

# SHREM FINANCIAL PRIVATE LIMITED

Development of Nadiad –Madhudha – Kathlal - Kapadwanj – Bayad – Modasa in the state of Gujarat on DBFOT on Annuity Basis

## **TECHNICAL DUE DILIGENCE REPORT**



FEBRUARY, 2021

## **SUBMITTED BY**



RUKY PROJECTS PRIVATE LIMITED Hyderabad – 500 072 www.rukyprojects.com



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This document has been issued and amended as follows:

Report No.	Issue	Date	Description
RU-DD Report-Nadiad- Modasa	01	February 2021	Technical Due Diligence Report

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## **CHAPTER 1. INTRODUCTION**

## 1.1 General

DBL Nadiad Modasa Tollways Limited (herein after referred to as the "**Concessionaire**") had augmented the existing two lane road of Nadiad- Modasa section of SH-59 in the State of Gujarat, in accordance with the provisions of the Concession Agreement executed on 5<sup>th</sup> January 2012 with Roads and Buildings Department of the Government of Gujarat (herein after referred to as the "**R&BD**, **GOG**) on DBFOT Annuity basis.

The Project Highway starts at Km. 0+600 and ends at Km. 109+000 passing through Nadiad, Kathlal, Kapadvanj, Bayad, Dhansura and Modasa in the state of Gujarat on Design, Build, Finance, Operate & Transfer (DBFOT)Annuity basis. Project location map is provided at **Figure 1.1**.

SHREM ROADWAYS PRIVATE LIMITED (SRPL) acquired DBL Nadiad Modasa Tollways Limited vide agreement dated 26.03.2018.

SHREM FINANCIAL PRIVATE 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 and additional road safety requirements, if any.





Figure 1.1: Project Location Map



## 1.2 The Project Data

S. No.	Particulars	Details		
1.	Name of the project	Two Laning of the Section Nadiad –Madhudha – Kathlal - Kapadwanj – Bayad – Modasa from Km. 0+600 to Km. 109+000 on SH-59 in the State of Gujarat on DBFOT on Annuity basis		
2.	Road Type	State Highway (SH-59)		
3.	Name of the Authority	Roads and Buildings Department, the Government of Gujarat.		
4.	Name of the Concessionaire	DBL Nadiad – Modasa Tollways Ltd.		
5.	Name of the EPC Contractor	Dilip Buildcon Limited		
6.	Design length as per Schedule B of CA	108.400 Kms.		
7.	Actual length constructed	108.400 Kms.		
8.	Project lane configuration	2 Lane		
9.	EPC cost	189.41 Cr		
10.	Nature of contract	DBFOT (Annuity)		
11.	Toll collected by	Roads & Building Department, Government of Gujarat		
12.	Concession period	13 years from the appointed date		
13.	Appointed date	03.07.2012		
14.	Concession End Date	02.07.2026		
15.	Construction period	730 days from the appointed date.		
16.	Schedule completion date	03.07.2014		
17.	Date of issuance of provisional certificate (Commercial operation date)	31.12.2013		
18.	Date of issuance of completion certificate	29.03.2014		
19.	Annuity amount (every six months)	17.46 Cr		
20.	Total number of annuities payable	22 No's		
21.	First annuity payment date	03.01.2015		
22.	Total number of annuity paid	13 No's		

## Table 1.1: The Project Data

## **1.3** Scope of consultancy services

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

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



- 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 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 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 and claims 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 of the Project as per schedule B and Schedule C of Concession Agreement (CA) including Change of scope are listed in the following Table.

S. No.	Particulars	As per CA	As per COS*	As per Site
1	Total project length	108.40 Kms.		108.40 Kms.
2	Four lane divided carriageway	7.370 Kms.		7.370 Kms.
3	Two lane with paved shoulder	101.03 Kms.		101.03 Kms.
4	Rigid pavement-two lane with paved shoulder			
5	Flexible pavement	108.40 Kms.		108.40 Kms.
6	Toll plaza		1 No.	1 No.
7	Bus bays / Bus shelters	36 Nos.		36 Nos.
8	Truck lay bays	4 Nos.	-4 Nos.	
9	Major junctions	9 Nos.		9 Nos.
10	Minor junctions	58 Nos.		58 Nos.
11	Number of Major Bridges (Retain & Repair)	7 Nos.		7 Nos.
12	Number of Minor Bridges	13 Nos.		14* Nos.
13	Number of Pipe Culverts	73 Nos.		72* Nos.
14	Number of Box/Slab Culverts	31 Nos.		32* Nos.

Table	2.1:	Salient	Features
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\* As per site requirement one Box culvert is converted into Minor Bridge, two Pipe Culverts are converted into slab culverts and one additional pipe Culvert is constructed due to site condition.

## 2.2 Typical Cross Section (TCS) Schedule

The Concessionaire has followed the Typical Cross Section schedule as shown below, during the construction.



Figure 2.1: (TCS 1) 2-Lane carriageway with Paved shoulder (Concentric widening)





Figure 2.2: (TCS 2) 2-Lane carriageway with paved shoulders (Concentric widening/reconstruction)



Figure 2.3: (TCS 5) 2-Lane Carriageway with paved shoulders (Reconstruction in Submergence area)



Figure 2.4: (TCS 7) 2-Lane Carriageway (With paved shoulder) with footpath in built-up section



Figure 2.5: (TCS 8A) Overlay on existing road





Figure 2.6: (TCS 9A) 4-Lane Divided Carriageway (Only Maintenance)

TCS schedule is provided below.

6.14	Chainage (Km.)			7	
5. NO.	From	То	Length (Kms.)	Type of ICS	
1	0+600	1+300	0.70	TCS8A	
2	1+300	2+300	1.00	TCS9A	
3	2+300	3+250	0.95	TCS8A	
4	3+250	4+100	0.85	TCS8A	
5	4+100	4+700	0.60	TCS5	
6	4+700	5+600	0.90	TCS1	
7	5+600	10+800	5.20	TCS5	
8	10+800	16+010	5.21	TCS1	
9	16+010	17+100	1.09	TCS7	
10	17+100	25+250	8.15	TCS1	
11	25+250	26+050	0.80	TCS8A	
12	26+050	27+710	1.66	TCS9A	
13	27+710	33+350	5.64	TCS1	
14	33+350	33+700	0.35	TCS7	
15	33+700	37+380	3.68	TCS1	
16	37+380	37+750	0.37	TCS7	
17	37+750	40+900	3.15	TCS1	
18	40+900	41+550	0.65	TCS7	
19	41+550	42+620	1.07	TCS1	
20	42+620	42+950	0.33	TCS8A	
21	42+950	44+750	1.80	TCS9A	
22	44+750	45+400	0.65	TCS8A	
23	45+400	45+950	0.55	TCS7	
24	45+950	62+150	16.20	TCS1	
25	62+150	62+450	0.30	TCS2	
26	62+450	64+680	2.23	TCS1	
27	64+680	64+900	0.22	TCS7	
28	64+900	67+100	2.20	TCS1	
29	67+100	68+070	0.97	TCS8A	

#### Table 2.2: TCS Schedule

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C No	Chainage (Km.)		Longth (Knoc)		
5. NO.	From	То	Length (Kms.)	Type of TCS	
30	68+070	74+750	6.68	TCS1	
31	74+750	75+850	1.10	TCS9A	
32	75+850	76+650	0.80	TCS7	
33	76+650	78+450	1.80	TCS1	
34	78+450	78+650	0.20	TCS7	
35	78+650	81+360	2.71	TCS1	
36	81+360	81+670	0.31	TCS7	
37	81+670	89+800	8.13	TCS1	
38	89+800	90+950	1.15	TCS7	
39	90+950	96+000	5.05	TCS1	
40	96+000	96+560	0.56	TCS9A	
41	96+560	105+780	9.22	TCS1	
42	105+780	106+300	0.52	TCS8A	
43	106+300	107+550	1.25	TCS9A	
44	107+550	108+500	0.95	TCS8A	
45	108+600	109+000	0.40	TCS7	



Figure 2.7: Typical Cross Section followed in the Project road

## 2.3 Road Side Drainage

- To facilitate quick disposal of storm water from the Carriageway and to avoid accumulation of drainage from road side community on the Carriageway, RCC side drains are constructed 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 road is not proposed along the entire stretch of the project road as per provisions of Schedule B of CA.

## 2.5 Bypass/Realignment

There is no bypass / realignment proposed on the project road as per provisions of Schedule B of CA.

## 2.6 Intersections

As per provisions of Schedule B of CA, 9 Major Junctions and 58 Minor Junctions are provided. Details are given below.

S. No.	Chainage (Km.)	Type of junction	Lead to			
Major Junctions						
1	15+782	Т	Ahmedabad			
2	15+930	Т	Dakor			
3	26+052	+	LHS: Ahmedabad RHS: Balasinor			
4	43+180	Т	Modasa			
5	43+976	Т	Dakor			
6	56+180	Т	Dakor			
7	75+490	Т	Ahmedabad			
8	90+320	+	LHS: Ahmedabad RHS: Dhansura			
9	108+450	Т	Himmat nagar			
	Ν	Ainor Junctions				
1	0+650	Т	Kheda			
2	0+850	Y	Modasa			
3	1+300	Т	Manjipura			
4	2+285	+	Dhaban Expressway			
5	5+960	Т	Davapura			
6	6+600	Т	Sihunj			
7	9+650	+	LHS: Bagdu RHS: Vina			
8	11+780	+	LHS: Sihunj RHS: Mangalpura			
9	16+420	Т	Mahudha			
10	17+380	Y	Finav			
11	18+932	Т	Ramna			
12	21+302	+	LHS: Vadhtal RHS: Minavada			
13	24+082	Т	Bhaner			

## Table 2.3: List of Junctions

S. No.	Chainage (Km.)	Type of junction	Lead to
14	27+030	Т	Kathlal
15	27+250	Т	Jamni
16	29+875	+	LHS: Vavana BHS: Porda
17	31+260	т	Bhatera
18	33+535	Т	Torna
19	36+530	Y	Dasalvada
20	37+200	+	LHS: Aantroli RHS: Fatiabad
21	41+160	Т	Mohamedpur
22	43+480	+	LHS: Kapadvanj RHS: Kapadvanj
23	43+795	Т	Kapadvanj
24	44+205	Т	Dondara
25	49+165	Т	Sonipura
26	50+045	Т	Vadali
27	53+655	Т	Vanzariya
28	55+455	Т	Dudhachal
29	57+710	Т	Reliya
30	59+975	Т	Chuptia
31	62+205	+	LHS: Kavath RHS: Batasinor
32	63+995	Т	Navi Barol
33	65+110	Т	Barol
34	67+430	Т	Demai
35	67+755	Т	Modpura
36	70+185	Т	Harjipura
37	71+550	Т	Salhanbha
38	71+570	Т	Madha Kampa
39	71+835	Т	Barmath
40	75+020	Т	Bayad
41	79+975	Т	Vatrak
42	82+325	Т	Local
43	84+590	Т	Hirapura
44	85+990	Т	Karoli
45	88+155	Т	Kanjari
46	89+360	Т	Maipur
47	90+900	Т	Dalpur
48	94+330	Т	Antisara
49	95+440	+	Sika
50	97+000	Т	Hindupura
51	97+240	T	Rahivol
52	98+100	T	Kodi
	201200	•	



S. No.	Chainage (Km.)	Type of junction	Lead to
53	102+780	Т	Kolikhad
54	103+330	Т	Meghraj
55	104+380	Т	Pahadpur
56	105+120	+	LHS: Modasa RHS:Modasa
57	106+295	Т	Modasa
58	106+640	Т	Meghraj

## 2.7 Grade Separated Structures and underpasses

Grade Separated Structures and underpasses are not proposed as per provisions of Schedule B of CA.

#### 2.8 Road Over Bridge

ROB is not proposed in the project road as per provisions of Schedule B of CA.

#### 2.9 Summary of the Carriageway Details

Table 2.4: Summary of Carriageway Details				

S. No.	Description	Flexible (Kms.)	Rigid (Kms.)	<b>ТС</b> Ѕ Туре
1	2 Lane with Paved Shoulder	82.02		TCS-1: of Schedule B of CA
2	2 Lane with Paved Shoulder	0.3		TCS-2: of Schedule B of CA
3	2 Lane with Paved Shoulder	5.8		TCS-5: of Schedule B of CA
4	2 Lane with Paved Shoulder	6.09		TCS-7: of Schedule B of CA
5	Overlay on Existing road	6.82		TCS-8A: of Schedule B of CA
6	4-Lane Divided Carriageway road	7.37		TCS-9A: of Schedule B of CA
	Total length of the project	108.4		
	TYPE OF ALIGNMENT			
1	New alignment			
2	Widening	88.41		
3	Overlay & Strengthening	14.19		
4	Reconstruction	5.8		
	Total length of the project	108.4		

#### 2.10 Summary of Bridges and Culverts

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

S. No.	Description	Major Bridges	Minor Bridges	Hume Pipe Culverts	Box/Slab Culverts	Remarks
1	Retained			25	5	
2	Widening	7	6	27	16	
3	Reconstruction			20	10	

## Table 2.5: Summary of Structures:



S. No.	Description	Major Bridges	Minor Bridges	Hume Pipe Culverts	Box/Slab Culverts	Remarks
4	New		7			
5	Improvement					
	Total	7	13	72	31	

## 2.11 Toll Plazas

As per Schedule C of the CA provisions one Toll Plaza has been constructed at Km. 80+680. Salient features of Toll Plaza are provided below.

- Each side comprises of two normal lanes, one extra wide lane and one bike lane.
- The lane width in normal lanes is 3.20m and Normal lane is 4.5m.
- Single canopy is provided to cover the toll lanes.
- Toll plaza has been constructed as per standards set forth in Schedule D of CA having facilities like lighting, water supply and firefighting system.
- Cameras are installed and monitored in administrative building.

## 2.12 Bus shelters

As per provisions of Schedule C of CA bus shelters are provided at 36 locations. Details are provided below.

S. No.	Chainage (Km.)	Side	Remarks	S. No.	Chainage (Km.)	Side	Remarks
1	0+410	LHS	Nadiad	19	46+040	RHS	Kapadvanj
2	3+3700	LHS	Nadiad	20	62+050	LHS	Kampa
3	3+420	RHS	Nadiad	21	62+550	RHS	Kampa
4	5+230	BOTH	Bilodra	22	64+560	LHS	Boral
5	15+860	LHS	Mahuda	23	65+000	RHS	Boral
6	17+230	RHS	Muvada	24	67+030	LHS	Demai
7	25+160	BOTH	Kathlal	25	68+210	RHS	Demai
8	27+840	RHS	Kathlal	26	74+610	LHS	Bayad
9	27+900	LHS	Kathlal	27	76+800	LHS	Bayad
10	33+230	LHS	Hirapur	28	76+930	RHS	Bayad
11	33+810	RHS	Hirapur	29	78+320	LHS	Vatrak
12	34+980	LHS	Udapura	30	78+880	RHS	Vatrak
13	35+580	RHS	Udapura	31	81+250	LHS	Halavacamp
14	37+270	LHS	Dashavada	32	81+790	RHS	Halavacamp
15	37+840	RHS	Dashavada	33	89+670	LHS	Dansura
16	40+710	RHS	Mahanandpur	34	91+100	RHS	Dansura
17	40+840	LHS	Mahanandpur	35	105+580	LHS	Modasa
18	42+540	LHS	Kapadvanj	36	107+820	RHS	Modasa

## Table 2.6: Bus shelters details



## 2.13 Other Project Facilities Provided as per Schedule C of CA

- Roadside furniture: Sign boards, Pavement Markings, Overhead signs, kilometer 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 the CA
- Landscaping: provided along the project road within ROW and in the islands of at grade intersections and being maintained
- Tree plantation: Tree plantation is provided on both sides of the project corridor all along the way and being maintained
- Medical Aid Post: Provided at toll plaza location and is operational
- Highway Lighting: Highway lighting is provided at Toll Plaza locations and is functional.



Km. 0+600 Starting Point



Km. 33+200 Bus Stop



Km. 3+200 Bus Stand



Km. 81+350 Bus Stop



Overhead sign at junction at Km. 1+300 Figure 2.8: Photos Representing Facilities



## 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 in the sections provided below.

## 3.2 Road Inventory

Inventory of the project road was carried out physically and the same is summarized in the following table. Few representative photographs are presented below.

S. No.	Features	Remarks			
1	Terrain	Plain Terrain			
2	Land Use	Predominantly Agriculture			
3	Two lane length	101.03 Kms.			
4	Four lane length	7.37 Kms.			
5	Earthen shoulder	1.0 m to 1.5 m width on site			
6	Junctions	09 Nos. Major junctions and 58 Nos. Minor junctions			
7	Toll Plaza	Km. 80+680			
8	Sign boards	Sign boards are provided as per Highway requirements			
9	Road Markings	Lane markings are provided as per Highway requirement			
10	Bus Bays /shelters	36 Nos.			
11	Street Lighting	Provided as per requirement			
12	Avenue plantation	Provided			

## Table 3.1: Road Inventory

## 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 condition of the pavement is as per 4.2.1 of IRC 81-1997.

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 and fair. 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

From (Km.)	To (Km.)	Length (Kms)	Condition
0+600	50+000	49.4	Good
50+000	90+000	40.0	Fair
90+000	109+000	19.0	Good

## Table 3.3: Pavement condition summary



Km. 0+600



Km. 20+000





Km. 9+580

Km. 29+605

Figure 3.1: Representative Photos of Pavement Condition.



## CHAPTER 4. INVENTORY AND REVIEW OF STRUCTURES

#### 4.1 General Assessment and Details of the Existing 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

The Details of structures along the project highway are listed below.

S. No.	Type of Structure	Numbers
1	Major bridges	07
2	Minor Bridge	14
3	Pipe culverts	72
4	Slab/Box Culverts	32

## Table 4.1: List of Structures

The superstructure for major bridge is of RCC Girder and RCC slab type resting on RCC wall type piers and abutments with open foundation. The minor bridges of superstructure are RCC solid slab and the substructures are of RCC/PCC conventional wall type supported 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. The 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

- 1. The total length of the major bridge at Km. 5+460 is 83.0m with 5 spans. The superstructure consists of RCC solid slab. Each pier and whereas abutment is regular RCC wall type abutment. Open foundations have been constructed for all piers and abutments. Superstructure is seated on Tar paper bearings. Expansion joints are of Buried type. RCC railings have been provided on both sides of the deck.
- 2. The total length of the major bridge at Km. 39+550 is 110.0m with 5 spans. The superstructure consists of RCC Girder. Each pier and whereas abutment is regular RCC wall type abutment. Open foundations have been constructed for all piers and abutments. Superstructure is seated on Elastomeric bearings. Expansion joints are Strip seal type. RCC railings have been provided on both sides of the deck.
- 3. The total length of the major bridge at Km. 41+730 is 98.0 m with 4 spans. The superstructure consists of RCC Girder. Each pier and whereas abutment is regular RCC wall type abutment. Open foundations have been constructed for all piers and abutments. Superstructure is seated on Elastomeric bearings. Expansion joints are Strip seal type. RCC railings have been provided on both sides of the deck.
- 4. The total length of the major bridge at Km. 59+225 is 60.0 m with 8 spans. The superstructure is arch type. Each pier and abutment are of regular RCC wall type abutment with open foundation.



Superstructure is seated on Tar paper bearings. Expansion joints are of Buried type. RCC railings have been provided on both sides of the deck.

- 5. The total length of the major bridge at Km. 73+100 is 62 m with 6 spans. The superstructure consists of RCC Girder. Each pier and abutment are of regular RCC wall type abutment with open foundation.. Superstructure is seated on Tar paper bearings. Expansion joints are of Buried type. RCC railings have been provided on both sides of the deck.
- 6. The total length of the major bridge at Km. 79+020 is 158.20 m with 9 spans. The superstructure consists of RCC Girder. Each pier and abutment are of regular RCC wall type abutment with open foundation.. Superstructure is seated on pot bearings. Expansion joints are of Buried type. RCC railings have been provided on both sides of the deck.
- 7. The total length of the major bridge at Km. 99+350 is 63.75 m with 3 spans. The superstructure consists of RCC Girder. Each pier and abutment are of regular RCC wall type abutment with open foundation.. Superstructure is seated on Elastomeric bearings. Expansion joints are Strip seal type. RCC railings have been provided on both sides of the deck.

S. No.	Chainage (Km.)	Span (m)	Total Length of Bridge (m)
1	5+460	3 x 21.0 + 2 x 10.0	83.00
2	39+550	5 x 22.0	110.0
3	41+730	4 x 24.50	98.00
4	59+225	8 x 7.6	60.80
5	73+100	6 x 12.0	72.00
6	79+020	1 x 11.4 + 7 x 19.5 +1 x 10.3	158.20
7	99+350	3 x 21.25	63.75

## Table 4.2: List of Major Bridges

The condition of the superstructure and substructure is good. Certain minor maintenance operations such as quadrant pitching, reflector plates, drainage spouts and strip seal expansion joints are to be carried out at few locations.









Km. 5+460



Km. 39+550 Figure 4.1: Overall view of the Major bridges

## 4.4 Details of Minor Bridges

The details of Minor bridges in the project stretch are listed below. The type of superstructure for minor bridges is RCC Girder type, solid slab and the substructure is PCC/RCC conventional wall type supported on open foundations. Expansion joints are buried type and bearings are tar paper and elastomeric bearings. RCC crash barriers are provided on all the Minor bridges.

S. No.	Chainage (Km.)	Span (m)	Total Length of Bridge (m)	Description
1	4+924	1 x 14.40	14.40	MNB has RCC Girder type structure. It has RCC crash barrier, bituminous wearing coat, strip seal type

## Table 4.3: Inventory of Minor Bridges



S. No.	Chainage (Km.)	Span (m)	Total Length of Bridge (m)	Description		
				expansion joints with elastomeric bearings.		
2	9+633	2 x 4.50	9.00	It has RCC Box structure. It has RCC crash barrier, bituminous wearing coat.		
3	12+965	5 x 3.30	16.50	MNB has RCC solid slab superstructure supported on CRM wall type piers and abutment. Other features are RCC crash barrier, bituminous wearing coat, and Tar paper Bearings and buried type expansion joints.		
4	17+356	1 x 10.20	10.20	MNB has RCC solid slab superstructure supported on RCC wall type abutment. Other features are RCC crash barrier, bituminous wearing coat, and Tar paper Bearings and buried type expansion joints.		
5	21+856	4 x 5.65	22.60	MNB has RCC solid slab superstructure supported on RCC wall type piers and abutment. Other features are RCC crash barrier, bituminous wearing coat, and Tar paper Bearings and buried type expansion joints.		
6	36+330	3 x 10.00	30.00	MNB has RCC solid slab superstructure supported on RCC wall type piers and abutment. Other features are RCC crash barrier, bituminous wearing coat, and Tar paper Bearings and buried type expansion joints.		
7	54+561	2 x 7.30	14.60	MNB has RCC solid slab superstructure supported on RCC wall type piers and abutment. Other features are RCC crash barrier, bituminous wearing coat, and Tar paper Bearings and buried type expansion joints.		
8	58+564	2 x 7.00	14.00	MNB has RCC Box structure. It has RCC crash barrier, bituminous wearing coat.		
9	66+149	4 x 3.00	12.00	It has RCC Box structure. It has RCC crash barrier, bituminous wearing coat.		
10	68+105	1 x 30.40	30.40	MNB has PSC Girder type structure. It has RCC crash barrier, bituminous wearing coat, Strip seal type expansion joints with elastomeric bearings.		
11	74+528	1 x 22.50	22.50	MNB has RCC Girder type structure. It has RCC crash barrier, bituminous wearing coat, Strip seal type expansion joints with elastomeric bearings.		
12	82+629	3 x 7.30	21.90	Arch MNB has been widened with Continuous RCC solid slab superstructure supported on RCC wall type piers and abutment. Other features are RCC crash barrier, bituminous wearing coat, and Tar paper Bearings and buried type expansion joints.		
13	91+153	2 x 3.50	7.00	It has been widened with RCC Box structure. It has RCC crash barrier, bituminous wearing coat		
14	93+788	1 x 14.00	14.00	MNB has RCC solid slab superstructure supported on RCC wall type abutment. Other features are RCC crash barrier, bituminous wearing coat, and elastomeric Bearings and strip seal type expansion joints.		







Km. 58+564





Km. 68+105





Km. 4+924





Km. 9+633





Km. 36+330 Figure 4.2: Overall view of the 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.

## 4.5.1. Slab/Box Culverts

The details of the Slab/Box culverts along the project highway are as given below.

S. No.	Chainage (Km.)	Span (m)
1	1+096	2 x 2.30
2	1+277	1 x 2.50
3	3+761	1 x 1.50
4	4+455	1 x 1.50
5	5+933	1 x 4.40
6	9+075	1 x 1.50
7	10+683	1 x 6.00
8	12+190	1 x 1.55
9	14+400	1 x 1.60
10	15+940	1 x 2.70
11	16+875	1 x3.00
12	17+250	1 x3.00
13	25+835	1 x3.00
14	27+795	1 x3.00
15	41+310	1 x 4.00
16	44+840	1 x 2.00
17	47+930	2 x 3.00
18	50+313	1 x 5.00
19	51+404	1 x 4.00
20	59+914	1 x 4.00

#### Table 4.4: List of Slab/Box Culverts

S. No.	Chainage (Km.)	Span (m)
21	60+515	1 x 4.00
22	64+327	2 x 3.00
23	65+832	1 x 4.60
24	67+236	1 x 3.00
25	81+861	3 x 1.25
26	82+063	1 x 6.00
27	92+563	2 x 2.80
28	94+900	2 x 1.80
29	96+232	1 x 2.80
30	96+578	2 x 1.30
31	103+792	1 x 2.50
32	104+164	1 x 2.90

## 4.5.2. Condition of the Slab/Box Culverts

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





Km. 5+933





Km. 50+313





Km. 60+515 Figure 4.3: Representative photos for Box/Slab culverts

## 4.5.3. General Description of the Pipe Culverts

The details of the Pipe culverts are as given below.

S. No.	Chainage (Km.)	Span (m)	S. No.	Chainage (Km.)	Span (m)
1	1+332	1 x 0.9	37	65+056	1 x 1.2
2	2+493	1 x 1.2	38	66+038	2 x 0.9
3	3+696	2 x 1.2	39	66+694	1 x 1.2
4	3+887	1 x 1.2	40	67+175	1 x 1.2
5	3+903	2 x 0.9	41	69+133	1 x 1.0
6	3+931	2 x 1.2	42	69+950	1 x 1.0
7	5+925	1 x 1.2	43	70+472	1 x 1.0
8	6+330	1 x 1.2	44	76+737	1 x 1.2
9	6+413	1 x 1.2	45	77+393	1 x 1.2
10	11+174	1 x 1.2	46	80+108	1 x 1.2
11	11+322	2 x 0.9	47	80+489	1 x 1.2
12	13+344	1 x 1.2	48	80+909	2 x 0.9
13	14+118	1 x 1.2	49	81+698	1 x 1.2
14	15+770	1 x 1.2	50	82+245	1 x 1.2
15	16+515	1 x 0.9	51	84+204	1 x 1.0
16	16+675	2 x 1.2	52	84+904	1 x 1.0
17	17+252	1 x 1.2	53	86+477	1 x 1.0
18	18+248	3 x 1.2	54	86+871	1 x 1.2
19	19+229	2 x 1.2	55	88+431	1 x 1.2
20	24+297	1 x 1.2	56	90+284	1 x 1.2
21	22+689	2 x 0.9	57	90+883	1 x 1.2
22	24+441	1 x 1.2	58	91+606	1 x 1.0
23	27+216	1 x 1.2	59	92+009	1 x 1.0
24	29+618	1 x 1.2	60	95+590	1 x 1.2
25	31+538	1 x 1.2	61	97+408	2 x 1.2

## Table 4.5: List of Pipe Culverts

Project:	Develop	ment	of Se	ection	Nac	liad -	– Mahud	lha	– Kath	lal	-Кар	advan	j —
Bayad -	Modasa	from	km.	0+600	to	Km.	109+00	on	SH-59	in	the	State	of
Gujarat (	on DBFOT	۲ on A	nnuit	ty basis									



DUE DILIGENCE REPORT

S. No.	Chainage (Km.)	Span (m)		S. No.	Chainage (Km.)	Span (m)
26	35+309	1 x 1.2		62	97+970	1 x 1.2
27	35+995	1 x 1.2		63	98+227	1 x 1.2
28	38+437	1 x 1.2		64	98+971	1 x 1.2
29	39+029	1 x 1.2		65	99+792	1 x 1.2
30	39+192	1 x 1.2		66	100+069	1 x 1.2
31	39+428	1 x 1.2		67	101+196	1 x 1.2
32	52+046	1 x 1.2		68	101+799	1 x 1.2
33	63+553	1 x 1.2		69	104+491	1 x 1.2
34	63+907	1 x 1.2		70	105+075	1 x 1.2
35	64+.013	2 x 1.2	]	71	105+898	1 x 1.2
36	64+761	1 x 1.2	]	72	106+285	1 x 1.2

## 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.



## 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 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.

## **Review of Pavement Design**

As per the pavement design approved in the project, the following conclusions are given.

S. No.	Description/ Pavement layer	HS-I Parameters HS-II Parameters		HS-III Parameters
1	Sub Grade CBR (%)	10%	10%	10%
r	Design Life (Vears)	8 years for BT*	8 years for BT	8 years for BT
2	Design Life (Tears)	15 years for granular	15 years for granular   15 years for granular	
2	Actual Traffic (MCA) 8 MSA for 8 years 4 MSA for 8 years		4 MSA for 8 years	18 MSA for 8 years
5	Actual Hame (IVISA)	20.8 MSA 15 years	8.9 MSA 15 years	46.8 MSA 15 years
		10 MSA for BT	5 MSA for BT	18 MSA for BT
4	Design Traffic* (MSA)	150 MSA for	150 MSA for	150 MSA for
		Granular	Granular	Granular
5	Surface course (BC)	40 mm	25 mm SDBC	40 mm
6	Binder course (DBM)	50 mm	50 mm	70 mm
7	Base course (WMM)	250 mm	250 mm	250 mm
8	Sub Base course (GSB)	200 mm	200 mm	200 mm

\*BT-Bituminous Layer

## 5.2.1. Validation of Pavement Design

The new pavement shall be designed in accordance with the IRC:37. "Guidelines for the Design of Flexible Pavements".

Pavement design validation is carried out as per actual traffic from COD. As per IRC 37, Vehicle Damage Factor (VDF), Distribution of commercial vehicles and growth rate values are 4.5, 0.75 and 5% respectively. Summary is given below.



FY		А	ADT in	Vehicles	5	CVPD			Veer	Domorka
Year	Car	LCV	BUS	2-AT	MAV	(Veh.)	IVISA	CIVISA	rear	Remarks
2020	3223	87	213	1192	3251	4743	5.84	5.84	6	Actual
2021	3384	91	224	1252	3414	4980	6.13	11.98	7	Projected
2022	3553	96	235	1314	3584	5229	6.44	18.42	8	Projected
2023	3731	101	247	1380	3763	5491	6.76	25.18	9	Projected
2024	3918	106	259	1449	3952	5765	7.10	32.29	10	Projected
2025	4113	111	272	1521	4149	6053	7.46	39.74	11	Projected
2026	4319	117	285	1597	4357	6356	7.83	47.57	12	Projected
2027	4535	122	300	1677	4574	6674	8.22	55.79	13	Projected
2028	4762	129	315	1761	4803	7008	8.63	64.43	14	Projected
2029	5000	135	330	1849	5043	7358	9.06	73.49	15	Projected

Table 5.2: Design Traffic calculations from 2020

Based on the above actual traffic, estimated MSA at 8 years and 15 years are 18.42 MSA, 73.49 MSA respectively, traffic projection with 5% growth rate. Traffic considered in pavement design is more than estimated traffic based on actual traffic. Hence the pavement design adopted is found in order.

## 5.3 Overlay during operation and maintenance

The base BT layers have been designed for MSA 10, 5 and 18 for HS-1, HS-2 and HS-3 respectively for 8 years (up to end of 2022). Granular layers designed for 150 MSA for HS-1, HS-2 & HS-3 for 15 years (up to end of 2029). 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 surveys, conduct BBD tests for evaluation of strength of pavement and required overlay. However, 6-7 years from COD and prior to end of concession period, overlay shall be laid as a good industrial practice.

## 5.3.1. Maintenance/ Overlay schedule

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

## Routine maintenance - Every year

**Periodic Renewal for Flexible Pavement** -Next Periodic Renewal will be proposed on or before 2026



## 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.

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					

## Table 6.1: Referred IRC Publications

## 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

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

## Table 6.2: Road Furniture Condition



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

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.

Few observations on the road furniture in safety aspects for the project road are mentioned below:

- At few places reflectors were missing on the sign boards and few sign boards were also damaged
- Retro Reflective stickers need to be provided for metal beam crash barriers for night time road users at all locations and damaged metal beam crash barriers requires maintenance regularly the object hazard markers are placed only on one side of Head walls/parapet walls of all structures, whereas it is to be installed on both sides at structures

## 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 maintenance period.



Km. 1+300



Km. 82+750





Km. 96+650





Km. 79+940

Km. 104+250

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. 80+680. Each side comprises of 1 normal lanes, 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 buildings are G+1 floor building which houses control room, UPS and Pantry.

# 7.2 Vehicles

The list of vehicles, which were observed at site, for operation of Highway and Toll Plaza are presented below.

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

# Table 7.1: List of Vehicles







Km. 80+680 at Toll Plaza Figure 7.1 Representative photos of Toll Plaza



# CHAPTER 8. OPERATION AND MAINTENANCE

# 8.1 General

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

# 8.2 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 if there is any need 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.

# 8.3 Operations

# 8.3.1. Traffic Flow Operation & Traffic Management Plan

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

- 1 Permitting smooth and uninterrupted flow of traffic during normal operating conditions.
- 2 Carrying out preventive and periodic maintenance of the Project road;
- 3 Undertaking routine maintenance including prompt repairs of potholes, cracks, joints, drains, embankments, structures, pavement markings, lighting, road signs and other traffic control devices;
- 4 Undertaking major maintenance such as resurfacing of pavements, repairs to structures;
- 5 Functioning of the lighting system;
- 6 Functioning of the Patrolling System
- 7 Functioning of rescue and medical aid services



- 8 Ambulance as and when required
- 9 Functioning of the Project Facilities
- 10 Administrative, Operational and Maintenance Base Camp
- 11 Truck Lay byes
- 12 Pickup Bus stops / Bus Bays
- 13 Protection of the environment and provision of equipment and materials therefore;
- 14 Operation and maintenance of all communication, control and administrative systems necessary for the efficient operation of the Project road
- 15 Complying with Safety Requirements in accordance with Article 18.

# 8.4 Operation of Toll Plazas

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.

# 8.5 Maintenance of Project road

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.

- i. Preventive Maintenance
- ii. Routine Maintenance
- iii. Periodic Maintenance
- iv. Special repairs

# 8.5.1. 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 does not require any immediate or preventive interventions.

# 8.5.2. 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.

# 8.5.3. 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 8.1: Schedule and status of for Periodic Maintenance

S. No.	Scheduled Major Maintenance	Year	Status at site
1	1st Periodic Maintenance	2026	Planned to Execute

# 8.5.4. 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 road 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.

# 8.6 Review of Test Reports

# 8.6.1. Bump Integrator Test:

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 the month of Dec, 2020. As per Schedule K of CA, "If the stretch exceeds 2500 mm in a KM shall be rectified". No stretch exceeds the permissible limit.

# 8.6.2. 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. BBD Test is to be carried once in a year.



Concessionaire has conducted the test in Dec2019. The test report has been verified and found within permissible limits as per IRC 81.

# 8.7 O&M Forecast

The O&M costs were estimated based on various parameters of CA, design reports and BBD/BI test results. The cost of summary is given below, and detailed cost estimations are given in **ANNEXURE 4**.

Year	Routine maintenance	Incidental maintenance	Periodic / Major maintenance	Operational Expenses.	Total cost per year
2021	1.685	0.296		0.07	2.05
2022	1.735	0.305		0.07	2.11
2023	1.787	0.314		0.08	2.18
2024	1.841	0.324		0.08	2.24
2025	1.896	0.333		0.08	2.31
2026	1.953	0.343	24.80	0.08	27.18
2027	0.513	0.090		0.02	0.62
Total	13.05	2.29	24.80	0.55	40.69

 Table 8.2: Proposed Plan for Future Operation & Maintenance Cost (In Crores)



# CHAPTER 9. REVIEW OF CONCESSION AGREEMENT

#### 9.1 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 CA and matters incidental thereto.

#### 9.2 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 5**.

#### 9.3 Conditions precedent (Article 4)

#### Conditions precedent to be fulfilled by the Authority

- Providing adequate Right of Way
- Shall provide applicable permits as per the CA

#### Conditions precedent to be fulfilled by the Concessionaire

- Provide performance security to the Authority
- Executed and procured 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

#### 9.4 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 to the Authority upon termination of the CA

# 9.5 Obligations relating to the Competing Roads (Clause 6.3)

Neither Authority nor any Governmental Instrumentality shall construct the Competing Road before 10<sup>th</sup> Anniversary of the Appointed Date



# 9.5.1. 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.

# 9.6 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 of CA 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 CA. Provisional Completion Certification is attached in **ANNEXURE 6.** 

# 9.6.1. Completion Certificate (Clause 14.4.2)

• 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. Completion Certificate is provided in **ANNEXURE 7**.

# 9.7 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

# 9.8 Change of scope (Article 16)

Change of Scope proposal initiated and consented by the Authority are provided at **ANNEXURE 9**.

# 9.9 O&M Obligations of the Concessionaire (Clause 17.1)

- Permitting safe, smooth and uninterrupted flow of traffic on the Project Highway
- 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.
- Preventing any unauthorized use of the Project Highway.
- Protection of environment and provision of equipment and materials
- Complying with safety Requirements in accordance with the provisions of the CA.

# 9.10 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").

# 9.10.1. Maintenance Manual (Clause 17.3)



No later than 180 (one hundred and eighty days prior to the Scheduled Two Laning 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.

# 9.10.2. 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.

# 9.10.3. 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 the 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, @ 0.1% (zero point one per cent) of the cost of such repair or rectification as estimated by the Independent Engineer.

# 9.10.4. 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.

# 9.11 Annuity (Clause 25.1)

The Authority agrees and undertakes to pay the Concessionaire for each annuity Payment period on each annuity payment date as set forth in schedule NY of CA the sum of Rs. 17.46 Crores.

As per Clause 25.2.1, In case the COD is different from the Schedule Y of CA, then the annuity payment schedule shall be suitably modified to be a period of 6 months from the preceding Annuity Payment date.

S. No.	Particulars	Annuity Date	Payment Paid on
1	1st Annuity	03.01.2015	20-Jan-15
2	2nd Annuity	03.07.2015	24-Jul-15

# Table 9.1: Status of Annuity Payments



S. No.	Particulars	Annuity Date	Payment Paid on
3	3rd Annuity	03.01.2016	12-Jan-16
4	4th Annuity	03.07.2016	11-Jul-16
5	5th Annuity	03.01.2017	13-Jan-17
6	6th Annuity	03.07.2017	10-Jul-17
7	7th Annuity	03.01.2018	6-Jan-18
8	8th Annuity	03.07.2018	7-Jul-18
9	9th Annuity	03.01.2019	4-Jan-19
10	10th Annuity	03.07.2019	4-Jul-19
11	11th Annuity	03.01.2020	12-Jan-20
12	12th Annuity	03.07.2020	6-Jul-20
13	13th Annuity	03.01.2021	11-Jan-21

# 9.12 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 Authority

# 9.13 Change in Law (Article 36)

If as a result of Change in law the Concessionaire suffers an increase in cost or reduction in net after tax return or other financial burden, the aggregate financial effect of which exceeds Rs.50 Lakhs or 0.5% of the Total Project Cost whichever is higher in any accounting year, the Concessionaire may so notify the Authority and propose amendments to the Agreements so as to place the Concessionaire in the same financial position as it would have enjoyed had there been no such Change in law resulting in the cost increase, reduction in return or other financial burden as aforesaid along with required justification to substantiate the claim notified.



# CHAPTER 10. INSURANCE

#### **10.1** Details of Insurance

As per clause 27.1 of the Concession Agreement (CA), 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. Insurance copies are provided in **ANNEXURE 8**. Accordingly, the Concessionaire has procured the following insurances for mitigating the risks

Name of the	Insurance	Deliny No.	Effectiv	e Period	Description of the			
Policy	Company	POICY NO	From	То	Property			
Civil Engineering Completed Risk	National Insurance Company Ltd	321300441910 001987	27.03.2020	26.03.2021	Road & Structure: Toll Building & Toll Booths, TMS, HTMS, Office &IT equipment, Electronic Equipment, Road Furniture, Fixtures, electrical Poles Lighting & Fittings, Sign boards & Safety Barrier			
Employees Compensati on Insurance Policy	The New India Assurance Co Ltd	450100361901 00000061	31.01.2020	30.01.2021	All categories of Employees of the Contractor & sub- contractor engaged in the Project			

# Table 10.1: Insurance Details



# CHAPTER 11. CONCLUSION

#### 11.1 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.

#### 11.2 Pavement Condition

Pavement condition is good. Drainage system is effective along the project road as the RCC drains constructed in built up locations and earthen drains in rural locations. Shoulder condition is fair.

#### **11.3** 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.

#### **11.4 Project Facilities**

Toll Plaza is located at Km. 80+680 and is operational. Toll Plaza is operated by ETC Toll collection system and connected by network system monitored in administrative building. Bus bays are in good condition. Medical Aid posts found in functional condition. Avenue plantation and landscaping at Toll Plaza is provided and being maintained. Highway lighting is provided at toll plaza locations and found functional.

#### 11.5 Road safety

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

#### **11.6** Maintenance:

- Routine maintenance is being carried out by O&M contractor effectively, based on documents reviewed, time to time observations made by client/Authority are being complied and no outstanding NCR's are to be attended as on date.
- Major maintenance (MM) /Periodic maintenance was carried recently a3nd next MM is scheduled in the year 2026.

#### 11.7 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 times.

Mrem X TECHNICAL DUE DILIGENCE REPORT

# Annexure 1: Pavement Condition

Condition/Quality: G=Good, F=Fair, P=Poor, VP=Very poor & D Damaged Drain, CD=Covered Drain, NO=No drain, PF=Partial Function, F= Functional

Rutting: M=Moderate & S=Severe

Drain: LD=Lined open Drain, ULD=Unlined

Chainage (Km.)			Pa	avement	Conditio	on		Rid Qua	ing Ility		Shou	lder	_	Road Dra	Side ain
From	То	Cracking (%)	Ravelling (%)	Potholes (%)	Bleeding (%)	Rutting	Patching (%)	Speed (KMPH)	Quality (G/F/P /VP)	Pavement Edge Drop (cm)	Composition	Condition (F/P/D)	Embankment Condition (G/F/P)	Type (LD/ULD/CD/NO)	Condition (PF/F)
0+000	1+000								G		P+E	F		ULD	PF
1+000	2+000								G		P+E	F		ULD	PF
2+000	3+000								G		P+E	F		ULD	PF
3+000	4+000								G		P+E	F		ULD	PF
4+000	5+000								G		P+E	F		ULD	PF
5+000	6+000								G		P+E	F		ULD	PF
6+000	7+000								G		P+E	F		ULD	PF
7+000	8+000								G		P+E	F		ULD	PF
8+000	10+000								G		P+E	F		ULD	PF
10+000	11+000								G		P+E	F		ULD	PF
11+000	12+000								G		P+E	F		ULD	PF
12+000	13+000								G		P+E	F		ULD	PF
13+000	14+000								G		P+E	F		ULD	PF
14+000	15+000								G		P+E	F		ULD	PF
15+000	16+000								G		P+E	F		ULD	PF

Shrew \*\* TECHNICAL

Chair	nage (Km.)		P	avemen	t Conditio	on		Rid Qua	ling ality		Shou	lder		Road Dra	l Side ain
From	То	Cracking (%)	Ravelling (%)	Potholes (%)	Bleeding (%)	Rutting	Patching (%)	Speed (KMPH)	Quality (G/F/P /VP)	Pavement Edge Drop (cm)	Composition	Condition (F/P/D)	Embankment Condition (G/F/P)	Type (LD/ULD/CD/NO)	Condition (PF/F)
16+000	17+000								G		P+E	F		CD	F
17+000	18+000								G		P+E	F		CD	F
18+000	19+000								G		P+E	F		ULD	PF
19+000	20+000								G		P+E	F		ULD	PF
20+000	21+000								G		P+E	F		ULD	PF
21+000	22+000								G		P+E	F		ULD	PF
22+000	23+000								G		P+E	F		ULD	PF
23+000	24+000								G		P+E	F		ULD	PF
24+000	25+000								G		P+E	F		ULD	PF
25+000	26+000								G		P+E	F		CD	F
26+000	27+000								G		P+E	F		CD	F
27+000	28+000								G		P+E	F		ULD	PF
28+000	29+000								G		P+E	F		ULD	PF
29+000	30+000								G		P+E	F		ULD	PF
30+000	31+000								G		P+E	F		ULD	PF
31+000	32+000								G		P+E	F		ULD	PF
32+000	33+000								G		P+E	F		ULD	PF
33+000	34+000								G		P+E	F		ULD	PF
34+000	35+000								G		P+E	F		CD	F

Shrew \*\* TECHNICAL

Chair	nage (Km.)		P	avement	t Conditio	on		Rid Qua	ling ality		Shou	lder		Road Dra	l Side ain
From	То	Cracking (%)	Ravelling (%)	Potholes (%)	Bleeding (%)	Rutting	Patching (%)	Speed (KMPH)	Quality (G/F/P /VP)	Pavement Edge Drop (cm)	Composition	Condition (F/P/D)	Embankment Condition (G/F/P)	Type (LD/ULD/CD/NO)	Condition (PF/F)
35+000	36+000								G		P+E	F		ULD	PF
36+000	37+000								G		P+E	F		ULD	PF
37+000	38+000								G		P+E	F		CD	F
38+000	39+000								G		P+E	F		CD	F
39+000	40+000								G		P+E	F		ULD	PF
40+000	41+000								G		P+E	F		ULD	PF
41+000	42+000								G		P+E	F		ULD	PF
42+000	43+000								G		P+E	F		CD	F
43+000	44+000								G		P+E	F		CD	F
44+000	45+000								G		P+E	F		CD	F
45+000	46+000								G		P+E	F		CD	F
46+000	47+000								G		P+E	F		CD	F
47+000	48+000								G		P+E	F		ULD	PF
48+000	49+000								G		P+E	F		ULD	PF
49+000	50+000								G		P+E	F		ULD	PF
50+000	51+000				5	5			F		P+E	F		ULD	PF
51+000	52+000				5	4			F		P+E	F		ULD	PF
52+000	53+000				5	5			F		P+E	F		ULD	PF
53+000	54+000				5	4			F		P+E	F		ULD	PF

Shrew \*\* TECHNICAL

Chair	nage (Km.)		Pa	avemen	t Conditio	on		Rid Qua	ling ality		Shou	lder		Road Dra	Side ain
From	То	Cracking (%)	Ravelling (%)	Potholes (%)	Bleeding (%)	Rutting	Patching (%)	Speed (KMPH)	Quality (G/F/P /VP)	Pavement Edge Drop (cm)	Composition	Condition (F/P/D)	Embankment Condition (G/F/P)	Type (LD/ULD/CD/NO)	Condition (PF/F)
54+000	55+000				5	5			F		P+E	F		ULD	PF
55+000	56+000				5	4			F		P+E	F		ULD	PF
56+000	57+000				5	3			F		P+E	F		ULD	PF
57+000	58+000				5	5			F		P+E	F		ULD	PF
58+000	59+000			1	5	5			F		P+E	F		ULD	PF
59+000	60+000				5	5			F		P+E	F		ULD	PF
60+000	61+000				5	5			F		P+E	F		ULD	PF
61+000	62+000				5	5			F		P+E	F		ULD	PF
62+000	63+000				5	5			F		P+E	F		ULD	PF
63+000	64+000				5	5			F		P+E	F		CD	
64+000	65+000				5	4			F		P+E	F		ULD	PF
65+000	66+000				5	4			F		P+E	F		CD	F
66+000	67+000				5	4			F		P+E	F		ULD	PF
67+000	68+000				5	5			F		P+E	F		ULD	PF
68+000	69+000				5	5			F		P+E	F		CD	F
69+000	70+000				5	5			F		P+E	F		ULD	PF
70+000	71+000				5	4			F		P+E	F		ULD	PF
71+000	72+000				5	4			F		P+E	F		ULD	PF
72+000	73+000				5	3			F		P+E	F		ULD	PF

Shrew \*\* TECHNICAL

DUE DILIGENCE REPORT

Chair	nage (Km.)		P	avement	t Conditio	on		Rid Qua	ing ality		Shou	lder		Road Side Drain	
From	То	Cracking (%)	Ravelling (%)	Potholes (%)	Bleeding (%)	Rutting	Patching (%)	Speed (KMPH)	Quality (G/F/P /VP)	Pavement Edge Drop (cm)	Composition	Condition (F/P/D)	Embankment Condition (G/F/P)	Type (LD/ULD/CD/NO)	Condition (PF/F)
73+000	74+000				5	5			F		P+E	F		ULD	PF
74+000	75+000				5	4			F		P+E	F		ULD	PF
75+000	76+000				5	5			F		P+E	F		ULD	PF
76+000	77+000				5	5			F		P+E	F		CD	F
77+000	78+000				5	4			F		P+E	F		CD	F
78+000	79+000				5	5			F		P+E	F		CD	F
79+000	80+000				5	5			F		P+E	F		CD	F
80+000	81+000				5	5			F		P+E	F		ULD	PF
81+000	82+000				5	4			F		P+E	F		ULD	PF
82+000	83+000				5	5			F		P+E	F		ULD	PF
83+000	84+000				5	5			F		P+E	F		ULD	PF
84+000	85+000				5	5			F		P+E	F		ULD	PF
85+000	86+000				5	4			F		P+E	F		ULD	PF
86+000	87+000				5	5			F		P+E	F		ULD	PF
87+000	88+000				5	5			F		P+E	F		ULD	PF
88+000	89+000				5	4			F		P+E	F		ULD	PF
89+000	90+000				5	5			F		P+E	F		ULD	PF
90+000	91+000				5	4			G		P+E	F		CD	F
91+000	92+000				3				G		P+E	F		ULD	PF

Shrew \*\* TECHNICAL

Chain	nage (Km.)		Pa	avemen	t Conditio	on		Rid Qua	ling ality		Shou	lder		Road Dra	l Side ain
From	То	Cracking (%)	Ravelling (%)	Potholes (%)	Bleeding (%)	Rutting	Patching (%)	Speed (KMPH)	Quality (G/F/P /VP)	Pavement Edge Drop (cm)	Composition	Condition (F/P/D)	Embankment Condition (G/F/P)	Type (LD/ULD/CD/NO)	Condition (PF/F)
92+000	93+000				3				G		P+E	F		ULD	PF
93+000	94+000				3				G		P+E	F		ULD	PF
94+000	95+000				3				G		P+E	F		ULD	PF
95+000	96+000				3				G		P+E	F		ULD	PF
96+000	97+000				3				G		P+E	F		ULD	PF
97+000	98+000				3				G		P+E	F		ULD	PF
98+000	99+000				3				G		P+E	F		ULD	PF
99+000	100+000				3				G		P+E	F		ULD	PF
100+000	101+000				3				G		P+E	F		ULD	PF
101+000	102+000				3				G		P+E	F		ULD	PF
102+000	103+000				3				G		P+E	F		ULD	PF
103+000	104+000				3				G		P+E	F		ULD	PF
104+000	105+000				3				G		P+E	F		ULD	PF
105+000	106+000				3				G		P+E	F		ULD	PF
106+000	107+000				3				G		P+E	F		ULD	PF
107+000	108+000				3				G		P+E	F		ULD	PF
108+000	108+400				3				G		P+E	F		CD	F



S. No.	Chainage(Km)	Type of Structure	Substructure	Superstructure	Expansion Joint	Approach slabs	Drainage spouts	Wearing coat	Bearings	Quadrant Pitching
1	5+450	Major Bridge	Good	Good	Fair	Fair	Fair	Fair	-	Vegetation observed
2	39+550	Major Bridge	Good	Good	Fair	Fair	Fair	Fair	-	Good
3	41+730	Major Bridge	Good	Good	Fair	Fair	Fair	Fair	Good	Good
4	59+225	Major Bridge	Good	Good	Fair	Fair	Fair	Fair	-	Good
5	73+100	Major Bridge	Good	Good	Fair	Fair	Fair	Fair	-	Good
6	79+020	Major Bridge	Good	Good	Fair	Fair	Fair	Fair	-	Good
7	99+350	Major Bridge	Good	Good	Fair	Fair	Fair	Fair	-	Good
8	4+924	Minor Bridge	Good	Good	Fair	Fair	Fair	Fair	-	Good
9	9+663	Minor Bridge	Good	Good	Fair	Fair	Fair	Fair	-	Good
10	12+965	Minor Bridge	Good	Good	Fair	Fair	Fair	Fair	-	Good
11	17+356	Minor Bridge	Good	Good	Fair	Fair	Fair	Fair	-	Good
12	21+856	Minor Bridge	Good	Good	Fair	Fair	Fair	Fair	-	Good
13	36+330	Minor Bridge	Good	Good	Fair	Fair	Fair	Fair	-	Good
14	54+561	Minor Bridge	Good	Good	Fair	Fair	Fair	Fair	-	Good
15	58+564	Minor Bridge	Good	Good	Fair	Fair	Fair	Fair	-	Good
16	66+149	Minor Bridge	Good	Good	Fair	Fair	Fair	Fair	-	Good
17	68+105	Minor Bridge	Good	Good	Fair	Fair	Fair	Fair	-	Good
18	74+528	Minor Bridge	Good	Good	Fair	Fair	Fair	Fair	-	Good
19	82+629	Minor Bridge	Good	Good	Fair	Fair	Fair	Fair	-	Good
20	91+156	Minor Bridge	Good	Good	Fair	Fair	Fair	Fair	-	Good
21	93+788	Minor Bridge	Good	Good	Fair	Fair	Fair	Fair	-	Good

# Annexure 2 : Condition of Bridges



# Annexure 3:Condition of Box /Slab/Pipe Culverts

S. No.	Chainage (Km)	Box/slab	Return wall	Quadrant pitching	Toe wall	Aprons
1	1+096	Good	Good	Fair	Fair	Fair
2	1+277	Good	Good	Fair	Fair	Fair
3	3+761	Good	Good	Fair	Fair	Fair
4	4+455	Good	Good	Fair	Fair	Fair
5	5+933	Good	Good	Fair	Fair	Fair
6	9+075	Good	Good	Fair	Fair	Fair
7	10+683	Good	Good	Fair	Fair	Fair
8	12+190	Good	Good	Fair	Fair	Fair
9	14+400	Good	Good	Fair	Fair	Fair
10	15+940	Good	Good	Fair	Fair	Fair
11	16+875	Good	Good	Fair	Fair	Fair
12	17+250	Good	Good	Fair	Fair	Fair
13	25+835	Good	Good	Fair	Fair	Fair
14	27+795	Good	Good	Fair	Fair	Fair
15	41+310	Good	Good	Fair	Fair	Fair
16	44+840	Good	Good	Fair	Fair	Fair
17	47+930	Good	Good	Fair	Fair	Fair
18	50+313	Good	Good	Fair	Fair	Fair
19	51+404	Good	Good	Fair	Fair	Fair
20	59+914	Good	Good	Fair	Fair	Fair
21	60+515	Good	Good	Fair	Fair	Fair
22	64+327	Good	Good	Fair	Fair	Fair
23	65+832	Good	Good	Fair	Fair	Fair
24	67+236	Good	Good	Fair	Fair	Fair
25	81+861	Good	Good	Fair	Fair	Fair
26	82+063	Good	Good	Fair	Fair	Fair
27	92+563	Good	Good	Fair	Fair	Fair
28	94+900	Good	Good	Fair	Fair	Fair
29	96+232	Good	Good	Fair	Fair	Fair
30	96+578	Good	Good	Fair	Fair	Fair
31	103+792	Good	Good	Fair	Fair	Fair
32	104+164	Good	Good	Fair	Fair	Fair

#### Condition of Box /Slab Culverts



# Condition of Pipe Culverts

S. No.	Chainage (Km)	Hume Pipe	Head wall	Quadrant pitching	Toe wall
1	1+332	Good	Fair	Fair	Fair
2	2+493	Good	Fair	Fair	Fair
3	3+696	Good	Fair	Fair	Fair
4	3+887	Good	Fair	Fair	Fair
5	3+903	Good	Fair	Fair	Fair
6	3+931	Good	Fair	Fair	Fair
7	5+925	Good	Fair	Fair	Fair
8	6+330	Good	Fair	Fair	Fair
9	6+413	Good	Fair	Fair	Fair
10	11+174	Good	Fair	Fair	Fair
11	11+322	Good	Fair	Fair	Fair
12	13+344	Good	Fair	Fair	Fair
13	14+118	Good	Fair	Fair	Fair
14	15+770	Good	Fair	Fair	Fair
15	16+515	Good	Fair	Fair	Fair
16	16+675	Good	Fair	Fair	Fair
17	17+252	Good	Fair	Fair	Fair
18	18+248	Good	Fair	Fair	Fair
19	19+229	Good	Fair	Fair	Fair
20	24+297	Good	Fair	Fair	Fair
21	22+689	Good	Fair	Fair	Fair
22	24+441	Good	Fair	Fair	Fair
23	27+216	Good	Fair	Fair	Fair
24	29+618	Good	Fair	Fair	Fair
25	31+538	Good	Fair	Fair	Fair
26	35+309	Good	Fair	Fair	Fair
27	35+995	Good	Fair	Fair	Fair
28	38+437	Good	Fair	Fair	Fair
29	39+029	Good	Fair	Fair	Fair
30	39+192	Good	Fair	Fair	Fair
31	39+428	Good	Fair	Fair	Fair
32	52+046	Good	Fair	Fair	Fair
33	63+553	Good	Fair	Fair	Fair
34	63+907	Good	Fair	Fair	Fair
35	64+761	Good	Fair	Fair	Fair
36	65+056	Good	Fair	Fair	Fair
37	66+038	Good	Fair	Fair	Fair



S. No.	Chainage (Km)	Hume Pipe	e Head wall Quadrant pi		Toe wall
38	66+694	Good	Fair	Fair	Fair
39	67+175	Good	Fair	Fair	Fair
40	69+133	Good	Fair	Fair	Fair
41	69+950	Good	Fair	Fair	Fair
42	70+472	Good	Fair	Fair	Fair
43	76+737	Good	Fair	Fair	Fair
44	77+393	Good	Fair	Fair	Fair
45	80+108	Good	Fair	Fair	Fair
46	80+489	Good	Fair	Fair	Fair
47	80+909	Good	Fair	Fair	Fair
48	81+698	Good	Fair	Fair	Fair
49	82+245	Good	Fair	Fair	Fair
50	84+204	Good	Fair	Fair	Fair
51	84+904	Good	Fair	Fair	Fair
52	86+477	Good	Fair	Fair	Fair
53	86+871	Good	Fair	Fair	Fair
54	88+431	Good	Fair	Fair	Fair
55	90+284	Good	Fair	Fair	Fair
56	90+883	Good	Fair	Fair	Fair
57	91+606	Good	Fair	Fair	Fair
58	92.009	Good	Fair	Fair	Fair
59	95+590	Good	Fair	Fair	Fair
60	97+408	Good	Fair	Fair	Fair
61	97+970	Good	Fair	Fair	Fair
62	98+227	Good	Fair	Fair	Fair
63	98+971	Good	Fair	Fair	Fair
64	99+792	Good	Fair	Fair	Fair
65	100+069	Good	Fair	Fair	Fair
66	101+196	Good	Fair	Fair	Fair
67	101+799	Good	Fair	Fair	Fair
68	104+491	Good	Fair	Fair	Fair
69	105+075	Good	Fair	Fair	Fair
70	105+898	Good	Fair	Fair	Fair
71	106+285	Good	Fair	Fair	Fair

Mnom 2

# Annexure 4: Operation & Maintenance cost

S. No.	Item	Frequency	Unit	No	Frequenc y per year	Quanti ty	Rate	Amount	Remarks
1	General Cleaning in Carriageway & Shoulders Rural area	Monthly	Kms.	108.4	12	4	350	18,21,120	04 Nos. of Labour
2	General Cleaning in Carriageway & Shoulders Urban area	Twice in a month	Kms.	101.03	24	4	350	33,94,608	04 Nos. of Labour
3	Watering in Median Plants	Once in Week	Kms.	101.03	52	1	1939	1,01,86,653	01 Nos. of Labour
4	ROW Cleaning	Half yearly	Kms.	54.2	2	5	350	1,89,700	5 Nos of labour per KM (50% of the Project length)
5	Cleaning of Culverts	Half yearly	Nos	104	2	2	650	2,70,400	3 Nos. of Labour along with JCB or Excavator
6	Road Furniture Cleaning	Quarterly	Kms.	108.4	4	2	350	3,03,520	02 Nos. of Labour
7	Maintenance of Bus shelters	Monthly	Nos.	36	6	2	350	1,51,200	2 Nos./ Bus shelter/month
8	Bridges	Half yearly	Nos.	14	2	2	350	19,600	02 Nos. of Labour for removal of vegetation/Structure
								1,63,36,801	
	EQUIPMENT SUPPLY							-	
1	Grass cutter	Monthly	Nos.	7.4	12	0	12000	4,422	(12000/year)
2	Bikes	Monthly	Nos.	7.4	12	0	2500	14,740	Per Supervisor/Per Month

Routine Maintenance cost for 1 year

19,162

Grand Total 1,63,55,963.00



S. No.	Item	Frequency	Unit	No	Frequency per year	Quantity	Rate	Amount	Remarks
1	Road marking	Half yearly	Sqm.	1	1	2701	516	13,93,716	10 % of Total Project length on B/S for 1 year
2	Maintenance of Earthen Shoulder	Half yearly	Cum.	1	3	1626	225	10,97,550	5% of total Shoulder length throughout the project
3	Sign Board	Quarterly	Km.	1	1	13	4000	52,000	2.5 % of Total sign boards per half year ( considered 500 Nos. )
4	МВСВ	Monthly	RMT			37.5	2400	90,000	2.5% of Total qty. per year - (considered 2400 per number)
5	Mile Stone ( KM Stone/ HM Stone / ROW stone etc.)	Quarterly	Nos.	108.4	4	27	2250	2,43,000	5 % of total stones per year (unable to understand the backup)
	Total amount for 1 Year							28,76,266	

# **Operational Expenses**

S. No.	PARTICULARS	Amount
1	Man Power	₹0
2	Fuel for Generator & Vehicles	₹ 3,60,000
3	Electricity	₹ 3,30,000
4	Stationary	₹ 5,000
	Total Amount	₹ 6,95,000



	Sun	nmary of iviajor	iviaintenanc	ce		
Description	Due date	Base cost	Esc Period	Escalation Rate per Year	Cost of MMR on due date @ 5% Escalation	In crores
Date of Estimation	20-01-2021					
Major Maintenance - Highway	01-04-2026	21,45,70,858	5.20	3.0%	24,80,43,912	24.80
				Total	₹ 24,80,43,912	24.80

.....

# Maior 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.	11,20,850.00	14.00	1,56,91,900	11,20,850.00	14.00	1,56,91,900
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 Tyre Rollers to achieve the desired compaction as per Technical specification clause No. 507 and mix design conforming the IRC -111 and IRC 37.	Cum.	-	7,480.00		-	7,480.00	
	Providing and laying bituminous concrete using a batch type Hot Mix Plant using crushed aggregates of size	Cum.	14,010.63	6,800.00	9,52,72,250	14,010.63	6,800.00	9,52,72,250



DUE DILIGENCE REPORT

S. No.	DESCRIPTION	Unit	QUANTITY	RATE	AMOUNT	QUANTITY	RATE	AMOUNT
	Micro surfacing	Sqm.	5,60,425.00	160.00	8,96,68,000	5,60,425.00	160.00	8,96,68,000
3	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	
4	Texturing of Rigid pavement (considering 50% for 7 years)	Sqm.	-	130.00		-	130.00	
	Total				20,06,32,150			20,06,32,150
	Junctions, Traffic Signs Marking and Other Appurtenances			-			-	
1	Providing and laying of <b>cement concrete kerb without</b> <b>channel</b> (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 <b>Consider 5% for</b> <b>construction period.</b>	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 g 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.	27,013.00	516.00	1,39,38,708	27,013.00	516.00	1,39,38,708
3	Road Studs	Nos.	-	750.00		-	750.00	
4	Kerb painting		-	250.00		-	250.00	
	Total			-	1,39,38,708		-	1,39,38,708
	Grand Total				21,45,70,858			21,45,70,858



# Annexure 5: Letter of Award Letter of Award

No.: AB/TC/SHDP/

3945

BY RPAD

/2011 Office of Executive Engineer Roads & Building Division 2<sup>nd</sup> Floor, Hostel Building, Polytechnic compound, Ahmedabad -380015 Date: ..../.%/2011 Ph No.: 079-26303490, 26303637 Fax: 079-26303490

To,

Dilip Buildcon Limited E-5/99, Arera Colony, Bhopal - 462 016 (M.P)

Kind Attention: Mr. Devendra Jain (Dilip Buildcon Limited)

Subject: Letter of Award (LOA) for Package 8 bid out under the Tender Notice No: 1 & 2 of 2010-11 issued by Roads & Buildings Department, Gujarat, dated 4th & 18th September 2010

We refer to your unconditional bid for Package 8 (Nadiad - Mahudha - Kathlal - Kapadwanj - Bayad - Modasa) in response to our Request for Proposal issued vide Tender Notice no: 1 & 2 of 2010-11 issued by Roads & Buildings Department, Gujarat, dated 4th & 18th September 2010 and all addendums and corrigendums issued thereto, for the development of select stretches of state highways in Gujarat on Design Build Finance Operate Transfer – Annuity basis ("the Project").

We are pleased to inform you that your Financial Bid of ₹17,46,00,000/- (Rupees seventeen crores forty-six lakhs only), to be paid to you as six-monthly Annuity, as per the terms of the draft Concession Agreement, has been duly approved by the Roads & Buildings Department, Gujarat vide their order No. SHDP/102010/631/7/Pvt. dt. 01/08/2011 and you have been declared as the Selected Bidder.

Please note that this LOA is subject to the following terms and conditions:

- As per Clause 3.3.5 of the Part 1 Instruction to Bidders (ITB) of the RFP, within 7 (seven) days of the receipt of the LOA, you are requested to sign and return the duly signed duplicate copy of the LOA, in acknowledgement thereof, along with a letter undertaking that you would abide by all the conditions mentioned herein;
- You are required to submit to the R&BD, details of the Special Purpose Vehicle (SPV) promoted and incorporated in accordance with Clauses 1.1.2 (B), 1.1.2(C) and 2.3 of Part 1- Instruction to Bidders (ITB) of the RFP, at the earliest;



- In terms of Clause 1.3 of the ITB you are required to execute the Draft Concession Agreement between the R&BD, GOG and the SPV to be set up in accordance with the RFP, within 60 days from the issue of the Letter of Award;
- In terms of Clause 9.1.1 of the Draft Concession Agreement, you are required to extend the Bid Security and keep it in force and effect, until the time you furnish the Performance Security and the same comes into effect.
- 5. In compliance with the terms of Clause 3.6 of the ITB you are required to pay, at the time of signing of the draft Concession Agreement, to India Infrastructure Initiative a non-refundable amount of ₹1,86,95,835 /- (Rupees One Crore Eighty Six Lakhs Ninety Five Thousand Eight Hundred and Thirty Five Only) plus service tax and education cess, towards 90% of project development expenses, by means of a Demand Draft from a Scheduled Bank (except a Cooperative Bank) in favour of India Infrastructure Initiative, payable at Delhi, and undertake to pay remaining amount of ₹20,77,315 /- (Rupees Twenty Lakhs Seventy Seven Thousand Three Hundred and Fifteen Only) plus service tax and education cess, towards balance 10% of project development expenses at any time within 3 (three) months from the date of signing of the Draft Concession Agreement.

Kindly note, that this communication by itself does not create any right or contractual relationship with R&BD, GoG. Any such right or relationship shall come into effect only on your fulfilling the above said conditions and execution of the Draft Concession Agreement. In the event of failure on your part to comply with any of the terms and conditions mentioned in the LOA and the RFP, within the time period and in the manner prescribed therein, R&BD, GoG, in addition to all other rights and remedies that may be available to it under the provisions of the RFP and the applicable laws, shall be at absolute liberty and freedom to treat your Bid as rejected and deal with the captioned Project as it deems fit in accordance with the RFP.

Please acknowledge this letter within 7 days of receipt of this letter and indicate a suitable date for execution of the Draft Concession Agreement which shall in no case, be later than 60 (sixty) days from the date of this Letter of Award.

Executive Engineer R&B Division, Ahmedabad Ahmedabad

# Copy Submitted to :

- Officer on Special Duty (SP), R & B Department, Block No. 14, Gandhinagara for Information please.
- Superintending Engineer, State Highway Development Project, Nirman Bhavan, Ground Floor, Sector 10-A, Gandhinagar for information please.



#### Dilip Buildcon Limited E-5/99, Arera Colony, Bhopal, (M.P.) - 462 Performan Amount paid Cost of Total ce Scurity Submission of Name of to Length 10.3% S.No. Project Performance Amount to Agreeme Name of Project Departm Bank LOA Chequ Independed Independed Km. Rs. in Service Tax one time of or en Guarantee be paid nt Date Bank Letter e/DD Crore Engineer Engineer part payment Amount in Guarantee Amount Inculding and Date Exculding Rs. Service Tax Days Two-laning of Sardarpur-Badnawar Road BOT (Toll + Annuity) basis (15 In Four instullment in Years) two years first 43.00 Within 6 Month M/s MSV 1 instuliment to be paid 83.67 MPRDC 4.20 Crore Km. from the date of International Inc. 17.524.038.00 1.804.976.00 19,329,014.00 Cheque at the time of agreement Gurgaon apointment of Independenced Engineer Nadiad- Mahudha-Kathlal -Kapadwani-Bayad- Modasa Gujarat Road BOT M/s India V Full amount to be paid 02.08.2011 60 Day's Infrastructure 18.695,835.00 (Annuity) basis (13 Years) 1,925,671,00 20,621,506.00 at time of agreement within LOA Nadiad- Mahudha-Kathlal -Kapadwanj-Initiative, New 2 in DD 244.39 Bayad- Modasa Gujarat Road BOT 108.4 Km Date Gujarat 13.41 Crore M/s India Full amount to be paid 02.10.2011 (Annuity) basis (13 Years) Infrastructure within 3 month from 2,077,315,00 213,963 00 2,291,278,00 Initiative, New DD the date of signing of Delhi the Draft Concession Silwani-Sultanganj-Jaising Nagar-Sagar Agreement BOT (Toll Plus Annuity) basis (15 27 07 2011 45 days 3 Years) 76 Km. 121.00 MPRDC 6.05 Crore within LOA Date Total Cost Rs. 12.09.2011 449.06

0/, 101 20621512 201 20621512 201 2559355





# Annexure 6: Provisional Certificate

SAI Consulting Engineers Pvt. Ltd. Independent Engineer for State Highways under SHDP R&BD (GoG) Project Office : Plot No. 360, Sector - 8B, Gandhinagar - 382 008 INDIA Tel : +91-79-23240594 E-mail : shdp@saiindia.com Web : www.salindia.com

(Ref. No. SAI/SHDP/IE/1121/2013 dated-31/12/2013)

# PROVISIONAL CERTIFICATE

- 1. I, Arun Shende Team Leader (SAI Consulting Engineers Pvt. Ltd), acting as Indepedent Engineer, under and in accordance with the Concession Agreement dated 05<sup>th</sup> January 2012 for redevelopment of the section Nadiad –Mahudha Kathlal –Kapadwanj-Bayad-Modasa from km 0.600 to km109.00 (inclusive of Maintenance works between km 1.300 to km 2.300 Nadiad , km 26.050 to 27.710 Kathlal, km 42+850 to km 44.250 Kapadwanj, km 74.750 to km75.750 to km 75.850 Bayad, km 96.000 to km 96.560 Sikka Chokadi, km 106.300 to km 107.550 Modasa ( as per Schdule-K)on State Highway No 59 in Gujarat (the "Project Highway") on design, build, finance, operate and transfer (DBFOT) annuity concession basis through M/s DBL NADIAD-MODASA TOLLWAYS LIMITED, hereby certify that the Tests specified in Article 14 and Schedule-I of the Concession Agreement have been undertaken to determine compliance of the Project Highway with the provisions of the Agreement.
- 2. Construction Works that were found to be incomplete and/or deficient have been specified in the Punch List appended here to, and the Concessonaire has agreed and accepted that it shall complete and/or rectify all such works in the time and manner set forth in the Concession Agreement. Some of the incomplete works have been delayed as a results of reasons attributable to the R&BD, GoG or due to Force Majeure and the Provisional Certificate cannot be withheld on this account. Though the remaining incomplete works have been delayed as a result of reasons attributable to the Concessionaire, I am satified that having regard to the nature and extent of such incomplete works, it would not be prudent to withhold commercial operation of the Project Highway, pending completion thereof.
- 3. In view of the foregoing, I am satisfied that the Project Highway can be safely and reliably placed in commercial service of the Users thereof, and in terms of the Concession Agreement, the Project Highway is hereby provisionally declared fit for entry into commercial opreation on this the 31<sup>st</sup> day of December 2013.

ACCEPTED SIGNED SEALED AND DELIVERED for and on Behalf of <u>M/s. DBL NADIAD-MODASA</u> TOLLWAYSCIMMED by:

J P Mishra Chief General Manager M/s. DBL NADIAD-MODASA TOLLWAYS LIMITED 8, Trinetra Bunglows, Shiv Shanti Society Nr. Sardar Patel Ring Road, Ratanpura Gam, Vastral, Ahmedabad, (Gujarat) 382418 SIGNED SEALED AND DELIVERED for and on behalf of INDEPENDENT ENGINEER by

Gandhinagar 382008

ArunShende (Team Leader/Sr. H. E/Authorized signatory) Plot No. 360, Sector – 8 B,

Regd. Office : Block-A, SAI House, Satyam Corporate Square, B/h. Rajpath Club, Bodakdev, Ahmedabad-380059. INDIA Tel : +91-79-66142600, 6614 2700 Fax : +91-79-66142800 E-mail : mail@saiindia.com Web : www.saiindia.com



#### Annexure 7: Completion Certificate



#### Ref. No. SAI/1470/2014

10<sup>th</sup> April, 2014

To, M/s. DBL Nadiad Modasa Toll ways Ltd. 8, Trinetra Bunglow, Shiv Shanti Society, Ratanpuragam, Vastral Ahmedabad (Gujarat)-382418

#### Kind Attn: Mr. J. P. Mishra

- Sub: Services of Independent Engineer for Two Laning with Paved Shoulders of Stretches of State Highways under SHDP to be executed on Design, Build, Finance, Operate & Transfer (DBFOT) Annuity Basis- Package-8 - Nadiad-Kathlal-Bayad-Modasa Road (SH-59)
- Reg: Completion Certificate (Article 14 & Schedule-J)
- Ref: 1. Our Letter No. SAI/SHDP/IE/1150/2014 dated 21.01.2014 2. Concessionaire's Letter No. DBLNMTL/I.E-SAI/SHDP/Package-08/2014/263 dated 23.03.2014

#### Dear Sir,

As per Provision of Concession Agreement Article 14.3, Provisional Completion Certificate with Punch List was issued by the Independent Engineer vide letter (1) above. Accordingly Concessionaire has attended the work within the stipulated time period i.e. 90 days from the date of issue of Provisional Completion Certificate.

Concessionaire informed Independent Engineer that they have completed the punch list items vide letter (2) above. Independent Engineer's Key personals visited the project site along with Concessionaire Representative on 01.04.2014. Following Representatives were present:

#### Independent Engineer

Mr. N.V. Satyanarayana, Acting TL cum SQME Dr Y.S. Madhvesh, Sr. Pavement Specialist Mr. Sandeep Rathod, CAD Expert Mrs. Meena Jain, Environmental Engineer Mr. Kumar Prem Prakash, Resident Highway Engineer SAI Site Team

#### Concessionaire

Mr. J. P. Mishra, DBL

Subsequently on 09.04.2014 Mr. Sushant Gupta, VP (Projects) Mr. Anil Mehta, Project Coordinator and Mr. P G Kulkarni, Team Leader cum Sr. Highway Engineer along with Concessionaire Representative Mr. J P Mishra, Project Manager also had joint inspection.

It is found that the Concessionaire has completed all works given in the Punch List satisfactorily. As Built Drawings has been submitted which are under review with Independent Engineer.

Y:\1 All Project Documents\212002-R&B Gujarat\Current Letters from 2014\Current Letters-2014.doc

# SAI Consulting Engineers Pvt. Ltd.

Concessionaire could not complete the Avenue Plantation as per Provision of Concession Agreement because of ROW constraint mainly wherever the embankment height is more than 2 Meter and Urban areas.

The work has not been executed/deviated from the Provision of Concession Agreement has been attached herewith as **Annexure -1**.

The Project Assets Report is attached herewith as Annexure-2.

Based on the above facts and inspection, Project Highway has been completed on 29.03.2014. Independent Engineer is issuing the **Completion Certificate** pursuant to Clause 14.2 & 14.3 and Schedule-J of Concession Agreement.

The Project Highway provisionally declared fit entry into Commercial Operation on 31.12.2013, as mentioned in Provisional Completion Certificate. Since Concessionaire has now completed the Punch List items within 90 days period, as per Article 14.4 CA, the date of Commercial Operation will be 31.12.2013 as per Article 15.

Thanking you.

Yours Sincerely, FOR SAI CONSULTING ENGINEERS PVT. LTD.

SUSHANT GUPTA VICE PRESIDENT (PROJECTS)

Encl: Completion Certificate Annexure 1 - Reduction Scope of Work as per Schedule-B of CA Annexure 2 - Project Asset Report

Copy forwarded with compliments to:

- 1. Mr. P J Patel, Chief Engineer (P&P) (R&B) Dept., Gandhinagar-382010
- 2. Mr. S N Shroff, SE (PIU) SHDP Scheme, Gandhinagar-382010
- 3. Executive Engineer (R&B) Division, Nadiad
- 4. Team Leader, SAI, Gandhinagar

Y:\1 All Project Documents\212002-R&B Gujarat\Current Letters from 2014\Current Letters-2014.doc



Enclosure to Letter No. SAI/1470/2014 dated 10.04.2014

#### SCHEDULE-J

#### (See Clauses 14.2 & 14.3)

#### COMPLETION CERTIFICATE

- 1. I, Sushant Gupta, Vice President-Projects /Authorized signatory (SAI Consulting Engineers Pvt. Ltd), acting as Independent Engineer, under and in accordance with the Concession Agreement dated 5<sup>th</sup> Day of January 2012 for redevelopment of the section <u>Nadiad-Madhudha-Kathlal-Kapadwanj-Bayad-Modasa from km 0.60 to Km 109.00 on State Highway No 59</u> in Gujarat the "Project Highway" on Design, Build, Finance, Operate and Transfer (DBFOT) Annuity Concession Basis through <u>M/s. DBL NADIAD-MODASA TOLLWAYS LIMITED</u>, hereby certify that the Tests specified in Article 14 and Schedule-I of the Concession Agreement have been successfully undertaken to determine compliance of the Project Highway with the Provisions of the Concession Agreement, and I am satisfied that the Project Highway can be safely and reliably placed in commercial service of the Users therof.
- It is certified that, in terms of the aforesaid Agrement, all works forming part of Project Highway have been completed, and the Project Highway is hereby declared fit for entry into commercial operation on this the 29<sup>th</sup> day of March 2014.

SIGNED, SEALED AND DELIVERED for and on behalf on INDEPENDENT ENGINEER by :



Sushant Gupta Vice President (Project) /Authorized Signatory Block A, SAI House, Satyam Corporate Square Rajpath Club, Bodakdev, Ahmedabad-380059 (Gujarat)



			A	nnexure 8	: Insur	ance	
गॅलसिंग अनसची	/ Policy Schodule -	Civil Engineerir	ng Completed	Risk			
olicy Num	ber:	23	वसाय सतरोत	/Business Source	910355		
213004419	10001987	qu	বিধাৰ বৃদ্ধন		Codo		
ीकरता कार्रयाल र्यालय कोड/	तय/ <b>Issuing Office</b> /Office Code: 321300	वान ) 91	त्य चनल वावर 03550000000	misales Channel 01	C008.		
र्यालय पता	/Office Address: BH0	OPAL II	R /Name: As	pire Insurance Bro ht Number: 82919	4810		
VISION II B adhya Prade	-8, Indrapuri, B H E L osh - 462022.	, Bhopal, Lic सह	: दलाल कोड /	Co Broker Code:	4070		
TIN: 23AAAC	. Madhya Pradesh CN9967E1ZB ber: 755 2682822	(	Customer C	are Toll Free N	umber:		
fail: 321300 bile Numbe	@nic.co.in pr:	en	nail:custom	ier.support@ni	c.co.in		
हिक का नाम ILLWAYS L	f /Customer Name: 1 TD	OBL NADIAD N	ODASA	ग्राहक आ 97018818	डी /Custome 38	er ID: पैन	/PAN: AAECD0388D
स्ता/ Address: 4TH, 33, ELLORA COMMERCIAL CE SALAPOSE ROAD, NR, G.P.O, AHMEDABAD, GU. AHMEDABAD, District: AHMEDABAD, State: GUJA			ENTRE, UJARAT, City IARAT, PIN:	জীন /Pho /:	ne:		
0001. II: 98262923	328			इ-मल /E-N	1811:		
লিমি: 27/03 idnight of	9/2020 के 00:00 से 26/03/2021	26/03/2021 क <u>ी</u>	मध्य रात्र	तक प्रभावी /Polic	y Effective	from 00:00 he	ours, on 27/03/2020 to
पुरीमयि	ਸ/ Premium	₹ 18,39,639.0	00 कवर नो	ट संख्या और तथि Note Number :	7 Cover N nd Date	IA	
SG	CGST ST/UTGST	₹0.0 ₹0.0	0				
केरला बाढ उ	IGST উপ্ৰক্য/Kerala Flood Cess	₹3,31,135.0 ₹0.0	७ प्रस्ताव २०	संख्या और तथि/। Number a	Proposal nd Date	8002003270868	47 Dt. 27/03/2020
कम:जीष Les	দাঠটের Cess एसटी_टीडीएस / s:GST TDS	₹0.0	00				
रुप्रापृत यो	ग्य स्टाम्प		-	winner alle - B.C.	Desciet		
ecoverable	इयूटी Stamp Duty	₹ 0.0	० रसाद	संख्या आर ताया/ Number a	Receipt 3 nd Date	2130081191000	7666 Dt. 27/03/2020
			पछिली प	ॉलसिी संख्या और	समापुती		
कुल /To	tal Amount	₹ 21,70,774.0	00 Pre	vious Policy Num	নথিিি N erand	A	
upees Twen	nty One Lakh Sevent	y Thousand Se	ven Hundred	Exp Seventy Four Only	.)		
ation:Nadia	d¿Madhudha-Kathla	, I-Kapadvanj-Ba	ayad-Modasa	(Km.00 to 109/00	Road, Gujar	at Kheda, Nadiad	1, 387001.
Sr.No	Type of Risk	Desci	ription Of Risk	Earthquake Zone	Sum Ins ri	ured of the sk(१)	Excess(7)
1	Roads	RO		Zone III	1,72,80	,00,000.00	1,00,000.00
		Toll E Booti HTMS, Equ	Building & hs, TMS, Office & It ipment,				
2	Roads	Ele Equipn Furnitu Electr Lighting	ctronic nent, Road re, Fixturs, ical Poles I & Fittings, and & Sofaty	Zone III	11,20,	00,000.00	1,00,000.00
। खंदी एचलां	कनौ एवं नाउंनी । Class	Signboa B	arrier	arranties Applica	hle-Riot St	ke and Malialau	s Damane Clause Balley in
ject to follo	wing conditions : PO	LICY IS SUBJE	CT TO THE	FOLLOWING CO	DITIONS:		- Damage Clause, Policy is
xcess appli pto 1500 C	icable under the polic r = 10% of Claim sub	ry is: (a) Upto S liect to Minimur	il of Rs 500 C n of Rs 10 lac	r = 10% of Clair	n subject to ckage will be	Minimum of Rs 5 treated as One	lacs & (b) SI above 500 Cr location for application of
ess. olicy is App o Coverage	blicable for Roads & F e for (Road) Transport	Road side struc	tures & Toll p	lazas & Bridges &	Flyovers on	Land.	and the second se
ach 72 hou	e for marine vessel ir ir period will be treate	npact Damage ed as One occu	rrence/event	for STFI & EQ for	application o	of Excess.	
P	rinted on 27/03/2020	by ID: 75159					Page no: 1
		-,					. ugu no. 1
Re with							
Sta Veri							F [*]

Mren X TECHNICAL DUE DILIGENCE REPORT

Policy Number: 321300441910001987	ब्यवसाय स्त्रोत /Business Source: 910355
जारीकर्ता कारयालय/Issuing Office कार्यालय कोड /Office Code: 321300	<u>वकिरय चैनल वविरण/Sales Channel Code:</u> 91035500000001
कार्यालय पता /Office Address: BHOPAL DIVISION II B-8, Indrapuri, B H E L, Bhopal, Madhya Pradesh - 462022. State Codo: 23 Madhya Prodosh	नाम /Name: Aspire Insurance Brokers Pvl Ltd - HO Contact Number: 8291914810 सह दलाल कोड / Co Broker Code:
GSTIN: 23AAACN996/E128 Contact Number: 755 2682822 eMail: 321300@nic.co.in Mobile Number:	Customer Care Toll Free Number: 1800 345 0330 email:customer.support@nic.co.in

PROJECT DETAILS COVERED UNDER THE POLICY AS FOLLOWS: Construction of Nadiad Madhudha Kathlal Kapadvanj-Bayad-Modasa (Km.00 to 109/00 Road.

Name of the co-insured under the policy is Dilip Buildcon Ltd. & R&BD Govt. of Gujarat. Name of the contractor under the policy is Dilip Buildcon Ltd and subcontractor is VARIOUS., Agreed Bank Clause, Terrorism Damage Exclusion Warranty.

जसिकी गवाही में दनि/ माह /वर्ष को उपरोक्त उल्तेखति कार्यालय पते पर अधोहस्ताक्षरी को वधिवित अधक्ति कयि जा रहा है उसके हाथ नरिधारति कपि जाएं। यह अनुस्ची, संलगन पॉलसी, खण्ड, पृष्ठठांकन और पॉलसी शब्दों, जो कंपनी वेबसाईट <u>https://nationalinsurance.nic.co.in</u> पर उपलब्ध है. को एक अनुबंध के रुप में एक साथ पढ़ा जाए तथा कोई भी शब्द या अभवियक्त जिसिके लपि यह वशिष्टि अरुथ पॉलसी या अनुस्ची के कसीं। भी हसिसे में संलगन कयि। गया हो, एक ही अरुथ वहन करेगा चाहे जहाँ भी उल्तेखति हो। यह आश्वासन दयि। जाता है क पिरीमयिम चेक के अस्वीकृत कि मामले में, यह दस्तावेज स्वतः पुराधमकिता नरिस्त हो जाएगी। //N WITNESS WHEREOF, the undersigned being duly authorized hereunto set his/ her hand at the office address mentioned above, this 27/March/2020. This schedule, the attached policy, the clauses, the endorsements and policy wordings as available in the website https://nationalinsurance.nic.co.in and any word or expression to which the specific meaning has been attached in any part of this policy or of the schedule shall be at the same meaning wherever it may appear. It is warranted that IN CASE OF DISHONOUR OF THE PREMIUM CHEQUE, THIS DOCUMENT STANDS AUTOMATICALLY CANCELLED 'AB-INITIO'

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. Antes a second स्टॉप इब्टी Stamp<sup>AlACSI</sup> For and on behalf of National Insurance Duty: (१ 0.50) अधकित हसतात्क्षरकरवादिAuthorized अधकित हसतात्क्षरकरवादिAuthorized

Printed on 27/03/2020 by ID: 75159

Page no: 2



					TAX INVO	ICE					
Invoice Serial	No: 30871E9	P00001987								Invoice (	Date: 27/03/2020
Details of Su National Insur BHOPAL DIVI State : GSTIN No :	pplier: ance Compan ISION II B-8, li 23 , Madi 23AAACi	ny Limited., ndrapuri, B H E hya Pradesh N9967E1ZB	E L, Bhopal	, Madhya Pradesi	n - 462022						
Details Of Re Address : City : District: State: PIN:	4TH, 33, E AHMEDAB AHMEDAB GUJARAT, 380001.	NADIAD MOD LLORA COMM JAD, JAD,	DASA TOLL	WAYS LTD ENTRE, SALAPC	DSE ROAD, N	ir, g.p.o, ai	HMEDABAD.	GUJARAT			
Place Of Sup State Code : GSTIN No :	ply State :	Gujarat 24 24AAECD03	386D1Z0								
a	सेवा का वविरण/		छ्ट।	टैक्स योग्य/	सीजीएसर्ट CC	ो की राशी) SST	एसजीएसटी SGST/	/यूटीजीएसटी/ /UTGST	आईजीए	सटी/IGST	केरला बाढ उपकर/Kerala Flood Cess
सक काउ/ SAC Code	Descripti on of Service	कुल/Total( ₹)	Discou nt	म्र्ल्य/Taxable Value(रॅ)	दर/Rate	राश्ति Amount( र)	दर/Rate	राश Amount( र)	दर/Rate	राश्ती Amount( र)	राश/Amount( ₹)
997137	Other property insurance	18,39,63 9	0%	18,39,639	0%	0	0%	0	18%	3,31,13 5	0
TOTAL	SELVICES	18,39,63		18,39,639		0		0		3,31,13 5	0
कुल इन्वॉयस ₹ 21,70,774 कुल इनवॉयस Twenty One केवल/Only. रविरुस चार्ज व	मूलुय (अंकों नै मूलुय (शब्दों मैं Lakh Seventy हे अधीन टैक्स	)Total Invoice )Total Invoice Thousand Se কী বাংগি Amo	e Value (in Value (in even Hundr punt of Tax	figures) : words) : UDDC/R red Seventy Four Subject to Reve	tupees rse Charge	: No					
E.&.O.E	41 - 21 - 1 X						and on b	कृते ने hehalf of Na	ংলন इনৃথ্য tional Insu	गेरेन्स कंपनी irance Con	लमिरिडा For npary Limited
							ł	अधकित हरा	नातुक्षरकरृत	TI Authoriz	Ad Signatory

Printed on 27/03/2020 by ID: 75159

Page no: 3



	1998-2007 - Di <b>a</b> n	<ul> <li>Access</li> </ul>	2010 CONTRACTOR 2010
वसली रसीट	Col	lection	Receipt
i della de	~~.		

जारीकर्ता कार्यालय कोड/Issuing Office Code : 321300 जारीकर्ता कार्यालय का नाम व पता/Name and Address of Issuing Office : BHOPAL DIVISION II B-8, Indrapuri, B H E L, Bhopal, Madhya Pradesh - 462022 राज्य कोड/State Code : 23 ,राज्य का नाम/State Name : Madhya Pradesh जीएसटीआईएन/GSTIN : 23AAACN9967E128 संपर्क संख्या/Contact Number : 755 2682822 रसीद सं./Receipt No : 321300811910007675

cannot an e and so the second s
8821200327000233
स्क्रॉल तिथि (यदि कोई हो)/Scroll Date(If any) :
27/03/2020

श्री DBL NADIAD MODASA TOLLWAYS LTD से सीडी– नकद जमा के रूप में रूपये

Rs. 21,70,774.00 निम्नलिखित लेनदेन के अनुसार धन्यवाद सहित प्राप्त हुआ। उपकरण स्क्रॉल किया गया है।

Received with thanks from DBL NADIAD MODASA TOLLWAYS LTD a sum of Rs. 21,70,774.00 (Rupees Twenty One Lakh Seventy Thousand Seven Hundred Seventy Four Only ) by way of CD-Cash Deposit towards the following transactions. The instrument is serolled.

भुगतान विवरण/Paymode Details :

भुगतान मोड का नाम/Paymode Name :	जमा खाता धारक का नाम/Deposit Account Holder Name :
CD-Cash Deposit	MS DILIP BUILDCON LIMITED
संदर्भ सं./Ref No :	संदर्भ तिथि/Ref Date :
881103220221	
वैंक का नाम (यदि कोई हो)/Bank Name(If any) :	बैंक शाखा (यदि कोई हो)/Bank Branch(If any) :
1 - 18 <b>2</b>	

#### आपके नकद जमा खाते में समायोजन के बाद उपलब्ध शेष रूपये

The available Balance of your Cash Deposit A/C. after adjustment is - CD a/c. 881103220221 : Balance-Rs.73072460.74

Adjusted from Receipt No. 321300811910007666. Balance Available - Rs. 67570368

क. सं./ S. No	विभाग/ Dept	पॉलिसी/ पृष्ठांकन Policy/Endorsement		व्यव. श्रोत कोड/ Biz Source Code	व्यव.का वर्ग/ विवरण / Class of Business/Narration	राशि रू./
	लेन-देन कोड/ Tr Cd	वर्ष/ Year	संख्या/ Number	विक्रय चैनेल/ Sales Channel	लेखा विवरण/ Account Description	Amount Rs.
1	44 11	2020	321300441910001987	910355 91035500000001	Civil Engineering Completed Risk Direct Premium IGST	18,39,639.00 3,31,135.00
	a 2	100			Total	21,70,774.00

कृते नेशनल इन्स्योरेन्स कं. लि./For National Insurance Co. Ltd,

रोकड़िया/Cashier :

प्राधिकृत हस्ताक्षरकर्ता/Authorised/Signatory

चेक द्वारा भुगतान किए जाने की स्थिति में रसीद चेक द्वारा भुगतान की प्राप्ति के बाद ही जारी कियेँ जिएँगी। सभी पत्राचारों में उपरोक्त वर्णित पॉलिसी जारी करनेवाले कार्यालय के पते पर दस्तावेज संख्या व पॉलिसी का वर्ष तथा संख्या उद्धृत किया जाना चाहिए। जब राशि 5000/- रूपए या उससे अधिक होगी तो राजस्व टिकट चिपकाया जाना आवश्यक होगा।
TECHNICAL DUE DILIGENCE REPORT

THE NEW INDIA ASSURANCE CO. LTD. (Government of India Undertaking)





### ADJUSTMENT VOUCHER

Issuing Office	: BHOPAL DO-1 (450100)
Address	C.D.U I , BLOCK NO 3, IIND FLOOR, PARYAVAS BHAWAN, ARERA HILLS, BHOPAL, 462011 BHOPAL
Phone	: 07554203271
Email	: nia.450100@newindia.co.in
Fax	: 07554203274
Collection Number	: 45010081190000007658
Collection Date	: 18/02/2020
Business Source Code	: 1D5140053
PAN No of Payer	: AACCD6124B

Received with thanks from M/S.DILIP BUILDCON LTD ...

Policy No.	A/C Description	Amount	A/C Code	Sub A/C Code
45010036190100000061	Cash Deposit Account-450100	6542.00	5076.450100	CD0000941977
45010036190100000061	Cash Deposit	3.00	5076.450100	CD0000941977

Total = ₹ 146787.00

#### Your Payment/Adjustment Details are as under -

Mode	Amount₹	Cheque No.	Cheque Date	Drawee Bank	Drawee Branch	Reference No.	Scroll/BG/A PD Balance
Advance Premium Deposit	6542.00	N.A.	N.A.	N.A.	N.A.	4501001910015997	3238537.0 0
Advance Premium Deposit	3.00	N.A.	N.A.	N.A.	N.A.	4501001910015997	3238537.0 0

Utilization details of the Collected Amount -

Premium		GST ,		Stamp Duty	Excess Amount	
5547.00		998.00		0.00	0	
SI no.	Agency Code		Agency Name		Department Code	
1	NA		GLOBAL INSU	ANCE BROKERS PRIVATE, LTD.	36	

For The New India Assurance Company Limited



Date of Issue: 18/02/2020

Cashier's Initial

Note -

1.Please note the Policy Number, Collection Number and date in all future correspondence.

2.NIA shall not be liable for any claim arising out of sales made during the period between the due date and date of payment of the installment if the premium paid has been exhausted by turnover declarations/if there is insufficient premium balance.

Tax Invoice No: 45010019P0009512

IRDA Registration Number: 190



Signature valid Digitally stored by admixes in

> Policy No. : 45010036190100000061 Document generated by 21425 at 18/02/2020 13:35:54 Hours. Regd. & Head Office: New India Assurance Bldg., 87 M.G. Road, Fort, Mumbai - 400 001. TOLL FREE No. 1 800 209 1415.

> > Page 1 of 1

HITEMA TECHNICAL DUE DILIGENCE REPORT

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THE NEW INDIA ASSURANCE CO. LTD. (Government of India Undertaking)



VIDE TREASURY DEPARTMENT, GOVT.OF MA ORDER No. -440, DTD AUGUST, 8, 2017.

# POLICY SCHEDULE FOR EMPLOYEES COMPENSATION INSURANCE

Insured's Name	:	M/S.DILIP BUILDCON LTD .		len	uing Office Details
	In	sured's Details		ISSU	Ing Once Details
Customer ID	1	PO64533895	Office Code	- 1	BHOPAL DO-1 (450100)
Address	2	PLOT NO-5, INSIDE GOVIND NARAYAN SINGH GATE CHUNA BHATTI KOLAR ROAD BHOPAL	Address	:	C.D.U1, BLOCK NO 3, IND FLOOR, PARYAVAS BHAWAN, ARERA HILLS, BHOPAL,462011
internet and a second second	-	BHOPAL, MADITATIO DESI, CONST	Phone No	:	07554203271 / 07554203272
Phone No			E mail/Eav		nia 450100@newindia.co.in /
E-mail/Fax	:	db@dilipbuildcon.co.in, /	E-mail/Fax	8	07554203274
	-	AACCD6124B	S.Tax Regn. No	:	AAACN4165CST178
PAN NO		AAGGD0124D	CSTIN		23AAACN4165C1ZZ
GSTIN/UIN	1	23AACCD6124B2ZD / NA	00111		007130 (Other non-life insurance services
	:		SAC		excl RI)

			Policy	Details		-		
Policy Number	1.	45010036190100000061		Business S	Source Code	_		
Period of Insurance	d of Insurance : From: 31/01/2020 12:00:01 AM To: 30/01/2021 11:59:59 PM		Dev.Off level./Broker/Corp. Agent/Web Aggregator		: GLOBAL INSUI PRIVATE, LTD, 112700_AON G (SI00062348)		JRANCE BROKERS D (105140053) GLOBAL INSURANCE	
Date of Proposal	:	31-Jan-20		Agent/Ban Specified F	cassurance/ Person	:	165	•
D. B. Kanada	1.			Phone No		:	02261485661	, 9819676655 / NA
Prev. Policy no.				E mail/Eav	8		girish grabhu	Dolobalinsurance.co.in, / /
Client Type	4	Corporate		E-mail/Fax	R	1	7	55
	-	0.07/10	То	tal (27)	Total	(₹	in words)	Receipt No. & Date
Premium(₹)	32.2	GSI(₹)	10		1000		TUOUCAND	450100811900000765
5547		998	E	545	FIVE HUI	ND VE	RED FORTY-	8 - 18/02/20

# Details of Employees with monthly wages upto ₹ 15000:

Categories	Sub Categories	No of Employee	Cash Total Wages
	Construction of Road and Other civil work	10	1800000
Road Paving, Tarring and Road Making	Construction of Road and Other ertil that		

Categories	Sub Categories		No of Employe	e Cas	sh Total Jages
P. I.P. L. Trains and Road Making	Construction of Road and Oth	er civil work	10	6	00000
Trade Description	Particular of Works	Location D	Details	Included Contr	All Sub - actors
Construction of Road and Other civil work	Construction of Nadiad-Madhudha- Kathlal-Kapadvanj-Bayad-Modasa (Km.00 to 109/00 Road.	Construct Nadiad-Mac Kathlal-Kapady Modasa (Km.00 Road	ion of dhudha- vanj-Bayad- 0 to 109/00 I.		

Serial No	Name of	Description	Categorie	N	o. of Workers	Amount Wages
	Contractor			Skilled	Unskilled Of	thers
Signature yallo	1					E Lin
Digitally son o by conversion						1ª total
Date: 20.0.02.18 13:35:55 IST	Policy No. : 45	010036190100000061 D	ocument generated by	21425 at 18/0	02/2020 13:35:5	4 Hours 501 00
Regd. &	& Head Office: New	India Assurance Bldg., I	37 M.G. Road, Fort, Mu	mbai - 400 00	1. TOLL FREE	NO. 1 000 203 AMIO.

Page 1 of 2



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THE NEW INDIA ASSURANCE CO. LTD. (Government of India Undertaking)



and the second		Sub Limit of the Extension	Deductible	es of the Extension
Medical Extension		₹50000		NA
Special Conditions	EMP CON	LOYEE COVERED - SKILLED/SEM TACT LABOUR ETC	SKILLED/UN-SKILLED	D, SUPERVISOR, ENGINEERS δ
	NA			
Special Exclusions	NA			
Special Excess/Deductible	NA			
The Policy shall be subject to EMF	LOYEES	COMPENSATION INSURANCE Pol	licy clauses attached	herewith.
Clauses		Des	cription	
Premium and GST Details				
		Rate of Tax	Amount in INF	
Premium			₹ 5547.00	
5GST		9	499	•
CGST		9	499	
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Page 2 of 2

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FORM NO. ANC-25



THE NEW INDIA ASSURANCE COMPANY LIMITED

Registered & Head Office- 87, M.G. Road, Fort, Mumbai-400001.

# WORKMEN'S COMPENSATION POLICY

WHEREAS the insured carrying on the Business described in the Schedule and no other for the purpose of his insurance by a proposal and declaration which shall be the basis of this contract and is deemed to be incorporated herein has applied to the Company for the insurance hereinafter contained and has paid or agreed to pay the Premium as consideration for such insurance.

NOW THIS POLICY WITNESSETH that if any time during the period of insurance any employee in the insured's immediate service shall sustain personal injury by accident or disease arising out of and in the course of his employment by the insured in the Business and if the Insured shall be liable to pay comensation for such injury either under

the Laws (s) set out in the Schedule

#### or at Common Law

then subject to the terms exception and conditions contained herein or endorsed hereon the Company will indemnify the Insured against all sums for which the insured shall be so liable and will in addition be responsible for all costs and expenses incurred with its consent in defending any claim for such compensation.

**PROVIDED ALWAYS** that in the event of any changes in the law(s) or the substitution of other legislation thereof this policy shall remain in force but the liability of the Company shall be limited to such sum as the Company would have been liable to pay if the Law (s) had remained unaltered.

Law(s)

1. The Workmen's Compensation Act, 1923 and subsequent amendments of the said Act, prior to the date of the issue of Policy. 2. The Fatal Accidents Act, 1855.

It is hereby understood and agreed that the Workmen's Compensation (Amendment) Acts, of 1959 (8 of 1959, and 1962 (64 of 1962) and 1976 (65 of 1976) and 1984 (22 of 1984) and 1995 (30 of 1995) and 2000 (46 of 2000) and deemed to be added to the Laws set out in the Schedule to the Policy.

Provided that the Insurance granted hereunder is not extended to include :

- (i) any interest and/or penalty imposed on the Insured on account of his/her failure to comply with the requirements laid down under the W. C. Act. 1923 and
- (ii) any compensation payable on account of occupational diseases listed in part 'C' of schedule III of the W. C. Act. 1923

## EXCEPTIONS

1. The Company shall not be liable under this Policy in respect of

(a) any injury by accident or disease, directly attributable to war, invasion, act of foreign enemy, hostilities (Whether war be declared or not) civil war, mutiny, insurrection, rebellion, revolution or military or usurped power.

(b) the insured's liability to employees of contractors to the insured.

(c) any employee who is not a "workman within meaning of the Law(s)"

(d) any liability of the insured which is attached by virtue of an agreement but which would not have attached in the absence of such an agreement.

(e) any sum which the Insured would have been entitled to recover from any party but for an agreement between the Insured and such party.



This Policy does not cover :

(a) any accident or any loss or destruction of or damage to any property whatsoever or any loss of expenses whatsover resulting or arising therefrom or any consequentiol loss.

(b) any legal liability of whatsoever nature.

(c) payment of compensation in respect of death, injury, disablement, of the insured person, directly or indirectly caused by or contributed to by or arising from ionising radiation or contamination by radioactivity from any source whatsoever.

 The indemnity or compensation provided by this Policy shall not apply to nor include any accident, loss destruction damage or legal liability directly or indirectly caused by or contributed to by or arising from nuclear weapons material.

### CONDITION

- This Policy and the Schedule shall be read together as one contract and any word or expression to which a specific meaning has been attached in any part of this policy or of the schedule shall bear such specific meaning wherever it may appear.
- Every notice or communication to be given or made under this policy shall delivered in writing to the Company.
- 3. The insured shall take reasonable precaution to prevent accidents and diseases and shall comply with all statutory obligations.
- 4. In the event of any occurrence which may give rise to a claim under this Policy the Insured shall as soon as possible give notice thereof to the Company with full particulars. Every letter claim writ summons and process shall be notified or forwarded to the Company immediately on receipt. Notice shall also be given to the Company immediately the shall insured shall have knowledge of any impending prosecution inquest or fatal enquiry in connection with any such occurrence as aforesaid.
- 5. No admission offer promise or payment shall be made by or on behalf of the Insured without the consent of the Company which shall be entitled if it so desires to take over and conduct in his name the defence or settlement of any claim or to prosecute in his name for its own benefit any claim for indemnity or damages or otherwise and shall have full discretion in the conduct of any proceedings and in the settlement of any claim and the Insured shall give all such information and assistance as the Company may require.
- 6. The first premium and all renewal premiums that may be accepted are to be regulated by the amount of wages and salaries and other earnings paid by the Insured to employees during each period of Insurance. The name of every employee together with the amount of wages and other earnings shall be properly recorded and the insured shall at all times allow the Company to inspect such records and shall supply the Company with a correct account of all such wages salaries and other earnings paid during any period of Insurance within one month from the expiry date of such Period of Insurance. If the amount so paid shall differ from the amount on which premium has been paid the difference in premium shall be met by a further proportionate payment to the Company or by a refund by the Company as the case may be.
- The Company may cancel this Policy by sending seven days notice by registered letter to the Insured at his last known address and in such event the premium shall be adjusted in accordance with Condition 6.
- 8. If any dispute or difference shall arise as to the quantum to be paid under the Policy (liability being otherwise admitted) such difference shall independently of all other questions be referred to the decision of a sole arbitrator to be appointed in writing by the parties to or if they cannot agree upon a single arbitrator within 30 days of any party invoking arbitration the same shall be referred to a panel of three arbitrators, comprising of two arbitrators, one to be appointed by each of the parties to the dispute/difference and the third arbitrator to be appointed by such two arbitrators and arbitration shall be conducted under and in accordance with the provisions of the Arbitration and Concilliation Act, 1996.





It is clearly agreed and understood that no difference or dispute shall be referable to arbitraion as hereinbefore provided if the Company has disputed or not accepted liability under or in respect of this Policy.

"It is hereby expressly stipulated and declared that it shall be a condition precedent to any right of action or suit upon this Policy that award by such arbitrators or umpire of the amount of the loss or damage shall be first obtained."

- It is also hereby further expressly agreed and declared that if the Company shall disclaim liability to the Insured for any claim hereunder and such claim shall not, within twelve calendar months from the date of such disclaimer have been made the subject matter of a suit in a Court of Law, then the claim shall for all purposes be deemed to have been abandoned and shall not thereafter be recoverable hereunder.
- 9. The due observance and fulfilment of terms, conditions and endorsements of this policy so far as they relate to anything to be done or not to be done by the Insured and the truth of the statements and answer in the proposal shall be conditions precedent to any liability of the Company to make any payment under this Policy.



**DUE DILIGENCE REPORT** 

Annexure 9: Change of Scope STAILA ZOSE No: SHDP / P-08 / 115 /2017 Office Of: The Superintending Engineer, State Highway Development Project (R&B), Nirman Bhavan, Ground Floor, Sector-10 A, Gandhinagar. DT: 12 / 05 /2017 To, ISR Engineering Consultancy Services, Plot No: 444/1, Sector-8/B, Gandhinagar - 382008 Mobile: -91 90999 42467 Email: info@Lsrindia.com Nadial - modery Approval of reduction in scope in the work of Maroling NH-8; Package-08, carried cut on Subject: DBFOT- Annuity basis under SHDP Reference: R&BD, GoG letter No. SHDP / 10 / 2017 / CoS / pkg-08 / 17 /pvt. Dt: 10/05/2017. With reference to the above subject, R&BD, GoG has approved reduction of scope order for Annuity Package No: 08 vide letter under reference. You are requested to do necessary action regarding detailed reduction of scope evaluation and to issue due revised certificate for permanent recovery of the reduction of scope amount against withheld amount in First Annuity certificate. Superinterding Engineer Encl : Proposal as above State Highway Development Project(R&B) Gandhinagar Copy to: Executive Engineer, R&B. Division – <del>Valuad</del> for information and necessary actions. DBL Nadlad Modasa Tollways Limited, E 5/99, Arera Colony, Bhopal - 462016 (MP) for information and necessary action. cubin tail

Project: Development of Section Nadiad – Mahudha – Kathlal-Kapadvanj – Bayad - Modasa from km. 0+600 to Km. 109+00 on SH-59 in the State of Gujarat on DBFOT on Annuity basis

**DUE DILIGENCE REPORT** 



No SHDE/10/2012/UOS/Pkg.07/17/29t.

Covernment of Gujarat. Reads & Bollding Department. 14, Sardar Bhavau, 2nd Floor, Sachiyalaya, Gandainagar Date:- 10/05/2017

To. The Superintenaing Coginees. SHDP Cell, Cround Floor, Nimtan Bhaven, Gandbinger- 362010

Subject - Approval of reduction in scope in the work of Nadiad-Modesa Roed, Package 8, earlied out on DBFOT-Auntity pasts under SHIDP Your Letter No. SrID7:/Pkg-87421/2015 dated 15/ 2/2015 Sell-

With reference to above subject and referred letter, 1 am directed to inform that proposal of Executive Engineer, Khoda (R&B) Olivision, Nading regarding reduction in scope of items as per attached list in the work mentioned in the subject above and submitted with recommendation through your choice referred letter is hereby approved.

You are requested to direct the concerned Executive Engineer to take all furface necessary actions in this regard as par the provisions in the Concession Agreement.

it is also requested to direct the concerned Excessive Engineer to take appropriate actions while Challostion of annulty emount scoping in view the verteus project facilities which are not provided by the

concessionning in this prevage, in consultation with independent Finginger.

Allum

Encl: As (ald above)

(N.G.Parmar) Officer on Special Duty (SP) R&B Department Ganahi tagar

### Capy to:

(1) The Executive Engineer, Khera (R&B) Division, Nation Information and further necessary actions.

- to take on the matter of fouer at the carliest, as per provisions in the Concession Agreement. (2) The Team Lozder, USR Engineering Consultancy Services, Plot No.44471, Second B, Gokul Society, Gendhinas at for information and further becassary actions to take on the matter of lotter of
  - the earliest, or per provisions in the Concession Agroement.

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TECHNICAL DUE DILIGENCE REPORT



# Annexure 10: Project Photos

Project: Development of Section Nadiad – Mahudha – Kathlal-Kapadvanj – Bayad - Modasa from km. 0+600 to Km. 109+00 on SH-59 in the State of Gujarat on DBFOT on Annuity basis



