

## Concrete Mixture Analysis Worksheet

Project Name: I-96 (Kent Lake to I-275)  
 Client Name: Daytona Redi Mix  
 MDOT Project #: 63022-124103  
 Maximum Aggregate Size (inches): 2

Date: 07/16/24 through 07/23/24  
 CT Project #: 230408  
 Mix ID #: BW-010 (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	Stoneco-Moscow (30-0071SG)	Fine	2.63	
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 <sup>3</sup>	% Vol.
Cement	458	3.1	2.37	
GGBFS	153	2.91	0.84	
Coarse	1000	2.69	5.96	33.22
Intermediate 1	785	2.68	4.69	26.18
		1.00	0.00	0.00
Fine	1195	2.63	7.28	40.60
27.02				
Water	257	1	4.12	
Air, %	6.5		1.76	

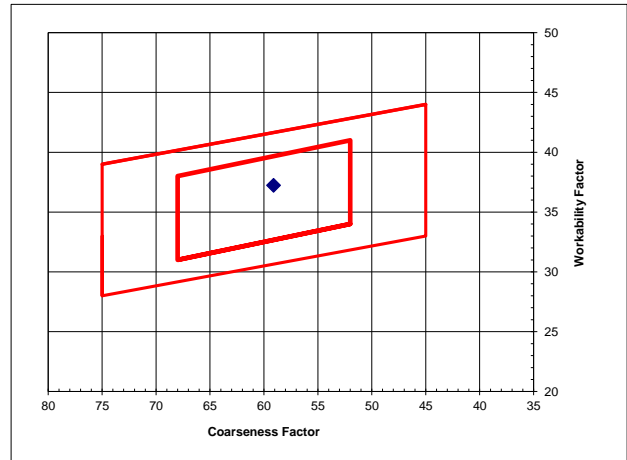
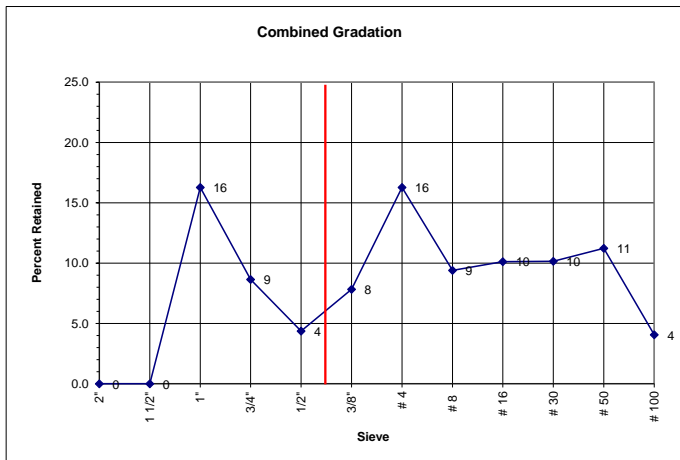
Total Cementitious:	611 lbs. or 6.5 bag
Water/Cement Ratio:	0.42
Percent Cementitious Replacement:	25%

	GRADATIONS								Gradation Date: <u>7/16/2024</u>			
	Coarse		Intermediate 1		Fine		Fine					
	SSD wt., lbs	1000	785	0	1195					Total % Passing	% Cumm. Retained	Retained Sieve, %
Abs. Volume	5.96	4.69	0.00	7.28								
Aggregate % Vol.	33.2	26.2	0.0	40.6								
Sieves	% Pass	% Mix	% Pass	% Mix	% Pass	% Mix	% Pass	% Mix				
2"	100.0	33.2	100.0	26.2	0.0	0.0	100.0	40.6	100.0	0.0	0.0	
1 1/2"	100.0	33.2	100.0	26.2	0.0	0.0	100.0	40.6	100.0	0.0	0.0	
1"	51.0	16.9	100.0	26.2	0.0	0.0	100.0	40.6	83.7	16.3	16.3	
3/4"	25.0	8.3	100.0	26.2	0.0	0.0	100.0	40.6	75.1	24.9	8.6	
1/2"	15.0	5.0	96.0	25.1	0.0	0.0	100.0	40.6	70.7	29.3	4.4	
3/8"	8.0	2.7	75.0	19.6	0.0	0.0	100.0	40.6	62.9	37.1	7.8	
# 4	2.0	0.7	22.0	5.8	0.0	0.0	99.0	40.2	46.6	53.4	16.3	
# 8	1.0	0.3	6.0	1.6	0.0	0.0	87.0	35.3	37.2	62.8	9.4	
# 16	1.0	0.3	3.0	0.8	0.0	0.0	64.0	26.0	27.1	72.9	10.1	
# 30	1.0	0.3	3.0	0.8	0.0	0.0	39.0	15.8	17.0	83.0	10.2	
# 50	1.0	0.3	2.0	0.5	0.0	0.0	12.0	4.9	5.7	94.3	11.2	
# 100	1.0	0.3	2.0	0.5	0.0	0.0	2.0	0.8	1.7	98.3	4.1	
# 200	1.0	0.3	1.9	0.5	0.0	0.0	1	0.5	1.4	98.6	0.3	

Fine Aggregate Fineness Modulus: 2.97 FM

Coarseness Factor (x-axis): 59  
((cumm. Ret 3/8 / cumm. Ret #8) x 100)

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



*James A. Plohq*