

IOWA DEPARTMENT OF TRANSPORTATION

To Office Bridges and Structures

Date July 27, 2007

Attention All Employees

Ref No. 521.1

From Gary Novey

Office Bridges and Structures

Subject CADD revision E233/M233 Nuclear density checks, deck test wells

Based on discussion with the office of construction the following notes have been revised. When constructing two course decks, the following general note should be included in the plans for overlay density testing when the project uses low slump overlays. The note is not required for projects that use high performance overlays.

E233/M233: Nuclear density checks, deck test wells

TWO COURSE DECKS USING LOW SLUMP OVERLAY MIXES WILL REQUIRE TEST WELLS BE CAST IN THE FIRST CONCRETE DECK COURSE. TEST WELLS SHALL BE LOCATED AS NOTED IN MATERIALS IM 204, APPENDIX M.

PRIOR TO DECK PLACEMENT THE CONTRACTOR SHALL SUBMIT A TEST WELL LOCATION PLAN TO THE ENGINEER FOR APPROVAL. THE PLAN SHALL SHOW THE PROPOSED EXTENT OF EACH SECOND STAGE PLACEMENT AND PROPOSED TEST WELL LOCATIONS. ALL COSTS ASSOCIATED WITH CONSTRUCTING THE TEST WELLS SHALL BE CONSIDERED INCIDENTAL TO STRUCTURAL CONCRETE BRIDGE OR HIGH PERFORMANCE STRUCTURAL CONCRETE ?????.

On some bridges a two-course bridge floor may be specified. This note is required when the second course is a low slump concrete overlay. Testing is not required if a high performance overlay is used. The top course usually will not be thick enough to accommodate the probe of a nuclear density gauge designed to determine the in-place density of plastic concrete. The probe is somewhat longer than 2 inches (50 mm) in length. Therefore, design plans should have this note. Cost shall be incidental to Structural Concrete, Bridge or High Performance Structural Concrete depending on the concrete specified to be used for the bridge deck.

GAN/dgb/bj