

Aggregate Optimization Chart

PLANT #: **P-36**

Sample Date: 1/27/20

Concrete Grade: **TM**

Contractor: _____

Dates Test Represents: 1/28/2020 through 2/3/2020

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1390	8.50	2.62	48.1
26A	71-47	Presque Isle	400	2.45	2.62	13.8
2NS	63-92	Grange Hall	1100	6.65	2.65	38.1
Total Wt			2890	17.60		100.0

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



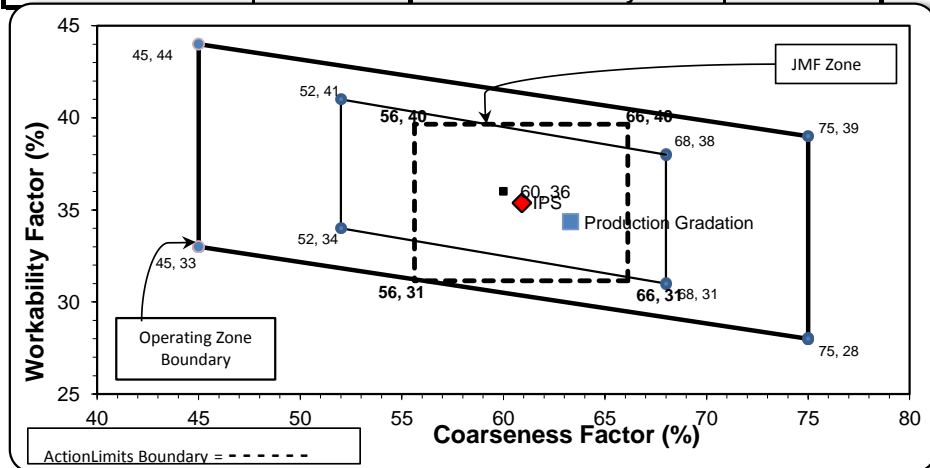
Superior Materials, LLC
 30701 W. 10 Mile Rd.
 Suite 500
 Farmington Hills, MI 48336

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"	95.5	100.0	100.0	97.8	2.2	2.2
3/4"	74.3	100.0	100.0	87.6	10.2	12.4
1/2"	34.7	98.1	100.0	68.3	19.3	31.7
3/8"	15.9	92.0	100.0	58.4	9.9	41.6
#4	2.9	25.0	97.3	41.9	16.6	58.1
#8	2.3	7.6	84.6	34.4	7.5	65.6
#16	1.7	3.2	69.5	27.7	6.6	72.3
#30	1.6	2.1	51.2	20.5	7.2	79.5
#50	1.5	1.8	22.2	9.4	11.1	90.6
#100	1.4	1.6	3.7	2.3	7.1	97.7
LBW	1.2	1.5	0.3	0.9	1.4	99.1

*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:	63	Workability Factor:	34
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Initial Production Sample (IPS)

Coarseness Factor:		61	
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"	99.1	0.9	0.9
3/4"	90.8	8.3	9.2
1/2"	70.6	20.2	29.4
3/8"	60.7	9.9	39.3
#4	42.3	18.4	57.7
#8	35.4	6.9	64.6
#16	28.7	6.7	71.3
#30	21.3	7.4	78.7
#50	8.8	12.5	91.2
#100	1.8	7.0	98.2
LBW	0.8	1.0	99.2

PREPARED BY:
 SM, LLC Technical Service

Approved By:

Aggregate Optimization Chart

PLANT #: **P-39**

Sample Date: 1/27/20

Concrete Grade: **TM**

Contractor: _____

Dates Test Represents: 1/28/2020 through 2/3/2020

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution
6AA	71-47	Presque Isle	1740	10.64	2.62	60.2
26A	71-47	Presque Isle	0	0.00	2.62	0.0
2NS	63-92	Grange Hall	1150	6.95	2.65	39.8
Total Wt			2890	17.60		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"	99.2	100.0	100.0	99.5	0.5	0.5
3/4"	89.5	100.0	100.0	93.7	5.8	6.3
1/2"	54.9	98.1	100.0	72.8	20.8	27.2
3/8"	35.6	92.0	100.0	61.2	11.6	38.8
#4	4.9	25.0	97.3	41.7	19.6	58.3
#8	2.3	7.6	84.6	35.0	6.6	65.0
#16	2.0	3.2	69.5	28.9	6.2	71.1
#30	1.9	2.1	51.2	21.5	7.3	78.5
#50	1.9	1.8	22.2	10.0	11.5	90.0
#100	1.8	1.6	3.7	2.6	7.4	97.4
LBW	1.6	1.5	0.3	1.1	1.5	98.9

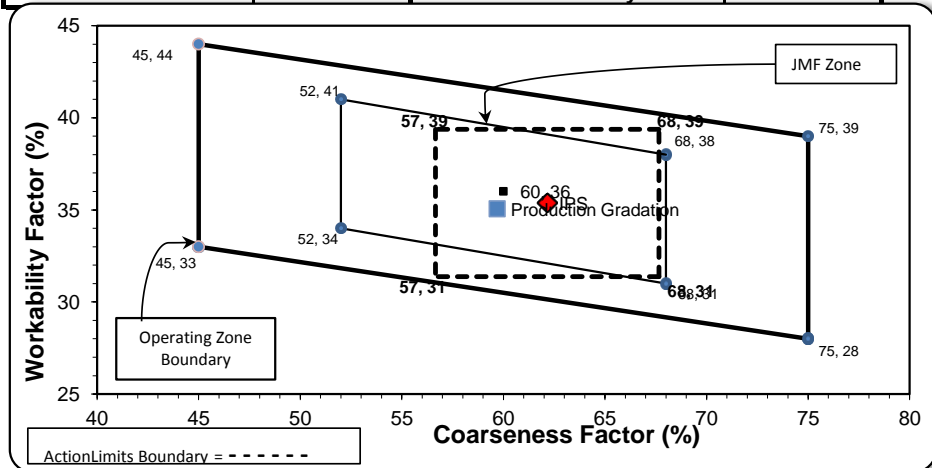


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 *Any two adjacent sieves must equal 10% except max., nom. max., #100 and #200 sieves.
 *% Retained must be at least 4% for each sieve except max., nom. max., #100 and #200 sieves.
 *% Retained must be at least 8% for the 1" sieve when a 2" max. size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

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor: 60 **Workability Factor: 35**



Initial 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"	89.9	10.1	10.1
1/2"	70.9	19.0	29.1
3/8"	59.8	11.1	40.2
#4	42.8	17.0	57.2
#8	35.4	7.4	64.6
#16	28.8	6.5	71.2
#30	21.1	7.7	78.9
#50	9.7	11.4	90.3
#100	3.7	6.1	96.3
LBW	1.2	2.4	98.8

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