

Approval & Reception Procedure

DG – Geotechnical Department	
Compaction of Sub-grade	Document no. ARP/DG/07
	Date: 2010/07/01
	Page no. 1 of 2

1. Reference standard

Regulamento de Fundações, Guia de Dimensionamento de Fundações, Regulamento de Estruturas de Suporte e Obras de Terra. ASTM C127, ASTM C128, ASTM D1556, ASTM D1557, ASTM D4253.

2. Approval procedures

2.1 Information to be submitted

Source of material and their test report. Proctor Test (ASTM D1557) for soil sample, Maximum index density (ASTM D4253) for sand sample and Specific Gravity Test (ASTM C127, C128) for crush stone sample.

2.2 Sub-grade material must be approved before (See approval & reception procedure ARP/DG/02)

3. Reception procedure

3.1 General

The sub-grade shall be tested and approved, compacted, finished correctly to alignment, dimensions and levels, before any pavement material is placed.

3.2 Field Tests

The following field tests shall be performed (1 test for each 500m² or part thereof):

Field Density Test (ASTM D1556)

4. Acceptance criteria

- Maximum permissible thickness of layers to be compacted should not be greater than the requirement of specification (or not greater than 0.3 m if not specified).
- The gradient of the surface must avoid the presence of retained water.
- If the determined relative density complies with the requirement of specification (or $\geq 95\%$ of modified proctor if not specified), then the compactness on the area of that level shall be considered to be acceptable.

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Compaction of Sub-grade	Document no. ARP/DG/07
	Date: 2010/07/01
	Page no. 2 of 2

- When the modified proctor is not possible to be obtained it can be decided to work with the void ratio, In this case if the determined void ratio comply with the requirement of specification (or $\leq 15\%$ if not specified), then the compactness on the area of that level shall be considered to be acceptable.
- If test results failed to comply with the requirements, further replace and/or compaction shall be requested.