

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P11**

Contractor: _____

Sample Date: **9/9/24**

Concrete Grade: **P1M, 3500HP**

Dates Test Represents: **9/10/2024** through **9/16/2024**

MIDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	71-47	Presque Isle	850	5.20	2.62	27.7
IA	71-47	Presque Isle	1020	6.24	2.62	33.2
2NS	63-115	Ray Rd	1200	7.26	2.65	39.1
Total Wt			3070	18.70		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"	94.2	100.0	100.0	98.4	1.6	1.6
1"	23.1	100.0	100.0	78.7	19.7	21.3
3/4"	6.1	98.2	100.0	73.4	5.3	26.6
1/2"	2.1	66.7	100.0	61.8	11.6	38.2
3/8"	1.8	40.5	100.0	53.0	8.8	47.0
#4	1.8	7.6	96.0	40.5	12.5	59.5
#8	1.8	3.9	80.9	33.4	7.1	66.6
#16	1.7	3.1	66.7	27.6	5.8	72.4
#30	1.6	2.8	52.5	21.9	5.7	78.1
#50	1.5	2.6	28.4	12.4	9.5	87.6
#100	1.4	2.4	7.6	4.2	8.2	95.8
LBW	1.1	1.9	0.6	1.2	3.0	98.8



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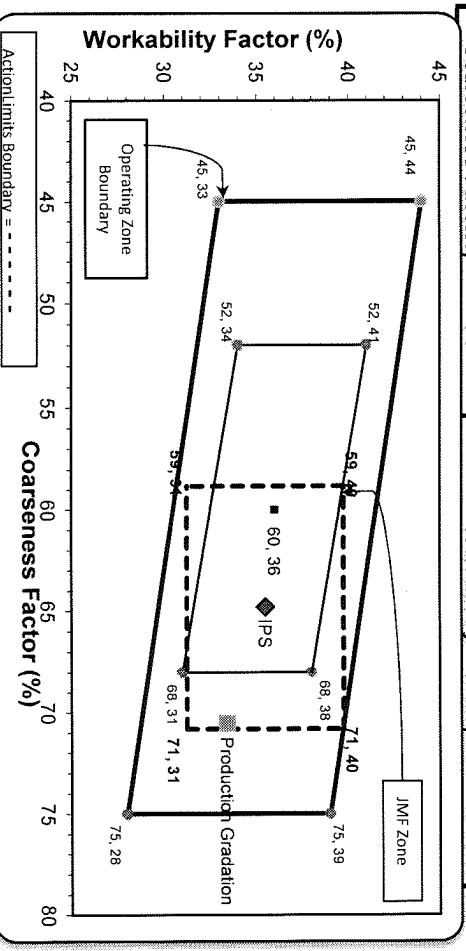
*Maximum % Retained must be above the 3/8" sieve.
 *Any two adjacent sieves must equal 10% except max.
 nom. max. #100 and #200 sieves.
 *% Retained must be at least 4% for each sieve except max.
 nom. max. #100 and #200 sieves.
 *% Retained must be at least 8% for the 1" sieve when
 a 2" max. size (nom.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

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor: **71** Workability Factor: **33**

Initial Production Sample (IPS) **65**

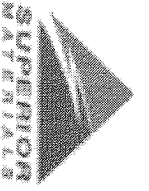
Coarseness Factor: **36** Workability Factor: **36**



Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	99.0	0.6	0.6
1"	84.0	15.3	16.0
3/4"	73.5	10.5	26.5
1/2"	65.2	8.2	34.8
3/8"	58.2	7.1	41.8
#4	44.1	14.1	55.9
#8	35.5	8.6	64.5
#16	29.1	6.4	70.9
#30	21.9	7.3	78.1
#50	9.6	12.2	90.4
#100	2.6	7.1	97.4
LBW	1.0	1.6	99.0

PREPARED BY:
 SM, LLC Technical Service

Approved By: _____



Daily Summary Report

Date Tuesday, September 10, 2024

Sample Id - 674984147

-674974897

-674937992

Plant S11

S11

S11

Product 7919
COARSE AGG
P1M LS

7920
INTERMED AGG
P1M LS

1022
2NS GR

Specification Coarse Agg P1M
LS Target

Intermed Agg P1M
LS Target

2NS GR Spec

Sample Type QA
Time 13:59

QA
14:04

QA
14:12

2" (50mm)	100.0	100.0	100.0
1 1/2" (37.5mm)	94.2	100.0	96.0
1" (25mm)	23.1	100.0	80.9
3/4" (19mm)	6.1	98.2	66.7
1/2" (12.5mm)	2.1	66.7	52.5
3/8" (9.5mm)	1.8	40.5	28.4
#4 (4.75mm)	1.8	7.6	7.6
#8 (2.36mm)	1.8	3.9	0.9
#16 (1.18mm)	1.7	3.1	0.0
#30 (.6mm)	1.6	2.8	2.68
#50 (.3mm)	1.5	2.6	0.6
#100 (.15mm)	1.4	2.4	
#200 (75µm)	1.3	2.1	
Pan	0.0	0.0	
FM			
Wash Loss (#200/75µm)	1.1	1.9	
Total Moisture	1.77	3.79	4.17

Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-102**

Contractor: _____

Sample Date: **9/9/24**

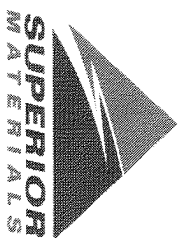
Concrete Grade: **P1M, 3500HP**

Dates Test Represents: **9/10/2024** through **9/16/2024**

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (ssd)	ft ³	Specific Gravity	% Contribution
CA	58-003	Stonoco	1470	8.76	2.69	47.1
IA	58-003	Stonoco	450	2.68	2.69	14.4
2NS	63-114	Highland	1200	7.26	2.65	38.5
Total Wt			3120	18.70		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"	68.8	100.0	100.0	85.3	14.7	14.7
3/4"	35.8	100.0	100.0	69.8	15.5	30.2
1/2"	19.8	95.1	100.0	61.5	8.2	38.5
3/8"	12.8	78.7	100.0	55.8	5.7	44.2
#4	4.7	25.4	99.3	44.1	11.8	55.9
#8	3.1	8.0	84.1	35.0	9.1	65.0
#16	2.8	3.6	65.2	26.9	8.0	73.1
#30	2.6	2.5	43.0	18.1	8.8	81.9
#50	2.4	1.7	15.6	7.4	10.7	92.6
#100	2.2	1.6	2.7	2.3	5.1	97.7
LBW	1.9	1.3	0.3	1.2	1.1	98.8

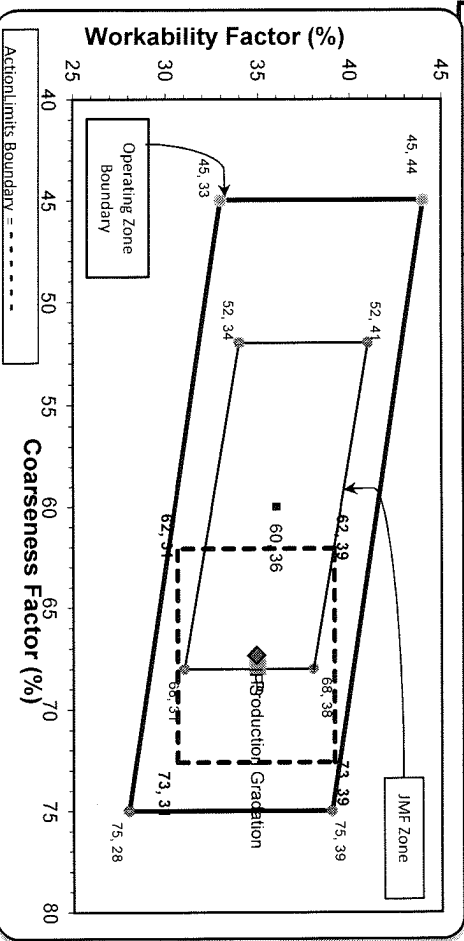


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*Maximum % Retained must be above the 3/8" sieve.
*Any two adjacent sieves must equal 10% except max. nom. max., #100 and #200 sieves.
*% Retained must be at least 4% for each sieve except max. nom. max., #100 and #200 sieves.
*% Retained must be at 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: **68** Workability Factor: **35**

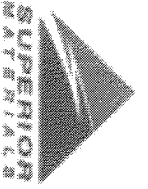
Initial Production Sample (IPS)
Coarseness Factor: **67** Workability Factor: **35**



Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	85.5	14.5	14.5
3/4"	73.4	12.1	26.6
1/2"	61.0	12.4	39.0
3/8"	56.2	4.8	43.8
#4	43.1	13.1	56.9
#8	34.9	8.2	65.1
#16	29.4	5.5	70.6
#30	21.6	7.8	78.4
#50	8.1	13.4	91.9
#100	2.2	5.9	97.8
LBW	1.4	0.8	98.6

PREPARED BY:
SM, LLC Technical Service

Approved By: _____



Daily Summary Report

Date Thursday, September 12, 2024

Sample Id	Plant	Product	Specification	Sample Type	Time
-674980875	S102 Superior Novi	6AA LS	6AA LS	QA	13:45
-674938758	S102 Superior Novi	1067 26A Mod LS	26A Mod LS Spec	QA	13:49
-674905499	S102 Superior Novi	1022 2NS GR	2NS GR Spec	QA	13:52
-674893851	S102 Superior Novi	7919 COARSE AGG P1M LS	Coarse Agg P1M LS Target	QA	19:38
-674967614	S102 Superior Novi	7920 INTERMED AGG P1M LS	Intermed Agg P1M LS Target	QA	19:42
2" (50mm)					100.0
1 1/2" (37.5mm)					100.0
1" (25mm)					99.3
3/4" (19mm)					82.1
1/2" (12.5mm)					37.3
3/8" (9.5mm)					16.6
#4 (4.75mm)					4.6
#8 (2.36mm)					2.4
#16 (1.18mm)					1.9
#30 (.6mm)					1.7
#50 (.3mm)					1.6
#100 (.15mm)					1.5
#200 (75µm)					1.36
Pan					0.00
FM					2.90
Wash Loss (#200/75µm)					1.3
Total Moisture					2.69
					0.8
					3.50
					2.65
					1.9
					1.00
					100.0
					100.0
					100.0
					100.0
					95.1
					78.7
					25.4
					8.0
					3.6
					2.5
					1.7
					1.6
					1.5
					0.0
					1.3
					1.05