SAMPLING METHOD MC1

SAMPLING OF ROAD PAVEMENT LAYERS

1. **SCOPE**

1.1 This sampling procedure covers the sampling of:
Materials which has been laid but not yet compacted, and
Completed layers.

1.2 The layers from which samples can be taken are as follows:
treated and untreated bases;
treated and untreated subbases;
selected layers; and
subgrades.

2 **APPARATUS**

2.1 A suitable tape measure.
2.2 A shovel.
2.3 A pick.
2.4 Suitable small canvas sheets.
2.5 A hand brush.
2.6 Suitable containers for samples such as strong canvas bags or plastic bags for unstabilized layers, and suitable tins or plastic containers with air-tight lids for stabilized layers.
2.7 A riffler with 25mm openings and six matching pans.
2.8 A metal basin approximately 500mm in diameter.

3 SAMPLE SIZE

Test for which sample is intended	**Mass in kg (minimum)**
Indicator tests	10
Density determinations	40
California Bearing Ratio	60
Unconfined compressive strength (treated layers)	35

4 **METHOD**

4.1 **Preparation of sampling hole**
Using a pick and shovel, dig a hole in the layer which is to be sampled. The hole should be large enough to yield the required sample size. (See note 6.1.) The material should be loosened carefully so that material from the underlying layer is not accidentally loosened and mixed in with the required material. Loosen enough material to obtain the minimum quantity required.

4.2 **Sampling**

4.2.1 The loosened material must be placed in suitable containers. If a single container is large enough to take the full quantity, then all the material from the sampling hole should be placed in it. If necessary, a small brush may be used to sweep all the fine material together before it is added to the sample.

4.2.2 When more than one container has to be filled, for instance when one small container has to be filled for indicator tests and two to three large containers for CBR tests, all the loosened material should be removed from the sampling hole and placed on a canvas sheet or hard, even surface. It should then be quartered with the aid of a riffler and/or quartering method so that each container that is filled with material will contain a representative sample of the material taken from the layer in the sampling hole.

4.2.3 When treated material is sampled for unconfined compressive strength tests, all the loosened material should immediately be placed in a sufficiently large drum and the lid should be put on to minimize moisture loss. (See note 6.2.)

4.3 **Labeling of sample containers**
Every sample container must be clearly and indelibly marked so that it can be identified in the laboratory. The label or reference must concur with the reference in the covering report ofsample data form which notifies the laboratory of the arrival of the samples.

5 **REPORTING**
The samples must be sent to the laboratory under cover of a properly composed report and data form. (See form TMH-2 in Method MA2).

Full details of each sample must be given and must contain at least the following information:

Name of the project.
Name of the sampler.
Date of sampling.
Stake value.
Centre line offset.
Depth of the layer.
Sample number and/or mark.
Number and type of container, and the numbers with which the containers are marked.
How sampled are being sent. (If the samples are being sent by train, bus or special transport, the information about the consignment should be given in a covering letter.)
Remarks: Any important information on the layer or the material in the road, particularly how the material was processed.

6 NOTES

6.1 If the layer to be sampled is covered by another layer, the latter should first be cleared away from an area larger than the area required for the test hole in the underlying layer. The sides of the test hole in the underlying layer must not touch the sides of the hole in the upper layer sot that no material from the upper layer gets mixed with the material from the sampled layer when the latter is being loosened.

6.2 Samples taken for unconfined compressive strength tests must be taken to the laboratory without delay so that test samples can be compacted as soon as possible. (See also Test Method A14 in TMH1.)

All other samples of cement- or lime-treated layers should be taken immediately after the stabilizing agent and water have been mixed in, and must be taken immediately to the nearest laboratory so that the tests can be done within the prescribed time limits.

6.3 Samples that are taken for the determinations of the moisture content of a material must be placed in a water-tight container as soon as they have been loosened, for example a bottle with a wide neck and a screw-cap and sealing ring, or a plastic flask with a top which forms a tight seal. The bottle or flask must be weighed **before** the container is opened. Once the mass has been determined, the container is opened so that the sample can be dried to determine the moisture content.