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No RW/NH-29013/01/2020-S&R(P&B) Government of India Ministry of Road Transport & Highways (Road Safety Engineering Zone) Transport Bhawan, 1, Parliament Street, New Delhi-110001

New Delhi dated the 09<sup>th</sup> November 2020

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), Seems Sadak Bhawan, Ring Road, New Delhi 110010.
- 5. The Chairman, National Highways Authority of India, G-5 & 6, Sector-10, Dwarka, New Delhi 110075.
- 6. The Managing Director, NHIDCL, PTI Building, New Delhi-110001.
- 7. All CE-ROs, ROs and ELOs of the Ministry.

Subject: Guidelines/SOP for monitoring and compliance of all safety norms on the Highways

Ministry and its executing agencies follow standard bidding documents of (i) FIDIC base Item Rate Bid (ITB) Contracts, (ii) Engineering Procurement Contract (EPC), (iii) Hybrid Annuity Mode Concession Agreement and (iv) BOT(Toll/Annuity) Concession Agreements. While (i) and (ii) are financed through 100% budget provisions, (iii) and (iv) are financed with investment models of Debt/Equity with investment recovery through toll or Annuity receipts. While, all the above model contracts have provisions to make the contractor/concessionaire responsible for safety auditing at design stage, during construction, while opening to traffic and during operations; the provisions for appointment of Safety Auditor by Contractor is made in the Model EPC documents. These provisions are made to ensure safety compliances where the contractor is to deliver at a fixed price and own all responsibilities of successful project.

2) Despite all due diligences made as above, due to divergent nature of traffic and driver behavior, it may be possible at some spots where all above fails and accidents/fatalities takes places. In order to save precious human lives, such spots need to be attended

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immediately for identification of problems and rectifications. There may be such spots on the highways, awaiting development, where such spots are to be dealt on priority. The "Protocol for identification and rectification of road accident black spots on National Highways" has been prepared and issued to all concerned vide this ministry OM no. RW/NH/15017/109/2015/P&M(RSCE) dated 28<sup>th</sup> October 2015 (Annex-1). This ministry has also issued following directions for effective rectification of Blackspots:

- i) OM No. RW/NH-29011/2/2015/P&M (RSCE) dated 7<sup>th</sup> December 2015 on "Preparation and submission of proposals for rectification of identified road accident black spots on National Highways." (Annex-2)
- ii) OM No. RW/NH-29011/2/2015-P&M(RSCE) dated 14<sup>th</sup> September 2016 on *"Immediate cautionary measures for alerting road users at identified black spots"* (Annex-3)
- iii) Circular no. RW-NH-29011/01/2019-S&R(P&B) dated 26<sup>th</sup> August 2019 on *"Rectification of Accident Black Spot - Preparation of proposal and sanction/approval regarding."* (Annex-4)

3) Further this ministry through NIC is developing a Blackspot MIS portal <u>http://122.176.47.24/bs/auth/users/login.cshtml</u> where details of all blackspots, ids, photographs, and rectification status and post rectification feedback shall be collected and monitored.

4) While reviewing the measures taken and strategy of Blackspots rectification, need has been felt to issue following guidelines for identification of problems, proposing/preparing proposals for suitable rectification measures:

4.1) The Blackspot shall be thoroughly inspected, a detailed layout drawing of existing site prepared duly marked with (i) all geometric features of existing road, (ii) all permanent and temporary structures within ROW, (iii) traffic flows along and across the road (separately marked fast moving motorable, slow moving motorable, non motorable and pedestrian), (iv) conflict points identified and marked on layout drawing;

4.2) Suitable measures for elimination of all conflict points derived and marked on the layout of existing spot with traffic flows along and across the road (separately marked fast moving motorable, slow moving motorable, non motorable and pedestrian); conflict points, remaining if any, identified and marked on layout drawings;

4.3) Justification for conflict points which could not be removed, shall be prepared along with other suggestive measures for minimization of accidents/fatalities.

4.4) Cost estimates be prepared for the proposed measures adopting quicker construction methods and works got sanctioned.

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4.5) Emphasis be given to complete the rectification process within 6 months.

4.6) Pending permanent rectification, temporary measures shall be taken, immediately on noticing the Black Spot, to avoid conflicts/accidents.

**4.7)** Photographic evidence of Blackspots pre and post rectification be kept along with three years feedback vigil on the rectified site to monitor results of rectification. In case of post rectification accidents on the spot, the reasons of failure be identified and urgent action for further improvements be taken.

4.8) Steps taken as above be immediately updated on Black Spot MIS portal <u>http://122.176.47.24/bs/auth/users/login.cshtml</u>.

5) This issues with the approval of Competent Authority.

Yours faithfully

shan veer Salu.

(Dhan Veer Sahu) Executive Engineer (Road Safety)

Copy to:

End: As above.

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

Copy for kind information to:

- 1. Sr. PPS to Secretary (RT&H)
- 2. PPS to DG (RD) & SS
- 3. PPS to AS&FA
- 4. PS to ADG-I
- 5. PS to JS(T)/ JS(H)/ JS(LA&C)/ JS(EIC)



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भारत सरकार Government of India सड़क परिवहन और राजमार्ग मंत्रालय Ministry of Road Transport & Highways परिवहन भवन, 1 संसद मार्ग, नई दिल्ली - 110001 Transport Bhawan, 1 Parliament Street, New Delhi- 110001



No. RW/NH/15017/109/2015/P&M (RSCE)

Dated: 28.10.2015

## OFFICE MEMORANDUM

Subject: Protocol for identification and rectification of road accident black spots on National Highways

The present Road Safety scenario on road network in general and on National Highways in particular with a high rate of accidents leaves much to be desired. Though the roads especially National Highways were expected to be developed adopting all Safety Engineering measures including design stage Road Safety Audit at the time of preparation of DPRs and Pre-opening stage Road Safety Audit after completion of the development work, , a significant number of locations even on NHs have remained prone to accidents on the road network in the country including NH network which has already been developed in one scheme or the other, due to several reasons and constraints in the development and maintenance. For improvement of such locations a systematic approach is required which includes a common definition for road accident black spots. For this purpose the following is the protocol for road accident black spots on National Highways.

2. <u>Definition of Road Accident Black spot on National Highways:</u> Road Accident Black spot is a stretch of National Highway of about 500m in length in which either 5 road accidents (in all three years put together involving fatalities/grievous injuries) took place during the last 3 calendar years or 10 fatalities (in all three years put together) took place during the last 3 calendar years.

3. <u>Forwarding the road accident data on NHs to Transport Research Wing (TRW) of</u> <u>MORTH:</u> The accident data (keeping in view the above definition of accident black spot) giving the specific location of black spot, limits of the black spot stretch (Up to a length of about 500 m), Number of accidents involving fatalities/ grievous injuries, number of fatalities if any during a calendar year are to be forwarded by police authorities/National Crime Records Bureau so as to reach TRW of Ministry of Road Transport & Highways by 31<sup>st</sup> March, of the subsequent calendar year( For example Road accident data of the year 2015 is to be forwarded to TRW by 31<sup>st</sup> March 2016).

4. <u>Forwarding of compiled road accident black spot data on National Highways by</u> <u>TRW to Road Safety Cell(Engineering) of MORTH:</u> Transport Research Wing of MORTH shall compile/analyse road accident data on NHs of a particular calendar year based on the above definition and furnish the black spot details along with details of accidents/ fatalities to Road Safety Cell(Engineering) of MORTH by 31<sup>st</sup> May of the subsequent calendar year (For example black spot data based on road accident data of the year 2015 is to be forwarded to RSCE of MORT&H by 31<sup>st</sup> May2016).

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सभी पत्र सचिव, भारत सरकार, सड़क परिवहन और राजमार्ग मंत्रालय, को उनके नाम पर नहीं बल्कि पद के पते पर भेजे जाने चाहिए। तार : ''ट्रांसपोर्ट'' All communication should be addressed to the Secretary to the Government of India, Ministry of Road Transport & Highways, by title NOT by name. Telegram : "TRANSPORT"

Remedial measures for Rectification of Road accident black spots on NHs: The 5. concerned executing agency should take necessary actions for preliminary inspection, framing of proposal and obtaining of approvals/sanctions as per the guidelines given in OM No RW/NH-15017/ 109/2015 / P&M (RSCE) dated 08.10.2015 and obtain sanctions/approvals for rectification of the accident black spots identified based on accident details of a particular Calendar year by 31st March of the next to subsequent Calendar year (For example sanctions of remedial measures for black spots based on road accident data of the year 2015 by 31st March 2017)The execution of the remedial measures including acquisition of the land for implementation of the road safety measures for removal of black spots should be taken up on top priority and should be completed in minimum possible time commensurate with the size/ complexity of the remedial measures as per the respective contract conditions. In any case, short term measures like installation of road signs, road markings, speed reduction measures and repair of damages causing unsafe conditions on the National Highway shall be taken up Immediately and completed within 3 months of identification of the road accident black spot. The progress of the execution of these remedial measures should be regularly (on quarterly basis) reported to Road Safety Cell (Engineering) of Ministry of Road Transport & Highways.

6. Feedback on effectiveness of remedial measures taken:

Concerned executing agencies who executed the remedial measures should obtain Road accident data of the location/stretch where remedial measures are executed, from concerned Police Authorities on a calendar year basis after the remedial measures are executed and should communicate to the Road Safety Cell (Engineering) by 31<sup>st</sup> March of the subsequent calendar year till 3 years after completion of remedial measures or the declaration of the remedial measures as effective by Road Safety Cell (Engineering) whichever is later.

This issues with the approval of Secretary (RT&H).

(Ravi Prasad) Chief Engineer (Road Safety)

To

Chief Engineer-P-1/P-2/P-3/P-4/P-5/P-6/P-7/NER/PL/MON-I/EAP/NHDP-IV/ LWE/S&R (R)/S&R (B)

Chairman, NHAI [Attention: Chief General Manager (Road Safety)]/ Director General Border Roads/Managing Director, NHIDCL, Director, IAHE. Joint Secretary (Transport), Senior Advisor, Transport Research Wing.

All Secretaries of PWDs, Chief Engineers of NH, Chief Engineers of project zones, Regional Officers of MORT&H, DGBR, NHAI, NHIDCL

Copy for information to: PS to Hon'ble Minister (RTH & S), PS to Hon'ble Minister of State for RTH & S, PS to Secretary (RT&H), Sr. PPS to DG (RD) & SS, Chief Secretaries of Concerned States & UTs, PPS to ADG-I ADG-II, Coordinator-I, II & III.



भारत सरकार Government of India सड़क परिवहन और राजमार्ग मंत्रालय Ministry of Road Transport & Highways परिवहन भवन, 1 संसद मार्ग, नई दिल्ली - 110001 Transport Bhawan, 1 Parliament Street, New Delhi- 110001



No. RW/NH-29011/2/2015/P&M (RSCE)

Dated: 07th December, 2015

## Office Memorandum

## Sub: Preparation and submission of proposals for rectification of identified road accident black spots on National Highways

Repeated road accidents and fatalities are taking place in some locations on NHs due to various reasons, which are being identified as road accident black spots. In view of the great loss, being caused by the road accidents to the economy, apart from irreparable loss of precious human lives, it is essential to identify, investigate and rectify these road accident black spots wherever the accidents are being caused due to road related deficiencies. Ministry has already issued guidelines on this subject. While designing remedial measures at the identified road accident black spots on NHs, a balanced approach needs to be adopted keeping in view the improvement projects in progress or in contemplation on the black spot stretch while simultaneously meeting the objective of minimizing the accident potential at the accident black spots in minimum possible time, so that, no major investments are rendered superfluous due to other improvement projects taken up within a short duration.

2. Various measures to be taken for minimizing accident potential at the identified road accident black spots on NHs can be classified into different categories viz., Short term, Medium term/interim and Long term depending on the requirement of resources for taking up these immediate actions and other site conditions. Typical examples of short term, Medium term/interim and Long term measures at Road accident black spots on National Highways are as below:

#### (i) Short term measures:

Applicable to Non-urban sections & Urban Sections:

Road signs, speed limits/speed breakers, pavement markings, delineators, pedestrian railings, crash barriers, studs/ cats eye etc.

Applicable only to Urban Sections:

Restriction of certain types of vehicles, one way streets, reversible lanes, bus lanes, restriction on movement of different types of vehicles by time/ by lane etc.

(ii) Interim/Medium term measures: Extra widening at curves at black spot locations, improving horizontal and vertical geometry at black spots, provision of pedestrian facilities like Zebra crossings, railings, street lights, crash barriers, improving junctions, provision of foot paths, improving sight distance etc., within available land(as far as possible), signalization and removing of obstructions.

(iii) Long term measures : Provision of bypasses, provision of service roads, provision of grade separated inter-changes, provision of vehicular & pedestrian under-passes, foot over bridges, different measures acquiring additional land wherever required.

3. National Highway stretches which are identified for capacity augmentation and other improvements (by executing agencies) would be in different stages of improvement like DPR preparation, land acquisition/utility shifting, bidding and completion of residual pre-construction activities before fixing of appointed date/commencement date etc., and may take durations varying from 1 to 3 years for

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सभी पत्र सचिव, भारत सरकार, सड़क परिवहन और राजमार्ग मंत्रालय, को उनके नाम पर नहीं बल्कि पद के पते पर भेजे जाने चाहिए। तार : ''ट्रांसपोर्ट'' All communication should be addressed to the Secretary to the Government of India, Ministry of Road Transport & Highways, by title NOT by name.Telegram : "TRANSPORT" their development depending on the conditions of individual projects. Therefore, the following approach may be adopted in formulating various measures at the black spots on NHs for avoiding major superfluous expenditure while meeting the objective of reducing accident potential at the black spots in minimum possible time.

4. Short term measures may be adopted where; the contemplated improvements at road accident black spots after their completion are likely to be used by the traffic/road users for less than a year before other improvement projects are executed on the stretch under consideration. Interim/medium term measures including short term measures may be adopted where the contemplated improvements at the road accident black spots are likely to be used by traffic/road users for more than a year, before other improvement projects are executed on the stretch under consideration. Long term measures including interim/medium term/short term measures may be adopted as per the site and traffic requirements where no major improvement proposals are contemplated on the stretch under consideration or where the traffic/road users continue to use the proposed long term measures even after the major improvement works in contemplation are executed ( e.g. the improvements carried out on urban stretch of the National Highway will continue to be used by the traffic/road users even after completion of the bypass).

5. Adequate care may be taken in preparing accurate base maps drawn to a suitable scale indicating all the features of road and road environment through survey investigations, in superimposing the proposed improvements and in furnishing other traffic/road user related data while framing and forwarding the proposals. The executing agency at the level of Chief Engineer (NH) or equivalent may record a certificate while forwarding the proposals for improvements at the road accident black spots, about the likely duration of usage of the proposed improvements by the traffic/road users before other major improvements are executed on the stretch under consideration duly taking into account the status of other improvement projects in progress/ in contemplation. This certificate may accompany every proposal for road accident black spot rectification, so as to avoid loss of time in processing the proposals for sanction.

6. This issues with the approval of competent authority. This may be circulated to all concerned.

(Ravi Prasad) Chief Engineer (Road Safety)

To

Chief Engineer-P-1/P-2/P-3/P-4/P-5/P-6/P-7/NER/PL/MON-I/EAP/NHDP-IV/ LWE/S&R (R)/S&R (B)

Chairman, NHAI [Attention: Chief General Manager (Road Safety)]/ Director General Border Roads/Managing Director, NHIDCL, Director, IAHE / Joint Secretary (Transport), Senior Advisor, Transport Research Wing.

All Secretaries of PWDs, Chief Engineers of NH, Chief Engineers of project zones, Regional Officers of MORT&H, DGBR, NHAI, NHIDCL

Copy for information to: PS to Hon'ble Minister (RTH & S), PS to Hon'ble Minister of State for RTH & S, PS to Secretary (RT&H), Sr. PPS to DG (RD) & SS, Chief Secretaries of Concerned States & UTs, PPS to ADG-I ADG-II, Coordinator-I, II & III. Page 2 of 2



भारत सरकार Government of India सड़क परिवहन और राजमार्ग मंत्रालय Ministry of Road Transport & Highways परिवहन भवन, 1 संसद मार्ग, नई दिल्ली - 110001 Transport Bhawan, 1 Parliament Street, New Deihi-110001



RW/NH-29011/2/2015-P&M (RSCE)

14th September 2016

### Office Memorandum

# Sub: Immediate cautionary measures for alerting road users at identified black spots.

Identifying and rectifying road accident Black Spots is a continuous engineering activity towards improvement of road safety. Guidelines for this activity have already been issued vide this office memorandum of even number dated 08-10-2015, 28-10-2015 & 07-12-2015.

2. Long term permanent measures require detailed survey investigations, preparation of detailed proposals and their implementation which take some time. Therefore, it is essential to caution and alert the road users about accident black spot if the same is resulting from deficiencies in road / road environment. For this purpose the following approach and guidelines may be followed.

3. Some or all of the following signages shall be installed at the identified black spots immediately for cautioning/alerting road users.

- (i) Cautionary accident black spot signs (Newly designed and indicated in Annexure I enclosed) at both ends
- (ii) Solar red blinking signals at both the ends
- (iii) Rumble strips together with rumble strip sign
- (iv) "Restriction ends" sign

4. An indicative sketch showing the locations and shapes of the above signs is at Annexure-I. Sizes, shapes, locations and other specifications of all the signs including the newly designed sign indicated at (i) above shall be as per IRC-67-2012 or its latest edition.

5. In case the identified black spot contains sub-spots, the signs shall be installed for each of the sub-spots.

6. In case there are no road / road environment related deficiencies at the identified black spot, the above signs should not be installed and it should be intimated to Ministry that there are no road related deficiencies at that particular spot.

7. Not withstanding the installation of the above cautionary measures, long term measures should be designed and implemented for permanently rectifying the black spots as per the guidelines already issued. After the permanent long term measures are implemented, the above cautionary measures should be removed.

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सभी पत्र सचिव, भारत सरकार, सड़क परिवहन और राजमार्ग मंत्रालय, को उनके नाम पर नहीं बल्कि पद के पते पर भेजे जाने चाहिए। तार : ''ट्रांसपोर्ट'' All communication should be addressed to the Secretary to the Government of India, Ministry of Road Transport & Highways, by little NOT by name. Telegram : "TRANSPORT" 8. In case the cost involved in the above measures for all the identified black spots put together in the jurisdiction of a regional office is small, the same can be met from either Ordinary repairs or Contingencies of an ongoing NH work (even if the ongoing work is not falling on the black spot stretch as has already been specified in the guidelines).

9. In case the cost involvement for the above measures for all the identified black spots in the jurisdiction of a Regional Office put together is substantial approximate cost for the same may be furnished in a single list by each RO for Administrative/Financial approval. This may be furnished within two weeks of issue of this OM.

10. The above cautionary measures may be executed through short tender notice and completed within three months for all the black spots so far identified and notified. In case of future black spots, these cautionary measures shall be implemented within two months of notifying the identified black spots by the competent road authority (In case of National Highways, Ministry of Road Transport & Highways).

11. Implementation of long term measures must be carried out as a parallel activity for final rectification of the black spot as cautioning of road users is only an immediate measure.

12. The above guidelines may be treated as most urgent and the action taken be reported immediately to Road Safety Cell (Engineering) mail ID ce.rsce.morth@gmail.com. This activity will be monitored at the highest level and would be intimated to concerned authorities including Honourable Supreme Court Committee on Road Safety.

Enclosure: As above

(Ravi Prasad) Chief Engineer (Road Safety)

To

Chief Engineer-P-1/P-2/P-3/P-4/P-5/P-6/P-7/NER/PL/MON-I/EAP/ NHDP-IV/ LWE/ S&R(R)/S&R(B)/ SPZ

Chairman, NHAI [Kind attention: Chief General Manager (Road Safety)]/ Director General Border Roads/Managing Director, NHIDCL.

All Secretaries of PWDs, Chief Engineers of NH, Chief Engineers of project zones, Regional Officers of MORT&H

Copy for information to: PS to Hon'ble Minister (RTH & S), PS to Hon'ble Minister of State for RTH & S(PR), PS to Hon'ble Minister of State for RTH & S(MM), PS to Secretary (RT&H), Sr. PPS to DG (RD) & SS, PPS to AS&FA, Chief Secretaries of All States & UTs, PPS to ADG, Coordinator-I & III, PS to JS-EIC, LA &EAP / JS (Transport)/ JS(Highways), Senior Advisor (Transport Research Wing), PS to CE (Road Safety).

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#### No RW-NH-29011/01/2019-S&R(P&B) Government of India Ministry of Road Transport & Highways (S&R (P&B) Section) Transport Bhawan, 1, Parliament Street, New Delhi-110001

Dated: 26<sup>th</sup> August, 2019

To,

- 1. The Chief Secretaries of all the State Governments/ UTs.
- The Principal Secretaries/ Secretaries of all States/ UTs Public Works Department dealing with National Highways, other centrally sponsored schemes.
- 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), SeemaSadakBhawan, 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: Rectification of Accident Black Spot - Preparation of proposal and sanction/approval regarding.

Reference:

- (i) Circular No- RW/NH-15017/109/2015-P&M(RSCE) dated 08.10.2015
- (ii) Circular No- RW/NH-29011/2/2015-P&M(RSCE) dated 07.12.2015
- (iii) Circular No- RW/NH-29011/2/2015-P&M(RSCE) dated 02.09.2016
- (iv) Circular No- RW/NH-29011/2/2015-P&M(RSCE) dated 14.09.2016

Precious life of several road users is lost due to road accident in India. The Road Accident imposes a huge social and economic cost in terms of untimely deaths, injuries, disabilities and loss of potential income. The cost of road accidents is borne not only by the victims and their family, but by the society and economy also.

2. Ministry earlier issued several guidelines/circulars as mentioned in reference above, for rectification of black spots so that the road accidents could be minimized and precious life of the road users are saved. A comprehensive guideline, in supersession of above circulars/guidelines has now been prepared and to be followed by all concerned.

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3. The definition of road accident black spots on National Highways and the protocol for their identification has already been provided in Ministry's OM No. RW/NH-15017/109/2015-P&M(RSCE) dated 28.10.2015 (copy enclosed at Annexure A). However for inspection, framing of proposal and obtaining approvals/sanction for rectification of the accident black spots, the instant guidelines may be followed. The definition as per said circular is as under:

"Definition of Road Accident Black Spot on National Highways: Road Accident Black spot is a stretch of National Highway of about 500m in length in which either 5 road accidents (in all three years put together involving fatalities/ grievous injuries) took place during the last 3 calendar years or 10 fatalities (in all three years put together) took place during the last 3 calendar years."

4. The Regional Officers inter-alia by involving their Officers, PWD Officers, PIU Officers etc. has to inspect each black spots on National highways under their jurisdiction, analyze the reason of accidents with respect to geometry and other features of Highways, the cross roads and other reasons. Local enquiry and discussion with local authorities including with Police Personnel may also be duly considered in identifying the reasons/remedial measures for repeated accidents/fatalities. Based on such inspection and analysis if it is concluded that the accidents are not due to engineering deficiencies, a certificate in this regard may be issued by the Regional Officer.

5. Based on site inspection, preliminary survey etc. the type of interventions required may be identified and accordingly the action for taking corrective measures i.e. short term measures and Long Term Measures may be initiated at Regional Office Level. Depending upon the site condition/requirement the corrective measures may require Short Term Measures only, and in some cases Long Term Measures including Cautionary Measures&/or Short Term Measures. The suggestive items/measures and guidelines to be followed for rectifications of black spots are as under:

#### (a)Short term measures:

(I)The suggestive items/measures:

- (i) Pedestrian facilities like Zebra crossings
- (ii) Crash barriers/ railings
- (iii) Solar light

(iv)Junctions improvement

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(b) Long term permanent measure: Based on inspection, survey etc. if it is concluded that the spot require long term measures, a detailed estimate may have to be prepared for the same. In such situations some of the short term measure as mentioned in above para and following cautionary measures may also be carried out.

- (I) The signanges for cautionary/alerting road users may be as under:
- (i) Cautionary accident black spot signs at both ends
- (ii) Solar red blinking signals at both the ends
- (iii) Rumble strips together with rumble strip sign
- (iv) "Restriction ends" sign
- (v) Traffic Calming Measures

An indicative sketch showing the locations and shapes of the above signs is at Annexure-B. Sizes, shapes, locations and other specifications of all the cautionary signs indicated at (I) above shall be as per IRC-67-2012 or its latest edition.

The cautionary measures and short term measures(if required) which are part of long term permanent measure may be taken up under the provision of ordinary repair or such estimate may be sanctioned by the Regional Officers at their own level under the provision of contingencies of any NH work in the State concerned. The short tender notice may be invited by Regional Officers in case measures are to be taken up under the provision of contingencies and work shall be completed within a time span of 3 months.

A lump sum fee of Rs. 7.5 Lakh per black spot including all other expenses (i.e. TA, DA, inspection, survey, report, estimate etc.) may be paid to the Road Safety Auditor / Expert for preparation of design, estimate etc. for cautionary/short term measures. The Road Safety Auditor / Expert shall also render his service as an advisor for preparation of estimate for permanent measures within the lump sum fee of Rs. 7.5 lakh per black spot as mentioned above. These fees may be paid by the Regional Officer at his level under the provision of contingencies of any NH work in the State concerned.

The consultant may be engaged in addition to the road safety auditor/expert for detailed survey investigation, preparation of DPR, RFP documents etc as detailed in the subsequent para.

(II) Suggestive Long Term Measures:- The long term corrective measures shall be decided and finalized based on details survey and investigation.

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Some of the long term suggestive measures depending upon the location of black spot are as under:

Location of Black spot	Corrective/remedial measures
Obstacles such as trees, poles, structure, etc. within the clear zone, encroachments etc.	Shifting/removal of those obstacles
At grade junction	Flyover, underpasses, overpasses junction improvement etc.
Deficient geometry	Improvement of horizontal/vertical alignment/curvature or other safety measures including crash barrier etc.
Mix traffic	Providing service lane, Footpath, crash barrier etc.
Distressed/narrow Bridge/culvert	Reconstruction, rehabilitation/ widening of the bridges
Crossing of pedestrians/habitant area/school/hospitals/educational institute etc.	Foot over bridge etc.
Animal/cattle crossing	Cattle pass/VUP, fencing etc.
Hill roads/sharp curves	Various safety measures including crash barriers

(III) Procedure of sanction for long term measures:

The Regional Officers inter-alia by involving their Officers, PWD Officers, PIU Officers etc. or/and by engaging Road Safety Auditor / Expert may prepare the detailed estimate for carrying out Long Term Measures. The services of consultants may also be hired if so required. The cost towards hiring the consultancy for preparation of detailed design, drawing, estimate, bid document etc. @ of 5% of the civil work cost may also be included in the civil work estimate. The following procedure shall be followed:

(i) Regional Officers shall forward indicative approximate cost (including centages) for rectification of each identified black spots on National Highways for administrative/financial approval with estimated cost upto Rs 50.0 Crore (including land acquisition cost if any) to concerned Project Zone. For tender purposes Black spots at nearby locations may be clubbed together (if felt appropriate) and such details shall be indicated by ROs in their approval.

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- (ii) Detailed estimates for black spot rectification including layout drawings & technical proposals up to 5% above the approved indicative cost shall be approved by ROs at their level.
- (iii) Other aspects shall be followed as per the procedures applicable to NH (0) works.

SI. No.	Activity	Timeline
1	Indicative cost estimate to be prepared and submitted by Regional Officer.	45 days
2	Administrative and financial approval to be accorded by HQ.	30 days
3	Detailed survey/investigation/preparation of drawing, design, detailed estimate, bid documents etc. by RO through consultant (if required) and technical sanction. (If consultant is require to be engaged the process for the same may be initiative through short tender notice while submitting the indicative estimate to MoRTH.)	120 days
4	Finalization of contractor for the civil construction work.	
5	LA/ environment clearance etc. (if required)	
6	Time line for Completion of civil construction work	2 years

(iv) The indicative timeline to be followed is as under:-

6. The execution of the remedial measures after the sanction/ approval may be carried out through a contract to be awarded through bidding as mentioned above. However, in case some work is in progress on a nearby NH location, the execution of Cautionary/short term/long term remedial measures may be carried out through variations, within the provisions of that contract avoiding extension of time/ delay on account of these additional works.

7. Efficacy of the Road Safety Engineering measures is ensured only when road accidents / fatalities related to road and road environment are eliminated as reflected in feedback on accidents/ fatalities at the improved

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location for at least 3 years. Therefore, State PWD shall collect accident / fatality data at the improved locations from police authorities and forward the same to Road Safety Cell Engineering MORTH on yearly basis through Regional Officer, MORTH.

8. In case some of these black spots are falling on State roads immediate necessary action for removal of those black spots may be taken by the State Government including under CRF fund. These works shall be taken up by the State Government after carrying out survey, investigation and design etc. as per their own procedure. In view of the highest importance which road safety deserves, it is requested that all concerned should take the actions with special attention in a strictly time bound matter.

9. In respect of black spots falling on the stretches entrusted to NHAI/NHIDCL appropriate actions may be taken by the respective organizations for implementing remedial measures wherever such measures are required and the action taken/ progress achieved may be intimated to the Road safety Engineering cell, MoRTH.

10. This circular is issued with the concurrence of vide IFD U.O. No.471/TF-II/2019 dated 16/08/2019 and approval of competent authority.

Yours faithfully,

(Varun Aggarwal) Superintending Engineer-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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