



# U.S. Highway Attributes Relevant to Lane Tracking

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## 1. What kinds of roads are there in the U.S.? What attributes do these roads have?

Information	Source(s) (by common name in section 4)	Main points
<b>Definitions</b> of different road types (arterials, collectors, local roads, etc.)	<b>AASHTO Green Book</b>	
	<i>Transportation Expressions</i>	
<b>Lane width</b> for different road types (miles by lane width) •Statistics by state •U.S. totals	<i>Highway Statistics</i>	12 ft = most common lane width
<b>Traffic lanes</b> – number of lanes per road type (miles by traffic lanes) •Statistics by state •U.S. totals	<i>Highway Statistics</i>	2 lanes most common; 4 lanes most common on interstates
<b>Speed limits</b>  •State maximums on primary roads •Summary of other speed laws	<i>National Transportation Statistics</i>	fall primarily between 55 and 75 mph
	<i>Summary of State Speed Laws</i>	vary by jurisdiction

## 2. Which means are used to delineate lane separations and road edges?

Information	Source(s)	Main points
Means of <b>lane separation</b> •Regulations for color, length, and width	<i>MUTCD 3a</i>	painted lines and medians are used
Regulations for <b>curb markings</b> and <b>road edge markers</b>	<i>MUTCD 3b</i>	
Regulations for <b>delineators</b>	<i>MUTCD 3d</i>	
<b>Materials</b>  •Retroreflectance of pavement markings •Measurement of Retroreflectance	<i>3M Product Reference Guide</i>	range from 410 to 1100 millicandellas/ sq m/lux
	<i>3M Briefs</i>	measurements vary by instrument

### 3. What types of intersections are there in the U.S. and how are they marked and controlled?

Information	Source(s)	Main points
<b>Illustrations</b> of intersection configurations	MDOT	
<b>Marking regulations</b> for intersections	<i>MUTCD 3b</i>	
<b>Statistics</b> for Michigan, California, and New York <ul style="list-style-type: none"> <li>•Types of intersections</li> <li>•How many of each type of intersection</li> <li>•How they are controlled</li> </ul>	MDOT CADOT NYDOT	tees are the most common configuration

### 4. Sources by common name and URL

Common name	Source	URL
<i>AASHTO Green Book</i>	AASHTO. (1994). <i>A Policy on Geometric Design of Highways and Streets</i> . Washington D.C.: AASHTO.	
CADOT	California Department of Transportation	
MDOT	Michigan Department of Transportation	
<i>Summary of State Speed Laws</i>	National Highway Traffic Safety Administration. (1997). <i>Summary of State Speed Laws</i>	<a href="http://www.azfms.com/DocReviews/ug97/art14.html">www.azfms.com/DocReviews/ug97/art14.html</a>
NYDOT	New York Department of Transportation	
<i>3M Briefs</i>	3M (1998). <i>3M Briefs</i>	<a href="http://www.mmm.com/market/trans/tcm/ss/framset.html">www.mmm.com/market/trans/tcm/ss/framset.html</a>
<i>3M Product Reference Guide</i>	3M (1998). <i>3M Product Reference Guide</i> .	<a href="http://www.mmm.com/market/trans/tcm/pc/framset.html">www.mmm.com/market/trans/tcm/pc/framset.html</a>
<i>National Transportation Statistics</i>	U.S. Department of Transportation, Bureau of Transportation Statistics. (1997). <i>National Transportation Statistics</i> .	<a href="http://www.bts.gov/programs/btsprod/nts/chp3/tbl3X28.html">www.bts.gov/programs/btsprod/nts/chp3/tbl3X28.html</a>
<i>Transportation Expressions</i>	U.S. Department of Transportation, Bureau of Transportation Statistics. (1996). <i>Transportation Expressions</i> . Washington D.C.: U.S. Department of Transportation	
<i>MUTCD 3a</i>	U.S. Department of Transportation, Federal Highway Administration. (1997). <i>Manual on Uniform Traffic Control Devices</i>	<a href="http://www.ohs.fhwa.dot.gov/devices/mutcd/mutcd3a1.pdf">www.ohs.fhwa.dot.gov/devices/mutcd/mutcd3a1.pdf</a>
<i>MUTCD 3b</i>		<a href="http://www.ohs.fhwa.dot.gov/devices/mutcd/mutcd3b1.pdf">www.ohs.fhwa.dot.gov/devices/mutcd/mutcd3b1.pdf</a>
<i>MUTCD 3d</i>		<a href="http://www.ohs.fhwa.dot.gov/devices/mutcd/mutcd3d1.pdf">www.ohs.fhwa.dot.gov/devices/mutcd/mutcd3d1.pdf</a>
<i>Highway Statistics</i>	U.S. Department of Transportation, Federal Highway Administration, Office of Information Management. (1996). <i>Highway Statistics 1996</i> . Washington D.C.: U.S. Government Printing Office, V49-V56.	<a href="http://www.fhwa.dot.gov/ohim/1996/hm53(hm55).pdf">www.fhwa.dot.gov/ohim/1996/hm53(hm55).pdf</a>