

South Carolina  
Department of Transportation

December 3, 2002

**MEMORANDUM TO TEAM LEADERS AND CONSULTANTS**

**SUBJECT:** Bridge Drainage Requirements

The need for bridge deck drains shall be based on the AASHTO LRFD BRIDGE DESIGN SPECIFICATION latest Edition (Section 2.6.6.3-2.6.6.5 for 1998 edition) with interim revisions. Drain shall be 6" diameter PVC (ASTM D 1785-89) or 6" diameter fiberglass (ASTM D 2996) pipes. The requirements are detailed in the table below for allowable spreads.

(From Section 2.2.3 of the SCDOT REQUIREMENTS FOR HYDRAULIC DESIGN STUDIES)

Interstate Routes, Routes and Roads: ADT > 10,000			
	< 45 mph	10-year	Shoulder + 3 ft.
	> 45 mph	10-year	Shoulder
	Low point on bridge	50-year	Shoulder + 3 ft.
Primary Routes: ADT < 10,000			
	< 45 mph	10-year	1/2 driving lane
	> 45 mph	10-year	Shoulder
	Low point on bridge	10-year	1/2 driving lane
Secondary Roads: ADT < 10,000			
		10-year	1/2 driving lane
	Paved shoulder	10-year	Shoulder
	Low point on bridge	10-year	1/2 driving lane

Drains shall be placed only where they are needed.

Permits and environmental issues may require a closed drainage systems. If a closed drainage system is required, it (size of pipes) shall be detailed in the construction plans. The contractor shall design all connections, hangers and expansion joints and this responsibility shall be indicated on the plans.

Drainage onto fill slopes shall be avoided if possible. A protection on the fill is required when water is drained onto the fill slopes.

All cost for drains shall be included in the price bid for concrete, unless a closed drainage system is needed. A closed drainage system shall be bid as

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