Florida Department of Transportation

RON DESANTIS
GOVERNOR

605 Suwannee Street
Tallahassee, FL 32399-0450

KEVIN J. THIBAULT, P.E.
SECRETARY

January 6, 2020

Khoa Nguyen
Director, Office of Technical Services
Federal Highway Administration
3500 Financial Plaza, Suite 400
Tallahassee, Florida 32312

Re: State Specifications Office
Section: **121**
Proposed Specification: **1210200 Flowable Fills.**

Dear Mr. Nguyen:

We are submitting, for your approval, two copies of the above referenced Supplemental Specification.

The changes are proposed by Jose Armenteros from the State Materials Office to clarify the specification language.

Please review and transmit your comments, if any, within two weeks. Comments should be sent via email to daniel.strickland@dot.state.fl.us.

If you have any questions relating to this specification change, please call me at 414-4130.

Sincerely,

Signature on file

Daniel Strickland, P.E.
State Specifications Engineer

DS/rf
Attachment
cc: Florida Transportation Builders' Assoc.
State Construction Engineer

FLOWABLE FILL
(REV 10-16-19)

ARTICLE 121-2 is deleted and the following substituted:

121-2 Materials.

Meet the following requirements:

Fine Aggregate[(1)].....Section 902
Portland Cement.....Section 921
Water.....Section 923
Admixtures[(2)].....Section 924
Ground Tire Rubber (GTR)[(3)].....Section 919
~~Fly Ash, Slag and other Pozzolanic~~ Supplementary Cementitious Materials
.....Section 929
Preformed Foam.....ASTM C 869

1. Any clean fine aggregate with 100% passing a 3/8 inch mesh sieve and not more than 15% passing a No. 200 sieve may be used.

2. High air generators or foaming agents may be used in lieu of conventional air entraining admixtures and shall be added at jobsite and mixed in accordance with the manufacturer's recommendation. GTR may reduce the amount of high air generators or foaming agents used.

3. GTR may replace up to 20% of the fine aggregate.

ARTICLE 121-3 is deleted and the following substituted:

121-3 Mix Design.

Conventional flowable fill is a mixture of portland cement, fly ash, fine aggregate, admixture and water. Flowable fill contains a low cementitious content for reduced strength development. Cellular concrete flowable fill is a low density concrete made with cement, water and preformed foam to form a hardened closed cell foam material. Cellular concrete flowable fill may also contain fine aggregate, ~~fly ash, slag~~supplementary cementitious materials and admixtures.

Submit mix designs to the Engineer for approval. The following are suggested mix guides for excavatable, non-excavatable and cellular concrete flowable fill:

	Excavatable	Non-Excavatable	Cellular Concrete
Cement	75-100 lb/yd^3	75-150 lb/yd^3	Min 150 lb/yd^3
~~Pozzolans or Slag~~Supplementary Cementitious Materials	None	150-600 lb/yd^3	Optional
Water	*	*	*
Air**	5-35%	5-15%	****
28 Day Compressive Strength**	Maximum 100 psi	Minimum 125 psi	Minimum 80 psi
Unit Weight **	90-110 lb/ft^3	100-125 lb/ft^3	20-80 lb/ft^3
Fine Aggregate	***	***	Optional

	Excavatable	Non-Excavatable	Cellular Concrete
*Mix designs shall produce a consistency that will result in a flowable self-leveling product at time of placement. **The requirements for percent air, compressive strength and unit weight are for laboratory designs only and are not intended for jobsite acceptance requirements. ***Fine Aggregate shall be proportioned to yield 1 yd^3. ****In cellular concrete, preformed foam shall be proportioned at the job site to yield 1 yd^3 in accordance with the design requirements.			

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