

STATE OF VERMONT
 AGENCY OF TRANSPORTATION
 MATERIAL AND RESEARCH SECTION - STRUCTURAL CONCRETE UNIT

STRUCTURAL CONCRETE MIX DESIGN SUBMISSION

Concrete class: Precast Prestressed
 Additional Description: _____
 Ready Mix Supplier: CARROLL CONCRETE - CHARLESTOWN, NH
 Designed By: Scott Jordan
 Design strength: 5000 PSI
 Design by dry weight or saturated surface dry: SSD

Agency Use Only	
Mix ID	PP14-060
Mix Design #	060
Approved by	jwild
Approved Date	2/11/2014
Spec Book Year	2011

Mix designs are valid for a 12 month period from date of approval or unless there is a change in material, material property or design parameter.

Cement:		Specific Gravity	_____	lb/cy	0.00	cf			
701.02	Source: _____ Brand Name: _____								
Cement Type III:		Specific Gravity	_____	lb/cy	0.00	cf			
701.04	Source: _____ Brand Name: _____								
Blended Cement:		Specific Gravity	3.020	705	lb/cy	3.74	cf		
701.06	Source: LAFARGE - TERCEM - MONTREAL, EAST PLANT Brand Name: _____								
Cement with Slag:		Specific Gravity	_____	lb/cy	0.00	cf			
701.07	Source: _____ Brand Name: _____								
Pozzolan:		Specific Gravity	_____	lb/cy	0.00	cf			
725.03(a)	Source: _____ Brand Name: _____								
Fly Ash:		Specific Gravity	_____	lb/cy	0.00	cf			
725.03(a)	Source: _____ Brand Name: _____								
Silica Fume:		Specific Gravity	_____	lb/cy	0.00	cf			
725.03(b)	Source: _____ Brand Name: _____								
Slag:		Specific Gravity	_____	lb/cy	0.00	cf			
725.03(c)	Source: _____ Brand Name: _____								
Water			32	gals	267	lb/cy	4.28	cf	
Air Content Target			7.0	%			1.89	cf	
Coarse Aggregate 3/8"		Absorption	_____	Specific Gravity	_____	lb/cy	0.00	cf	
704.02A	Source: _____								
Coarse Aggregate 3/4"		Absorption	0.80	Specific Gravity	2.880	1688	lb/cy	9.39	cf
704.02B	Source: COLD RIVER MATERIALS PIT - N WALPOLE, NH								
Coarse Aggregate 1 1/2"		Absorption	_____	Specific Gravity	_____	lb/cy	0.00	cf	
704.02C	Source: _____								
Fine Aggregate:		Absorption	0.90	Specific Gravity	2.670	1283	lb/cy	7.70	cf
704.01	Source: NEWPORT SAND & GRAVEL - NEWPORT, NH	Fineness Modulus	2.83						
Air Entrainment Admixture		Specific Gravity	_____	1.5	oz/cy				
725.02(b)	Source: MASTER BUILDERS INC - MESQUITE, TX Brand Name: MasterAir AE 200 / Micro Air								
Retarder Admixture:		Specific Gravity	_____	1	oz/cwt				
725.02(c)	Source: MASTER BUILDERS INC - MESQUITE, TX Brand Name: MasterSet R100 / Pozzolith 100XR								
High Range Water Reducer Admixture:		Specific Gravity	_____	3	oz/cwt				
725.02(h)	Source: MASTER BUILDERS INC - MESQUITE, TX Brand Name: MasterGlenium 7500								
Other Admixtures:		Specific Gravity	_____	2	oz/cwt	0.00	cf		
Source: _____ Brand Name: BASF, MasterSure 260		Specific Gravity	_____			0.00	cf		
Source: _____ Brand Name: _____		Specific Gravity	_____			0.00	cf		
Source: _____ Brand Name: _____		Specific Gravity	_____			0.00	cf		
TOTAL			47.570		3943	lb	27.00	cf	

Approval by *Justin Wild, Composite Materials Engineer 2/11/14* for use on Cavendish ER BRF 0146(13) contractor submittal. Maximum Water/Cementitious Ratio 0.44
 recent. Supplied strength data is adjusted for air content. Maximum Water (gal/cy) 37.2
 expected on project air content and net sum of admix design. Slump Min/Max (inch) 4.0 min 7.0 max
 make up. Based on cementitious amount and favorable curing. Air Content Min/Max (%) 5.0 min 9.0 max
 Notes: conditions, mix should obtain 5000psi in 28 day. Design Unit Wt. (lb/cf) 146.04

2014 Construction season 2011 specification 5000-psi precast 2-10-14

Vermont Agency of Transportation
RECEIVED
 ON: **March 17, 2014**
 and Checked for
CONFORMANCE
 BY: Rob Young DATE: 03/24/2014

COLD RIVER BRIDGES, LLC 10 LANBRO LANE WALPOLE, NH FAX 603-756-9303	
CAVENDISH ER BRF 0146(13)	
PBU CONCRETE MIX DESIGN	SHEET NUMBER
DATE: 2-17-14	11
Scale:	

(REVISION #1 2/17/2014)

(REVISION #2 3/17/2014)