

Aggregate Optimization Chart

MIX ID'S: DDP154E7, DDP154E8, DDP164E7 and DDP164E8

Production Gradation Report

PLANT #: **P-101**

Sample Date: 5/22/17

Concrete Grade: **P1M**

Contractor: _____

Dates Test Represents: 5/22/2017 to 5/28/2017

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	71-47	Presque Isle	820	5.02	2.62	26.7
IA	71-47	Presque Isle	950	5.81	2.62	30.9
2NS	63-115	Ray Road	1300	7.86	2.65	42.3
Total Wt			3070	18.69		100.0

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

Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	95.1	100.0	100.0	98.7	1.3	1.3
1"	43.2	100.0	100.0	84.8	13.9	15.2
3/4"	14.9	96.8	100.0	76.3	8.5	23.7
1/2"	4.0	73.5	100.0	66.2	10.1	33.8
3/8"	2.8	40.6	100.0	55.7	10.5	44.3
#4	2.0	5.0	97.7	43.5	12.2	56.5
#8	1.8	2.2	80.6	35.3	8.2	64.7
#16	1.8	1.8	61.3	27.0	8.3	73.0
#30	1.7	1.7	43.7	19.5	7.5	80.5
#50	1.7	1.6	20.5	9.6	9.9	90.4
#100	1.6	1.5	3.6	2.4	7.2	97.6
LBW	1.2	1.4	0.6	1.0	1.4	99.0



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

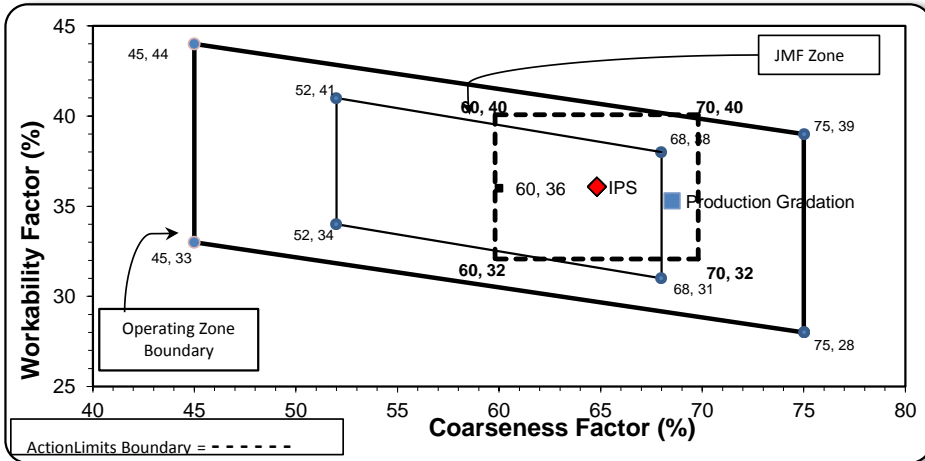
*Maximum % Retained must be above the 3/8" sieve.
 *Any two adjacent sieves must equal 10% except max., nom. max., #100 and #200 sieves.
 *% Retained must be at least 4% for each sieve except max., nom. max., #100 and #200 sieves.
 *% Retained must be at least 8% for the 1" sieve when a 2" max. size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

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor:	69	Workability Factor:	35
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Initial Production Sample (IPS)

Coarseness Factor:	65		
Workability Factor:	36		
Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	99.3	0.7	0.7
1"	83.6	15.7	16.4
3/4"	73.0	10.6	27.0
1/2"	65.1	7.9	34.9
3/8"	58.6	6.5	41.4
#4	45.8	12.8	54.2
#8	36.1	9.7	63.9
#16	28.8	7.3	71.2
#30	21.7	7.1	78.3
#50	10.3	11.4	89.7
#100	3.1	7.2	96.9
LBW	1.3	1.8	98.7



PREPARED BY:
 SM, LLC Technical Service

Approved By:

Aggregate Optimization Chart

MIX ID'S: DDP154E7, DDP154E8, DDP164E7 and DDP164E8

Production Gradation Report

PLANT #: **P-39**

Sample Date: 5/22/17

Concrete Grade: **P1M**

Contractor: _____

Dates Test Represents: 5/22/2017 to 5/28/2017

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
CA	71-47	Presque Isle	820	5.02	2.62	26.7
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Total Wt			3070	18.69		100.0

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Sieve	CA	IA	2NS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	95.1	100.0	100.0	98.7	1.3	1.3
1"	43.2	100.0	100.0	84.8	13.9	15.2
3/4"	14.9	96.8	100.0	76.3	8.5	23.7
1/2"	4.0	73.5	100.0	66.2	10.1	33.8
3/8"	2.8	40.6	100.0	55.7	10.5	44.3
#4	2.0	5.0	97.7	43.5	12.2	56.5
#8	1.8	2.2	80.6	35.3	8.2	64.7
#16	1.8	1.8	61.3	27.0	8.3	73.0
#30	1.7	1.7	43.7	19.5	7.5	80.5
#50	1.7	1.6	20.5	9.6	9.9	90.4
#100	1.6	1.5	3.6	2.4	7.2	97.6
LBW	1.2	1.4	0.6	1.0	1.4	99.0

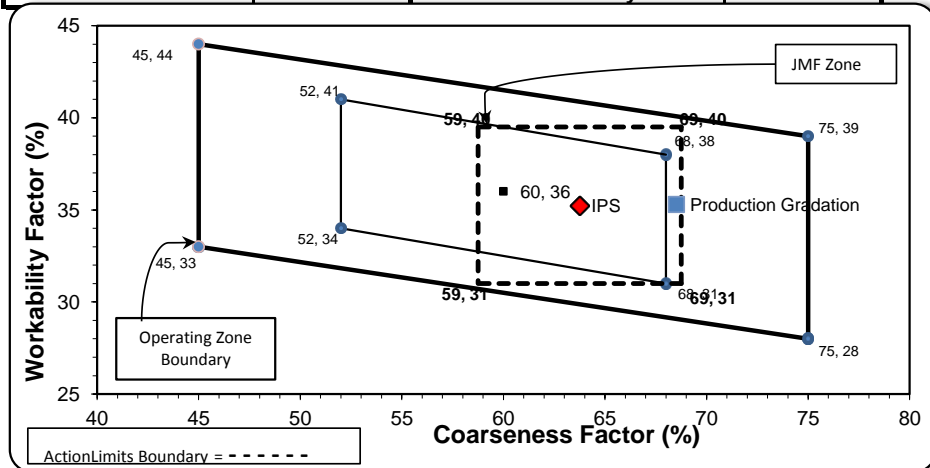
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Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor: 69 **Workability Factor: 35**



Initial Production Sample (IPS)

Coarseness Factor: 64		Workability Factor: 35	
Sieve	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	0.0	0.0
1.5"	99.4	0.6	0.6
1"	84.3	15.1	15.7
3/4"	73.9	10.4	26.1
1/2"	65.7	8.2	34.3
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#50	10.1	11.1	89.9
#100	3.1	7.0	96.9
LBW	1.4	1.7	98.6

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