

NHIDCL/MANIPUR/EPC/UKHRULBYPASS/2023/3939

Dated: 30.12.2023

विषय: Construction of 2-lane Ukhrul Bypass starting at km 537.850 of NH-202 & joining at km 8.840 of NH-102A (Ukhrul - Tolo - Tadubi Road) and continuing upto km 9.840 of NH-102A (Package-1, Length-6.571 km) in the State of Manipur on EPC mode - "Corrigendum No.1" - reg.

Tender ID: 2023_NHIDC_783404_1

It is to inform to all bidders that the following amendments are carried out:


Sr. No.	Reference/clause no./ Annexure	Existing Provision	Modified Provision (To be read as)
1	NIT & RFP	Estimated Cost exclusive of GST: Rs.107.34 Crore	Estimated Cost exclusive of GST: Rs.107.23 Crore
2	Section 2, Instructions to bidder, Clause No. 2.2.2.2 (i) Page no. 31	2.2.2.2 Technical Capacity (i) For demonstrating technical capacity and experience (the "Technical Capacity"), the Bidder shall, over the past [5 (five)] financial years preceding the Bid Due Date, have received payments for construction of Eligible Project(s), or has undertaken construction works by itself in a PPP project, such that the sum total thereof, as further adjusted in accordance with clause 2.2.2.5 (i) & (ii), is more than Rs.107.34 crore (Rupees One Hundred Seven Crore and Thirty-Four Lakh) (the "Threshold Technical Capacity") given in the Data Sheet.	2.2.2.2 Technical Capacity (i) For demonstrating technical capacity and experience (the "Technical Capacity"), the Bidder shall, over the past [5 (five)] financial years preceding the Bid Due Date, have received payments for construction of Eligible Project(s), or has undertaken construction works by itself in a PPP project, such that the sum total thereof, as further adjusted in accordance with clause 2.2.2.5 (i) & (ii), is more than Rs. 107.23 crore (Rupees One Hundred Seven Crore and Twenty-Three Lakh) (the "Threshold Technical Capacity") given in the Data Sheet.
3	Section 2, Instructions to bidder, Clause No. 2.2.2.2 (i) Page no. 31	(ii) For normal Highway projects (including Major Bridges / ROB / Flyovers/Tunnels): Provided that at least one similar work of 20% of Estimated Project Cost [Rs. 21.50 crore (Rupees Twenty-One Crore fifty lakh)] shall have been completed from the Eligible Projects in Category 1 and/or Category 3 specified in Clause 2.2.2.5. For this purpose, a project shall be considered to be completed, if more than 90% of the	(ii) For normal Highway projects (including Major Bridges / ROB / Flyovers/Tunnels): Provided that at least one similar work of 20% of Estimated Project Cost [Rs. 21.45 crore (Rupees Twenty-One Crore Forty-five lakh)] shall have been completed from the Eligible Projects in Category 1 and/or Category 3 specified in Clause 2.2.2.5. For this purpose, a project shall be considered to be completed, if more than 90% of the

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Sr. No.	Reference/clause no./ Annexure	Existing Provision	Modified Provision (To be read as)
		value of work has been completed and such completed value of work is equal to or more than 20% of the estimated project cost. Eligible projects shall include the following:	value of work has been completed and such completed value of work is equal to or more than 20% of the estimated project cost. Eligible projects shall include the following:
4	Section 2, Instructions to bidder, Clause No. 2.2.2.3 (i) Page no. 32	Financial Capacity: (i) The Bidder shall have a minimum Net Worth (the "Financial Capacity") of [Rs. 5.40 crore (Rupees Five Crore Forty lakh) 5% (five percent) of the Estimated Project Cost at the close of the preceding financial year.	Financial Capacity: (i) The Bidder shall have a minimum Net Worth (the "Financial Capacity") of Rs. 5.36 crore (Rupees Five Crore Thirty-Six lakh) 5% (five percent) of the Estimated Project Cost at the close of the preceding financial year.
5	Section 2, Instructions to bidder, Clause No. 2.2.2.3 (ii) Page no. 32	(ii) The Bidder shall have a minimum Average Annual Turnover (updated to the price level of the year based on factors indicated in table below) of [Rs. 16.10 crore (Rupees Sixteen Crore Ten Lakh) 15% (Fifteen percent) of the Estimated Project Cost for the last 5 (five) financial years.	(ii) The Bidder shall have a minimum Average Annual Turnover (updated to the price level of the year based on factors indicated in table below) of [Rs. 16.08 crore (Rupees Sixteen Crore Eight Lakh) 15% (Fifteen percent) of the Estimated Project Cost for the last 5 (five) financial years.
6	Section 2, Instructions to bidder, Clause No. 2.11.1 (f) Page no. 41	BID Security of ₹1,07,34,000/- (One Crore Seven Lakh Thirty-Four Thousand Only) in the form of Insurance Surety Bond (issued by Insurance Company authorized by Insurance Regulatory & Development Authority of India in the format at Appendix-IIA), Account Payee Demand Draft, Banker's Cheque or e-Bank Guarantee (in the format at Appendix-II from a Scheduled Bank) or may be deposited through online facility provided by the IndusInd Bank.	BID Security of ₹1,07,23,000/- (One Crore Seven Lakh Twenty-Three Thousand Only) in the form of Insurance Surety Bond (issued by Insurance Company authorized by Insurance Regulatory & Development Authority of India in the format at Appendix-IIA), Account Payee Demand Draft, Banker's Cheque or e-Bank Guarantee (in the format at Appendix-II from a Scheduled Bank) or may be deposited through online facility provided by the IndusInd Bank.
7	Section 2, Instructions to bidder, Clause No. 2.11.2 (d) Page no. 43	BID Security of ₹ 1,07,34,000/- (One Crore Seven Lakh Thirty-Four Thousand Only) in the form of Insurance Surety Bond (in the format at Appendix-IIA issued by Insurance Company authorized by Insurance Regulatory &	BID Security of ₹ 1,07,23,000/- (One Crore Seven Lakh Twenty-Three Thousand Only) in the form of Insurance Surety Bond (in the format at Appendix-IIA issued by Insurance Company authorized by Insurance Regulatory &

Sr. No.	Reference/clause no./ Annexure	Existing Provision	Modified Provision (To be read as)
		Development Authority of India), Account Payee Demand Draft, Banker's Cheque or Electronic Bank Guarantee (in the format at Appendix-II from a Scheduled Bank) or through the online facility provided by the IndusInd Bank.	Development Authority of India), Account Payee Demand Draft, Banker's Cheque or Electronic Bank Guarantee (in the format at Appendix-II from a Scheduled Bank) or through the online facility provided by the IndusInd Bank.
8	Section 7 Data Clause 4 Page no.58	Threshold Technical Capacity: ₹ 107.34 Crore	Threshold Technical Capacity: ₹ 107.23 Crore
9	Section 7 Data Clause 5 Page no.58	Data/Details for similar work (Technical Capacity) (Refer Clause No. 2.2.2.2 (ii) & (iii): ₹ 21.50 Crore	Data/Details for similar work (Technical Capacity) (Refer Clause No. 2.2.2.2 (ii) & (iii): ₹ 21.45 Crore
10	Section 7 Data Clause 5.1 (a) Page no.58	Estimated Project Cost (Excl. GST): ₹ 107.34 Crore	Estimated Project Cost (Excl. GST): ₹ 107.23 Crore
11	Section 7 Data Clause 8 Page no.58	Bid Security: ₹1,07,34,000/- (One Crore Seven Lakh Thirty-Four Thousand Only)	Bid Security: ₹ 1,07,23,000/- (One Crore Seven Lakh Twenty-Three Thousand Only)
12	Clause 18 of Schedule-A	Modified Clause 18 of Schedule-A enclosed as Annexure-I of this Corrigendum.	
13	Schedule-B1	Modified Schedule-B1 including utility relocation plan enclosed as Annexure-II of this Corrigendum.	
14	Schedule-H	Modified Schedule-H enclosed as Annexure-III of this Corrigendum.	

2. यह सक्षम प्राधिकारी के अनुमोदन से जारी किया जाता है ।


(राजपाल सिंह)

उप महाप्रबंधक (तकनीकी)

Annexure-I

18. Existing utilities

(i) Electrical utilities

The site includes the following electrical utilities:

a) Extra High-Tension Lines (EHT Lines) *

S. No.	Chainage		Length (in Km)				Crossings			
	From	To	400KV	220KV	110KV	66KV	400KV	220KV	110KV	66KV
Nil										

b) High Tension/Low Tension Lines (HT/LT Lines) *

S. No.	Design Chainage		HT/LT Lines (Nos./in km)			Crossings			Transformer		Conductor	
	From	To	33KV	11KV	LT	33KV	11KV	LT	No	Capacity	Type	Length
1	0.000	6.571	5/ 0.150	18/ 4.730	10/ 0.430	--	--	--	--	--	--	--

(ii) Public Health utilities (Water/Sewage Pipe Lines)

The site includes the following Public Health utilities: -

S. No.	Chainage		Length (in Km)				Crossings				Water Tank	
	From	To	Water Supply Line		Sewage Line		Water Supply Line		Sewage Line		Capacity (in Its)	Nos.
			With Pumping	With Gravity Flow	With Pumping	With Gravity Flow	With Pumping	With Gravity Flow	With Pumping	With Gravity Flow		
1			--	--	--	--	--	--	--	--	--	--

* Contractor shall inspect the project highway for existing utilities and undertake shifting in accordance with Annexure – I of Schedule – B1 and as per the Utility Relocation Plan approved by the concerned Utility Owning Dept.

(iii) Any Other line

(This illustrative and may change as per features of existing utilities.)


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SCHEDULE-B1

Utility Shifting

The shifting of utilities and felling of trees shall be carried out by the Contractor. Shifting of obstructing existing utilities indicated in Schedule A to an appropriate location in accordance with the standards and specification of concerned Utility Owning Department is part of the scope of work of the Contractor. The bidders may visit the site and assess the quantum of shifting of utilities for the projects before submission of their bid. The Contractor has to verify & shift all the utilities on the Project Site under the supervision of Utility Department/Agency.

All the Utilities which affect the execution of EPC work or Maintenance of Project highway in accordance with Article-9 of EPC Agreement.



Annexure-II of Corrigendum No.1

Appendix B-I of Annexure -I

Schedule-B1

Utility Shifting

Shifting of obstructing existing utilities indicated in Schedule A to an appropriate location in accordance with the standards and specification of concerned Utility Owning Department is part of the scope of work of the Contractor. The bidders may visit the site and assess the quantum of shifting of utilities for the projects before submission of their bid. Copy of utility relocation plan is enclosed. The specification of concerned Utility Owning Department shall be applicable and followed.

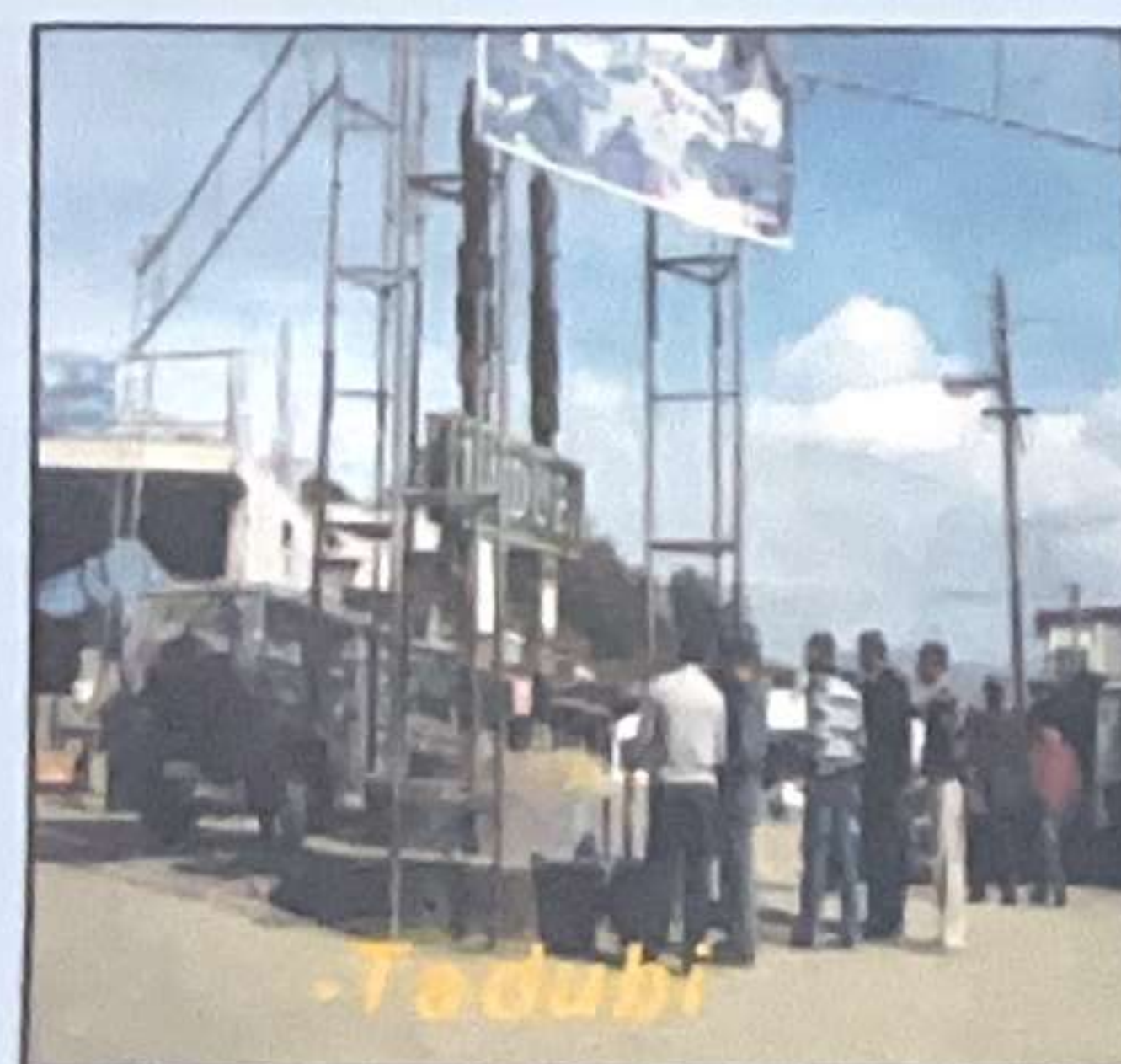
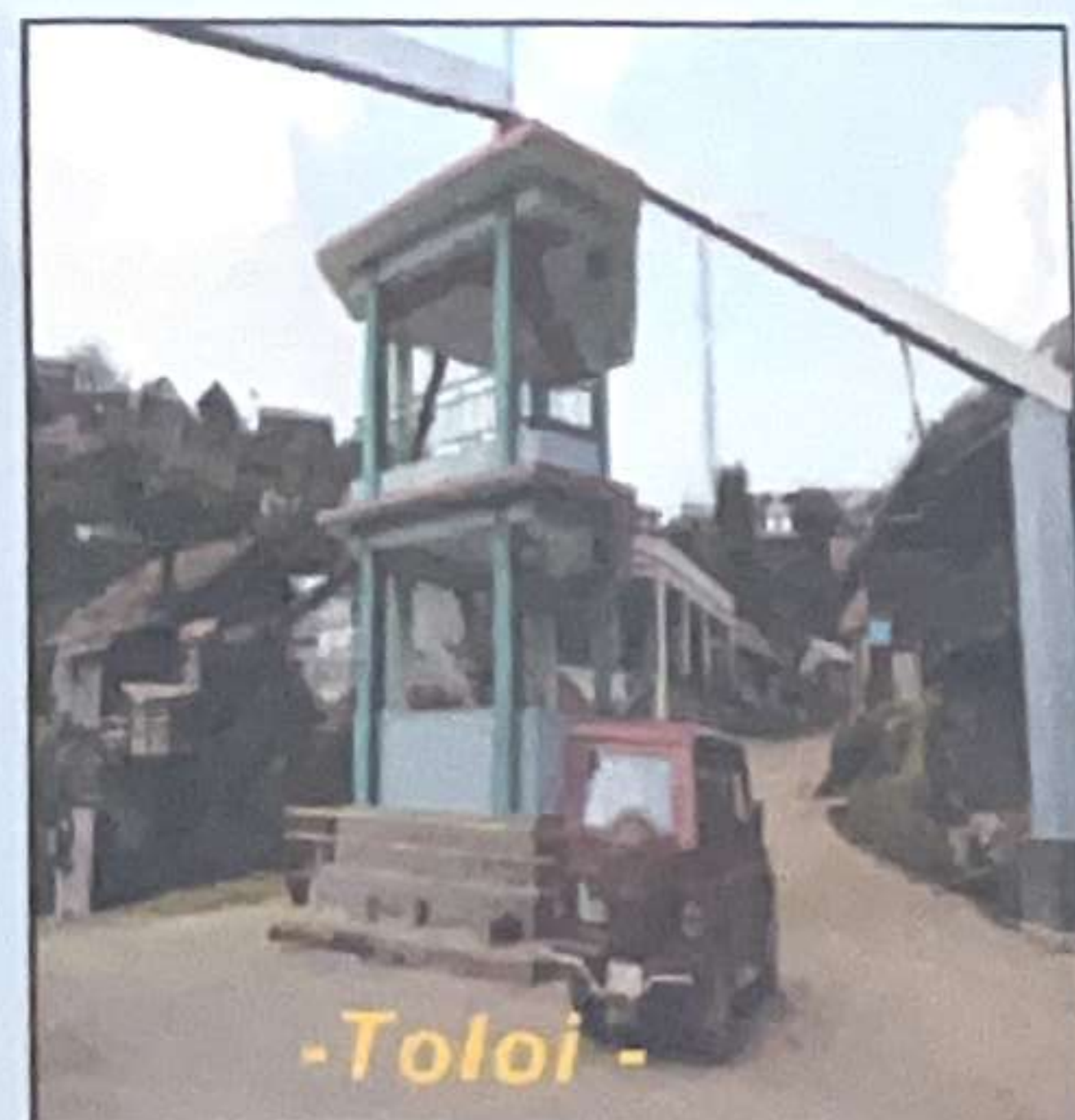
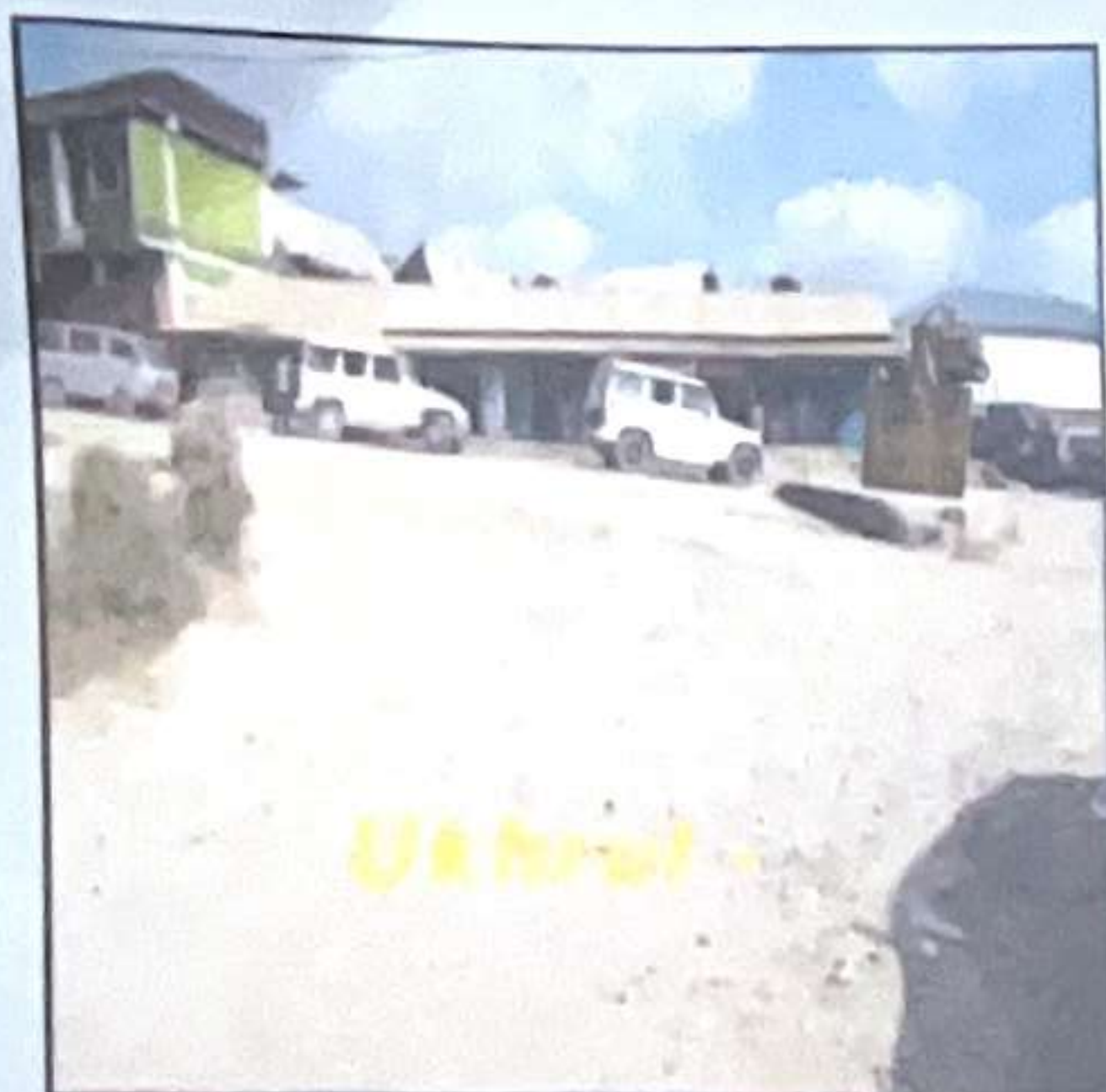
Note-I:

- a) The type/spacing/size/specifications of poles/towers/lines/cables to be used in shifting work shall be as per the guidelines of utility owning department and it is to be agreed solely between the contractor and the utility owning department. No change of scope shall be admissible and no cost shall be paid for using different type/spacing/size/specifications in shifted work in comparison to those in the existing work or for making any overhead crossing to underground as per requirement of utility owning department and/or construction of project highway. The contractor shall carry out joint inspection with utility owning department and get the estimates from the utility owning department. The assistance of the Authority is limited to giving forwarding letter on the proposal of contractor to utility owning department whenever asked by the contractor. The decision/ approval of utility owning department shall be on the contractor.
- b) The supervision charges at the rates/charges applicable of the utility owning department shall be paid directly by the Authority to the utility Owning department as and when contractor furnishes demand of utility Owning Department along with a copy of estimated cost given by later.
- c) The dismantled material/scrap of existing Utility to be shifted/Dismantled shall belong to the contractor who would be free to dispose-off the dismantled material as deemed fit by them unless the contractor is required to deposit the dismantled material to utility owning department as per the norm and practice and in that case the amount of credit for dismantled material may be availed by the contractor as per estimate agreed between them.
- d) The utilities shall be handed over after shifting work is completed to utility Owning Department to their entire satisfaction. The maintenance liability shall rest with the Utility Owning Department after Handing over Process is complete as far as utility shifting works are concerned.

Note-II: Copy of utility shifting plans enclosed as Annexure – II to Schedule B1

Utility Shifting/Relocation Plan along with tentative details such as the length and category of lines, types of circuits, type and number of poles, size and type of conductor/cable, the number and type of crossings and the capacity and the number of transformers, the length and category of pipes etc., have been enclosed as Annexure-II. However, the actual requirements at site shall be assessed by the bidders before submission of their bids. The utility shifting works shall be executed by the Contractor in consultation with Utility Owning Department and the Authority's Engineer.





Feasibility Study and Detailed Project Report for Two laning with hard shoulder of Ukhrul – Toloi - Tadubi section of NH-102A (115 km) in the State of Manipur on EPC mode



DETAILED PROJECT REPORT UTILITY SHIFTING PLAN Pkg.-1: UKHRUL BYPASS Design chainage:- 0+000 Km to 6+571 Km

Prepared By

CETEST
Engineering Consultants

CE Testing Co. Pvt. Ltd.

124-A, N.S.C. Bose Road
Kolkata – 700 092, West Bengal

Submitted to

**National Highways & Infrastructure
Development Corporation Ltd**

4, Parliament Street, New Delhi-110001

CET/2016/3640/NHIDCL/102A/DPR

NOV-2023



SUMMARY OF UTILITES TO BE SHIFFTED					
Design Chainage (Km)		District	No. of Posts		
From	To		220 V	11 KV	33 KV
0+000	6+571	Ukhrul	8	18	5

Ukhrul-Toloi-Tadubi Road Pkg-1 (Ukhrul Bypass) on NH-102A			
Sr. No.	Design Chainage	Type	No of E.P.
1	0+280	33 KV	1
2	0+550	220 V	3
3	1+350	220 V	1
4	1+490	220 V	2
5	3+120	220 V	2
5	5+600	11 KV	3
6	5+700	11 KV	2
7	6+030	11 KV	2
8	6+050	11 KV	1
9	6+110	11 KV	2
10	6+250	11 KV	2
11	6+310	11 KV	2
12	6+390	11 KV	2
13	6+450	11 KV	2
14	6+550	33 KV	4
Total No of Electric Posts			31

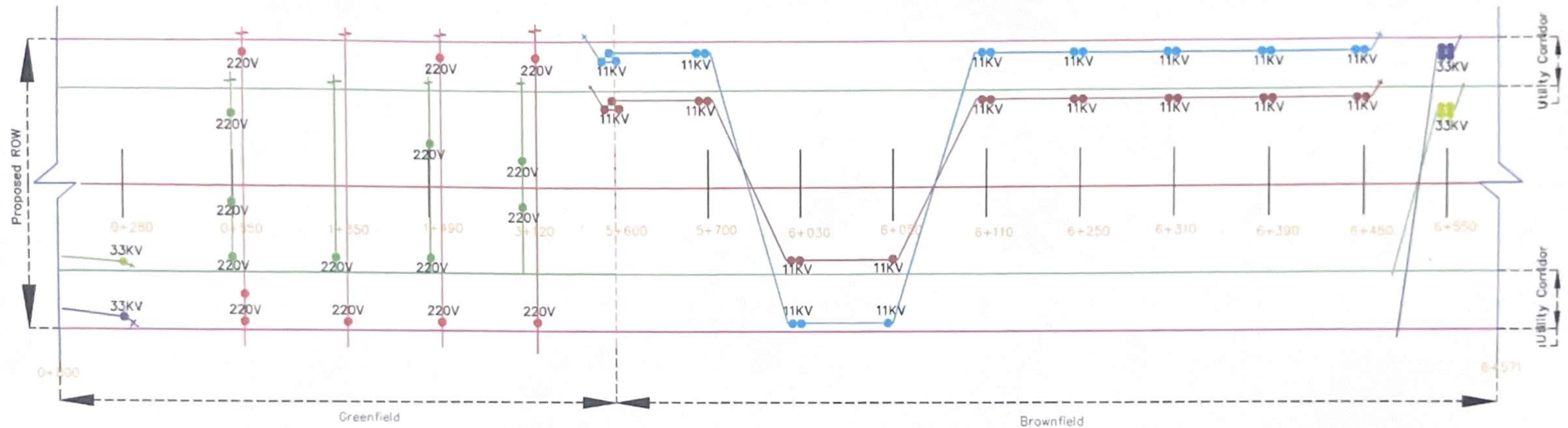
Divul
19/12/23
Manager
Ukhrul Sub-Division
MSPDCL

[Signature]
19/12/23
Deputy General Manager
Ukhrul Division
MSPDCL

* Note: The number of poles listed here are as per the site condition, additional new pole/s may be considered by the concerned department in the Utility Estimate.

<div>Scale - NTS</div> <div>  <div> <div>CLIENT:</div> <div>NATIONAL HIGHWAYS AND INFRASTRUCTURE DEVELOPMENT CORPORATION LTD. 4, Parliament Street, New Delhi - 110001</div> </div> </div>					<div>UTILITY SHIFTING PLAN</div> <div>UKHRUL BYPASS District- UKHRUL</div> <div>Detailed Project Report</div> <div>Design chainage:- 0+000 Km to 6+799 Km</div>		<div>CONSULTANT:</div> <div>  <div> <div>C.E. TESTING COMPANY PVT. LTD.</div> <div>124-A, N.S.C. Bose Road Kolkata - 700092.</div> </div> </div>		<div>DWG NO - CET/2016/3640/NH-102A/DFR/USP</div>
<div>PROJECT</div> <div>Consultancy Services for Preparation of Feasibility Study and Detailed Project Report for Two Lining with Paved Shoulder of Ukhrul - Toloi - Tadubi Section of NH-102A (115 km) in the State of Manipur on EPC mode</div>									
<div>DATE: NOV. 2023</div>									
<div>REVISIONS</div>									

Road Name :Ukhrul-Toloi-Tadubi Road Pkg-1 (Ukhrul Bypass) of NH-102A
From Ex. Ch. 0.000 (De.Ch. 0.000) to Ex. Ch. 9.840 (De.Ch. 6.571Km)



SUMMARY OF UTILITES TO BE SHIFTED

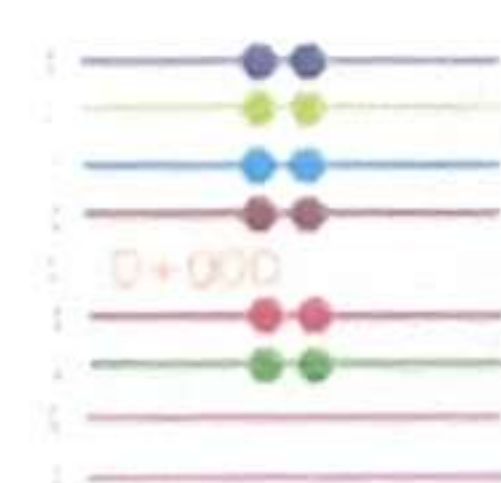
Design Chainage (Km)		District	No. of Posts		
From	To		220 V	11 KV	33 KV
0+000	6+571	Ukhrul	8	18	5

Sr. No.	Design Chainage	Type	No of E.P.
1	0+280	33 KV	1
2	0+550	220 V	3
3	1+350	220 V	1
4	1+490	220 V	2
5	3+120	220 V	2
5	5+600	11 KV	3
6	5+700	11 KV	2
7	6+030	11 KV	2
8	6+050	11 KV	1
9	6+110	11 KV	2
10	6+250	11 KV	2
11	6+310	11 KV	2
12	6+390	11 KV	2
13	6+450	11 KV	2
14	6+550	33 KV	4
Total No of Electric Posts			31

Signature
 19/12/23
 Deputy General Manager
 Ukhrul Division
 MSPDCL

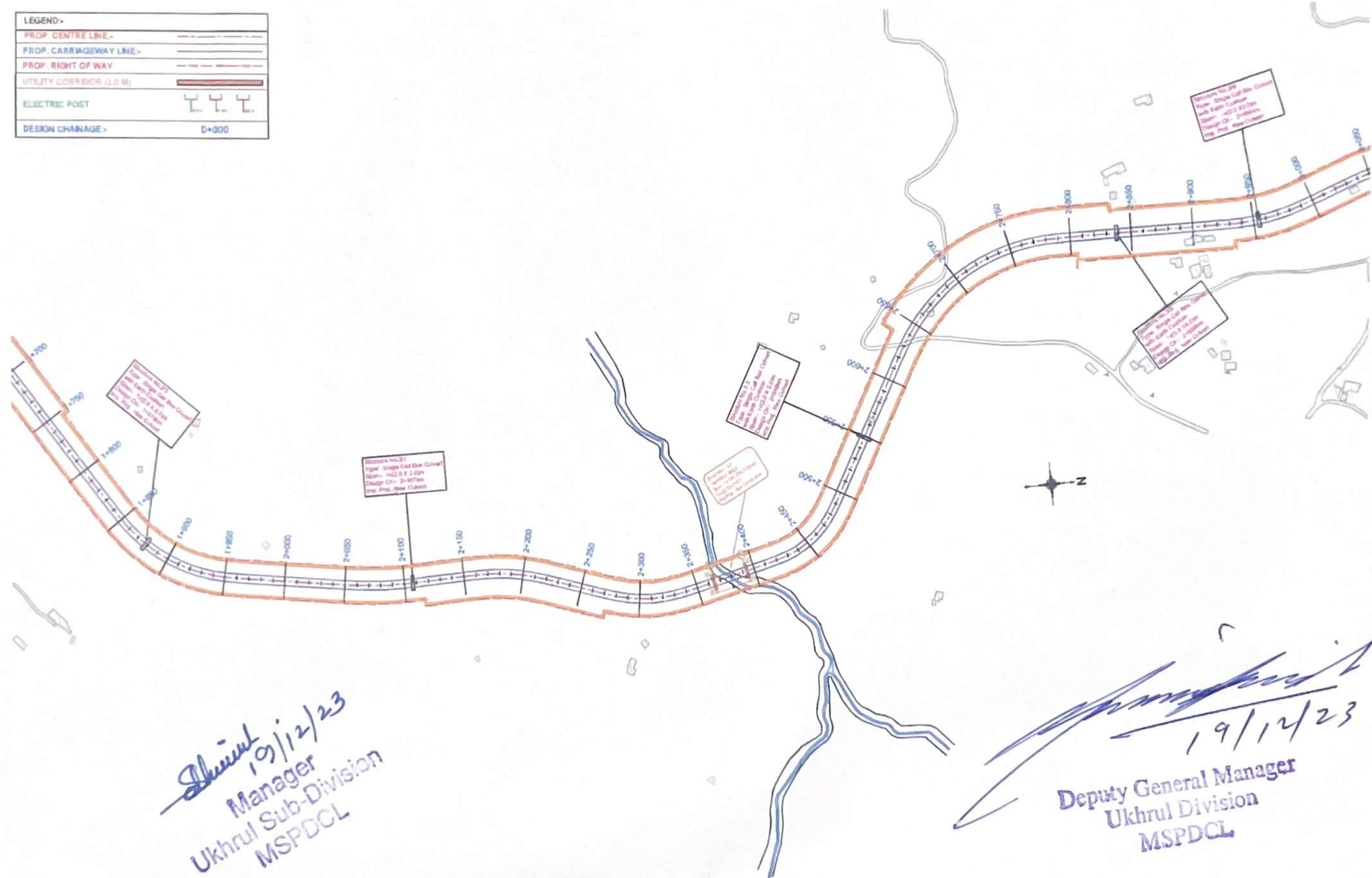
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PROPOSED 33 KV LINE
 EXISTING 33 KV LINE
 PROPOSED 11 KV LINE
 EXISTING 11 KV LINE
 DESIGN CHAINAGE
 PROPOSED 220 V LINE
 EXISTING 220 KV LINE
 PROPOSED CENTRE LINE
 PROPOSED ROW LINE



Signature
 19/12/23
 Manager
 Ukhrul Sub-Division
 MSPDCL

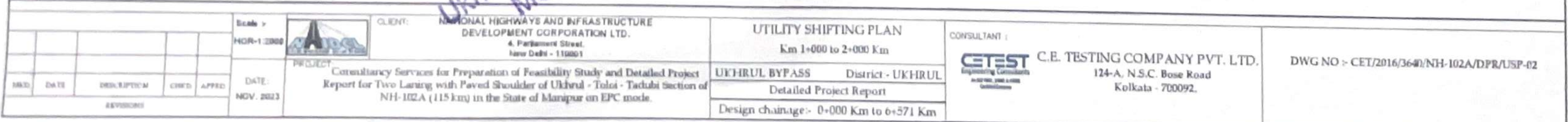
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PROP. CARRIAGEWAY LINE:-	---
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UTILITY CORRIDOR (2.0 M)	---
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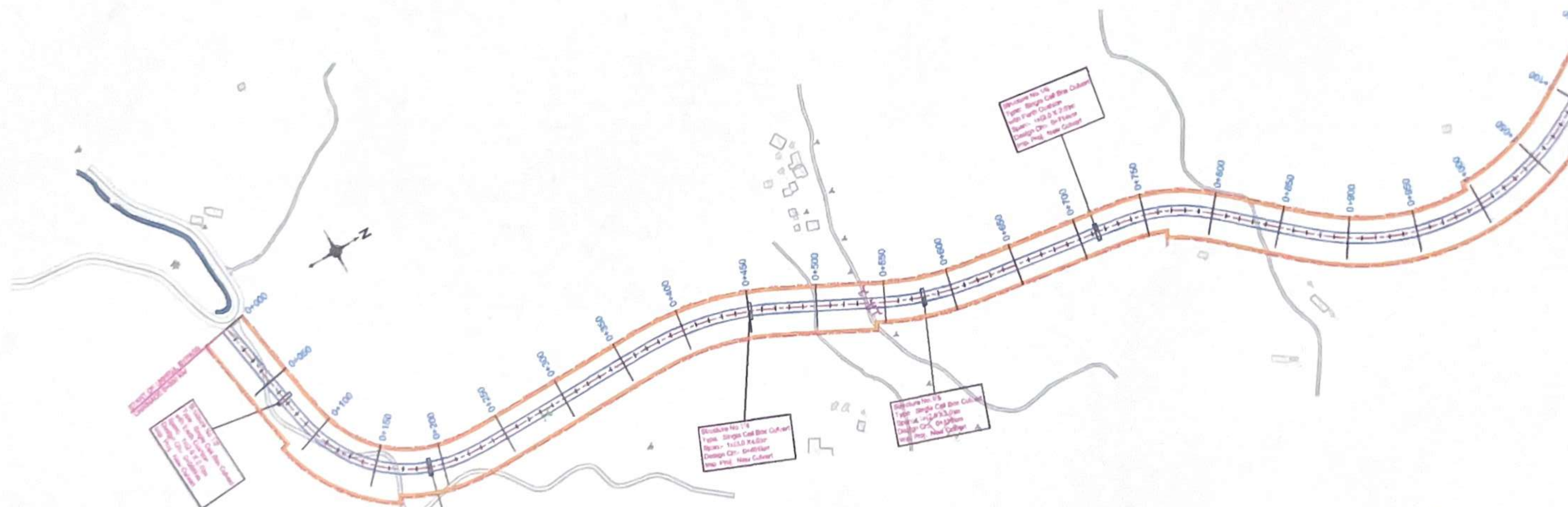
Shivul
19/12/23
Manager
Ukhrul Sub-Division
MSPDCL

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19/12/23
Deputy General Manager
Ukhrul Division
MSPDCL

Scale > HOR-1:2500 PROJECT CONSULTANCY SERVICES FOR PREPARATION OF FEASIBILITY STUDY AND DETAILED PROJECT REPORT FOR TWO LANE WITH PAVED SHOULDER OF UKHRUL - TOLA - TADUBI SECTION OF NH-102A (115 km) IN THE STATE OF MANIPUR ON EPC MODE.					CLIENT: NATIONAL HIGHWAYS AND INFRASTRUCTURE DEVELOPMENT CORPORATION LTD. 4, Parliament Street, New Delhi - 110001		UTILITY SHIFTING PLAN Km 2+000 to 3+000 Km UKHRUL BYPASS District:- UKHRUL Detailed Project Report Design chainage:- 0+000 Km to 0+571 Km		CONSULTANT: CETEST Engineering Consultants 124-A, N.S.C. Bose Road Kolkata - 700092.		DWG NO > CET/2016/3640/NH-102A/DPR/USP-03	
NO.	DATE	DESCRIPTION	CHKD	APPD	DATE: NOV, 2023							
REVISIONS												





LEGEND:-	
PROP. CENTRE LINE-	---
PROP. CARRIAGEWAY LINE-	---
PROP. RIGHT OF WAY	---
UTILITY CORRIDOR (2.0 M)	---
ELECTRIC POST	⌋ ⌋ ⌋
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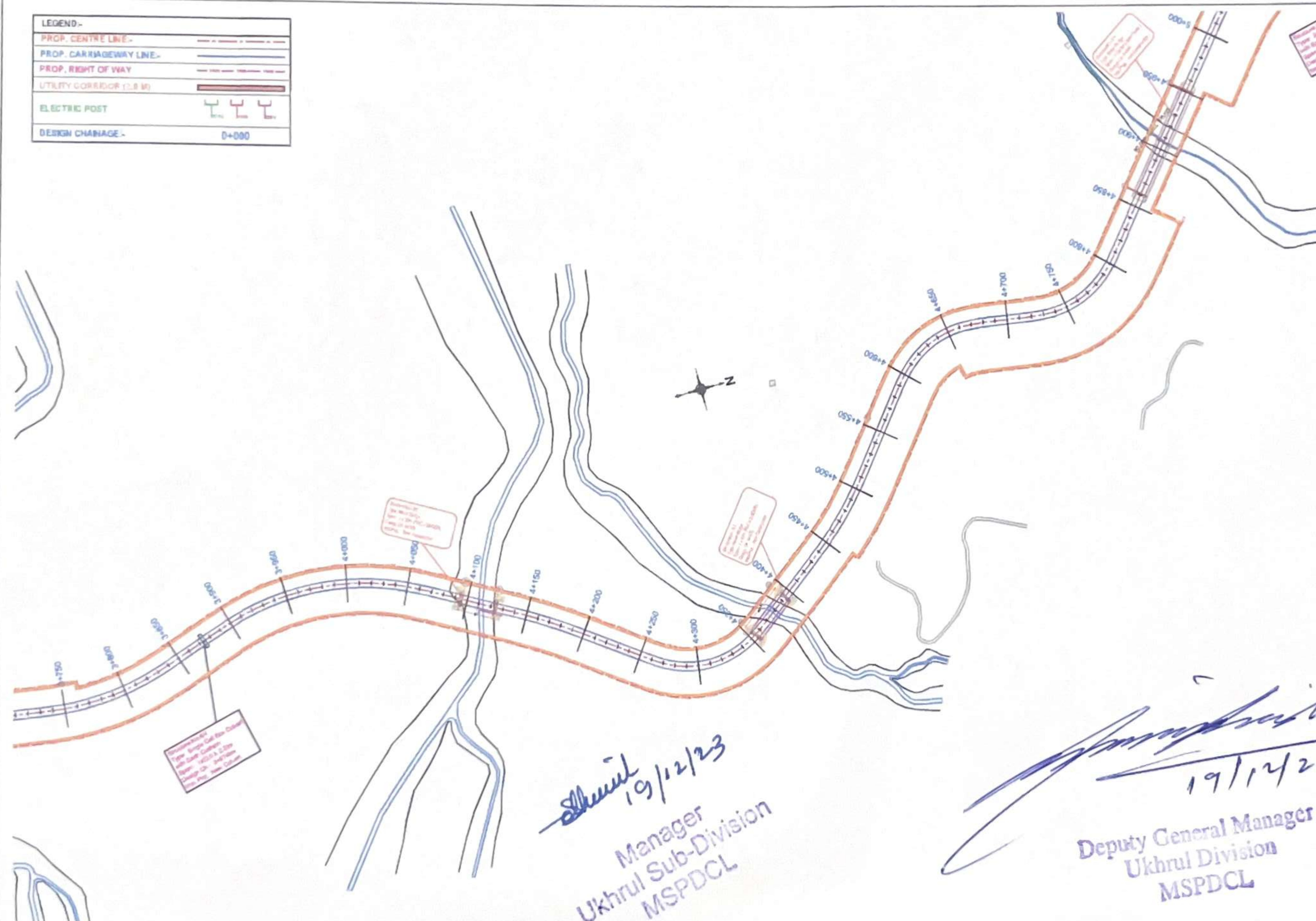


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Deputy General Manager
Ukhrul Division
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					Scale > HQR-1/2000		CLIENT NATIONAL HIGHWAYS AND INFRASTRUCTURE DEVELOPMENT CORPORATION LTD. 4, Park Road Street, New Delhi - 110001	UTILITY SHIFTING PLAN Km 0+000 to 1+000 Km	CONSULTANT :  C.E. TESTING COMPANY PVT. LTD. 124-A, N.S.C. Bose Road Kolkata - 700092.	DWG NO :- CET/2016/3640/NH-102A/DPR/USP-01
					DATE: NOV. 2023	PROJECT Consultancy Services for Preparation of Feasibility Study and Detailed Project Report for Two Lining with Paved Shoulder of Ukhrul - Toloi - Tadubi Section of NH-102A (115 km) in the State of Manipur on EPC mode.	UKHRUL BYPASS District - UKHRUL Detailed Project Report			
							Design chainage:- 0+000 Km to 6+571 Km			
REVISED										

LEGEND-	
PROP. CENTRE LINE-	---
PROP. CARRIAGEWAY LINE-	---
PROP. RIGHT OF WAY	---
UTILITY CORRIDOR (2.8 M)	---
ELECTRIC POST	⌋ ⌋ ⌋
DESIGN CHAINAGE -	0+000



Shivul
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Manager
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					Scale - HOR-1 2000		CLIENT: NATIONAL HIGHWAYS AND INFRASTRUCTURE DEVELOPMENT CORPORATION LTD. 4, Parliament Street, New Delhi - 110001	PROJECT Consultancy Services for Preparation of Feasibility Study and Detailed Project Report for Two Lanes with Paved Shoulder of Ukhrul - Tuloi - Tadubi Section of NH-102A (115 km) in the State of Manipur on EPC mode.	UTILITY SHIFTING PLAN Km 4+000 to 5+000 Km UKHRUL BYPASS District - UKHRUL Detailed Project Report Design chainage:- 0+000 Km to 6+571 Km	CONSULTANT :  C.E. TESTING COMPANY PVT. LTD. 124-A, N.S.C. Bose Road Kolkata - 700092.	DWG NO :- CET/2016/3640/NH-102A/DPR/USP-05
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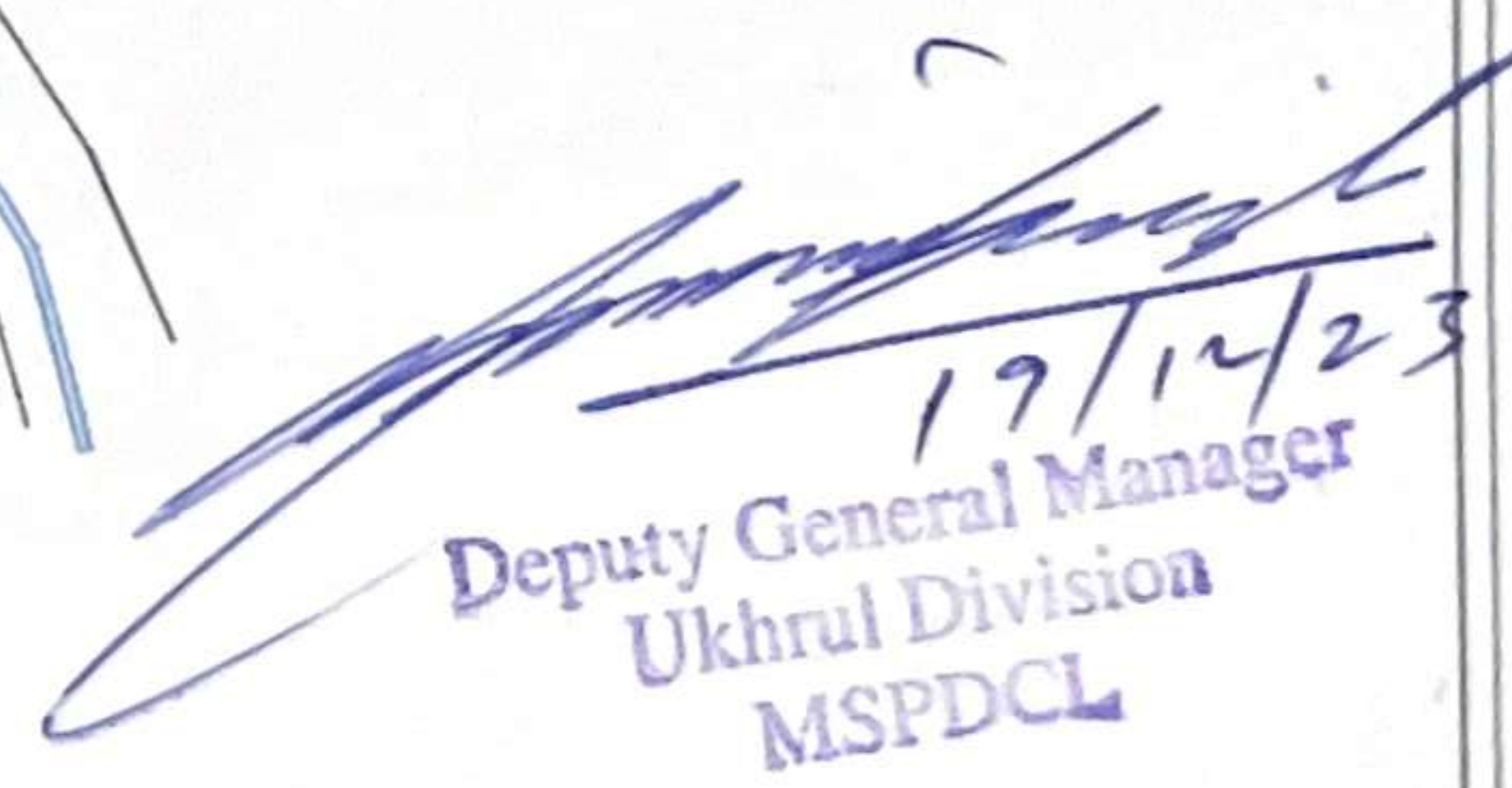
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PROP. CARRIAGEWAY LINE-	---
PROP. RIGHT OF WAY	---
UTILITY CORRIDOR (2.0 M)	---
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DESIGN CHAINAGE-	0+000



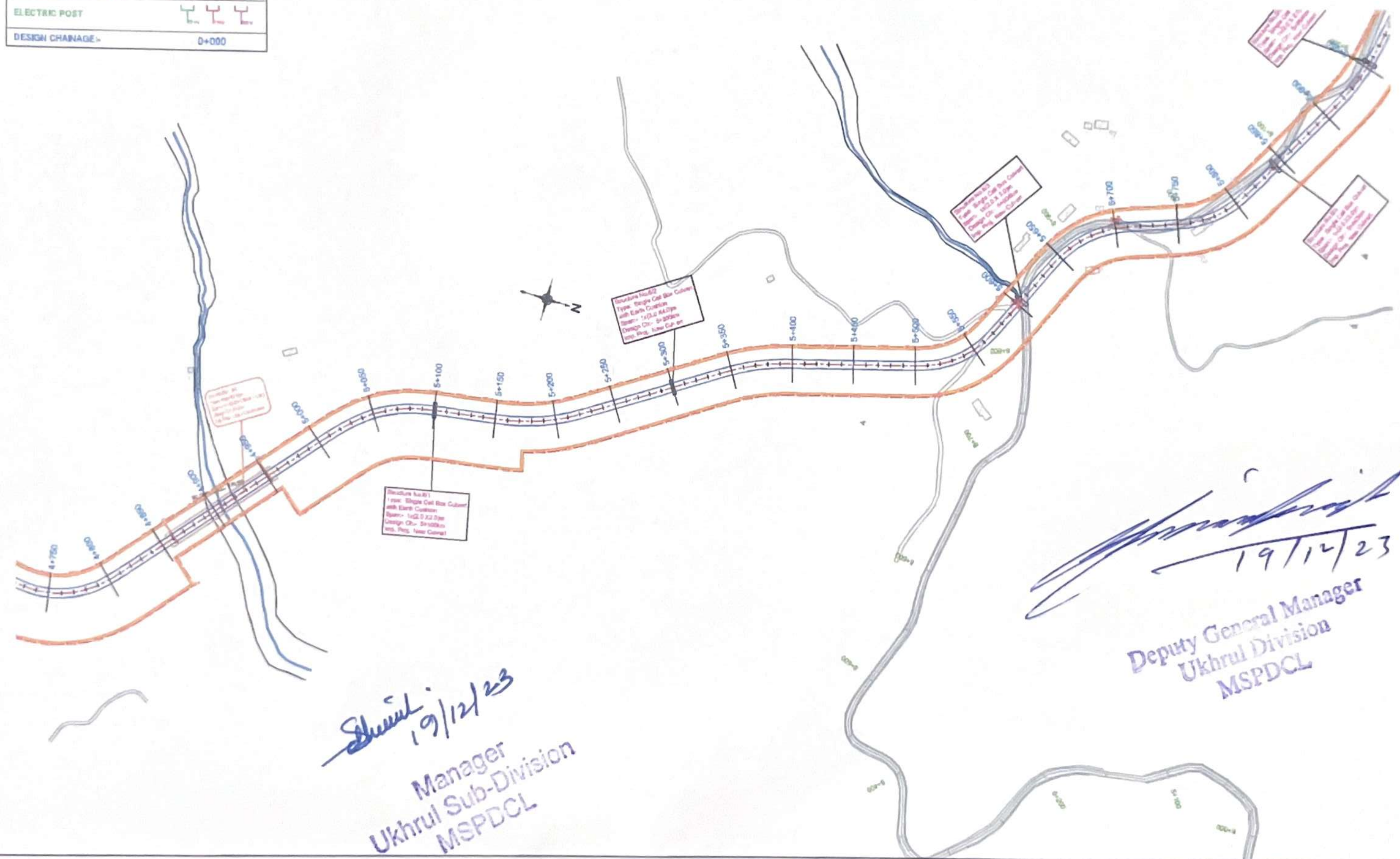
Shivani
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Deputy General Manager
Ukhrul Division
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					Scale > HOR-1:2000		CLIENT: NATIONAL HIGHWAYS AND INFRASTRUCTURE DEVELOPMENT CORPORATION LTD. 4, Parliament Street, New Delhi - 110001	UTILITY SHIFTING PLAN Km 6+000 to 6+799 Km	CONSULTANT :  C.E. TESTING COMPANY PVT. LTD. 124-A, N.S.C. Bose Road Kolkata - 700092.	DWG NO > CET/2016/3640/NH-102A/DPR/USP-07	
					PROJECT	Consultancy Services for Preparation of Feasibility Study and Detailed Project Report for Two Laning with Paved Shoulder of Ukhrul - Toloi - Tadubi Section of NH-102A (115 km) in the State of Manipur on EPC mode.	UKHRUL BYPASS District:- UKHRUL Detailed Project Report				
MNO. DATE DESCRIPTION CHKD. APPRD.					DATE: NOV. 2023		Design change:- 0+000 Km to 6+571 Km				
REVISIONS											






LEGEND -	
PROP. CENTRE LINE-	
PROP. CARRIAGEWAY LINE-	
PROP. RIGHT OF WAY	
UTILITY CORRIDOR (2.0 M)	
ELECTRIC POST	
DESIGN CHANAGE -	0+000



Shivul
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Manager
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19/12/23
Deputy General Manager
Ukhrul Division
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Scale > HOR-1 2500					 <div>CLIENT: NATIONAL HIGHWAYS AND INFRASTRUCTURE DEVELOPMENT CORPORATION LTD. 4, Park Road Street, New Delhi - 110001</div>		UTILITY SHIFTING PLAN Km 5+000 to 6+000 Km		CONSULTANT :  C.E. TESTING COMPANY PVT. LTD. 124-A, N.S.C. Bose Road Kolkata - 700092.		DWG NO - CET/2016/3640/NH-102A/DPR/USP-06
NO.	DATE	DESCRIPTION	CHECK	APPROD	PROJECT: Consultancy Services for Preparation of Feasibility Study and Detailed Project Report for Two Lanes, with Paved Shoulder of Ukhrul - Toloi - Tadubi Section of NH-102A (115 km) in the State of Manipur on EPC mode		UKHRUL BYPASS District- UKHRUL Detailed Project Report				
REVISIONS					DATE: NOV. 2023		Design chainage-> 0+000 Km to 6+571 Km				

Annexure-III

Schedule - H

(See Clauses 10.1 (iv) and 19.3)

Contract Price Weightages

- 1.1 The Contract Price for this Agreement is ₹ _____
- 1.2 Proportions of the Contract Price for different stages of Construction of the Project Highway shall be as specified below:

Item	Weightage in % of CP	Stage for Payment	Percentage
1	2	3	4
Road Works including Culverts, widening and repair of culverts	46.88 %	A- Widening and strengthening of existing road	
		(1) Earthwork up to top of the sub- grade	[Nil]
		(2) Sub-base Course	[Nil]
		(3) Non-bituminous Base course	[Nil]
		(4) Bituminous Base course	[Nil]
		(5) Wearing Coat	[Nil]
		(6) Widening and repair of culverts	[Nil]
		B.1-Reconstruction/New 2-Lane Realignment / Bypass (Flexible Pavement)	
		(1) Earthwork up to top of the sub- grade	64.94%
		(2) Sub-base Course	4.46%
		(3) Non-bituminous Base course	5.26%
		(4) Bituminous Base course	5.39%
		(5) Wearing Coat	3.43%
		B.2- Reconstruction/New 8-Lane Realignment/ Bypass (Rigid Pavement)	
		(1) Earthwork up to top of the sub- grade	[Nil]
		(2) Sub-base Course	[Nil]
		(3) Dry Lean Concrete (DLC) Course	[Nil]
		(4) Pavement Quality Control (PQC) Course	[Nil]
		C.1- Reconstruction/ New Service Road (Flexible Pavement)	
		(1) Earthwork up to top of the sub- grade	[Nil]
		(2) Sub-base Course	[Nil]
		(3) Non-bituminous Base course	[Nil]
		(4) Bituminous Base course	[Nil]
		(5) Wearing Coat	[Nil]
		C.2- Reconstruction/New Service Road (Rigid Pavement)	
		(1) Earthwork up to top of the sub- grade	[Nil]
		(2) Sub-base Course	[Nil]
		(3) Dry Lean Concrete (DLC) Course	[Nil]
		(4) Pavement Quality Control (PQC) Course	[Nil]
		D- Reconstruction & New Culverts on existing road, realignments, bypasses Culverts (length <6m)	16.52%
Minor bridge / Underpasses / Overpasses	12.68 %	A.1-widening and repairing of Minor Bridges (length >6 m & <60m)	
		Minor Bridges	[Nil]

Item	Weightage in % of CP	Stage for Payment	Percentage
1	2	3	4
		A.2- New Minor bridges (length >6 m and <60m)	
		(1) Foundation: On completion of the foundation work including foundation for wing and return wall	14.03%
		(2) Sub-Structure: On completion of abutments, piers upto the abutment / pier cap.	30.26%
		(2) Super-structure: On completion of the super-structure in all respects including wearing coat, bearings, expansion joints, hand rails, crash barriers, road, signs & markings, tests on completion etc. complete in all respect.	46.29%
		(3) Approaches: On completion of approaches including Retaining walls, stone pitching, protection works complete in all and fit for use	9.42%
		(4) Guide Bunds and River Training Works: On completion of Guide Bunds and river training works complete in all respects	
		B.1- Widening and repairs of underpasses/overpasses	
		Underpasses/ Overpasses	[Nil]
		B.2-New Underpasses/Overpasses	
		(1) Foundation + Sub-Structure: On completion of the foundation work including foundations for wing and return walls, abutments, piers up to the abutment/pier cap.	[Nil]
		(2) Super-structure: On completion of the super-structure in all respects including wearing coat, bearings, expansion joints, hand rails, crash barriers, road signs & markings, tests on completion etc. complete in all respect. Wearing Coat (a) in case of Overpass-wearing coat including expansion joints complete in all respects as specified and (b) in case of underpass-rigid pavement including drainage facility complete in all respects as specified.	[Nil]
Major bridge (length > 60 m) works and ROB / RUB / elevated sections / flyovers including viaducts, if any	12.86 %	(3) Approaches: On completion of approaches including Retaining walls/ Reinforced Earth walls, stone pitching, protection works complete in all respect and fit for use.	*[Nil]
		A.1- Widening and repairs of Major Bridges	
		(1) Foundation	[Nil]
		(2) Sub-structure	[Nil]
		Super-structure (including bearings)	
		(a) Super-structure: casting of girder / fabrication of girders (steel)	[Nil]
		(b) Super-structure: casting of segments	[Nil]
		(c) Super-structure: erection of girder, deck slab	[Nil]

Item	Weightage in % of CP	Stage for Payment	Percentage
1	2	3	4
		and bearings	
		(4) Wearing Coat including expansion joints	[Nil]
		(5) Miscellaneous Items like handrails, crash barrier, road markings etc.	[Nil]
		(6) Wing walls/return walls	[Nil]
		(7) Guide bunds, River Training works etc.	[Nil]
		(8) Approaches (including Retaining walls, stone pitching and protection works)	[Nil]
		A.2-New Major Bridges	
		(1) Foundation	6.78%
		(2) Sub-structure	13.46%
		Super-structure (including bearings)	
		(a) Super-structure: casting of girder / fabrication of girders (steel)	64.07%
		(b) Super-structure: casting of segments	[Nil]
		(c) Super-structure: erection of girder, deck slab and bearings	10.27%
		(4) Wearing Coat including expansion joints	1.53%
		(5) Miscellaneous: stone pitching, protection works, excluding retaining walls / reinforced earth walls etc.	3.89%
		(6) Wing walls/return walls	[Nil]
		(7) Guide bunds, River Training works etc.	[Nil]
		(8) Retaining walls / reinforced earth walls etc.	
		(a) Panel Casting	[Nil]
		(b) Erection of panel / construction of retaining wall	[Nil]
		B.1-Widening and repairs of (a) ROB (b) RUB	
		(1) Foundations	[Nil]
		(2) Sub-Structure	[Nil]
		(3) Super-Structure (Including bearings)	[Nil]
		(4) Wearing Coat(a)in case of ROB- wearing coat including expansion joints complete in all respects as specified and (b) in case of RUB-rigid pavement under RUB including drainage facility complete in all respects as specified	[Nil]
		(5) Miscellaneous Items like handrails, crash barrier, road markings etc.	[Nil]
		(6) Wing walls/Return walls	[Nil]
		(7) Approaches (Including Retaining walls, Stone Pitching and protection works)	[Nil]
		B.2-NewROB/RUB	
		(1) Foundations	[Nil]
		(2) Sub-Structure	[Nil]
		(3) Super-Structure (Including bearings)	[Nil]
		(4) Wearing Coat (a) in case of ROB- wearing coat including expansion joints complete in all respects as specified and (b) in case of RUB-rigid pavement under RUB including drainage facility complete in	[Nil]

Item	Weightage in % of CP	Stage for Payment	Percentage
1	2	3	4
		all respects as specified	
		(5) Miscellaneous Items like handrails, crash barrier, road markings etc.	[Nil]
		(6) Wing walls/Return walls	[Nil]
		(7) Approaches (including Retaining walls/Reinforced Earth wall, stone pitching and protection works)	[Nil]
		C.1- Widening and repair of Elevated Section/Flyovers/Grade Separators	
		(1) Foundations	[Nil]
		(2) Sub-Structure	[Nil]
		(3) Super-Structure (Including bearings)	[Nil]
		(4) Wearing Coat including expansion joints	[Nil]
		(5) Miscellaneous Items like handrails, crash barrier, road markings etc.	[Nil]
		(6) Wing walls/Return walls	[Nil]
		(7) Approaches (including Retaining walls/Reinforced Earth wall, stone pitching and protection works)	[Nil]
		C.2- New Elevated Section/Flyovers/Grade Separators	
		(1) Foundations	[Nil]
		(2) Sub-Structure	[Nil]
		(3) Super-Structure (Including bearings)	[Nil]
		(4) Wearing Coat including expansion joints	[Nil]
		(5) Miscellaneous Items like handrails, crash barrier, road markings etc.	[Nil]
		(6) Wing walls/Return walls	[Nil]
		(7) Approaches (including Retaining walls/Reinforced Earth wall, stone pitching and protection works)	[Nil]
Other Works	27.43 %	(i) Toll Plaza	[Nil]
		(ii) Road side drains	5.39%
		(iii) Road signs, markings, km stones, safety devices etc.	3.21%
		(iv) Project facilities	
		a) Bus Bay with Passenger Shelter	0.89%
		b) Truck Lay-byes	[Nil]
		c) Junction	1.71%
		d) Rest Area	[Nil]
		e) Diversion Works	[Nil]
		(v) Road side Plantation	[Nil]
		(vi) Repair of Protection Works other than approaches to the bridges, elevated sections/flyover/grade separators and ROB's/ RUBs	[Nil]
		(vii) Safety & Traffic Management during const.	[Nil]
		(viii) Breast Wall	15.20%
		(ix) Toe Wall	[Nil]
		(ix) Gabion Structure	47.90%
		(x) Retaining Wall	7.32%

Item	Weightage in % of CP	Stage for Payment	Percentage
1	2	3	4
Electrical Utilities & Public Health Utilities (Water Pipe Line & Sewage Line)	0.15%	(xi) Thrie Metal Beam Crash Barrier	8.32%
		(xi) Parapet Wall	[Nil]
		(xii) Site Clearance & Dismantling	0.99%
		(xiii) Protection Works (Turfing with sods and Slope Protection with Coir Mat, Bamboo plantation)	9.07%
		a) EHT line	[Nil]
		b) EHT Crossing	[Nil]
		c) HT/LT line (including transformers if any)	100%
		d) HT / LT line crossings	
		e) Water Pipe Line	[Nil]
		f) Water Pipe Line Crossing	[Nil]
		g) Sewage Line	[Nil]
		h) Sewage Line Crossing	[Nil]

1.3 Procedure of estimating the value of work done

1.3.1 Road works

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

Table 1.3.1

Stage of Payment	Percentage weightage	Payment Procedure
A- Widening & Strengthening of road		
(1) Earthwork up to top of the sub-grade	[Nil]	Unit of measurement is linear length. Payment of each stage shall be made on pro-rata basis on completion of a stage in a length of not less than 500m.
(2) Sub-base Course	[Nil]	
(3) Non-bituminous Base course	[Nil]	
(4) Bituminous Base course	[Nil]	
(5) Wearing Coat	[Nil]	
(6) Widening and repair of culverts	[Nil]	Cost of ten completed culverts shall be determined on pro-rata basis with respect to the total number of culverts.
B.1- Reconstruction/New 2-Lane Realignment/Bypass (Flexible Pavement)		
(1) Earthwork up to top of the sub-grade	64.94%	Unit of measurement is linear length. Payment of each stage shall be made on pro-rata basis on completion of a stage in a length of not less than 500m. In case of Hill Cutting, the payment procedure will be as under: Hill Cutting: 40% of weightage specified in B1 Preparation of sub-grade: 40% of weightage specified in B1
(2) Sub-base Course	4.46%	
(3) Non-bituminous Base course	5.26%	
(4) Bituminous Base course	5.39%	
(5) Wearing Coat	3.43%	
B.2- Reconstruction/New 8-Lane Realignment/Bypass (Rigid Pavement)		
(1) Earthwork up to top of the sub-grade	[Nil]	Unit of measurement is linear length. Payment of each stage shall be made on pro-rata basis on completion of a stage in a length of not less than 500m.
(2) Sub-base Course	[Nil]	
(3) Dry Lean Concrete (DLC) Course	[Nil]	
(4) Pavement Quality Control (PQC) Course	[Nil]	
C.1- Reconstruction/New Service Road/ Slip Road (Flexible Pavement)		Unit of measurement is linear length. Payment of each stage shall be made on pro-rata basis on

Stage of Payment	Percentage weightage	Payment Procedure
(1) Earthwork up to top of the sub-grade	[Nil]	completion of a stage in a length of not less than 500m.
(2) Sub-base Course	[Nil]	
(3) Non-bituminous Base course	[Nil]	
(4) Bituminous Basecourse	[Nil]	
(5) Wearing Coat	[Nil]	
C.2- Reconstruction/New Service road (Rigid Pavement)		Unit of measurement is linear length. Payment of each stage shall be made on pro-rata basis on completion of a stage in a length of not less than 500m.
(1) Earthwork up to top of the sub-grade	[Nil]	
(2) Sub-base Course	[Nil]	
(3) Dry Lean Concrete (DLC) Course	[Nil]	
(4) Pavement Quality Control (PQC) Course	[Nil]	
D-Reconstruction & New Culverts on existing road, realignments, bypasses		Cost of each culvert shall be determined on pro-rata basis with respect to the total number of culverts. Payment shall be made on the completion of at least 01 (one) culvert.
Culverts (length <6m)	16.52%	

@ For example, if the total length of bituminous work to be done is 100 km, the cost per km of bituminous work shall be determined as follows:

$$\text{Cost per km} = P \times \text{weightage for road work} \times \text{weightage for bituminous work} \times (1/L)$$

Where,

P = Contract Price

L = Total length in km

Similarly, the rates per km for other stages shall be worked out accordingly.

Note: The length affected due to law-and-order problems or litigation during execution due to which the Contractor is unable to execute the work, may be deducted from the total project length for payment purposes. The total length calculated here is only for payment purposes and will not affect and referred in other clauses of the Contract Agreement.

1.3.2 Minor Bridges and Underpasses/Overpasses.

Procedure for estimating the value of Minor bridge and Underpasses/Overpasses shall be as stated in table 1.3.2:

Table 1.3.2

Stage of Payment	Weightage	Payment Procedure
1	2	3
A.1-Widening and repairs of Minor Bridges (length >6m & <60m)	Nil	Cost of each minor bridge shall be determined on pro-rata basis with respect to the total linear length of the minor bridges. Payment shall be made on the completion of widening & repair works of a minor bridge.
A.2- New Minor Bridges (length > 6m & < 60m)		
(1) Foundation: On completion of the	14.03%	Foundation: Payment against foundation shall be made on pro-rata basis on completion of at least two

Stage of Payment	Weightage	Payment Procedure
foundation work including foundation for wing and return wall		foundations. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
(2)Sub-Structure: On completion of abutments, piers upto the abutment / pier cap.	30.26%	Sub Structure: Payment sub structure shall be made on pro-rata basis on completion of at least two substructure upto abutment / pier cap level of each bridge.
(2) Super-structure: On completion of the super-structure in all respects including wearing coat, bearings, expansion joints, hand rails, crash barriers, road, signs & markings, tests on completion etc. complete in all respect.	46.29%	Super-structure: Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super structure of at least one span in all respects as specified in the column of "Stage of Payment" in this sub-clause.
(3) Approaches: On completion of approaches including Retaining walls, stone pitching, protection works complete in all and fit for use	9.42%	Approaches: Payment shall be made on pro-rata basis on completion of a stage i.e. completion of approaches in all respect as specified in the column of "Stage of Payment" in this sub-clause.
(4) Guide Bunds and River Training Works: On completion of Guide Bunds and river training works complete in all respects	Nil	Guide Bunds and River Training Works: Payment shall be made on pro-rata basis on completion of a stage i.e. completion of Guide Bund sand River training Works in all respects as specified
B.1- Widening and repairs of underpasses/overpasses	[Nil]	Cost of each underpass/overpass shall be determined on pro-rata basis with respect to the total linear length of the underpasses/ overpasses. Payment shall be made on the completion of widening & repair works of an underpass/overpass.
B.2- New Underpasses/Overpasses		
(1) Foundation + Sub-Structure: On completion of the foundation work including foundations for wing and return walls, abutments, piers up to the abutment/pier cap.	[Nil]	Foundation: Cost of each Underpass/ Overpass shall be determined on pro- rata basis with respect to the total linear length (m) of the Underpasses/Overpasses. Payment against foundation shall be made on pro-rata basis on completion of a stage i.e. Not less than 25% of the scope of foundation of each Underpasses/ Overpasses. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
(2) Super-structure: On completion of the super-structure in all respects including wearing coat, bearings, expansion joints, hand rails, crash barriers, road signs & markings, tests on completion etc. complete in all respect. Wearing Coat (a) in case of Overpass-wearing coat including	[Nil]	Super-structure: Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super- structure of at least one span in all respects as specified in the column of "Stage of Payment" in this sub-clause. In case of structures where pre-cast girders have been proposed by the Contractor, 50% of the stage payment shall be due and payable on casting of girders for each span and balance 50% of the stage payment shall be made on completion of stage specified as above

Stage of Payment	Weightage	Payment Procedure
expansion joints complete in all respects as specified and (b) in case of underpass- rigid pavement including drainage facility complete in all respects as specified.		
(3) Approaches: On completion of approaches including Retaining walls/ Reinforced Earth walls, stone pitching, protection works complete in all respect and fit for use.	[Nil]	Payment shall be made on pro-rata basis on completion of a stage in all respects as specified

1.3.3 Major Bridge works, ROB/RUB and Structures.

Procedure for estimating the value of Major Bridge works, ROB/RUB and Structures shall be as stated in table 1.3.3:

Table 1.3.3

Stage of Payment	Weightage	Payment Procedure
A.1- Widening and repairs of Major Bridges		
(1) Foundation	[Nil]	Foundation: Cost of each Major Bridge shall be determined on pro-rata basis with respect to the total linear length (m) of the Major Bridge. Payment against foundation shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of foundation of the major Bridge. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
(2) Sub-structure	[Nil]	Sub-structure: Payment against sub- structure shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of sub-structure of major bridge.
(3) Super-structure (including bearings)	[Nil]	Super-structure: Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super- structure including bearings of at least one span in all respects as specified. In case of structures where pre-cast girders have been proposed by the Contractor, 50% of the stage payment shall be due and payable on casting of girders for each span and balance 50% of the stage payment shall be made on completion of stage specified as above
(4) Wearing Coat including expansion joints	[Nil]	Wearing Coat: Payment shall be made on completion of wearing coat including expansion joints complete in all respects as specified.
(5) Miscellaneous Items like handrails, crash barrier, road markings etc.	[Nil]	Miscellaneous: Payments shall be made on completion of all miscellaneous works like handrails, crash barriers, road markings etc. complete in all respects as specified.
(6) Wing walls/return walls	[Nil]	Wingwalls/return walls: Payments shall be made on completion of all wing walls/return walls complete in all respects as specified.
(7) Guide Bunds, River Training	[Nil]	Guide Bunds, River Training works: Payments shall be made

Stage of Payment	Weightage	Payment Procedure
works etc.		on completion of all guide bunds/river training works etc. complete in all respects as specified.
(8) Approaches (including Retaining walls, stone pitching and protection works)	[Nil]	Approaches: Payments shall be made on completion of the scope of stage.
A.2-NewMajorBridges		
(1) Foundation	6.78%	Foundation: Cost of each Major Bridge shall be determined on pro-rata basis with respect to the total linear length (m) of the Major Bridge. Payment against foundation shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of foundation of the major bridge. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
(2) Sub-structure	13.46%	Sub-structure: Payment against Sub-Structure shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of Sub-Structure of the bridge subject to completion of atleast two foundations along with sub-structure upto abutment/pier cap level of the bridge
(3) Super-structure: including girder, deck slab, bearings (excluding wearing coat and expansion joints)		
(a) Super-structure: casting of girder / fabrication of girders (steel)	64.07%	Super-structure (casting of girder): Unit of measurement is numbers. Payment against casting of girder shall be made on pro rata basis with respect to total number of girders required in the structure on completion of a stage i.e. not less than completion of casting of atleast five girders of the structures.
(b) Super-structure: casting of segments	[Nil]	Super-structure (casting of segments) : Unit of measurement is numbers. Payment against casting of segment shall be made on pro rata basis with respect to total number of segments required in the structure on completion of a stage i.e. not less than completion of casting of atleast 10 segments of the structures.
(c) Super-structure: erection of girder, deck slab and bearings	10.27%	Super-structure(erection of girder, deck slab and bearings) : Payment shall be made on pro rata basis on completion of a stage i.e. completion of super structure including bearings of at least one span in all respects as specified.
(4) Other Ancillary works: wearing coat, expansion joints, hand rails, crash barriers, tests on completion etc. completion in all respects.	1.53%	Payment shall be made on pro rata basis on in all respects as specified, for each structure.
(5) Miscellaneous: stone pitching, protection works, excluding retaining walls / reinforced earth walls etc.	3.89%	Payment shall be made on pro rata basis on in all respects as specified, for each structure.
(6) Wing walls/return walls upto full height.	[Nil]	Wing walls/return walls upto full height: Payments shall be made on completion of all wing walls/return walls for a bridges as per Weightage given in the table, complete in all respects as specified.
(7) Guide bunds, River Training works etc.	[Nil]	Payment shall be made on pro rata basis on in all respects as specified, for each structure.
(8) Retaining walls / reinforced		

Stage of Payment	Weightage	Payment Procedure
earth walls etc.		
(a) Panel Casting:	[Nil]	Panel Casting: Unit of measurement is area in Sqm. Payment against casting of panels shall be made on pro rata basis with respect to total area panels required for the structure on completion of a stage i.e. not less than completion of casting of 25% of scope of the RE wall panel of each bridge.
(b) Erection of panel / construction of retaining wall	[Nil]	Erection of panel / construction of retaining wall: Unit of measurement is area in Sqm. Payment shall be made on pro rata basis on completion of a stage i.e. completion of erection of panels / construction of retaining wall complete in all respect for atleast 25% scope of work for each structure.
B.1- Widening and repairs of (a)ROB (b)RUB		
(1) Foundations	[Nil]	Foundation: Cost of each ROB/RUB shall be determined on pro-rata basis with respect to the total linear length (m) of the ROB/RUB. Payment against foundation shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of foundation of the ROB/RUB. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
(2) Sub-Structure	[Nil]	Sub-structure: Payment against sub- structure shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of sub- structure of ROB/RUB.
(3) Super-Structure (Including bearings)	[Nil]	Super-structure: Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super- structure including bearings of at least one span in all respects as specified. In case of structures where pre-cast girders have been proposed by the Contractor, 50% of the stage payment shall be due and payable on casting of girders for each span and balance 50% of the stage payment shall be made on completion of stage specified as above
(4) Wearing Coat (a) in case of ROB-wearing coat including expansion joints complete in all respects as specified and (b) in case of RUB-rigid pavement under RUB including drainage facility complete in all respects as specified	[Nil]	Wearing Coat: Payment shall be made on completion (a) in case of ROB-wearing coat including expansion joints complete in all respects as specified and (b) in case of RUB-rigid pavement under RUB including drainage facility complete in all respects as specified.
(5) Miscellaneous Items like handrails, crash barrier, road markings etc.	[Nil]	Miscellaneous: Payments shall be made on completion of all miscellaneous works like handrails, crash barriers, road markings etc. complete in all respects as specified.
(6) Wing walls/Return walls	[Nil]	Wingwalls/return walls: Payments shall be made on completion of all wing walls/return walls complete in all respects as specified.
(7) Approaches (Including Retaining walls, Stone Pitching and protection works)	[Nil]	Payments shall be made on pro-rata basis on completion of 20% of the total area.
B.2-New ROB/RUB		

Stage of Payment	Weightage	Payment Procedure
(1) Foundation	[Nil]	Foundation: Cost of each ROB/RUB shall be determined on pro-rata basis with respect to the total linear length (m) of the ROB/RUB. Payment against foundation shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of foundation of the ROB/RUB.
(2) Sub-structure	[Nil]	Sub-structure: Payment against sub- structure shall be made on pro-rata basis on completion of a stage i.e. Not less than 25% of the scope of sub- structure of ROB/RUB.
(3) Super-structure (including bearing)	[Nil]	Super-structure: Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super- structure including bearings of at least one span in all respects as specified. In case of structures where pre-cast girders have been proposed by the Contractor, 50% of the stage payment shall be due and payable on casting of girders for each span and balance 50% of the stage payment shall be made on completion of stage specified as above
(4) Wearing Coat (a) in case of ROB- wearing coat including expansion joints complete in all respects as specified and (b) in case of RUB-rigid pavement under RUB including drainage facility complete in all respects as specified	[Nil]	Wearing Coat: Payment shall be made on completion (a) in case of ROB-wearing coat including expansion joints complete in all respects as specified and (b) In case of RUB-rigid pavement under RUB including drainage facility complete in all respects as specified.
(5) Miscellaneous Items like handrails, crash barrier, road markings etc.	[Nil]	Miscellaneous: Payments shall be made on completion of all miscellaneous works like handrails, crash barriers, road markings etc. Complete in all respects as specified.
(6) Wing walls/Return walls	[Nil]	Wingwalls/return walls: Payments shall be made on completion of all wing walls/return walls complete in all respects as specified.
(7) Approaches (including Retaining walls/Reinforced Earth wall, stone pitching and protection works)	[Nil]	Payment shall be made on pro-rata basis on completion of a stage in all respects as specified
C.1-Widening and repairs of Elevated Section/ Flyovers/Grade Separators		
(1) Foundations	[Nil]	Foundation: Cost of each structure shall be determined on pro-rata basis with respect to the total linear length (m) of the structure. Payment against foundation shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of foundation of the structure. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
(2) Sub-Structure	[Nil]	Sub-structure: Payment against sub- structure shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of sub- structure of structure.
(3) Super-Structure (Including bearings)	[Nil]	Super-structure: Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super- structure including bearings of at least one span in all respects as specified. In case of structures where pre-cast girders have

Stage of Payment	Weightage	Payment Procedure
		been proposed by the Contractor, 50% of the stage payment shall be due and payable on casting of girders for each span and balance 50% of the stage payment shall be made on completion of stage specified as above
(4) Wearing Coat including expansion joints	[Nil]	Wearing Coat: Payment shall be made on completion of wearing coat including expansion joints complete in all respects as specified.
(5) Miscellaneous Items like handrails, crash barrier, road markings etc.	[Nil]	Miscellaneous: Payments shall be made on completion of all miscellaneous works like handrails, crash barriers, road markings etc. Complete in all respects as specified.
(6) Wing walls/Return walls	[Nil]	Wingwalls/return walls: Payments shall be made on completion of all wing walls/return walls complete in all respects as specified.
(7) Approaches (including Retaining walls/Reinforced Earth wall, stone pitching and protection works)	[Nil]	Payment shall be made on pro-rata basis on completion of a stage in all respects as specified
C.2- New Elevated Section/ Flyovers/Grade Separators		
(1) Foundations	[Nil]	Foundation: Cost of each structure shall be determined on pro-rata basis with respect to the total linear length (m) of the structure. Payment against foundation shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of foundation of the structure. In case where load testing is required for foundation, the trigger of first payment shall include load testing also where specified.
(2) Sub-Structure	[Nil]	Sub-structure: Payment against sub- structure shall be made on pro-rata basis on completion of a stage i.e. not less than 25% of the scope of sub- structure of structure.
(3) Super-Structure (Including bearings)	[Nil]	Super-structure: Payment shall be made on pro-rata basis on completion of a stage i.e. completion of super- structure including bearings of at least one span in all respects as specified. In case of structures where pre-cast girders have been proposed by the Contractor, 50% of the stage payment shall be due and payable on casting of girders for each span and balance 50% of the stage payment shall be made on completion of stage specified as above
(4) Wearing Coat including expansion joints	[Nil]	Wearing Coat: Payment shall be made on completion of wearing coat including expansion joints complete in all respects as specified.
(5) Miscellaneous Items like handrails, crash barrier, road markings etc.	[Nil]	Miscellaneous: Payments shall be made on completion of all miscellaneous works like handrails, crash barriers, road markings etc. complete in all respects as specified.
(6) Wing walls/Return walls	[Nil]	Wingwalls/return walls: Payments shall be made on completion of all wing walls/return walls complete in all respects as specified.
(7) Approaches (including Retaining walls/Reinforced Earth wall, stone pitching and protection works)	[Nil]	Payments shall be made on pro-rata basis on completion of 20% of the total area.

Note: (1) In case of innovative Major Bridge projects like cable suspension/cable stayed/ Extra Dozed

and exceptionally long span bridges, the schedule may be modified as per site requirements before bidding with due approval of Competent Authority.

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

1.3.4 Other works.

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

Table 1.3.4

Stage of Payment	Weightage	Payment Procedure
1	2	3
(i) Toll Plaza	Nil	Payment shall be made on pro rata basis for completed facilities.
(2) Road side drains	5.39%	Unit of measurement is linear length. Payment shall be made on pro rata basis on completion of a stage in a length of not less than 5% (five percent) of the total length.
(3) Road signs, markings, km stones, safety devices etc	3.21%	
(4) Project Facilities		Payment shall be made on pro rata basis for completed facilities.
a) Bus Bay with Passenger Shelter	0.89%	
b) Truck Lay-byes	[Nil]	
c) Junction	1.71%	
(8) Protection Works		Unit of measurement is linear length. Payment shall be made on pro rata basis on completion of a stage in a length of not less than 5% (five percent) of the total length.
(a) Retaining Wall	7.32%	
(b) Breast Wall	15.20%	
(c) Gabion Structure	47.90%	
(d) Thrie Metal Beam Crash Barrier	8.32%	
(9) Site Clearance & Dismantling	0.99%	Unit of measurement is linear length. Payment shall be made on pro rata basis on completion of a stage in a length of not less than 5% (ten percent) of the total length.
(10) Other Works (Protection Works (Turving with sods and Slope Protection with Coir Mat, Bamboo plantation)	9.07%	Unit of measurement is square metre. Payment shall be made on pro rata basis on completion of a stage in a length of not less than 10% (ten percent) of the total length.

1.3.5 Utility Shifting

Procedure for estimating the value of other works done shall be as stated in table 1.3.5

Table 1.3.5

Stage of Payment	Weightage	Payment Procedure
1	2	3
Electrical Utilities & Public Health Utilities(Water Pipe Line & Sewage Line)		
a) EHT line	[Nil]	Unit of measurement is as per completed activities. Cost per activity shall be determined on pro-rate basis as per its weightage with reference to total cost of EHT line. Payment shall be made for completed activity. (The average weightage of major activities (only for payment purpose) in shifting work is (i) Erection of Poles-20%, (ii) Conductor stringing including laying of cable-30%, (iii) DTR erection (if involved)-15% and (iv) Charging of line including dismantling and site clearance-35% (with DTR) and 50% (without DTR)
b) EHT Crossing	[Nil]	Cost of each crossing shall be determined on pro-rata basis with reference to total no. of crossings. Payment shall be made for not less than 25% of the crossings subject to a minimum of 4 crossings.
c) HT/LT line (including transformers if any)	100%	Unit of measurement is as per completed activities. Cost per activity shall be determined on pro-rata basis as per its weightage with reference to total cost of LT / HT line. Payment shall be made for completed activity. (The average weightage of major activities (only for payment purpose) in shifting work is (i) Erection of Poles-20% (ii) Conductor stringing including laying of cable-30% (iii) DTR erection (if involved) -10% and (iv) Charging of line including dismantling and site clearance-40% (with DTR) and 50% without DTR)
d) HT / LT line crossings		Cost of each crossing shall be determined on pro-rata basis with reference to total no. of crossings. Payment shall be made for not less than 25% of the crossings subject to a minimum of 10 crossings.
e) Water Pipe Line	[Nil]	Unit of measurement is as per completed activities. Cost per activity shall be determined on pro-rata basis as per its weightage with reference to total cost of pipe line. Payment shall be made for completed activity. (The average Weightage of major activities (only for payment purpose) in shifting work is laying of pipe-50%, Charging of line including all miscellaneous works and dismantling and site clearance-50%)
f) Water Pipe Line Crossing	[Nil]	Cost of each crossing shall be determined on pro-rata basis with reference to total no. of crossings. Payment shall be made for not less than 25% of the

Stage of Payment	Weightage	Payment Procedure
		crossings subject to a minimum of 8 crossings.
g) Sewage Line	[Nil]	Unit of measurement is as per completed activities. Cost per activity shall be determined on pro-rata basis as per its weightage with reference to total cost of pipe line. Payment shall be made for completed activity. (The average weightage of major activities (only for payment purpose) in shifting work is laying of pipe-50%, Charging of line including all miscellaneous works and dismantling and site clearance-50%)
h) Sewage Line Crossing	[Nil]	Cost of each crossing shall be determined on pro-rata basis with reference to total no. of crossings. Payment shall be made for completed activity. (The average weightage of major activities in shifting work is laying pipe-50%, Charging of line including all miscellaneous works and dismantling and site clearance-50%)

2. Procedure for payment for Maintenance

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

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

