

E-mail

Phone: 011-25686839
Mob : 0-8415927181
Email ID:bro-direpc@bro.gov.in

Headquarters
Dte General Border Roads
Seema Sadak Bhawan
Ring Road, Delhi Cantt,
New Delhi -110 010

24006/DGBR/Policy/ 58 /EPC Cell

10 Dec 2019

HQ ADGBR (North-West)
Sec-48-C, Near Motor Market
Chandigarh-160047

HQ ADGBR (East)
C/o 99 APO
Pin – 900885

HQ CE (P) -----
C/o 56/99APO

**POLICY GUIDELINES ON SURVEYING WITH NETWORK SURVEY VEHICLE (NSV)
FOR ALL THE PROJECTS INVOLVING DEVELOPMENT OF 2/4/6/8 – LANE,
EXPRESSWAY, STRENGTHENING**

1. Refer MoRT&H policy letter No. RW/NH-33044/32/2019-S&R (P&B) dated 13 Nov 2019 (copy enclosed) under which use of Network Survey Vehicle (NSV) mandated for all ongoing projects being executed through EPC mode of execution.
2. Network Survey Vehicle utilise latest survey technique utilizing Laser, Global positioning system and video image processing tools etc. The system is capable of collecting of following information:-
 - (i) Longitudinal Profile (International roughness index).
 - (ii) Transverse Profiling (Rut Depth).
 - (iii) Payment texture in terms of mean profile depth.
 - (iv) Road Geometry data (Cross slope, gradient, Curvature)
 - (v) GPS coordinates ie longitude, latitude & Altitude.
 - (vi) Video imaging of Road side furniture/ Road assets.
 - (vii) Video imaging for pavement surface distress.

These details can be collected at the speed from 30 to 80 Km PH.

3. It is advised that contents of policy to be followed in letter and spirit to record different parameter of roads as per para 3 of ibid letter at different stages of road construction viz :-

(i) **Inventory of Road:**

GPS coordinates, pavement Type, pavement Width, Terrain, land use, shoulder type and width, Drain Type and Width, Median type and Width, wayside Amenities, Crash barrier, Signages etc.

(Note- All inventory items shall be recorded both side of road and Geo-tagged with images).

(ii) **Condition of Road:**

Roughness, Rutting, Distresses (cracking, Potholes, Bleeding, Surface failure etc.): (Note- All inventory items shall be recorded for each lane and Geo-tagged).

4. When departmental authority engineer is appointed to supervise and execute the works or where provision of utilising NSV is not available in the contract of authority engineer, the provisions available in Para 5 (a) for expenditure on account of NSV to be booked to physical contingency of job is to be availed.

5. Please ack receipt.



(R K Garg)

SE (Civ)

Dir (EPC

For Dir Gen Border Roads

Encls:02 Sheets

Copy To

EDPCR/DGR - Please upload on BROWEBIDE.



No. RW/NH-33044/32/2019-S&R (P&B)
GOVERNMENT OF INDIA
MINISTRY OF ROAD TRANSPORT & HIGHWAYS
(S&R(P&B) Section)
Transport Bhawan, 01, Parliament Street, New Delhi-110 001

Dated, the 13th November, 2019

To,

1. The Chief Secretaries of all the State Governments/ UTs
2. The Principal Secretaries/ Secretaries of all States/ UTs Public Works Department dealing with National Highways, other centrally sponsored schemes.
3. All Engineers-in-Chief and Chief Engineers of Public Works Department of States/ UTs dealing with National Highways, other centrally sponsored schemes.
4. The Director General (Border Roads), Seema Sadak Bhawan, Ring Road, New Delhi-110 010.
5. The Chairman, National Highways Authority of India, G-5 & 6, Sector-10, Dwarka, New Delhi-110 075.
6. The Managing Director, NHIDCL, PTI Building, New Delhi-110001
7. All CE-ROs, ROs and ELOs of the Ministry

Subject: - Policy Guidelines on surveying with Network Survey Vehicle (NSV) for all the projects involving development of 2/4/6/8- lane, Expressway, Strengthening.

Madam/Sir,

Ministry has been mandated to develop quality road infrastructure. To ensure this objective, various measures has already been taken through the provisions made in RFP & contract document of Contractor/ Concessionaire as well as RFP for engagement of Authority's Engineer/ Independent Engineer which interalia provides for carrying out detailed condition survey of road by the Authority's Engineer/Independent Engineer using Network Survey Vehicle (NSV).

2. The prevailing contract document of Authority's Engineer and Independent Engineer provides for conducting road survey with NSV. As per contract, NSV survey has to be conducted on completion of work and thereafter at the interval specified in the contract. It is also noted that provisions are varying from contract to contract.

3. The matter has been considered in the Ministry and it is felt necessary to record the condition of the highway prior to commencement of work in order to have a documentary evidence for status/ condition and quality of road. On completion of the project, this exercise may invariably be done and recorded before issuing completion certificate. The minimum parameter which has to be recorded during survey with NSV in each lane, not limited to the following:

(i) Inventory of Road;

GPS coordinates, Pavement Type, Pavement Width, Terrain, Land use, Shoulder type and width, Drain Type and Width, Median Type and Width, Wayside Amenities, Crash barrier, Signages etc.

(Note- All inventory items shall be recorded both side of road and Geo-tagged with images)

(ii) Condition of Road;

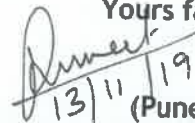
Roughness, Rutting, Distresses (cracking, Potholes, Bleeding, Surface failure etc.);

(Note- All inventory items shall be recorded for each lane and Geo-tagged)

Praveen
13/11/19

4. Therefore, it is decided that for all the projects involving development of 2/4/6/8-lane, Expressway, stage strengthening necessarily be surveyed with NSV before start of work and thereafter at regular intervals as provided in the contract for each lane of pavement.
5. (a) In respect of contracts where provision for use of NSV does not exist, the condition of road shall also be assessed using NSV. For this purpose, the Project -in-Charge may invite quotations or follow the rates in the adjoining/ nearby contract packages in accordance with relevant item rate stipulated in the contract agreement. The financial implication arising out, if any, may be met out from the contingencies provisions of any of the sanctioned work in the State. The time interval for carrying out survey using NSV shall be as under:
- (i) Before start of the work,
 - (ii) Before issue of provisional/ final completion certificate,
 - (iii) Every 6 months after completion of work.
- (b) In respect of EPC projects costing upto Rs. 300 Cr where State PWD/NHAI/NHIDCL/BRO is acting as Authority's Engineer without engaging a Supervision Consultant in accordance with Ministry's guidelines issued vide letter No. RW-NH-34048/7/2013-S&R (B) dated 29.10.2018, the road survey with NSV shall also be conducted by the executing agency as per procedure & time interval specified above and completion certificate shall be issued only after obtaining satisfactory results complying to Ministry's / IRC Specifications and Manual.
6. Road inventory and condition survey details obtained from NSV shall be regularly uploaded on PMIS portal.
7. The contents of this Circular may please be brought to the notice of all the Concerned in your Organization for strict implementation.

Yours faithfully,


13/11/19

(Puneet Garg)
Assistant Executive Engineer -QCC (S&R)
For Director General (Road Development) & SS

Copy to:

1. All CEs in the Ministry of Road Transport & Highways
2. The Secretary General, Indian Roads Congress
3. Technical circular file of S&R (R) Section
4. NIC-for uploading on Ministry's website under "What's new"

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2. PPS to DG (RD) & SS
3. PPS to AS&FA
4. PS to all ADG's
5. PS to JS (T)/ JS (H)/ JS (LA&C)/ JS (EIC)