

SUBPROJECT SELECTION CRITERIA

1. The periodic road maintenance component will finance a time slice of road periodic maintenance and rehabilitation works under the Yunnan Highway Administration Bureau (YHAB) from its annual road maintenance plan. Under the trunk road rehabilitation output (Output 1), the works will be divided into four annual phases and implemented over 4 years. Phase I includes 192 km of works, including 36 km of overlays and 156 km of pavement rehabilitation works. Phase II and Phase III will include a target of 290 km of works each, and Phase IV a target 120 km. Periodic maintenance will account for at least 20% of the length of works under Phase II, Phase III and Phase IV, the rest being pavement rehabilitation. Box 1 provides the correspondence between the English definitions used throughout the documents and those used in the selection criteria and the Loan and Project Agreement, which are based on the Ministry of Transport (MOT) technical standards.

Table 1: Target Phase Lengths

	Year	Length (km)		Total
		Overlays	Rehabilitation	
Phase I	2013	36	156	192
Phase II	2014	60	230	290
Phase III	2015	60	230	290
Phase IV	2016	30	95	120
Total		181	711	892

Source: Asian Development Bank.

Box 1: Definition of Road Maintenance Categories

MOT classifies maintenance as *routine*, *intermediate* and *heavy*.¹ The two latter ones correspond reasonably well to the English-language concepts of *periodic* maintenance and of *rehabilitation* respectively. In the documents, 'rehabilitation' is used generically to include intermediate and heavy maintenance, except when specified otherwise. MOT categories include the following main activities:

Routine Maintenance: routine maintenance (cleaning, removal of debris, clearing of water or snow, repainting, clearing of culverts, cutting of vegetation), and small repairs (crack sealing, patching, cuts and shoulders, retaining walls and other masonry, fencing).

Intermediate Maintenance: pavement sealing and overlays, punctual widening within right of way (RoW) (<50 m e.g., for curve safety), comprehensive repair of retaining walls, shoulders and ditches, minor bridge repairs, clearing of long stretches of ditches, full replacement of curbs, widening of narrow bridges by <1m, river bed training around existing bridges, culvert replacement.

¹ Ministry of Transport of the People's Republic of China. 2009. *Technical Specifications for Maintenance of Highways*. Beijing.

Heavy Maintenance: reconstruction of entire pavement (possibly including subgrade) on sections longer than 10 km, construction of small interchanges within RoW, tunnel reinforcement works, placement of new guardrails, full replacement of fencing, roadway minor realignment within RoW, reconstruction of large retaining walls or slope protection, clearing of large landslides (>1 km)*, widening and upgrading of roads from Class IV to Class III*, replacement of bridge decks, widening and strengthening of bridges (>30 m),* new short tunnel construction*, construction of new short road corridors.*

* Activities generally not considered in other countries part of road maintenance, or that due to their technicality require to be treated separately from road pavement maintenance.

2. A due diligence of Subprojects included in Phase I was carried out during project preparation by ADB. Subprojects to be included in Phase II, Phase III and Phase IV will require ADB approval. They will be selected annually, in order of their economic returns, based on rankings prepared each year by YHAB, subject to the criteria below.

- (i) The subproject concerns rehabilitation works of the road.
- (ii) The subproject does not involve:
 - (a) bridge construction widening or rehabilitation of more than 30 meters in length (while bridge rehabilitation of less than 30 meters can be included);
 - (b) any tunnel rehabilitation or upgrading (widening, structural strengthening etc.);
 - (c) widening outside of the existing right of way, and the width of the increase does not exceed one meter, unless the length of such increase does not exceed 5% as a percentage of the total length of the road section undergoing Heavy or Intermediate Maintenance works;
 - (d) upgrading from one road class to another road class; (e) paving of gravel or dirt roads;
 - (e) extension or change in alignment of more than one meter, unless such realignment is directly required to improve the safety of an intersection, of a curve, or a steep grade in the road; and
 - (f) major slope protection works, where 'major' means more than 25% of the estimated costs of the works.
- (iii) Unless otherwise agreed, the subproject should involve at least ten continuous kilometers in length.
- (iv) The type of maintenance is aligned with first priority tasks under the Road Sector Maintenance Strategy.²
- (v) The subproject is a High Priority Road Maintenance Project, meaning a road maintenance project identified in a preliminary subproject list, which, based on a prioritization carried out with a road asset management software,³ applied to annual traffic and road condition data, is among those presenting the highest benefits to cost ratio for maintenance work.

² Road Sector Maintenance Strategy (available from the list of Supplementary Linked Documents in Appendix 2 of the Report and Recommendations to the President).

³ Highway Design and Management IV or Chinese Pavement Management System.

- (vi) The subproject has undergone environmental impact assessment and social impact assessment and has been found not to involve any significant environmental or social impacts or any negative impacts on ethnic minorities.
- (vii) The subproject has an estimated economic internal rate of return of at least 12% when using a minimum eight year evaluation period using life cycle cost and benefits.
- (viii) YHAB has prepared and submitted for the subproject a Data Sheet in the form set out in the Operations Manual.