Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-103**

Contractor:

Sample Date: 9/22/25

Concrete Grade: **S2M, 3500HP**

Dates Test Represents: 9/23/2025 through 9/29/2025

MDOT No.:

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	58-003	Stoneco	1600	9.53	2.69	51.6
26A	58-003	Stoneco	300	1.79	2.69	9.7
2NS	63-114	Highland	1200	7.26	2.65	38.7
		Total Wt	**3100**	**18.58**		100.0

<----- Verify this number is 100%

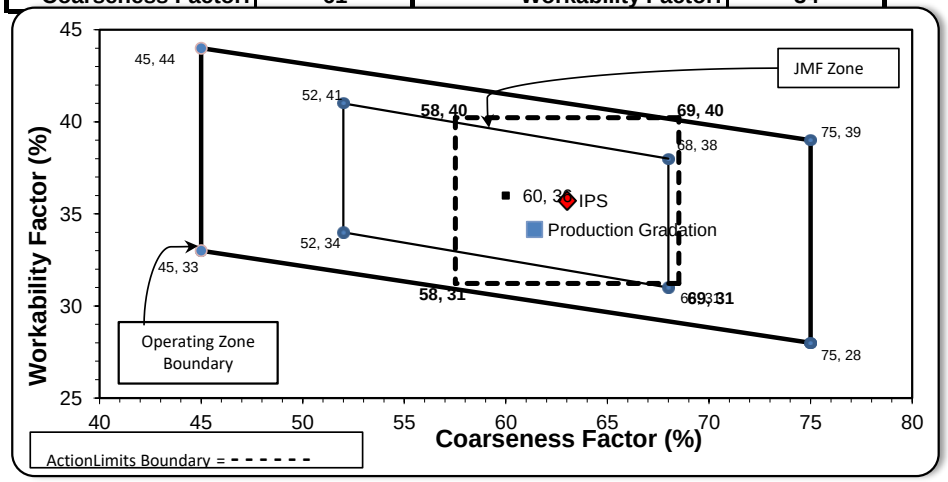
Sieve	6AA	26A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	100.0	100.0	100.0	100.0	0.0	0.0
1"	100.0	100.0	100.0	100.0	0.0	0.0
3/4"	82.7	100.0	100.0	91.1	8.9	8.9
1/2"	43.1	100.0	100.0	70.6	20.4	29.4
3/8"	24.2	86.4	100.0	59.6	11.1	40.4
#4	3.7	9.0	99.1	41.1	18.4	58.9
#8	1.6	2.0	85.6	34.2	7.0	65.8
#16	1.5	1.4	67.3	27.0	7.2	73.0
#30	1.4	1.3	48.5	19.6	7.3	80.4
#50	1.3	1.2	23.9	10.0	9.6	90.0
#100	1.3	1.2	4.1	2.4	7.7	97.6
LBW	1.1	1.0	0.4	0.8	1.6	99.2

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

*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 4% for the 3/4" sieve when a 1.5" max. size (nom. Max. 1.0") aggregate is used.

Production Gradation ○ Batch Plant Gradations ◉ Aggregate Supplier Gradations

Coarseness Factor:	61	Workability Factor:	34



Intial Production Sample (IPS)

Coarseness Factor:	63
Workability Factor:	36

Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	99.2	0.8	0.8
3/4"	90.9	8.3	9.1
1/2"	71.3	19.6	28.7
3/8"	59.5	11.8	40.5
#4	43.8	15.7	56.2
#8	35.7	8.1	64.3
#16	27.0	8.7	73.0
#30	18.6	8.4	81.4
#50	6.8	11.8	93.2
#100	1.4	5.4	98.6
LBW	0.6	0.8	99.4

PREPARED BY:
SM, LLC Technical Service

Approved BY:

Aggregate Optimization Chart

Production Gradation Report

PLANT #: p11

Contractor:

Sample Date: 9/22/25

Concrete Grade: **S2M, 3500HP**

Dates Test Represents: 9/23/2025 through 9/29/2025

MDOT No.:

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1420	8.69	2.62	46.6
26A	71-47	Presque Isle	400	2.45	2.62	13.1
2NS	63-115	Ray Rd	1230	7.44	2.65	40.3
		Total Wt	**3050**	**18.57**		100.0

<----- Verify this number is 100%

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"	98.0	100.0	100.0	99.1	0.9	0.9
3/4"	82.5	100.0	100.0	91.9	7.2	8.1
1/2"	37.7	99.2	100.0	70.9	21.0	29.1
3/8"	18.0	84.0	100.0	59.7	11.2	40.3
#4	3.1	17.0	97.5	43.0	16.7	57.0
#8	1.9	6.1	82.1	34.8	8.2	65.2
#16	1.6	3.5	62.9	26.6	8.2	73.4
#30	1.5	2.8	45.2	19.3	7.3	80.7
#50	1.4	2.5	22.6	10.1	9.2	89.9
#100	1.3	2.3	5.1	3.0	7.1	97.0
LBW	1.1	2.1	0.6	1.0	1.9	99.0

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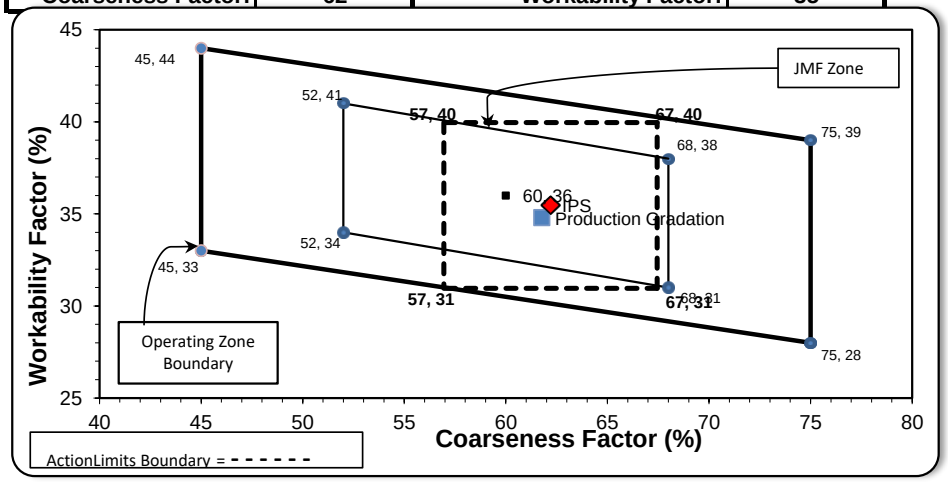
*Maximum % Retained must be above the 3/8" sieve.
*Any two adjacent sieves must equal 10% except max., nom. max., #100 and #200 sieves.
*% Retained must be at least 4% for each sieve except max., nom. max., #100 and #200 sieves.
*% Retained must be at least 4% for the 3/4" sieve when a 1.5" max. size (nom. Max. 1.0") aggregate is used.

Production Gradation ○ Batch Plant Gradations ◉ Aggregate Supplier Gradations

Coarseness Factor:	62	Workability Factor:	35



Intial Production Sample (IPS)

Coarseness Factor:	62
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"	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

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Aggregate Optimization Chart

Production Gradation Report

PLANT #: **P-O2**

Contractor:

Sample Date: 9/22/25

Concrete Grade: **S2M, 3500HP**

Dates Test Represents: 9/23/2025 through 9/29/2025

MDOT No.:

Agg. Class	Pit #	Source	Weight (SSD)	ft³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1420	8.69	2.62	46.6
26A	71-47	Presque Isle	400	2.45	2.62	13.1
2NS	63-115	Ray Rd	1230	7.44	2.65	40.3
		Total Wt	**3050**	**18.57**		100.0

<----- Verify this number is 100%

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"	98.0	100.0	100.0	99.1	0.9	0.9
3/4"	82.5	100.0	100.0	91.9	7.2	8.1
1/2"	37.7	99.2	100.0	70.9	21.0	29.1
3/8"	18.0	84.0	100.0	59.7	11.2	40.3
#4	3.1	17.0	97.5	43.0	16.7	57.0
#8	1.9	6.1	82.1	34.8	8.2	65.2
#16	1.6	3.5	62.9	26.6	8.2	73.4
#30	1.5	2.8	45.2	19.3	7.3	80.7
#50	1.4	2.5	22.6	10.1	9.2	89.9
#100	1.3	2.3	5.1	3.0	7.1	97.0
LBW	1.1	2.1	0.6	1.0	1.9	99.0

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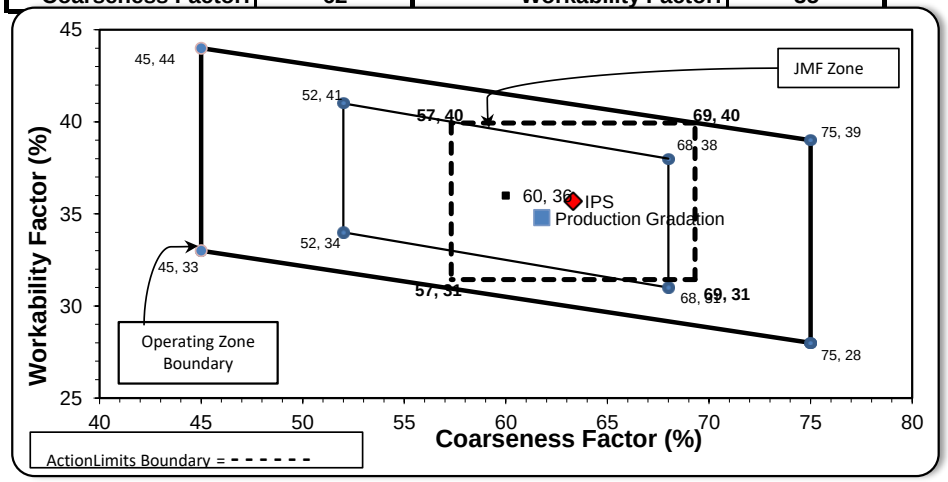
*% Retained must be at least 4% for the 3/4" sieve when a 1.5" max. size (nom. Max. 1.0") aggregate is used.

Production Gradation ○ Batch Plant Gradations ◉ Aggregate SupplierGradations

Coarseness Factor:	62	Workability Factor:	35



Intial Production Sample (IPS)

Coarseness Factor:	63
Workability Factor:	36

Sieve	Cumulative % 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"	95.6	4.4	4.4
1/2"	73.1	22.6	26.9
3/8"	59.3	13.8	40.7
#4	42.8	16.5	57.2
#8	35.7	7.1	64.3
#16	28.9	6.8	71.1
#30	20.7	8.2	79.3
#50	9.9	10.8	90.1
#100	2.1	7.8	97.9
LBW	0.9	1.2	99.1

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Approved By: