

Concrete Mixture Analysis Worksheet

Project Name: I-696 (I-275 to Lahser)
 Contractor Name: Daytona Redi Mix
 MDOT Project #: 63101-131589
 Maximum Aggregate Size (inches): 1.5

Representative Date: 06/11/24 through 06/18/24
 CT Project #: 230408
 Mix ID #: BW-008 (Handwork)

MATERIALS				
Type	Source	Class	Spec. Grav.	F/T Dialation
Coarse	Stoneco-Ottawa Lake (58-0003CA)	CA	2.69	0.010
Intermediate 1	Stoneco-Ottawa Lake (58-0003CA)	IA	2.68	0.010
			1.00	
Fine	Mid Michigan-Vella (81-0101SG)	Fine	2.64	
Cement	Ash Grove-Missisauga	Type II	3.10	
GGBFS	Ash Grove-Detroit	Grade 100	2.91	
ADMIXTURES				
Type	Supplier	Dosage (oz/cwt)		
Mapair SA	MAPEI	3.5		
DynamonSX	MAPEI	5		

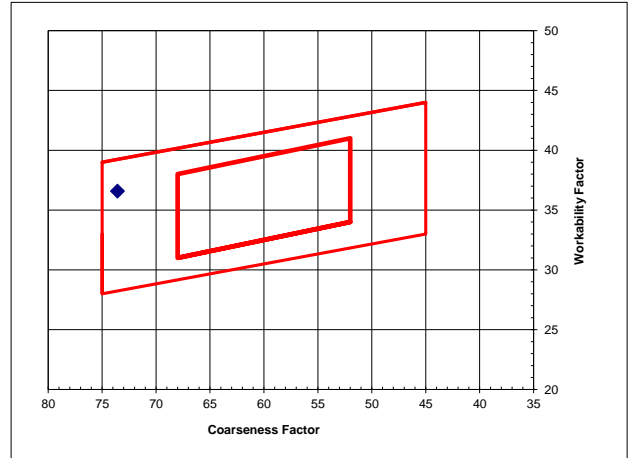
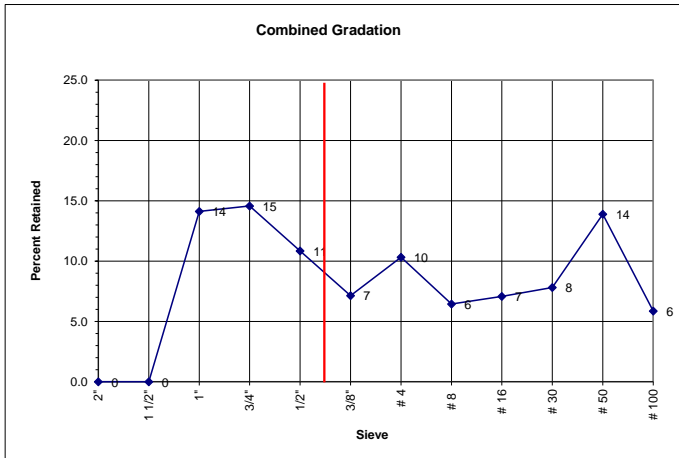
PROPORTIONS (SSD)				
Type	Wt. lbs.	Sp. Grav.	Vol. ft ³	% Vol.
Cement	458	3.1	2.37	
GGBFS	153	2.91	0.84	
Coarse	1375	2.69	8.19	45.54
Intermediate 1	410	2.68	2.45	13.63
		1.00	0.00	0.00
Fine	1210	2.64	7.35	40.83
27.07				
Water		1	4.12	
Air, %		6.5	1.76	
Total Cementitious:		611	lbs. or	6.5 bag
Water/Cement Ratio:		0.42		
Percent Cementitious Replacement:		25%		

	GRADATIONS								Gradation Date: <u>6/11/2024</u>			
	Coarse		Intermediate 1		Fine		Fine					
	SSD wt., lbs	1375	410	0	1210					Total % Passing	% Cumm. Retained	Retained Sieve, %
Abs. Volume	8.19	2.45	0.00	7.35								
Aggregate % Vol.	45.5	13.6	0.0	40.8								
Sieves	% Pass	% Mix	% Pass	% Mix	% Pass	% Mix	% Pass	% Mix				
2"	100.0	45.5	100.0	13.6	0.0	100.0	40.8	100.0	0.0	0.0	0.0	
1 1/2"	100.0	45.5	100.0	13.6	0.0	100.0	40.8	100.0	0.0	0.0	0.0	
1"	69.0	31.4	100.0	13.6	0.0	100.0	40.8	85.9	14.1	14.1	14.1	
3/4"	37.0	16.8	100.0	13.6	0.0	100.0	40.8	71.3	28.7	14.6	14.6	
1/2"	15.0	6.8	94.0	12.8	0.0	100.0	40.8	60.5	39.5	10.8	10.8	
3/8"	8.0	3.6	65.0	8.9	0.0	100.0	40.8	53.3	46.7	7.1	7.1	
# 4	3.0	1.4	12.0	1.6	0.0	98.0	40.0	43.0	57.0	10.3	10.3	
# 8	2.0	0.9	4.0	0.5	0.0	86.0	35.1	36.6	63.4	6.4	6.4	
# 16	2.0	0.9	3.0	0.4	0.0	69.0	28.2	29.5	70.5	7.1	7.1	
# 30	1.0	0.5	3.0	0.4	0.0	51.0	20.8	21.7	78.3	7.8	7.8	
# 50	1.0	0.5	3.0	0.4	0.0	17.0	6.9	7.8	92.2	13.9	13.9	
# 100	1.0	0.5	2.0	0.3	0.0	3.0	1.2	2.0	98.0	5.9	5.9	
# 200	1.4	0.6	2.3	0.3	0.0	1	0.4	1.4	98.6	0.6	0.6	

Fine Aggregate Fineness Modulus: 2.76 FM

Coarseness Factor (x-axis): 74
((cumm. Ret 3/8 / cumm. Ret #8) x 100)

Workability Factor (y-axis): 37
(Pass #8 + Adjustment Factor)



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