

Lake Emma Township – Minimum Road Standards  
For New or Re-Construction

New or reconstructed roads shall meet or exceed the following dimensions and standards indicated. Town Board judgement relating to topographical conditions, public safety and convenience shall be additional considerations for town roads. Any item not covered in the following information shall comply with the minimum geometric standards set forth under State Aid Operations 8820, and as directed by the Town Board.

	Estimated vehicle speeds – MPH	<u>20</u>	<u>30</u>	<u>40</u>	<u>50</u>
1.	Minimum sight distance to allow for safe stopping:	150'	200'	275'	350'

(See Figure # 1 Sight Distance )

2. Maximum allowable grades, % (feet of elevation change per 100 feet of road length)

	MPH	<u>20</u>	<u>30</u>	<u>40</u>	<u>50</u>
	% of Grade	10%	9%	8%	7%

3. Minimum radii for curves. 110' 250' 460' 760'  
Superelevation will be required on curves greater than 30 MPH and when the direction of travel changes by more than 5 degrees a horizontal curve should be constructed.

4. Road surfaces and grades shall be constructed to current MN/DOT Standard Specifications for Construction and the attached Typical Section and shall provide a smooth, hard, dense, well-drained, all weather surface. ( See Figure # 2 Typical Section )

5. The minimum recommended ditch depth is 3 feet from the shoulder to ditch bottom. Minimum culvert diameter is 15 inches and set to the flow line of the ditch. Culverts larger than 24 inches should be sized by a professional engineer. Culverts shall have a minimum cover of 18 inches. Turf establishment shall be required on all disturbed areas and shall comply with MPCA best management practices and storm water runoff requirements.

6. Intersecting roads shall intersect at right angles except when topography precludes, and in no case should the angle of intersection be less than 60 degrees. Two roads meeting a third road from opposite sides shall be offset at least 125 feet from their centerlines. Sight distance at intersections shall be as follows:

Anticipated vehicle speed,	MPH	<u>20</u>	<u>30</u>	<u>40</u>	<u>50</u>
Minimum sight distance,	Feet	200	300	400	500

(See Figure # 3 Intersection Sight Distance )

7. Dead end roads will not be permitted without a suitable cul-de-sac constructed at the end for a turn around. Minimum diameter for cul-de-sac shall be 75 feet.

8. Right of Way shall be adequate for construction and maintenance of the roadway, slopes and ditch. In most cases the right of way easement shall be a minimum of 66 feet wide.

9. Road surfacing shall be spread and bladed shoulder to shoulder and consist of 2 inches stabilizing Aggregate Class 5 and 2 inches of aggregate surfacing class 1, all conforming to current MN/DOT Specifications.

Figure No. 1 – Sight Distance

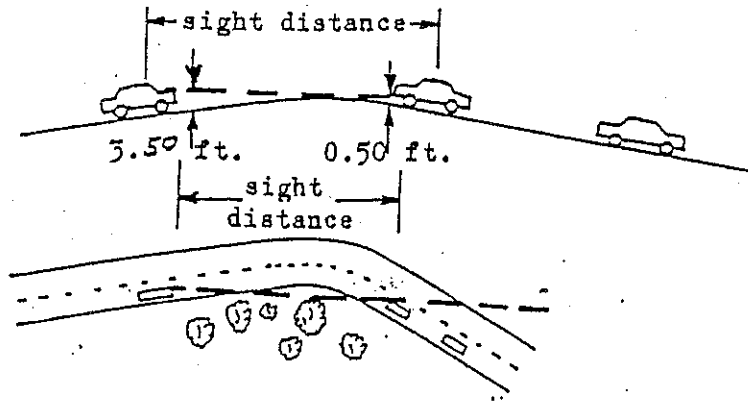
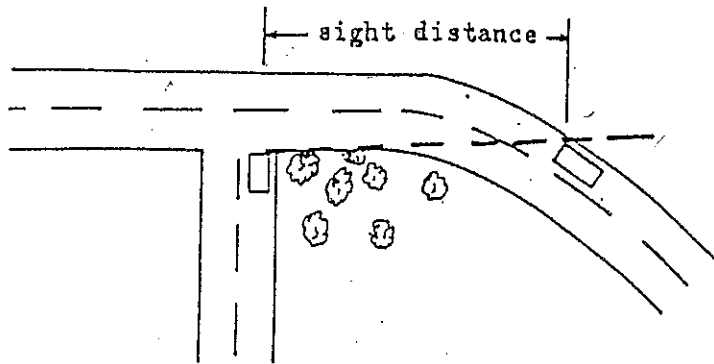
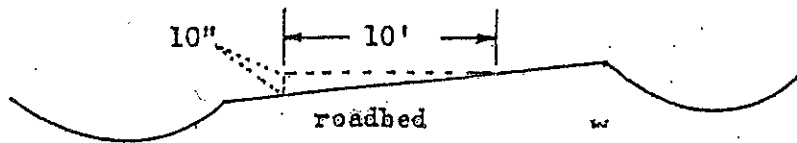


Figure No. 3 – Intersection Sight Distance



This Figure shows the Maximum allowable superelevation of one inch per foot of road width.



# TYPICAL GRADING SECTION

FIGURE NO. 2

