



McCoig Materials

PO Box 6349,
Plymouth, MI 48170

September 15, 2020

Fort Wayne Contracting
300 E. Seven Mile Road
Detroit, MI 48203
Attn: Patty Hopkins

Re: PW-7018 City of Detroit Major Roads

We submit herewith the following concrete mixture(s) for the above referenced project:

Mix Code	Description
P1-SW-10	3500 PSI AE MDOT Grade P1 - 3" Slump - 7 MILE, WARREN
P1-SM-10	3500 PSI AE MDOT Grade P1 + MR - 6" Slump - 7 MILE WARREN
P1-SW-11	3500 PSI AE MDOT Grade P1 - 3" Slump - SPRINGWELLS
P1-SM-11	3500 PSI AE MDOT Grade P1 + MR - 6" Slump - SPRINGWELLS
P-NC0M-10	3500 PSI AE MDOT Grade P-NC Patching + MR - 6" Slump - 7 MILE WARREN
P-NC0M-11	3500 PSI AE MDOT Grade P-NC Patching + MR - 6" Slump - SPRINGWELLS

The above has been designed in accordance with MDOT 2012 Standard Specifications for Construction and/or the project specifications and in reference to ACI 318-08, Chapter 5 - (Concrete Quality), and ACI standard deviation/overdesign requirements. These materials will meet the noted criterion when handled, placed, cured and tested in accordance with current ASTM and ACI standards and recommended practices. Please refer to the attached concrete mix document(s) for further detail.

In accordance with ACI 301-05, ASTM C94-05, we hereby request to receive concrete test results that pertain to this project from the testing laboratory of record for the purposes of quality assurance, the information can be forwarded to QC@mccoig.biz.

Forward this submittal in it's entirety to the proper individuals for approval and field reference. A written response on the status of this submittal is required and appreciated. If no response is received and a concrete order is placed for the above referenced project than that order shall be considered the approval of this submittal.

Please do not hesitate to contact the CSR if you have any questions or concerns regarding the submitted mixtures, or if we may be of additional service.

Respectfully submitted,

Jesse Schram
QC Technician
McCoig Materials, LLC

This form applies only to the project listed below and is not transferable to other projects

DISTRIBUTION: ORIGINAL – Project Engineer COPIES – Contractor, Lansing CFS, Region, Inspector

CONTROL SECTION	JOB NUMBER	PROJECT LOCATION PW-7018 City of Detroit	PROJECT ENGINEER City of Detroit	
CONCRETE SUPPLIER McCoig Materials		PLANT LOCATION Detroit, MI / Warren, MI		PLANT NUMBER M-11 / M-24
GRADE OF CONCRETE P1	PSI REQUIREMENT 3500	MIX DESIGN NUMBER P1-SW-10	INTENDED USE (S) Pavement & Curb	CONTRACTOR QC PLAN Y ☐ SUBMITTED? (MDOT use only) N ☐
PRIME / SUBCONTRACTOR(S) Fort Wayne Contracting / All Subcontractors				
STANDARD SPEC DATE 01/01/12		QC/QA SPECIAL PROVISION DATE 06/14/18	JMF EFFECTIVE DATE 09/15/20	AGG. CORRECTION 0.2%

MATERIAL DESIGN SOURCES AND PROPERTIES

COARSE AGGREGATE		INTERMEDIATE AGGREGATE		FINE AGGREGATE	
Aggregate Type	Limestone	Aggregate Type		Source Name	Spring Mill
Source Name	Carmeuse -Port In	Source Name		MDOT Source No.	47-003
MDOT Source No.	75-005	MDOT Source No.		MDOT Series Class	2NS
MDOT Series Class	6AA	MDOT Series Class		Specific Gravity (Bulk Dry)*	2.61
Specific Gravity (Bulk Dry)*	2.67	Specific Gravity (Bulk Dry)*		Specific Gravity (Bulk SSD) optional	2.64
Specific Gravity (Bulk SSD) optional	2.68	Specific Gravity (Bulk SSD) optional		Absorption	1.1%
Absorption	0.53%	Absorption		Fineness Modulus (FM)	2.82
Unit Weight (Dry Rodded) DR or	97.0	Unit Weight (Dry Rodded) DR or			
Unit Weight (Dry Loose) DL	91.0	Unit Weight (Dry Loose) DL			
Percent Crushed	100%	Percent Crushed			
MDOT Freeze-Thaw (F-T) Dilation	0.008	MDOT Freeze-Thaw (F-T) Dilation			
Specific Gravity (Bulk Dry) of F-T	2.67	Specific Gravity (Bulk Dry) of F-T			
Sample*		Sample*			
Date of MDOT Freeze-Thaw Report	08/22/18	Date of MDOT Freeze-Thaw Report			

* If the bulk dry specific gravity is more than 0.04 less than the bulk dry specific gravity of the most recently tested freeze-thaw sample, the aggregate will be considered to have changed characteristics and be required to have a new freeze-thaw test conducted prior to the use on Department projects.

CEMENTITIOUS		ADMIXTURES	
Cement Source / Plant	Ash Grove - Mississauga,ON	Air Entrainment	BASF-Master Air AE 200-0AE-BA
Cement Type	I	Water Reducer	Premiere - OptiFlo 50 - 0WRA-PR
Cement Specific Gravity	3.15	Water Reducer	-
Fly Ash Source (distributer & plant)	-	Water Reducer	-
Fly Ash Class	-	Accelerator	-
Fly Ash Specific Gravity	-	Other	-
Slag Cement Source	Ash Grove - Detroit, MI	(Indicate Source & Product name with ticket code)	
Slag Cement Grade	100		
Slag Cement Specific Gravity	2.90	TYPE OF MIX WINTER/SUMMER	All Year
Other	-		

MIX PROPORTIONS

Volume of Coarse Aggregate (DR)	68%	Design Slump	3"
Coarse Aggregate Weight (Dry)	1769 (SSD 1780)	Specified Slump	0 - 3"
Intermediate Aggregate Weight (Dry)	-	Design Air %	6.5%
Fine Aggregate Weight (Dry)	1335 (SSD 1350)	Specified Air %	5.5% - 8.5%
Portland Cement Weight	342	PSI minimum required	3500
Fly Ash Weight	-	Total Cementitious	526
Fly Ash Percent of Cementitious	-	Yield cu/ft	27.0 +/- 0.3
Slag Cement Weight	184		
Slag Cement Percent of Cementitious	35%		
Total Water Weight	263		
Net Water Weight	237		
WC (as designed)	.45		
Air Entrainment (dosage)	1.0 oz/cwt		
Water Reducer (dosage)	3 - 5 oz/cwt		
Other (dosage)	-		

I certify that all applicable standard test methods have been followed verifying the mix design and JMF:

Signature

Jesse Schram

Digitally signed by Jesse Schram
DN: cn=Jesse Schram, o=McCoig Materials LLC,
ou=QC Technician, email=jschram@mccoig.biz, c=US
Date: 2018.04.18 11:21:31 -04'00'

MCA Level II Expiration Date: 04/15/22

Date: 09/15/20

STRENGTH PERFORMANCE REPORT

McCoig Laboratory
12100 Wayne road
Romulus, Michigan 48174
Tel: 734-893-1215

Mix : P1-SW-10 - MDOT P1 S35 WR
Period : 23 Jun 2020 **To** 27 Jul 2020

Number of Tests	3	Specified Strength	3500	28 Day	Compressive Test
Average Strength	4960	Corrected CofV	0	ACI Running Average of 3 Criteria	Yes
Required Strength	4700	Standard Deviation	0	ACI Standard Deviation Criteria	No

	Air Content %	Slump in	Concrete Temp deg F	Density Test lb/ft3	Strength28 Day psi
Count	3	3	3	3	3
Average	6.40	2.17	78	145.2	4960
STDEV	0.62	0.29	6	1.5	680
COV%	9.8	13.3	7.1	1.0	13.8
Range Min	5.70	2.00	74	144.2	4390
Range Max	6.90	2.50	84	147.0	5720

Date	Sample	Air Content %	Slump in	Concrete Temp deg F	Air Temp deg F	Density Test lb/ft3	Strength28 Day psi
7/27/2020	1231320	5.70	2.00	84	81	147.0	4780
6/25/2020	6110683	6.90	2.00	75	65	144.2	4390
6/23/2020	6110572	6.60	2.50	74	70	144.6	5720

MDOT Verification Method 2:
28 day breaks are an average of
2 or more cylinders

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CONTROL SECTION	JOB NUMBER	PROJECT LOCATION PW-7018 City of Detroit	PROJECT ENGINEER City of Detroit	
CONCRETE SUPPLIER McCoig Materials		PLANT LOCATION Detroit, MI		PLANT NUMBER M-11 / M-24
GRADE OF CONCRETE P1	PSI REQUIREMENT 3500	MIX DESIGN NUMBER P1-SM-10	INTENDED USE (S) Pavement / Sidewalks	CONTRACTOR QC PLAN Y ☐ SUBMITTED? (MDOT use only) N ☐
PRIME / SUBCONTRACTOR(S) Fort Wayne Contracting / All Subcontractors				
STANDARD SPEC DATE 01/01/12		QC/QA SPECIAL PROVISION DATE 06/14/19	JMF EFFECTIVE DATE 09/15/20	AGG. CORRECTION 0.2%

MATERIAL DESIGN SOURCES AND PROPERTIES

COARSE AGGREGATE		INTERMEDIATE AGGREGATE		FINE AGGREGATE	
Aggregate Type	Limestone	Aggregate Type	-	Source Name	Spring Mill
Source Name	Carmeuse -Port In	Source Name	-	MDOT Source No.	47-003
MDOT Source No.	75-005	MDOT Source No.	-	MDOT Series Class	2NS
MDOT Series Class	6AA	MDOT Series Class	-	Specific Gravity (Bulk Dry)*	2.61
Specific Gravity (Bulk Dry)*	2.67	Specific Gravity (Bulk Dry)*	-	Specific Gravity (Bulk SSD) optional	2.64
Specific Gravity (Bulk SSD) optional	2.68	Specific Gravity (Bulk SSD) optional	-	Absorption	1.1%
Absorption	0.53%	Absorption	-	Fineness Modulus (FM)	2.82
Unit Weight (Dry Rodded) DR or	97	Unit Weight (Dry Rodded) DR or	-		
Unit Weight (Dry Loose) DL	91.0	Unit Weight (Dry Loose) DL	-		
Percent Crushed	100%	Percent Crushed	-		
MDOT Freeze-Thaw (F-T) Dilation	0.008	MDOT Freeze-Thaw (F-T) Dilation	-		
Specific Gravity (Bulk Dry) of F-T	2.67	Specific Gravity (Bulk Dry) of F-T	-		
Sample*		Sample*			
Date of MDOT Freeze-Thaw Report	08/22/18	Date of MDOT Freeze-Thaw Report			

* If the bulk dry specific gravity is more than 0.04 less than the bulk dry specific gravity of the most recently tested freeze-thaw sample, the aggregate will be considered to have changed characteristics and be required to have a new freeze-thaw test conducted prior to the use on Department projects.

CEMENTITIOUS		ADMIXTURES	
Cement Source / Plant	Ash Grove - Mississauga,ON	Air Entrainment	BASF-Master Air AE 200-0AE-BA
Cement Type	I	Water Reducer	Premiere - OptiFlo MR-0MRLI-PR
Cement Specific Gravity	3.15	Water Reducer	-
Fly Ash Source (distributer & plant)	-	Water Reducer	-
Fly Ash Class	-	Accelerator	-
Fly Ash Specific Gravity	-	Other	-
Slag Cement Source	Ash Grove - Detroit, MI	(Indicate Source & Product name with ticket code)	
Slag Cement Grade	100		
Slag Cement Specific Gravity	2.90	TYPE OF MIX WINTER/SUMMER	All Year
Other	-		

MIX PROPORTIONS

Volume of Coarse Aggregate (DR)	68%	Design Slump	5"
Coarse Aggregate Weight (Dry)	1769 (SSD 1780)	Specified Slump	0 - 6"
Intermediate Aggregate Weight (Dry)	-	Design Air %	6.5%
Fine Aggregate Weight (Dry)	1335 (SSD 1350)	Specified Air %	5.5% - 8.5%
Portland Cement Weight	342	PSI minimum required	3500
Fly Ash Weight	-	Total Cementitious	526
Fly Ash Percent of Cementitious	-	Yield cu/ft	27.0 +/- 0.3
Slag Cement Weight	184		
Slag Cement Percent of Cementitious	35%		
Total Water Weight	263		
Net Water Weight	237		
WC (as designed)	0.45		
Air Entrainment (dosage)	1.0 oz/cwt		
Water Reducer (dosage)	5 - 12 oz/cwt		
Other (dosage)	-		

I certify that all applicable standard test methods have been followed verifying the mix design and JMF:

Signature

Jesse Schram

Digitally signed by Jesse Schram
DN: cn=Jesse Schram, o=McCoig Materials LLC,
ou=QC Technician, email=jschram@mccoig.biz, c=US
Date: 2018.04.18 11:21:31 -04'00'

MCA Level II Expiration Date: 04/15/22

Date: 09/15/20

STRENGTH PERFORMANCE REPORT

McCoig Laboratory
12100 Wayne road
Romulus, Michigan 48174
Tel: 734-893-1215

Mix : P1-SM-10 - MDOT P1 S35 MR
Period : 12 Aug 2020 **To** 14 Aug 2020

Number of Tests	3	Specified Strength	3500	28 Day	Compressive Test
Average Strength	4890	Corrected CofV	0	ACI Running Average of 3 Criteria	Yes
Required Strength	4700	Standard Deviation	0	ACI Standard Deviation Criteria	No

	Air Content %	Slump in	Concrete Temp deg F	Density Test lb/ft3	Strength28 Day psi
Count	3	3	3	3	3
Average	6.33	5.33	78	145.9	4890
STDEV	0.12	0.58	2	0.2	250
COV%	1.8	10.8	2.0	0.1	5.2
Range Min	6.20	5.00	76	145.8	4670
Range Max	6.40	6.00	79	146.1	5170

Date	Sample	Air Content %	Slump in	Concrete Temp deg F	Air Temp deg F	Density Test lb/ft3	Strength28 Day psi
8/14/2020	15122158	6.20	5.00	79	74	146.1	5170
8/12/2020	14139705	6.40	6.00	76	73	145.8	4670
	15122016	6.40	5.00	78	72	145.9	4840

MDOT Verification Method 2:
28 day breaks are an average of
2 or more cylinders

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CONTROL SECTION	JOB NUMBER	PROJECT LOCATION PW- 7018 City of Detroit	PROJECT ENGINEER City of Detroit	
CONCRETE SUPPLIER McCoig Materials		PLANT LOCATION Detroit, MI		PLANT NUMBER M-40
GRADE OF CONCRETE P1	PSI REQUIREMENT 3500	MIX DESIGN NUMBER P1-SW-11	INTENDED USE (S) Pavement, Curb	CONTRACTOR QC PLAN Y ☐ SUBMITTED? (MDOT use only) N ☐
PRIME / SUBCONTRACTOR(S) Fort Wayne Contracting / All Subcontractors				
STANDARD SPEC DATE 01/01/12		QC/QA SPECIAL PROVISION DATE 06/14/19	JMF EFFECTIVE DATE 09/15/20	AGG. CORRECTION 0.2%

MATERIAL DESIGN SOURCES AND PROPERTIES

COARSE AGGREGATE		INTERMEDIATE AGGREGATE		FINE AGGREGATE	
Aggregate Type	Limestone	Aggregate Type	-	Source Name	StoneCo - Burmeiste
Source Name	Carmeuse -Port In	Source Name	-	MDOT Source No.	81-093
MDOT Source No.	75-005	MDOT Source No.	-	MDOT Series Class	2NS
MDOT Series Class	6AA	MDOT Series Class	-	Specific Gravity (Bulk Dry)*	2.62
Specific Gravity (Bulk Dry)*	2.67	Specific Gravity (Bulk Dry)*	-	Specific Gravity (Bulk SSD) optional	2.65
Specific Gravity (Bulk SSD) optional	2.68	Specific Gravity (Bulk SSD) optional	-	Absorption	1.00%
Absorption	0.53%	Absorption	-	Fineness Modulus (FM)	2.83
Unit Weight (Dry Rodded) DR or	97.0	Unit Weight (Dry Rodded) DR or	-		
Unit Weight (Dry Loose) DL	91.0	Unit Weight (Dry Loose) DL	-		
Percent Crushed	100%	Percent Crushed	-		
MDOT Freeze-Thaw (F-T) Dilation	0.008	MDOT Freeze-Thaw (F-T) Dilation	-		
Specific Gravity (Bulk Dry) of F-T	2.67	Specific Gravity (Bulk Dry) of F-T	-		
Sample*		Sample*			
Date of MDOT Freeze-Thaw Report	08/22/18	Date of MDOT Freeze-Thaw Report			

* If the bulk dry specific gravity is more than 0.04 less than the bulk dry specific gravity of the most recently tested freeze-thaw sample, the aggregate will be considered to have changed characteristics and be required to have a new freeze-thaw test conducted prior to the use on Department projects.

CEMENTITIOUS		ADMIXTURES	
Cement Source / Plant	Ash Grove - Mississauga,ON	Air Entrainment	BASF-Master Air AE 200-0AE-BA
Cement Type	I	Water Reducer	Premiere - OptiFlo 50 - 0WRA-PR
Cement Specific Gravity	3.15	Water Reducer	-
Fly Ash Source (distributer & plant)	-	Water Reducer	-
Fly Ash Class	-	Accelerator	-
Fly Ash Specific Gravity	-	Other	-
Slag Cement Source	Ash Grove - Detroit, MI	(Indicate Source & Product name with ticket code)	
Slag Cement Grade	100		
Slag Cement Specific Gravity	2.90	TYPE OF MIX WINTER/SUMMER	All Year
Other	-		

MIX PROPORTIONS

Volume of Coarse Aggregate (DR)	68%	Design Slump	3"
Coarse Aggregate Weight (Dry)	1769 (SSD 1780)	Specified Slump	0 - 3"
Intermediate Aggregate Weight (Dry)	-	Design Air %	6.5%
Fine Aggregate Weight (Dry)	1337 (SSD 1350)	Specified Air %	5.5% - 8.5%
Portland Cement Weight	342	PSI minimum required	3500
Fly Ash Weight	-	Total Cementitious	526
Fly Ash Percent of Cementitious	-	Yield cu/ft	27.0 +/- 0.3
Slag Cement Weight	184		
Slag Cement Percent of Cementitious	35%		
Total Water Weight	261		
Net Water Weight	237		
WC (as designed)	0.45		
Air Entrainer (dosage)	1.0 oz/cwt		
Water Reducer (dosage)	3-5 oz/cwt		
Other (dosage)	-		

I certify that all applicable standard test methods have been followed verifying the mix design and JMF:

Signature

Jesse Schram

Digitally signed by Jesse Schram
DN: cn=Jesse Schram, o=McCoig Materials LLC,
ou=QC Technician, email=jschram@mccoig.biz, c=US
Date: 2018.04.18 11:21:31 -04'00'

MCA Level II Expiration Date: 04/15/22

Date: 09/15/20

STRENGTH PERFORMANCE REPORT

McCoig Laboratory
12100 Wayne road
Romulus, Michigan 48174
Tel: 734-893-1215

Mix : P1-SW-11 - MDOT P1 S35 WR
Period : 01 May 2020 **To** 20 Jun 2020

Number of Tests	3	Specified Strength	3500	28 Day	Compressive Test
Average Strength	4620	Corrected CofV	0	ACI Running Average of 3 Criteria	Yes
Required Strength	4700	Standard Deviation	0	ACI Standard Deviation Criteria	Yes

	Air Content %	Slump in	Concrete Temp deg F	Density Test lb/ft3	Strength28 Day psi
Count	3	3	3	3	3
Average	6.67	2.67	73	144.6	4620
STDEV	0.65	0.14	7	2.0	190
COV%	9.8	5.4	9.5	1.4	4.1
Range Min	6.00	2.50	65	142.9	4500
Range Max	7.30	2.75	77	146.7	4840

Date	Sample	Air Content %	Slump in	Concrete Temp deg F	Air Temp deg F	Density Test lb/ft3	Strength28 Day psi
6/20/2020	6110518	6.00	2.50	77	75	146.7	4840
6/18/2020	6110424	6.70	2.75	77	83	144.2	4500
5/1/2020	6108881	7.30	2.75	65	48	142.9	4530

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CONCRETE SUPPLIER McCoig Materials		PLANT LOCATION Detroit, MI		PLANT NUMBER M-40
GRADE OF CONCRETE P1	PSI REQUIREMENT 3500	MIX DESIGN NUMBER P1-SM-11	INTENDED USE (S) MDOT P1 + MR - 6" Slump	CONTRACTOR QC PLAN Y ☐ SUBMITTED? (MDOT use only) N ☐
PRIME / SUBCONTRACTOR(S) Fort Wayne Contracting / All Subcontractors				
STANDARD SPEC DATE 01/01/12		QC/QA SPECIAL PROVISION DATE 06/14/19	JMF EFFECTIVE DATE 09/15/20	AGG. CORRECTION 0.2%

MATERIAL DESIGN SOURCES AND PROPERTIES

COARSE AGGREGATE		INTERMEDIATE AGGREGATE		FINE AGGREGATE	
Aggregate Type	Limestone	Aggregate Type	-	Source Name	StoneCo - Burmeiste
Source Name	Carmeuse -Port In	Source Name	-	MDOT Source No.	81-093
MDOT Source No.	75-005	MDOT Source No.	-	MDOT Series Class	2NS
MDOT Series Class	6AA	MDOT Series Class	-	Specific Gravity (Bulk Dry)*	2.62
Specific Gravity (Bulk Dry)*	2.67	Specific Gravity (Bulk Dry)*	-	Specific Gravity (Bulk SSD) optional	2.65
Specific Gravity (Bulk SSD) optional	2.68	Specific Gravity (Bulk SSD) optional	-	Absorption	1.00%
Absorption	0.53%	Absorption	-	Fineness Modulus (FM)	2.83
Unit Weight (Dry Rodded) DR or	97.0	Unit Weight (Dry Rodded) DR or	-		
Unit Weight (Dry Loose) DL	91.0	Unit Weight (Dry Loose) DL	-		
Percent Crushed	100%	Percent Crushed	-		
MDOT Freeze-Thaw (F-T) Dilation	0.008	MDOT Freeze-Thaw (F-T) Dilation	-		
Specific Gravity (Bulk Dry) of F-T	2.67	Specific Gravity (Bulk Dry) of F-T	-		
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Other	-		

MIX PROPORTIONS

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Air Entrainment (dosage)	1.0 oz/cwt		
Water Reducer (dosage)	5-12 oz/cwt		
Other (dosage)	-		

I certify that all applicable standard test methods have been followed verifying the mix design and JMF:

Signature

Jesse Schram

Digitally signed by Jesse Schram
DN: cn=Jesse Schram, o=McCoig Materials LLC,
ou=QC Technician, email=jschram@mccoig.biz, c=US
Date: 2018.04.18 11:21:31 -04'00'

MCA Level II Expiration Date: 04/15/22

Date: 09/15/20

STRENGTH PERFORMANCE REPORT

McCoig Laboratory
12100 Wayne road
Romulus, Michigan 48174
Tel: 734-893-1215

Mix : P1-SM-11 - MDOT P1 S35 MR
Period : 20 Jul 2020 **To** 22 Jul 2020

Number of Tests	3	Specified Strength	3500	28 Day	Compressive Test
Average Strength	5100	Corrected CofV	0	ACI Running Average of 3 Criteria	Yes
Required Strength	4700	Standard Deviation	0	ACI Standard Deviation Criteria	No

	Air Content %	Slump in	Concrete Temp deg F	Density Test lb/ft3	Strength28 Day psi
Count	3	3	3	3	3
Average	6.53	5.00	81	146.9	5100
STDEV	0.85	0.25	1	2.7	660
COV%	13.0	5.0	1.4	1.9	12.9
Range Min	5.70	4.75	80	144.0	4340
Range Max	7.40	5.25	82	149.4	5520

Date	Sample	Air Content %	Slump in	Concrete Temp deg F	Air Temp deg F	Density Test lb/ft3	Strength28 Day psi
7/22/2020	1512374	5.70	4.75	80	72	147.3	5430
7/21/2020	15121331	6.50	5.25	80	70	149.4	5520
7/20/2020	1230740	7.40	5.00	82	75	144.0	4340

**MDOT Verification Method 2:
28 day breaks are an average of
2 or more cylinders**

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CONCRETE SUPPLIER McCoig Materials		PLANT LOCATION Detroit, MI		PLANT NUMBER M-11 / M-24
GRADE OF CONCRETE P-NC	PSI REQUIREMENT 3500	MIX DESIGN NUMBER P-NC0M-10	INTENDED USE (S) Pavement, Patches	CONTRACTOR QC PLAN Y ☐ SUBMITTED? (MDOT use only) N ☐
PRIME / SUBCONTRACTOR(S) Fort Wayne Contracting / All Sub-Contractors				
STANDARD SPEC DATE 01/01/12		QC/QA SPECIAL PROVISION DATE 06/14/19	JMF EFFECTIVE DATE 09/15/20	AGG. CORRECTION 0.2%

MATERIAL DESIGN SOURCES AND PROPERTIES

COARSE AGGREGATE		INTERMEDIATE AGGREGATE		FINE AGGREGATE	
Aggregate Type	Limestone	Aggregate Type		Source Name	Spring Mill
Source Name	Carmeuse -Port In	Source Name		MDOT Source No.	47-003
MDOT Source No.	75-005	MDOT Source No.		MDOT Series Class	2NS
MDOT Series Class	6AA	MDOT Series Class		Specific Gravity (Bulk Dry)*	2.61
Specific Gravity (Bulk Dry)*	2.67	Specific Gravity (Bulk Dry)*		Specific Gravity (Bulk SSD) optional	2.64
Specific Gravity (Bulk SSD) optional	2.68	Specific Gravity (Bulk SSD) optional		Absorption	1.1%
Absorption	0.53%	Absorption		Fineness Modulus (FM)	2.82
Unit Weight (Dry Rodded) DR or	97	Unit Weight (Dry Rodded) DR or			
Unit Weight (Dry Loose) DL	91.0	Unit Weight (Dry Loose) DL			
Percent Crushed	100%	Percent Crushed			
MDOT Freeze-Thaw (F-T) Dilation	0.008	MDOT Freeze-Thaw (F-T) Dilation			
Specific Gravity (Bulk Dry) of F-T	2.67	Specific Gravity (Bulk Dry) of F-T			
Sample*		Sample*			
Date of MDOT Freeze-Thaw Report	08/22/18	Date of MDOT Freeze-Thaw Report			

* If the bulk dry specific gravity is more than 0.04 less than the bulk dry specific gravity of the most recently tested freeze-thaw sample, the aggregate will be considered to have changed characteristics and be required to have a new freeze-thaw test conducted prior to the use on Department projects.

CEMENTITIOUS		ADMIXTURES	
Cement Source / Plant	Ash Grove - Mississauga,ON	Air Entrainment	BASF-Master Air AE 200-0AE-BA
Cement Type	I	Water Reducer	Premiere - OptiFlo MR-0MRLI-PR
Cement Specific Gravity	3.15	Water Reducer	-
Fly Ash Source (distributer & plant)	-	Water Reducer	-
Fly Ash Class	-	Accelerator	-
Fly Ash Specific Gravity	-	Other	-
Slag Cement Source	-	(Indicate Source & Product name with ticket code)	
Slag Cement Grade	-		
Slag Cement Specific Gravity	-	TYPE OF MIX WINTER/SUMMER	All Year
Other	-		

MIX PROPORTIONS

Volume of Coarse Aggregate (DR)	68%	Design Slump	5"
Coarse Aggregate Weight (Dry)	1769 (SSD 1780)	Specified Slump	0 - 6"
Intermediate Aggregate Weight (Dry)	-	Design Air %	6.5%
Fine Aggregate Weight (Dry)	1167 (SSD 1180)	Specified Air %	5.5% - 8.5%
Portland Cement Weight	658	PSI minimum required	3500
Fly Ash Weight	-	Total Cementitious	658
Fly Ash Percent of Cementitious	-	Yield cu/ft	27.0 +/- 0.3
Slag Cement Weight	-		
Slag Cement Percent of Cementitious	-	I certify that all applicable standard test methods have been followed verifying the mix design and JMF:	
Total Water Weight	287	Digitally signed by Jesse Schram DN: cn=Jesse Schram, o=McCoig Materials LLC, ou=QC Technician, email=jschram@mccoig.biz, c=US Date: 2018.04.18 11:21:31 -04'00'	
Net Water Weight	263	MCA Level II Expiration Date: 04/15/22	
WC (as designed)	.40	Date: 09/15/20	
Air Entrainment (dosage)	1.0 oz/cwt		
Water Reducer (dosage)	5 - 12 oz/cwt		
Other (dosage)	-		

STRENGTH PERFORMANCE REPORT

McCoig Laboratory
12100 Wayne road
Romulus, Michigan 48174
Tel: 734-893-1215

Mix : P-NC0M-!
Period : 05 Sep 2019 **To** 06 Mar 2020

Number of Tests	10	Specified Strength	3500	28 Day	Compressive Test
Average Strength	4810	Corrected CofV	0	ACI Running Average of 3 Criteria	Yes
Required Strength	4700	Standard Deviation	0	ACI Standard Deviation Criteria	Yes

Date	Sample	Air Content %	Concrete Temp deg F	Slump in	Strength28 Day psi
3/6/2020	2198497	7.00	64	5.25	4880
10/28/2019	1215241	6.00	68	4.50	5180
10/26/2019	3053991	7.50	67	5.75	4250
10/19/2019	1214623	7.10	70	6.00	4620
10/8/2019	1213720	6.80	78	5.50	4050
10/4/2019	2192863	5.80	71	4.50	5130
9/16/2019	19000803	6.00	80	6.00	4900
9/15/2019	2191622	5.60	80	5.00	5560
9/6/2019	1211051	7.20	74	5.75	4590
9/5/2019	6105014	7.50	83	5.50	4930

This form applies only to the project listed below and is not transferable to other projects

DISTRIBUTION: ORIGINAL – Project Engineer COPIES – Contractor, Lansing CFS, Region, Inspector

CONTROL SECTION	JOB NUMBER	PROJECT LOCATION PW- 7018 City of Detroit	PROJECT ENGINEER City of Detroit	
CONCRETE SUPPLIER McCoig Materials		PLANT LOCATION Detroit, MI		PLANT NUMBER M-40
GRADE OF CONCRETE P-NC	PSI REQUIREMENT 3500	MIX DESIGN NUMBER P-NC0M-11	INTENDED USE (S) Pavement Repair	CONTRACTOR QC PLAN Y ☐ SUBMITTED? (MDOT use only) N ☐

PRIME / SUBCONTRACTOR(S)
Fort Wayne Contracting / All Sub Contractors

STANDARD SPEC DATE 01/01/12	QC/QA SPECIAL PROVISION DATE 06/14/19	JMF EFFECTIVE DATE 09/15/20	AGG. CORRECTION 0.2%
--------------------------------	--	--------------------------------	-------------------------

MATERIAL DESIGN SOURCES AND PROPERTIES

COARSE AGGREGATE		INTERMEDIATE AGGREGATE		FINE AGGREGATE	
Aggregate Type	Limestone	Aggregate Type	-	Source Name	StoneCo - Burmeiste
Source Name	Carmeuse -Port In	Source Name	-	MDOT Source No.	81-093
MDOT Source No.	75-005	MDOT Source No.	-	MDOT Series Class	2NS
MDOT Series Class	6AA	MDOT Series Class	-	Specific Gravity (Bulk Dry)*	2.62
Specific Gravity (Bulk Dry)*	2.67	Specific Gravity (Bulk Dry)*	-	Specific Gravity (Bulk SSD) optional	2.65
Specific Gravity (Bulk SSD) optional	2.68	Specific Gravity (Bulk SSD) optional	-	Absorption	1.00%
Absorption	0.53%	Absorption	-	Unit Weight (Dry Rodded) DR or	2.83
Unit Weight (Dry Rodded) DR or	97.0	Unit Weight (Dry Rodded) DR or	-	Fineness Modulus (FM)	
Unit Weight (Dry Loose) DL	91.0	Unit Weight (Dry Loose) DL	-		
Percent Crushed	100%	Percent Crushed	-		
MDOT Freeze-Thaw (F-T) Dilation	0.008	MDOT Freeze-Thaw (F-T) Dilation	-		
Specific Gravity (Bulk Dry) of F-T	2.67	Specific Gravity (Bulk Dry) of F-T	-		
Sample*		Sample*			
Date of MDOT Freeze-Thaw Report	08/22/18	Date of MDOT Freeze-Thaw Report			

* If the bulk dry specific gravity is more than 0.04 less than the bulk dry specific gravity of the most recently tested freeze-thaw sample, the aggregate will be considered to have changed characteristics and be required to have a new freeze-thaw test conducted prior to the use on Department projects.

CEMENTITIOUS		ADMIXTURES	
Cement Source / Plant	Ash-Grove - Mississauga,ON	Air Entrainment	BASF-Master Air AE 200-0AE-PR
Cement Type	I	Water Reducer	Premiere - OptiFlo MR-0MRLI-PR
Cement Specific Gravity	3.15	Water Reducer	-
Fly Ash Source (distributer & plant)	-	Water Reducer	-
Fly Ash Class	-	Accelerator	-
Fly Ash Specific Gravity	-	Other	-
Slag Cement Source	-	(Indicate Source & Product name with ticket code)	
Slag Cement Grade	-		
Slag Cement Specific Gravity	-	TYPE OF MIX WINTER/SUMMER	All Year
Other	-		

MIX PROPORTIONS

Volume of Coarse Aggregate (DR)	68%	Design Slump	5"
Coarse Aggregate Weight (Dry)	1769 (SSD 1780)	Specified Slump	0 - 6"
Intermediate Aggregate Weight (Dry)	-	Design Air %	6.5%
Fine Aggregate Weight (Dry)	1168 (SSD 1180)	Specified Air %	5.5% - 8.5%
Portland Cement Weight	658	PSI minimum required	3500
Fly Ash Weight	-	Total Cementitious	658
Fly Ash Percent of Cementitious	-	Yield cu/ft	27.0 +/- 0.3
Slag Cement Weight	-		
Slag Cement Percent of Cementitious	-		
Total Water Weight	286		
Net Water Weight	263		
WC (as designed)	0.40		
Air Entrainment (dosage)	1.0 oz/cwt		
Water Reducer (dosage)	5 - 12 oz/cwt		
Other (dosage)	-		

I certify that all applicable standard test methods have been followed verifying the mix design and JMF:

 Digitally signed by Jesse Schram
DN: cn=Jesse Schram, o=McCoig Materials LLC,
ou=QC Technician, email=jschram@mccoig.biz, c=US
Date: 2018.04.18 11:21:31 -04'00'

MCA Level II Expiration Date: 04/15/22

Date: 09/15/20

STRENGTH PERFORMANCE REPORT

McCoig Laboratory
12100 Wayne road
Romulus, Michigan 48174
Tel: 734-893-1215

Mix : P-NC0M-2 - MDOT P-NC W/ MR WO/NCA

Period : 19 Oct 2019 **To** 06 Mar 2020

Number of Tests	4	Specified Strength	3500	28 Day	Compressive Test
Average Strength	4730	Corrected CofV	0	ACI Running Average of 3 Criteria	Yes
Required Strength	4700	Standard Deviation	0	ACI Standard Deviation Criteria	Yes

	Air Content %	Slump in	Concrete Temp deg F	Density Test lb/ft3	Strength28 Day psi
Count	4	4	4	4	4
Average	6.90	5.38	67	142.7	4730
STDEV	0.64	0.66	3	1.1	390
COV%	9.2	12.3	3.7	0.7	8.3
Range Min	6.00	4.50	64	141.8	4250
Range Max	7.50	6.00	70	144.2	5180

Date	Sample	Air Content %	Slump in	Concrete Temp deg F	Air Temp deg F	Density Test lb/ft3	Strength28 Day psi
3/6/2020	2198497	7.00	5.25	64	38	142.7	4880
10/28/2019	1215241	6.00	4.50	68	56	144.2	5180
10/26/2019	3053991	7.50	5.75	67	39	141.8	4250
10/19/2019	1214623	7.10	6.00	70	45	142.2	4620

**MDOT Verification Method 2:
28 day breaks are an average of
2 or more cylinders**



McCoig Materials

PO Box 6349,
Plymouth, MI 48170

Re: ALL MDOT PROJECTS

Admixture General Certification

<u>Spec.# and Material Name</u>	<u>Manufacturer</u>	<u>Product Name</u>	<u>McCoig Ticket Code</u>
903.01 - Air Entraining Admix	BASF	MasterAir AE 200	0AE-BA
903.02 - Water Reducing Admix	Premiere	OptiFlo 50	0WRA-PR
903.02 - Water Reducing Admix	Premiere	OptiFlo MR	0MRLI-PR
903.04 - Concrete Accelerators	Premiere	NitroCast K	0NCAC-PR
903.02 - Water Reducing Retarding	Premiere	ProLong L	0STAB-PR

We certify that the above QPL materials indicated were provided and incorporated into the identified project.

Respectfully submitted,

Douglas Rousseau

Doug Rousseau
QC / Testing Manager
McCoig Materials, LLC

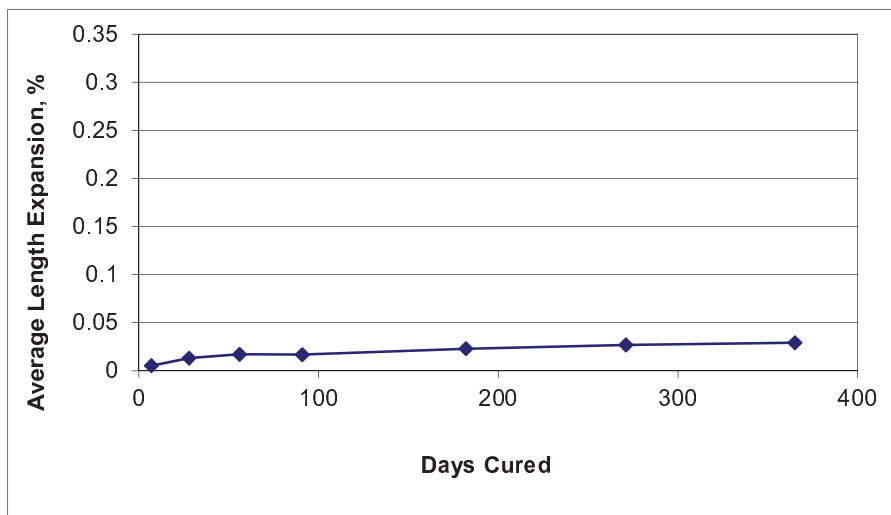
cc:

**SME**

Potential Alkali Reactivity of Aggregates

ASTM C 1293

Project: Spring Mill Reclamation LLC Lab Testing Date: 06/28/19
 Project No.: 79383 Prepared By: Ryan Wilk
 Client: Spring Mill Reclamation LLC
 Location: EEH
 Date Molded: 06/28/18 Fine Aggregate: Spring Mill 2NS #47-003
 Portland Cement: St. Mary's Type I Coarse Aggregate: 58-011



Date	Days Cured	Specimen			Average Expansion, %
		1	2	3	
07/05/18	7	0.004	0.005	0.007	0.0053
07/26/18	28	0.012	0.014	0.014	0.0133
08/23/18	56	0.016	0.018	0.018	0.0173
09/27/18	91	0.014	0.018	0.019	0.0168
12/27/18	182	0.020	0.023	0.026	0.0229
03/26/19	271	0.025	0.027	0.029	0.0271
06/28/19	365	0.028	0.028	0.032	0.0293

Notes: Aggregates that exceed 0.04% expansion at one year using this test criteria could be considered potentially reactive.

Remarks: I hereby certify that the above aggregate meets specification requirements for ASTM C1293.

Nick Atkins
Oct 2 2019 9:01 PM

DocuSign

Tested by: Ryan Wilk

Reviewed by: Nick Atkins

National Ready Mixed Concrete Association



Certificate of Conformance For Concrete Production Facilities

THIS IS TO CERTIFY THAT

Koenig Concrete Plant 1, Detroit, MI

McCoig Materials, LLC

MDOT Plant # M-11

has been inspected by the undersigned licensed professional engineer for conformance with the requirements of the *Check List for Ready Mixed Concrete Production Facilities*. As of the inspection date, the facilities met the requirements for production by

***Central Mixing with Automatic Batching and Recordings of
Cementitious Materials, Aggregate, Water, and Chemical Admixtures***



(Seal)

A handwritten signature in blue ink, likely of the professional engineer, written over a horizontal line.

Signature of Licensed Professional Engineer

March 17, 2020

Inspection Date

May 28, 2022

Certification Expiration Date

This company will maintain these facilities in compliance with the *Check List* requirements and will correct promptly any deficiencies which develop.

A handwritten signature in black ink, likely of a company official, written over a horizontal line.

Signature of Company Official

MANAGER

Title of Company Official

NOTICE: The Check List indicates only that plant facilities are satisfactory for the production of concrete when properly operated. Conformance of the concrete itself with specification requirements must be verified by usual inspection methods in accordance with sales agreements.

This certificate is issued by the National Ready Mixed Concrete Association on verification that the production facility conforms to the requirements of the NRMCA Certification of Ready Mixed Concrete Production Facilities, QC3. Unauthorized reproduction or misuse of this certificate may result in legal action.

Plant ID #: 800714

Certification ID #: 25743

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National Ready Mixed Concrete Association 66 Canal Center Plaza, Suite 250 • Alexandria • Virginia 22314



PJLA
Calibration
Accreditation # 59303

METRO SCALE COMPANY, INC.
17670 ALLEN ROAD, MELVINDALE, MI 48122
PHONE: (313) 382-6190 FAX: (313) 382-6194

73345

SCALE CALIBRATION REPORT

TECHNICIAN: <i>Alex Lulla / Jeff Ingison</i>		DATE: <i>9-3-20</i> Next Due:	
SCALE MFG: ALKON		CUSTOMER: KOENIG FUEL & SUPPLY CO.(SHIP	
MODEL NO: Spectrum		ADDRESS: 500 E. SEVEN MILE	
SERIAL NO: N/A1			
LOCATION: Cement Scale Plt.1		DETROIT, MI 48203	
CAPACITY/RESOLUTION: 10,000 X 10 LB/			
CONDITION PRIOR TO CALIBRATION: ☒ ACCEPTABLE ☐ NEEDS REPAIR - UNABLE TO CAL.			
UNITS OF MEASURE: ☒ POUNDS ☐ KG ☐ GRAMS ☐ OTHER:			
CALIBRATED TO HANDBOOK 44 TOLERANCE: ☐ YES ☐ NO ☐ LEGAL FOR TRADE			
APPLIED WEIGHT	TEST READING		SERIAL NUMBERS OF WEIGHTS USED:
	BEFORE	AFTER	
0 LB	<i>0lb</i>	<i>0lb</i>	<i>0N76, 0N77, 0N7A, 22222, 104, 120 @ 1000Lb</i>
2000LB	<i>2000Lb</i>	<i>2000Lb</i>	
4000LB	<i>4000Lb</i>	<i>4000Lb</i>	
6000LB	<i>6000Lb</i>	<i>6000Lb</i>	
Shift Test: Before			L/C Cable/Indicator
Position 1: <i>NA</i>			1
Position 2:			2
Position 3:			3
Position 4:			4
			After
			<i>NA</i>
COMMENTS:			
SCALE OK FOR USE ☒ YES ☐ NO			
NOTES:			
1. SCALE TOLERANCE AS APPLIED TO NIST HANDBOOK 44 REQUIREMENTS.			
2. DEVICES LISTED ON THIS SHEET WERE CHECKED AND CALIBRATED WITH WEIGHTS TRACEABLE TO SI THROUGH N.I.S.T. CERTIFICATIONS FOR TEST WEIGHTS ARE AVAILABLE UPON REQUEST.			
3. CALIBRATION COMPLIES WITH MSC INSTRUCTION QW 4.11.02, ISO IEC 17025:2005 AND WITH REFERENCE TO NIST HANDBOOK 44 WHERE APPLICABLE.			
4. RESULTS OF THIS CALIBRATION RELATE ONLY TO THE ITEMS SPECIFIED ABOVE.			
5. THIS REPORT IS NOT TO BE REPRODUCED EXCEPT IN FULL, WITHOUT WRITTEN PERMISSION OF MSC.			
6. ALL CALIBRATIONS PERFORMED UNDER NORMAL WORKING ENVIRONMENTAL CONDITIONS UNLESS NOTED UNDER COMMENTS.			
7. THE UNCERTAINTY CALCULATIONS ARE AVAILABLE UPON WRITTEN REQUEST FROM THE CUSTOMER.			
8. END OF REPORT.			



METRO SCALE COMPANY, INC.
 17670 ALLEN ROAD, MELVINDALE, MI 48122
 PHONE: (313) 382-6190 FAX: (313) 382-6194

73346

SCALE CALIBRATION REPORT

TECHNICIAN: <i>Alvin Lulka / Jeff Ingison</i>	DATE: <i>9-3-20</i>	Next Due:
SCALE MFG: ALKON	CUSTOMER: KOENIG FUEL & SUPPLY CO.(SHIP	
MODEL NO: Spectrum	ADDRESS: 500 E. SEVEN MILE	
SERIAL NO: N/A2		
LOCATION: Agg Scale Plt. 1	DETROIT, MI 48203	
CAPACITY/RESOLUTION: 36,000 X 40 LB		
CONDITION PRIOR TO CALIBRATION: ☒ ACCEPTABLE ☐ NEEDS REPAIR - UNABLE TO CAL.		
UNITS OF MEASURE: ☒ POUNDS ☐ KG ☐ GRAMS ☐ OTHER:		
CALIBRATED TO HANDBOOK 44 TOLERANCE: ☐ YES ☐ NO ☐ LEGAL FOR TRADE		

APPLIED WEIGHT			TEST READING		TOLERANCE: ☐ YES ☐ NO ☐ LEGAL		FOR TRADE	
			BEFORE	AFTER	SERIAL NUMBERS OF WEIGHTS USED:			
0 LB			0LB	0LB	0N76, 0N77, 0N7A, 22222, 10V, 120 @ 1000LB			
2000LB			2000LB	2000LB				
4000LB			4000LB	4000LB				
6000LB			6000LB	6000LB	Shift Test: Before L/C Cable/Indicator After			
12,000 LB			11980LB	11980LB	Position 1:	1	2	NA
18,000 LB			18,000LB	18,000LB	Position 2:			
24,000 LB			24,160LB	24,160LB	Position 3:			
30,000 LB			30,100LB	30,100LB	Position 4:			
36,000 LB			35960LB	35,960LB		3	4	

COMMENTS:

SCALE OK FOR USE ☒ YES ☐ NO

NOTES:

- SCALE TOLERANCE AS APPLIED TO NIST HANDBOOK 44 REQUIREMENTS.
- DEVICES LISTED ON THIS SHEET WERE CHECKED AND CALIBRATED WITH WEIGHTS TRACEABLE TO SI THROUGH N.I.S.T. CERTIFICATIONS FOR TEST WEIGHTS ARE AVAILABLE UPON REQUEST.
- CALIBRATION COMPLIES WITH MSC INSTRUCTION QW 4.11.02, ISO IEC 17025:2005 AND WITH REFERENCE TO NIST HANDBOOK 44 WHERE APPLICABLE.
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- ALL CALIBRATIONS PERFORMED UNDER NORMAL WORKING ENVIRONMENTAL CONDITIONS UNLESS NOTED UNDER COMMENTS.
- THE UNCERTAINTY CALCULATIONS ARE AVAILABLE UPON WRITTEN REQUEST FROM THE CUSTOMER.
- END OF REPORT.

DISPENSER CALIBRATION

Premiere Concrete Admixtures
PO Box 277
Pioneer, Ohio 43554
(800) 503-3418



Seven Mile
McCoig Materials
500 E 7 Mile Rd
Detroit, MI 48203
United States

Date Of Certification	August 19, 2020
Certified By	Mike McKown

Dispenser Serial	Dispenser Product	Metered	Measured	Tol %
	Impede CNI	256	256	0%
McCoig 4	ConAir	22	22	0%
McCoig 4	OptiFlo 50	100	100	0%
McCoig 4	UltraFlo 2000	200	200	0%
McCoig 4	OptiFlo MR	265	265	0%
McCoig 4	ProLong L	120	120	0%
McCoig 4	NitroCast K	256	256	0%
Mccoig 4	ConAir 260	25	25	0%
Mccoig 4	PCA SRA	200	200	0%
D-?	ConAir X	30	30	0%

Certificate Signature

A handwritten signature in blue ink, appearing to read "Cody", is written over a large, light blue, stylized outline of the letter "C".



McCoig Materials

Water Meter Accuracy Verification 55 Gallon Drum Calibration Sheet

90 Day Requirement for Volumetric Water Batching Devices per MDOT (sect 601.03 A. 1. a.)

Plant Information

Plant Name:	Koenig	Meter Type:	Flow
Plant Number:	1	Meter Brand name:	Badger
MDOT Plant Number:	M-11	Plant Meter No.:	No. 1
Water Temperature:	120°F	Meter Serial No.:	
Ambient Temperature:	44°F	Meter Setting:	0.0413
		Pulse Count:	1.0 Gallons

Date Information

Calibration Date: 8/20/2020
Next Calibration Date: 11/18/2020

Test 1

Metered Quantity	50 gallons	Measure Quantity	50 gallons
Meter Setting	0.304	Adjusted Setting	Not Required

Test 2

Metered Quantity	50 gallons	Measure Quantity	50 gallons
Meter Setting	0.304	Adjusted Setting	Not Required

Test 3

Metered Quantity	50 gallons	Measure Quantity	50 gallons
Meter Setting	0.304	Adjusted Setting	Not Required

I certify the above information and test results are accurate.

Rob Esche

Test Performed By:

Chris Toth

Test Witnessed By:

Signature:

Date

8/20/2020

Signature:

Date

8/20/20

National Ready Mixed Concrete Association



Certificate of Conformance For Concrete Production Facilities

THIS IS TO CERTIFY THAT

Eastside Concrete Plant 14, Warren, MI

McCoig Materials, LLC

Plant # M-24

has been inspected by the undersigned licensed professional engineer for conformance with the requirements of the *Check List for Ready Mixed Concrete Production Facilities*. As of the inspection date, the facilities met the requirements for production by

***Truck Mixing with Automatic Batching and Recordings of
Cementitious Materials, Aggregate, Water, and Chemical Admixtures***



A handwritten signature in blue ink, likely of Ruben E. Ramos, written over a horizontal line.

Signature of Licensed Professional Engineer

March 26, 2020

Inspection Date

May 14, 2022

Certification Expiration Date

This company will maintain these facilities in compliance with the *Check List* requirements and will correct promptly any deficiencies which develop.

A handwritten signature in blue ink, likely of a company official, written over a horizontal line.

Signature of Company Official

BUSINESS UNIT LEADER

Title of Company Official

NOTICE: The Check List indicates only that plant facilities are satisfactory for the production of concrete when properly operated. Conformance of the concrete itself with specification requirements must be verified by usual inspection methods in accordance with sales agreements.

This certificate is issued by the National Ready Mixed Concrete Association on verification that the production facility conforms to the requirements of the NRMCA Certification of Ready Mixed Concrete Production Facilities, QC3. Unauthorized reproduction or misuse of this certificate may result in legal action.

Plant ID #: 802699

Certification ID #: 25934

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National Ready Mixed Concrete Association 66 Canal Center Plaza, Suite 250 • Alexandria • Virginia 22314



PJLA
Calibration
Accreditation # 59303

METRO SCALE COMPANY, INC.
17670 ALLEN ROAD, MELVINDALE, MI 48122
PHONE: (313) 382-6190 FAX: (313) 382-6194

70581

SCALE CALIBRATION REPORT

TECHNICIAN: <i>Alan L. McHenry</i>	DATE: <i>3-25-20</i>	Next Due:
SCALE MFG: ALKON	CUSTOMER: WARREN EASTSIDE CONCRETE (M)	
MODEL NO: Spectrum	ADDRESS: 23055 GROESBECK HWY	
SERIAL NO: N/A1		
LOCATION: Cement Scale	WARREN, MI 48089	
CAPACITY/RESOLUTION: 10,000 X 5 LB		
CONDITION PRIOR TO CALIBRATION: ☒ ACCEPTABLE ☐ NEEDS REPAIR - UNABLE TO CAL.		
UNITS OF MEASURE: ☒ POUNDS ☐ KG ☐ GRAMS ☐ OTHER:		
CALIBRATED TO HANDBOOK 44 TOLERANCE: ☐ YES ☐ NO ☐ LEGAL FOR TRADE		

APPLIED WEIGHT	TEST READING		SERIAL NUMBERS OF WEIGHTS USED:
	BEFORE	AFTER	
0 LB	<i>0 lb</i>	<i>0 lb</i>	<i>0N76, 0N77, 0N78, 0N79, 0N7A, 12222 @ 1000 lb</i>
2000LB	<i>2000 lb</i>	<i>2000 lb</i>	
4000LB	<i>4000 lb</i>	<i>4000 lb</i>	
6000LB	<i>6000 lb</i>	<i>6000 lb</i>	

Shift Test:		L/C Cable/Indicator		After
Before		1	2	
Position 1:	<i>NA</i>			<i>NA</i>
Position 2:				
Position 3:				
Position 4:		3	4	

COMMENTS:

SCALE OK FOR USE ☒ YES ☐ NO

NOTES:

- SCALE TOLERANCE AS APPLIED TO NIST HANDBOOK 44 REQUIREMENTS.
- DEVICES LISTED ON THIS SHEET WERE CHECKED AND CALIBRATED WITH WEIGHTS TRACEABLE TO SI THROUGH N.I.S.T. CERTIFICATIONS FOR TEST WEIGHTS ARE AVAILABLE UPON REQUEST.
- CALIBRATION COMPLIES WITH MSC INSTRUCTION QW 4.11.02, ISO IEC 17025:2005 AND WITH REFERENCE TO NIST HANDBOOK 44 WHERE APPLICABLE.
- RESULTS OF THIS CALIBRATION RELATE ONLY TO THE ITEMS SPECIFIED ABOVE.
- THIS REPORT IS NOT TO BE REPRODUCED EXCEPT IN FULL, WITHOUT WRITTEN PERMISSION OF MSC.
- ALL CALIBRATIONS PERFORMED UNDER NORMAL WORKING ENVIRONMENTAL CONDITIONS UNLESS NOTED UNDER COMMENTS.
- THE UNCERTAINTY CALCULATIONS ARE AVAILABLE UPON WRITTEN REQUEST FROM THE CUSTOMER.
- END OF REPORT.



PJLA
Calibration
Accreditation # 59303

METRO SCALE COMPANY, INC.
17670 ALLEN ROAD, MELVINDALE, MI 48122
PHONE: (313) 382-6190 FAX: (313) 382-6194

70582

SCALE CALIBRATION REPORT

TECHNICIAN: <i>Alan L. Kelly / Leahy</i>		DATE: <i>3-25-20</i> Next Due:	
SCALE MFG: ALKON		CUSTOMER: WARREN EASTSIDE CONCRETE (M)	
MODEL NO: Spectrum		ADDRESS: 23055 GROESBECK HWY	
SERIAL NO: N/A2			
LOCATION: Agg Scale		WARREN, MI 48089	
CAPACITY/RESOLUTION: 36,000 X 20 LB			
CONDITION PRIOR TO CALIBRATION: ☒ ACCEPTABLE ☐ NEEDS REPAIR - UNABLE TO CAL.			
UNITS OF MEASURE: ☒ POUNDS ☐ KG ☐ GRAMS ☐ OTHER:			
CALIBRATED TO HANDBOOK 44 TOLERANCE: ☐ YES ☐ NO ☐ LEGAL FOR TRADE			
APPLIED WEIGHT	TEST READING		SERIAL NUMBERS OF WEIGHTS USED:
	BEFORE	AFTER	
0 LB	0 lb	0 lb	<i>0N76, 0N77, 0N78, 0N79, 0N7A, 22222 @ 1000 LB</i>
2000LB	2000 lb	2000 lb	
4000LB	4000 lb	4000 lb	
6000LB	6000 lb	6000 lb	
12,000 LB	12,000 lb	12,000 lb	
18,000 LB	18,080 lb	18,080 lb	
24,000 LB	24,240 lb	24,240 lb	
30,000 LB	30,020 lb	30,020 lb	
36,000 LB	36,120 lb	36,120 lb	

COMMENTS:

SCALE OK FOR USE ☒ YES ☐ NO

NOTES:

1. SCALE TOLERANCE AS APPLIED TO NIST HANDBOOK 44 REQUIREMENTS.
2. DEVICES LISTED ON THIS SHEET WERE CHECKED AND CALIBRATED WITH WEIGHTS TRACEABLE TO SI THROUGH N.I.S.T. CERTIFICATIONS FOR TEST WEIGHTS ARE AVAILABLE UPON REQUEST.
3. CALIBRATION COMPLIES WITH MSC INSTRUCTION QW 4.11.02, ISO IEC 17025:2005 AND WITH REFERENCE TO NIST HANDBOOK 44 WHERE APPLICABLE.
4. RESULTS OF THIS CALIBRATION RELATE ONLY TO THE ITEMS SPECIFIED ABOVE.
5. THIS REPORT IS NOT TO BE REPRODUCED EXCEPT IN FULL, WITHOUT WRITTEN PERMISSION OF MSC.
6. ALL CALIBRATIONS PERFORMED UNDER NORMAL WORKING ENVIRONMENTAL CONDITIONS UNLESS NOTED UNDER COMMENTS.
7. THE UNCERTAINTY CALCULATIONS ARE AVAILABLE UPON WRITTEN REQUEST FROM THE CUSTOMER.
8. END OF REPORT.

DISPENSER CALIBRATION

Premiere Concrete Admixtures
PO Box 277
Pioneer, Ohio 43554
(800) 503-3418



Eastside/Warren
McCoig Materials
23055 Groesbeck Hwy
Warren, MI 48089
United States

Date Of Certification	September 09, 2020
Certified By	Mike McKown

Dispenser Serial	Dispenser Product	Metered	Measured	Tol %
Plant 2	ConAir	39	39	0%
Plant 2	OptiFlo 50	225	225	0%
Plant 2	OptiFlo MR	305	305	0%
Plant 2	UltraFlo 2000	150	150	0%
Plant 2	ProLong L	100	100	0%
Plant 2	Impede CNI	256	256	0%
plant 2	NitroCast K	256	256	0%
NA	ConAir 260	30	30	0%

Certificate Signature

A handwritten signature in blue ink, appearing to read "Mike McKown", is written over a light blue grid background.



McCoig Materials

Water Meter Accuracy Verification 55 Gallon Drum Calibration Sheet

90 Day Requirement for Volumetric Water Batching Devices per MDOT (sect 601.03 A. 1. a.)

Plant Information

Plant Name:	Eastside	Meter Type:	Flow
Plant Number:	14	Meter Brand name:	Badger
MDOT Plant Number:	M-24	Plant Meter No.:	No. 1
Water Temperature:	62°F	Meter Serial No.:	123456
Ambient Temperature:	64°F	Meter Setting:	0.2445
		Pulse Count:	16 oz

Date Information

Calibration Date:	9/9/2020	Previous Calibration Date:	6/12/2020
Next Calibration Date:	12/9/2020		

Test 1

Metered Quantity	50 gallons	Measure Quantity	50 gallons
Meter Setting	0.2645	Adjusted Setting	Not Required

Test 2

Metered Quantity	50 gallons	Measure Quantity	50 gallons
Meter Setting	0.2645	Adjusted Setting	Not Required

Test 3

Metered Quantity	Not Required	Measure Quantity	Not Required
Meter Setting	Not Required	Adjusted Setting	Not Required

I certify the above information and test results are accurate, no adjustment to the meter was required at this time.

Joseph Smith

Test Performed By:

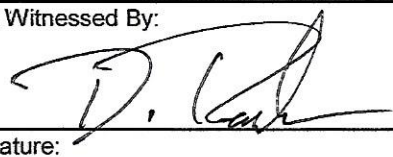


Signature:

Date

Duane Poucher

Test Witnessed By:

 9/9/20

Signature:

Date

BOWSER-MORNER, INC.

Delivery Address: 4518 Taylorsville Rd • Dayton, Ohio 45424 **Mailing Address:** P.O. Box 51 • Dayton, Ohio 45401

AASHTO/ISO 17025 Accredited • USACE Validated



LABORATORY REPORT

Report To: Stoneco
Attn.: Cyndy Brock
7555 Whiteford Rd.
Ottawa Lake, MI 49267

Report Date: 09/25/18
Job No.: 181058
Report No.: 018814A
No. of Pages: 3

Report On: Laboratory Determination of Alkali-Silica Reactivity (ASR)

Procedure: Length Change of Concrete Due to Alkali-Silica Reaction (ASTM C 1293)

Material and Source Information

Sample Identification: MDOT 2NS
Fine Aggregate Source: Burmeister; Pit #81-93
Coarse Aggregate Source: #57 crLS MMA Phillipsburg
Cement Source: Fairborn Cement Co.
Date Received: 08/25/17
Date Cast: 09/25/17

Results are summarized below and detailed on the attached data sheets.

Average Length Change, %		ASTM C 1293 Specification, %
56 Days:	0.012	---
90 Days:	0.017	---
180 Days:	0.018	---
270 Days:	0.023	---
365 Days:	0.025	0.040 Max.

Should you have any questions, or if we may be of further service, please contact me at (937) 236-8805, ext. 329.

Respectfully submitted,
BOWSER-MORNER, INC.

Scott D. Ruhkamp, Supervisor
Special Projects Section
Construction Materials Laboratory

SDR/sdr
018814A
1-File
1-cbrock@stoneco.com

Report To: Stoneco
Sample ID: MDOT 2NS
Source: Burmeister; Pit #81-93

Job No.: 181058
Report No.: 018814A
Date Received: 08/25/17

Concrete Mixture Summary

Aggregates Used	Type	Source	Grading
Coarse (Lab Standard)	#57 crLS	MMA Phillipsburg	Table 1, coarse
Fine (Subject)	MDOT 2NS	Burmeister; Pit #81-93	Table 1, fine
Cement Used	Source	Type	Na ₂ O Equiv., %
Fairborn Cement Co.	Fairborn, OH	Portland Type I	0.8
Pozzolan Used	Source	Type	Na ₂ O Equiv., %
n/a	n/a	n/a	n/a
Admixtures Used	Source	Type	Dosage Rate
n/a	n/a	n/a	n/a

Concrete Proportions, SSD, lbs/cubic yard

Component	Source	Specific Gravity	Mass, lbs	Volume, cubic yard
Portland Cement	Fairborn Cement Co.*	3.15	708	3.60195
Water	BMI Standard	1.00	308	4.93590
#57 crLS	MMA Phillipsburg*	2.664	1781	10.71384
MDOT 2NS	Burmeister; Pit #81-93	2.640	1265	7.67895
Entrained Air, %:	n/a	n/a	2.7	0.72900
Total	n/a	n/a	4062	27.7

*The cement and coarse aggregate used in this test are BMI's laboratory standards and meet sections 7.1 and 7.2

Sodium Hydroxide Added, %	W/Cm	Slump, inches	Air, %
0.4	0.435	2 3/4	2.7
Fresh Unit Weight, cubic yard	Mass Yield, %		
149.3	100.8		

Storage Containers

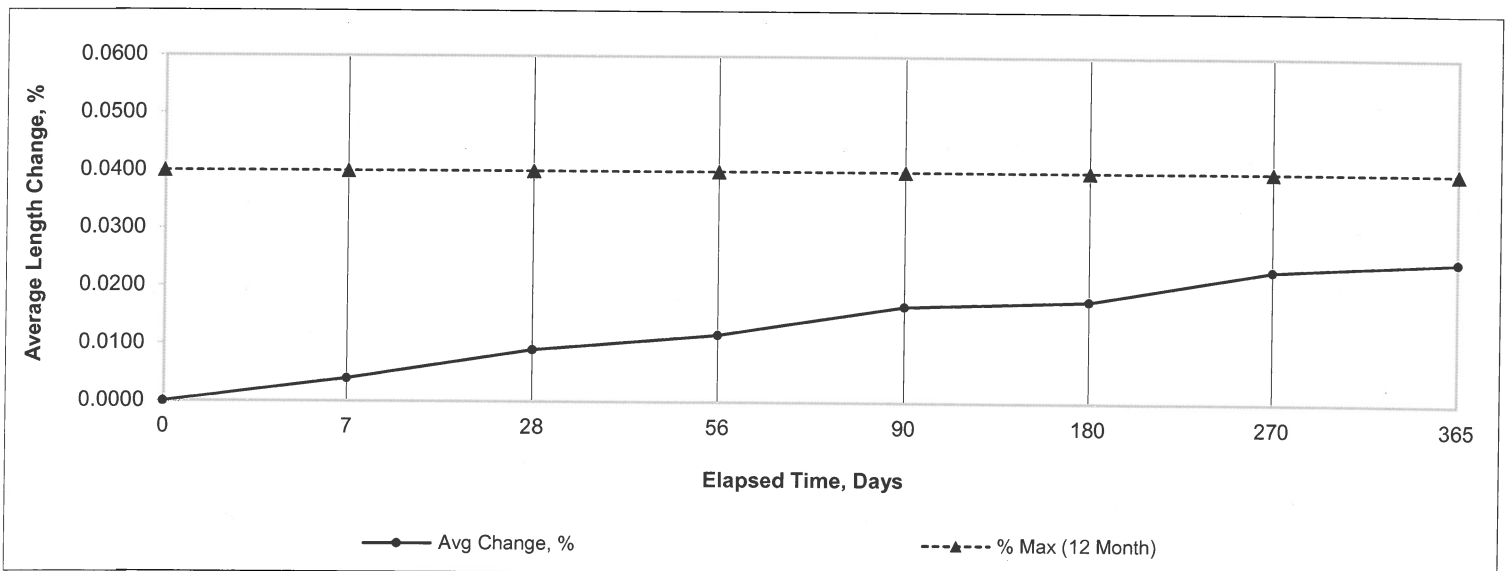
6-gallon (23-liter) plastic pail with gamma seal lid conforming to ASTM C1293, sections 5.2.1 and 5.3.1

Report To: Stoneco
Sample ID: MDOT 2NS
Source: Burmeister; Pit #81-93
Date Cast: 09/25/17

Job No.: 181058
Report No.: 018814A
Date Received: 08/25/17
Ref. Rod Length: 11.622118

Procedure: Length Change of Concrete Due to Alkali-Silica Reaction (ASTM C 1293)

Age, Days	ID	Reference Rod, inch	Specimen Readings, inch	Expansion, inch	Length Change, %	Avg, %
Initial 09/26/17	A	0.0000	-0.0057	11.6164	n/a	0.0000
	B	0.0000	0.0093	11.6314	n/a	
	C	0.0000	0.0096	11.6317	n/a	
7 10/03/17	A	0.0000	-0.0055	11.6166	0.0020	0.0040
	B	0.0000	0.0099	11.6320	0.0060	
	C	0.0000	0.0100	11.6321	0.0040	
28 10/24/17	A	0.0000	-0.0047	11.6174	0.0100	0.0090
	B	0.0000	0.0101	11.6322	0.0080	
	C	0.0000	0.0105	11.6326	0.0090	
56 11/21/17	A	0.0000	-0.0045	11.6176	0.0120	0.0117
	B	0.0000	0.0103	11.6324	0.0100	
	C	0.0000	0.0109	11.6330	0.0130	
90 12/26/17	A	0.0000	-0.0039	11.6182	0.0180	0.0167
	B	0.0000	0.0109	11.6330	0.0160	
	C	0.0000	0.0112	11.6333	0.0160	
180 03/27/18	A	0.0000	-0.0039	11.6182	0.0180	0.0177
	B	0.0000	0.0110	11.6331	0.0170	
	C	0.0000	0.0114	11.6335	0.0180	
270 06/26/18	A	0.0000	-0.0033	11.6188	0.0240	0.0230
	B	0.0000	0.0115	11.6336	0.0220	
	C	0.0000	0.0119	11.6340	0.0230	
365 09/25/18	A	0.0000	-0.0032	11.6189	0.0250	0.0247
	B	0.0000	0.0117	11.6338	0.0240	
	C	0.0000	0.0121	11.6342	0.0250	



National Ready Mixed Concrete Association



Certificate of Conformance For Concrete Production Facilities

THIS IS TO CERTIFY THAT

Detroit Plant 2, Detroit, MI

McCoig Materials, LLC

MDOT Plant #: M-40

has been inspected by the undersigned licensed professional engineer for conformance with the requirements of the *Check List for Ready Mixed Concrete Production Facilities*. As of the inspection date, the facilities met the requirements for production by

***Central Mixing with Automatic Batching and Recordings of
Cementitious Materials, Aggregate, Water, and Chemical Admixtures***



(Seal)

A handwritten signature in blue ink, likely of the professional engineer, written over a horizontal line.

Signature of Licensed Professional Engineer

March 14, 2019

Inspection Date

March 14, 2021

Certification Expiration Date

This company will maintain these facilities in compliance with the *Check List* requirements and will correct promptly any deficiencies which develop.

A handwritten signature in blue ink, likely of a company official, written over a horizontal line.

Signature of Company Official

MANAGER

Title of Company Official

NOTICE: The Check List indicates only that plant facilities are satisfactory for the production of concrete when properly operated. Conformance of the concrete itself with specification requirements must be verified by usual inspection methods in accordance with sales agreements.

This certificate is issued by the National Ready Mixed Concrete Association on verification that the production facility conforms to the requirements of the NRMCA Certification of Ready Mixed Concrete Production Facilities, QC3. Unauthorized reproduction or misuse of this certificate may result in legal action.

Plant ID #: 818491

Certification ID #: 24190

© 1965, 1992, 2001, 2002, 2006, 2007, 2012

National Ready Mixed Concrete Association 900 Spring Street • Silver Spring • Maryland 20910



METRO SCALE COMPANY, INC.
 17670 ALLEN ROAD, MELVINDALE, MI 48122
 PHONE: (313) 382-6190 FAX: (313) 382-6194

73360

SCALE CALIBRATION REPORT

TECHNICIAN: <i>Alan Lutha / Jeff Engler</i>		DATE: <i>9-10-20</i> Next Due:	
SCALE MFG: ALKON		CUSTOMER: MC COIG CONCRETE(MAIN)	
MODEL NO: Spectrum		ADDRESS: 1441 SPRINGWELLS COURT	
SERIAL NO: N/A			
LOCATION: Agg Scale		DETROIT, MI 48209	
CAPACITY/RESOLUTION: 40,000 X 40 LB			
CONDITION PRIOR TO CALIBRATION: ☒ ACCEPTABLE ☐ NEEDS REPAIR - UNABLE TO CAL.			
UNITS OF MEASURE: ☒ POUNDS ☐ KG ☐ GRAMS ☐ OTHER:			
CALIBRATED TO HANDBOOK 44 TOLERANCE: ☐ YES ☐ NO ☐ LEGAL FOR TRADE			
APPLIED WEIGHT	TEST READING		SERIAL NUMBERS OF WEIGHTS USED:
	BEFORE	AFTER	
0 LB	<i>0 LB</i>	<i>0 LB</i>	<i>0N76, 0N77, 0N7A, 120, 121, 22222 @ 1000LB</i>
2000LB	<i>2000 LB</i>	<i>2000 LB</i>	
4000LB	<i>4000 LB</i>	<i>4000 LB</i>	
6000LB	<i>6000 LB</i>	<i>6000 LB</i>	
8000LB	<i>8000 LB</i>	<i>8000 LB</i>	
10,000 LB	<i>10,000 LB</i>	<i>10,000 LB</i>	
16,000 LB	<i>16,000 LB</i>	<i>16,000 LB</i>	
22,000 LB	<i>22,000 LB</i>	<i>22,000 LB</i>	
28,000 LB	<i>28,000 LB</i>	<i>28,000 LB</i>	
36,000 LB	<i>36,000 LB</i>	<i>36,000 LB</i>	

COMMENTS:

SCALE OK FOR USE ☒ YES ☐ NO

NOTES:

- SCALE TOLERANCE AS APPLIED TO NIST HANDBOOK 44 REQUIREMENTS.
- DEVICES LISTED ON THIS SHEET WERE CHECKED AND CALIBRATED WITH WEIGHTS TRACEABLE TO SI THROUGH N.I.S.T. CERTIFICATIONS FOR TEST WEIGHTS ARE AVAILABLE UPON REQUEST.
- CALIBRATION COMPLIES WITH MSC INSTRUCTION QW 4.11.02, ISO IEC 17025:2005 AND WITH REFERENCE TO NIST HANDBOOK 44 WHERE APPLICABLE.
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- END OF REPORT.



PJLA
Calibration
Accreditation # 59303

METRO SCALE COMPANY, INC.
17670 ALLEN ROAD, MELVINDALE, MI 48122
PHONE: (313) 382-6190 FAX: (313) 382-6194

73362

SCALE CALIBRATION REPORT

TECHNICIAN: <i>Alan L. Luff / Jeff Ingiam</i>		DATE: <i>9-10-20</i> Next Due:	
SCALE MFG: ALKON		CUSTOMER: MC COIG CONCRETE(MAIN)	
MODEL NO: Spectrum		ADDRESS: 1441 SPRINGWELLS COURT	
SERIAL NO: N/A			
LOCATION: Cement Scale		DETROIT, MI 48209	
CAPACITY/RESOLUTION: 10,000 X 10 LB			
CONDITION PRIOR TO CALIBRATION: ☒ ACCEPTABLE ☐ NEEDS REPAIR - UNABLE TO CAL.			
UNITS OF MEASURE: ☒ POUNDS ☐ KG ☐ GRAMS ☐ OTHER:			
CALIBRATED TO HANDBOOK 44 TOLERANCE: ☐ YES ☐ NO ☐ LEGAL FOR TRADE			
APPLIED WEIGHT	TEST READING		SERIAL NUMBERS OF WEIGHTS USED:
	BEFORE	AFTER	
0 LB	<i>0.66</i>	<i>0.66</i>	<i>0N76, 0N77, 0N7A, 120, 121, 22222 @ 1000 LB</i>
2000LB		<i>2000 LB</i>	
4000LB		<i>4000 LB</i>	
6000LB	<i>6010 LB</i>	<i>6000 LB</i>	
			Shift Test: Before L/C Cable/Indicator After
			Position 1: <i>NA</i> 1 2
			Position 2: 3 4
			Position 3:
			Position 4:

COMMENTS:

SCALE OK FOR USE ☒ YES ☐ NO

NOTES:

- SCALE TOLERANCE AS APPLIED TO NIST HANDBOOK 44 REQUIREMENTS.
- DEVICES LISTED ON THIS SHEET WERE CHECKED AND CALIBRATED WITH WEIGHTS TRACEABLE TO SI THROUGH N.I.S.T. CERTIFICATIONS FOR TEST WEIGHTS ARE AVAILABLE UPON REQUEST.
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- END OF REPORT.



PJLA
Calibration
Accreditation # 59303

METRO SCALE COMPANY, INC.
17670 ALLEN ROAD, MELVINDALE, MI 48122
PHONE: (313) 382-6190 FAX: (313) 382-6194

73361

SCALE CALIBRATION REPORT

TECHNICIAN: <i>Alan L. Miller / Jeff Ingman</i>		DATE: <i>9-10-20</i> Next Due:					
SCALE MFG: ALKON		CUSTOMER: MC COIG CONCRETE(MAIN					
MODEL NO: Spectrum		ADDRESS: 1441 SPRINGWELLS COURT					
SERIAL NO: N/A							
LOCATION: Water Scale		DETROIT, MI 48209					
CAPACITY/RESOLUTION: 4000 X 2 LB							
CONDITION PRIOR TO CALIBRATION: ☒ ACCEPTABLE ☐ NEEDS REPAIR - UNABLE TO CAL.							
UNITS OF MEASURE: ☒ POUNDS ☐ KG ☐ GRAMS ☐ OTHER:							
CALIBRATED TO HANDBOOK 44 TOLERANCE: ☐ YES ☐ NO ☐ LEGAL FOR TRADE							
APPLIED WEIGHT	TEST READING		SERIAL NUMBERS OF WEIGHTS USED:				
	BEFORE	AFTER					
0 LB	<i>0.0</i>	<i>0.0</i>	<i>0N76, 0N77, 0N7A, 120 @ 1000 lb</i>				
1000LB		<i>1000.0</i>					
2000LB		<i>1998.0</i>					
4000LB	<i>3994.0</i>	<i>4000.0</i>					
Shift Test: Before ☐ L/C Cable/Indicator ☐ After							
Position 1:		<i>NA</i>	<table border="1"> <tr> <td>1</td> <td>2</td> </tr> <tr> <td>3</td> <td>4</td> </tr> </table>	1	2	3	4
1	2						
3	4						
Position 2:							
Position 3:							
Position 4:							

COMMENTS:

SCALE OK FOR USE ☒ YES ☐ NO

NOTES:

- SCALE TOLERANCE AS APPLIED TO NIST HANDBOOK 44 REQUIREMENTS.
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- END OF REPORT.

DISPENSER CALIBRATION

Premiere Concrete Admixtures
PO Box 277
Pioneer, Ohio 43554
(800) 503-3418



Downtown/Springwells
McCoig Materials
1441 Springwells Ct
Detroit, MI 48209
United States

Date Of Certification	August 27, 2020
Certified By	Mike McKown

Dispenser Serial	Dispenser Product	Metered	Measured	Tol %
McCoig 1	ConAir 260	30	30	0%
McCoig 1	OptiFlo MR	250	250	0%
McCoig 1	OptiFlo 50	150	150	0%
McCoig 1	UltraFlo 2000	150	150	0%
McCoig 1	ProLong L	100	100	0%
McCoig 1	NitroCast K	256	256	0%
McCoig 1	Impede CNI	256	256	0%
Mccoig 1	ConAir X	40	40	0%
Mccoig 1	PCA SRA	200	200	0%

Certificate Signature

A handwritten signature in blue ink, appearing to read "Mike McKown", is written over a light blue grid background.

McCoig Materials, LLC

CONTRACTOR / PRODUCER AGGREGATE STOCKPILE MANAGEMENT PLAN

Submitted By:

McCoig Materials, LLC
12100 Wayne Road,
Romulus, MI 48174

McCoig Materials, LLC

MDOT – Stockpile Management Plan

The plan covers the procedures McCoig Materials intends to ensure compliance with MDOT for Portland Cement Concrete.

All McCoig Materials plants are MDOT qualified and NRMCA certified per ASTM C-94 Standards.

Aggregates utilized for MDOT projects are from approved manufactures for Coarse, Intermediate and 2NS aggregates. All aggregates will be delivered to the plants via gravel bulk haulers.

Material

Aggregates delivered to our production facilities are from the Approved Manufactures list with MDOT. Aggregates purchased from this list are produced with strict compliance with MDOT standards and testing according to the suppliers Quality Control Plan as submitted by them to MDOT for review and approval.

Supplier production and load out sample gradation analysis are provided weekly by supplier.

Project specifications will be followed to ensure the correct aggregate is being utilized per the project requirements. Specifically Absorption limits and Freeze thaw requirements will be strictly followed.

Stock Pile Management

Aggregates are stockpiled by loader or loaded directly into plant bins dependant on plant configuration.

Stockpiles shall be maintained to eliminate contamination from vehicle tracking.

Stockpiles shall be maintained in separate piles and/or bins.

All attempts will be employed to maintain aggregate moisture contents to SSD, provided it does not compromise mix uniformity due to excess moisture contents.

Handling and moving aggregates will be kept to a minimum to decrease the amount of material degradation occurring that will contribute to LBW.

Action & Suspension Limits:

<u>Quality Characteristic</u>	<u>Action Limits</u>	<u>Suspension Limits</u>
Coarseness Factor	< 50 or > 73	< 45 or > 75
Workability Factor	< 30 or > 38	< 28 or > 44

Corrective Action Limits

Action Limits will be monitored throughout the production process

Action limits are set at the operation boundary limits as established on Table 902-1 Grading Requirements chart as provided by MDOT.

The Contractor/Engineer will be notified whenever the process approaches an action limits.

Suspension of Work Limits

When and if the production gradation have resulted a value that is outside the operational limits as set by the chart provided by MDOT, production will cease and the following will be implemented to correct the gradation back within the action limits / operational boundaries lines.

Material causing values to exceed limits will be removed from production operations and stockpiled separately as to not be incorporated into production.

Stockpile to be investigated for segregation possibilities

Suppliers Load out reports to be reviewed for discrepancies

Supplier to be contacted and revise producing operations if gradations need to be altered and brought back within MDOT requirements.