

MIX DESIGN REVIEW CHECKLIST

CS-JN 82000-205935A		JMF # P1-FW MDOT Grade P1_3" Slump_Detroit Plant 2 (M-40)		
REVIEWER San Rofoo		APPROVED ☒	AS NOTED ☐	REJECTED ☐
		DATE 10/07/2019		
THE SUBMITTAL MUST INCLUDE THE FOLLOWING:		YES	NO	N/A
Form 1976 – Job Mix Formula (JMF) Concrete Field Communication		☒	☐	
Source of Materials		☒	☐	
Batch Weights of Constituent Materials (Dry)		☒	☐	
For Optimized Gradations Only – Individual Aggregate Gradations		☐	☐	☒
Specific Gravity of Constituent Materials (Dry - Required, SSD - Optional)		☒	☐	
Typical Ranges:	Type I Portland Cement:	3.15(approximate)	3.15	
	Class F Fly Ash:	2.20 – 2.70	2.70 Class F	
	Class C Fly Ash:	2.55 – 2.80		
	Slag Cement:	2.85 – 2.95		
	Coarse Aggregate:	2.55 – 2.85	2.67	
	Intermediate Aggregate:	2.55 – 2.85		
	Fine Aggregate:	2.60 – 2.80	2.62	
Dry Loose or Dry Rodded Unit Weight of Coarse Aggregate		☒	☐	
Water/Cementitious Ratio (w/cm) – 0.45 max		☒	☐	
Volume (dry, rodded) of coarse aggregate per unit volume concrete – 65 – 75% (inclusive)		☒	☐	
Aggregate Absorptions and Correction Factors		☒	☐	
Typical Absorptions:	Coarse Aggregate:	≤ 2.5%	0.53	
	Intermediate Aggregate:	≤ 2.5%		
	Fine Aggregate:	≤ 2.0%	1	
Alkali-Silica Reactivity (ASR) testing results for fine aggregate		☒	☐	
Date of completion within the last 2 years		☒	☐	
Conforms with one of the methods in c.5.A of 12SP604B		☒	☐	
STRENGTH, COMPRESSION				
The Lower Specification Limit (LSL) at 28 days, or		☒	☐	☐
70% of the Lower Specification Limit (LSL) at 7 days (Method 1 verification only)		☐	☐	☒
SUPPLEMENTAL CEMENTITIOUS MATERIALS (SCM)				
If Used, Maximum Slag Cement Replacement is 40% (Minimum replacement 25% for P1M and DM)		☐	☐	☒
If Used, Maximum Fly Ash Replacement is 40% (Minimum replacement 25% for P1M and DM)		☒	☐	☐ 25%
If Both Are Used, They Must Not Exceed 40% of Cementitious Material		☐	☐	☒

DOCUMENTATION

Air Content	Average Values from Test Data: 10/16/2017 02/12/2019	6.03	(%)
Slump		2.67	Inch
Compressive Strength		5840	Psi
Concrete Age at Time of Test		28	Days
Verification Method Use (ref. c.5.B.2 of 12SP604B)		1 ☐ 2 ☐ 3 ☒ 4 ☐	

QPL/APPROVED SOURCE CHECK

	YES	NO	N/A
Coarse Aggregate 6AA O-N Minerals (Michigan) Co. Port Inland "75-005"	☒	☐	☐
Intermediate Aggregate	☐	☐	☒
Fine Aggregate 2NS Stoneco-East Burmeister "81-093"	☒	☐	☐
Cement LafargeHolcim - Alpena, MI Type I/II Low Alkali	☒	☐	☐
Fly Ash Boral Resources - Monroe Power Plant "Monroe,MI"	☒	☐	☐
Slag Cement	☐	☐	☒
Admixtures BASF-MasterAir AE200, Premiere OptiFlo 50	☒	☐	☐
Specified Dosage Greater Than Minimum or Within Dosage Range	☒	☐	☐

CEMENTITIOUS CONTENT

Meets Requirements (ref. Table 1 of 12SP604B) 517-611 "526"	☒	☐	
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YIELD AND OPTIMIZED GRADATION CHECK

Mix Design Yields (Use Concrete Job Mix Formula Yield Calculator) 27.08	☒	☐	
If Used, Optimized Aggregate Gradation Meets Appendix 1 requirements of 12SP602D	☐	☐	☒

Trial Batch Test Records (expires every 2 years)	☒	☐	☐
Stockpile Management Plan	☒	☐	☐
General Letter of Certification	☒	☐	☐
Material Data Test Reports	☒	☐	☐
Alkali-Silica Reactivity Report (expires every 2 years) Expires: 09/24/2020	☒	☐	☐
Plant NRMCA Certification (expires every 2 years) Expires: 03/14/2021	☒	☐	☐
Aggregate Scale Certificate of Calibration (expires every 6 months) Expires: 03/10/2020	☒	☐	☐
Admixture Dispensing Equipment Check (expires every 90 days) Expires: 12/08/2019	☒	☐	☐
Water Supply Documentation	☒	☐	☐

COMMENTS/NOTES:

- Job mix formula was reviewed per MDOT 12SP-604A-09.