

### 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: 06/18/24 through 06/25/24  
 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)		
Mapear SA	MAPEI	3.5		
DynamonSX	MAPEI	5		

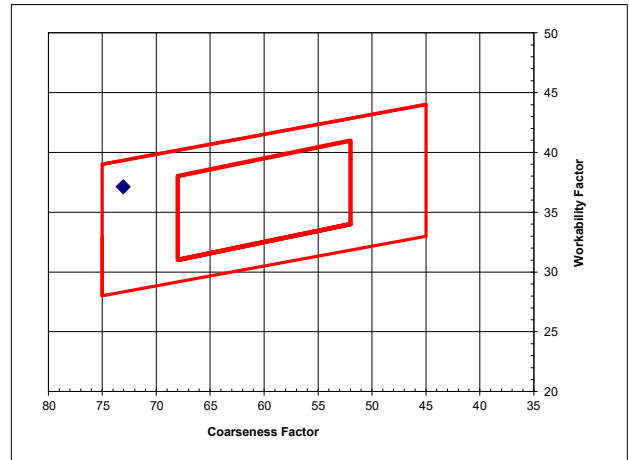
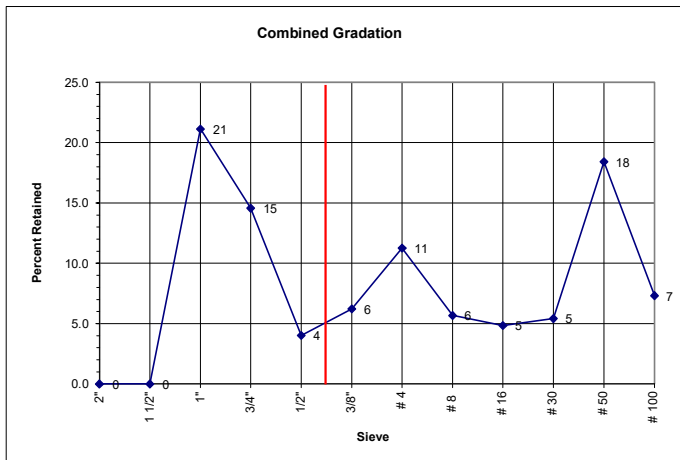
PROPORTIONS (SSD)				
Type	Wt. lbs.	Sp. Grav.	Vol. ft <sup>3</sup>	% Vol.
Cement	458	3.1	2.37	
GGBFS	153	2.91	0.84	
Coarse	1413	2.69	8.42	46.99
Intermediate 1	370	2.68	2.21	12.35
		1.00	0.00	0.00
Fine	1200	2.64	7.28	40.66
Water	257	1	4.12	
Air, %	6.5		1.76	
27.00				
Total Cementitious:		611	lbs. or	6.5 bag
Water/Cement Ratio:		0.42		
Percent Cementitious Replacement:		25%		

SSD wt., lbs	GRADATIONS								Gradation Date: <u>6/18/2024</u>			
	Coarse		Intermediate 1		Fine		Fine		Total % Passing	% Cumm. Retained	Retained Sieve, %	Retained Spec. %
	Abs. Volume	Aggregate % Vol.	Abs. Volume	Aggregate % Vol.	Abs. Volume	Aggregate % Vol.	Abs. Volume	Aggregate % Vol.				
	1413	47.0	370	12.4	0	0.0	1200	40.7				
	8.42	47.0	2.21	12.4	0.00	0.0	7.28	40.7				
Sieves	% Pass	% Mix	% Pass	% Mix	% Pass	% Mix	% Pass	% Mix	Total % Passing	% Cumm. Retained	Retained Sieve, %	Retained Spec. %
2"	100.0	47.0	100.0	12.4	0.0	0.0	100.0	40.7	100.0	0.0	0.0	
1 1/2"	100.0	47.0	100.0	12.4	0.0	0.0	100.0	40.7	100.0	0.0	0.0	
1"	55.0	25.8	100.0	12.4	0.0	0.0	100.0	40.7	78.9	21.1	21.1	
3/4"	24.0	11.3	100.0	12.4	0.0	0.0	100.0	40.7	64.3	35.7	14.6	
1/2"	16.0	7.5	98.0	12.1	0.0	0.0	100.0	40.7	60.3	39.7	4.0	
3/8"	8.0	3.8	78.0	9.6	0.0	0.0	100.0	40.7	54.1	45.9	6.2	
# 4	1.0	0.5	20.0	2.5	0.0	0.0	98.0	39.8	42.8	57.2	11.3	
# 8	1.0	0.5	7.0	0.9	0.0	0.0	88.0	35.8	37.1	62.9	5.7	
# 16	1.0	0.5	4.0	0.5	0.0	0.0	77.0	31.3	32.3	67.7	4.8	
# 30	1.0	0.5	3.0	0.4	0.0	0.0	64.0	26.0	26.9	73.1	5.4	
# 50	1.0	0.5	2.0	0.2	0.0	0.0	19.0	7.7	8.4	91.6	18.4	
# 100	1.0	0.5	2.0	0.2	0.0	0.0	1.0	0.4	1.1	98.9	7.3	
# 200	1.0	0.5	2.0	0.2	0.0	0.0	1	0.4	1.2	98.8	0.0	

Fine Aggregate Fineness Modulus: 2.53 FM

Coarseness Factor (x-axis): 73  
 ((cumm. Ret 3/8 / cumm. Ret #8) x 100)

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



Approved By: James A. Plohg  
 Signature: James A. Plohg