

Texas Department of Transportation
TECHNICAL PROVISIONS

STATE HIGHWAY 71 TOLL LANES

Attachment 11-1
Roadway Design Criteria

	SH 71 West of Spirit of Tx Blvd. and between Pres. Blvd to FM 973	Between Sprit of Tx Blvd and Pres. Blvd.	SH 71 General Purpose Lanes at FM 973 and east of FM 973	Toll Lanes	Ramps	Mainlane Transition	Toll Lane Transition	Cross Streets
Functional Classification	Principal Arterial/Suburban	Urban Principal Arterial/Freeway	Urban Minor Arterial	Urban Principal Arterial/Freeway	-	Collector/Suburban	Principal Arterial/Freeway	See Table Below
Design Speed (4)	60 mph	60 mph	50 mph	60 mph	50 mph	50 mph	50 mph	40-50 mph
Superelevation	e(max)= 6%	e(max)= 6%	e(max)= 6%	e(max)= 6%	e(max)= 6%	e(max)= 6%	e(max)= 6%	N/A
Maximum Curvature (Min Radius) w/o Superelevation	11,100 ft	11,100 ft	7,870 ft	11,100 ft	7,870 ft ¹	7,870 ft	7,870 ft	5,230-7,870 ft
Cross Section Criteria:								
Lane Widths	12 ft	12 ft	12 ft, 14 ft (3)	12 ft	14 ft	12 ft	12 ft	12 ft
U-turn width	-	-	20 ft	-	-	-	-	-
Inside Shoulder Widths for Curves	4 ft	10 ft	N/A	4 ft	4 ft	4 ft	4 ft	-
Outside Shoulder Widths	4 ft	10 ft`	N/A	10 ft`	6 ft	10 ft	10 ft	-
Pavement Cross Slope	Match exist. (2)	Match exist.	0.025 ft/ft	0.025 ft/ft	0.025 ft/ft	0.025 ft/ft	0.025 ft/ft	0.02 ft/ft
Side Slopes								
Within Clear Zone	6:1	6:1	6:1	6:1	6:1	6:1	6:1	6:1
Outside of Clear Zone	6:1 usual 3:1 max	6:1 usual 3:1 max	4:1 usual 3:1 max	6:1 usual 3:1 max	6:1 usual 3:1 max	6:1 usual 3:1 max	6:1 usual 3:1 max	6:1 usual 3:1 max
Gore Width - Entrance	-	-	-	-	6 ft min	-	-	-
Gore Width - Exit	-	-	-	-	6 ft min	-	-	-
Clear Zone Width ¹	30 ft	N/A	6 ft	30 ft	16 ft	30 ft	30 ft	6 ft
Intersection horizontal and vertical criteria:								
Corner Radii	40 ft min	N/A	40 ft min	N/A	-	N/A	N/A	-
Design Vehicle (Intersections)	WB-62	N/A	WB-62	N/A	WB-62	N/A	N/A	See Table 11-2
Preferred Corner Geometry	Curve w/taper	N/A	Curve w/ taper	N/A	-	N/A	N/A	-

Note:

1. Horizontal clearance to accommodate farming equipment, minimum 30' width.
2. 2.5% slope to the outside east of Presidential Boulevard.
3. 14 foot outside lane
4. For design speed limits for segments of roadways see Attachment 11-2.

Cross Streets

Intersecting Street	Functional Classification	Design Speed (MPH)	Configuration (Over/Under)	Design Vehicle	CONFIGURATION														
					NORTHBOUND/EASTBOUND						SOUTHBOUND/WESTBOUND								
					U-Turn	Sidewalk Minimum Width	Curb	Curb Offset	Through Lanes	Shoulders	Turn Lanes	Median	Shoulders	Through Lanes	Curb Offset	Curb	Sidewalk Minimum Width	U-Turn	Pedestrian Rail Above Bridge Barrier?
Existing Presidential Blvd	Urban – Low Speed	45	Under	WB-67	N	Y – 6'	Y	2'	2 (12')		Y			2 (12')	2'	Y	N	N	N
U-Turn at Presidential Blvd. (1)	Urban – Low Speed	40	Under	WB-67	N	-	-	-	-	-	-	-	-	-	-	Y	N	Y-20'	N
FM 973	Suburban Major Arterial	50	Under	WB-67	N	Y-6'	Y	2'	2 (12')	10'	Y	40'	10'	2 (12')	2'	Y	Y-6'	N	N

Note:

- SH 71 Westbound to SH 71 Eastbound U-Turn.