

Aggregate Optimization Chart

Production Gradation Report

PLANT #: P-35

Sample Date: 12/12/22

Dates Test Represents: 12/13/2022 through 12/19/2022

Concrete Grade: P1M, 3500HP

Contractor: _____

MDOT No.: _____



Superior Materials, LLC
30701 W. 10 Mile Rd.
Suite 500
Farmington Hills, MI 48336

Verify this number is 100%

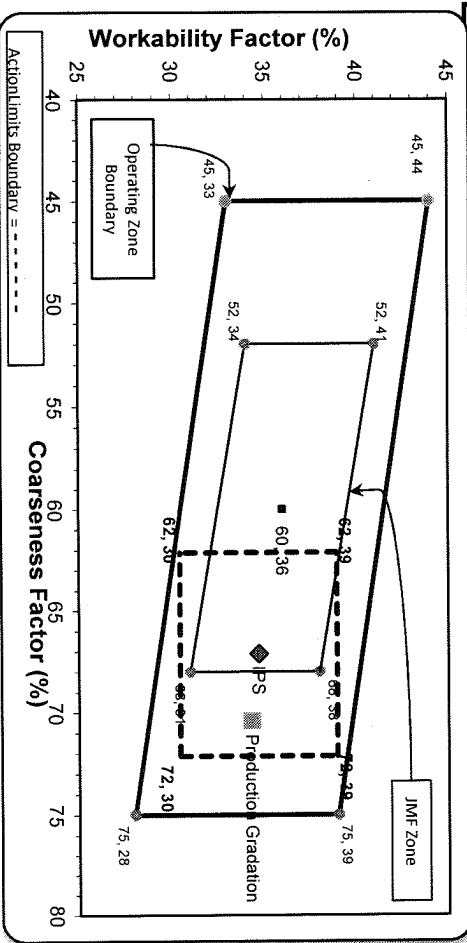
Agg. Class	Pit #	Source	Weight (ssd)	ft ³	Specific Gravity	Contribution %
CA	58-003	Stoneco	1370	8.16	2.69	43.9
IA	58-003	Stoneco	560	3.28	2.69	17.6
2NS	81-019	Pleasant Lake	1200	7.26	2.65	38.5
		Total Wt	3120			100.0

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	58.1	100.0	100.0	100.0	18.4	18.4
3/4"	21.8	100.0	100.0	100.0	15.9	34.3
1/2"	9.0	93.6	100.0	100.0	6.7	41.1
3/8"	4.1	76.6	100.0	100.0	5.1	46.2
#4	1.5	15.3	98.2	98.2	12.6	58.9
#8	1.3	5.3	85.3	34.3	6.8	65.7
#16	1.3	3.1	69.6	27.9	6.4	72.1
#30	1.2	2.4	52.4	21.1	6.8	78.9
#50	1.1	2.0	27.2	11.3	9.8	88.7
#100	1.1	1.8	8.1	3.9	7.4	96.1
LBW	0.8	1.5	2.0	1.4	2.5	98.6

*Maximum % Retained must be above the 3/8" sieve.
 *Any two adjacent sieves must equal 10% except max.
 nom. max. #100 and #200 sieves.
 *% Retained must be at least 4% for each sieve except max.
 nom. max. #100 and #200 sieves.
 *% Retained must be at least 8% for the 1" sieve when
 a 2" max. size (nom. Max. 1.5") aggregate is used.

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor: 70 Workability Factor: 34



Initial Production Sample (IPS)

Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	86.9	13.1	13.1
3/4"	76.1	10.8	23.9
1/2"	63.7	12.4	36.3
3/8"	56.2	7.5	43.8
#4	43.2	13.0	56.8
#8	34.7	8.5	65.3
#16	27.5	7.2	72.5
#30	20.6	7.0	79.4
#50	9.0	11.6	91.0
#100	2.1	6.9	97.9
LBW	1.0	1.1	99.0

PREPARED BY:
SM, LLC Technical Service

Approved By: _____



Plant S35-Superior Romulus

Product 1022-2NS GR

Name/Title Doug Storey / QC Technician

Period: 12/11/2022 - 12/17/2022

Report Date 12/16/2022

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	98.2	%	95-100
	#8 (2.36mm)	85.3	%	65-95
	#16 (1.18mm)	69.6	%	35-75
	#30 (.6mm)	52.4	%	20-55
	#50 (.3mm)	27.2	%	10-30
	#100 (.15mm)	8.1	%	0-10
	#200 (75µm)	2.3	%	
	FM	2.59		2.6-3
	Wash Loss (#200/75um)	2.0	%	0-3
ASTM C566	Total Moisture	3.51	%	



Plant S35-Superior Romulus
Product 7920-INTERMED AGG P1M LS
Period: 12/11/2022 - 12/17/2022

Name/Title Doug Storey / QC Technician
Report Date 12/16/2022

Procedure	Sieve/Test	Result	Unit	Intermed Agg P1M LS Target
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	
	1" (25mm)	100.0	%	
	3/4" (19mm)	100.0	%	
	1/2" (12.5mm)	93.6	%	
	3/8" (9.5mm)	76.6	%	
	#4 (4.75mm)	15.3	%	
	#8 (2.36mm)	5.3	%	
	#16 (1.18mm)	3.1	%	
	#30 (.6mm)	2.4	%	
	#50 (.3mm)	2.0	%	
	#100 (.15mm)	1.8	%	
	#200 (75µm)	1.7	%	
	Wash Loss (#200/75um)	1.5	%	0-3
ASTM C566	Total Moisture	2.85	%	



Plant S35-Superior Romulus

Product 7919-COARSE AGG P1M LS

Name/Title Doug Storey / QC Technician

Period: 12/11/2022 - 12/17/2022

Report Date 12/16/2022

Procedure	Sieve/Test	Result	Unit	Coarse Agg P1M LS Target
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	
	1" (25mm)	58.1	%	
	3/4" (19mm)	21.8	%	
	1/2" (12.5mm)	9.0	%	
	3/8" (9.5mm)	4.1	%	
	#4 (4.75mm)	1.5	%	
	#8 (2.36mm)	1.3	%	
	#16 (1.18mm)	1.3	%	
	#30 (.6mm)	1.2	%	
	#50 (.3mm)	1.1	%	
	#100 (.15mm)	1.1	%	
	#200 (75µm)	1.0	%	
	Wash Loss (#200/75um)	0.8	%	0-2
ASTM C566	Total Moisture	1.56	%	