schedule A & B it is not proposed. As per site condition and safety of the road, structure is required at this chainage location. Hence it is proposed to reconstruct (1x1.0) mtr HPC upto 12 mtr width	The mentioned chainage inspected by us. Agreed with the comments of concessionaire. Structure is not mentioned in schedule A and there is no provision of structure in schedule B. Hence it is proposed and recommended to reconstruct (1X1.0)mtr HPC upto 12 mtr width whose cross sectional area is sufficient compare to the existing structure. (i) The proposed and recommended structure shall be under change of scope of positive variation. The actual cost of structure shall be worked out for financial implication.	Reasons & recommendation of IE is accepted for re construction of (1x1.0)mtr HPC in the width of 12 mtr taken as positive variation. Actual financial implication may be worked out
49	Extra	72+931	Not Mentioned in schedule A	No proposal in Shedule B	During inventory existing structure (1X0.65)mtr stone slab is found in poor condition Detail of existing structure is given below. Length -9 Smtr ,width-0.65 height -0.5mtr . In schedule A & B it is not proposed. As per site condition and safety of the road, structure is required at this chainage location. Hence it is proposed to reconstruct (1x1.0) mtr HPC upto 12 mtr width	The mentioned chainage inspected by us. Agreed with the comments of concessionaire. Structure is not mentioned in schedule A and there is no provision of structure in schedule B Hence it is proposed and recommended to reconstruct (1X1.0)mtr HPC upto 12 mtr width whose cross sectional area is sufficient compare to the existing structure. (i) The proposed and recommended structure shall be under change of scope of positive variation. The actual cost of structure shall be worked out by concessionaire for financial implication.	Reasons & recommendation of IE is accepted for re construction of (1x1.0)mtr HPC in the width of 12 mtr taken as positive variation. Actual financial implication may be worked out
50	Extra	73+851	Not Mentioned in schedule A	No proposal in Shedule B	During inventory existing structure (3X0.8)mtr stone slab is found in poor condition Detail of existing structure is given below. Length -0.1mtr ,width-0.8 height -0.55mtr . (3 no. vents) In schedule A & B it is not proposed. As per site condition and safety of the road, structure is required at this chainage location. Hence it is proposed to reconstruct (3x1.0) mtr HPC upto 12 mtr width	The mentioned chainage inspected by us Agreed with the comments of concessionaire. Structure is not mentioned in schedule A and there is no provision of structure in schedule B.Also it is observed in rainy season water overtops the existing structure Hence the proposal of the concessionaire to reconstruct (3X1.0) mtr HPC upto 12 mtr width is moderated to (2x1.0)mtr HPC whose cross sectional area is more than the existing structure. Hence proposed and recommended structure shall be under change of scope of positive variation. The actual cost of structure shall be worked out by concessionaire for financial implication.	Reasons & recommendation of IE is accepted for re construction of (2x1.0)mtr HPC in the width of 12 mtr taken as positive variation. Actual financial implication may be worked out

DRE-UCHERA-NAGOD TOLLWAYS LIMITED PROJECT MANAGER

Team Leader
Redecon (I) Pvt. Ltd.

Divisional Manager
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Dn. No. 1, Rewa

CE (BOT)

GM (BOT)

SR. NO.	CHAINAGE		EXISTING DETAILS ASPER SCHEDULE A	PROVISION ASPER SCHEDULE B	CONSTRUCTION PROPOSED BY CONCESSIONAIRE AS PER SITE CONDITION	REASONS & RECOMMENDATION BY INDEPENDENT ENGINEER	Decision of committee
	EXISTING	DESIGN					
S1	Extra	73+302	Not Mentioned in schedule A	No proposal in Shedule B	During inventory existing structure (1X0.7)mtr stone slab is found in poor condition Detail of existing structure is given below. Length -0.1mtr ,width-0.7 height -0.5mtr . In schedule A & B it is not proposed. As per site condition and safety of the road, structure is required at this chainage location. Hence it is proposed to reconstruct (1x1.0) mtr RPC upto 12 mtr width	The mentioned chainage inspected by us. Agreed with the comments of concessionaire. Structure is not mentioned in schedule A and there is no provision of structure in schedule B Hence it is proposed and recommended to reconstruct (1X1.0)mtr HPC upto 12 mtr width whose cross sectional area is sufficient compare to the existing structure. (i) The proposed and recommended structure shall be under change of scope of positive variation. The actual cost of structure shall be worked out by concessionaire for financial implication.	Reasons & recommendation of IE is accepted for re construction of (1x1.0)mtr HPC in the width of 12 mtr taken as positive variation Actual financial implication may be worked out
S2	Extra	73+334	Not Mentioned in schedule A	No proposal in Shedule B	During inventory existing structure (1X0.5)mtr stone slab is found in poor condition Detail of existing structure is given below. Length -0.2mtr ,width-0.5 height -0.35mtr . In schedule A & B it is not proposed. As per site condition and safety of the road, structure is required at this chainage location. Hence it is proposed to reconstruct (1x1.0) mtr HPC upto 12 mtr width	The mentioned chainage inspected by us. Agreed with the comments of concessionaire. Structure is not mentioned in schedule A and there is no provision of structure in schedule B Hence it is proposed and recommended to reconstruct (1X1.0)mtr HPC upto 12 mtr width whose cross sectional area is sufficient compare to the existing structure. (i) The proposed and recommended structure shall be under change of scope of positive variation. The actual cost of structure shall be worked out for financial implication.	Reasons & recommendation of IE is accepted for re construction of (1x1.0)mtr HPC in the width of 12 mtr taken as positive variation. Actual financial implication may be worked out
S3	Extra	73+625	Not Mentioned in schedule A	No proposal in Shedule B	During inventory existing structure (2X0.65)mtr stone slab is found in poor condition Detail of existing structure is given below. Length -7.3mtr ,width-0.65 height -0.46mtr . (2 no. vents) In schedule A & B it is not proposed. As per site condition and safety of the road, structure is required at this chainage location. Hence it is proposed to reconstruct (1x1.0) mtr HPC upto 12 mtr width	The mentioned chainage inspected by us. Agreed with the comments of concessionaire. Structure is not mentioned in schedule A and there is no provision of structure in schedule B Hence it is proposed and recommended to reconstruct (1X1.0)mtr HPC upto 12 mtr whose cross sectional area is equivalent to the existing structure. (i) The proposed and recommended structure shall be under change of scope of positive variation. The actual cost of structure shall be worked out by concessionaire for financial implication.	Reasons & recommendation of IE is accepted for re construction of (1x1.0)mtr HPC in the width of 12 mtr taken as positive variation. Actual financial implication may be worked out
S4	Extra	73+734	Not Mentioned in schedule A	No proposal in Shedule B	During inventory existing structure (1X0.65)mtr stone slab is found in poor condition Detail of existing structure is given below. Length -0.8mtr ,width-0.65 height -0.4mtr . In schedule A & B it is not proposed. As per site condition and safety of the road, structure is required at this chainage location. Hence it is proposed to reconstruct (1x1.0) mtr RPC upto 12 mtr width	The mentioned chainage inspected by us. Agreed with the comments of concessionaire. Structure is not mentioned in schedule A and there is no provision of structure in schedule B Hence it is proposed and recommended to reconstruct (1X1.0)mtr HPC upto 12 mtr width whose cross sectional area is sufficient compare to the existing structure. (i) The proposed and recommended structure shall be under change of scope of positive variation. The actual cost of structure shall be worked out by concessionaire for financial implication.	Reasons & recommendation of IE is accepted for re construction of (1x1.0)mtr HPC in the width of 12 mtr taken as positive variation. Actual financial implication may be worked out
S5	Extra	73+827	Not Mentioned in schedule A	No proposal in Shedule B	During inventory existing structure (1X0.6)mtr stone slab is found in poor condition Detail of existing structure is given below. Length -7.6mtr ,width-0.6 height -0.4mtr . In schedule A & B it is not proposed. As per site condition and safety of the road, structure is required at this chainage location. Hence it is proposed to reconstruct (1x1.0) mtr RPC upto 12 mtr width	The mentioned chainage inspected by us. Agreed with the comments of concessionaire. Structure is not mentioned in schedule A and there is no provision of structure in schedule B Hence it is proposed and recommended to reconstruct (1X1.0)mtr HPC upto 12 mtr width whose cross sectional area is sufficient compare to the existing structure. (i) The proposed and recommended structure shall be under change of scope of positive variation. The actual cost of structure shall be worked out for financial implication.	Reasons & recommendation of IE is accepted for re construction of (1x1.0)mtr HPC in the width of 12 mtr taken as positive variation. Actual financial implication may be worked out

HDE

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Divisional Manager
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Dn. No. 1, Rewa

CE (BoT)

SR. NO.	CHAINAGE		EXISTING DETAILS ASPER SCHEDULE A	PROVISION ASPER SCHEDULE B	CONSTRUCTION PROPOSEDBY CONCESSIONAIRE AS PER SITE CONDITION	REASONS & RECOMMENDATION BY INDEPENDENT ENGINEER	Decision of committee
	EXISTING	DESIGN					
56	Extra	74+114	Not Mentioned in schedule A	No proposal in Shedule B	During inventory existing structure (1X8.8)mtr stone slab is found in poor condition Detail of existing structure is given below. Length -8.5mtr ,width -0.8 height -0.4mtr . In schedule A & B it is not proposed. As per site condition and safety of the road, structure is required at this chainage location. Hence it is proposed to reconstruct (1x1.0) mtr HPC upto 12 mtr width	The mentioned chainage inspected by us. Agreed with the comments of concessionaire. Structure is not mentioned in schedule A and there is no provision of structure in schedule B (2) Hence it is proposed and recommended to reconstruct (1X1.0) HPC upto 12 mtr width whose cross sectional area is equivalent to the existing structure. (i) The proposed and recommended structure shall be under change of scope of positive variation. The actual cost of structure shall be worked out for financial implication.	Reasons & recommendation of IE is accepted for re construction of (1x1.0)mtr HPC in the width of 12 mtr taken as positive variation. Actual financial implication may be worked out
57	Extra	74+635	Not Mentioned in schedule A	No proposal inShedule B	During inventory existing structure (1X2.4)mtr stone slab is found in poor condition Detail of existing structure is given below. Length -7.7mtr ,width-2.4 height -0.9mtr . In schedule A & B it is not proposed. As per site condition and safety of the road, structure is required at this chainage location. Hence it is proposed to reconstruct (2x1.0) mtr HPC upto 12 mtr width	The mentioned chainage inspected by us. Agreed with the comments of concessionaire. Structure is not mentioned in schedule A and there is no provision of structure in schedule B Hence it is proposed and recommended to reconstruct (2X1.0)mtr HPC upto 12 mtr width whose cross sectional area is equivalent to the existing structure. (i) The proposed and recommended structure shall be under change of scope of positive variation. The actual cost of structure shall be worked out by concessionaire for financial implication.	Reasons & recommendation of IE is accepted for re construction of (2x1.0)mtr HPC in the width of 12 mtr taken as positive variation. Actual financial implication may be worked out
58	77+500	74+756	**Type of Structure- HPC** No of pipe-01 Dia of pipe-1000mm C.W-6.5 mtr Over all width-7.5 mtr Condition of structure- pipe-fair Head wall -fair Return wall-fair	Type of Structure- HPC (1x1.00) Proposed -widening up to 12 mtr width	During inventory existing structure (3X0.65)mtr stone slab is found in poor condition Detail of existing structure is given below. Length -7.8mtr ,Width/span -0.65 Height - 1.4mtr (3 no. vents) As per schedule B it is proposed to widen (1X1.0)mtr HPC in 12 mtr width Which is not resembling with the existing structure. Therefore seeing above site condition for the safety of traffic and requirement to full fill the condition of road it is proposed to reconstruct (2X1.0) HPC in width of 12 mtr.	The mentioned chainage inspected by us and Agreed with the comments of concessionaire. Hence it is proposed and recommended to reconstruct (2X1.0)mtr HPC which is equivalent to the cross sectional area of Existing structure in width of 12 mtr on the located chainage as follows. (4) (a) Structure mentioned in schedule B proposed for widening shall be change of scope of Negative variation. (b) The proposed and recommended structure shall be under change of scope of positive variation. The Net cost shall be worked out by concessionaire for financial implication.	Reasons & recommendation of IE is accepted for widening of (1x1.0)HPC in 12 mtr width proposed in schedule B taken as negative variation and proposal for reconstruction of (2x1.0) mtr HPC in 12 mtr width as positive vaciation. Net financial implication may be worked out accordingly.
59	Extra	74+903	Not Mentioned in schedule A	No proposal in schedule B	During inventory existing structure (2X0.85)mtr stone slab is found in poor condition Detail of existing structure isgiven below. Length -9.2mtr ,width-0.85 height -0.7mtr . (2 no. vents) In schedule A & B it is not proposed. As per site condition and safety of the road, structure is required at this chainage location. Hence it is proposed to reconstruct (1x1.0) mtr HPC upto 12 mtr width	The mentioned chainage inspected by us. Agreed with the comments of concessionaire. Structure is not mentioned in schedule A and there is no provision of structure in schedule B Hence it is proposed and recommended to reconstruct (1X1.0)mtr HPC upto 12 mtr width whose cross sectional area is Equivalent to the existing structure. (i) The proposed and recommended structure shall be under change of scope of positive variation. The actual cost of structure shall be worked out by concessionaire for financial implication.	Reasons & recommendation of IE is accepted for re construction of (1x1.0)mtr HPC in the width of 12 mtr taken as positive variation. Actual financial implication may be worked out
60	Extra	74+990	Not Mentioned in schedule A	No proposal in schedule B	During inventory existing structure (2X0.8)mtr stone slab is found in poor condition Detail of existing structure isgiven below. Length -9.8mtr ,width-0.8 height -0.72mtr . (2 no. vents) In schedule A & B it is not proposed. As per site condition and safety of the road, structure is required at this chainage location. Hence it is proposed to reconstruct (1x1.0) mtr HPC upto 12 mtr width	The mentioned chainage inspected by us. Agreed with the comments of concessionaire. Structure is not mentioned in schedule A and there is no provision of structure in schedule B Hence it is proposed and recommended to reconstruct (1X1.0)mtr HPC upto 12 mtr width whose cross sectional area is Equivalent to the existing structure. (i) The proposed and recommended structure shall be under change of scope of positive variation. The actual cost of structure shall be worked out concessionaire for financial implication.	Reasons & recommendation of IE is accepted for re construction of (1x1.0)mtr HPC in the width of 12 mtr taken as positive variation. Actual financial implication may be worked out

UCHERA-NAGOD TOLLWAYS LIMITED PROJECT MANAGER

Team Leader
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Divisional Manager
M.P.R.D.C. Ltd.
Dn. No. 1, Rewa

CE (BOT)

SR. NO.	CHAINAGE		EXISTING DETAILS ASPER SCHEDULE A	PROVISION ASPER SCHEDULE B	CONSTRUCTION PROPOSEDBY CONCESSIONAIRE AS PER SITE CONDITION	REASONS & RECOMMENDATION BY INDEPENDENT ENGINEER	Decision of committee (14)
	EXISTING	DESIGN					
61	Extra	75+513	Not Mentioned in schedule A	No proposal in schedule B	During inventory existing structure (3X0.8)mtr stone slab is found in poor condition Detail of existing structure is given below. Length -8.2mtr ,Width-0.8 height -0.5mtr . (2 no. vents) In schedule A & B it is not proposed. As per site condition and safety of the road, structure is required at this chainage location. Hence it is proposed to reconstruct (1x1.0) mtr HPC upto 12 mtr width	The mentioned chainage inspected by us. Agreed with the comments of concessionaire. structure is not mentioned in schedule A and there is no provision of structure in schedule B Hence it is proposed and recommended to reconstruct (1X1.0)mtr HPC upto 12 mtr width whose cross sectional area is Equivalent to the existing structure. (i) The proposed and recommended structure shall be under charge of scope of positive variation. The actual cost of structure shall be worked out by concessionaire for financial implication.	Reasons & recommendation of IE is accepted for re construction of (1x1.0)mtr HPC in the width of 12 mtr taken as positive variation. Actual financial implication may be worked out
62	Extra	76+013	Not Mentioned in schedule A	No proposal in schedule B	During inventory existing structure (3X0.9)mtr stone slab is found in poor condition Detail of existing structure is given below. Length -0.5mtr ,width-0.9 height -0.5mtr . (3 no. vents) In schedule A & B it is not proposed. As per site condition and safety of the road, structure is required at this chainage location. Hence it is proposed to reconstruct (3x1.0) mtr HPC upto 12 mtr width	The mentioned chainage inspected by us. Agreed with the comments of concessionaire. Structure is not mentioned in schedule A and there is no provision of structure in schedule B Hence it is proposed and recommended to construct (3X1.0) mtr HPC upto 12mtr width whose cross sectional area is Equivalent to the existing structure. (i) The proposed and recommended structure shall be under charge of scope of positive variation. The actual cost of structure shall be worked out by concessionaire for financial implication.	Reasons & recommendation of IE is accepted for re construction of (3x1.0)mtr HPC in the width of 12 mtr taken as positive variation. Actual financial implication may be worked out
63	Extra	76+600	Not Mentioned in schedule A	No proposal in schedule B	During inventory existing structure (1X0.6)mtr stone slab is found in poor condition Detail of existing structure is given below. Length -7.8mtr ,width-0.6 height -0.15mtr . In schedule A & B it is not proposed. As per site condition and safety of the road, structure is required at this chainage location. Hence it is proposed to reconstruct (1x1.0) mtr HPC upto 12 mtr width	The mentioned chainage inspected by us. Agreed with the comments of concessionaire. Structure is not mentioned in schedule A and there is no provision of structure in schedule B Hence it is proposed and recommended to reconstruct (1X1.0)mtr HPC upto 12 mtr width whose cross sectional area is Equivalent to the existing structure. (i) The proposed and recommended structure shall be under charge of scope of positive variation. The actual cost of structure shall be worked out by concessionaire for financial implication.	Reasons & recommendation of IE is accepted for re construction of (1x1.0)mtr HPC in the width of 12 mtr taken as positive variation. Actual financial implication may be worked out
64	80+100	77+183	Type of Structure- Minor Bridge No of span-03 Span length -10mtr CW-6.7 mtr Over all width-8.5 mtr Condition of structure- super structure -poor sub structure -poor	Type of structure- minor bridge (1x10)mtr minor bridge Proposal - Reconstruction in 12.0 mtr width	(1) As per site inventory existing structure is Minor bridge (3X7.2) mtr in good condition. The carriage way and over all width of structure is 6.7 and 8.5 mtr respectively. (2) In schedule B it is proposed to reconstruct (1X10) mtr minor bridge in 12 mtr width. Also it is decided during site visit of CE (MPRDC) dt. 13.05.2013. to retain this structure. The structure can be saved as it is in good condition with minor repairs. Hence it is proposed to retain the structure.	The mentioned chainage inspected by us Agreed with the comments of concessionaire. Therefore it is proposed and recommended to retain the structure as follows. (a) Proposed construction of minor bridge (1X10)mtr upto 12 mtr width shall be under charge of scope of Negative variation. The actual cost of structure shall be worked outby concessionaire for financial implication.	Reasons & recommendation of IE, is accepted for proposal of construction in schedule B, (1X10)mtr Minor bridge upto 12 mtr width taken as under Negative charge of scope., Financial implication may be worked out.
65	80+600	77+875	Type of Structure-Stone No of span-01 Span length-1mtr CW-6.5 mtr Over all width-7.5 mtr Condition of structure- slab -poor head wall/wing wall -poor return wall/parapet poor	Type of structure- Slab culvert (1x3)mtr proposed -Reconstruction in 12.0 mtr width	During inventory existing structure (1X1.2)mtr HPC is found in poor condition Detail of existing structure is given below. Length -6.4mtr ,One new Dia - 1.2 mtr. (1) In schedule B it is proposed to reconstruct (1X3) slab in 12 mtr width. Observing a narrow Nallah at this chainage location, and flow of water during rainy season it is required to provide structure, to safeguard road and traffic. Proposed structure in schedule B may be changed as per requirement of site condition. Hence it is proposed to reconstruct (2x1.2) mtr HPC in 12 mtr width.	Inspection is carried out by us Agreed with the comments of concessionaire . As per site condition (2X1.2) HPC is sufficient for drainage of water at this location hence it is proposed and recommended to Reconstruct (2X1.2) HPC in 12mtr width as follows. (a) Structure proposed in schedule B shall be charge of scope of Negative variation. (b) structure proposed and recommended to reconstruct shall be charge of scope of positive variation. Net cost shall be worked out by concessionaire for financial implication.	IE recommendation is accepted for deletion of (reconstruction of (1x3)mtr slab in 12 mtr width) structure proposed in shedule B taken as negative variation and proposal for reconstruction of (2x1.2) mtr RPC in 12 mtr width as positive variation. Net financial implication may be worked out accordingly.

UCHERA-NAGOD TOLLWAYS LTD. PROJECT MANAGER

Team Leader
Redecon (I) Pvt. Ltd.

MDE

Divisional Manager
MPRDC Ltd

CE (BOT)

15/10/15
GM (BOT)

SR. NO.	CHAINAGE		EXISTING DETAILS ASPER SCHEDULE A	PROVISION ASPER SCHEDULE B	CONSTRUCTION PROPOSED BY CONCESSIONAIRE AS PER SITE CONDITION	REASONS & RECOMMENDATION BY INDEPENDENT ENGINEER	Decision of committee
	EXISTING	DESIGN					
66	81+908	78+063	Type of Structure-Stone No of span-01 Span length-2.0 mtr C.W-5.5 mtr Over all width-6.5 mtr Condition of structure- slab -poor head wall/wing wall -poor return wall/parapet-poor	Type of Structure-RCC slab(1X4.0)mtr proposed -Reconstruction in 12.0 mtr width	During inventory existing structure (1X0.7)mtr stone slab is found in poor condition Detail of existing structure is given below. Length -8.0mtr ,width/span -0.7mtr Height -0.75mtr (1) In schedule B it is proposedto reconstruct (1X4) slab in 12 mtr width. Observing a narrow Nallah at this chainage location, and flow of water during rainy season it is required to provide structure, to safeguardroad and traffic. Proposed structure in scheduleB may be changed as per requiresent of site condition. Hence it is proposed to reconstruct (2x1.2) mtr RPC in 12 mtr width.	Inspection is carried out by us. Agreed with the comments of concessionaire . As per site condition (2X1.2) HPC upto 12 mtr width is sufficient for drainage of water at this location hence it is proposed and recommended to construct (2X1.2) HPC in 12 m width as follows . (a) Structure proposed in schedule B shall be change of scope of Negative variation. (b) structure proposed and recommended to reconstruct shall be change of scope of positive variation. Net cost shall be worked out by concessionaire for financial implication	Reasons & recommendation of IE is accepted for deletion of(reconstruction of (1x4)mtr slab in 12 mtr width) structure proposed in schedule B taken as negative variation ,and proposal for reconstruction of (2x1.2) mtr HPC in 12 mtr width as positive variation. Net financial implication may be worked out accordingly.
67	82+908	79+793	Type of Structure-Stone No of span-01 Span length-2mtr C.W-6 mtr . Over all width-7.5 mtr Condition of structure- slab -poor head wall/wing wall -poor return wall/parapet-poor	Type of Structure-RCC slab(1x3.00) proposed -Reconstruction in 12.0 mtr width	During inventory existing structure (1X1.0) mtr stone slab is found in poor condition Detail of existing structure is given below. Length -7.5mtr ,width/span - 10 mtr . Height -0.35mtr (1) In schedule B it is proposed to reconstruct (1X3) slab in 12 mtr width. Observing a narrow Nallah at this chainage location, and flow of water during rainy season it is required to provide structure, to safeguard road and traffic. Proposed structure in schedule B may be changed as per requirement of site condition. Hence it is proposed to reconstruct (2x1.2) mtr RPC in 12 mtr width.	Inspection is carried out by us. Agreed with the comments of concessionaire . As per site condition (2X1.2) HPC upto 12 mtr width is sufficient for drainage of water at this location hence it is proposed and recommended to reconstruct (2X1.2) HPC upto 12 mtr width as follows . (a) Structure proposed in schedule B shall be change of scope of Negative variation. (b) structure proposed and recommended to reconstruct shall be change of scope of positive variation. Net cost of structure shall be worked out by concessionaire for financial implication.	Reasons & recommendation of IE is accepted for deletion of (reconstruction of (1x3)mtr slab in 12 mtr width) structure proposed in schedule B taken as negative variation ,and proposal for reconstruction of (2x1.2) mtr HPC in 12 mtr width as positive variation. Net financial implication may be worked out accordingly.
68	83+393	80+191	Type of Structure- HPC No of pipe-01 Dia of pipe-1000mm C.W-6.5 mtr Over all width-8.2 mtr Condition of structure- pipe-poor Head wall -poor Return wall-poor	Type of Structure- HPC (1x1.2)mtr Proposed - Reconstruction in 12 mtr width	During inventory existing structure (1X1.2)mtr slab is found in fair condition. Detail of existing structure is given below. Length -8.0mtr ,width/span - 12 mtr . Height -1.1mtr Existing slab culvert is sufficient for drainge of water in rainy season. The slab condition is found fair. In schedule B it is proposed toreconstruct (1x1.2)mtr HPC upto 12 mtr width. Since the condition of existing slab culvert is fair therefore widening of slab cannot with existing span (1x1.2) mtr is proposed upto 12 mtr width	Inspection is carried out by us. Agreed with the comments of concessionaire .proposed and recommended to widen the existing culvert(1x1.2)mtr width up to 12 mtr length as follows . (a) In shedule B proposed HPC shall be under change of scope of Negative variation. (b) Proposed and recommended for widening of slab shall be under change of scope of positive variation. Net cost of structure shall be worked out by the concessionaire for financial implication.	Reasons & recommendation of IE is accepted for deletion (reconstruction of (1x1.2)mtr HPC in 12 mtr width) structure proposed in schedule B taken as negative variation ,and proposal for widening of (1x1.2) mtr slab culvert in 12 mtr width as positive variation. Net financial implication may be worked out accordingly.
69	94+100	88+992	Type of Structure-Stone No of span-01 Span length-3mtr C.W-6 mtr Over all width-7.5 mtr Condition of structure- slab -poor head wall/wing wall -poor return wall/parapet-poor	Type of Structure- slab culvert(1x4)mtr proposal -Reconstruction in 12.0 mtr width	During inventory existing structure (1X0.6)mtr HPC is found in poor condition Detail of existing structure is given below. Length -8 mtr ,One row Dia - 0.6 mtr . (1) In schedule B it is proposed to reconstruct (1X4) slab in 12 mtr width. Observing a narrow Nallah at this chainage location, and flow of water during rainy season it is required to provide structure, to safeguard road and traffic. Proposed structure in schedule B may be changed as per requirement of site condition. Hence it is proposed to reconstruct (1x1.2) mtr RPC in 12 mtr width.	site inspection is carried out by us. Agreed with the comments of concessionaire . But as per site condition (1X1.2) HPC upto 12 mtr width is sufficient for drainage of water hence it is proposed and recommended to reconstruct on this location as follows Structure is proposed in schedule B shall be change of scope of Negative variation. Structure proposed for reconstruction shall be change of scope of positive variation. Net cost of structure shall be worked out by concessionaire for financial implication.	Reasons & recommendation of IE is accepted for deletion of (1x4)mtr slab culvert in 12 mtr width proposed inSheduled B taken as negative variation ,and proposal for widening of (1x1.2) mtr HPC in 12 mtr width as positive variation. Net financial implication may be worked out accordingly.

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MPRDC Ltd.
Dn. No. 1, Rewa

CE (BOT)

SR. NO.	CHAINAGE		EXISTING DETAILS ASPER SCHEDULE A	PROVISION ASPER SCHEDULE B	CONSTRUCTION PROPOSED BY CONCESSIONAIRE AS PER SITE CONDITION	REASONS & RECOMMENDATION BY INDEPENDENT ENGINEER	Decision of committee (16)
	EXISTING	DESIGN					
70	81+908	81+443	Type of Structure- HPC No of pipe-01 Dia of pipe-1000mm C.W-6.5 mtr Over all width-7.5 mtr Condition of structure- pipe-poor Head wall -poor Return wall-poor	Type of Structure- HPC (1X1.2)mtr. Proposed - Reconstruction in 12 mtr width	During inventory existing structure (1X1.2)mtr slab is found in fair condition. Detail of existing structure is given below. Length -8.0mtr ,width/span- 1.2 mtr . Height -6.96mtr Existing slab culvert is sufficient for drainge of water in rainy season. The slab condition is found fair. In schedule B it is proposed to reconstruct (1x1.2)mtr HPC upto 12 mtr width. Since the condition of existing slab culvert is fair therefore widening of slab covert with existing span (1x1.2) mtr is proposed upto 12 mtr width.	Site inspection is carried out by us. Agreed with the comments of concessionaire . Observing the above condition of site and structure it is proposed and recommended to widen the existing culvert up to 12 mtr length as follows . (a) In shedule B mentioned HPC shall be under charge of scope of Negative variation. (b) Proposed and recommended for widening of slab shall be under charge of scope of positive variation. Net cost of structure shall be worked out by the concessionaire for financial implication.	Reasons & recommendation of IE is accepted for re construction(1x1.2)mtr HPC culvert in 12 mtr width proposed in schedule B taken as negative variation and proposal for widening of (1x1.2) mtr slab culvert in 12 mtr width as positive variation. Net financial implication may be worked out accordingly.
71	Extra	81+582	Not Mentioned in schedule A	No proposal in schedule B	During site inventory it is found a buried pipe is very poor condition the location of this chainage is required drainage system to the safety of traffic and road. Hence it is proposed to reconstruct (1x1.0)mtr HPC	Site inspection is carried out by us Agreed with the comments of concessionaire . Structure is not mentioned in schedule A and there is no provision of structure in schedule B Hence it is proposed & recommended to reconstruct (1x1.0) HPC in width of 12 mtr. (1)(a)Proposed and recommended structure shall be under charge of scope of positive variation. Actual cost of structure shall be worked out by concessionaire for financial implication.	Reasons & recommendation of IE is accepted for proposal of reconstruction (1x1.0) mtr HPC in 12 mtr width taken as positive variation. Actual financial implication may be worked out accordingly.
72	85+280	82+078	Type of Structure- HPC No of pipe-01 Dia of pipe-1000mm C.W-6.5 mtr Over all width-7.5 mtr Condition of structure- pipe- fair Head wall -fair Return wall-fair	Type of Structure- HPC (1x1.0) Proposed -widening up to 12 mtr	During site inventory (1x0.86) stone slab is found in poor condition. Detail of existing structure is given below. Length -6.6mtr ,width/span - 0.85 mtr . Height -1.9mtr In schedule B it is proposed to widen HPC (1X1.0)mtr upto 12 mtr width Since the existing structure is stone slab so it can not be widened with HPC. In this circumstances it is proposed to reconstruct (1X1.2)mtr HPC upto 12 mtr width.	Site inspection is carried out by us Agreed with the comments of concessionaire . Since the existing structure is stone slab in debilitated condition so can not be widened with HPC In this circumstances it is proposed and recommended to reconstruct (1X1.2)mtr HPC upto 12 mtr width. (1)(a)Proposed and recommended structure shall be under charge of scope of positive variation. (b) proposed structure in schedule B shall be under charge of scope of Negative variation . Net cost of structure shall be worked out by concessionaire for financial implication.	Reasons & recommendation of IE is accepted for proposal of reconstruction of (1x1.2) mtr HPC in 12 mtr width taken as positive variation. And structure proposed in schedule B as Negative variation. Net financial implication may be worked out accordingly.
73	86+080	BY PASS	Type of Structure-Slab No of span-01 Span length-1mtr C.W-7 mtr Over all width-8.4 mtr Condition of structure- slab - fair head wall/wing wall -fair return wall/parapet-fair	Type of Structure- RCC Culvert No. of span x length of span-1x1.0mtr C.W-6.5 mtr Over all width-7.5 mtr Condition of structure Substructure- fair super structure-fair Proposed width- (i)widening up to 12.0 mtr width (ii) (1X1.2) HPC is proposed for new construction.	During site inventory it is found (1X0.9) slab in poor condition Detail of existing structures are given below. Length -8.0mtr ,width/span- 0.9 mtr . Height -2.2mtr. In schedule B at this chainage location 2 no. structures are proposed (i) (1X1.0) slab is proposed for widening up to 12 mtr width (ii) (1X1.2) HPC is proposedfor new construction. Since 86B is proposed hence the above structures are required to eliminate.	Site inspection carried out by us and observed that one Stone slab culvert (1X0.9) found in deteriated condition as against schedule A provision (1) In schedule B 2 no. structures are proposed for construction (a)(1X1.0) RCC culvert for widening (b)(1X1.2) HPC for reconstruction (2) Since major bridge (4125) is proposed and recommended for construction on schedule chainage 85+500 The mentioned 2 non-structure in schedule B proposed for construction may be omitted The 2 nonstructure mentioned in schedule B eshall be under charge of scope of Negative variation. Actual cost of structure shall be worked out by the concessionaire for financial implication.	Reasons & recommendation of IE is accepted to delete 2 nos structures mentioned in schedule B under Negative variation.

HDB

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Divisional Manager
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15/10/15
GM (BOT)

CE (BOT)

SR. NO.	CHAINAGE		EXISTING DETAILS ASPER SCHEDULE A	PROVISION ASPER SCHEDULE B	CONSTRUCTION PROPOSED BY CONCESSIONAIRE AS PER SITE CONDITION	REASONS & RECOMMENDATION BY INDEPENDENT ENGINEER	Decision of committee
	EXISTING	DESIGN					
74	75+180	83+805	Not Mentioned in schedule A	Detail Of Proposed Structure Type of structure- HPC NO. of pipes-1 Pipe dia-1200 mm proposal & proposed width-Newconstruction in 12.0 mtr width	During inventory no structure found at existing chainage In schedule B it is proposed to Newconstruct (1X1.2)mtr HPC upto 12 mtr width. As per site observation the structure is not required due to this location being on ridge line Hence it is proposed to delete the structure mentioned in schedule B	During site investigation it is observed as follows. (1) No structure found at this chainage location The location of structure is on ridge line. (2) (i) In schedule A no structure is mentioned (ii) In schedule B it is proposed New construction HPC (1X1.2) in 12 mtr width Observing the above condition structure is not required hence it is proposed & recommended to delete as follows. (a) Proposed structure mentioned in schedule B shall be under change of scope of Negative variation. Actual cost of structure shall be worked out by the concessionaire for financial implication.	Reasons & recommendation of IE is accepted for deletion of(New construction HPC (1X1.2)mtr in width of 12mtr)structure proposed in schedule B. to be taken as Negative variation. Actual financial implication may be worked out accordingly.
75	75+400	80+280	Not Mentioned in schedule A	Detail Of Proposed Structure (1x1.20)HPC Proposed-Newconstruction in 12.0 mtr width	During inventory no structure found at existing chainage In schedule B it is proposed to Newconstruct (1X1.2)mtr HPC upto 12 mtr width. As per site observation the structure is not required due to this location being on ridge line Hence it is proposed to delete the structure mentioned in schedule B	During site investigation it is observed as follows. (1) No structure found at this chainage location The location of structure is on ridge line. (2) (i) In schedule A no structure is mentioned (ii) In schedule B it is proposed to new construction HPC (1X1.2) in width of 12 mtr. Seeing the above condition structure is not required hence it is proposed & recommended to delete under following condition (a) Proposed structure mention in schedule B shall be under change of scope of Negative variation. Actual cost of structure shall be worked out by the concessionaire for financial implication.	Reasons & recommendation of IE is accepted for deletion of(New construction HPC (1X1.2)mtr in width of 12mtr)structure proposed in schedule B to be taken as Negative variation. Actual financial implication may be worked out accordingly.
76	Extra	84+618	Not Mentioned in schedule A	Not Mentioned in Schedule B	During inventory an existing structure (1X1.2)mtr slab culvert is found in poor condition Detail of existing structure is given below. Length -7.7mtr ,width/span- 1.2 Height -0.6mtr . In schedule A & B it is not proposed. As per site condition and safety of the road, structure is required at this chainage location. Hence it is proposed to reconstruct (1x1.0) mtr HPC upto 12 mtr width	Inspection of Existing structure carried out by us Agreed with the comments of concessionaire (1)(i) In schedule A no structure is mentioned. (ii) Also there is no provision of structure in schedule B (2) As per requirment of site condition and safety of road it is required . Hence it is proposed & recommended to reconstruct (1x1.0)mtr HPC in 12 mtr width on this location as follows (a) The complete structure shall be under charge of scope of positive variation. The actual cost of structure shall be worked out by concessionaire for financial implication.	Reasons & recommendation of IE is accepted for proposal to reconstruct(1X1.0)mtr HPC, in width of 12mtr taken as Positive variation. Actual financial implication may be worked out accordingly.
77	89+180	89+504	Type of Structure-Slab No of span-01 Span length-1mtr C.W-6.5 mtr Over all width-8.2 mtr Condition of structure- Slab -Fair head wall/wing wall -Fair return wall/parapet-Fair	Type of Structure-RCC culvert(1x1)mtr. Proposed-widening up to 12 mtr width	During site inventory (100.9) mtr slab is found on ridge line. Detail of existing structure is given below. Length -8.2mtr ,width/span-0.9 Height -1.1mtr . Due to the above position of structure there is no need to provide drainage system. In schedule B it is proposed to widen (1X1.0)mtr slab culvert. As there is no requirment of structure due to above condition Hence it is proposed to delete	Inspection of Existing structure carried out by us Agreed with the comments of concessionaire. (1)(i) In schedule A structure is mentioned (1X1)mtr slab (ii) In schedule B it is proposed to widen existing structure (1X1)mtr RCC slab in 12 mtr width It is not needed to provide any cross drainage system as the location of structure exists on ridge line. Hence it is proposed & recommended to delete the structure as follows. Proposed structure in schedule B shall be under change of scope of Negative variation. Actual cost of structure shall be worked out by the concessionaire for financial implication.	Reasons & recommendation of IE is accepted to delete the structure (1X1) mtr RCC slab in 12 mtr width proposed in schedule B is taken as Negative variation. Actual financial implication may be worked out accordingly.

Team Leader
Redecon (I) Pvt. Ltd.

CE (BOT)

SR. NO.	CHAINAGE		EXISTING DETAILS ASPER SCHEDULE A	PROVISION ASPER SCHEDULE B	CONSTRUCTION PROPOSED BY CONCESSIONAIRE AS PER SITE CONDITION	REASONS & RECOMMENDATION BY INDEPENDENT ENGINEER	Decision of committee
	EXISTING	DESIGN					
78	72+388	69+979	Type of Structure- HPC No of pipe-01 Dia of pipe-1000mm C.W-6.5 mtr Over all width-8.1 mtr Condition of structure- pipe-fair Head wall - fair Return wall-fair	Type of Structure- HPC (1x1.0)mtr Proposed-widening up to 12 mtr width	In inventory existing structure (1825)mtr causeway is found in poor condition. In schedule B it is proposed to widen (1X1.0)mtr HPC in 12 mtr width It is observed the existing Nallah has larger span due to its topography. Water flows above the existing causeway continuously in complete rainy season. Hydrological data has also shown the quantum of discharge which is submitted shows that (1X18) mtr minor bridge is width of 12 mtr is required, hence proposed for reconstruction under positive change of scope. Also the same is decided during site visit of CE (MPRDC) on @ 31.05.2018	The mentioned chainage inspected by us Agreed with the comments of concessionaire. Hence it is proposed and recommended to construct (1X18)mtr minor bridge in the width of 12 mtr which is hydrologically required and verified by us. on this located chainage as follows. (a) The proposed structure mentioned in schedule B shall be under change of scope Negative variation. (b) The proposed and recommended structure shall be under change of scope of positive variation. The net cost of variation shall be worked out by concessionaire for financial implication.	Reasons & recommendation of IE is accepted for proposal of widening (1x1.0)HPC in 12 mtr width proposed in schedule B be taken as negative variation and proposal for reconstruction of (1x18) mtr minor bridge in 12 mtr width as positive variation. Net financial implication may be worked out accordingly.
79	83+508	82+163	Type of Structure-Arch No of span-01 Span length-3mtr C.W-7.4 mtr Over all width-8.4 mtr Condition of structure- slab -poor head wall/wing wall -poor return wall/parapet-poor	Type of Structure- Slab culvert(1x3) Proposal -widening to 12.0 mtr width	During site inventory there are 2 separate slab culvert on existing road. Detail of existing structures are given below. (a) Length -6.2mtr ,width/span - 5.95 mtr. Height - 4.5mtr. (b) Length -6.2mtr ,width/span - 5.90 mtr. Height - 3.10mtr. Water flows during rainy season above 3 to 4 Mt. on existing slab, and traffic gets blocked. In schedule B it is proposed to widen (1X3) slab culvert to 12 mtr width and other (1X4) slab for reconstruction in 12 mtr width Since it is a live river required to construct a major bridge for continuance of smooth movement of traffic based on the catchment streaand hydrological design It is proposed to construct a major bridge (4x25) mtr on this re-alignment portion	During site inspection at this location following things are observed Agreed with the comments of concessionaire (1) (i) In schedule A (1X3.0) slab culvert and other (1X3.0) Stone arch are shown. (ii) In schedule B it is proposed to widen (1X3) slab culvert in 12 mtr width and other (1X4) slab. reconstruction in 12 mtr width Therefore a major bridge is required and recommendation for construction hydrologicaly major bridge(4x25) to easy movement of traffic in all weather condition as follows. (a)The proposed structure in schedule B shall be under change of scope of Negative variation. (b) Proposed Major bridge hydrologically and structurally checked for adequacy and structure major bridge (4x25) shall be under change of scope of positive variation. Net cost shall be worked out by concessionaire for financial implication	IE recommendation is accepted for proposal of reconstruction of (4x25) mtr major bridge in 12 mtr width taken as positive variation, and structure proposed (1X3) slab culvert to 12 mtr width in schedule B as Negative variation. Net financial implication may be worked out accordingly.

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