



## Florida Department of Transportation

JEB BUSH  
GOVERNOR

605 Suwannee Street  
Tallahassee, FL 32399-0450

DENVER J. STUTLER, JR.  
SECRETARY

December 15, 2006

Mrs. Leslie McCarthy, PhD, P.E.  
Program Operations Engineer  
Federal Highway Administration  
545 John Knox Road, Suite 200  
Tallahassee, Florida 32303

Re: Office of Design, Specifications  
Section 901  
Proposed Specification: 9010102-Deleterious Substances

Dear Mrs. McCarthy:

We are submitting, for your approval, two copies of a proposed Supplemental Specification for Deleterious Substances.

This change was proposed by Tom Malerk of the State Materials Office to specify maximum weight percentages of deleterious substances allowed, in granitic and non-granitic aggregate.

Please review and transmit your comments, if any, within two weeks. Comments should be sent via Email to SP965DB or [duane.brautigam@dot.state.fl.us](mailto:duane.brautigam@dot.state.fl.us).

If you have any questions relating to this specification change, please call Duane F. Brautigam, State Specifications Engineer at 414-4110.

Sincerely,

Duane F. Brautigam, P.E.  
State Specifications Engineer

DFB/sh

Attachment

cc: General Counsel  
Florida Transportation Builders' Assoc.  
State Construction Engineer

**DELETERIOUS SUBSTANCES.****(REV 8-30-06)**

SUBARTICLE 901-1.2 (Pages 756 and 757) is deleted and the following substituted:

**901-1.2 Deleterious Substances:** All coarse aggregates shall be reasonably free of clay lumps, soft and friable particles, salt, alkali, organic matter, adherent coatings, and other substances not defined which may possess undesirable characteristics. The weight of deleterious substances shall not exceed the following percentages:

Coal and lignite (AASHTO T 113).....	1.00
Soft and friable particles (AASHTO T 112).....	2.00*
Clay lumps (AASHTO T 112).....	2.00*
Cinders and clinkers.....	0.50
Free shell.....	1.00**
Total Material passing the No. 200 sieve (FM 1-T 011)	
At <i>Non-Granitic</i> Source.....	1.75
At <i>Granitic Source</i> .....	2.50
At Point of Use.....	3.75
Organic Matter (wet).....	0.03
Chert (less than 2.40 specific gravity SSD)	
(AASHTO T-113).....	3.00***

\*The maximum percent by weight of soft and friable particles and clay lumps together shall not exceed 3.00.

\*\*Aggregates to be used in asphalt concrete may contain up to 5% free shell. Free shell is defined as that portion of the coarse aggregate retained on the No. 4 sieve consisting of loose, whole, or broken shell, or the external skeletal remains of other marine life, having a ratio of the maximum length of the particle to the shell wall thickness exceeding five to one. Coral, molds, or casts of other shells, and crushed clam and oyster shell indigenous to the formation will not be considered as free shell.

\*\*\*This limitation applies only to coarse aggregates in which chert appears as an impurity. It is not applicable to aggregates which are predominantly chert.

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