



SOUTH CAROLINA
DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION
P.O. BOX 191
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DM0891

November 1, 1991

MEMORANDUM TO DESIGN GROUP LEADERS AND CONSULTANTS

SUBJECT: Elastomeric Bearing Design

Elastomeric bearings shall be designed in accordance with the provisions of Section 14 of the AASHTO Standard Specifications for Highway Bridges, Fourteenth Edition, 1989, including the latest Interim Specifications. The following shall be observed in the application of the provisions of Section 14:

Compressive Stress

1. For Bearings in which shear deformation will occur,
 - (a) Unreinforced bearings shall be designed for an average compressive stress not to exceed the lesser of GS/β or 800 psi.
 - (b) Steel reinforced bearings shall be designed for an average compressive stress in any layer not to exceed the lesser of GS/β or 1000 psi.

Shape Modification Factor

The shape modification factor β shall have a value of 1.0 for internal layers of steel reinforced bearings, 1.4 for cover layers, and 1.8 for unreinforced bearings.

Compressive Deflection

The shape factor used to determine compressive strain from Figures 14.2.4A and 14.2.4B shall be the modified shape factor S/β . The modification factor shall have the appropriate value as given above.

The requirements of this memorandum shall be effective immediately and shall be applied to in-progress designs as well as completed designs. Designs which have been completed shall be reviewed for conformance and modified as necessary.

Sincerely,

B. A. Meetze, Jr.
Bridge Design Engineer

BAM/RLK/slb