

GOVERNMENT OF MAHARASHTRA
Public Works Department
Technical Circular No. MIS-1091/CR-85/NH-2
Mantralaya, Bombay – 400 032.

Dated : 4th May 1991

According to present practice, apart from various testes prescribed, field density tests are prescribed for bituminous concrete with a view to ensure good quality. However similar field density tests are not prescribed for bituminous macadam. Strengthening of bituminous pavement is a multi-layer construction with a top layer of bituminous concrete with supporting layers of bituminous macadam of various grades. If the supporting layers of bituminous macadam of various grades are not compacted properly, the inadequate compaction of bituminous macadam layers will reflect adversely on the behavior of bituminous concrete above. It is, therefore, necessary that bituminous macadam layers of various grades are compacted properly. All the field engineers are hereby instructed to specify and carry out field density tests as prescribed below for bituminous macadam layers of any grade with a view to ensure proper compaction of bituminous macadam layers

- 1) Compaction of bituminous macadam layers shall be carried out in accordance with clause 507.4.6 of ministry of surface transport specification (2nd revision of 1988 edition).
- 2) The specific gravity for the aggregates supplied by the agency, should be again determined in the Government laboratory and only that value of specific gravity for the aggregates should be adopted for determining the laboratory density.
- 3) For working out the laboratory density, the mixes for bituminous macadams of different types be compacted in the same manner as for Marshall stability test. The accepted value of field density shall not be less than 95% of the value of laboratory density.
- 4) The frequency of tests shall be as one sample for 500 sq.mt. of the compacted bituminous surface. However, minimum two samples shall be tested for the work carried out during the day, if the work carried out is less than 500 sq.mt.
- 5) Proper records for all the field density test carried out shall be maintained in the register by the deputy engineer incharge of the work and 5% of the field density tests shall be checked by the Executive Engineer incharge of the work.
- 6) If results of field density tests are not satisfactory, the work carried out shall be rejected and redone without any cost to Government.

(S.W.GOKHALE)
Superintending Engineer and
Ex-Office Deputy Secretary to Government.