Concrete Mixture Analysis Worksheet

Project Name: Miscellaneous Mix Designs
Client Name: Daytona Redi Mix
MDOT Project #: Various
Maximum Aggregate Size (inches): 1.5

Date: 5/28/2024
CT Project #: 230408
Mix ID #: 3500HP (Slag - Mid-Range)

MATERIALS				
Type	Source	Class	Spec. Grav.	F/T Dialation
Coarse	Manitoulin (MDOT 95-0005CA)	6AA	2.82	0.001
Intermediate	Port Inland (MDOT 74-0005CA)	26A	2.68	0.036
			1.00	
Fine	Krake-Measel (MDOT 44-0051SG)	2NS	2.68	
Cement	Ash Grove - Missisauga	Type IL	3.10	
GGBFS	Ash Grove - Detroit	100	2.91	

ADMIXTURES		
Type	Supplier	Dosage (oz/cwt)
SA-50	MAPEI	0.8
Dynamon SX	MAPEI	5

PROPORTIONS (SSD)				
Type	Wt, lbs.	Sp. Grav.	Vol. ft^3	% Vol.
Cement	395	3.1	2.04	
GGBFS	131	2.91	0.72	
Coarse	1650	2.82	9.38	49.89
Intermediate	290	2.68	1.73	9.23
		1.00	0.00	0.00
Fine	1285	2.68	7.68	40.88
Water	231	1	3.70	
Air, %	6.5		1.76	
			27.02	

Total Cementitious:	526	lbs. or	5.6 bag
Water/Cement Ratio:	0.44		
Percent Cementitious Replacement:	25%		

GRADATIONS

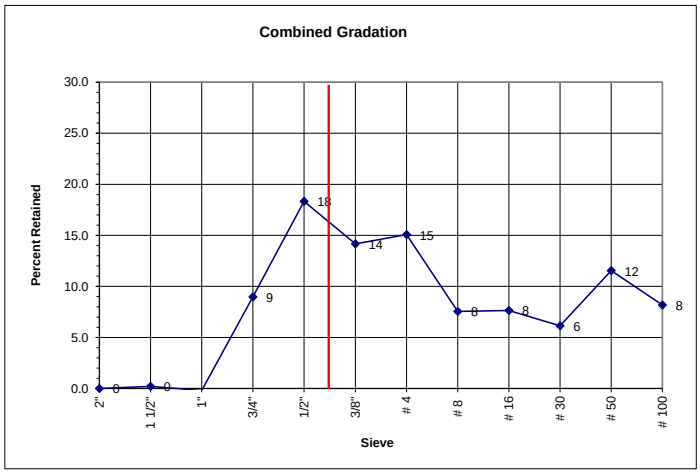
Gradation Date: 5/28/2024

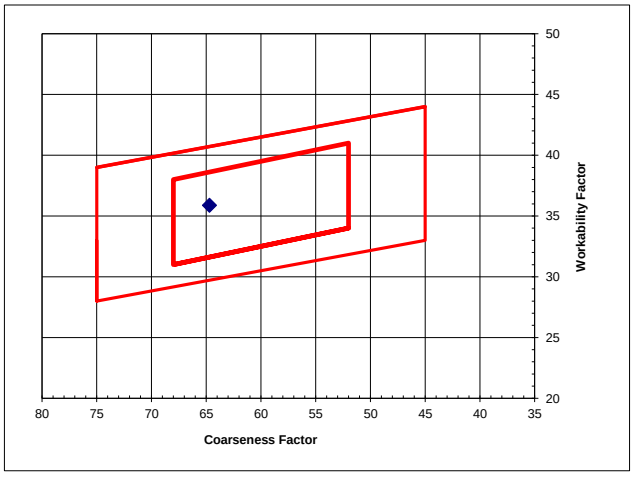
	Coarse		Intermediate		0		Fine					
SSD wt., lbs	1650		290		0		1285					
Abs. Volume	9.38		1.73		0.00		7.68					
Aggregate % Vol.	49.9		9.2		0.0		40.9					
Sieves	% Pass	% Mix	% Pass	% Mix	% Pass	% Mix	% Pass	% Mix	Total % Passing	% Cumm. Retained	Retained Sieve, %	Retained Spec. %
2"	100	49.9	100	9.2		0.0	100	40.9	100.0	0.0	0.0	
1 1/2"	100	49.7	100	9.2		0.0	100	40.9	99.8	0.2	0.2	
1"	100	49.9	100	9.2		0.0	100	40.9	100.0	0.0	-0.2	
3/4"	82	40.9	100	9.2		0.0	100	40.9	91.0	9.0	9.0	
1/2"	46	22.9	96	8.9		0.0	100	40.9	72.7	27.3	18.3	
3/8"	20	10.0	83	7.7		0.0	100	40.9	58.5	41.5	14.2	
# 4	4	2.0	15	1.4		0.0	98	40.1	43.4	56.6	15.1	
# 8	3	1.5	5	0.5		0.0	83	33.9	35.9	64.1	7.6	
# 16	2	1.0	3	0.3		0.0	66	27.0	28.3	71.7	7.6	
# 30	2	1.0	3	0.3		0.0	51	20.9	22.1	77.9	6.1	
# 50	2	1.0	2	0.2		0.0	23	9.4	10.6	89.4	11.5	
# 100	2	1.0	2	0.2		0.0	3	1.2	2.4	97.6	8.2	
# 200	2	0.7	2	0.2		0.0	1	0.5	1.4	98.6	1.0	

Fine Aggregate Fineness Modulus: 2.76 FM

Coarseness Factor (x-axis): 65
((cumm. Ret 3/8 / cumm. Ret #8) x 100)

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





Revised 5/10/17