Florida Department of Transportation

CHARLIE CRIST
GOVERNOR

605 Suwannee Street
Tallahassee, FL 32399-0450

STEPHANIE KOPELOUSOS
SECRETARY

December 21, 2009

Monica Gourdine
Program Operations Engineer
Federal Highway Administration
545 John Knox Road, Suite 200
Tallahassee, Florida 32303

Re: Office of Design, Specifications
Section 901
Proposed Specification: **9010104 Coarse Aggregate - Gradation**

Dear Ms. Gourdine:

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

These changes to Subarticle 904-1.4 were proposed to correct formatting errors in the header for Table 1.

Please review and transmit your comments, if any, within two weeks. Comments should be sent via Email to ST986RP or rudy.powell@dot.state.fl.us.

If you have any questions relating to this specification change, please call Rudy Powell, State Specifications Engineer at 414-4280.

Sincerely,

Rudy Powell, Jr., P.E.
State Specifications Engineer

RP/dt
Attachment
cc: Gregory Jones, Chief Civil Litigation
Florida Transportation Builders' Assoc.
State Construction Engineer

COARSE AGGREGATE.
(REV 12-15-09)

SUBARTICLE 901-4.1 (Pages 815-817) is deleted and the following substituted:

901-1.4 Gradation: Coarse aggregates shall conform to the gradation requirements of Table 1, when the stone size is specified. However, Table 1 is waived for those aggregates intended for usage in bituminous mixtures, provided the material is graded on sieves specified in production requirements contained in 6-3.3, and meets uniformity and bituminous design requirements.

TABLE 1
Standard Sizes of Coarse Aggregate

Amounts Finer than Each Laboratory Sieve (Square Openings), weight percent								
Size No.	Nominal Size Square Openings	4 inches	3 1/2 inches	3 inches	2 1/2 inches	2 inches	1 1/2 inches	1 inch
1	3 1/2 to 1 1/2 inches	100	90 to 100	-	25 to 60	-	0 to 15	-
2	2 1/2 inches to 1 1/2 inches	-	-	100	90 to 100	35 to 70	0 to 15	-
24	2 1/2 inches to 3/4 inch	-	-	100	90 to 100	-	25 to 60	-
3	2 inches to 1 inch	-	-	-	100	90 to 100	35 to 70	0 to 15
357	2 inches to No. 4	-	-	-	100	95 to 100	-	35 to 70
4	1 1/2 inches to 3/4 inch	-	-	-	-	100	90 to 100	20 to 55
467	1 1/2 inches to No. 4	-	-	-	-	100	95 to 100	-
5	1 inch to 1/2 inch	-	-	-	-	-	100	90 to 100
56	1 inch to 3/8 inch	-	-	-	-	-	100	90 to 100
57	1 inch to No. 4	-	-	-	-	-	100	95 to 100
6	3/4 inch to 3/8 inch	-	-	-	-	-	-	100
67	3/4 inch to No. 4	-	-	-	-	-	-	100
68	3/4 inch to No. 8	-	-	-	-	-	-	-
7	1/2 inch to No. 4	-	-	-	-	-	-	-
78	1/2 inch to No. 8	-	-	-	-	-	-	-
8	3/8 inch to No. 8	-	-	-	-	-	-	-
89	3/8 inch to No. 16	-	-	-	-	-	-	-
9	No. 4 to No. 16	-	-	-	-	-	-	-
10	No. 4 to 0	-	-	-	-	-	-	-

TABLE 1 (Continued) Standard Sizes of Coarse Aggregate								
Amounts Finer than Each Laboratory Sieve (Square Openings), weight percent								
Size No.	Nominal Size Square Openings	*3/4 inch*	*1/2 inch*	*3/8 inch*	*No. 4*	*No. 8*	*No. 16*	*No. 50*
1	3 1/2 inches to 1 1/2 inches	0 to 5						
2	2 1/2 inches to 1 1/2 inches	0 to 5						
24	2 1/2 inches to 3/4 inch	0 to 10	0 to 5					
3	2 inches to 1 inch	-	0 to 5					
357	2 inches to No. 4	-	10 to 30	-	0 to 5			
4	1 1/2 inches to 3/4 inch	0 to 15	-	0 to 5				
467	1 1/2 inches to No. 4	35 to 70	-	10 to 30	0 to 5			
5	1 inch to 1/2 inch	20 to 55	0 to 10	0 to 5				
56	1 inch to 3/8 inch	40 to 85	10 to 40	0 to 15	0 to 5			
57	1 inch to No. 4	-	25 to 60	-	0 to 10	0 to 5		
6	3/4 inch to 3/8 inch	90 to 100	20 to 55	0 to 15	0 to 5			
67	3/4 inch to No. 4	90 to 100	-	20 to 55	0 to 10	0 to 5		
68	3/4 inch to No. 8	90 to 100	-	30 to 65	5 to 25	0 to 10	0 to 5	
7	1/2 inch to No. 4	100	90 to 100	40 to 70	0 to 15	0 to 5		
78	1/2 inch to No. 8	100	90 to 100	40 to 75	5 to 25	0 to 10	0 to 5	
8	3/8 inch to No. 8	-	100	85 to 100	10 to 30	0 to 10	0 to 5	
89	3/8 inch to No. 16	-	100	90 to 100	20 to 55	5 to 30	0 to 10	0 to 5
9	No. 4 to No. 16	-	-	100	85 to 100	10 to 40	0 to 10	0 to 5
10	No. 4 to 0	-	-	100	85 to 100	-	-	-
~~NOTE: The gradations in Table 1 represent the extreme limits for the various sizes indicated, which will be used in determining the suitability for use of coarse aggregate from all sources of supply. For any grade from any one source, the gradation shall be held reasonably uniform and not subject to the extreme percentages of gradation specified above.~~								

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TABLE 1
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1	3 1/2 to 1 1/2 inches	100	90 to 100	-	25 to 60	-	0 to 15	-
2	2 1/2 inches to 1 1/2 inches	-	-	100	90 to 100	35 to 70	0 to 15	-
24	2 1/2 inches to 3/4 inch	-	-	100	90 to 100	-	25 to 60	-
3	2 inches to 1 inch	-	-	-	100	90 to 100	35 to 70	0 to 15
357	2 inches to No. 4	-	-	-	100	95 to 100	-	35 to 70
4	1 1/2 inches to 3/4 inch	-	-	-	-	100	90 to 100	20 to 55
467	1 1/2 inches to No. 4	-	-	-	-	100	95 to 100	-
5	1 inch to 1/2 inch	-	-	-	-	-	100	90 to 100
56	1 inch to 3/8 inch	-	-	-	-	-	100	90 to 100
57	1 inch to No. 4	-	-	-	-	-	100	95 to 100
6	3/4 inch to 3/8 inch	-	-	-	-	-	-	100
67	3/4 inch to No. 4	-	-	-	-	-	-	100
68	3/4 inch to No. 8	-	-	-	-	-	-	-
7	1/2 inch to No. 4	-	-	-	-	-	-	-
78	1/2 inch to No. 8	-	-	-	-	-	-	-
8	3/8 inch to No. 8	-	-	-	-	-	-	-
89	3/8 inch to No. 16	-	-	-	-	-	-	-
9	No. 4 to No. 16	-	-	-	-	-	-	-
10	No. 4 to 0	-	-	-	-	-	-	-

TABLE 1 (Continued) Standard Sizes of Coarse Aggregate								
Amounts Finer than Each Laboratory Sieve (Square Openings), weight percent								
Size No.	Nominal Size Square Openings	3/4 inch	1/2 inch	3/8 inch	No. 4	No. 8	No. 16	No. 50
1	3 1/2 inches to 1 1/2 inches	0 to 5						
2	2 1/2 inches to 1 1/2 inches	0 to 5						
24	2 1/2 inches to 3/4 inch	0 to 10	0 to 5					
3	2 inches to 1 inch	-	0 to 5					
357	2 inches to No. 4	-	10 to 30	-	0 to 5			
4	1 1/2 inches to 3/4 inch	0 to 15	-	0 to 5				
467	1 1/2 inches to No. 4	35 to 70	-	10 to 30	0 to 5			
5	1 inch to 1/2 inch	20 to 55	0 to 10	0 to 5				
56	1 inch to 3/8 inch	40 to 85	10 to 40	0 to 15	0 to 5			
57	1 inch to No. 4	-	25 to 60	-	0 to 10	0 to 5		
6	3/4 inch to 3/8 inch	90 to 100	20 to 55	0 to 15	0 to 5			
67	3/4 inch to No. 4	90 to 100	-	20 to 55	0 to 10	0 to 5		
68	3/4 inch to No. 8	90 to 100	-	30 to 65	5 to 25	0 to 10	0 to 5	
7	1/2 inch to No. 4	100	90 to 100	40 to 70	0 to 15	0 to 5		
78	1/2 inch to No. 8	100	90 to 100	40 to 75	5 to 25	0 to 10	0 to 5	
8	3/8 inch to No. 8	-	100	85 to 100	10 to 30	0 to 10	0 to 5	
89	3/8 inch to No. 16	-	100	90 to 100	20 to 55	5 to 30	0 to 10	0 to 5
9	No. 4 to No. 16	-	-	100	85 to 100	10 to 40	0 to 10	0 to 5
10	No. 4 to 0	-	-	100	85 to 100	-	-	-

The gradations in Table 1 represent the extreme limits for the various sizes indicated which will be used in determining the suitability for use of coarse aggregate from all sources of supply. For any grade from any one source, the gradation shall be held

reasonably uniform and not subject to the extreme percentages of gradation specified above.