

## 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: 07/02/24 through 07/09/24  
 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 1L	3.10	
GGBFS	Ash Grove-Detroit	Grade 100	2.91	
ADMIXTURES				
Type	Supplier	Dosage (oz/cwt)		
Mapear SA	MAPEI	3.5		
DynamonSX	MAPEI	5		

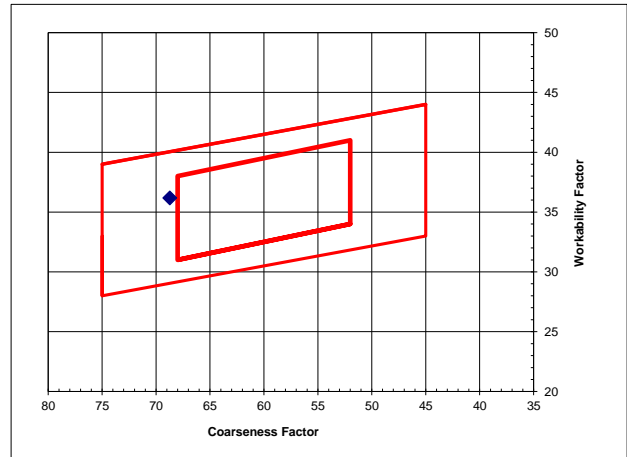
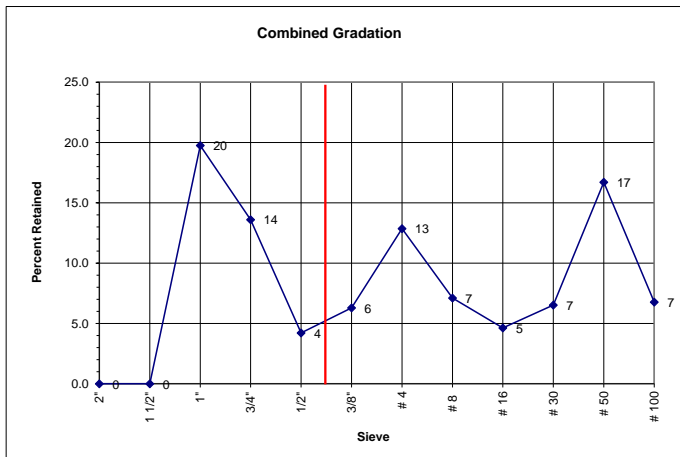
PROPORTIONS (SSD)				
Type	Wt. lbs.	Sp. Grav.	Vol. ft <sup>3</sup>	% Vol.
Cement	458	3.1	2.37	
GGBFS	153	2.91	0.84	
Coarse	1320	2.69	7.86	43.88
Intermediate 1	490	2.68	2.93	16.35
Fine	1174	2.64	7.13	39.77
Water	257	1	4.12	
Air, %	6.5		1.76	
				27.00
Total Cementitious:		611	lbs. or	6.5 bag
Water/Cement Ratio:		0.42		
Percent Cementitious Replacement:		25%		

	GRADATIONS								Gradation Date: <u>7/2/2024</u>				
	Coarse		Intermediate 1		Fine		Fine						
	SSD wt., lbs	1320	490	0	1174					Total % Passing	% Cumm. Retained	Retained Sieve, %	Retained Spec. %
Abs. Volume	7.86	2.93	0.00	7.13									
Aggregate % Vol.	43.9	16.4	0.0	39.8									
Sieves	% Pass	% Mix	% Pass	% Mix	% Pass	% Mix	% Pass	% Mix					
2"	100.0	43.9	100.0	16.4	0.0	0.0	100.0	39.8	100.0	0.0	0.0	0.0	
1 1/2"	100.0	43.9	100.0	16.4	0.0	0.0	100.0	39.8	100.0	0.0	0.0	0.0	
1"	55.0	24.1	100.0	16.4	0.0	0.0	100.0	39.8	80.3	19.7	19.7		
3/4"	24.0	10.5	100.0	16.4	0.0	0.0	100.0	39.8	66.6	33.4	13.6		
1/2"	17.0	7.5	93.0	15.2	0.0	0.0	100.0	39.8	62.4	37.6	4.2		
3/8"	9.0	3.9	76.0	12.4	0.0	0.0	100.0	39.8	56.1	43.9	6.3		
# 4	2.0	0.9	21.0	3.4	0.0	0.0	98.0	39.0	43.3	56.7	12.9		
# 8	1.0	0.4	7.0	1.1	0.0	0.0	87.0	34.6	36.2	63.8	7.1		
# 16	1.0	0.4	3.0	0.5	0.0	0.0	77.0	30.6	31.6	68.4	4.6		
# 30	1.0	0.4	2.0	0.3	0.0	0.0	61.0	24.3	25.0	75.0	6.5		
# 50	1.0	0.4	2.0	0.3	0.0	0.0	19.0	7.6	8.3	91.7	16.7		
# 100	1.0	0.4	2.0	0.3	0.0	0.0	2.0	0.8	1.6	98.4	6.8		
# 200	1.2	0.5	1.8	0.3	0.0	0.0	1	0.4	1.3	98.7	0.3		

Fine Aggregate Fineness Modulus: 2.56 FM

Coarseness Factor (x-axis): 69  
((cumm. Ret 3/8 / cumm. Ret #8) x 100)

Workability Factor (y-axis): 36  
(Pass #8 + Adjustment Factor)



Approved By: James Ploh  
 Signature: James A. Ploh