

**[DPWH DEPARTMENT ORDER NO. 22, S. 2011,
April 08, 2011]**

**MINIMUM PAVEMENT THICKNESS AND WIDTH OF NATIONAL
ROADS**

In line with the Department's thrust of upgrading the design standards of national roads and in order to avoid the early deterioration of pavement due to uncontrolled overloading, the guidelines on the design of pavement thickness and width of national roads are hereby prescribed:

A. Pavement Thickness

1. Portland Cement Concrete Pavement (PCCP)

- a. For new road construction, rehabilitation or upgrading, the minimum thickness of the pavement shall be 280 mm. However, a thickness of less than 280 mm. but in no case less than 230 mm., may be adopted if the Cumulative Equivalent Single Axle Load (CESAL) is not more than 7.0×10^6 . The procedure for calculating the CESAL is hereto attached as Annex A*.
- b. For pavement rehabilitation using the crack and seat method, a minimum thickness of 260 mm. shall be adopted for the new pavement that will be constructed on top of the deteriorated concrete pavement.
- c. For pavement reblocking, the thickness of the new pavement shall be the same as the replaced blocks.

2. Asphalt Pavement

- a. For overlaying works, the minimum thickness of the overlay shall be 50 mm.
- b. On grounds of economy, pavement thickness of more than 50 mm. shall be considered only if the cost of the asphalt pavement of such thickness is less than the cost of a 230 mm. thick PCCP.

In both pavement types, the thickness of pavement shall be verified from pavement design analysis using the AASHTO method as contained in the DPWH Design Guidelines, Criteria and Standards considering the latest Annual Average Daily Traffic (AADT) and axle loading.

B. Pavement Width