
Fieldwork

1. Clear all underground services at each test-hole location.
2. On most projects, test-holes are required every 50 m with a minimum of three (3) test holes per project location. For street projects greater than 500 metres, test holes may be taken every 100 m. More or fewer test-holes may be required depending upon known site conditions – confirm with the Streets Project Engineer.
3. Record location of test-hole (offset from curb, distance from cross street and house number).
4. Drill 150 mm-diameter core in pavement.
5. Drill 125 mm-diameter test-hole into fill materials and subgrade.
6. If a service trench backfilled with granular materials is encountered, another hole shall be drilled to define the existing sub-surface conditions.
7. Test-holes are to be drilled to depth of 2 m \pm 150 mm below surface of the pavement.
8. Recover pavement core sample and representative samples of soil (fill materials, pavement structure materials and subgrade).
9. Measure and record pavement section exposed in the test-hole (thickness of concrete or asphalt and different types of pavement structure materials).
10. Pavement structure materials to be identified as crushed limestone or granular fill and the maximum aggregate size of the material (20 mm, 50 mm or 150 mm).
11. Log soil profile for the subgrade.
12. Representative samples of soil must be obtained at the following depths below the bottom of the pavement structure materials – 0.1 m, 0.4 m, 0.7 m, 1.0 m, 1.3 m, 1.6 m, etc. Ensure a sample is obtained from each soil type encountered in the test-hole.
13. Make note of any water seepage into the test-hole.
14. Backfill test-hole with native materials and additional granular fill, if required. Patch pavement surface with hot mix asphalt or high strength durable concrete mix.
15. Return core sample from the pavement and soil samples to the laboratory.

Lab Work

1. Test all soil samples for moisture content.
2. Photograph core samples recovered from the pavement surface.
3. Conduct tests for Atterberg Limits and hydrometer analysis on selected soil samples which are between 0.5 m and 1 m below top of pavement (this is the sub-grade on which the pavement and sub-base will be built). The selection will be based upon visual classification and moisture content test results, with a minimum of one sample of each soil type per street to be tested.
4. Prepare test-hole logs and classify subgrade (based on hydrometer) as follows:
 - < 30% silt - classify as clay
 - 30% - 50% silt - classify as silty clay
 - 50% - 70% silt - classify as clayey silt
 - > 70% silt - classify as silt

For any uncertain situations and/or locations, or clarification of these requirements, contact the Streets Project Engineer.

Prepared by The National Testing Laboratories Limited and Eng-Tech Consulting