MEMORANDUM

TO: District Structures Design Engineers
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Area Structures Engineers
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SUBJECT: Temporary Design Bulletin C01-3
Effective October 26, 2001

Replace paragraph "B" of Section 10.20.1 of the (LFD) Structures Design Guidelines
(previously replaced by Temporary Design Bulletin C00-3) with the following:

B. Compliance with the strength requirements of Article 2.7 of the Standard
Specifications for Highway Bridges with the exception that the Highway Design
Loading, "P", in Figure 2.7.4B shall be increased to 54 kN (12 kips) distributed over a
longitudinal distance of 1.5 meters (5 ft). This load and distribution length apply only
to 815-mm (32") high, solid face FDOT barriers (Index Nos. 700 & 730) and the
2.44-m (8 ft) high barrier/soundwall (Index No. 1550). The supporting slab shall be
designed for this distributed load using a moment arm of 815-mm (32") for the 815-
mm (32") high barriers and 1065-mm (42") for the 2.44-m (8 ft) high
barrier/soundwall. Additionally, for the barrier/soundwall only, the area of top slab
reinforcing 1.8 meters (6 ft) each side of a bridge deck expansion joint shall be
increased by 30%. The appropriate highway design loading and distribution length
for any other traffic barrier must be approved by the DSDE or SSDE as appropriate.

Commentary: The intent is to provide a deck overhang design, when using the AASHTO
Load Factor Design (LFD) specification, that is equivalent to the AASHTO-LRFD
Specification requirements. The load should be considered a live load and multiplied by the
1.67 load factor plus the 1.3 γ factor. The factored dead loads for the barrier and slab should
also be included for the moment calculation. \( \varphi = 0.9 \) should be used when computing the
strength of the slab. The slab design shall satisfy the following relationship:

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\[
\frac{M_u}{\phi M_N} + \frac{F_u}{\phi F_N} \leq 1.0
\]

NOTE: The top slab reinforcing at the barrier shall not be less than:
- 1660 mm²/m (0.78 in²/ft) for the 815-mm (32") high barriers.
- 1970 mm²/m (0.93 in²/ft) for the 2.44-m (8 ft) high barrier/soundwall on a
  200-mm (8") thick slab, and 1400 mm²/m (0.66 in²/ft) on a 250-mm (10")
  thick slab.

WNM/sjn