SHOP DRAWING REVIEW FORM AND TRANSMITTAL

DATE:	October 25, 2021		
то:	Carl Hendrickson Project Manager Veolia Water 825 West Water Street Taunton, MA 02780	FROM:	Michael Andrus, P.E. Project Manager BETA Group, Inc. 701 George Washington Hwy Lincoln, Rhode Island 02865
RE:	City of Taunton, MA WWTF Solids Handling Imp Contract S-2020-3 Shop Drawing No. 03300 – 0		ţn

BETA COMMENTS:

<u>Item</u>	Action Code	Description/Comments
1	1	Concrete Mix Design (Redi Mix)
		1. Acceptable as submitted.

Action Codes

- 1 No Exception Taken
- 2 Make Corrections Noted
- 3 Amend and Resubmit
- 4 Rejected, See Remarks
- a. Installation shall proceed only when Action Code is '1' or '2'.
- b. Submittals action coded '3' shall be resubmitted within time limit set in Contract.
- c. Review does not relieve Contractor from responsibility of compliance with the Contract Documents.





PROJECT: 9722. - Veolia/Taunton WWTP Solids Handling Improvements

DATE: 10/04/2021

SUBMITTAL: 03300-01 - Concrete Mix Design REVISION: A STATUS: Eng SPEC #: 03300

TO:

Carl Hendrickson Veolia North America 125 S. 84th Street, Suite 175 Milwaukee, WI 53214 carl.hendrickson@veolia.com FROM: Ryan Murphy Hart Engineering Corporation 800 Scenic View Drive Cumberland, RI 02864 rmurphy@hartcompanies.com

Item	Revision	Description	Status	Date Sent	Date Returned
03300-01	A	Concrete Mix Design	Eng	10/04/2021	
Notes:		•			

Additional Notes:

Status Codes

1-APP – No Excep	otions Taken	
2-ANR – Make C	SHOP DRAWING REVIEW	1
3-R&R – Revise a	1 – Approved 2 – Approved as Noted	
4-REJ – Rejected		
5-IPO – For Infor		
6-NRR – Not Req		
ENG – Submitted	(Above Check Designates Action Code – See Review Comments) IMPORTANT NOTE FOR CONTRACTOR	
Sincerely, Hart Engineering	Review is only for general compliance with the design concept and information provided in Contract Documents. Corrections and comments made on the Shop Drawings during review do not relieve the Contractor from compliance with the requirements of the plans and specifications. Review and/or approval of a specific item shall not include review or approval of an assembly of which the item is a component. No approval or correction of a Shop Drawing shall be construed as an order for extra work. The Contractor is responsible for: all quantities and dimensions to be confirmed and correlated; information	10/04/2021
	that pertains solely to the fabrication processes or to the means, methods, techniques, sequences and procedures of construction; coordination of the Work with that of all trades and subcontractors; and performing all Work in a safe and satisfactory manner. BETA GROUP, INC. Checked By:	
	By: BN Date: 10/21/21	Page

REDI MIX SERVICES INC

120 Berkley Street Taunton, Mass. 02780 Phone Fax (508) 823-0771 (508) 823-7305

Project: Taunton WWTP

Contractor: Hart Engineering

Presented below is a mix design proportioned to produce one cubic yard of concrete to meet the requirements of Section 033000 of this projects sepcifications.

The mix quantities have been developed in accordance with ACI Standards 301 based upon the specific charectereistics of the material proposed use.

MIX #		50500AE
STRENGTH	PSI	5000
C.A. SIZE	INCH	3/4" Blend
USE		ALL
CEMENT	LBS.	700
FINE AGG	LBS.	1150
COARSE AGG	LBS.	1800
WATER	GAL	36.0
W/C RATIO		0.428
SLUMP	INCHES	4-6" +/-1
AIR CONTENT	%	5-7% +/-1
SIKA 686	OZ	35.25
SIKA AEA 14	OZ	2.20

* Slump at Point Of Placement

Remarks: The mix quantities stated are basic quantities for aggregates in a saturated surface dry condition. These quantities will be adjusted for specific moisture content, workability, slump, and yield at the time of batching.

Notes: Mid Range Water Reducer Included in Mix Deign. Pumpable Mix.

9/17/2021 TJH

Concrete Mix Evaluator

Water / Cement only Ratio 0.4	Water/Cementitious Ratio 0.4	V1 Vol Cemt/Vol Water 0.	0.I.F 16	W-Adj (Workability-Adjustment) 3.	Coarseness Factor: 59	Workability Factor (fines) 34	Sand / Agg ratio (Vol) 0.	Air Vol / (Cementitious + water) 16	Mortar Fraction 57	Paste Fraction + Air 35	Paste Fraction 30	Plastic Density - Cu.Ft. 14;	Total: 39	4	Water: 36.0 Gal 3	Design Air Content 5	4		Sand 💉 11		3/4" 🔷 10	Total Cementitious 7	4			Portland Cement Type I	Cementitious Materials	C50500AE We	Various	50500AE	
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February 17: 2021 Date

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Quality Control Manager:

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PRODUCT DATA SHEET Sikament[®]-686

HIGH RANGE WATER REDUCING ADMIXTURE

PRODUCT DESCRIPTION

Sikament[®]-686 is a high range water reducing admixture utilizing Sika's ViscoCrete[®] Technology. It's unique formulation is based on polycarboxylate technology. Sikament[®]-686 meets the requirements for ASTM C-494 Types A and F admixture.

USES

Sikament[®]-686 is recommended for use in the production of all high strength concrete products, whenever high plasticity and increased early and ultimate strengths are desired. The superplasticizing action of Sikament[®]-686 provides excellent workability at low water cementitious ratios.

CHARACTERISTICS / ADVANTAGES

High Range Water Reducing Applications: When used as a high range water reducing admixture, water reduction up to 30 % can be obtained. The superplasticizing action allows for the production of high slump flowing concrete with excellent workability that can be placed with minimum vibration even at a low water/cementitious ratio. The dispersing action of Sikament[®]-686 maximizes cement hydration efficiency and improves concrete's early and long term compressive strengths. **Mid Range Water Reducing Applications:** At a lower dosage, Sikament®-686 can be used as a cost effective mid range water reducing admixture or simply as a water reducing admixture for production of conventional slump concrete. When used as a mid range water reducing admixture, water reduction up to 15 % can be obtained. This application is ideal for use with lean, harsh concrete mixes or concrete containing fly ash. Sikament®-686 will improve workability and finishability. The combined water reducing and superplasticizing action provide the following benefits:

- Higher early and ultimate strengths for cost effective high strength concrete and earlier structural use of concrete.
- Higher early strengths allow faster demolding and more efficient use of forms to precast producers.
- Increased slump improves workability and reduces labor costs.
- Full flow action aids in pumping and reduces need for vibration.
- Greater concrete density reduces permeability and increases durability.

Sikament[®]-686 does not contain calcium chloride or any other intentionally added chlorides and will not initiate or contribute to corrosion on steel reinforcement present in the concrete.

Packaging	Sikament [®] -686 is available in 55 gallon drums (208 liter), 275 gallon totes (1040 liters) and bulk delivery.
Appearance / Color	Brown Liquid
Shelf Life	Shelf life when stored in dry warehouse conditions between 40 °F and 80 °F (5–27 °C) is 1 year.

PRODUCT INFORMATION

Product Data Sheet Sikament®-686 November 2018, Version 01.02 021302011000000140 Sikament®-686 should be stored at above 40 °F (5 °C). If frozen, thaw and agitate thoroughly to return to normal state. Protect from direct sunlight.

Specific Gravity

Approx. 1.05

APPLICATION INFORMATION

Recommended Dosage	Dosage rates will vary depending on the material used, ambient conditions and the requirements of a specific project. For general concreting applica- tions, Sika recommends a dosage rate between 3–12 fl.oz. /100 lbs. (195–780 ml/100 kg) cementitious materials. If maximum water reduction is required, dosage up to 18 fl.oz./100 lbs. (1170 ml/100 kg) of cementitious materials may be used. In this case, delayed setting times may occur. Dosage rates out- side the recommended range may be used where specialized materials such as microsilica are specified, extreme ambient conditions are encountered or unusual project conditions require special consideration. In this case please contact your local regional Sika office or Sika technical ser- vice department at 1-800-933-7452 for further information.
Mixing	For best plasticizing results, Sikament [®] -686 should be added directly to freshly mixed concrete in the concrete mixer at the end of the batching cycle. Sikament [®] -686 may also be dispensed as an integral material during the regu- lar admixture batching cycle, or into freshly mixed concrete in a Ready-Mix truck at the concrete plant or job site. To optimize the superplasticizing effect, Sika recommends that the combined materials be mixed for 80-100 revolu- tions, either in the concrete mixer or in the Ready-Mix truck.
	Combination with other Admixtures: Sikament [®] -686 is highly effective as a single admixture or in combination with other admixtures in the Sika System. If used in combination with certain Sikament [®] high range water reducers, it may affect the plastic properties of fresh concrete. Please contact your local regional office or technical service department at 1-800-933-7452 for further information.
	Combination with Microsilica: Sikament®-686 is particularly well suited for

use with Microsilica because of its water reduction capability.

BASIS OF PRODUCT DATA

Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

OTHER RESTRICTIONS

See Legal Disclaimer.

ENVIRONMENTAL, HEALTH AND SAFETY

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data. User must read the current actual Safety Data Sheets before using any products. In case of an emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

Product Data Sheet Sikament®-686 November 2018, Version 01.02 021302011000000140



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LEGAL DISCLAIMER

- KEEP CONTAINER TIGHTLY CLOSED
- KEEP OUT OF REACH OF CHILDREN
- NOT FOR INTERNAL CONSUMPTION
- FOR INDUSTRIAL USE ONLY
- FOR PROFESSIONAL USE ONLY

Prior to each use of any product of Sika Corporation, its subsidiaries or affiliates ("SIKA"), the user must always read and follow the warnings and instructions on the product's most current product label, Product Data Sheet and Safety Data Sheet which are available at usa.sika.com or by calling SIKA's Technical Service Department at 800-933-7452. Nothing contained in any SIKA literature or materials relieves the user of the obligation to read and follow the warnings and instructions for each SIKA product as set forth in the current product label, Product Data Sheet and Safety Data Sheet prior to use of the SIKA product.

SIKA warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current Product Data Sheet if used as directed within the product's shelf life. User determines suitability of product for intended use and assumes all risks. User's and/or buyer's sole remedy shall be limited to the purchase price or replacement of this product exclusive of any labor costs. NO OTHER WARRANTIES EXPRESS OR IMPLIED SHALL AP-PLY INCLUDING ANY WARRANTY OF MERCHANTABIL-ITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES. SIKA SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY **OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTH-**FRS.

Sale of SIKA products are subject to the Terms and Conditions of Sale which are available at https://usa.sika.com/en/group/SikaCorp/termsandconditions.html or by calling 201-933-8300.

Sika Corporation 201 Polito Avenue Lyndhurst, NJ 07071 Phone: 800-933-7452 Fax: 201-933-6225



Product Data Sheet Sikament®-686 November 2018, Version 01.02 021302011000000140 Sika Canada Inc. 601 Delmar Avenue Pointe Claire Quebec H9R 4A9 Phone: 514-697-2610 Fax: 514-694-2792 Sika Mexicana S.A. de C.V. Carretera Libre Celaya Km. 8.5 Fracc. Industrial Balvanera Corregidora, Queretaro C.P. 76920 Phone: 52.442 2385800 Fax: 52.442 2250537

Sikament-686-en-US-(11-2018)-1-2.pdf



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PRODUCT DATA SHEET Sika® AEA-14

AIR ENTRAINING ADMIXTURE

PRODUCT DESCRIPTION

Sika® AEA-14 admixture is an aqueous solution of organic materials. Sika® AEA-14 meets the requirements of ASTM C-260 for air entraining admixtures.

USES

Sika® AEA-14 is recommended for use whenever air entrained concrete is desired. Ready-mix, precast and block producers can achieve predictable and uniform entrained air contents in concrete, even where harsh lean mixes are used or fly-ash is added to the concrete.

CHARACTERISTICS / ADVANTAGES

Durability:

- Air entrainment is recognized as the most effective prevention against concrete scaling in exposed environments. Air entrained concrete delivers particular benefits in the form of increased concrete durability. This is important in colder climates where frost and freezethaw cycles can cause scaling and damage to the concrete surface.
- Air entraining agents help to prevent scaling by creating microscopic air voids that water trapped in the concrete can expand into when the concrete freezes, thus preventing cracks caused by the natural expansion. Entrained air voids in the concrete will also increase durability in harsh environments where concrete is exposed to deicing salts, marine salts and sulfates.
- Workability and placeability are also improved by the lubricating action of the microscopic bubbles in the concrete. Concrete flows better, and bleeding and shrinkage is reduced because less water is needed to obtain the desired workability.

PRODUCT INFORMATION

Packaging	Sika® AEA-14 is available in 55 gallon drums (208 liters), 275 gallon totes (1040 liters) and bulk delivery.
Appearance / Color	Dark Brown Liquid The presence of cloudiness/turbidity is a natural occurrence and does not af- fect the performance of Sika® AEA-14.
Shelf Life	Shelf life when stored in dry warehouse conditions between 50 °F and 80 °F (10-27 °C) is 1 year.
Storage Conditions	Sika [®] AEA-14 should be stored at above 40 °F (5 °C). If frozen, thaw and agitate thoroughly to return to normal state.
Specific Gravity	Approx. 1.01

Product Data Sheet Sika® AEA-14 November 2018, Version 01.02 021403021000000079

APPLICATION INFORMATION

Recommended Dosage	Dosage rates for Sika [®] AEA-14 will typically fall between 1 and 3 fl. oz. per 100 lbs. (65–195 ml/100 kg) of cement to entrain between 4 and 6 percent air. Higher air contents may be obtained by increasing the dosage rate. Dosage rates will vary depending on the air content required for a particular project. Typically air contents will be specified in the range of 4 to 8 percent by volume.
	Other factors that may affect the amount of air entrained into the concrete include, but are not limited to: total cementitious content, type of pozzolanic materials, sand gradation, temperature and water content. Sika recommends that trial mixes be performed whenever material or any other changes are made that may affect the amount of entrained air.
Mixing	Measure the required quantity per batch manually or with automatic dis- penser equipment. Add Sika® AEA-14 to mixing water or sand. Do not mix with dry cement. When used in combination with other admixtures, care must be taken to dispense each admixture separately into the mix.
	Combination with Other Admixtures: Combination with other admixtures, particularly water reducers and retarders, may increase the amount of entrained air in the mix. Air contents should be checked with an air-meter after batching and dosage adjustments made at the concrete plant.

BASIS OF PRODUCT DATA

Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

OTHER RESTRICTIONS

See Legal Disclaimer.

ENVIRONMENTAL, HEALTH AND SAFETY

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data. User must read the current actual Safety Data Sheets before using any products. In case of an emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

LEGAL DISCLAIMER

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- KEEP OUT OF REACH OF CHILDREN
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- FOR INDUSTRIAL USE ONLY
- FOR PROFESSIONAL USE ONLY

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SIKA warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current Product Data Sheet if used as directed within the product's shelf life. User determines suitability of product for intended use and assumes all risks. User's and/or buyer's sole remedy shall be limited to the purchase price or replacement of this product exclusive of any labor costs. NO OTHER WARRANTIES EXPRESS OR IMPLIED SHALL AP-PLY INCLUDING ANY WARRANTY OF MERCHANTABIL-ITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES. SIKA SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT

Product Data Sheet Sika® AEA-14 November 2018, Version 01.02 021403021000000079



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IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTH-ERS.

Sale of SIKA products are subject to the Terms and Conditions of Sale which are available at https://usa.sika.com/en/group/SikaCorp/termsandconditions.html or by calling 201-933-8300.

Sika Corporation 201 Polito Avenue Lyndhurst, NJ 07071 Phone: 800-933-7452 Fax: 201-933-6225



Product Data Sheet Sika® AEA-14 November 2018, Version 01.02 021403021000000079 Sika Canada Inc. 601 Delmar Avenue Pointe Claire Quebec H9R 4A9 Phone: 514-697-2610 Fax: 514-694-2792 Sika Mexicana S.A. de C.V. Carretera tibre Celaya Km. 8.5 Fracc. Industrial Balvanera Corregidora, Queretaro C.P. 76920 Phone: 52 442 2385800 Fax: 52 442 2250537

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Page 1

5 Richardson Lane, Stoneham, MA 02180 781-438-7755 (Voice) 781-438-6216 (Fax)

Com	pressive Stre	ength R	eport - C	oncrete		Repor	t Date	06-19-	2019		
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	Distribut:	ton cop	У			Job N	umber	23158			
						Projec	:t	Middleb	orough H	igh School Proje	ct 71
								East Gr	ove St.,	Middleborough, I	MA
						Contra	actor	Fontain	e Brothe	rs, Inc	
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G897	4.00 × 8.00	12.57	Good	06/19/19	06/26/19	7	53,500	4,260	1	Truck No.	49
G898	4.00 × 8.00	12.57	Good	06/19/19	07/03/19	14	72,000	5,730	2	Ticket No.	9256
G899	4.00 × 8.00	12.57	Good	06/19/19	07/17/19	28	83,000	6,600	2	Time	2:39
G900	4.00 x 8.00	12.57	Good	06/19/19	07/17/19	28	85,000	6,760	1	Unit Wt Ibs/cu ft	
G901	4.00 x 8.00	12.57	Good	06/19/19	07/17/19	28	85,500	6,800	1	Air Content (%)	6.2
Inspec	RAL REMARKS:	Gyrrin	Nerb Acce.	ived 6-26	Premiu	1. S.	172			Travel Time	
	t Penn				No	6.0	the second s				
Lanon	it rein										
REVIE	EWED BY: Bry	an M. Cı	abtree						Z	3MC	
					FRACTU	RE TYP	ES				
co	Type 1 sonably well-formed mes on both ends, less than 1 in. 5 mm] of cracking throught caps	o	Type Well-formed of running throu no well-define on other e	one on al cracks gh caps, ed cone	Type 3 Columner ve cracking thro both ends, well-formed co	rtical ough no	Type Diagonal fi with no cro through en with ham distinguist Type	racture acking nds; tap mer to h from	Side frac or botte comm	tures at top Simil om (occur b nonly with c	Type 6 lar to Type 5 ut end of ylinder is pointed



5 Richardson Lane, Stoneham, MA 02180 781-438-7755 (Voice) 781-438-6216 (Fax)

Lamont Penn

omp	pressive Stre	ength R	eport - C	oncrete		Repor	t Date	06-26-	2019			
Distribution Copy							t No.	39 23158				
							umber					
						Projec	t	Middlebo	orough H	igh School Proje	ct 71	
								East Gro	ove St.	Middleborough,	MA	
						Contr						
						Contractor Fontaine Brother Concrete Co. Ready Mix Servi						
ALL F	IELD TESTS	DONE A	CCORDI	NG TO AS	STM: C-	172 C	-31 C-	143 C-	1064 C-	-231		
									-39 C-1			
ALL COMPRESSIVE STRENGTH TESTS DONE ACCO CLASS CONCRETE: 5000# 3/4"						No. Of Sets: 1 CUBIC YARDS: 1						
				- Death mu	wh Nowth			<i>.</i>	1000			
<u>SEI 1</u>	LOCATION:	rootba	ll stadiu	m East Cu	rb, North		Total	Unit		Slump (in.)	6 1/2	
Lab	Size	Area	the second	Date	Date	Age	Load	Load	Fracture	Air Temp. (F.)	75	
No.	(in.)	(sq. in.)	Condition	Cast	Tested	Days	(lbs.)	(psi.)	Туре	Conc Temp (F)	80	
H862	4.00 x 8.00	12.57	Good	06/26/19	07/03/19	7	53,500	4,260	1	Truck No.	56	
H863	4.00 x 8.00	12.57	Good	06/26/19	07/10/19	14	62,000	4,930	3	Ticket No.	9371	
H864	4.00 x 8.00	12.57	Good	06/26/19	07/24/19	28	78,000	6,210	2	Time	10:00	
H865	4.00 x 8.00	12.57	Good	06/26/19	07/24/19	28	81,000	6,440	1	Unit Wt Ibs/cu ft		
H866	4.00 x 8.00	12.57	Good	06/26/19	07/24/19	28	77,000	6,130	1		5.2	
H866	4.00 × 8.00	12.57	Good	06/26/19	07/24/19	28				Unit Wt Ibs/cu ft Air Content (%)		
GENERAL REMARKS: Cylinders received on 06/28				1			1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	1. 1991 C. 1975		20105		
Inspect	tor				Premiu	m				Travel		

BMC REVIEWED BY: Bryan M. Crabtree FRACTURE TYPES Type 6 Type5 Type 4 Type 1 Type 2 Type 3 Similar to Type 5 Side fractures at top **Reasonably well-formed** Well-formed cone on **Columner vertical Diagonal fracture** but end of with no cracking or bottom (occur cones on both ends, one end, vertical cracks cracking through cylinder is commonly with less than 1 in. running through caps, both ends, no through ends; tap pointed unbonded caps) [25 mm] of cracking no well-defined cone well-formed cones with hammer to distinguish from throught caps on other end Type 1

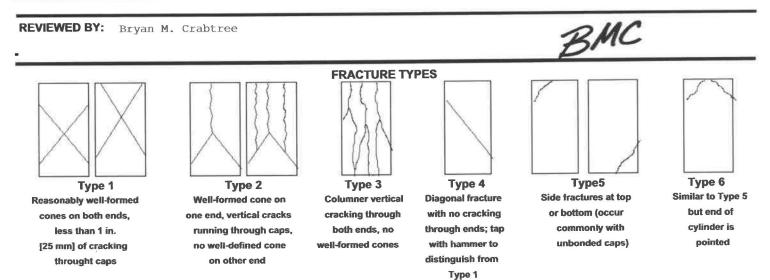
No



5 Richardson Lane, Stoneham, MA 02180 781-438-7755 (Voice) 781-438-6216 (Fax)

Compressive Strength Report - Concrete								06-24-2019 41				
							t No.					
	Distribut	ion Cop	У			Job N	umber	23158				
						Projec	t	Middlebo	orough Hi	gh School Proje	ct 71	
								East Gro	ove St.,	Middleborough, I	AM	
						Contra	actor	Fontaine	Brother	s, Inc		
					Concr	ete Co.	. Ready Mix Services					
ALL F	IELD TESTS	DONE A	CCORDIN	IG TO AS	TM: C-	172 C	-31 C-	143 C-1	064 C-2	31		
ALL C	OMPRESSIV	E STRE	NGTH TE	STS DON	ACCOR	DING 1	O ASTI	M: C-	39 C-12	31		
CLASS CONCRETE: 5000# 3/4"*							f Sets:	1	CUBIC	IC YARDS: 8		
SFT 1	LOCATION:	Footba	ll stadiu	um curb, S	outh of W	lest cu	rb					
	Looning						Total	Unit		Slump (in.)	6 1/2	
Lab	Size	Area		Date	Date	Age	Load	Load	Fracture	Air Temp. (F.)	84	
No.	(in.)	(sq. in.)	Condition	Cast	Tested	Days	(Ibs.)	(psi.)	Туре	Conc Temp (F)	85	
H822	4.00 x 8.00	12.57	Good	06/24/19	07/01/19	7	51,000	4,060	3	Truck No.	44	
	4.00 x 8.00	12.57	Good	06/24/19	07/08/19	14	71,000	5,650	1	Ticket No.	9326	
H823	1.00 A 0.00											
H823 H824	4.00 x 8.00	12.57	Good	06/24/19	07/22/19	28	83,000	6,600	1	Time	12:51	
		12.57 12.57	Good Good	06/24/19 06/24/19	07/22/19	28 28	83,000 85,000	6,600 6,760	1 2	Time Unit Wt Ibs/cu ft		

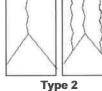
Inspector	Premium	and the second se	Travel
Name	Time	Hours	Time
Lamont Penn	No	6.00	





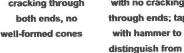
	oressive Stre	onath P	lonort - C	`oncroto		Repor	t Date	07-10-	2019		
	1699146 Oll	angui N	Sebour - C			Repor		48			
	Distribut.	ion Cor	уу				umber	23158			
			1011			Projec			rough u	igh School Proje	st 71
						Frojec	-L		5	Middleborough, I	
						0					4A
						Contra		Fontaine		-	
						Concr	ete Co.	Ready M	ix Servi	ces	
ALL F	FIELD TESTS	DONE A	CCORDIN	IG TO AS	TM: C-3	172 C	-31 C-	143 C-1	064 C-	231	
ALL (COMPRESSIV	E STRE	NGTH TE	STS DONI	E ACCORI	DING 1	O AST	M: C-	39 C-1	231	
CLAS	S CONCRET	E: 5000)# 3/4"			No. O	f Sets:	1	CUBI	C YARDS: 30	
SET 1	LOCATION:	Southw	est wall	footing a	t concess	ion st	and				
						-14-7	Total	Unit		Slump (in.)	5 1/2
Lab	Size	Area	1.1.1.1	Date	Date	Age	Load	Load	Fracture	Air Temp. (F.)	85
No.	(în.)	(sq. in.)	Condition	Cast	Tested	Days	(lbs.)	(psi.)	Туре	Conc Temp (F)	83
P383	4.00 × 8.00	12.57	Good	07/10/19	07/17/19	7	65,000	5,170	2	Truck No.	49
P384	4.00 x 8.00	12.57	Good	07/10/19	07/24/19	14 28	72,500	5,770	1	Ticket No.	8951
P385	4.00 x 8.00	12.57	Good	07/10/19	08/07/19	28	85,500	6,800	2	Time	10:45
P386 P387	4.00 x 8.00 4.00 x 8.00	12.57	Good	07/10/19	08/07/19	28	82,000	6,520	1	Unit Wt Ibs/cu ft	
										Air Content (%)	4.5
						_					
GENE	RAL REMARKS:	Cylind	lers rece.	ived on 0'	7/16/2019		1.000	and the second se	1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 - 1990 -	Travel	
1	tor				Time		IIS			Time	
Inspec Name											
Name	t Penn				No	6.0	0				

Type 1 **Reasonably well-formed** cones on both ends, less than 1 in. [25 mm] of cracking throught caps



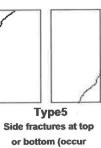
Well-formed cone on one end, vertical cracks running through caps, no well-defined cone on other end

YIL Type 3 **Columner vertical** cracking through



Type 4 **Diagonal fracture** with no cracking through ends; tap

Type 1



commonly with

unbonded caps)

Type 6 Similar to Type 5

but end of cylinder is pointed



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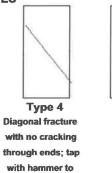
Com	pressive Stro	ength R	leport - C	oncrete		Repo	rt Date	07-19-	2019		
						Repo	rt No.	51			
	Distribut			Job Number		23158					
						Proje	ct	Middlebo	orough H	igh School Proje	ct 71
								East Gro	ove St.,	Middleborough,	MA
						Contr	actor	Fontaine	Brothe	rs, Inc	
						Conc	rete Co.		ix Servi		
		DONE /	00000				1 120020 100		_		
_	FIELD TESTS							143 C-3	L064 C-	-231	
ALL (COMPRESSIV	'E STRE	NGTH TE	STS DON	E ACCOR	DING	TO AS	ГМ: С-	39 C-1	231	
CLAS	SS CONCRET	E: 5000)# 3/4"			No. C)f Sets:	1	CUBI	C YARDS: 33	
SET 1	LOCATION:	SOG; S	oftball F	ield Dugo	ut						
							Total	Unit		Slump (in.)	5 1/2
Lab	Size	Area		Date	Date	Age	Load	Load	Fracture	Air Temp. (F.)	66
No.	(in.)	(sq. in.)	Condition	Cast	Tested	Days	(ibs.)	(psi.)	Туре	Conc Temp (F)	84
S585	4.00 x 8.00	12.57	Good	07/19/19	07/26/19	7	66,500	5,290	1	Truck No.	49
S586	4.00 x 8.00	12.57	Good	07/19/19	08/02/19	14	78,000	6,210	2	Ticket No.	9776
S587	4.00 x 8.00	12.57	Good	07/19/19	08/16/19	28		7,960	1	Time	7:30
S588	4.00 x 8.00	12.57	Good	07/19/19	08/16/19		101,000	8,040	2	Unit Wt Ibs/cu ft	
S589	4.00 x 8.00	12.57	Good	07/19/19	08/16/19	28	99,000	7,880	1	Air Content (%)	4.6
GENE Inspec Name	RAL REMARKS: tor	Cylind	ders Recei	ived 7-24	-19 Premiu Time	m Ho	urs			Travel Time	
Lamon	t Penn				No						

Type 1 Reasonably well-formed cones on both ends, less than 1 in. [25 mm] of cracking throught caps



Type 2 Well-formed cone on one end, vertical cracks running through caps, no well-defined cone on other end

Type 3 **Columner vertical** cracking through both ends, no well-formed cones



distinguish from Type 1

1 1 Type5 Side fractures at top or bottom (occur commonly with

unbonded caps)



Type 6 Similar to Type 5 but end of cylinder is pointed