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<p>16. Abstract</p> <p>The current AASHTO procedures for determination of specific gravity and absorption of coarse and fine aggregates are time consuming and the repeatability is less than generally desired. This is especially true for angular fine aggregates with high absorption and rough surface textures.</p> <p>There are two new methods currently available for determining bulk specific gravity and absorption of coarse and fine aggregates, the AggPlus[™] system using the CoreLok device and the SSDetect system. The AggPlus[™] system applicable to both coarse and fine aggregates, and blended aggregate gradations. The SSDetect system is applicable to fine aggregates only.</p> <p>The objectives of this study were to determine if either the AggPlus[™] system or the SSDetect system could produce statistically similar results to the current AASHTO procedures. A total of eight coarse aggregate sources and 15 fine aggregate sources were selected for evaluation in this study and the specific gravity and absorption determined using each procedure.</p> <p>The CoreLok procedure for fine aggregate was the only procedure that produced statistically similar results to the AASHTO procedures. There was a high correlation between the CoreLok procedures for bulk specific gravity and AASHTO T-84 and T-85. Adjustments to the algorithm used by the CoreLok procedure could produce more acceptable results. The SSDetect procedure showed promise as a replacement to AASHTO T-84; however, refinement in the procedure would be necessary before it could be recommended for use. The CoreLok procedure for a blended aggregate did not produce bulk specific gravity results that were statistically significant to values calculated using AASHTO T-84 and T-85 results.</p>			
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