NEC/4/2024-UNDER SECRETARY(A)
Government of India
Ministry of Development of North Eastern Region

Vigyan Bhawan Annexe,
Maulana Azad Road,
New Delhi-110011
March 18, 2024

OFFICE MEMORANDUM

Subject: Use of New/Alternative materials and Technology in Construction of Roads under NESIDS (Roads) – reg.

MDoNER has been supporting road projects in NER under its various schemes to fill up the gaps of road infrastructure in the region. The Ministry has supported several road projects over the last decade. It has been observed that the roads in NER constructed with conventional technology had several drawbacks such as rapid depletion of aggregate, poor durability, erosion under heavy rainfall condition etc. The terrain, geological structure and weather condition of NER warrants a special consideration for adoption of new technologies to address these issues. Adoption of new technologies/alternative materials in road construction shall increase the service life of road, reduce the necessity of frequent maintenance and shall boost the use of local and eco-friendly materials. These technologies will not only encourage sustainable practices but also will significantly reduce the cost.

2. To encourage use of new technology/alternative materials for construction of roads in NER supported under the Schemes of DoNER, a workshop was organized on 08.01.2024 in Vigyan Bhawan, New Delhi, with the participation of Representatives of State government of NER and expert agencies in this domain. The participants had agreed on use of such technologies as these have successfully demonstrated by NHAI/NHIDCL in their projects in NER.

3. In this regard, the competent authority in the Ministry of DoNER has decided that such new technologies be promoted in the projects supported by DoNER. Accordingly, the following measures may be taken by all concerned: -

(a) Although there is an exhaustive list of such new technologies that can be adopted in constructing road projects in NER, the relevant technologies that can be implemented in NER in surface course, base/sub base course, subgrade, slope protection, bridges and culverts, have been finalized after due consultation with MoRTH, MoRD/NRIDA and CRRI and is attached at **Annexure 1**.

(b) All the DPRs of Road/Bridges projects being submitted for approval to MDoNER under NESIDS (Road), should necessarily incorporate new technology component, for a minimum of 15 % length of the project proposal. The new technology component in the road project should invariably be adopted from the list

of technologies mentioned under Para 3 (a) above. However, efforts should be made to use the technologies indicated in para 3(a) over more length of the proposed road wherever feasible. Bidding/Contract Document may be prepared in accordance with above provisions.

(c) Defects Liability Period (DLP) of projects using such material/technology shall be at par with that of conventionally constructed pavement.

(d) The bidding/contract document shall have the provision of involvement of the Technology Provider during execution.

(e) Depending upon the location and size of the project, EIMC will be empowered to exempt any project from the above-mentioned conditions for utilization of new technologies for reasons recorded in writing

(f) The agencies entrusted with techno-economic vetting of the DPRs of the Roads/Bridges being sanctioned by MDoNER shall ensure that the above guidelines are followed in letter and spirit.

4. This issues with the approval of the competent authority.

Enclosed: As above.

(Anjana)
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To:

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2. Sh. S.K. Jain, Executive Engineer, Technical Wing, MDoNER

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Annexure-I

List of new technologies to be incorporated in road projects sanctioned under NESIDS (Roads)

i. Waste Plastic in Bituminous layer
ii. Cold Mix Technology
iii. Cement Grouted Bitumen Macadam
iv. Geo-cell Filled Concrete, Short-Panelled Concrete Pavement, Roller Compacted Concrete Pavement in built-up/urban stretches
v. Cement Treated Sub base/Base
vi. Soil Stabilization for Subgrade improvement
vii. Full depth reclamation (for rehabilitation)
viii. Geo-synthetics/Jute - Geo textile/Coir
ix. Pre cast concrete segmental box culvert
x. New Technologies for Protection / Retention Structures
xi. Prefabricated Modular Steel Bridges