PLANT :	#: <u>.</u>	P-102					Contractor:					
Sample Date): -	6/10/24			Concrete Grade	DM, 4500HP						
Dates Test R	Represents:	6/11/2024	through	6/17/2024			MDOT No.:					
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution						
6AA	58-003	Stoneco	1400	8.34	2.69	47.5						
26A	58-003	Stoneco	400	2.38	2.69	13.6						
2NS	63-114	Highland	1150	6.95	2.65	39.0			SUPERIOR			
		Total Wt	2950	17.68		100.0	< Verify this n	umber is 100%	MATERIALS			
Sieve	e	AA	26	A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained			<u>Materials, LLC</u> 10 Mile Rd.	
2"	1	0.00	10	2.0	100.0	100.0	0.0	0.0		Suite 500		
1.5"		0.00	10		100.0	100.0	0.0	0.0		Farmingto	n Hills, MI 48336	
1"		0.00	10		100.0	100.0	0.0	0.0	1			
3/4"	8	5.1	10	0.0	100.0	92.9	7.1	7.1				
1/2"	3	9.6	99	.1	100.0	71.2	21.7	28.8				
3/8"	1	7.8	86	5.0	100.0	59.1	12.1	40.9	*Maximum % Retained must be above the 3/8" sieve.			
#4	2.9		6		98.9	40.9	18.2	59.1	*Any two adja	cent sieves must e	qual 10% except max.,	
#8		1.7	1.	-	84.7	34.0	6.9	66.0	nom. max., #10	00 and #200 sieves	S.	
#16		1.5	1.		67.3	27.1	6.9	72.9			6 for each sieve except	
#30		1.4	1.		48.2	19.6	7.5	80.4	,	nom. max., #100 and #200 sieves.		
#50		1.3	1.		16.1	7.0	12.6	93.0	*% Retained must be at least 4% for the 3/4" sieve whe a 1.5" max. size (nom. Max. 1.0") aggregate is used.			
#100 LBW		1.2 1.0	1.		2.5 0.4	1.7 0.8	5.4 0.9	98.3 99.2	a 1.5" max. siz	e (nom. Max. 1.0")	aggregate is used.	
Production G		Batch Plant Gra		s regate Supplier Gra				on Sample (IPS	.			
	ess Factor:	62	Work	ability Factor:	34	36.5		eness Factor:	, 61			
				ability radion.	04	00.0		ability Factor:	36			
⁴⁵]	-						WORK	Cumulative	%	Cumulative	l	
	45, 44				JMF Zone		Sieve	% Passing	Retained	% Retained		
1		52, 41		07.40			2"	100.0	0.0	0.0		
$\overline{2}^{40}$		-56	40		75, 39		1.5"	100.0	0.0	0.0		
8				68, 38			1"	99.3	0.7	0.7		
D I				roduction Gradation	n		3/4"	89.2	10.1	10.8		
5 35 -				!			1/2"	70.7	18.5	29.3		
Ë 1		52, 34	i				3/8"	60.7	10.0	39.3		
li Î	45, 33		L				#4	44.4	16.3	55.6		
ig 30			32	67, 32 , 31			#8	35.9	8.5	64.1		
8 1	Operating Zone						#16	27.3	8.6	72.7		
~ !!	Boundary				75, 28		#30	19.1	8.2	80.9		
Vork							#50	7.4	11.7	92.6		
Workability Factor (%)							#100	10	56	00 1		
25 40	45	50 55	5 60	Factor (%)	75	80	#100 LBW	1.9 0.7	5.6 1.2	98.1 99.3		

PREPARED BY: SM, LLC Technical Service

Approved By:

PLANT		P-103		-			Contractor:					
Sample Date		6/10/24			oncrete Grade	: DM, 4500HP						
Dates Test R	(epresents:	6/11/2024	through	6/17/2024	0	0/	MDOT No.:					
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution						
6AA	58-003	Stoneco	1400	8.34	2.69	47.5						
26A	58-003	Stoneco	400	2.38	2.69	13.6						
2NS	63-114	Highland	1150	6.95	2.65	39.0				GUD	ERIOR	
		Total Wt	2950	17.68		100.0	< Verify this n	umber is 100%		MATE	RIALS	
Sieve	6	AA	26	A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained		<u>Superior I</u> 30701 W. 1	Materials, LLC L0 Mile Rd.	
2"	1/	00.0	100	0.0	100.0	100.0	0.0	0.0	Suite 500			
1.5"		00.0	100	-	100.0	100.0	0.0	0.0		Farmingtor	n Hills, MI 48336	
1"		00.0	100		100.0	100.0	0.0	0.0				
3/4"		35.1	100		100.0	92.9	7.1	7.1				
1/2"		9.6 7.8	99		100.0	71.2 59.1	21.7 12.1	28.8	****	Detained (1		
3/8" #4		7.8 2.9	<u> </u>		100.0 98.9	40.9	12.1	40.9 59.1			above the 3/8" sieve.	
#4 #8	1.7		1.		84.7	34.0	6.9	66.0			qual 10% except max.	
#16		1.5	1.		67.3	27.1	6.9	72.9		om. max., #100 and #200 sieves. % Retained must be at least 4% for each sieve excep		
#30		1.4	1.		48.2	19.6	7.5	80.4		00 and #200 sieves.	-	
#50		1.3	1.		16.1	7.0	12.6	93.0			for the 3/4" sieve whe	
#100		1.2	1.	0	2.5	1.7	5.4	98.3	a 1.5" max. size (nom. Max. 1.0") aggregate is used.			
LBW		1.0	0.	9	0.4	0.8	0.9	99.2				
roduction G	Gradation	🔘 Batch Plant Gra	dations 💿 Agg	regate Supplier Gra	dations	Adjusted WF	Intial Production	on Sample (IPS	3)			
Coarsene	ess Factor:	62	Work	ability Factor:	34	36.5	Coars	eness Factor:	61			
				*			Work	ability Factor:	36			
45					JMF Zone			Cumulative	%	Cumulative		
1 '	45, 44				JIVIF ZOIIE		Sieve	% Passing	Retained	% Retained		
		52, 41 	40	67 40			2"	100.0	0.0	0.0		
1.1		,		68, 38	75, 39		1.5"	100.0	0.0	0.0		
रू ⁴⁰			i				1"	99.3	0.7	0.7		
<u>ع</u>				oduction Gradation			3/4" 1/2"	89.2	10.1	10.8		
tor (%)							1/./"	70.7	18.5	29.3		
actor (%)	_		■ () 186						10.0	20.2		
y Factor (%)	45.33	52, 34	• (*) 1736				3/8"	60.7	10.0	39.3 55.6		
ility Factor (%)	45, 33	52, 34					3/8" #4	60.7 44.4	16.3	55.6		
ability Factor (%) 00 01 02 02 02 04 04 04 04 04 04 04 04 04 04				67, 32 67, 32 68, 31			3/8" #4 #8	60.7 44.4 35.9	16.3 8.5	55.6 64.1		
orkability Factor (%)	Operating Zone						3/8" #4 #8 #16	60.7 44.4	16.3 8.5 8.6	55.6		
ility Factor (%)					75, 28		3/8" #4 #8	60.7 44.4 35.9 27.3	16.3 8.5	55.6 64.1 72.7		
Workability Factor (%)	Operating Zone		32				3/8" #4 #8 #16 #30	60.7 44.4 35.9 27.3 19.1	16.3 8.5 8.6 8.2	55.6 64.1 72.7 80.9		

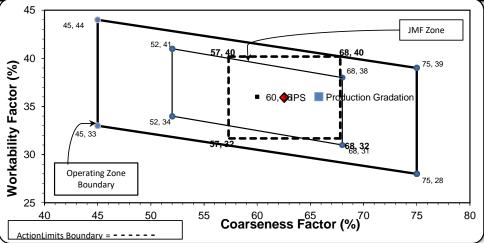
Approved BY: May 1. Ball

PLANT #	#:	12					Contractor:			_
Sample Date	:	6/10/24			Concrete Grade:	DM, 4500HP				-
Dates Test R	epresents:	6/11/2024	through	6/17/2024			MDOT No.:			
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution				_
6AA	71-47	Presque Isle	1500	9.17	2.62	51.6				
26A	71-47	Presque Isle	255	1.56	2.62	8.8				
2NS	63-115	Ray Rd	1150	6.95	2.65	39.6				0115
		Total Wt	2905	17.69		100.0	< Verify this n	umber is 100%	_	SUF M A T
Sieve		6AA	26	A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained		<u>Superior</u> 30701 W.
2"	1	00.0	100	0.0	100.0	100.0	0.0	0.0		Suite 500
1.5"	1	00.0	100).0	100.0	100.0	0.0	0.0		Farmingto
1"	ģ	98.1	100	0.0	100.0	99.0	1.0	1.0		
3/4"	-	74.2	100		100.0	86.7	12.3	13.3		
1/2"		33.6	95.	.6	100.0	65.3	21.4	34.7		
3/8"		18.0	84.	.0	100.0	56.3	9.1	43.7	*Maximum %	Retained must b
#4		3.0	18.	.1	95.8	41.1	15.2	58.9	*Any two adja	acent sieves must
#8		2.4	3.	7	80.7	33.5	7.6	66.5	nom. max., #10	00 and #200 siev
#16		2.1	2.0	0	64.7	26.9	6.6	73.1	*% Retained	must be at least 4
#30		2.1	1.	7	49.5	20.8	6.0	79.2	nom. max., #10	00 and #200 siev
#50		2.0	1.0	6	27.2	11.9	8.9	88.1	*% Retained	must be at least 4
#100		2.0	1.	5	6.4	3.7	8.2	96.3	a 1.5" max. siz	e (nom. Max. 1.0
LBW		1.7	1.3	3	0.8	1.3	2.4	98.7		
Production G	radation	O Batch Plant Grad	dations 💿 Aggr	egate Supplier (Gradations	Adjusted WF	Intial Production	on Sample (IPS	5)	_
Coarsene	ess Factor:	66	Work	ability Facto	or: 34	36.0	Coars	eness Factor:	63	
45							Work	ability Factor:	36	
4	15, 44				JMF Zone		Sieve	Cumulative	%	Cumulative
-		52, 41			5111 20110		Sleve	% Passing	Retained	% Retained
- 40			57, 40	68, 4			2"	100.0	0.0	0.0
%			1	68, 3	38 75, 39		1.5"	100.0	0.0	0.0
Ľ			!				1"	99.3	0.7	0.7
អ ្ន			■ 60, 4 6	PS 🔳 Producti	on Gradation		3/4"	89.0	10.3	11.0
e 35			i				1/2"	70.3	18.7	29.7
ility Factor (%)		52, 34		i			3/8"	59.9	10.4	40.1
i ii	45, 33				22		#4	41.9	18.0	58.1
	1		.,	⊸0,3, ,	34					



or Materials, LLC /. 10 Mile Rd. 0 ton Hills, MI 48336

be above the 3/8" sieve. st equal 10% except max., eves. 4% for each sieve except max., ves. 4% for the 3/4" sieve when .0") aggregate is used.



Coars	seness Factor:	63	
Worl	ability Factor:	36	
Sieve	Cumulative	%	Cumulative
Sleve	% Passing	Retained	% Retained
2"	100.0	0.0	0.0
1.5"	100.0	0.0	0.0
1"	99.3	0.7	0.7
3/4"	89.0	10.3	11.0
1/2"	70.3	18.7	29.7
3/8"	59.9	10.4	40.1
#4	41.9	18.0	58.1
#8	35.9	6.0	64.1
#16	27.8	8.2	72.2
#30	18.9	8.8	81.1
#50	6.3	12.6	93.7
#100	1.7	4.6	98.3
LBW	1.0	0.7	99.0



Mart P. Ball

Sample Date	#: e:	p11 6/10/24	1	(Concrete Grade	DM, 4500HP	Contractor:					
Dates Test R		6/11/2024	through	6/17/2024		· · ·	MDOT No.:					
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution						
6AA	71-47	Presque Isle	1405	8.59	2.62	48.4						
26A	71-47	Presque Isle	350	2.14	2.62	12.0						
2NS	95-013	Smelter Bay	1150	6.95	2.65	39.6				SUP	ERIOR	
		Total Wt	2905	17.69		100.0	< Verify this n	umber is 100%	•		FIALS	
Sieve	(6AA	26/	A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained			Materials, LLC 10 Mile Rd.	
2"	1	00.0	100	.0	100.0	100.0	0.0	0.0	1	Suite 500		
1.5"		00.0	100	0.0	100.0	100.0	0.0	0.0]	Farmingto	n Hills, MI 48336	
1"		96.9	100		100.0	98.5	1.5	1.5]			
3/4"		71.5	100		100.0	86.2	12.3	13.8]			
1/2"		34.5	95.		100.0	67.8	18.4	32.2	1			
3/8"		20.4	84.		100.0	59.6	8.2	40.4			above the 3/8" sieve.	
#4		4.6	18.		95.8	42.3	17.2	57.7	*Any two adjacent sieves must equal 10% except max.,			
#8		2.9	3.7		83.4	34.9	7.5	65.1	nom. max., #100 and #200 sieves.			
#16 #30		2.4 2.3	2.0		68.0	28.3 20.7	6.5 7.6	71.7 79.3	*% Retained must be at least 4% for each sieve except m nom. max., #100 and #200 sieves.			
#30 #50		2.2	1.0		48.9 24.3	10.9	7.6 9.8	79.3 89.1	· · · ·		s. 6 for the 3/4" sieve whe	
#100		2.0	1.5	-	7.2	4.0	6.9	96.0		e (nom. Max. 1.0")		
LBW		1.2	1.3		1.3	1.3	2.7	98.7	a 1.0 max. 312		aggregate is used.	
Production G		O Batch Plant Gra	idations () Aggr	egate Supplier Grad	dations			on Sample (IPS	⊿ 3)			
	ess Factor:	62	Work	ability Factor:	35	37.4		eness Factor:	ŕ			
								ability Factor:				
45								Cumulative	%	Cumulative		
45	45, 44	52 41			JMF Zone		Sieve		Retained	% Retained		
	45, 44	52, 41 56	<u>3, 40</u>	67, 40			2"	% Passing 100.0	Retained 0.0			
- 40 -	45, 44	52, 41 56	3. 40	67, 40 68, 38	JMF Zone			% Passing		% Retained		
40	45, 44	52, 41 5 6	3, 40		75, 39		2" 1.5" 1"	% Passing 100.0 100.0 100.0	0.0 0.0 0.0	% Retained 0.0 0.0 0.0		
40	45, 44	52, 4 1 5	6. 40 Pr 6. 60 385	68, 38 roduction Gradation	75, 39		2" 1.5" 1" 3/4"	% Passing 100.0 100.0 100.0 95.0	0.0 0.0 0.0 5.0	% Retained 0.0 0.0 0.0 5.0		
40	45, 44	56		68, 38 roduction Gradation	75, 39		2" 1.5" 1" 3/4" 1/2"	% Passing 100.0 100.0 95.0 72.3	0.0 0.0 0.0 5.0 22.8	% Retained 0.0 0.0 0.0 5.0 27.7		
40	45, 44	52, 41 55		68, 38 roduction Gradation	75, 39		2" 1.5" 1" 3/4" 1/2" 3/8"	% Passing 100.0 100.0 95.0 72.3 60.4	0.0 0.0 5.0 22.8 11.8	% Retained 0.0 0.0 5.0 27.7 39.6		
40		56		68, 38 roduction G adation S	75, 39		2" 1.5" 1" 3/4" 1/2" 3/8" #4	% Passing 100.0 100.0 95.0 72.3 60.4 42.6	0.0 0.0 5.0 22.8 11.8 17.8	% Retained 0.0 0.0 5.0 27.7 39.6 57.4		
40	45, 33	52, 34		68, 38 roduction Gradation	75, 39		2" 1.5" 1" 3/4" 1/2" 3/8" #4 #8	% Passing 100.0 100.0 95.0 72.3 60.4 42.6 36.0	0.0 0.0 5.0 22.8 11.8 17.8 6.6	% Retained 0.0 0.0 5.0 27.7 39.6 57.4 64.0		
40 -	45, 33 Operating Zone	52, 34		68, 38 roduction G adation S	75, 39		2" 1.5" 1" 3/4" 1/2" 3/8" #4 #8 #16	% Passing 100.0 100.0 95.0 72.3 60.4 42.6 36.0 29.5	0.0 0.0 5.0 22.8 11.8 17.8 6.6 6.5	% Retained 0.0 0.0 5.0 27.7 39.6 57.4 64.0 70.5		
Workability Factor (%) 00 02 05 05 05 05 05 05 05 05 05 05 05 05 05	45, 33	52, 34		68, 38 roduction G adation S	n 75, 39		2" 1.5" 1" 3/4" 1/2" 3/8" #4 #8 #16 #30	% Passing 100.0 100.0 95.0 72.3 60.4 42.6 36.0 29.5 20.3	0.0 0.0 5.0 22.8 11.8 17.8 6.6 6.5 9.2	% Retained 0.0 0.0 5.0 27.7 39.6 57.4 64.0 70.5 79.7		
40	45, 33 Operating Zone	52, 34	● 6 ◆ 385	68, 38 roduction G adation S	n 75, 39 75, 28		2" 1.5" 1" 3/4" 1/2" 3/8" #4 #8 #16	% Passing 100.0 100.0 95.0 72.3 60.4 42.6 36.0 29.5	0.0 0.0 5.0 22.8 11.8 17.8 6.6 6.5	% Retained 0.0 0.0 5.0 27.7 39.6 57.4 64.0 70.5		

Approved By:

Mart 1. Ball

PLANT :	#:	P-35					Contractor:			-	
Sample Date):	6/10/24		C	concrete Grade	: DM, 4500HP					
Dates Test R	Represents:	6/11/2024	through	6/17/2024			MDOT No.:			_	
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution					
6AA	58-003	Stoneco	1400	8.34	2.69	47.5					
26A	58-003	Stoneco	400	2.38	2.69	13.6					
2NS	81-019	Pleasant Lake	1150	6.95	2.65	39.0				SUP	ERIOR
		Total Wt	2950	17.68		100.0	< Verify this n	umber is 100%	1	MATE	RIALS
Sieve	(6AA	26/	4	2NS	Cumulative % Passing	% Retained	Cumulative % Retained		Superior 30701 W. 1	Materials, LLC 10 Mile Rd.
2"	1	00.0	100	.0	100.0	100.0	0.0	0.0		Suite 500	
1.5"	-	00.0	100	-	100.0	100.0	0.0	0.0	Farmington Hills, MI 48336		
1"		00.0	100		100.0	100.0	0.0	0.0			
3/4"		35.1	100	-	100.0	92.9	7.1	7.1			
1/2"		39.6	99.		100.0	71.2	21.7	28.8			
3/8"		17.8	86.		100.0	59.1	12.1	40.9			above the 3/8" sieve.
#4		2.9	6.8		98.3	40.6	18.5	59.4	· ·		qual 10% except max.,
#8 #16		1.7 1.5	1.:		85.1 63.1	34.2	6.5 8.7	65.8 74.5		00 and #200 sieves	
#16 #30		1.5 1.4	1.4		39.1	25.5 16.1	9.4	83.9	*% Retained must be at least 4% for each sieve exc nom. max., #100 and #200 sieves.		•
#50		1.3	1.		15.2	6.7	9.4	93.3			, 6 for the 3/4" sieve wher
#100		1.2	1.(2.6	1.7	5.0	98.3		e (nom. Max. 1.0")	
LBW		1.0	0.9		0.5	0.8	0.9	99.2			-999
Production G	Gradation	O Batch Plant Gra	dations 💿 Aggre	egate Supplier Grad	dations	Adjusted WF	Intial Producti	on Sample (IPS	S)		
Coarsene	ess Factor:	62	Work	ability Factor:	34	36.7	Coars	eness Factor:	 61	1	
				,, ,				ability Factor:	36		
45	-							Cumulative	%	Cumulative	
	45, 44				JMF Zone		Sieve	% Passing	Retained	% Retained	
1		52, 41					2"	100.0	0.0	0.0	
2 ⁴⁰		56,	**		75, 39		1.5"	100.0	0.0	0.0	
× 1				68, 38	T T		1"	99.3	0.7	0.7	
<u> </u>			60.3 ^{Pr}	oduction Gradation	n		3/4"	89.1	10.2	10.9	
,) I				i			1/2"	70.5	18.6	29.5	
35 35			1				3/8"	60.5	10.0	39.5	
Eactor (\rightarrow	52, 34					#4	44.1	16.4	55.9	
ity Factor ('	45, 33										
bility Factor (45, 33	52, 34 56,	31	67 , 88 , 31			#8	35.6	8.5	64.4	
kability Factor (45, 33 Operating Zone	56,	31	67 , 89, 31			#16	27.7	7.9	72.3	
/orkability Factor (56,	31	67, 88, 31	75, 28		#16 #30	27.7 20.6	7.9 7.1	72.3 79.4	
Workability Fa	Operating Zone	56,	31	67, 69, 31	75, 28		#16 #30 #50	27.7 20.6 8.7	7.9 7.1 11.8	72.3 79.4 91.3	
Norkability Factor (°	Operating Zone	56,			75, 28		#16 #30	27.7 20.6	7.9 7.1	72.3 79.4	

Approved By: Mary 1. Ball

PLANT #		P-38					Contractor:				
Sample Date		6/10/24			concrete Grade	: DM, 4500HP					
Dates Test R	epresents:	6/11/2024	through	6/17/2024		0/	MDOT No.:				
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific Gravity	% Contribution					
6AA	58-003	Stoneco	1400	8.34	2.69	47.5					
26A	58-003	Stoneco	400	2.38	2.69	13.6					
2NS	81-019	Pleasant Lake	1150	6.95	2.65	39.0				SUD	ERIOR
		Total Wt	2950	17.68		100.0	< Verify this n	umber is 100%			RIALS
Sieve		6AA	26	Α	2NS	Cumulative % Passing	% Retained	Cumulative % Retained		<u>Superior I</u> 30701 W. 1	<u>Materials, LLC</u> 10 Mile Rd.
2"	1	100.0	100).0	100.0	100.0	0.0	0.0		Suite 500	
1.5"		100.0	100		100.0	100.0	0.0	0.0		Farmingtor	n Hills, MI 48336
1"		100.0	100		100.0	100.0	0.0	0.0			
3/4"		85.1	100		100.0	92.9	7.1	7.1			
1/2" 3/8"		39.6 17.8	99 86		100.0 100.0	71.2 59.1	21.7 12.1	28.8 40.9	*Movierum 0/	Detained arrest l	above the 2/0" -:
3/8 4		2.9	6.		98.3	40.6	12.1	40.9 59.4			above the 3/8" sieve. qual 10% except max.,
#4		1.7	1.		85.1	34.2	6.5	65.8		00 and #200 sieves	
#16		1.5	1.		63.1	25.5	8.7	74.5	*% Retained must be at least 4% for each sieve except i		
#30		1.4	1.		39.1	16.1	9.4	83.9		00 and #200 sieves	-
#50		1.3	1.		15.2	6.7	9.4	93.3			for the 3/4" sieve whe
#100		1.2	1.		2.6	1.7	5.0	98.3	a 1.5" max. siz	e (nom. Max. 1.0")	aggregate is used.
LBW		1.0	0.	9	0.5	0.8	0.9	99.2			
Production G	radation	O Batch Plant Gra	idations 💿 Agg	regate Supplier Gra	adations	Adjusted WF	Intial Production	on Sample (IPS	3)		
			Mert		04		0	<u> </u>			
Coarsene	ess Factor:	62	VVOľK	ability Factor:	34	36.7	Coars	eness Factor:	61		
	ess Factor:	62	vvork	ability Factor:	34	36.7		eness Factor: ability Factor:	61 36		
45		62	VVOľk	ability Factor:	L		Work		-	Cumulative	
45	5, 44	62		ability Factor:	JMF Zone	36.7		ability Factor:	36	Cumulative % Retained	
45 4		52, 41		ability Factor:	L	36.7	Work Sieve 2"	ability Factor: Cumulative % Passing 100.0	36 % Retained 0.0	% Retained 0.0	
45 4				97, 40	L	36.7	Work Sieve 2" 1.5"	ability Factor: Cumulative % Passing 100.0 100.0	36 % Retained 0.0 0.0	% Retained 0.0 0.0	
45 4			* 10	68, 38	JMF Zone	36.7	Works Sieve 2" 1.5" 1"	ability Factor: Cumulative % Passing 100.0 100.0 99.3	36 % Retained 0.0 0.0 0.7	% Retained 0.0 0.0 0.7	
45 4			* 10	97, 40	JMF Zone	36.7	Works Sieve 2" 1.5" 1" 3/4"	ability Factor: Cumulative % Passing 100.0 100.0 99.3 89.1	36 % Retained 0.0 0.0 0.7 10.2	% Retained 0.0 0.0 0.7 10.9	
45 4			* 10	68, 38	JMF Zone	36.7	Works 2" 1.5" 1" 3/4" 1/2"	ability Factor: Cumulative % Passing 100.0 100.0 99.3 89.1 70.5	36 % Retained 0.0 0.0 0.7 10.2 18.6	% Retained 0.0 0.0 0.7 10.9 29.5	
45 4	5, 44		* 10	68, 38	JMF Zone	36.7	Works 2" 1.5" 1" 3/4" 1/2" 3/8"	ability Factor: Cumulative % Passing 100.0 100.0 99.3 89.1 70.5 60.5	36 % Retained 0.0 0.0 0.7 10.2 18.6 10.0	% Retained 0.0 0.7 10.9 29.5 39.5	
45 4		52, 41 56 , 52, 34		roduction Gradation	JMF Zone	36.7	Works 2" 1.5" 1" 3/4" 1/2" 3/8" #4	ability Factor: Cumulative % Passing 100.0 100.0 99.3 89.1 70.5 60.5 44.1	36 % Retained 0.0 0.0 0.7 10.2 18.6 10.0 16.4	% Retained 0.0 0.7 10.9 29.5 39.5 55.9	
45 4	5, 44	52, 41 56,		68, 38	JMF Zone	36.7	Works 2" 1.5" 1" 3/4" 1/2" 3/8" #4 #8	ability Factor: Cumulative % Passing 100.0 100.0 99.3 89.1 70.5 60.5 44.1 35.6	36 % Retained 0.0 0.0 0.7 10.2 18.6 10.0 16.4 8.5	% Retained 0.0 0.7 10.9 29.5 39.5 55.9 64.4	
	5, 44 45, 33 Operating Zone	52, 41 56 , 52, 34 56 ,		roduction Gradation	JMF Zone 75, 39	36.7	Works 2" 1.5" 1" 3/4" 1/2" 3/8" #4 #8 #16	ability Factor: Cumulative % Passing 100.0 100.0 99.3 89.1 70.5 60.5 44.1 35.6 27.7	36 % Retained 0.0 0.0 0.7 10.2 18.6 10.0 16.4 8.5 7.9	% Retained 0.0 0.7 10.9 29.5 39.5 55.9 64.4 72.3	
	45, 33	52, 41 56 , 52, 34 56 ,		roduction Gradation	JMF Zone	36.7	Works 2" 1.5" 1" 3/4" 1/2" 3/8" #4 #8 #16 #30	ability Factor: Cumulative % Passing 100.0 100.0 99.3 89.1 70.5 60.5 44.1 35.6 27.7 20.6	36 % Retained 0.0 0.0 0.7 10.2 18.6 10.0 16.4 8.5 7.9 7.1	% Retained 0.0 0.7 10.9 29.5 39.5 55.9 64.4 72.3 79.4	
ability Factor (%)	5, 44 45, 33 Operating Zone	52, 41 56 , 52, 34 56 ,		roduction Gradation	JMF Zone 75, 39	36.7	Works 2" 1.5" 1" 3/4" 1/2" 3/8" #4 #8 #16	ability Factor: Cumulative % Passing 100.0 100.0 99.3 89.1 70.5 60.5 44.1 35.6 27.7	36 % Retained 0.0 0.0 0.7 10.2 18.6 10.0 16.4 8.5 7.9	% Retained 0.0 0.7 10.9 29.5 39.5 55.9 64.4 72.3	

Approved By:

PLANT #		P-02					Contractor:					
Sample Date		6/10/24			Concrete Grade	DM, 4500HP						
Dates Test R	Represents:	6/11/2024	through	6/17/2024	- ·/·		MDOT No.:					
Agg. Class	Pit #	Source	Weight (SSD)	ft ³	Specific	% Contribution						
6AA	71-47	Presque Isle	1500	9.17	Gravity 2.62	51.6						
26A	71-47	Presque Isle	255	1.56	2.62	8.8						
2NS	63-115	Ray Rd	1150	6.95	2.65	39.6						
		Total Wt	2905	17.69		100.0	< Verify this n	umber is 100%	-		ERIOR	
Sieve	(6AA	26	A	2NS	Cumulative % Passing	% Retained	Cumulative % Retained		Superior I 30701 W. 2	Materials, LLC 10 Mile Rd.	
2"	1	00.0	10	0.0	100.0	100.0	0.0	0.0		Suite 500		
1.5"		00.0	10		100.0	100.0	0.0	0.0		Farmingto	n Hills, MI 48336	
1"		98.1	-	0.0	100.0	99.0	1.0	1.0	l			
3/4"		74.2	10		100.0	86.7	12.3	13.3				
1/2"		33.6	95		100.0	65.3	21.4	34.7				
3/8" #4		18.0	84 18		100.0 95.8	56.3 41.1	9.1 15.2	43.7 58.9			above the 3/8" sieve.	
#4 #8	3.0		3		95.8 80.7	33.5	7.6	58.9 66.5	· ·		qual 10% except max.,	
#8 #16		2.4	2		64.7	26.9	6.6	73.1	· · ·	00 and #200 sieves		
#30		2.1	1		49.5	20.9	6.0	79.2	*% Retained must be at least 4% for each sieve except nom. max., #100 and #200 sieves.			
#50		2.0	1		27.2	11.9	8.9	88.1		*% Retained must be at least 4% for the 3/4" sieve w		
#100		2.0	1	-	6.4	3.7	8.2	96.3	a 1.5" max. size (nom. Max. 1.0") aggregate is used.			
LBW		1.7	1	.3	0.8	1.3	2.4	98.7	1	, , , , , , , , , , , , , , , , , , ,		
Production G	Gradation	O Batch Plant Gra	dations 💿 Agg	regate SupplierGrad	lations	Adjusted WF	Intial Production	on Sample (IPS	3)			
	ess Factor:	66		ability Factor:		36.0		eness Factor:	63			
					0.			ability Factor:	35			
45	-							Cumulative	%	Cumulative		
- 4	45, 44				JMF Zone		Sieve	% Passing	Retained	% Retained		
1		52, 41					2"	100.0	0.0	0.0		
(2^{40})			58, 39	68, 39 68, 38	75, 39		1.5"	100.0	0.0	0.0		
~ 1				68, 38	T T		1"	100.0	0.0	0.0		
\smile 1	1		• 60.36	Production	Gradation		3/4"	95.1	4.9	4.9		
) to			I 50, 🍊	IPS			1/2"	74.6	20.5	25.4		
actor (• •				3/8"	59.3	15.3	40.7		
/ Factor (\rightarrow	52, 34							4 = 6			
lity Factor (45, 33	52, 34					#4	42.1	17.2	57.9		
ability Factor (45, 33	52, 34	58, 31	689.331			#4 #8	42.1 35.1	7.1	64.9		
ntrability Factor (Operating Zone		58, 31	689.331			#4 #8 #16	42.1 35.1 29.2	7.1 5.9	64.9 70.8		
Vorkability Factor (58, 31	689.331	75, 28		#4 #8 #16 #30	42.1 35.1 29.2 21.9	7.1 5.9 7.3	64.9 70.8 78.1		
ability Fa	Operating Zone		58, 31	688,331	75, 28		#4 #8 #16	42.1 35.1 29.2	7.1 5.9	64.9 70.8		

Approved By: Mart 1. Ball