

# Aggregate Optimization Chart

# Production Gradation Report

**PLANT #:** P-36

Sample Date: 5/31/21

Dates Test Represents: 6/1/2021 through 6/7/2021

Concrete Grade: P1M

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

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

Agg. Class	Pit #	Source	Weight (SSD)	ft <sup>3</sup>	Specific Gravity	Contribution %
CA	71-47	Presque Isle	1050	6.42	2.62	34.2
IA	71-47	Presque Isle	820	5.02	2.62	26.7
N2S	63-92	Grange Hall	1200	7.26	2.65	39.1
Total Wt			3070	18.70		100.0

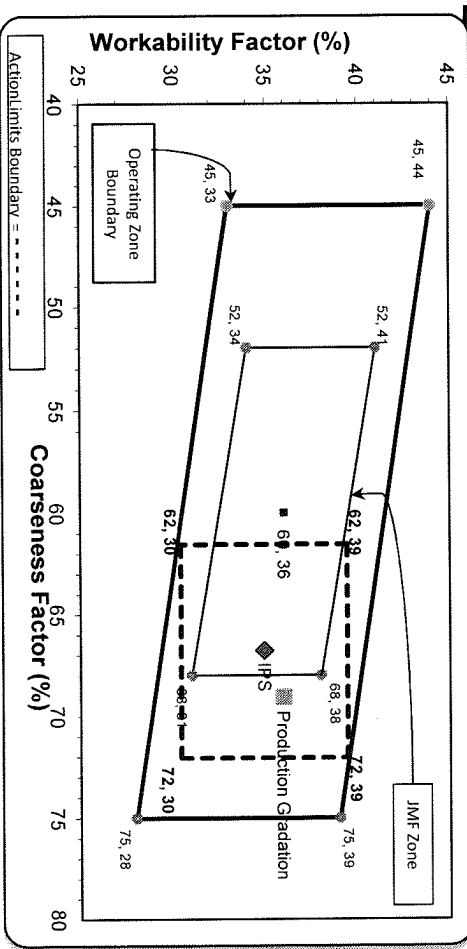
Verify this number is 100%

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"	49.7	100.0	100.0	82.8	17.2	17.2
3/4"	14.9	100.0	100.0	69.0	13.8	31.0
1/2"	3.4	100.0	100.0	61.2	7.8	38.8
3/8"	3.0	58.5	100.0	55.7	5.4	44.3
#4	2.7	16.7	98.2	43.8	12.0	56.2
#8	2.5	6.2	85.5	35.9	7.8	64.1
#16	2.3	3.7	69.3	28.9	7.1	71.1
#30	2.2	3.3	50.0	21.2	7.7	78.8
#50	2.1	3.1	22.6	10.4	10.8	89.6
#100	2.0	3.0	3.7	2.9	7.4	97.1
LBW	1.6	2.6	0.5	1.4	1.5	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: 69 Workability Factor: 36



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"	85.0	15.0	15.0
3/4"	72.1	12.9	27.9
1/2"	64.5	7.6	35.5
3/8"	56.5	8.0	43.5
#4	42.7	13.8	57.3
#8	34.9	7.8	65.1
#16	29.0	5.9	71.0
#30	21.0	8.0	79.0
#50	8.2	12.8	91.8
#100	1.6	6.5	98.4
LBW	0.7	0.9	99.3



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PREPARED BY:  
 SM, LLC Technical Service

Approved By: \_\_\_\_\_



Superior Auburn Hills  
 2470 Auburn Road  
 Auburn Hills, MI 48432

**Plant** S36-Superior Auburn Hills

**Product** 1022-2NS GR

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

**Period:** 05/30/2021 - 06/05/2021

**Report Date** 06/04/2021

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)	85.5	%	65-95
	#16 (1.18mm)	69.3	%	35-75
	#30 (.6mm)	50.0	%	20-55
	#50 (.3mm)	22.6	%	10-30
	#100 (.15mm)	3.7	%	0-10
	#200 (75µm)	0.7	%	
	FM	2.71		2.6-3
	Wash Loss (#200/75um)	0.5	%	0-3
	Total Moisture	3.16	%	



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Plant S36-Superior Auburn Hills  
Product 7920-INTERMED AGG P1M LS  
Period: 05/30/2021 - 06/05/2021

Name/Title Doug Storey / QC Technician  
Report Date 06/04/2021

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)	96.7	%	
	1/2" (12.5mm)	78.3	%	
	3/8" (9.5mm)	58.5	%	
	#4 (4.75mm)	16.7	%	
	#8 (2.36mm)	6.2	%	
	#16 (1.18mm)	3.7	%	
	#30 (.6mm)	3.3	%	
	#50 (.3mm)	3.1	%	
	#100 (.15mm)	3.0	%	
	#200 (75µm)	2.7	%	
	Wash Loss (#200/75um)	2.6	%	0-3
	Total Moisture	2.40	%	



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Plant S36-Superior Auburn Hills

Product 7919-COARSE AGG P1M LS

Name/Title Doug Storey / QC Technician

Period: 05/30/2021 - 06/05/2021

Report Date 06/04/2021

Procedure	Sieve/Test	Result	Unit	Coarse Agg P1M LS Target
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	
	1" (25mm)	49.7	%	
	3/4" (19mm)	11.9	%	
	1/2" (12.5mm)	3.4	%	
	3/8" (9.5mm)	3.0	%	
	#4 (4.75mm)	2.7	%	
	#8 (2.36mm)	2.5	%	
	#16 (1.18mm)	2.3	%	
	#30 (.6mm)	2.2	%	
	#50 (.3mm)	2.1	%	
	#100 (.15mm)	2.0	%	
	#200 (75µm)	1.7	%	
	Wash Loss (#200/75um)	1.6	%	0-2
	Total Moisture	0.73	%	