

Basic Cross-Section 5 (2-Lane)

This cross-section has been narrowed from 10.0 m to 9.4 m. The cross-section should be fully paved / surface treated.

Basic Cross-Sections 5.S1 and 5.S2 (2-Lane)

Stage construction is recommended for Secondary Arterials where the projected 10 yr. AADT is less than 300 v/d and for Collectors when the projected 10-year AADT is in the 300 v/d range.

Basic Cross-Section 6 (2-Lane)

The top widths for all gravel roads remain as 8.0 m (8.4 m in rolling terrain).

An in-house study showed that the warrants to pave a road should remain at 300 v/d (20 yr. AADT). Paving highways with traffic volumes less than 200 v/d may be warranted due to special circumstances such as soil conditions, adjacent developments, large volumes of truck traffic or the need to maintain the continuity of a route surface.

As previously mentioned, it is also recommended that roads that warrant paving should be constructed in stages according to **Basic Cross-sections 5.S1 and 5.S2** where it is anticipated that it will be 5 to 10 years before they are paved. With stage construction - the earth, ditches, subgrade and berms are built to accommodate eventual surfacing. However, the travelled roadway is built with gravel to between a 8.0 m - 8.4 m width. Under stage construction - the rock and ditches would be constructed at the final location so that the subgrade can be widened at a later stage to accommodate surfacing in a manner that will not affect the ditches. Provision of the 8.0 m gravel top in both types of stage construction (as compared with something wider) results in considerable savings in maintenance costs prior to the highway being hard surfaced.

Right-of-Way

The right-of-way widths previously adopted following the 1986 Manitoba Highways Classification Study (See Table 1 - Basic Design Standards for Provincial Highways - March 1986 on page 16 of the Study Report) have been increased somewhat for low volume roads to minimize the future negative effect on adjacent lands. The minimum right-of-way width is now 45 to 50 m for roads located in a rugged area. The right-of-way widths apply to the normal type of highway construction using side borrow. Where the sources of subgrade materials are from borrow beyond the right-of-way, consideration should be given to reducing these widths, in particular, where the highway is crossing prime agricultural land, built-up areas or environmentally sensitive areas.

In the case of multi-lane divided highways, acquisition of right-of-way can be reduced by using median