8820.9922 MINIMUM DESIGN STANDARDS; NEW BRIDGE, BRIDGE REPLACEMENT, OR BRIDGE REHABILITATION PROJECTS AND APPROACH ROADWAYS ON RURAL OR SUBURBAN UNDIVIDED ROADWAYS THAT ARE NOT ON THE STATE-AID SYSTEM.

New bridge, bridge replacement, or bridge rehabilitation projects and approach roadways on rural or suburban undivided roadways that are not on the state-aid system must meet or exceed the minimum dimensions indicated in the following design chart.

Existing ADT (a)	Lane Width	Shoulder Width	Inslope (b)	Clear Zone (c)	Design Speed (d)
	(feet)	(feet)	(rise: run)	(feet)	(mph)
0-49	11	1	1:3	7	30-60
50-149	11	3	1:4	9	30-60
150-400	12	4	1:4	15(e)	30-60

Engineering judgment may be used to choose a lane-width or shoulder-width dimension other than the widths indicated in the chart for roadways. Factors to consider may be safety, speed, population, land use, benefit/cost analysis, traffic mix, farm equipment, environmental impacts, terrain limitations, bicycle traffic, pedestrian traffic, other nonmotorized uses, functional classification, or other factors. Widths less than those indicated in the chart require a variance in accordance with parts 8820.3300 and 8820.3400.

(a) For existing ADT greater than 400, part 8820.9920 standards apply.

(b) Applies to slope within the clear zone only.

(c) Culverts with less than 30-inch vertical height allowed without protection in the clear zone.

(d) Subject to terrain.

(e) For roadways in suburban areas, the clear zone may be reduced to a width of ten feet for projected ADT under 1,000 and to 20 feet for projected ADT of 1,000 or over. Wherever the legal posted speed limit is 40 miles per hour or less, the clear zone may be reduced to a width of ten feet.

HS 25 loading with AASHTO Standard Specifications or HL-93 loading with load and resistance factor design (LRFD) is required for new or reconstructed bridges. HS 18 loading is required for all rehabilitated bridges. The curb-to-curb minimum width for new or reconstructed bridges must be equal to the proposed lane plus shoulder widths, but in no case less than the minimum lane width plus four feet, and in no case less than required per Minnesota Statutes, section 165.04.

Bridge structures of minimum 20-foot clear width may be constructed where existing ADT is less than 50, potential for increasing ADT is low, and the local government agency finds that the bridge width can operate effectively at that width for the expected life of the bridge.

Statutory Authority: *MS s 14.389; 162.02; 162.09*

History: *29 SR 449; 36 SR 925*

Published Electronically: *February 22, 2012*