

CHHAPRA-HAJIPUR EXPRESSWAYS LIMITED

Four-laning of **Chhapra- Hajipur** section of NH-19 (New-31) from Km. 143+200 to Km. 207+200 in the State of Bihar under NHDP - III on Design, Build, Finance, Operate and Transfer (DBFOT) Annuity Basis



Independent Engineer



M/S STANLEY CONSULTANTS INC.

MONTHLY PROGRESS REPORT NO. 81

FOR THE MONTH OF: *June, 2018*

EXECUTIVE SUMMARY

1. INTRODUCTION

The monthly progress report is prepared and submitted in respect to the Term of Reference (TOR) of Agreement between NATIONAL HIGHWAYS AUTHORITY OF INDIA, represented by its Chairman and having its principal offices at G-5 & 6, Sector 10, Dawarka, New Delhi – 110 075 and Stanley Consultants Inc. The report includes Project background, Salient Feature of civil works and scope of Consulting Services.

2. THE PROJECT:

2.1. Background:

2.1.1 Client: M/s National Highway Authority of India (NHAI), PIU - Hajipur

The project envisages Four-Laning of Chhapra - Hajipur section of NH-19 (New-31) from Km.143+200 to Km.207+200 in the State of Bihar under NHDP-III on (DBFOT) Annuity basis.

2.2. The scope of works is broadly summarized as follows:

Independent Consultant for the project - Four laning of Chhapra – Hajipur Section of NH-19 from Km 143+200 to Km. 209+940 for a length of 66.740 Kms (Existing Kms) in the State of Bihar under NHDP III on Design, Build, Finance, Operate and Transfer (DBFOT) Annuity Basis. In the above section Chhapra Bypass (15.012 km) will be only Two Lanes. The above scope also includes all design, engineering, financing, procurement, construction, completion & maintenance of the above stretch for the entire duration of concession period i.e. 15 years.

2.3. The Concessionaire and EPC Contractor:

The Project comprises Construction of 4 lane road, two lane & service roads at four locations has been entrusted by M/s National Highway Authority of India (NHAI) under a Concessionary Agreement to M/s Chhapra - Hajipur Expressways limited. M/s Chhapra - Hajipur Expressways limited have appointed M/s Madhucon Project limited (MPL) as the EPC Contractor who is planning and executing the work partially through contractors and the balance themselves.

3.1. Right of Way (ROW):

The proposed Right of Way from Km.143+200 to Km.209+940 is 60 meter

3.2. Carriageway: The paved carriageway shall be 17.50 meter wide excluding the median except Chhapra Bypass which is 10m in width.

STATUS OF STRUCTURAL WORKS UPTO 30th June, 2018.

Serial Number	Description	Structure (in Nos)			
		Total Structures as per Condition	Completed	In Progress	Yet to be Started
1	Bridges				
	Major Bridges	3	1 (Crash barrier & Approach slab and protection work balance)	2	0
	Minor Bridges	17	15 (Protection work remaining)	2	0
2	ROB				
	ROB	6	1 (Crash barrier & Approach balance and RE wall in progress.)	4	1
3	Fly Over				
	Fly Over	2	0	2	0
4	Underpasses				
	VUP	3	3 (Protection work remaining)	0	0
	PUP	2	0	1	1
5	Box Culverts				
	Box Culverts	100	80 (Protection work remaining)	10	10

Type of Structures			
MAJOR BRIDGES			
Sl. No.	Chainage	Span (in mtrs)	Status
1	145+162	20+30+30	Bridge completed Crash barrier & Approach work in progress.
2	183+209	5 X 30.00	<p>LHS: - All piling work completed, P1, P2 & P3 pier cap completed. P4 pier cap in progress. Girder casting in progress- 6 Girder casted. Abutment A1 all Pile complete, Pile cap complete, abutment wall in progress. A2 side all Pile complete.</p> <p>RHS: - All piling work completed, P1, P2, P3 & P4 pier & pier cap completed. Girder casting in progress- 6 Girder casted. Abutment A1 all Pile complete, Pile cap complete, abutment wall in progress. A2 side all Pile complete.</p>
3	206+436	46.36+13X60.32+46.36	In Super structure 239 Nos. segment completed out of 292 Nos balance.
FLYOVER			
1	207+760	3 X 25.00	<p>LHS: - A1, P1, P2 & A2, pile, pile cap abutment wall, abutment cap, pier, pier cap, pedestal, girder and girder erection complete. Cross girder complete.</p> <p>RHS: - A1, P1, P2 & A2, pile, pile cap abutment wall, abutment cap, pier, pier cap, pedestal, girder and girder erection complete. Cross girder complete.</p>
2	209+530	20.115 + 26.00 + 8 X 21.75	10 nos. of pier cap completed 2 lane, P2-P10 (9 span) deck slab completed out of 10,36nos. Pre-cast girder completed out of 40.

Type of Structures			
R.O.B			
Sl. No.	Chainage	Span	Status
1	143+974	3 X 26.23	All pier caps completed. All bearing pedestal done. 4 slab balance. 12 girders casted out of 12.
2	150+984	13.23 + 26.23 + 13.23	Super structure complete. Crash barrier & Approach balance and RE wall in progress.
3	157+860	26.23 + 31.23 + 26.23	4 Nos. of Pier Cap Completed, Girder casting completed, prestressing of girder done. Concreting of 2Slab done out of 3 nos. A1-P1& P2-A2 slab done. RE wall work progress.
4	177+182	16.23 + 26.23 + 31.23 + 26.23 + 16.23	LHS: - A1-P1 & P1-P2 slab complete, P3-P4, P4-A2 girder erection completed. RHS: - A1-P1 & P1-P2 slab complete, P3-P4, P4-A2 girder erection completed. 4 girder balance.
5	188+235	57.48	Work not started
6	209+318	6 X 26.23	7pier caps completed. Girder 15 nos completed out of 24.
UNDERPASSES			
1	205+871	1 X 10.30	Protection work balance
2	207+031	1 X 10.30	Do
3	209+050	1 X 10.00	Do
4	204+377	1 X 7.0	Not started
5	176+728	1 X 7.0	Estimate sent to NHAI office, work started. LHS- PCC, Raft, wall and deck slab completed.

Type of Structures			
MINOR BRIDGES			
Sl. No.	Chainage	Span	Status
1	143+508	4 X 10.00	Completed
2	146+512	2 X 5.0	Completed
3	148+495	3 X 10.0	Completed
4	152+430	1 X 10.0	Completed
5	152+933	2 X 7.5	Completed
6	153+210	1 X 10	Completed
7	155+365	1 X 10	Completed
8	156+250	1 X 12	Completed
9	157+175	1 X 35	Completed
10	157+495	2 X 10	Completed
11	158+864	1 X 10	Completed
12	172+189	8.85+8.3+8.85	Completed
13	185+921	1 X 10	Completed
14	187+037	4 X 10	Completed
15	194+718	2 X 10	In Progress
16	203+156	12.18+2 X 11.2+12.18	Completed
17	204+535	9.35 +25+9.35	In Progress

Type of Structures			
CULVERTS			
Sl. No.	Chainage	Span (In mtrs)	Status
1	144+374	3	Completed
2	144+424	3	Completed
3	145+590	2	Completed
4	145+960	3	Completed
5	146+061	5	Completed
6	146+315	2	Completed
7	147+447	3	Completed
8	148+059	6	Completed
9	148+225	3	Completed
10	149+357	4	Completed
11	149+516	3	Completed
12	149+673	3	Completed
13	150+279	2	Completed
14	150+472	2	Completed
15	150+696	3	Completed
16	151+177	3	Completed
17	151+347	3	Completed
18	151+495	3	Completed
19	151+705	3	Completed
20	152+490	5	Completed
21	153+770	2	Completed
22	153+947	2	Completed
23	153+990	3	Completed

24	154+215	6	Completed
25	154+628	2	Completed
26	155+051	2	Completed
27	155+866	2	Completed
28	156+105	2	Completed
29	156+625	3	Completed
30	158+892	2	Completed
31	159+603	2	In progress
32	159+931	2	Completed
33	160+345	2	Completed
34	161+448	2	Completed
35	161+850	2	Completed
36	162+517	2	Completed
37	163+581	2	Completed
38	163+990	2	In progress
39	164+642	2	Completed
40	164+958	2	Completed
41	165+818	2	Completed
42	166+183	2	Completed
43	166+698	2	Completed
44	167+982	2	Completed
45	168+770	3 (COS)	Completed
46	169+590	3 (COS)	Completed
47	170+450	3 (COS)	Completed
48	170+815	2	Completed
49	176+452	2	In progress
50	176+865	2	Completed
51	177+421	2	Completed

52	177+930	2	Completed
53	178+332	2	Completed
54	178+832	2	Completed
55	179+232	2	Completed
56	179+840	2	Completed
57	180+251	2	Completed
58	180+581	2	Completed
59	180+825	3	Completed
60	180+975	3	Completed
61	181+129	3	Completed
62	181+284	3	Completed
63	181+335	3	In progress
64	182+209	2	Work not started
65	184+050	6	Work not started
66	184+762	6	Completed
67	186+145	4	Completed
68	187+370	2	Completed
69	187+790	2	Completed
70	188+287	2	Completed
71	188+686	2	Completed
72	189+255	2	Completed
73	189+955	2	In progress
74	190+288	2	Completed
75	190+838	2	Completed
76	191+072	3	Completed
77	191+861	3	Completed
78	191+877	3	Completed
79	192+238	2	Completed

80	193+286	2	Completed
81	193+888	2	Completed
82	194+388	2	Completed
83	195+338	2	Completed
84	195+690	2	Completed
85	196+187	2	Completed
86	196+783	2	Work not started
87	197+288	2	Work not started
88	197+888	2	Work not started
89	198+390	2	Work not started
90	199+389	2	Work not started
91	199+826	2	Work not started
92	200+288	2	Work not started
93	200+855	2	Work not started
94	202+616	2	Completed
95	202+658	2	Completed
96	203+220	2	In progress
97	203+398	2	In progress
98	204+238	2	In progress
99	204+907	2	In progress
100	205+085	2	In progress

Summary of Current Month's Progress

Expected Contents & Structure of Summary

Summary of Progress – June, 2018:

Total length of project is 66.74 km from 143+200 to 207+200 with total cost 990.38 Cr. Appointed Date was 27/01/2011 and scheduled date of completion of construction was 24/07/2013 (with 910 days construction period).

Cumulative physical progress is 69.85%, against scheduled progress of 100%. Financial progress is 80.95%. Total expenditure till date is 820.54 Cr. The excess in expenditure is mainly due to non performance in the last 3 years at consequently payment of heavy IDC. This delay is primarily due to poor mobilization by the concessionaire on site in the last few months. Total progress of DBM layer is 33.35 km, with 29.855 km pending across the entire stretch.

Land acquisition, with only 7.895 Km pending. Rs. 62.146 Cr. Compensation was disbursed earlier. Many encroachments and buildings were demolished and land made available.

Now, 58.845 km of project highway is encumbrance free and available for construction.

Current Issues & Recommended Actions by IE:

1. Status of Change of Scope Proposals: 3 Nos. completed and 5 Nos. in process.

1. - PUP @ 176+728
2. - PUP @ 204+377
3. - MNB @ 183+209 (Existing Mahi Bridge)
4. - MJB @ 183+209 (Realignment)
5. - ROB @ 188+237

1.2 Critical Issues & Action Log

1.2.1 Pending Issues & Action Log

Sl. No	Issue Description	Type	Ongoing/ New Issue/Resolved	Concerned Authority	Chainage(s) affected due to the issue	Length affected (km)	Action(s) taken till now	Action(s) suggested by the IE	Expected date/Actual Date for resolving issue
1	Diversion of 27.98 ha of forest Land	Clearance	Resolved	MoEF	<i>[Chainage]</i>	-		Forest clearance obtained	-
2	Compensation disbursement pending	Land Acquisition	Resolved	<i>[CALA Name]</i>	<i>[Chainage]</i>	-	Rs.62.146 Cr. Disbursed already	Disbursement of balance Rs. 49.17 Cr. expeditiously	-

1.2.2 Obligations as per Contract

Expected Contents & Structure

Please write a summary of non-compliances of contractual obligations highlighting reasons for delay, stating pending actions and their potential risk to the project's progress and recommended actions by the IE.

Critical obligations and constraints of concessionaire as per contract

Construction of highway and structures in spite of sufficient front being available

Critical obligations of authority as per contract

Handing over of balance 7.895 km of land

Critical pending obligations of IE as per contract

No design or drawing pending approval from IE.

1.3 Project Overview

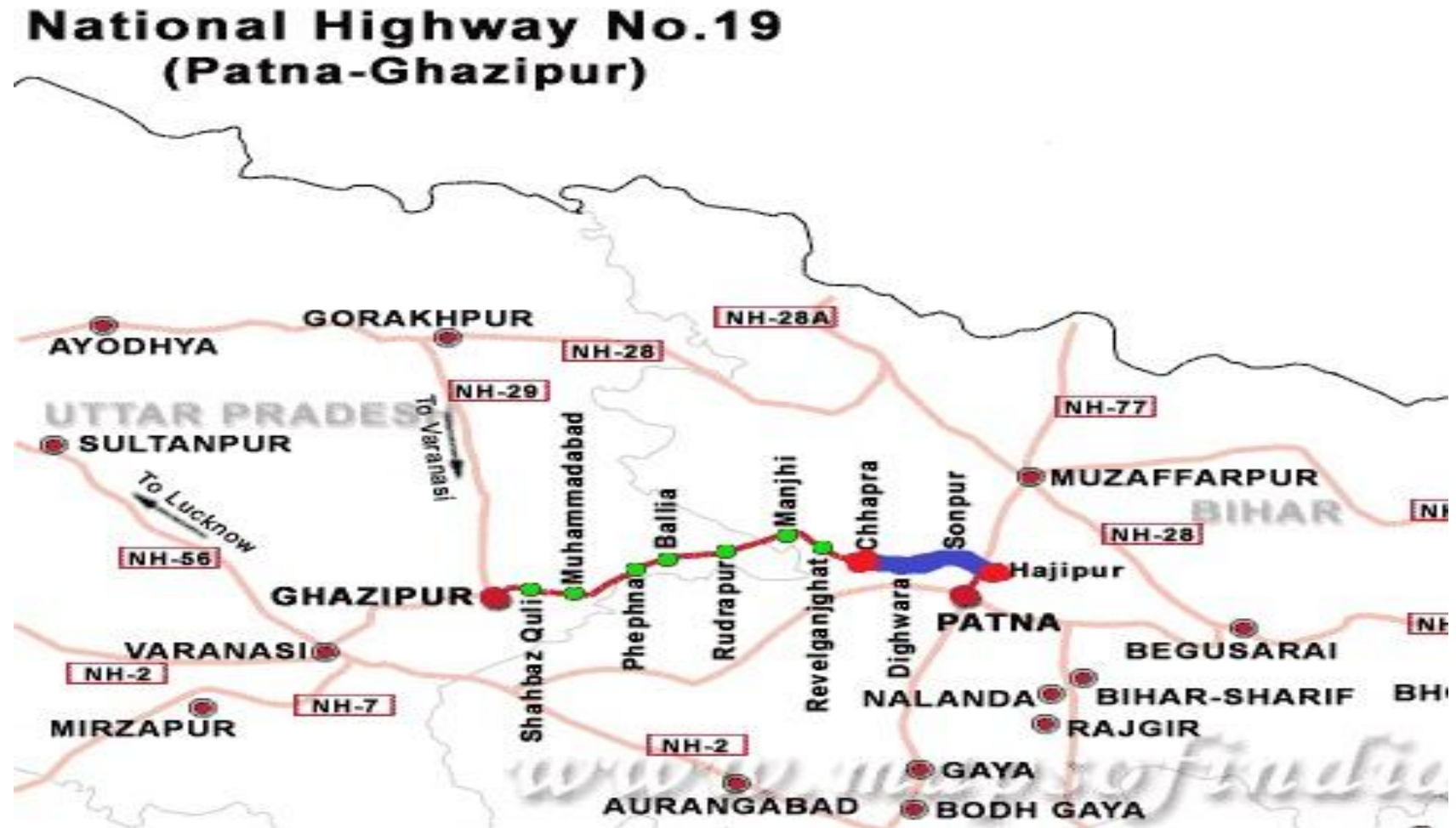
1.3.1 Salient Features of Project

Project Name	Four-laning of Chhapra- Hajipur section of NH-19 (New-31) from Km. 143+200 to Km. 207+200 in the State of Bihar under NHDP - III on Design, Build, Finance, Operate and Transfer (DBFOT) Annuity Basis
NH No. (New/ Old)	NH-19 (New-31)
Scheme/ Phase	NHDP-Phase-III
Mode of the Execution (BOT Toll/ BOT Annuity/EPC/ HAM/ Item Rate/ Others)	BOT - Annuity
No. of Lanes/ Configuration	2 lane for Chhapra Bypass and balance are 4 lanes.
Length of the Project (in Km)	66.740
Total Project Cost (in Cr)	990.38
No. of Bypasses (Name of Town, Length)	3Nos 1) Chhapra bypass-15.012, 2) Aami & Dighwara bypass-4.95 Km, 3) Bhitalpur bypass-18.00 Km
No. of Major Bridges (Number and Location)	3 Nos. 1) 145+162 2) 183+209 3) 206+436
No. of Toll Plazas (Number and Location)	1 No. @ 174+900
No. of Fly Overs (Number and Location)	2 Nos. 1) 207+768 2) 209+530
DPR Consultant Name	Span Consultants
Lead & Consortium Members of Bank	SBI, Allahabad Bank, Punjab & Sindh Bank, SBBJ, Andhra Bank & Indus Bank
Concessionaire Name (SPV & Parent Company)	Chhapra-Hajipur Expressways Limited
Date of Award (LOA Date)	13-05 2010
Appointed Date	27-01-2011
Concession Period	15 Years
Construction Period (in Days)	910
O&M Period (in Days)	4570
Scheduled Date of Completion	24-07-2013
Independent Engineer	Stanley Consultant inc.
IE Agreement Date	14-09-2011
IE Mobilization Date	14-09-2011

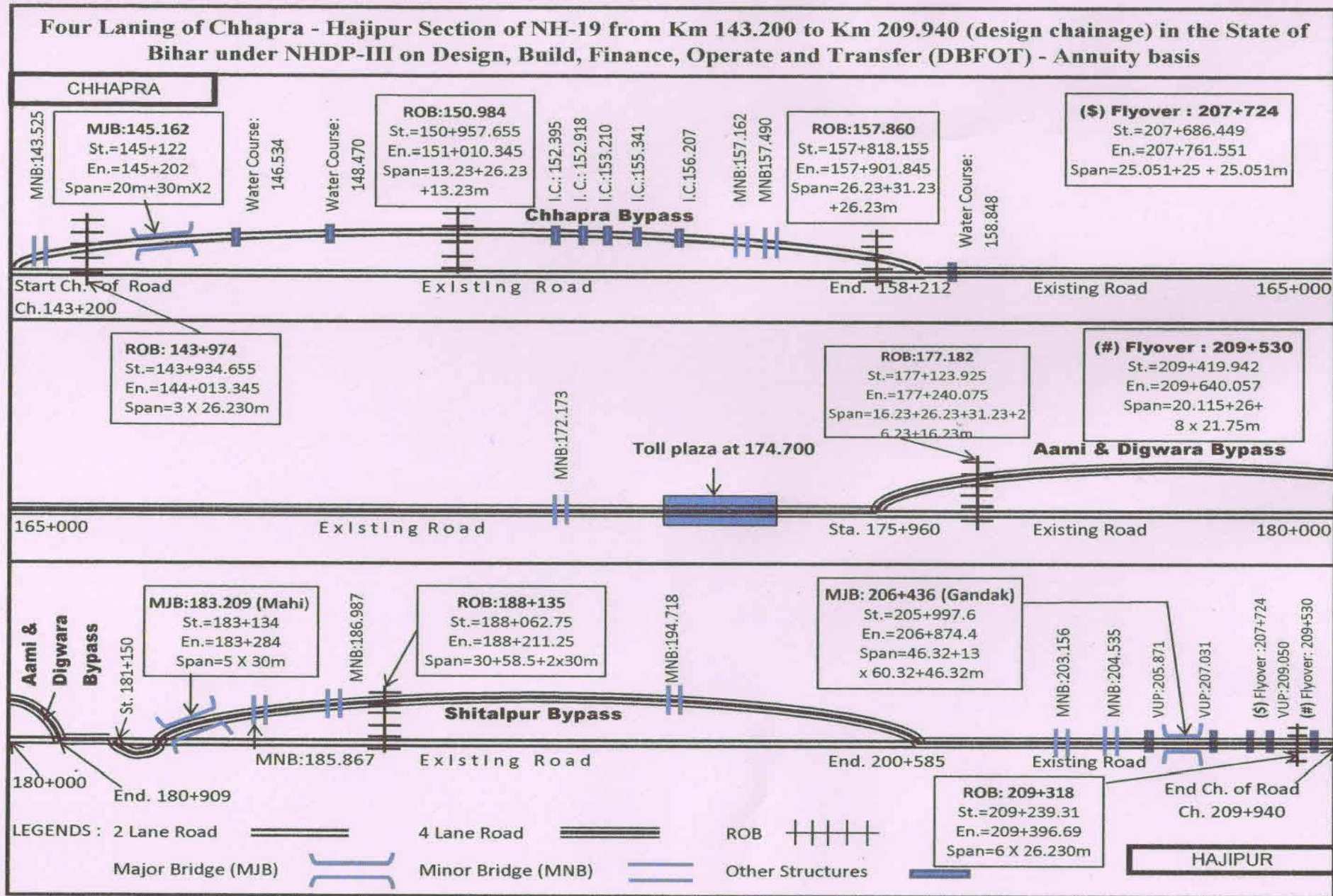
1.3.2 Project Milestones

Project Milestone	Description (Day from appointed date)	Planned		Actual		Delay (No. Of months)	Current status
		Physical progress (%)	Scheduled date	Physical progress (%)	Revised date		
Milestone-I	180	10	27/07/2011		24/10/2011	3	Achieved
Milestone-II	400	35	01/03/2012		31/05/2012	3	Achieved
Scheduled completion	910	100	24/07/2013	69.85		68	Not Achieved

1.3.3 Location Map



1.3.4 Key Plan



1.4 Physical Progress

Component	% Weight-age	Physical Progress (During Current Month)	Physical Progress (Cumulative, Up to Current Month)
Road Works	64%	-	38.31%
Major Bridge works and ROB / RUB	12%	-	10.80%
Structures	19%	-	16.64%
Other Works	5%	-	4.10%
Physical Progress	100%		69.85%

1.4.1 Detailed Scope of Work & Physical Progress by Component

Component	Cost Weightage in Project (%)	Item Description	Cost Weightage in Component (%)	Planned in Scope (As per Scope of Work)	Progress till Date	% Physical Progress (current)	Value of Physical Progress (7X4)
1	2	3	4	5	6	7	8
1. Road works (Main Carriageway)	63.5%	1. C&G	0.02%	63.74 km	63.00	0	0.02%
		2. Embankment	7.00%	63.74 km	62.90	0	6.91%
		3. Sub Grade	5.50%	63.74 km	47.00	7.222	4.10%
		4. GSB	12.50%	63.74 km	38.38	0.589%	7.59%
		5. WMM	13.50%	63.205 km	35.33	0.657%	7.57%
		6. DBM	22.15%	63.205 km	33.35	0.913%	11.72%
		7. BC	2.83%	66.74 km	3.83	0	0.16%
2. Road Work (Service road)	0.5%	1. C&G	0.50%	3.055 Km	3.055	0	0%
		2. Embankment		3.055 Km	2.50	0	0.03%
		3. Sub Grade		3.055 Km	2.00	0	0.04%
		4. GSB		3.055 Km	1.60	0	0.05%
		5. WMM		3.055 Km	1.50	0	0.06%
		6. DBM		3.055 Km	1.20	0	0.06%
		7. BC		3.055 Km	0	0	0
3. Structures / Bridges	31%	1. Major Bridge	7.50%	3 Nos	2.7	0	6.75%
		2. Minor Bridges	4.50%	17 Nos	17	0	4.50%
		3. Flyovers	3.50%	2 Nos	1.5	0	2.63%
		4. ROB	4.50%	5 Nos	4.5	0	4.05%
		5. VUP	2.00%	2 Nos	2	0	2.00%
		6. PUP	-	-	-	0	-
		7. Culverts	4.50%	100 Nos	80	0	3.62%
		8. Grade Separated Structure/ Reinforced Earth Wall	4.50%	100%	86	0.058	3.89%
4. Other Works	5%	1. Road Side Drain	5.00%	1 No	0.82	0	4.10%
		2. Toll Plaza					
GRAND TOTAL	100%		100.00%				69.85%

1.5 Strip Plan

1.5.1 Strip Plan (Details)

Input

Project Type	DBFOT
Chainage(Start Value)	143.200
Total Length	66.740
Least Count	2

Output

Length Completed	33.350
Workfront Available	25.495
Workfront Unavailable	7.895

(Calculated out of length pending)

Legends

Not Started(Blank)	
Work In Progress(WIP)	
Completed(COM)	

Workfront Available	
Workfront Unavailable	

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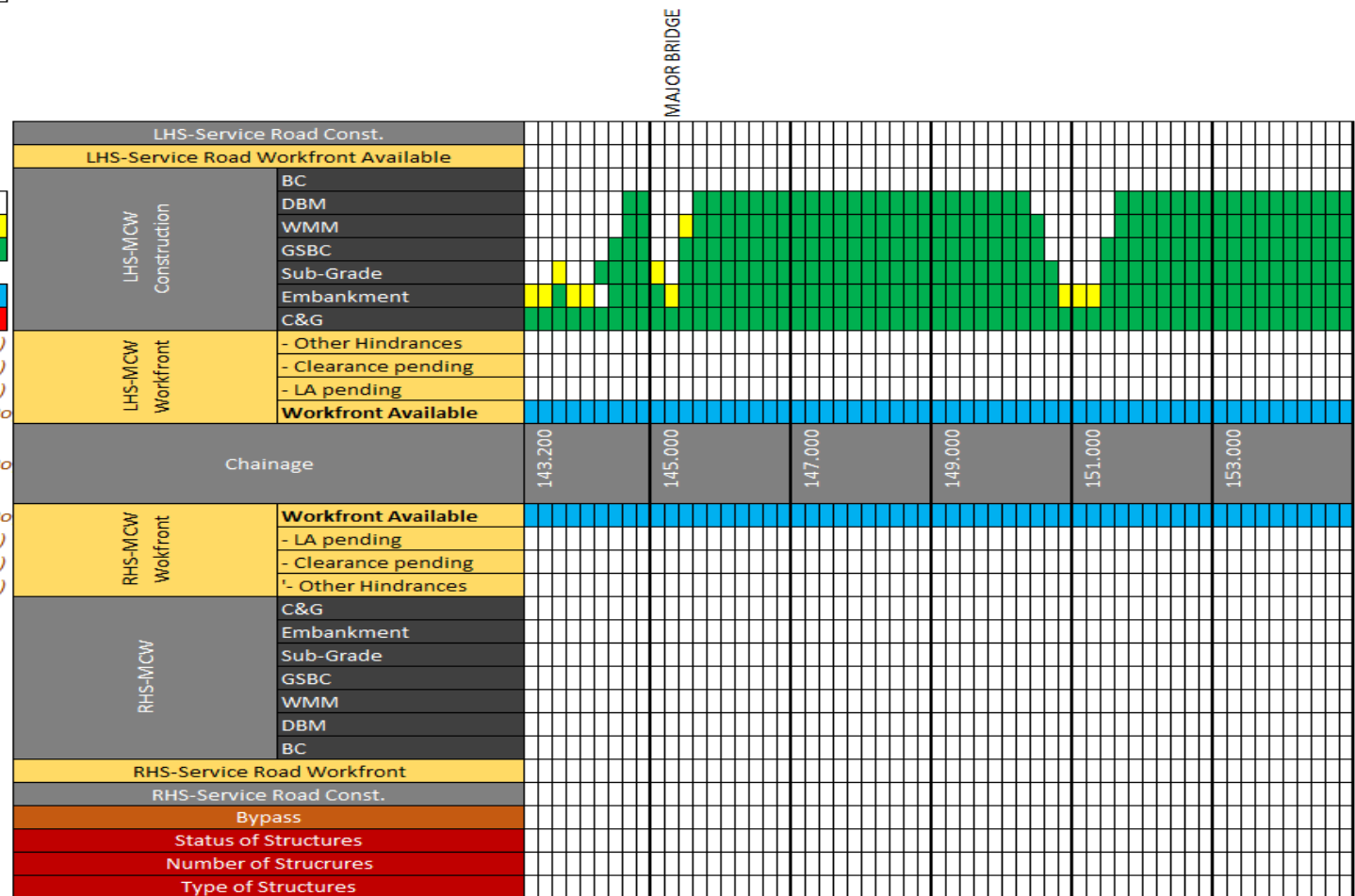
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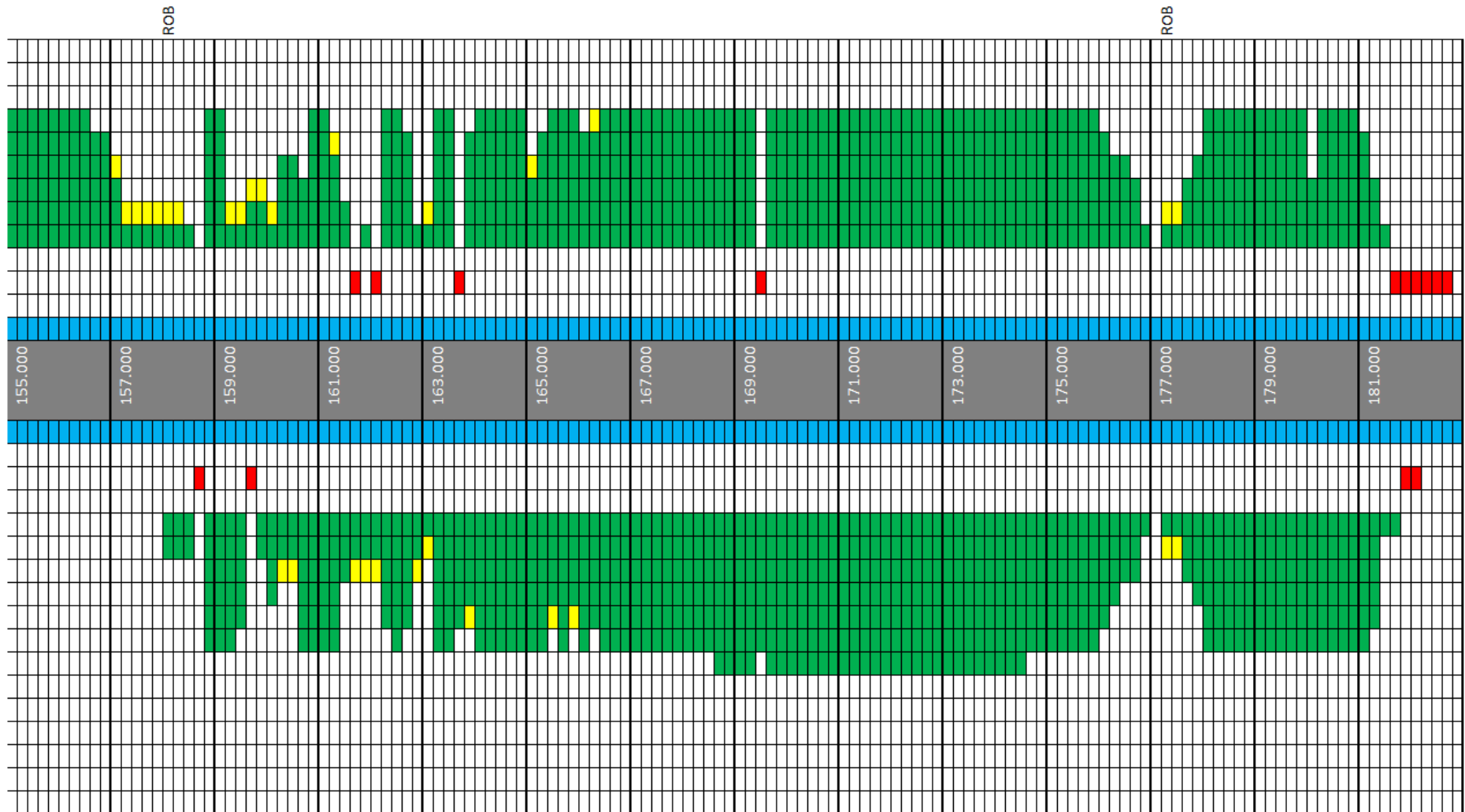
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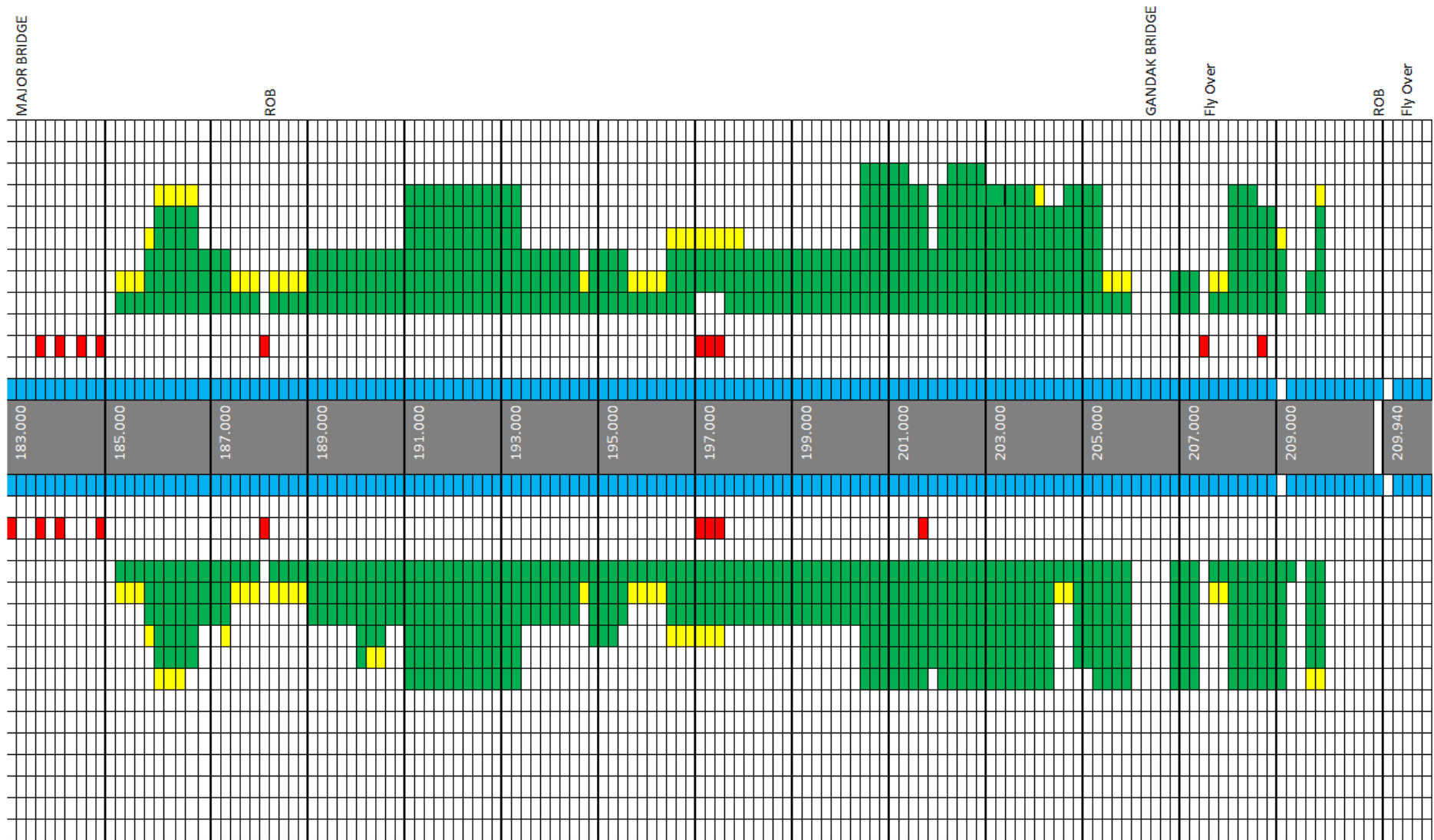
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1.5.1 Strip Plan (Details)



1.5.1 Strip Plan (Details)



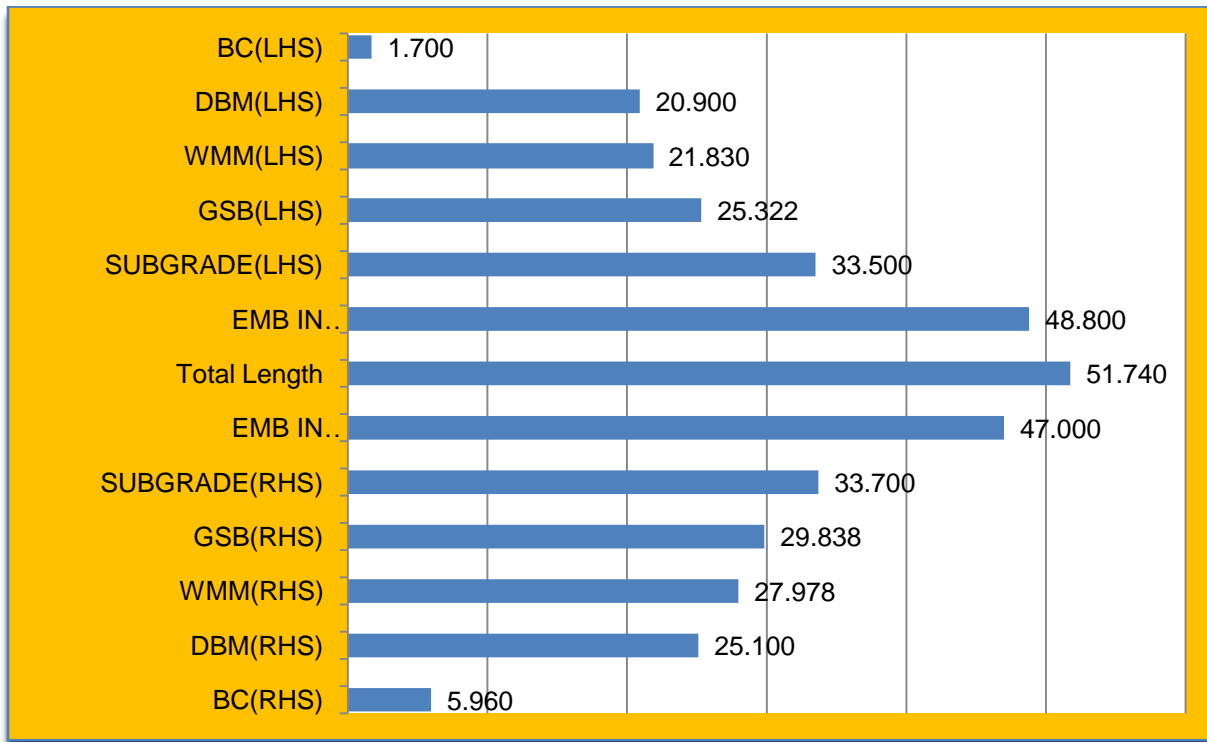
Details of work done

Item	2 lane	4 lane	Total
BC	0.00	3.83	3.83
DBM	10.35	23.00	33.35
WMM	10.43	24.90	35.33
GSB	10.80	27.58	38.38
Sub Grade	13.40	33.60	47.00
EMB	15.00	47.90	62.90

Chhapra bypass 2 Lane



Balance 4 Lane Chhapra-Hajipur



1.5.2 Strip Plan (Summary)

1.Workfront Unavailable and Reasons for Unavailability

	Length (km)	%Pending Length
Total Length	66.74	
Total Workfront Unavailable	7.895	11.83%
Pending Land Acq	0	0.00%
Pending Clearances	7.895	11.83%
Encumbrances	0	0.00%

2.Length Completed By Layer - MCW

	Length (km)	%Total Length
Total Length	66.74	
Total Length Completed(Till DBM)	33.35	49.97%
DBM	33.35	49.97%
WMM	35.33	52.93%
GSB	38.38	57.50%
Sub-Grade	47.00	70.42%
Embankment	62.90	94.24%
C&G	63.00	94.39%

1.6 Land Acquisition and Clearances

1.6.1 LA summary

Description	Total Required (ha)	Total in possession at start (ha)	Total to be required (ha)
Existing ROW	425.44	85 (Existing ROW) + 9.41 (As per 3G Govt. Land mentioned in 3D)	331.03
Pvt. Land to be Acquired			
Public Land to be Transferred			
Grand Total			

1.6.2 LA Detail by CALA

NH No.	CALA	Total Land left to be Acquired (Ha)	3H Pending (ha)	3H Done (ha)	3G Pending (ha)	3G Done (ha)	3D Pending (ha)	3D Done (ha)	3A Pending (ha)	3A Done (ha)	Amount Awarded (Crore Rs.)	Amount Deposited (Crore Rs.)	Amount Disbursed by CALA	Pending Amount
													(Crore Rs.)	(Crore Rs.)
NH-19	Saran	331.03	5.317	325.713	5.317	325.713	0	331.03	0	331.03	356.166	340.86	294.02	62.146
	Vaishali	0	0	0	0	0	0	0	0	0	0	0	0	0
	Grand Total	331.03	5.317	325.713	5.317	325.713	0	331.03	0	331.03	356.166	340.86	294.02	62.146

1.6.3 Clearances Summary

Environment				
Proposal Description	Status	Length Impacted	Current Stage	Issue/ Comments
Approval of construction	Obtained	66.74 km	Completed	No issue
Forest Land				
Proposal Description	Status	Length Impacted	Current Stage	Issue/ Comments
Diversion of 0.00 ha ([Chainage])	Pending	0.00	Completed	Nil
Diversion of 27.9857 ha ([Chainage])	Obtained	0.00	Completed	Nil

Wildlife				
Proposal Description	Status	Length Impacted	Current Stage	Issue/ Comments
Diversion of Xx ha ([Chainage])	N.A.	N.A.	N.A.	N.A.
Tree Cutting				
Proposal Description	Status	Length Impacted	Current Stage	Issue/ Comments
N.A.	N.A.	N.A.	N.A.	N.A.
Railways (ROBs/ RUBs)				
Proposal Description	Status	Length Impacted	Current Stage	Issue/ Comments
GAD Number	Proposal Submitted, Approval Pending	1. 143+974	Approved on 18-08-2008	
		2. 150+984		
		3. 157+860	Approved on 5-12-2008	
		4. 177+182		
		5. 209+318	No details available with IE	
		6. 188+235	Approved on 24-08-2016	

1.6.4 Status of utilities shifting

Utility Category	Name	Status	Length affected	Department	Date of request by Authority for estimate	Date when Estimate was Received from concerned dept.	Date of Approval by Authority RO/ HQ	Date of Deposit of supervision charge	Progress of Physical Shifting	Date of Certification from Agency for Completion	Estimate Amount	Issue/ Comments
Water	-	-	-	-	-	-	-	-	-	-	-	-
Electricity	-	Estimate approved		BSEB	-							
Others-Temples	-	Estimate approved		NHAI								
Chabutras	-	Estimate approved		NHAI								

1.7 Change of Scope

S No.	Proposal Details	Date of first submission to IE	Current Status	COS Amount	Expected/ Actual Date of Approval
1	3 Box Culvert at Ch. (1) 168+770, (2) 169+590 and (3) 170+450		Approved	1,13,91,968.00	
2	PUP at Chainage -204+377		Approved	1,71,53,019.00	
3	COS (H&S) at Ch. Ch. 181+300 to 183+500			15,08,26,393.00	
4	PUP at Chainage-176+728			1,13,83,975.00	
5	ROB at Chainage- 188+235			-	
6	Flyover @ Ch. 160+825 (Ara-Chhapra Junction)		-	-	
7.	Existing Mahi bridge @ 183+209			17897245.71	

1.8 Mobilization of Resources

No.	Equipment Name	Make	Model	Age of Equipment	Planned/Required Quantity	Actual Quantity	Deployed During the Month	Reason(s) for Under/Over Mobilization	Expected Delay due to Under-Mobilization(M onths)	Remarks
1	Excavator/Poelain				10	4				
2	Pavers				4	2				
3	Transit Mixer				27	8				
4	Hot Mix Plant				1	1				
5	Dozers				5	3				
6	Loaders				2	4				
7	Motor Graders				14	4				
8	Vibro Compactors				24	8				
9	Kerb Cutting Machines				1	1				
10	Tippers				154	34				
11	Water Tankers				12	6				
12	Dewatering Pumps				5	3				
13	Bitumen Distributers				2	2				
14	Broomers				2	2				
15	Cranes				4	0				
16	WMM Plant				1	1				
17	Diesel Tankers				1	1				
18	Generator Sets				5	5				
19	Hydraulic Rig				3	0				
20	Hydra Crane- 12 T				4	1				
21	JCB				9	2				
22	Pneumatic Tyred Rollers				4	1				
23	IDD 90 Rollers				4	4				
24	Bathing plant				2	2				

1.9 Financial Progress Details

1.10 1.9.1 Pen Picture – Escrow

As received from the concessionaire CHEL

TPC (Cr.)	Cumulative inflow to Escrow till previous months(Cr.)	Cumulative outflow from Escrow till previous month (Cr.)	Inflow to Escrow during the month (Cr.)	Outflow from Escrow during the month (Cr.)
990.38	820.54	820.54	0	*0

* Updated details awaited from concessionaire.

Are the Escrow withdrawals in according with the order of withdrawal as specified in the Concession Agreement?

Tick as applicable

Yes	
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If not, details to be provide below:

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1.9.2 Escrow details: as received from concessionaire CHEL

TPC (Cr.)	Cumulative exp. Till date (Cr.)	Escrow plan till date- Debt (BOT) (Cr.)	Escrow plan till date- Equity (BOT) (Cr.)	Escrow plan till date- VGF (BOT) (Cr.)	Escrow Actual till date- Debt (BOT) (Cr.)	Escrow Actual till date- Equity (BOT) (Cr.)	Escrow Actual till date- VGF (BOT) (Cr.)

Note: Updated details awaited from concessionaire.

1.10. Monitoring of Operations & Maintenance Obligations

1.10.1 Maintenance Status during Construction Phase

Expected Contents & Structure

Please write a summary of maintenance status in the current month, along with pending items, issues and actions recommended using the following format.

*Status of traffic worthiness and safety of
project highway Status of necessary repair
and maintenance works
Compliance of other maintenance obligations as
per contract Key issues and recommended action
by IE*

1.10.2 Maintenance Status during Operations & Maintenance Phase (If Applicable)

Expected Contents & Structure

Not Applicable

1.11 Pen Picture on safety features

Details to be provided after assessment of the side requirement via-a-via provisional in the Concession Agreement:

Location of Black Spots	Suggested Remedial Measures within provision Agreement	Additional Remedial Measures (if any)	Financial implication of Additional Remedial Measures for authority (Cr.)
No Black Spot Identified			

1.12 Annex 1: Detailed List of Physical Components as per Schedule G

Component	Physical Item	
Road works including culverts, minor bridges, underpasses, overpasses, approaches to ROB/RUB/ Major Bridges/ Structures (but excluding service roads)	A- Widening and strengthening of existing road	
	(1)	Earthwork up to top of the sub-grade
	(2)	Granular work (sub- base, base, shoulders)
	(a)	GSB
	(b)	WMM
	(3)	Shoulders
	(4)	Bituminous work
	(a)	DBM
	(b)	BC
	(5)	Rigid Pavement
		Concrete work
	(6)	Widening and repair of culverts
	(7)	Widening and repair of minor bridges
	B- New realignment/bypass	
	(1)	Earthwork up to top of the sub-grade
	(2)	Granular work (sub- base, base, shoulders)
	(a)	GSB
	(b)	WMM
	(3)	Shoulders
	(4)	Bituminous work
	(a)	DBM
	(b)	BC
	(5)	Rigid Pavement
		Concrete work
	C-New culverts, minor bridges, underpasses, overpasses on existing road, realignments, bypasses:	
	(1)	Culverts

Component	Physical Item		
	(2)	Minor bridges	
		(a)	Foundation
		(b)	Sub- Structure
		(c)	Super-structure (including crash barriers etc. complete)
	(3)Cattle/Pedestrian underpasses		
		(a)	Foundation
		(b)	Sub- Structure
		(c)	Super-structure (including crash barriers etc. complete)
	(4)	Pedestrian overpasses	
		(a)	Foundation
		(b)	Sub- Structure
		(c)	Super-structure (including crash barriers etc. complete)
	(5)Grade separated structures		
		(a)	Underpasses
			(i) Foundation
			(ii) Sub- Structure
			(iii) Super-structure (including crash barriers etc. complete)
		(b)	Overpass
			(i) Foundation
			(ii) Sub- Structure
			(iii) Super-structure (including crash barriers etc. complete)
		(c)	Flyover
			(i) Foundation
			(ii) Sub- Structure
			(iii) Super-structure (including crash barriers etc. complete)
		(d)	Foot over Bridge
Major Bridge	A- Widening and repairs of Major Bridge		

Component	Physical Item	
works and ROB/RUB	(1)	Foundation
	(a)	Open Foundation
	(b)	Pile Foundation/Well Foundation
	(2)	Sub-structure
	(3)	Super-structure (including crash barriers etc. complete)
	B- Widening and repair of	
	(a)	ROB
	(1)	Foundation
	(2)	Sub-structure
	(3)	Super-structure (including crash barriers etc. complete)
	(b)	RUB
	(1)	Foundation
	(2)	Sub-structure
	(3)	Super-structure (including crash barriers etc. complete)
	C- New Major Bridge	
	(1)	Foundation
	(a)	Open Foundation
	(b)	Pile Foundation/Well Foundation
	(2)	Sub-structure
	(3)	Super-structure (including crash barriers etc. complete)
	D- New rail-road bridges	
	(a)	ROB
	(1)	Foundation
	(2)	Sub-structure
	(3)	Super-structure (including crash barriers etc. complete)
	(b)	RUB
	(1)	Foundation
	(2)	Sub-structure
	(3)	Super-structure (including crash barriers etc. complete)

Component	Physical Item		
Structures(elevated sections, reinforced earth) Other Works	(1)	Foundation	
	(2)	Sub-structure	
	(3)	Super-structure (including crash barriers etc. complete)	
	(4)	Reinforced Earth Wall (includes Approaches of ROB, Underpasses, Overpasses, and Flyover etc.	
	(i)	Service roads/ Slip Roads	
	(ii)	Toll Plaza	
	(iii)	Road side drains	
	(iv)	Road signs, markings, km stones, safety devices...	
		(a)	Road signs, markings, km stones...
		(b)	Concrete Crash Barrier/ W-Beam Crash Barrier in Road work
	(v)	Project facilities	
		(a)	Bus bays
		(b)	Truck lay-byes
		(c)	Rest areas
	(vi)	Repairs to bridges/structures	
	(vii)	Road side plantation	
	(viii)	Protection works	
		(a)	Boulder Pitching on slopes
		(b)	Toe/Retaining wall
	(ix)	Tunnel	
		(a)	Excavation
		(b)	Construction of support system including rock bolting, lining etc.
		(c)	On complete completion of tunnel
	(x)	Miscellaneous	

*The above list is illustrative and may require modification as per the actual scope of the work