

Date 7/12/16 Sheet No. of
 Job
 Subject

Concrete Mix Design

Supplier Mix Design #
 Design Strength **4500 psi**

Mix Proportioning						
	Identification (Type, size, source, etc.)	Weight (pounds)	Density (SSD)	Volume (cubic feet)		% Aggregate Absorption
Cement	Type I	634	3.080	3.30	Total	
Fly Ash				0.00	3.30	
Slag				0.00		
Stone #1	#67	1572	2.680	9.40	Total	
Stone #2				0.00	9.40	
Stone #3				0.00		
Sand #1	C-33 Natural Sand	1551	2.640	9.42	Total	
Sand #2				0.00	9.42	
Water	C-94	285.0	1.000	4.57	(34.2 gal)	
Air Content	Entrapped			0.41	1.5%	
Totals		4042		27.09		

Density (Wet) = 149.2 pcf
 % Fly Ash = 0.0%
 W/C Ratio = 0.45
 Total Cement = 634.00

Gradation Analysis									
	% Passing Stone 1	Stone 2	Stone 3	Comb Coarse	% Passing Sand 1	Sand 2	Comb Fine Agg	Comb % Passing	Comb % Retained Cumulative Individual
1 1/2"	100.00			100.0	100.00		100.0	100.0	0.0 0.0
1"	100.00			100.0	100.00		100.0	100.0	0.0 0.0
3/4"	92.00			92.0	100.00		100.0	96.0	4.0 4.0
1/2"	66.00			66.0	100.00		100.0	83.0	17.0 13.0
3/8"	45.00			45.0	100.00		100.0	72.5	27.5 10.5
#4	5.00			5.0	100.00		100.0	52.5	47.5 20.0
#8	1.00			1.0	91.00		91.0	46.0	54.0 6.5
#16	0.00			0.0	62.00		62.0	31.0	69.0 15.0
#30	0.00			0.0	36.00		36.0	18.0	82.0 13.0
#50	0.00			0.0	17.00		17.0	8.5	91.5 9.5
#100	0.00			0.0	4.00		4.0	2.0	98.0 6.5
#200	0.00			0.0	1.10		1.1	0.6	99.4 1.5
#325				0.0			0.0	0.0	100.0 0.6
% of Vol	50%	0%	0%	50%	50%	0%	50%		

Maximum Aggregate Size = 3/4"
 Nominal Max Aggregate Size = 0.500 in
 Coarseness Factor (between 60% to 75%) = 50.9%
 Workability Factor = 46.0%
 Adj-Workability Factor = 47.9%
 Min. Allowable Adj-WF = 36.6%
 Max. Allowable Adj-WF = 41.6%

Greater than 4% Retained on Max Agg. Size Sieve

CF DOES NOT MEET SPECIFICATIONS

Adj-WF DOES NOT MEET SPECIFIED RANGE

Exposure Requirements					
	Nominal Max Agg Size	Exp F0 (Negligible)	Exp F1 (Moderate)	Exp F2 (Severe)	Exp F3* (Very Severe)
Minimum Total Air Content	3/8"	N/A	6.0%	7.5%	7.5%
	1/2"	N/A	5.5%	7.0%	7.0%
	3/4"	N/A	5.0%	6.0%	6.0%
	1"	N/A	4.5%	6.0%	6.0%
	1.5"	N/A	4.5%	5.5%	5.5%
Maximum w/c Ratio		N/A	0.45	0.45	0.45
Minimum f _c , psi		2500	4500	4500	4500

From ACI 318-08 Tables 4.3.1 and 4.4.1

*See ACI 318 Table 4.4.2 for limits on supplementary cementitious materials for F3

Concrete Mix Design

Supplier Mix Design # Interior Slab
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