

No. NH-12014/79/2020-21-MAH(Z-4)
Government of India
Ministry of Road Transport & Highways
(Zone-4)

Transport Bhawan, 1, Parliament Street, New Delhi - 110001

Dated: 21. 03 .2022

To

The Secretary to the Govt. of Maharashtra
Public Works Department,
Government of Maharashtra,
Mumbai-400032

Sub:- Rehabilitation and Upgradation of Satana to Mangrul (Chandwad) Section of NH752 G Design Ch: Km 64.000 to Ch: Km 101.140 two lane with paved shoulder/four lane configuration in the state of Maharashtra on EPC mode.

(Job No. NH-752G -MAH-2021-22-020)

Sir,

I am directed to refer to Chief Engineer (NH), Maharashtra vide letter No. CE(NH)/P-2/AP2021-22/NH-752G/4054/2021 dated 30.12.2021 forwarding an estimate amounting to Rs.448.28 Crore for the above noted work and to say that the estimate has been examined in the Ministry and approved for Rs. 428.80 crore in the light of comments contained in the enclosed Technical Note dated 21.03.2022 and SFC minutes of meeting held on 08.03.2022.

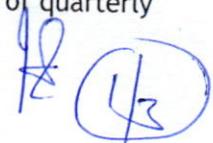
2. I am to convey the technical, administrative and financial sanction of the President of India to the estimate amounting to Rs 428.80 crore (Rupees Four Hundred Twenty Eight Crore Eighty Lakh only).

3. The work has been assigned Job No. NH-752G -MAH-2021-22-020. This Job No. may be quoted in all future correspondence regarding this work.

4. The expenditure is debitable to Major Head '5054' Capital Outlay on Roads & Bridges, 01-National Highways (Sub Major Head), 01.337 Road Works (Minor Head), 03 (NH Original Works), 03.01 Works financed from Central Road Fund 03.01.53 Major Works under demand No. '85'- Ministry of Road Transport & Highways NH (O) for the year 2021-22.

5. In accordance with the orders contained in this Ministry's letter No. 24035/4/2008-P&M/PIC Vol II dated 23.2.2018 addressed to the State Public Works Department, if the cost of tender exceeds 5% of sanctioned estimated cost, the revised estimate has to get sanctioned from the Ministry and all the works above Rs. 5.00 crore is to be taken up on EPC mode. 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's Circular letter No. RW/NH-11024/3/99/US(D-I) dated 09.03.2000, No. RW/NH-24035/4/2008-P&M dated 21.05.2010 No. NH-12037/67/2010LWE dated 02.08.2010 and RW/NH-34066/14/2018-S&R(P&B) dated 25.6.2018. The work shall be awarded as per guidelines issued by the Ministry vide letter No. NH-15015/29/2001-PL dated 05.07.2001.

6. It is requested that arrangements may be made for the submission of quarterly



progress report in respect of this work by the Executive Engineer concerned to the Director General (Road Development) Government of India.

7. On completion of 50% work if the appraisal of the project shows that it will necessitate revision of the estimate based upon the physical completion of the project vis-à-vis financial expenditure immediate action should be taken to submit the revised estimate so as to ensure that the sanctioned revised estimate is available before necessary for incurring expenditure beyond permissible limits arises.

8. 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.

9. The Regional Officer, M/o RT&H, Mumbai will be Drawing and Disbursing Officer.

10. The following physical and financial target shall be strictly adhered to. Phasing of expenditure shall be as given below: -

Year	Cumulative progress				
	Milestone	Financial (Rs. in Cr.)			
		Physical	Construction	Maintenance	Total
2021-22	Preliminary	Prelim.	5.00	0.00	5.00
2022-23	Under implementation	40%	164.28	0.00	164.28
2023-24	Completion	100%	410.71	0.00	410.71
2024-25 to 2034-35	Maintenance	100%	410.71	18.09	428.80

11. This sanction issues with the concurrence of the Finance Wing vide Note #42 dated 14.02.2022.

12. The condition of the road should be recorded by the Network Survey Vehicle before the start of work and during the execution, completion and the defect liability period before payments are released and the same should be clearly specified in the tender documents/agreement.

Yours faithfully,

Encl: -As above.

(Kamal Parkash)

Under Secretary to the Government of India

Copy to:

1. The Chief Secretary to the Govt. of Maharashtra, Mumbai-400032.
2. The Chief Engineer (NH), National Highways, Room No-527, Konkan Bhawan, Navi Mumbai-400614.
3. The Regional Officer(Mumbai), Office of Regional Officer, M/o RT&H Maharashtra & Goa, Room No. 508-509, 5th Floor, Konkan Bhawan, CBD Belapur, Navi Mumbai-400614
4. The Principal Director of Audit, Economics and Services Ministries, AGCR

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- Building, IP Estate, New Delhi
5. PF-I Division, Ministry of Finance, North Block, New Delhi.
 6. The Secretary, Deptt. of Finance, Govt. of Maharashtra, Sachivalaya, Mumbai-400032.
 7. The RPAO, M/o RTH, 3rd Floor, Cavasji Patel Street, Mehar House, Mumbai.
 8. The Pay & Accounts Officer, Ministry of Road Transport & Highways (RW), IDA, Building, Jamnagar House, Shahjahan Road, New Delhi.



(Kamal Parkash)

Under Secretary to the Government of India



NH-12014/79/2020-21-MAH(Z-4)
Government of India
Ministry of Road Transport and Highways
(Project Zone-4)

Dated: 21.03.2022

TECHNICAL NOTE

1.	Name of work	:	Rehabilitation and Upgradation of Satana to Mangrul (Chandwad) Section of NH752 G Design Ch: Km 64.000 to Ch: Km 101.140 two lane with paved shoulder/four lane configuration in the state of Maharashtra on EPC mode.	
2.	NH No.	:	NH-752G	
3.	State and Division	:	Maharashtra & National Highway Division, Nashik	
4.	Estimated cost (Rs. in Cr.)		<u>As submitted by State PWD</u> 448.28	<u>As modified in the Ministry</u> 428.80
5.	Length in km	:	37.14	37.14
6.	Cost / km (Amount in Rs. Lakhs)	:	12.07	12.07
7.	Reference	:	Letter No. CE(NH)/P-2/AP2021-22/NH-752G/4054/2021 dated 30.12.2021 received from CE (NH) PWD, Maharashtra	

COMMENTS

1. Scope of work:

Scope of work Rehabilitation and Upgradation of Satana to Mangrul (Chandwad) Section of NH752 G Design Ch: Km 64.000 to Ch: Km 101.140 two lane with paved shoulder/four lane configuration in the state of Maharashtra on EPC mode..

2. Details of Work:

2.1 Main carriageway-

2.1.1 Crust Composition (Rigid Pavement) (Length=37.140 km)

Design Life-30 years (CVPD - 2565, CBR - 8%)

(i) GSB - 150 mm thick

(ii) DLC - 150 mm

(iii) PQC - 300 mm thick (M-40)

2.1.2 Length of main carriageway is 37.140 km of comprising of

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(i) Concentric Widening -37.140 kms

(ii) Eccentric widening -0.000 kms

2.1.3 The above project Section is having Typical Sections in length of

(i) 2 lane highway with Paved Shoulder in open country - 14.620 Kms

(ii) 2 lane highway with Paved Shoulder in Hilly Section - 2.400 Kms

(iii) 4 lane highway in built up section with Bituminous Shoulders- 5.95 Kms

(iv) 4 lane highway with earthen shoulder - 14.170 Kms

Total - 37.140 kms

2.1.4 Crust Composition (Flexible Pavement) for Bituminous Shoulder (Builtup Area)

(i) Bituminous Concrete - 40 mm

(ii) Dense Graded Bituminous Macadam - 70 mm

(iii) Wet Mix Macadam - 250 mm

(iv) Granular Sub Base - 240 mm

2.2 Junction Improvements

2.2.1 Major Junctions - 8 Nos

- Major T junction @ Km 65+180
- Major T junction @ Km 65+250
- Major X junction @ Km 66+100
- Major T junction @ Km 66+960
- Major T junction @ Km 81+420
- Major T junction @ Km 81+800
- Major T junction @ Km 93+860
- Major T junction @ Km 101+000

2.2.2 Minor Junction- 17 Nos

2.3. Culverts -

2.3.1 Pipe culverts - 53 Nos. (Existing)

(i) Reconstruction - 43 Nos. (out of 43, 38 are to be reconstructed as pipe culvert and 5 are to be reconstructed as slab culvert)

(ii) Widening (as pipe culvert)- 10 Nos.

2.3.2 Box Culverts - Nil (Existing)

2.3.3 Slab Culvert - 08 Nos. (Existing)

(i) Reconstruction - 03 Nos. (all 03 are reconstructed as slab culvert)

(ii) Widening (as slab culvert) - 05 Nos.

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Total proposed pipe culvert: 48

Total proposed slab culvert: 13

2.4. Bridges -

2.4.1 Major Bridges - 2 Nos. (both are two laned bridge at the same location i.e. Km 74+820)

(i) Retain with Repair - 1 Nos.

Sr. No	Design Chainage	No. of Spans with Span Length (m)	Width (m)		Remark
			Clear Width	Overall Width	
1	74+820	10 X 20.0	7.50	8.00	Retain with repair, RCC T Girder Bridge

(ii) Reconstruction - 1 Nos.

Sr. No.	Design Chainage (Km)	Details of Proposed structure		
		Span Arrangement (m)	Proposed Width (m)	Type of Bridge
1	74+820	10 X 20.0	11.0	RCC

2.4.2 Minor Bridges - 15 Nos. (Existing)

(i) Reconstruction - 05 Nos.

Sr. No.	Design Chainage (Km)	Details of Proposed structure			Remarks
		Span Arrangement (m)	Proposed Width (m)	Type of Bridge	
1	64+945	3X5.8	11	RCC	Reconstruction of Existing Bridges
2	68+800	3X5.0	11	RCC	
3	75+310	6X5.8	11	RCC	
4	80+085	8X5.8	11	RCC	
5	81+633	5X5.5	11	RCC	

(ii) New Construction at parallel side -05 Nos.

Sr. No.	Bridge at km (Design Ch.)	Span Arrangement (m)	Total Length of bridge (m)	Total Width (m)	Remarks
1	64+945	3X5.8	17.4	11.0	New Bridge.
2	66+440	8x7	56	11.0	
3	67+610	4x5	20	11.0	
4	68+800	3X5.0	15	11.0	

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Sr. No.	Bridge at km (Design Ch.)	Span Arrangement (m)	Total Length of bridge (m)	Total Width (m)	Remarks
5	71+910	3x5	15	11.0	

(iii) Widening - 04 Nos.

Sr. No.	Design Chainage (Km)	Existing Width (m)	Existing Span (m)	Cross-section at deck level for widening	Remark
1	83+860	12	3X6.0	22.0m	Widening
2	88+900	12	1X11.2	16.0m	Widening
3	96+260	12	2X4	16.0m	Widening
4	98+680	12	2X4	16.0m	Widening

(iv) Retain - 06 Nos.

Sr. No.	Design Chainage (Km)	Existing Span (m)	Existing Width (m)	Remark
1	66+440	8X7	12	Retain
2	67+610	4X5	12	Retain
3	71+910	3X5	10.5	Retain
4	75+310	6x5.8	12	Retain
5	80+085	8x5.8	8.7	Retain
6	81+633	5x5.5	11.7	Retain

Total=20 Nos.

2.4.3 Pedestrian Underpass - 2 Nos. (Widening)

S. No.	Design Chainages(Km)	Location	Ex. Width(m)	Proposed Width (m)	Remark
1	81+030	Near Thengode	12.5	22.5	Widening of Existing Pedestrian Underpass
2	82+150	Near Deola	14	22.5	Widening of Existing Pedestrian Underpass

2.4.4 Foot Over Bridge - 01 Nos. (Retained)

S. No.	Chainage (km)	Type of Structure	Lateral Clearance	Vertical Clearance	Remark
1	65+200	Steel Structure	1X25	6	At Satana City

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2.5. Toll Plaza - 01 Nos. - Proposed at Design Ch. 93+700 Km

Distance from the Municipal Limits/Area = 11.0 km

Distance from the preceding Toll Plaza = 65.70 Km

Distance from the subsequent Toll Plaza = 17.40 Km

The preceding toll plaza is at Km 28+000. The proposed Toll Plaza for the project road is at Km 93+700, which is at 65.70 Km away. The succeeding Toll Plaza is at Km 111+000 which is 17.40 Km away (less than stipulated limit of 60 km). The toll plaza cannot be placed before the proposed location as there exists municipal town of Satana and Deola. Further, there exists 3.46 Km (Mangrul to Chandwad) overlap with NH3 (where the Chandwad-Manmad section of NH 752G starts) which will act as traffic leakage point. In view of all this, this is the only suitable location for toll plaza.

2.6 Traffic Control Devices, Road Safety Work and Road Furniture

Road marking, overhead gantry, mandatory sign boards, informatorily sign boards, cautionary sign boards, hazard markers, rumble strips are provided as per provision of manual.

2.7 Miscellaneous Work-

The provision of slope and shoulder protection, high embankment protection, utility ducts, RCC drains cum footpath in built up section have also been taken.

2.8 Project Facilities-

The provision of project facilities in accordance to requirement of manual such as

- (i) Road Boundary, Km and 200 m stones
- (ii) Street lighting in habitation and structure approaches.
- (iii) Bus Shelters (3x2=6 Nos) & Bus Bay (3x2=6 Nos)

2.9 Safety and Traffic Management during Construction-

The provision of traffic management as per clause 112 of Ministry specification during construction have also been taken in cost estimates by providing diversion of 7.00m at Bridge reconstruction locations which shall be maintained by the EPC contractor.

2.10 Utility Shifting:

There exist electrical and water utilities in ROW which are required to be shifted. NH Division Nashik, State PWD has prepared an estimate for existing utilities present which are required to be shifted of total amount Rs. 11.01 Cr.

3 Utility Shifting:

There exist electrical and water utilities in ROW which are required to be shifted. NH Division Nashik, State PWD has prepared an estimate for existing utilities present which are required to be shifted of total amount Rs. 11.01 Cr.

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4. Land Acquisition:

4.1 The details of LA is as follows:

Particulars	Details	Remark
Total Land required	90.049 Ha	
Total Land available	83.81 Ha	
Total Land to be acquired	6.241 Ha	Private Land= 4.17 Ha and Forest Land= 2.07 Ha. Realignment- 1.78 Ha. (Length=1.13 Km) Curve Improvement- 0.44 Ha (Length=0.675 Km) Toll Plaza= 1.56 Ha (Length=0.330 Km) Cross Section Fitting = 2.45 Ha (Length=4.82 Km)

4.2 PWD(NH) proposed provision of 7.165 crores for LA.

5. Cost Estimate:

Sr. No.	Items	Cost in Rupees	Cost in crore
A1	<u>Widening and Upgradation of existing road</u>		
1	Site Clearance including dismantling	17064941.6	1.71
2	Earthwork	358364514.8	35.84
3	Granular work (sub-base, base, shoulders)	255118128.1	25.51
4	Bituminous work		
	(a) BC	9449552	0.94
	(b) DBM	15745128	1.57
	Total Bituminous Work	25194680	2.52
5	Cement Concrete pavement work		
	(a) PQC	1261953402	126.20
	(b) DLC	307850211.5	30.79

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	Total CC Work	1569803613	156.98
6	Slip Roads	0	0.00
	Sub total A1	2225545878	222.55
A2	Major Bridge Works	95387109.75	9.54
	Sub total A2	95387109.75	9.54
A3	<u>Culverts, minor bridges, underpasses, overpasses on existing road, realignments and bypasses:</u>		
1	Culverts	106286943	10.63
2	Minor bridges	156607807.2	15.66
3	Cattle / Pedestrian underpass (Foot Under Bridge)	12575980	1.26
4	Pedestrian overpass	0	0.00
5	Grade Separated structures	0	0.00
6	Light Vehicular Underpass (LVUP)	0	0.00
7	Overpass	0	0.00
	Sub total A3	275470730.2	27.55
A4	OTHER WORKS		
1	Toll Plaza	56232413.46	5.62
2	Road side drains	107313592.2	10.73
3	Protection Works (Retaining Wall, Toe Wall, Pitching of Stone)	53007915.05	5.30
4	W metal Beam Crash Barrier	13335000	1.33
5	Road signs, markings, km stones, Boundary stones, safety devices, utility ducts etc.	43124522	4.31
6	Bus Bays, Bus Shelter and Truck lay Bay	38830823.12	3.88
7	NJ Type Barrier for Median/Divider @ 4 Lane Locations	63297570.06	6.33
8	Junctions	110609168.5	11.06
9	Street Lighting in Towns	13601077.6	1.36
10	Utility Duct (Across the Road & Along Builtup Sections)	24631650.17	2.46
11	Horticulture (Tree Plantation & Its maintenance)	0	0.00
11	Utility Shifting Cost		
	a. Electrical works	72249661	7.22
	b. Water supply works	37912514.67	3.79
	Sub total A4	634145907.8	63.41
A	CIVIL COST (A) = A1+A2+A3+A4	3230549625	323.05
B	Add GST @12% of civil cost	387665955	38.77
C	Cost of Civil Works including GST (C)	3618215580	361.82
D	Maintenance Charges @ 5% of C	180910779	18.09
E	Contingencies @ 1% of (A)	32305496.25	3.23

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F	Agency Charges 3% on (A)	96916488.76	9.69
G	Supervision 3% on (A)	96916488.76	9.69
H	Price Escalation @ 5% on C	180910779	18.09
I	Total project cost	4206175612	420.62
J	Land Acquisition	71648843.88	7.16
K	Tree Cutting and Compensatory Plantation	10146017	1.01
L	Total Capital cost of the project	4287970473	428.80

6. Modifications:

The State PWD has submitted the cost estimate for the instant work amounting to Rs. 448.28 Cr. which has been modified to Rs. 428.80 Cr. The following modifications are made in the estimates:

- (i) Royalty Amount is added in the Rate Analysis. Previously, it was separately added in the Cost Abstract.
- (ii) GST on the Civil Cost was added @18%, which is changed to 12%.
- (iii) Amount of Tree Cutting & Compensatory Plantation was added in the Civil Cost, which has now been shifted to Pre Construction Activities.
- (iv) Previously, width of Earthen Shoulders was taken 2.0 m. The same has been revised to 1.0 m as per MoRTH circular. Accordingly, calculations of Sub grade, GSB, C&G etc. have been revised
- (v) Corrections in calculation of toll plaza pavement & Cost of ATMS.
- (vi) Cost of utility shifting was modified based on submissions of EE(NHD) Nashik.

7. The project will be executed on EPC mode and detailed design has to be carried out by the contractor as per EPC documents. The EPC Contractor shall design as per design requirement subject to minimum technical requirement which needs to be ensured by State PWD incorporated in Schedule 'B' of the Draft Contract Agreement to be issued along with the RFP. CE (NH), Maharashtra PWD, shall check the draft RFP document along with schedules viz. -a-viz. provisions specified in this technical note before inviting tender.

8. **Design specifications:** All the items of work included in the scope of work will be executed as per Ministry's specifications for Road and Bridge Works (5thRevision, 2013), IRC-37-2018 and those mentioned in the EPC document. Circulars/ Guidelines issued by the Ministry from time to time shall be referred to. Deviation in specifications for any work should be got approved from the Ministry before adopting the same.

Condition of the road should be recorded by Network Survey vehicle before the start of work and during the execution, completion and the defect liability period before payments are released and the same should be clearly specified in the tender documents/agreement.

Maharashtra

9. Traffic management during construction

- 9.1 Traffic management should be done as per clause 112 of Ministry's specification, during the construction period it may be insured that the traffic is regulated in conformity to Ministry's guidelines stipulated in clause No.8.2.3 'Manual for construction and supervision of bituminous work.'.
- 9.2 The nomenclature and clause numbers of the items shall be specified as per MORTH specification for Road and Bridge work 2013 (5th revision) and all the works shall be executed strictly as per Ministry's specifications/ Ministry's circular/ guidelines issued from time to time.
- 9.3 Directions issued vide Ministry's circular no. RW/NH-35072/05/2018-S&R(P&B) dated 24.08.2018 and Ministry's circular no. RW/NH-33044/127/2016-S&R(P&B) dated 06.08.2018 shall be strictly comply during execution and tendering. As per Ministry's circular dated 24.08.2018 only VG-40 shall be used for DBM/BM layer and for BC layer modified bitumen (using polymer/ crumbed rubber/ natural rubber or VG-40 grade bitumen has to be used. The bitumen/modified bitumen shall be procured from the refineries only.

10. Contract Documents:

- 10.1 Single stage two-cover bidding is to be adopted as per instructions conveyed vide Ministry's letter no. RW / NH-37010 /4 /2010 / PTC dated 27.05.2014 and other amendment issued till date.
- 10.2 RFP and draft contract documents may be adopted as per the draft Model RFP and EPC documents circulated by Ministry vide circular No. RW/NH-37010/4/2010-EAP (Printing) Vol. - IV dated 05.03.2019 and all amendments issued till the date of invitation of bids.
- 10.3 Construction period for this work shall not be more than 24 months including the rainy period. Defects liability period and maintenance period shall be 10 years as specified in the amendments to Model EPC Document issued vide Ministry's letter no. RW/NH-37010/4/2010-EAP (Printing) Vol. - IV dated 05.03.2019.

11. Invitation of tenders and award of works:

- 11.1 Procedure as per instructions conveyed vide Ministry's letter no. RW/ NH-24035/4/2008/P&M/PIC Vol II dated 23.02.2018 is to be adopted for award of works.
- 11.2 The time limit for awarding of this work is 6 months from the date of sanction and should be strictly followed as per the instructions communicated to all State PWDs vides this Ministry's letter no. RW/ NH- 24035/4/2008/P&M/PIC Vol II dated



23.02.2018 and compliance reported to the Ministry. If the work is not awarded within the stipulated time, it may lead to de-sanction of the work unless Ministry's prior approval to extension of the time limit is obtained.

- 11.3 It is the responsibility of the executing agency (State PWD/MSRDC) to ensure availability of encumbrance free working front to the Contractor at the time of declaration of 'Appointed Date', and in case the project entailed any revision in cost estimates on account of authority default, any such incremental costs would have to be borne by the State PWD/MSRDC
- 11.4 CE (NH), State PWD will intimate this Ministry about award of contract/commencement of work immediately as per instructions contained in this Ministry's letter no. RW/NH-37010/4/2010/PIC-EAP(Printing) dated 16.01.2017.
- 11.5 E procurement must be adhered to while inviting tender for the work.
- 11.6 The tenders for the work shall be invited on EPC mode as per guidelines issued by this Ministry vide circular letter 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. RW/NH-11024/3/99-US (D-1) Dated 9.3.2000, No. RW / NH - 24035 / 4 / 2008 - P&M dtd. 21.05.2010.
- 11.7 While accepting tenders that the overall cost of estimate at tender rates including contingencies, supervision charges and agency charges does not exceed by more than 5% of sanctioned cost.
- 11.8 Excess in tender cost is caused only be routine factors such as increase in cost of labor or material.
- 11.9 Excess due to change of scope or enlargement / reduction of work or specifications as already approved in the sanctioned estimate would require prior approval of Ministry.

12. General

- 12.1 The provision of Project contingencies, supervision charges and agency charges should be utilized as per Ministry's circular letter no. NH-15017/17(2)/2016-P&M dated 16.06.2016. For any other item, which is not covered in the above circular necessary approval of Ministry (in principle) with the recommendation of Concerned RO should be taken before execution. However, sub-estimate for the same should be got approved from Concerned RO, before execution.
- 12.2 The estimates for carrying out the activities under the provision of contingencies including change in scope of work will be approved by Ministry on assurance/certification by Authority's Engineer/CE (NH), PWD Department that the amount provided against contingencies is available and the same has not been

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indirectly utilized by accepting higher tender rates. Authority's Engineer/ENC/CE (NH), PWD Department shall also certify that approval of estimates to be charged to contingencies will not cause revision of the sanctioned estimate.

- 12.3 Collection of material on the roadside should be so planned that it should commensurate with the physical progress of work and the collected material should not cause any hindrance to the traffic. It must be ensured that the contractor arranges for separate land for storage of road construction material and machinery and these shall not be allowed to be stacked on roadside.
- 12.4 No work beyond the scope of the sanctioned estimate leading to increase in the scope of the work or change in specification should be undertaken without obtaining prior written approval of the Ministry. In case, the estimate needs revision due to change in rates/tender rates for any reasons, the revised estimate shall be submitted immediately for Ministry's approval. In this connection, this Ministry's letter No. RW/NHIII/Coord/32/84 dated 19.5.84 and NH-11026/2/99-US (DI) dated 29.10.2001 may be referred.
- 12.5 In order to ensure that there is no slippage in achieving the targets, the progress may be closely monitored by ENC/CE (NH), Departmental quarterly status report be furnished to the Ministry in the prescribed proforma.
- 12.6 During the course of execution, the traffic may be regulated in accordance with guidelines laid down vide Ministry's letter no. NHIII-33 (126)/72 dated 20.03.1973 and letter No. RW/NH-11060/1/1998-D.O.1 dated 07.10.1987. Smooth flow of the traffic may be ensured by providing adequate traffic control devices in accordance with stipulation of IRC: SP: 55:2001 "Guidelines on Safety in construction Zone".
- 12.7 It is observed that simultaneous working at large number of work fronts in long stretches is causing severe inconvenience to traffic during construction. Therefore, it is suggested that fronts may not be operated in more than 3 km length simultaneously, without completing the bituminous surfacing in the stretches where excavation/granular layers are carried out. Suitable provisions in the contract shall be incorporated for proper traffic management.
- 12.8 The display boards on development activities of the work shall be made as per guidelines issued vide Ministry's letter no. RW/NH-33044/ 10/2002-S&R (R) dated 26th May, 2003. The cost of the same will be met out of the provision of contingencies allowed in the estimate.
- 12.9 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/1/83 dated 19 April 1984 and permanent records maintained thereof.



- 12.10 The independent quality control tests of all items from any of the accredited laboratories as per IRC: SP:94-2011 shall be carried out from the quality control provision in estimate to ensure the quality of work.
- 12.11 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
- 12.12 Guidelines for Road Safety vide Ministry's letter No. RW/ NH-33072/04/2004-S86R(R) dated 27.04.2012 shall be followed wherever applicable.
- 12.13 Condition of the road should be recorded by Network Survey vehicle before the start of work and during the execution, completion and the defect liability period before payments are released and the same should be clearly specified in the tender documents/agreement.

13. Cost of work:

- 13.1 The estimate is based on rates of SSR 2021-22 (for state of Maharashtra) and same is verified by State PWD. Necessary Rate Analysis (RA) wherever required has been prepared and attached to the estimates. It is presumed that CE (NH), of State PWD while forwarding the proposal has satisfied himself about the adequacy and workability of the rates of various items of work and that rates adopted in the estimate are latest and no revision of the rates has occurred till date.
- 13.2 The lead for the carriage of different materials as proposed in the estimate has been allowed for estimate purpose only. However, while calling tenders the sources may not be indicated. The contractor shall be responsible to procure the material conforming to specification of the work. No provision of extra lead during execution of the work shall be allowed.
- 13.3 In view of the above comments, the cost of the estimate amounts to **Rs. 428.80 Cr.** including 3% agency charges.

14. Targets:

Following physical and financial targets shall be strictly adhered to subject to the availability of funds:

Year	Cumulative progress				
	Milestone	Financial (Rs. in Cr.)			
		Physical	Construction	Maintenance	Total

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2021-22	Preliminary	Prelim.	5.00	0.00	5.00
2022-23	Under implementation	40%	164.28	0.00	164.28
2023-24	Completion	100%	410.71	0.00	410.71
2024-25 to 2034-35	Maintenance	100%	410.71	18.09	428.80

Mahipal Singh
21/03/22

(Mahipal Singh)
Executive Engineer
For Director General (RD) & Special Secretary