

# Aggregate Optimization Chart

## Production Gradation Report

**PLANT #:** P-35

Sample Date: 9/6/21

Dates Test Represents: 9/7/2021 through 9/13/2021

Concrete Grade: P1M

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

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



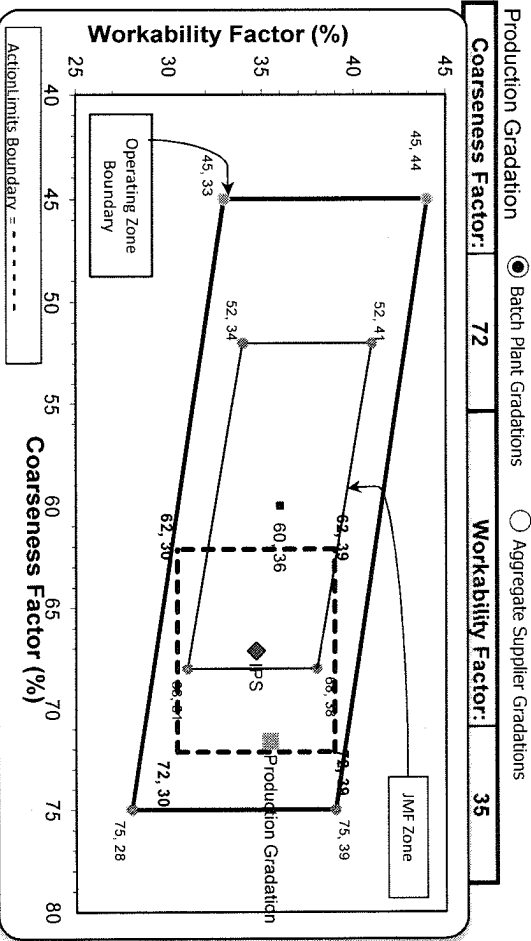
**Superior Materials, LLC**  
30701 W. 10 Mile Rd.  
Suite 500  
Farmington Hills, MI 48336

Aggr. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	Contribution %
CA	58-003	Stoneco	1370	8.16	2.69	43.9
IA	58-003	Stoneco	550	3.28	2.69	17.6
ZNS	81-093	Burnmeister	1200	7.26	2.65	38.5
Total Wt			3120	18.70		100.0

Sieve	CA	IA	ZNS	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"	61.5	100.0	100.0	83.1	16.9	16.9
3/4"	31.5	100.0	100.0	69.9	30.1	30.1
1/2"	13.0	92.1	100.0	60.4	39.6	39.6
3/8"	7.3	68.8	100.0	53.8	46.2	46.2
#4	2.5	20.3	99.1	42.8	57.2	57.2
#8	1.7	5.9	87.6	35.5	64.5	64.5
#16	1.5	3.1	71.5	28.7	71.3	71.3
#30	1.4	2.1	52.2	21.1	78.9	78.9
#50	1.3	1.8	17.6	7.7	92.3	92.3
#100	1.3	1.7	3.3	2.1	97.9	97.9
LBW	1.0	1.5	1.0	1.1	98.9	98.9

\*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.



Initial Production Sample (IPS)

Sieve	% 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

Period: 09/05/2021 - 09/11/2021

Name/Title Doug Storey / QC Technician

Report Date 09/11/2021

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	99.1	%	95-100
	#8 (2.36mm)	87.6	%	65-95
	#16 (1.18mm)	71.5	%	35-75
	#30 (.6mm)	52.2	%	20-55
	#50 (.3mm)	17.6	%	10-30
	#100 (.15mm)	3.3	%	0-10
	#200 (75µm)	1.2	%	
	FM	2.69		2.6-3
AASHTO T11	-#200 (75um)	1.21	%	
	Wash Loss (#200/75um)	1.0	%	0-3
ASTM C566	Total Moisture	2.42	%	



Plant S35-Superior Romulus

Product 7920-INTERMED AGG P1M LS

Name/Title Doug Storey / QC Technician

Period: 09/05/2021 - 09/11/2021

Report Date 09/11/2021

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)	92.1	%	
	3/8" (9.5mm)	68.8	%	
	#4 (4.75mm)	20.3	%	
	#8 (2.36mm)	5.9	%	
	#16 (1.18mm)	3.1	%	
	#30 (.6mm)	2.1	%	
	#50 (.3mm)	1.8	%	
	#100 (.15mm)	1.7	%	
	#200 (75µm)	1.6	%	
	Wash Loss (#200/75um)	1.5	%	0-3
ASTM C566	Total Moisture	1.60	%	



**Plant** S35-Superior Romulus

**Product** 7919-COARSE AGG P1M LS

**Period:** 09/05/2021 - 09/11/2021

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

**Report Date** 09/11/2021

Procedure	Sieve/Test	Result	Unit	Coarse Agg P1M LS Target
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	
	1" (25mm)	61.5	%	
	3/4" (19mm)	31.5	%	
	1/2" (12.5mm)	13.0	%	
	3/8" (9.5mm)	7.3	%	
	#4 (4.75mm)	2.5	%	
	#8 (2.36mm)	1.7	%	
	#16 (1.18mm)	1.5	%	
	#30 (.6mm)	1.4	%	
	#50 (.3mm)	1.3	%	
	#100 (.15mm)	1.3	%	
	#200 (75µm)	1.1	%	
	Wash Loss (#200/75µm)	1.0	%	0-2
ASTM C566	Total Moisture	1.10	%	