

# Aggregate Optimization Chart

# Production Gradation Report

**PLANT #:** P-35

Sample Date: 10/31/22

Dates Test Represents: 11/1/2022 through 11/7/2022

Concrete Grade: P1M, 3500HP

Contractor: \_\_\_\_\_

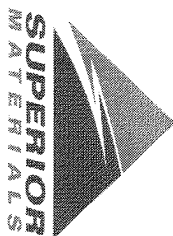
MDOT No.: \_\_\_\_\_

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	Contribution %
CA	58-003	Stonoco	1370	8.16	2.69	43.9
IA	58-003	Stonoco	550	3.28	2.69	17.6
N2S	81-019	Pleasant Lake	1200	7.26	2.65	38.5
Total Wt			3120	18.70		100.0

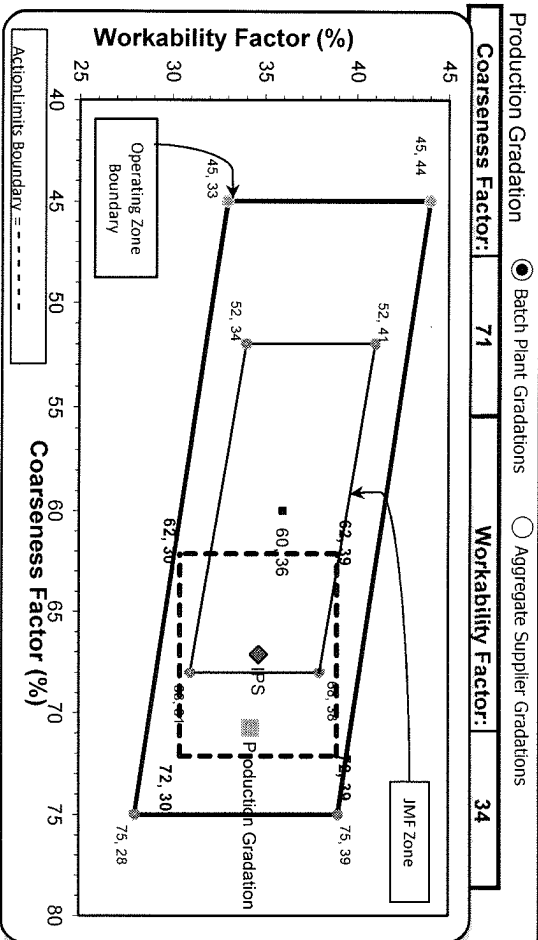
<--- Verify this number is 100%

Sieve	CA	IA	N2S	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"	51.5	100.0	100.0	78.7	21.3	21.3
3/4"	18.0	100.0	100.0	64.0	14.7	36.0
1/2"	7.4	93.5	100.0	58.2	5.8	41.8
3/8"	3.5	76.6	100.0	53.5	4.7	46.5
#4	1.9	26.6	98.9	43.6	9.9	56.4
#8	1.7	7.9	83.5	34.3	9.3	65.7
#16	1.6	4.0	66.5	27.0	7.3	73.0
#30	1.5	2.9	49.2	20.1	6.9	79.9
#50	1.4	2.5	24.5	10.5	9.6	89.5
#100	1.3	2.3	7.2	3.7	6.7	96.3
LBW	1.1	2.2	1.8	1.6	2.2	98.4

\*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.



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



Production Gradation:  Batch Plant Gradations  Aggregate Supplier Gradations

Coarseness Factor: 71 Workability Factor: 34

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

Initial Production Sample (PS)  
 Coarseness Factor: 67 Workability Factor: 35

PREPARED BY:  
 SM, LLC Technical Service

Approved By:



Plant S35-Superior Romulus

Product 1022-2NS GR

Name/Title Doug Storey / QC Technician

Period: 10/30/2022 - 11/05/2022

Report Date 11/04/2022

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	98.9	%	95-100
	#8 (2.36mm)	83.5	%	65-95
	#16 (1.18mm)	66.5	%	35-75
	#30 (.6mm)	49.2	%	20-55
	#50 (.3mm)	24.5	%	10-30
	#100 (.15mm)	7.2	%	0-10
	#200 (75µm)	2.1	%	
	FM	2.70		2.6-3
	Wash Loss (#200/75um)	1.8	%	0-3
ASTM C566	Total Moisture	4.03	%	



Plant S35-Superior Romulus

Product 7920-INTERMED AGG P1M LS

Name/Title Doug Storey / QC Technician

Period: 10/30/2022 - 11/05/2022

Report Date 11/04/2022

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)	93.5	%	
	3/8" (9.5mm)	76.6	%	
	#4 (4.75mm)	26.6	%	
	#8 (2.36mm)	7.9	%	
	#16 (1.18mm)	4.0	%	
	#30 (.6mm)	2.9	%	
	#50 (.3mm)	2.5	%	
	#100 (.15mm)	2.3	%	
	#200 (75µm)	2.2	%	
	Wash Loss (#200/75um)	2.2	%	0-3
ASTM C566	Total Moisture	3.89	%	



**Plant** S35-Superior Romulus

**Product** 7919-COARSE AGG P1M LS

**Name/Title** Doug Storey / QC Technician

**Period:** 10/30/2022 - 11/05/2022

**Report Date** 11/04/2022

Procedure	Sieve/Test	Result	Unit	Coarse Agg P1M LS Target
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	
	1" (25mm)	51.5	%	
	3/4" (19mm)	18.0	%	
	1/2" (12.5mm)	7.4	%	
	3/8" (9.5mm)	3.5	%	
	#4 (4.75mm)	1.9	%	
	#8 (2.36mm)	1.7	%	
	#16 (1.18mm)	1.6	%	
	#30 (.6mm)	1.5	%	
	#50 (.3mm)	1.4	%	
	#100 (.15mm)	1.3	%	
	#200 (75µm)	1.2	%	
	Wash Loss (#200/75um)	1.1	%	0-2
ASTM C566	Total Moisture	2.19	%	