

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-32**

Sample Date: 5/17/21

Dates Test Represents: 5/18/2021 through 5/24/2021

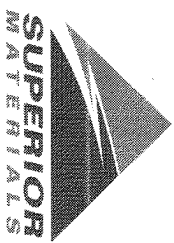
Concrete Grade: **S2M**

Contractor: _____

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	Contribution %
6AA	71-47	Presque Isle	1500	9.17	2.62	49.2
26A	71-47	Presque Isle	320	1.96	2.62	10.5
2NS	95-013	Smelter Bay	1230	7.44	2.65	40.3
Total Wt						100.0
Total Wt						18.57

Sieve	6AA	26A	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"	95.6	100.0	100.0	97.8	2.2	2.2
3/4"	80.2	100.0	100.0	90.3	7.6	9.7
1/2"	40.3	97.0	100.0	70.3	19.9	29.7
3/8"	23.0	86.6	100.0	60.7	39.3	39.3
#4	4.8	22.9	95.7	43.4	56.6	56.6
#8	2.8	7.4	82.0	35.2	64.8	64.8
#16	2.4	3.8	68.5	29.2	70.8	70.8
#30	2.2	2.8	48.0	20.7	79.3	79.3
#50	2.1	2.4	22.2	10.2	89.8	89.8
#100	2.0	2.0	6.2	3.7	96.3	96.3
LBW	1.5	1.4	1.6	1.5	98.5	98.5

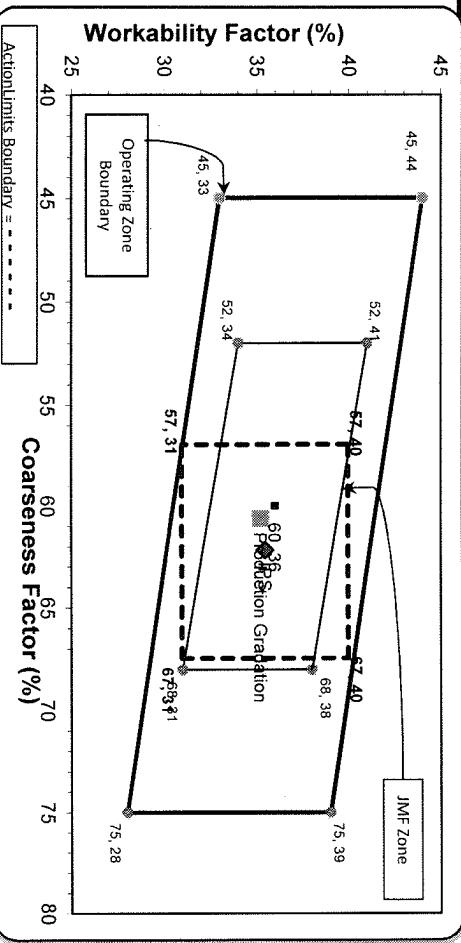


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*Maximum % Retained must be above the 3/8" sieve.
*Any two adjacent sieves must equal 10% except max.
nom. max. #100 and #200 sieves.
*% Retained must be at least 4% for each sieve except max.
nom. max. #100 and #200 sieves.
*% Retained must be at 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: **61** Workability Factor: **35**



Initial Production Sample (IPS)

Coarseness Factor: **62** Workability Factor: **35**

Sieve	% Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	100.0	0.0	0.0
3/4"	94.0	6.0	6.0
1/2"	70.2	23.7	29.8
3/8"	59.9	10.4	40.1
#4	42.7	17.2	57.3
#8	35.5	7.2	64.5
#16	28.4	7.0	71.6
#30	19.2	9.2	80.8
#50	8.9	10.3	91.1
#100	3.1	5.9	96.9
LBW	1.4	1.7	98.6

PREPARED BY:
SM, LLC Technical Service

Approved By: _____

Plant 958-JMT

Product 1022-2NS GR - Smelter Bay

Name/Title Doug Storey / QC Technician

Period: 05/16/2021 - 05/22/2021

Report Date 05/21/2021

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	#4 (4.75mm)	95.7	%	95-100
	#8 (2.36mm)	82.0	%	65-95
	#16 (1.18mm)	68.5	%	35-75
	#30 (.6mm)	48.0	%	20-55
	#50 (.3mm)	22.2	%	10-30
	#100 (.15mm)	6.2	%	0-10
	#200 (75µm)	1.9	%	
	FM	2.78		2.6-3
	Wash Loss (#200/75um)	1.6	%	0-3
	Total Moisture	5.1	%	

Plant 958-JMT

Product 1067-26A Mod LS

Name/Title Doug Storey / QC Technician

Period: 05/16/2021 - 05/22/2021

Report Date 05/19/2021

Procedure	Sieve/Test	Result	Unit	26A Mod LS Spec
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	
	1" (25mm)	100.0	%	
	3/4" (19mm)	100.0	%	100-100
	1/2" (12.5mm)	97.0	%	95-100
	3/8" (9.5mm)	86.6	%	60-95
	#4 (4.75mm)	22.9	%	5-30
	#8 (2.36mm)	7.4	%	0-12
	#16 (1.18mm)	3.8	%	
	#30 (.6mm)	2.8	%	
	#50 (.3mm)	2.4	%	
	#100 (.15mm)	2.0	%	
	#200 (75µm)	1.7	%	
	Wash Loss (#200/75um)	1.4	%	0-3
	Total Moisture	2.7	%	

Plant 958-JMT

Product 1054-6AA LS PI

Name/Title Doug Storey / QC Technician

Period: 05/16/2021 - 05/22/2021

Report Date 05/19/2021

Procedure	Sieve/Test	Result	Unit	6AA LS PI Spec
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	100-100
	1" (25mm)	95.6	%	95-100
	3/4" (19mm)	80.2	%	
	1/2" (12.5mm)	40.3	%	30-60
	3/8" (9.5mm)	23.0	%	
	#4 (4.75mm)	4.8	%	0-8
	#8 (2.36mm)	2.8	%	
	#16 (1.18mm)	2.4	%	
	#30 (.6mm)	2.2	%	
	#50 (.3mm)	2.1	%	
	#100 (.15mm)	2.0	%	
	#200 (75µm)	1.7	%	
	Wash Loss (#200/75um)	1.5	%	0-2
	Total Moisture	2.6	%	