

**Table 2-9**  
**Pavement Spread Criteria (Stormwater Drainage Manual Section 2.3.2)**

Functional Classification	Design Speed	Design Storm Frequency	Maximum Design Spread**		
Interstate Highways	Refer to ODOT L&D Manual Volume 2, Section 1103				
Freeways and Expressways ≥ 4-Lanes (Non Interstate)	≥ 45 mph	10-Year	4 Feet		
	< 45 mph	10-Year	8 Feet		
	All	50-Year	Meet associated spread for mph	Applies at underpasses and sag points	
Major Arterial (ADT > 10,000)	≥ 45 mph	10-Year	4 Feet		
	< 45 mph	10-Year	2-Lanes, 6 Feet 4-Lanes (1)		
	All	25-Year	Meet associated spread for mph	Applies at underpasses and sag points	
Minor Arterial and Collectors (ADT 3,501 – 10,000)	≥ 45 mph	5-Year	4 Feet		*
	< 45 mph	5-Year	2-Lanes, 6 Feet 4-Lanes (1)		*
	All	10-Year	Meet associated spread for mph	Applies at underpasses and sag points	
Locals (ADT ≤ 3,500), Other Parking and Development Areas	< 35 mph	2-year	May not exceed Crown Elevation		
	< 35 mph	5-year	May not exceed Crown Elevation	Applies at underpasses and sag points	

**NOTES TO DESIGNER:**

(1) On roadways with multiple through lanes in each direction, or one direction on a one-way roadway, one through travel lane in each direction must be free of water. Stormwater spread on shoulders, full-time parking lanes, and other paved roadside areas and non-traffic lanes is permitted to be full width of that designated pavement area.

(2) Spread is considered the encroachment of ponding water in the through travel lane. The allowable depth of water on a roadway, within the design spread, shall be 1" below the top of curb or 5" maximum (i.e., no overtopping of curb allowed). 6" is permissible when a barrier shape is provided adjacent to the pavement.

(3) Travel lanes are defined for noted street classifications as follows:

A-Freeways and Expressways - Divided highway with 12-foot travel lanes

B-Major Arterial - Minimum travel lane 11-Foot, refer to (STD DWG, 2110, 2115, 2120, and 2125)

C-Minor Arterials and Collectors - Minimum travel lane 10-Foot, refer to (STD DWG, 2110 and 2115)

D-Locals - Minimum travel lane 9-Foot (centered over pavement crown), refer to (STD DWG, 2100, 2105 and 2110)

(4) Other pavement spread computation requirements:

- roughness coefficient (n) = 0.015 to be shown on spread computation table or worksheet
- show allowable spread from above Table on spread computation table or worksheet

(5) Rainfall intensities shall be consistent with Intensity Duration Frequency (IDF) Curves in the current City of Columbus Stormwater Drainage Manual.

(6) ODOT CDSS Program is acceptable for use in City of Columbus Spread calculation submittals; however, **if ODOT CDSS is NOT used**, note (5) above prevails.

Define and design travel lane configuration in accordance with the requirements herein. Any project specific variations to defined travel lanes