

Aggregate Optimization Chart

Production Gradation Report

PLANT #: P-36

Sample Date: 2/17/20

Dates Test Represents: 2/18/2020 through 2/24/2020

Concrete Grade: P1M

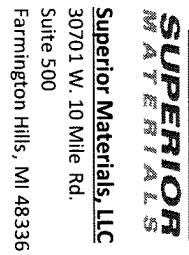
Contractor: _____

MDOT No.: _____

Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	Contribution %
CA	71-47	Presque Isle	900	5.50	2.62	29.3
IA	71-47	Presque Isle	970	5.93	2.62	31.6
NNS	63-92	Grange Hall	1200	7.26	2.65	39.1
Total Wt			3070	18.70		

Sieve	CA	IA	NNS	Cumulative % Passing	% Retained	Cumulative % Retained
2"	100.0	100.0	100.0	100.0	0.0	0.0
1.5"	90.9	100.0	100.0	97.3	2.7	2.7
1"	41.1	100.0	100.0	82.7	14.6	17.3
3/4"	14.9	99.2	100.0	74.8	7.9	25.2
1/2"	5.9	86.2	100.0	68.1	6.7	31.9
3/8"	4.2	65.9	100.0	61.1	6.9	38.9
#4	2.8	19.5	97.4	45.1	16.1	54.9
#8	2.5	7.0	84.7	36.1	9.0	63.9
#16	2.4	4.4	70.4	29.6	6.4	70.4
#30	1.2	3.9	51.7	21.8	7.8	78.2
#50	1.1	3.6	22.2	10.1	11.7	89.9
#100	1.0	3.3	3.0	2.5	7.6	97.5
LBW	0.9	2.9	0.3	1.3	1.2	98.7

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



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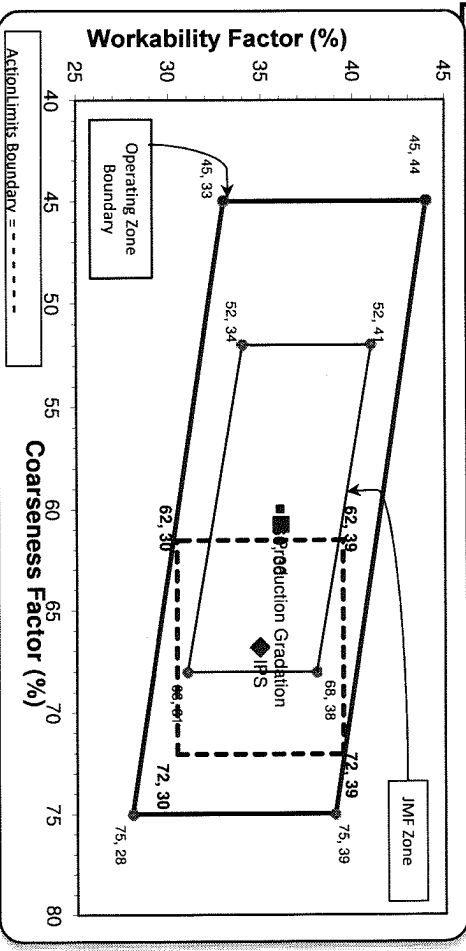
*Maximum % Retained must be above the 3/8" sieve.
*Any two adjacent sieves must equal 10% except max., nom. max., #100 and #200 sieves.
**Retained must be at least 4% for each sieve except max., nom. max., #100 and #200 sieves.
***Retained must be at least 8% for the 1" sieve when a 2" max. size (nom.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

Production Gradation Batch Plant Gradations Aggregate Supplier Gradations

Coarseness Factor: 61 Workability Factor: 36

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"	85.0	15.0	15.0
3/4"	72.1	12.9	27.9
1/2"	64.5	7.6	35.5
3/8"	56.5	8.0	43.5
#4	42.7	13.8	57.3
#8	34.9	7.8	65.1
#16	29.0	5.9	71.0
#30	21.0	8.0	79.0
#50	8.2	12.8	91.8
#100	1.6	6.5	98.4
LBW	0.7	0.9	99.3

PREPARED BY:
SM, LLC Technical Service

Approved By: _____



Superior Auburn Hills
 2470 Auburn Road
 Auburn Hills, MI 48432

Plant S36-Superior Auburn Hills
 Product 7919-COARSE AGG P1M LS
 Period: 02/16/2020 - 02/22/2020

Name/Title Doug Storey / QC Technician
 Report Date 02/20/2020

Procedure	Sieve/Test	Result	Unit	Coarse Agg P1M LS Target
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	90.9	%	
	1" (25mm)	41.1	%	
	3/4" (19mm)	14.9	%	
	1/2" (12.5mm)	5.9	%	
	3/8" (9.5mm)	4.2	%	
	#4 (4.75mm)	2.8	%	
	#8 (2.36mm)	2.5	%	
	#16 (1.18mm)	2.4	%	
	#30 (0.6mm)	1.2	%	
	#50 (0.3mm)	1.1	%	
	#100 (0.15mm)	1.0	%	
	#200 (75µm)	1.0	%	
	Wash Loss (#200/75um)	0.9	%	0-2
	Total Moisture	4.13	%	



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Plant S36-Superior Auburn Hills
Product 7920-INTERMED AGG P1M LS
Period: 02/16/2020 - 02/22/2020

Name/Title Doug Storey / QC Technician
Report Date 02/20/2020

Procedure	Sieve/Test	Result	Unit	Intermed Agg P1M LS Target
	2" (50mm)	100.0	%	
	1 1/2" (37.5mm)	100.0	%	
	1" (25mm)	100.0	%	
	3/4" (19mm)	99.2	%	
	1/2" (12.5mm)	86.2	%	
	3/8" (9.5mm)	65.9	%	
	#4 (4.75mm)	19.5	%	
	#8 (2.36mm)	7.0	%	
	#16 (1.18mm)	4.4	%	
	#30 (0.6mm)	3.9	%	
	#50 (0.3mm)	3.6	%	
	#100 (0.15mm)	3.3	%	
	#200 (75µm)	3.0	%	
	Wash Loss (#200/75um)	2.9	%	0-3
	Total Moisture	6.42	%	



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Plant S36-Superior Auburn Hills

Product 1022-2NS GR

Period: 02/16/2020 - 02/22/2020

Name/Title Doug Storey / QC Technician

Report Date 02/20/2020

Procedure	Sieve/Test	Result	Unit	2NS GR Spec
	3/8" (9.5mm)	100.0	%	100-100
	#4 (4.75mm)	97.4	%	95-100
	#8 (2.36mm)	84.7	%	65-95
	#16 (1.18mm)	70.4	%	35-75
	#30 (0.6mm)	51.7	%	20-55
	#50 (0.3mm)	22.2	%	10-30
	#100 (0.15mm)	3.0	%	0-10
	#200 (75µm)	0.5	%	
	FM	2.71		2.6-3
	Wash Loss (#200/75um)	0.3	%	0-3
	Total Moisture	3.19	%	