

MIX DESIGN REVIEW CHECKLIST

CS-JN 82000-205935A		JMF # HE75E7CQA032_MDOT P-NC Grade_3" Slump_Plant 32 (M-02)		
REVIEWER San Rofoo (Somat Engineering, Inc.)		APPROVED ☒	AS NOTED ☐	REJECTED ☐
		DATE 03/20/20		
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)	Reported in JMF =	3.15
	Class F Fly Ash:	2.20 – 2.70	Reported in JMF =	
	Class C Fly Ash:	2.55 – 2.80	Reported in JMF =	
	Slag Cement:	2.85 – 2.95	Reported in JMF =	2.9
	Coarse Aggregate:	2.55 – 2.85	Reported in JMF =	2.56
	Intermediate Aggregate:	2.55 – 2.85	Reported in JMF =	
	Fine Aggregate:	2.60 – 2.80	Reported in JMF =	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%	Reported in JMF =	1.3
	Intermediate Aggregate:	≤ 2.5%	Reported in JMF =	
	Fine Aggregate:	≤ 2.0%	Reported in JMF =	0.68
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)		☐	☐	☒
If Both Are Used, They Must Not Exceed 40% of Cementitious Material		☐	☐	☒

DOCUMENTATION				
Air Content	Average Values	06/26/2019	7.03	(%)
Slump	From Test Date:	07/10/2019	2.916	Inch
Compressive Strength			5110	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 LaFarge Construction Material - Presque Isle "71-047"	☒	☐	☐
Intermediate Aggregate		☐	☐	☒
Fine Aggregate	2NS Smelter Bay Aggregates - Maple Ridge "95-013"	☒	☐	☐
Cement	St. Mary's Cement "Detroit, MI"	☒	☐	☐
Fly Ash		☐	☐	☒
Slag Cement	St. Mary's Slag Cement "Detroit, MI"	☒	☐	☐
Admixtures	BASF (MasterAir AE 200, MasterPozzoloth 200)	☒	☐	☐
Specified Dosage Greater Than Minimum or Within Dosage Range		☒	☐	☐
CEMENTITIOUS CONTENT				
Meets Requirements (ref. Table 1 of 12SP604B) Required = 658(S)/752(W), Used = 658		☒	☐	
YIELD AND OPTIMIZED GRADATION CHECK				
Mix Design Yields (Use Concrete Job Mix Formula Yield Calculator) 27.3		☒	☐	
If Used, Optimized Aggregate Gradation Meets Appendix 1 requirements of 12SP602D		☐	☐	☒
OTHER REQUIREMENTS				
Trial Batch Test Records (Expires Every 2 years)		☒	☐	☐
Stockpile Management Plan		☒	☐	☐
General Letter of Certification		☒	☐	☐
Material Data Test Reports (Sieve Analysis, Milling Report, etc.)		☒	☐	☐
Alkali-Silica Reactivity Report (Expires Every 2 Years)		Expires: 06/26/2020	☒	☐
Plant NRMCA Certification (Expires Every 2 Years)		Expires: 01/28/2022	☒	☐
Aggregate Scale Certification of Calibration (Expires Every 6 Months)		Expires: 05/02/2020	☒	☐
Admixture Dispensing Equipment Check (Expires Every 90 Days)		Expires: 04/09/2020	☒	☐
Water Supply Documentation		☒	☐	☐

NOTES/COMMENTS

- Mix Shall be only used for temperatures above 59 F.
- Mix was reviewed per the 12SP-604A-09 and the 2012 MDOT standard specification for construction.