

ALABAMA CONCRETE MIX DESIGN, AGGREGATE TESTS, AND VERIFICATIONS

CLIENT: _____	DATE: <u>4/13/2021</u>
PROJECT NAME: _____	DESIGN STRENGTH: <u>3000</u>
JOB NUMBER: _____	MIX #: <u>390 - 120 CFA</u>
	Exposed Brown Pea Gravel

WEIGHT/VOLUME PROPORTIONS OF THE MIX (SSD)

<u>MATERIAL</u>	<u>CUBIC FT/CY</u>	<u>LBS/CY</u>
CEMENT	<u>1.98</u>	<u>390</u>
FLYASH	<u>0.74</u>	<u>120</u>
FINE AGG. 1	<u>7.52</u>	<u>1230</u>
COARSE AGG.	<u>11.79</u>	<u>1950</u>
WATER	<u>3.88</u>	<u>242</u>
AIR 4%	<u>1.08</u>	<u>--</u>
TOTALS	<u>27.00</u>	<u>3932</u>

TEST RESULTS OF VERIFICATION

<u>TEST</u>	<u>REQUIRED</u>	<u>ACTUAL</u>
SLUMP:	3 TO 5	<u>4.00</u>
AIR %:	3 TO 5	<u>4.00</u>
WEIGHT:	145.6	<u>145.6</u>

W/C RATIO:		<u>0.47</u>
% FINE AGG. VOL. BASIS:		<u>27.9</u>
% COARSE AGG. VOL. BASIS:		<u>43.7</u>
CEMENTITIOUS MTRLS, LBS:		<u>510</u>

MATERIAL PRODUCERS AND AGGREGATE PROPERTIES

<u>MIX MATERIAL</u>	<u>MATERIAL PRODUCER</u>	<u>SPECIFIC GRAVITY</u>	<u>TYPE OR SIZE:</u>
CEMENT MFG.	NATIONAL CEMENT	3.15	1
FLYASH MFG.	BORAL	2.6	C
FINE AGG. 1 MFG.	ALLIANCE	2.62	33
COARSE AGG. MFG.	ALLIANCE	2.65	78

ADMIX MFG. AIR	BASF	AMT (OZ)/100cwt <u>0.8</u>	<u>MB AE 90</u>
ADMIX MFG. WR	BASF	AMT (OZ)/100cwt <u>2.0</u>	<u>POLYHEED 1025</u>

SIEVE ANALYSIS OF FINE AND COARSE AGGREGATE

<u>FINE AGGREGATE</u>			<u>COARSE AGGREGATE</u>		
<u>SIEVE</u>	<u>% PASS</u>	<u>SPEC</u>	<u>SIEVE</u>	<u>% PASS</u>	<u>SPEC</u>
3/8	<u>100</u>	100	1/2	<u>99</u>	90 - 100
#4	<u>96.2</u>	95 - 100	3/8	<u>70</u>	40-75
#8	<u>86.7</u>	80 - 100	#4	<u>22</u>	5-25
#16	<u>79.4</u>	50 - 85	#8	<u>5</u>	0-10
#30	<u>70.1</u>	25 - 60	#16	<u>2</u>	0 - 5
#50	<u>24.8</u>	10 - 30			
#100	<u>3</u>	2 - 10			
FINE AGG. 1 ABS % =		<u>1.5</u>			
F.M. =		<u>2.40</u>			
				(COARSE AGG. ABS % =	<u>0.9</u>

CONCRETE MIX AVERAGE COMPRESSIVE STRENGTH, PSI

<u>TEST AGE</u>	<u>COMPRESSIVE STRENGTH</u>
7 DAYS	3750
7 DAYS	3820
28 DAYS	4990
28 DAYS	4870
28 DAYS	4920

ADMIX DOSAGES INDICATED ARE THOSE USED WHEN PREPARING LAB MIX
 PLANT DOSAGES MAY VARY TO PRODUCE DESIRED RESULTS
 IF A SUPERPLASTICIZER IS USED, INITIAL VERIFIED SLUMP SHALL BE 2" TO 3"
 SLUMP AFTER S.P. IS ADDED SHALL BE 7" TO 9"