
From: Reese, John
Sent: Wednesday, July 25, 2007 2:53 PM
To: Roadway Design Division
Subject: FW: Table 2-7D revision design manual

If you are in possession of a Roadway Design Manual, please make the corrections for bridge widths shown in the attached file to Table 2-7D (Rural Collectors).

Thanks,

John

From: Carr, Barry K.
Sent: Wednesday, July 25, 2007 2:47 PM
To: Reese, John
Cc: Carr, Mitch; Altobelli, Nick; Walker, Justin
Subject: Table 2-7D revision design manual

John,
As you discussed with me, your division is writing a program that will use the bridge width values from the design manual and you asked us to review the bridge widths and see if there are any changes that need to be made. Mitch, Nick, Justin & I met and discussed the minimum bridge widths. I have attached our recommended changes. This only affects Table 2-7D (Rural Collectors).

Thanks,

**Table 2-7D
GEOMETRIC DESIGN CRITERIA FOR RURAL COLLECTORS
(New Construction/Reconstruction)**



DESIGN ELEMENT	Design ADT	Manual Section	2-Lane				Multilane
			Under 400	400 - 1500	1500-2000	Over 2000	
Design Controls			20 Years				20 Years
*Design Forecast Year		2-3.04					
*Design Speed (1)		2-2.01	55 mph			Level: 60 mph Rolling: 55 mph	65 mph
Control of Access		2-4.0	Control by Regulation (Type 3)				Control by Regulation (Type 3)
Level of Service		2-3.04	Desirable: B Minimum: C				B
*Lane Width		2-6.03	12'				12'
Outside Shoulder Width	*Usable	2-6.03	4'	5'	6'	8'	10'
	Surfaced		N/A				(2)
Median Shoulder Width	*Usable	2-6.03	N/A				8'
	Surfaced		N/A				(2)
*Cross Slope	Travel Lane	2-6.03	2%				2%
	Shoulder		4%				4%
Auxiliary Lanes	Lane Width	2-6.03	11'				12'
	Usable Shoulder Width						Same Usable/Surfaced Width Adjacent to Travel Lane
Median Width		2-6.03	N/A				101' Typical (3)
*New and Reconstructed Bridges	Structural Capacity	2-6.03;	HS-20				HS-20
	Minimum Width (4)	11-4.0	32'	34'	30'	44'	Traveled Way +10' (outside shoulder) +6' (median shoulder)
*Existing Bridges to Remain in Place	Structural Capacity	2-6.03;	HS-20				HS-20
	Minimum Width (4)	11-4.0	24'				28' (Each Roadway)
Minimum Right-of-Way Width		2-6.03;	80'	100'	120'	240'	
Desirable RW Border Width (Beyond toe/top of fill/cut slope)		10-1.02	5' - 10'	10' - 15'	15' - 20'	30'	
Roadside Clear Zone	Guardrail	9-4.03;	Usable Shoulder Width				Usable Shoulder Width
	Obstruction	9-2.0	See Note (5)				See Note (4)
Slope Schedule (6)	Cut	Foreslope (within clear zone)	V ≤ 55mph 4:1 V > 55 mph 6:1				6:1
		Depth of Ditch	3'				4'
	Fill	Backslopes	3:1				3:1
				Height of Fill < 5' — 4:1 Height of Fill ≥ 5' — 3:1	Height of Fill < 10' — 4:1 Height of Fill ≥ 10' — 3:1		6:1 (Within Clear Zone) 3:1 (Outside Clear Zone)
Alignment Elements							
DESIGN SPEED			55 mph		60 mph		65 mph
*Minimum Stopping Sight Distance		2-6.02	435'		505'		550'
*Maximum Degree of Curvature (e = 10%)		3-3.0	6°30'		5°15'		4°15'
*Superelevation Rate		3-4.01	See Table 3-4A (e _{max} = 10%)				
*Horizontal Sight Distance		3-5.0	(7)				
*Maximum Grades	Level	4-3.01	5.5%		5%		4.5%
	Rolling		6.5%		6%		5.5%
Minimum Grades		4-3.02	Desirable: 0.4% Minimum: 0.0%				
*Vertical Curve (K-values)		4-4.0	Crest: 143	Sag: 99	Crest: 192	Sag: 118	Crest: 228 Sag: 131
*Minimum Vertical Clearance	New/Reconstructed Bridges (8)	2-6.03	16.5'				
	Existing Bridges		14.5'				
Vertical Clearance (Collector Over Railroad)		2-6.03	23'				

*Controlling design criteria. See Section 2-8.0.