

GOVERNMENT OF INDIA
MINISTRY OF ROAD TRANSPORT & HIGHWAYS
IAHE Campus
A-5, Sector-62
Noida, Uttar Pradesh

RW/NH-12014/West Bengal (1)/16-S&R (B)

Dated: 4th March, 2016

To

The Secretary (PWD)
Government of West Bengal,
Writers Building, Kolkata-700 001
West Bengal.

Sub: Construction of twins 2-lane ROB and its approaches in replacement of level crossing at Km. 652.600 on NH-31 (Railway km. 20/7-8) between Neora & Lataguri at lataguri in the state of West Bengal.

[Job No.NH-31/(WB)/(1)/15-16-008-S&R(B)]

Ref:- Chief Engineer (NH) West Bengal's letter No. 111/CE/NH Dated 15.01.2016.

Sir,

I am directed to convey the technical, financial and administrative approval of the President of India to estimate for the work mentioned in the subject as per the following details subject to the condition stipulated in the attached technical note:

- | | |
|--|------------------|
| 1. (a) Estimate submitted by State Govt./other agency | |
| 2. (i) (excluding plantation Work) | Rs. 7410.12 lakh |
| (ii) 1% of Civil Work for plantation work
& its maintenance | Rs. 0 |
| (iii) Total of (i) & (ii) above | Rs. 7410.12 lakh |
| (b) Amount as modified in the Ministry
(Including Plantation work & its maintenance) | Rs. 7406.27 lakh |
| 3. Amount of technical approval
Including Plantation work & its maintenance)
(Inclusive of agency charges, as applicable) | Rs. 7406.27 lakh |
| 4. Amount of financial sanction including
Plantation work & its maintenance
(Inclusive of agency charges, as applicable)
[(Total Project Cost) (TPC)] | Rs. 7406.27 lakh |
| 5. Amount of tree plantation (@1% of Civil Work cost)
To be transferred to NHAI in Green Highways Fund
Account for this purpose) | Rs. 56.32 lakh |

[Rs. Seventy four crore six lakhs twenty seven thousand only]

2. This sanction letter is further subject to the following conditions:
 - (i) The work shall be executed by inviting the tender on EPC mode.
 - (ii) The work should be completed as targeted and indicated in the enclosed technical note.
 - (iii) In accordance with the order contained in this Ministry's Circular letter No. RW/NH-11026/2/99- US(D-I) dated 13-1-2001 issued in supersession of earlier Circular No. RW/NH-11026/2/99- US(D-I) dated 13-1-2000, if the cost of tender exceeds 5% of the sanctioned estimated cost, the revised estimate be got sanctioned from the Ministry. Further, the tenders for the work shall be invited by adopting e-procurement / e-tendering procedure as per Ministry's Circular No. RW/NH- 24035/4/2008-P&M/PIC dated 21.05.2011, in addition to guidelines issued by this Ministry vide Circular letter No. 11024/3/99-US(D-I) dated 09.03.2000, No. RW/NH-24035/4/2008-P&M dated 21.05.2010 and No. NH-12037/67/2010/LWE dated 02.08.2010. The work shall be awarded as per guidelines issued by the Ministry vide Letter No. NH-15015/29/2001-PL dated 05.07.2001.
 - (iv) 1% of the Civil Work cost is set apart for Highway Plantation and its Maintenance as indicated Para 1 above. This Cost will be transferred to NHAI to keep in a separate Fund Account called "Green Highways Fund". NHAI will act only as a Fund Manager for maintaining the Account and releasing payments based on the request made by Regional Officer, MORTH and recommendation of monitoring agency, IHMCL. This Fund will be utilized for Plantation & its Maintenance work on all stretches of National Highways.
 - (v) The expenditure during the current financial year on this work as also on other sanctioned should not exceed the allotment placed at the disposal of the State Government during the year.

3. The expenditure is debitable to Major Head: 5054-Capital Outlays on Roads & Bridges; Sub Major Head : 01-National Highways; Minor Head : 01.337-Road Works; 01-Works under Road Wing; 01.02-Other Scheme; 01.02.53- Major Works for which the corresponding Demand No. for the current financial year 2015-16 is '83'-Ministry of Road Transport & Highways.

4. Quarterly progress reports in the stipulated proforma may be sent to this Ministry as is being done for all sanctioned works. The status of transfer of funds for plantation and its maintenance to NHAI may also be informed quarterly.

5. The technical approval and financial sanction may lapse after six months from the date of its issue in case the work is not awarded within that period.

6. The following physical and financial target shall be strictly adhered to:

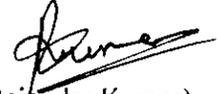
Financial Year	Cumulative progress	
	Physical (%)	Financial (Rs.In lakh)
2015-16	5.0	370.31
2016-17	50.0	3703.14
2017-2018	98.25	7276.66
2018-2019	98.50	7295.18
2019-2020	99.0	7332.21
2020-2021	99.50	7369.24
2021-2022	100.0	7406.27

7. The Regional Officer, MORTH, West Bengal will be the Drawing and Disbursing Officer.

08. This sanction issues with the concurrence of the Finance Division vide their U.O No. 3854/TF-II/2015 dated 25.02.2016.

Encl: As above.

Yours faithfully,



(Rajender Kumar)

Under Secretary to the Govt. of India

Copy with a copy of the Technical Note forwarded to:-

1. The Accountant General, West Bengal, Kolkata.
2. The Pay & Accounts Officer, Ministry of Road Transport & Highways (RW), IDA Building, Jam Nagar House, Shahjahan Road, New Delhi.
3. The Regional Pay & Accounts Officer (NH), Ministry of Road Transport & Highways, Purta Bhawan, Ground Floor, Salt Lake, Kolkata-700 091.
4. The Principal Director of Audit, Economic and Services Ministries, IP Estate, New Delhi.
5. The Chief Engineer (NH), Government of West Bengal, PW(Roads) Directorate, Works Branch, Kolkata.

Encl: As above.



(Rajender Kumar)

Under Secretary to the Govt. of India

Copy to:

CE(P-3) / SE(P-3) / EE(P-3) / W&A Section, TF-II Finance Wing / Monitoring Cell / Guard File.



GOVERNMENT OF INDIA
MINISTRY OF ROAD TRANSPORT & HIGHWAYS

IAHE,
A-5, Sector-62,
Noida-201301

RW-NH-12014/West Bengal(1)/2016 - S&R(B)

Dated: 4th Mar, 2016

TECHNICAL NOTE

1.	Name of work	:	Construction of 2-Lane ROB & its approaches in replacement of level crossing at Km 652.600 on NH-31 (Railway Km 20/7-8) between Neora & Lataguri at Lataguri in the State of West Bengal.	
2.	State	:	West Bengal	
3.	NH No.	:	NH-31	
4.	Estimated cost	:	As forwarded by State P.W.D.	As modified in the Ministry
	(Rs. in lakh)		7410.12	7406.27
5.	Reference	:	1. CE (NH), West Bengal vide letter no. 111/CE/NH dated 15.01.2016.	
6.	Job No.	:	NH-31/(WB)/(1)/15-16-008-S&R(B)	

COMMENTS

1. Scope of work:

Scope of the work includes Construction of 2-Lane ROB & its approaches in replacement of level crossing at Km 652.600 on NH-31 (Railway Km 20/7-8) between Neora & Lataguri at Lataguri in the State of West Bengal.

2. Provisions as allowed:

2.1 Site:

The State PWD has proposed to construct the ROB along the existing alignment. Further, no diversion road is required to be constructed. The ROB will cross the Railway line with skew angle of 47 Deg. Lump sum provision of Land Acquisition is involved in the proposal.

2.2 Alignment:

The ROB is proposed along the existing alignment. NH-31 crosses the railway line at skew angle of 47°. The project starts at km 651.690 (Malbazar

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Side) and ends at km 653.560 (Maynaguri side). The total length of project is 1.870.

2.3 Details of ROB:

S. No.	Item	Description	Remarks
1	ROB Proper	98.0 m (1 x 19.0m +1 x 60.0m + 1x 19.0 m c/c Exp. Joint)	Steel girder & Steel Box girder with RCC Slab
1.1	Vertical Clearance	6.525m	
1.2	Skew Angle	47 deg	
2	Approach towards Malbazar Side		
2.1	Approaches with R E Wall	599 m	Both side (confirming to MoRT&H specification)
2.2	Valley Curve	100 m	
2.3	Submit Curve	340 m	
3	Approach towards Mayanaguri side		
3.1	Approaches with R E Wall	653 m	Both side (confirming to MoRT&H specification)
3.2	Valley Curve	100 m	
3.3	Submit Curve	340 m	
4	Total length of ROB including approaches	1350 m	ROB Proper + Viaduct + Approaches with RE wall
5	Carriageway Width	11.0 m	On ROB Proper
5.1	Overall Width of ROB proper	16.0 m	Crash Barrier 2X.5m+Footpath 2X1.5m + RCC railing 2X.5m on railway portion
6	Carriageway Width	7.0 m	On Approaches
7	Approach Road Gradient	1 in 40	

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8	Design Speed	100/80 kmph	100 km per hr for vertical profile and 80 km per hour for horizontal profile
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2.4. Approaches

It is proposed to construct service road on both sides of ROB with carriageway width 2 x 7.0m with following provisions.

Bituminous Concrete	-	40 mm
Dense Bituminous Macadam	-	85 mm
Wet Mix Macadam	-	250 mm
Granular Sub-base	-	200 mm

2.5. Service Road

It is proposed to construct service road on both sides of ROB with carriageway width of 5.5 m with following provisions.

Bituminous Concrete	-	40 mm
Dense Bituminous Macadam	-	60 mm
Wet Mix Macadam	-	250 mm
Granular Sub-base	-	230 mm

2.6 ROB Proper

a) Foundation

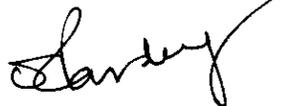
Based on the geotechnical Investigation data, State PWD has Proposed Pile foundation of 1.2m dia in RCC M35 concrete for abutments and piers. The same may be agreed for estimate purpose.

b) Substructure:

- Solid Wall type RCC piers in RCC M35 Grade.
- Cap over pier and abutment in RCC M35.
- Dirt wall over abutment cap in RCC M35.
- Pot-PTFE Bearing with seismic restrainers.
- Strip seal expansion Joint.

c) Superstructure

- Steel girder & Steel Box Girder with RCC Slab in M 35 grade.
- RCC Crash Barrier on M-40 Grade
- Wearing Course: 40mm Bituminous Concrete overlaid with 25 mm Mastic Asphalt



- G.I Drainage Spouts at spacing 5 m c/c.
- Approach slab in RCC M-30 as per Ministry's circular No.RW/NH-34015/2/86-S&R dt. 22.6.1994

2.7 R E Wall

Construction of RE Wall for 599 m on Malbazar Side and 653 m on Mayanaguri side has been proposed by PWD. The RE Wall shall conform to the specification laid down in section 3100 of MoRT&H Specification for Road and Bridge Work.

2.8 Miscellaneous Provision:

- a) Drainage & Protection works.
- b) Traffic sign, marking & Appurtenances.
- c) Stairs to footpath on ROB Proper.
- d) 2 Nos. of Culverts

2.9 Status of Land Acquisition

State PWD has intimated that, the ROB is proposed on existing alignment. The proposed ROB and service roads have been accommodated within the ROW of 36m. The consultant has proposed a lump sum provision for Land Acquisition amounting to Rs. 300 Lakhs. The amount provided in the estimate has been allowed for estimate purpose. The same may be allowed.

2.10 Tolling Requirement

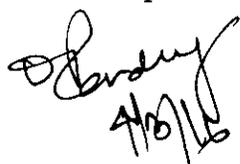
Provision of toll plaza has not been included in the estimate submitted by PWD. State PWD has stated that the provision for construction of Toll Plaza as it is not possible to acquire land due to forest land.

2.11 Utility Sifting

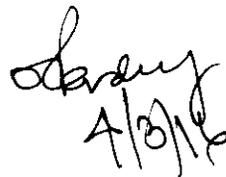
State PWD has intimated that, the lump-sum amount i.e 2% of civil cost + contingency has been included in the estimate. The amount provided in the estimate has been allowed for estimate purpose. The same may be allowed.

3. Modification:

- 3.1 The provisions allowed above are for estimation purpose only as the project will be executed on EPC mode; however the detailed design has to be carried out by the contractor as per EPC documents.
- 3.2 Construction of all the components of ROB shall conform to the specification laid down in MoRT&H Specification for Road and Bridge Work.
- 3.3 The lump-sum provision for LA & utility shifting has been allowed for estimate purpose. However sub estimate based on actual requirement for the same may be got from respective departments and approval by the competent authority of the concerned department. State PWD shall complete all these


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- activities before award of the work.
- 3.4 DBM and BC layer should be provided strictly in accordance with IRC: 111-2009 specially for job mix design (section 4), construction operations (section 5), and quality controls (section 6) in conjunction with Ministry's specifications for Road and Bridge works (5th revision) The work of GSB & WMM shall be executed as per Clause 401 & 406 respectively of Ministry's specifications for Road and Bridge works (5th revision).
 - 3.5 The type and design for the concrete crash barriers shall be adopted as per IRC:5-1998 & IRC:6-2014.
 - 3.6 Guidelines in Ministries circular No. RW/NH-34015/2/86-S&R dated 22.06.1994 circular shall be followed while executing the work of approach slab.
 - 3.7 Centages has been considered as per EPC mode of execution of work. Contingencies @ 2.8 %, supervision charges @ 4 %, Agency charges @ 3 %, Quality Control @ 0.5% and road safety @ 0.5 % has been considered in the estimate as per Ministry's letter No. 11014/7/2013-P&M dated 14.08.2013. Further provision for Escalation @ 10% for two year construction period [5% for each year , totalling 10%] has been considered. Further, the maintenance charges @ 1.75% for four years [0.25% for 1st year and 0.5% for each subsequent year has been included in the estimate as per Ministry circular no. RW/NH-37010/4/2010/PIC-EAP(Printing) date 05.10.2015.
 - 3.8 Maintenance cost has not been allowed as it is Maintenance charge @ 1.75% for four years has been included.
 - 3.9 Further, 1% of civil cost has also been considered on account of greening of National Highways as per Ministry's circular no. RW/NH-33044/49/2015-S&R(R) dated 28.08.2015.
 - 3.10 All schedules required for EPC mode of execution of work shall be in line with approved estimate and technical note. The EPC Schedule for the work prepared in consultation with Regional Officer shall be submitted for approval to Ministry along with recommendations to Regional Officer, Kolkata.
 - 3.11 The work shall be executed as per provisions in Model Engineering Procurement and Construction (EPC) document for Construction of Two lane National Highway works, communicated by Ministry vide letter No. RW/NH-37010/4/2010/PIC dated 26th November 2012 and all its amendments as on date.
 - 3.12 It is presumed that the design of the proposed bridge structure conforms to all loading cases strictly as per IRC:6 including IRC class special vehicle loading as per clause 204.5 of Prime mover with 20 axle trailer having Gross vehicles weight of 385 MT. In any case, CE (NH) PWD West Bengal needs to approve the design of the Bridge structure & it's working drawings to ensure the adequacy, safety and stability of the structure.
 - 3.13 Construction period for the work shall not be more than 24 months including rainy period. The defect liability period as specified in the Model EPC document shall be 4 years.


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3.14 Similar work clause of EPC document (Clause no. 2.2.2.2(ii) of RFP) shall be amended suitably so that the contractors having experience in Bridge/ ROB works should only be qualified.

4. Rates and Leads

4.1 The estimate has been prepared based on of SOR-2015 of West Bengal.

4.2 The procurement of material from the quarry mentioned in the estimate has been allowed for estimate purpose only. However, while calling the tender, the source may not be indicated. The contractor shall be responsible to procure the material conforming to the specification of the work. No provision for extra lead during execution of work shall be allowed.

5. Tender:

5.1 **The tenders for the work shall be invited adopting e-procurement/e-tendering procedure as per Ministry's circular No. RW/NH-24035/4/2008-P & M/PIC dated 21.05.2011 and circular No. RW-NH-34048/6/13-S&R(B) dated 16.05.2014**, in addition to guidelines issued by this Ministry vide circular letter No RW/NH-11024/3/99-US (D-I) dated 9.3.2000, No.RW/NH-24035/4/2008-P&M dtd 21.05.2010 and No.NH-12037/67/2010/LWE dated 02.08.2010.

5.2 The work shall be awarded as per guidelines issued by the Ministry vide letter No NH-15015/29/2001-PL dated 05.07.01.

5.3 It may be ensured that the construction period required for the work is assessed properly and only reasonable period is kept in the contracts.

5.3 In accordance with Ministry's circular letter No RW/NH-11026/2/99-US (P) dated 13.01.2000, if the cost of tender exceeds 5% of the sanctioned cost, the work shall be got de-sanctioned and fresh estimate be got sanctioned from this Ministry.

6. General:

6.1 The provision for centages (contingencies, quality control etc) should be utilized as per Ministry's circular no. 11014/7/2013-P&M dated 14.08.2013 & RW/NH-37010/4/2010/PIC-EAP(Printing) date 05.10.2015.

6.2 **RO, MORT&H, Kolkata may get necessary testing done for quality control of the work from accredited laboratories keeping in view IRC:SP:94-2011, charging cost to the provisions of Quality Control.**

6.3 Provision for quality control @ 0.5% has been allowed. The work is to be carried out in accordance with the "Hand Book of Quality Control for construction of Roads and Runways (Second Revision)-IRC SP:11-1988", observing strict quality control instructions contained in the Ministry's letter No.NH-III/P/I/83 dated 19 April 1984 and permanent records maintained thereof.

6.4 No work beyond the scope of the sanctioned estimate leading to increase in the scope of the work or change in specifications should be undertaken without obtaining prior approval of the Ministry. In case, the estimate needs


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revision due to change in rates/tender rates for any reasons, the revised estimate shall be submitted immediately for Ministry's approval. No expenditure beyond permissible limit will be committed without prior approval of Ministry.

- 6.5 Neither the work nor any item of work shall be split into small parts for awarding the work to a number of contractors. In this regard, instructions issued in this Ministry's letter No. NH-III/P/25/84 dated 4-8-1984 may be referred.
- 6.6 The project display boards are to be erected on the either end of the project reach as per the Ministry's letter No. RW/NH-33044/10/2001-S&R (R) dated 17.07.2001.
- 6.7 The work shall be entrusted to the contractors having adequate experience in similar type works and having adequate machineries, equipments and financial resources to execute the work as per Ministry's guidelines.
- 6.8 The state PWD will intimate this Ministry and Ministry's RO at Kolkata about award of contract/commencement of work immediately as per instructions contained in this Ministry letter No RW/NH-11060/1/98-(DO-I) dated 5.11.1998.
- 6.9 The contractor should possess all required machinery such as concrete mixers, vibrators, form work, hot mix plant, road roller, bitumen boiler sensor paver etc. and should be able to procure all required materials including bitumen to execute the work as per Ministry specifications.
- 6.10 For maintenance of proper record of the execution of the work Photography/videography shall be taken by state PWD before, during and after execution of work and a digital copy of the same may be forwarded to Ministry/RO Kolkata for record.
- 6.11 The advertisement for invitation of tenders shall be done as per modified guidelines circulated to State PWDs in the Ministry's letter no. RW/NH-11024/3/99-US (D.I) dated 09.03.2000 and the cost incurred under contingencies with the approval of Ministry RO, as per Para 1.1 of Ministry circular no. RW/G-20011/8/98-WA dated 16.08.02.
- 6.12 Guidelines for Road Safety vide Ministry's letter No. RW/NH-33072/04/2004-S&R(R) dated 27.04.2010 shall be followed.
- 6.13 In order to ensure that there is no slippage in achieving the targets, the progress may be closely monitored by competent authority and quarterly status report furnished to the Ministry in the prescribed proforma.
- 6.14 The provisions made in the estimate are accepted for estimate purpose only. Any savings (in the provisions in the estimate) during execution of the work shall be credited to the estimate.

7. **Cost of work:**

The estimate has been modified in the light of above comments and the modified cost works out to **Rs. 7406.27 lakhs** including 3 % agency charges. The details of cost are as under:-

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Item	Mod. Cost (RW)(Rs)
Site Clearance & dismantling	305071
Earth Work	31764231
Granular Sub Base & Base Course	65293286
Bituminous Course & Concrete Pavement	54824313
ROB Proper (Foundation, Substructure & Superstructure)	129838791
Culverts	12827483
Drainage & Protection Work	246036301
Traffic Sign, Markings & Road Appurtenances	1705932
Miscellaneous (Toll Plaza, Footpath Finishing, Barricades etc.)	20683576
Total Civil Cost	563278984
Add 2.8 % Contingencies	15771812
Total A	579050795.6
Add 3 % of A for Agency Charges	17371524
Add 0.5 % of A for Quality Control	2895254
Add 0.5 % of A for Road Safety	2895254
Supervision Charges @ 4 % of A	23162032
Escalation charges @ 5% per year for 2 years = 10% of A	57905080
Total	683279938.8
Land Acquisition (Lump-Sum)	30000000
Utility Shifting @ 2 % of A	11581016
Total	724860954.7
Maintenance charge for 4 years @ 1.75% of A	10133389
Fund for greening @1% of civil cost	5632790

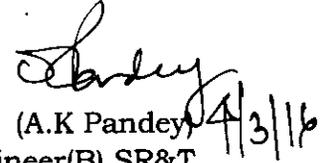
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SAY	7406.27 Lakhs
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8. **Targets for the work:**

The following physical and financial cumulative targets may be achieved depending upon the availability of funds:-

Year of Phasing	Physical Phasing (%)	Financial progress (Rs. lakhs)
2015-2016	5.0	370.31
2016-2017	50.0	3703.14
2017-2018	98.25	7276.66
2018-2019	98.50	7295.18
2019-2020	99.0	7332.21
2020-2021	99.50	7369.24
2021-2022	100	7406.27


(A.K. Pandey) 4/3/16

Superintending Engineer(B) SR&T
For Director General (Road Development) & SS