

TRAFFIC AND SAFETY NOTE 604A

SUBJECT: Traffic Volume Guidelines for Right-Turn Lanes and Tapers

PURPOSE: To Promote a Uniform System of Determining When Right-Turn Lanes or Tapers Should be Constructed

COORDINATING UNIT: Geometric Design Unit

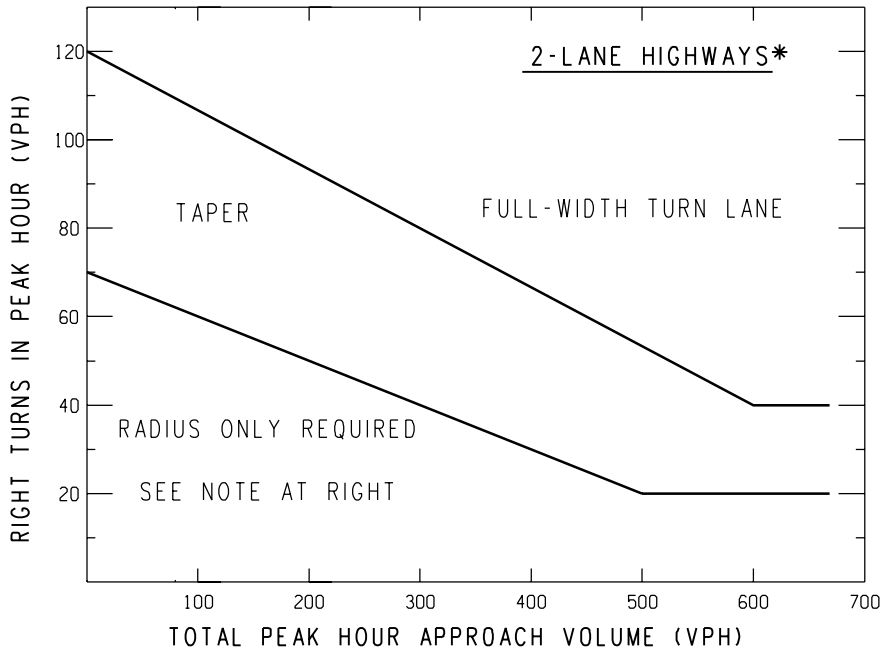
INFORMATION: The addition of right-turn lanes or tapers at intersections should be considered to enhance the traffic movement and improve operations. Exclusive right-turn lanes should be considered. The following traffic volume guidelines have been established and are outlined below.

Guidelines for Right-Turn Lanes and Tapers

The use of right-turn lanes should be considered in the following conditions:

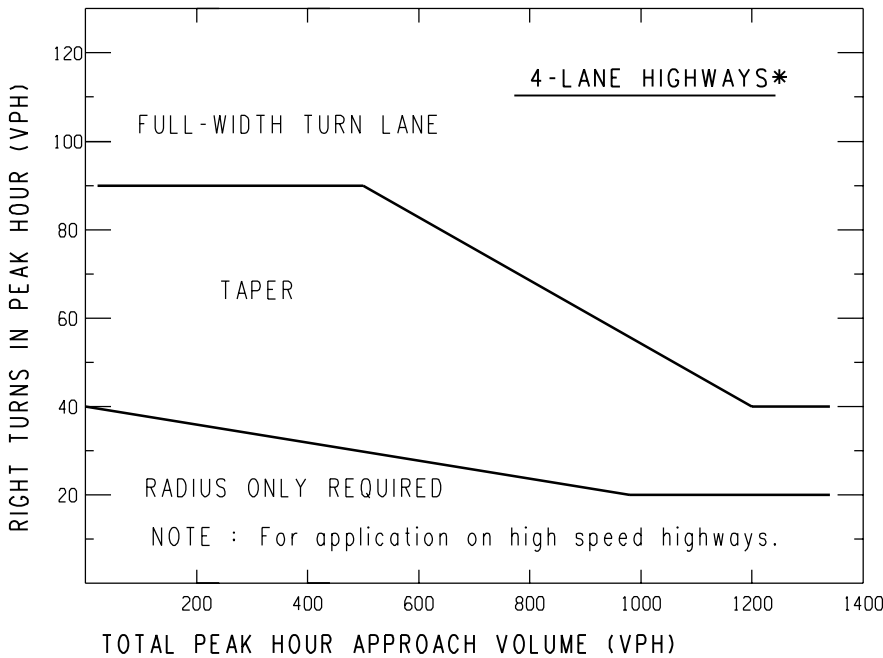
1. At any intersection where a capacity analysis determines a right-turn lane is necessary to meet a desired level of service.
2. At any intersection where the crash experience, existing traffic operations or engineering judgment indicates that a right-turn lane will significantly improve operations.
3. At any unsignalized intersection which satisfies the criteria on the charts on page two.

The two charts (from the NCHRP Report #279, Intersection Channelization Design Guide) on page two show the relationship between peak hour approach volumes and peak hour right-turns. When the intersection peak hour approach volume and peak hour right-turns fall below the lower trend line, radius improvements may be required. If the intersection falls between the two trend lines, taper improvements are recommended. For flare and intersection details, see the Geometric Design Guide VII-650 series.



NOTE:
 For posted speeds at or under 45 mph, peak hour right turns greater than 40 vph, and total peak hour approach less than 300 vph, adjust right turn volumes.

Adjust peak hour right turns = Peak hour right turns - 20



*If a center left-turn lane exists (i.e. 3 or 5 lane highway), subtract the number of left turns in approach volume from the total approach volume to get an adjusted total approach volume.

Sample Problem:

The Design Speed is 55 mph. The Peak Hour Approach Volume is 300 vph. The Number of Right Turns in the Peak Hour is 100 vph. Determine if a right turn lane is recommended.

Solution:

Figure indicates that the intersection of 300 vph and 100 vph is located above the upper trend line; thus, a right-turn lane may be recommended.

<p>MDOT Michigan Department of Transportation</p> <p>TRAFFIC AND SAFETY NOTE</p>	<p>TRAFFIC VOLUME GUIDELINES FOR RIGHT-TURN LANES AND TAPERS</p>	
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		<p>SHEET 2 OF 2</p>