

**TABLE 40 Sample dimensions for rural classes**

Class/Subclass:	Freeway	Arterials		Collectors	Local
Item		Principal (Nonfreeway)	Minor		
Anticipated Speed or Speed limit (mph)	55 to 70	55 to 70	45 to 70	35 to 55	35 to 55
<b>CROSS SECTION</b>					
Lane Width (ft)	12	12	12	Speed Width (ft)/ ADT mph <1500 ≥1500 ≤ 50 10 12 ≥ 55 11 12 [GB Ex. 6-5]	Speed Width (ft)/ ADT mph <1500 ≥1500 ≤ 50 10 12 ≥ 55 11 12 [GB Ex. 5-5]
Anticipated Speed or Speed limit (mph)	55 to 70	55 to 70	45 to 70	35 to 55	35 to 55
Shoulder Width (ft)	10 to 12 ft	<u>Volume</u> <u>Width (ft)</u> <400 4 400-1500 6 1500-2000 6 >2000 8 [GB Ex. 7-3]	<u>Volume</u> <u>Width (ft)</u> <400 4 400-1500 6 1500-2000 6 >2000 8 [GB Ex. 7-3]	<u>Volume</u> <u>Width (ft)</u> <400 2 400-1500 5 1500-2000 6 >2000 8 [GB Ex. 6-5]	<u>Volume</u> <u>Width (ft)</u> <400 2 400-1500 5 1500-2000 6 >2000 8 [GB Ex. 5-5]
Anticipated Speed or Speed limit (mph)	55 to 70	55 to 70	45 to 70	35 to 55	35 to 55
Horizontal Clearance (ft)	30	<u>Volume</u> <u>Min</u> <u>Des</u> 0-750 10 16 750-1500 16 30 ≥ 1500 30	<u>Volume</u> <u>Min</u> <u>Des</u> 0-750 10 16 750-1500 16 30 ≥ 1500 30	10	7 to 10

**TABLE 40 (Continued)**

Class/Subclass:	Freeway		Arterials				Collectors				Local			
Item			Principal (Nonfreeway)		Minor									
Anticipated Speed or Speed limit (mph)	55 to 70		55 to 70		45 to 70		35 to 55				35 to 55			
Median Width (ft)	50 to 100 (10 to 30 ft with barrier)		Min: 4 to 6 Preferred: 12 to 30		N/A		N/A				N/A			
Anticipated Speed or Speed limit (mph)	55 to 70		55 to 70		45 to 70		35 to 55				35 to 55			
<b>ALIGNMENT</b>														
Radius (minimum)	See Green Book (17)													
Anticipated Speed or Speed limit (mph)	55 to 70		55 to 70		45 to 70		35 to 55				35 to 55			
Maximum Superelevation (%)	12 8 (when snow and ice conditions prevail)						10 8 (when snow and ice conditions prevail) 12 (aggregate roads)							
Maximum Grade (%)	Speed      Grade (mph)    Lev    Roll    Mou		Speed      Grade (mph)    Level    Rolling    Mount				Speed      Grade (mph)    Lev    Roll    Mou				Speed      Grade (mph)    Lev    Roll    Mou			
	≥ 60    3    4    5		≥ 60    3    4    5				≥ 60    5    6    8				≥60    5    6    --			
	<60    4    5    6		50-55    4    5    6-7				50-55    6    7    9				50-55    6    7-8    10			
	[GB Ex. 8-1]		≤ 45    5    6    7-8				40-45    7    8    10				40-45    7    9    12			
			[GB Ex. 7-2]				30-35    7    9    10				25-30    7    10    14			
							[GB Ex. 6-4]				[GB Ex. 5-4]			

(table continues on next page)

**TABLE 40 (Continued)**

Class/Subclass:	Freeway	Arterials		Collectors	Local
Item		Principal (Nonfreeway)	Minor		
Anticipated Speed or Speed limit (mph)	55 to 70	55 to 70	45 to 70	35 to 55	35 to 55
Cross Slope	1.5 to 2 %			high: 1.5 to 2% intermediate 1.5 to 3%	high: 1.5 to 2% intermediate 1.5 to 3% low: 2 to 6%
Anticipated Speed or Speed limit (mph)	55 to 70	55 to 70	45 to 70	35 to 55	35 to 55
<p>Notes:</p> <p>GB Ex. = refers to Exhibits in <i>Green Book (17)</i>.</p> <p>Speed = previously called design speed, suggested that it reflects the anticipated 85<sup>th</sup> percentile speed of the roadway.</p> <p>ADT = anticipated ADT in design year.</p>					

anticipated operating speed, the posted speed, the anticipated posted speed plus a set increment such as 5 or 10 mph (8.1 or 16.1 km/h), or the adjusted operating speed as determined using a regression equation and then rounded to nearest 5 mph (8.1 km/h).

It should be noted that there are relationships established that are available to help designers select the anticipated operating speed, if unknown. For instance, if the facility contains traffic signals, there are relationships such as the one shown in Figure 21 that can be used to estimate the operating speed depending on the anticipated signal den-

sity and cycle length. Table 38 lists the equations that can be used to calculate the adjusted posted speed with the known posted speed.

**Step 4: Look up appropriate design element values using the roadway design class.**

The remaining step is to use Tables 39 and 40 to identify the values for the roadway features. These tables also provide a reference to the relevant chapter of the *Green Book*. Additional information may also be contained in a state’s design manuals.