



**AGGREGATE
& CONCRETE
TESTING, LLC**

TO ALL CLIENTS:

To assist you in obtaining the building permit from the NYC Department of Buildings, please find the TR-3P and Mix Design submittal procedure that must be followed.

Aggregate and Concrete Testing, LLC (ACT) is licensed as an Approved Fabricator (License No. 85) to prepare and submit concrete mix designs to the New York City Department of Buildings in accordance with section 1704.2.2 of the 2008 NYC Building Code.

As this program is a new initiative of the NYC Department of Buildings, it is important to note that the TR-3P and Mix Design Forms must be sent to an alternate address for approval in order to make sure the application is processed properly and expeditiously. (See Item 4 on procedure).

If you have any questions, please contact us. Thank you.

Sincerely,

AGGREGATE & CONCRETE TESTING, LLC.

Kenneth Krautheim
Technical Director



**AGGREGATE
& CONCRETE
TESTING, LLC**

TR-3P Form Submittal Procedure

1. Mix designs and TR-3P forms are prepared and signed by Aggregate and Concrete Testing, LLC (ACT, LLC)
2. The TR-3P form and Mix Design Forms will be returned to the Contractor (or Expeditor) to be signed by all remaining appropriate parties.
3. After these signatures are obtained, the Contractor (or Expeditor) shall affix the appropriate NYC Building Departments Bar Code Sticker.
4. **All properly signed documentation shall then be mailed directly to the attention of the following person ONLY:**

**Mr. Joseph Ackroyd
New York City Department of Buildings
280 Broadway, 7th Floor
New York, NY 10007**

Do Not send these forms to the standard NYC Building Department address as this will delay your project approval.

5. Please send a final executed copy to ACT, LLC for our records.

If you have any questions regarding this procedure, please contact us. Thank you.

Sincerely,

AGGREGATE & CONCRETE TESTING, LLC

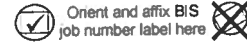
**Ken Krautheim
Technical Director**



TR3P: Technical Report
Approved Producer
Concrete Design Mix

Must be typewritten.

121324290



The TR3P is required prior to permit

1 Location Information Required for all applications.

House No(s) 513 Street Name West 30th Avenue
Borough Manhattan Block 702 Lot 50 BIN 1012456 CB No. 104

2 Applicant Information - Approved Producer Required for all applications (QM = Producer Quality Manager).

QM Last Name Shevchenko QM First Name Gleb QM Middle Initial
Business Name Aggregate and Concrete Testing, LLC (Subsidiary Ferrara Bros) Business Telephone (347) 532-2992
Business Address 120-05 31st Avenue Business Fax (718) 539-1998
City Flushing State NY Zip 11354 Mobile Telephone (914) 484-7330
E-Mail gshevchenko@actlabny.com
Approved Producer's Identification Number: 85

3 Strength Requirements and Design Required for all applications. Attach Trial Mixture Reports and/or Field Experience Results.

				Mix #1	Mix #2	Mix #3
Method of Determining Proportions (Trial Mixture and/or Field Experience)				<input checked="" type="checkbox"/> Trial Mix <input type="checkbox"/> Field Experience	<input type="checkbox"/> Trial Mix <input type="checkbox"/> Field Experience	<input type="checkbox"/> Trial Mix <input type="checkbox"/> Field Experience
Date Trial Mixture Performed				03-29-12		
Specified Strength (f _c)				10000 PSI	PSI	PSI
Required Strength (f _{cr})				11700 PSI	PSI	PSI
Specified Test Age (Days)				56		
	Material Type	Material Source	ASTM Standard			
Cementitious #1 (lbs)	Type I/II	Lafarge	ASTM C-150	385 lbs.	lbs.	lbs.
Cementitious #2 (lbs)	Fly ASH	STI/ProAsh	ASTM C-618	125 lbs.	lbs.	lbs.
Cementitious #3 (lbs)	SLAG	Holcim	ASTM C-989	340 lbs.	lbs.	lbs.
Fine Aggregate (lbs)	Long Island Natural	Roanoke S&G	ASTM C-33	1130 lbs.	lbs.	lbs.
Coarse Aggregate #1 (lbs)	#8 Stone	Tilcon	ASTM C-33	1800 lbs.	lbs.	lbs.
Coarse Aggregate #2 (lbs)				lbs.	lbs.	lbs.
Coarse Aggregate #3 (lbs)				lbs.	lbs.	lbs.
Amount of Water (gals)	Water	NYC DEP	Potable	32.2 gals.	gals.	gals.
Admixture #1 (oz)	Rheotec Z-60	BASF	ASTM C-494	30 oz	oz	oz
Admixture #2 (oz)	HRWR-Glenium 7500	BASF	ASTM C-494	88 oz	oz	oz
Admixture #3 (oz)	Delvo Stabilizer	BASF	ASTM C-494	17 oz	oz	oz
Other						
Water-Cement Ratio				.32		
Slump/Spread (inches ± tolerance)				24 ± 3	±	±
Air Content (% ± tolerance)				3 %±	%±	%±
Unit Weight (lbs./ft ³)				150 lbs./ft ³	lbs./ft ³	lbs./ft ³

4 Quality Manager's Statement and Signature *Required for all applications.*

I hereby state that the information reported in section 3 above is correct and complete and that the tests reported in section 3 above were performed under my supervision in accordance with all applicable New York City Construction Code provisions, and Departmental rules.

Falsification of any statement is a misdemeanor and is punishable by a fine or imprisonment, or both.

It is unlawful to give to a city employee, or for a city employee to accept, any benefit, monetary or otherwise, either as a gratuity for properly performing the job or in exchange for special consideration. Violation is punishable by imprisonment or fine or both.

Name (print) **Gleb Shevchenko**Title **Quality Control Manager**

Signature

*Gleb Shevchenko*Date **10-16-12****5 Concrete Producer's Statement and Signature** *Required for all applications. Must be filled out by Owner of Production Facility.*

I certify that the material type and source specified in section 3 above are available at my facility and that I will use such materials to produce the concrete mix(es) specified in section 3. I further certify that I will produce and deliver such mix(es) to the project site in accordance with the applicable code provisions of the NYC construction codes and that such mix(es) are appropriate for the placement conditions for the project identified in section 1 above (BC 1905.8.2).

Name (print) **Alex Ferrara**Title **QC/QA**

Signature

*Alex Ferrara*Date **10-16-12**NRMCA Certification Expiration Date (BC 1905.8.2) **06-02-14**Business Name **Ferrara Bros. Building Materials Corp.**Business Telephone **718-939-3030**Business Address **120-05 31st Avenue**Business Fax: **718-539-1998**City **Flushing**State **NY**Zip **11354****6 Design Applicant's Statement and Signature** *Required for all applications. Must be filled out by P.E./R.A. responsible for plans.*

- ☐ I certify I have reviewed the concrete design mix(es) reported by the Approved Concrete Producer and found them to be in compliance with the approved construction documents (BC 1905.6.3.3).

Name (please print)

Signature

Date

P.E. / R.A. Seal (apply seal, then sign and date over seal)

7 Building Owner's Statement and Signature *Required for all applications*

Falsification of any statement is a misdemeanor and is punishable by a fine or imprisonment, or both. It is unlawful to give to a city employee, or for a city employee to accept, any benefit, monetary or otherwise, either as a gratuity for properly performing the job or in exchange for special consideration. Violation is punishable by a fine or imprisonment, or both. I understand that if I am found after hearing to have knowingly or negligently made a false statement or to have knowingly or negligently falsified or allowed to be falsified any certificate, form, signed statement, application, report or certification of the correction of a violation required under the provisions of this code or of a rule of any agency, I may be barred from filing further applications or documents with the Department.

Name (print)

Ron Wackrow

Title

Executive Vice President

Signature

Date

12/20/12**INTERNAL USE ONLY.**

Examiner Name (print)

Title

Signature

Date

06/11



CLIENT: Hayward Baker Geotechnical Construction
PROJECT: Hudson Yards Tower C
513 West 30th Street
New York, NY

DATE ISSUED: 03-29-2012
TYPE: 10,000 psi Pump
MIX #: Hayward 032912-100kPNA
PRODUCER: FERRARA BROS.

STRENGTH AT 56 DAYS (PSI)	SPREAD (IN)	AIR CONTENT (%)	W/C RATIO	UNIT WEIGHT (PCF)
10,000 +1700	24" +/- 3"	Max 3%	0.32	150.2

RECOMMENDED POINT # 3

MATERIAL	BRAND	STANDARD	SPECIFIC GRAVITY	RECOMMENDED PROPORTIONS PER CUBIC YARD
CEMENT (LBS)	La Farge Type I/II	ASTM C150	3.15	385
FLY ASH (LBS)	STI Pro Ash	ASTM C618	2.13	125
SLAG (LBS)	Holcim Grade 100	ASTM C989	2.88	340
SAND (LBS)	L.I. Natural (Roanoke)	ASTM C33	2.64	1130
STONE 1 (LBS)	# 8 Tilcon (Clinton Point)	ASTM C33	2.81	1800
WATER (LBS)	NYC POTABLE	ASTM C1602	1.00	268.0
WATER (GAL)	NYC POTABLE	ASTM C1602	1.00	32.2
ADMIX 1 (OZ)	RheoTec Z-60 (BASF)	ASTM C494	1.04	30.0
ADMIX 2 (OZ)	Glenium 7500 (BASF)	ASTM C494	1.05	88.0
ADMIX 3 (OZ)	Delvo Stabilizer (BASF)	ASTM C494	1.07	17.0

SAND GRADATION									
SAND	SIEVE SIZE	3/8"	#4	#8	#16	#30	#50	#100	F.M
	% PASS	100	97.4	92.2	82.3	53.9	13.2	1.1	2.6

STONE GRADATIONS									
SIEVE SIZE	2"	1-1/2"	1"	3/4"	1/2"	3/8"	#4	#8	#16
STONE #8					100	93.9	20.8	4.8	2.9

NOTES:

1. Adjust air-entraining admixtures and water reducing admixtures to meet specification requirements as per manufacturers recommendations and according to NYCDOB bulletin 2010-018
2. Structural Engineer of Record must approve this design mix before use on the project stated above.
3. This mix is explicitly issued to the client stated above for the project noted. Any reproduction, alteration or use by anyone other than the client is a criminal offense unless written authorization is provided by ACT, LLC.

*This mix has been reviewed by Gleb Shevchenko of ACT, LLC. *Gleb Shevchenko*

Date: 10-16-2012



AGGREGATE & CONCRETE TESTING, LLC

120-05 31st Avenue
Flushing, NY 11354
Tel: (347)-532-2992
INFO@ACTLABNY.COM

CLIENT: Hayward Baker Geotechnical
PROJECT: Hudson Yards Tower C
513 West 30th Street
New York, NY

DATE ISSUED: 03-29-2012
TYPE: 10,000 psi Pump
MIX #: Hayward 032912-100kPNA
PRODUCER: FERRARA BROS.


PSI: 10,000 +1700 AT 56 DAYS

TRIAL MIXES

POINT #	1	2	3
DATE OF TRIAL	3/29/2012	3/29/2012	3/29/2012
CEMENT (LBS)	315	350	385
FLY ASH (LBS)	105	115	125
SLAG (LBS)	280	310	340
SAND (LBS)	1340	1220	1130
STONE 1 (LBS)	1755	1775	1800
WATER(LBS)	250.0	261.0	268.0
WATER(GAL.)	30.0	31.3	32.2
ADMIX 1(OZ)	21.0	25.0	30.0
ADMIX 2(OZ)	66.0	84.0	88.0
ADMIX 3(OZ)	14.0	15.0	17.0
SLUMP (IN)	16.50	24.50	25.00
AIR (%)	3.50	1.50	1.10
TEMP (F)	69	69	70
UNIT WEIGHT(PCF)	151.2	152.4	152.8
THEOR. UNIT WEIGHT	150.0	149.5	150.2
W/C RATIO	0.36	0.34	0.32
7 DAY RESULTS(Psi)	7580	7800	8280
	7630	8310	8370
	7680	7750	8100
7 DAY AVERAGE(Psi)	7630	7953	8250
28 DAY RESULTS(Psi)	11140	11630	11460
	11310	12080	12010
	11270	11880	11560
28 DAY AVERAGE(Psi)	11240	11863	11677
56 DAY RESULTS(Psi)	12690	13450	13420
	12750	13300	13480
	12610	13170	13140
56 DAY AVERAGE(Psi)	12683	13307	13347

NOTES:

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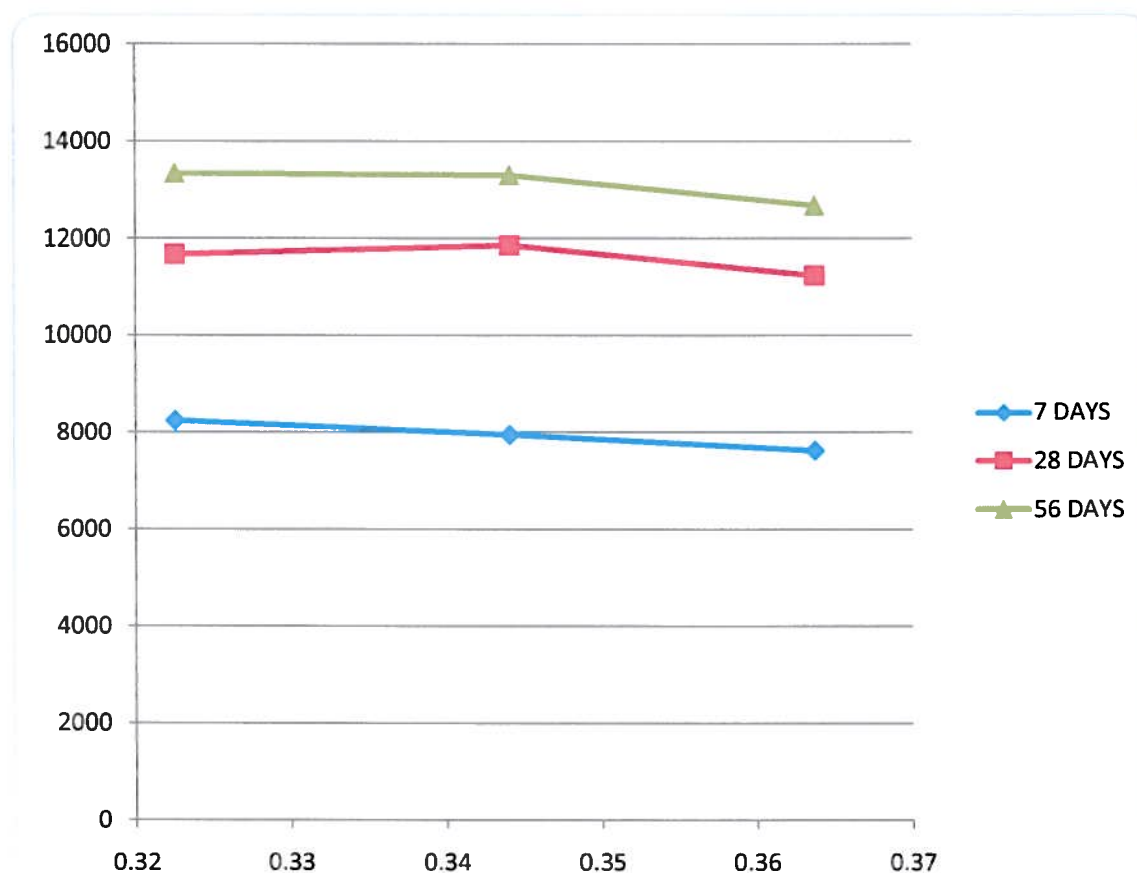


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513 West 30th Street
New York, NY

DATE ISSUED: 03-29-2012
TYPE: 10,000 psi Pump
MIX #: Hayward 032912-100kPNA
PRODUCER: FERRARA BROS.

PSI: 10,000 +1700 AT 56 DAYS

COMPRESSIVE STRENGTH VS W/C RATIOS



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TESTING, LLC

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Sincerely,

AGGREGATE & CONCRETE TESTING, LLC.

Kenneth Krautheim
Technical Director

120-05 31st Avenue, Flushing, NY 11354-2516
Office Phone: (347) 532-2992 - Email: INFO@ACTLABNY.COM



AGGREGATE
& CONCRETE
TESTING, LLC

TR-3P Form Submittal Procedure

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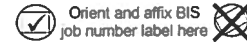
AGGREGATE & CONCRETE TESTING, LLC

Ken Krautheim
Technical Director



TR3P: Technical Report
Approved Producer
Concrete Design Mix

121324290



Must be typewritten.

The TR3P is required prior to permit

1 Location Information Required for all applications.

House No(s) 513

Street Name West 30th Avenue

Borough Manhattan

Block 702

Lot 50

BIN 1012456

CB No. 104

2 Applicant Information - Approved Producer Required for all applications (QM = Producer Quality Manager).

QM Last Name Shevchenko

QM First Name Gleb

QM Middle Initial

Business Name Aggregate and Concrete Testing, LLC (Subsidiary Ferrara Bros) Business Telephone (347) 532-2992

Business Address 120-05 31st Avenue

Business Fax (718) 539-1998

City Flushing

State NY

Zip 11354

Mobile Telephone (914) 484-7330

E-Mail gshevchenko@actlabny.com

Approved Producer's Identification Number: 85

3 Strength Requirements and Design Required for all applications. Attach Trial Mixture Reports and/or Field Experience Results.

				Mix #1	Mix #2	Mix #3
Method of Determining Proportions (Trial Mixture and/or Field Experience)				<input checked="" type="checkbox"/> Trial Mix <input type="checkbox"/> Field Experience	<input type="checkbox"/> Trial Mix <input type="checkbox"/> Field Experience	<input type="checkbox"/> Trial Mix <input type="checkbox"/> Field Experience
Date Trial Mixture Performed				03-29-12		
Specified Strength (f'_c)				10000 PSI	PSI	PSI
Required Strength (f'_d)				11700 PSI	PSI	PSI
Specified Test Age (Days)				56		
	Material Type	Material Source	ASTM Standard			
Cementitious #1 (lbs)	Type I/II	Lafarge	ASTM C-150	385 lbs.	lbs.	lbs.
Cementitious #2 (lbs)	Fly ASH	STI/ProAsh	ASTM C-618	125 lbs.	lbs.	lbs.
Cementitious #3 (lbs)	SLAG	Holcim	ASTM C-989	340 lbs.	lbs.	lbs.
Fine Aggregate (lbs)	Long Island Natural	Roanoke S&G	ASTM C-33	1130 lbs.	lbs.	lbs.
Coarse Aggregate #1 (lbs)	#8 Stone	Tilcon	ASTM C-33	1800 lbs.	lbs.	lbs.
Coarse Aggregate #2 (lbs)				lbs.	lbs.	lbs.
Coarse Aggregate #3 (lbs)				lbs.	lbs.	lbs.
Amount of Water (gals)	Water	NYC DEP	Potable	32.2 gals.	gals.	gals.
Admixture #1 (oz)	Rheotec Z-60	BASF	ASTM C-494	30 oz	oz	oz
Admixture #2 (oz)	HRWR-Glenium 7500	BASF	ASTM C-494	88 oz	oz	oz
Admixture #3 (oz)	Delvo Stabilizer	BASF	ASTM C-494	17 oz	oz	oz
Other						
Water-Cement Ratio				.32		
Slump/Spread (inches \pm tolerance)				24 \pm 3	\pm	\pm
Air Content (% \pm tolerance)				3 % \pm	% \pm	% \pm
Unit Weight (lbs./ft ³)				150 lbs./ft ³	lbs./ft ³	lbs./ft ³

4 Quality Manager's Statement and Signature *Required for all applications.*

I hereby state that the information reported in section 3 above is correct and complete and that the tests reported in section 3 above were performed under my supervision in accordance with all applicable New York City Construction Code provisions, and Departmental rules.

Falsification of any statement is a misdemeanor and is punishable by a fine or imprisonment, or both.

It is unlawful to give to a city employee, or for a city employee to accept, any benefit, monetary or otherwise, either as a gratuity for properly performing the job or in exchange for special consideration. Violation is punishable by imprisonment or fine or both.

Name (print) **Gleb Shevchenko**Title **Quality Control Manager**Signature *Gleb Shevchenko*Date **10-16-12****5 Concrete Producer's Statement and Signature** *Required for all applications. Must be filled out by Owner of Production Facility.*

I certify that the material type and source specified in section 3 above are available at my facility and that I will use such materials to produce the concrete mix(es) specified in section 3. I further certify that I will produce and deliver such mix(es) to the project site in accordance with the applicable code provisions of the NYC construction codes and that such mix(es) are appropriate for the placement conditions for the project identified in section 1 above (BC 1905.8.2).

Name (print) **Alex Ferrara**Title **QC/QA**Signature *Alex Ferrara*Date **10-16-12**NRMCA Certification Expiration Date (BC 1905.8.2) **06-02-14**Business Name **Ferrara Bros. Building Materials Corp.**Business Telephone **718-939-3030**Business Address **120-05 31st Avenue**Business Fax: **718-539-1998**City **Flushing**State **NY**Zip **11354****6 Design Applicant's Statement and Signature** *Required for all applications. Must be filled out by P.E./R.A. responsible for plans.*

- ☐ I certify I have reviewed the concrete design mix(es) reported by the Approved Concrete Producer and found them to be in compliance with the approved construction documents (BC 1905.6.3.3).

Name (please print) **Alex Brazil**Signature *Alex Brazil*Date **12/18/12**

P.E./R.A. Seal (apply seal, then sign and date over seal)

7 Building Owner's Statement and Signature *Required for all applications.*

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Name (print) **Ron Wreckrow**Title **Executive Vice President**Signature *Ron Wreckrow*Date **12/20/12****INTERNAL USE ONLY**

Examiner Name (print)

Title

Signature

Date



CLIENT: Hayward Baker Geotechnical Construction
PROJECT: Hudson Yards Tower C
513 West 30th Street
New York, NY

DATE ISSUED: 03-29-2012
TYPE: 10,000 psi Pump
MIX #: Hayward 032912-100kPNA
PRODUCER: FERRARA BROS.

STRENGTH AT 56 DAYS (PSI)	SPREAD (IN)	AIR CONTENT (%)	W/C RATIO	UNIT WEIGHT (PCF)
10,000 +1700	24" +/- 3"	Max 3%	0.32	150.2

RECOMMENDED POINT # 3

MATERIAL	BRAND	STANDARD	SPECIFIC GRAVITY	RECOMMENDED PROPORTIONS PER CUBIC YARD
CEMENT (LBS)	La Farge Type I/II	ASTM C150	3.15	385
FLY ASH (LBS)	STI Pro Ash	ASTM C618	2.13	125
SLAG (LBS)	Holcim Grade 100	ASTM C989	2.88	340
SAND (LBS)	L.I. Natural (Roanoke)	ASTM C33	2.64	1130
STONE 1 (LBS)	# 8 Tilcon (Clinton Point)	ASTM C33	2.81	1800
WATER (LBS)	NYC POTABLE	ASTM C1602	1.00	268.0
WATER (GAL)	NYC POTABLE	ASTM C1602	1.00	32.2
ADMIX 1 (OZ)	RheoTec Z-60 (BASF)	ASTM C494	1.04	30.0
ADMIX 2 (OZ)	Glenium 7500 (BASF)	ASTM C494	1.05	88.0
ADMIX 3 (OZ)	Delvo Stabilizer (BASF)	ASTM C494	1.07	17.0

SAND GRADATION									
SAND	SIEVE SIZE	3/8"	#4	#8	#16	#30	#50	#100	F.M
	% PASS	100	97.4	92.2	82.3	53.9	13.2	1.1	2.6

STONE GRADATIONS									
SIEVE SIZE	2"	1-1/2"	1"	3/4"	1/2"	3/8"	#4	#8	#16
STONE #8					100	93.9	20.8	4.8	2.9

NOTES:

1. Adjust air-entraining admixtures and water reducing admixtures to meet specification requirements as per manufacturers recommendations and according to NYCDOB bulletin 2010-018
2. Structural Engineer of Record must approve this design mix before use on the project stated above.
3. This mix is explicitly issued to the client stated above for the project noted. Any reproduction, alteration or use by anyone other than the client is a criminal offense unless written authorization is provided by ACT, LLC.

*This mix has been reviewed by Gleb Shevchenko of ACT, LLC. *Gleb Shevchenko* Date: 10-16-2012



AGGREGATE & CONCRETE TESTING, LLC

120-05 31st Avenue
Flushing, NY 11354
Tel: (347)-532-2992
INFO@ACTLABNY.COM

CLIENT: Hayward Baker Geotechnical
PROJECT: Hudson Yards Tower C
513 West 30th Street
New York, NY

DATE ISSUED: 03-29-2012
TYPE: 10,000 psi Pump
MIX #: Hayward 032912-100kPNA
PRODUCER: FERRARA BROS.

PSI: 10,000 +1700 AT 56 DAYS

TRIAL MIXES

POINT #	1	2	3
DATE OF TRIAL	3/29/2012	3/29/2012	3/29/2012
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SLAG (LBS)	280	310	340
SAND (LBS)	1340	1220	1130
STONE 1 (LBS)	1755	1775	1800
WATER (LBS)	250.0	261.0	268.0
WATER (GAL.)	30.0	31.3	32.2
ADMIX 1 (OZ)	21.0	25.0	30.0
ADMIX 2 (OZ)	66.0	84.0	88.0
ADMIX 3 (OZ)	14.0	15.0	17.0
SLUMP (IN)	16.50	24.50	25.00
AIR (%)	3.50	1.50	1.10
TEMP (F)	69	69	70
UNIT WEIGHT (PCF)	151.2	152.4	152.8
THEOR. UNIT WEIGHT	150.0	149.5	150.2
W/C RATIO	0.36	0.34	0.32
7 DAY RESULTS (PSI)	7580	7800	8280
	7630	8310	8370
	7680	7750	8100
7 DAY AVERAGE (PSI)	7630	7953	8250
28 DAY RESULTS (PSI)	11140	11630	11460
	11310	12080	12010
	11270	11880	11560
28 DAY AVERAGE (PSI)	11240	11863	11677
56 DAY RESULTS (PSI)	12690	13450	13420
	12750	13300	13480
	12610	13170	13140
56 DAY AVERAGE (PSI)	12683	13307	13347

NOTES:

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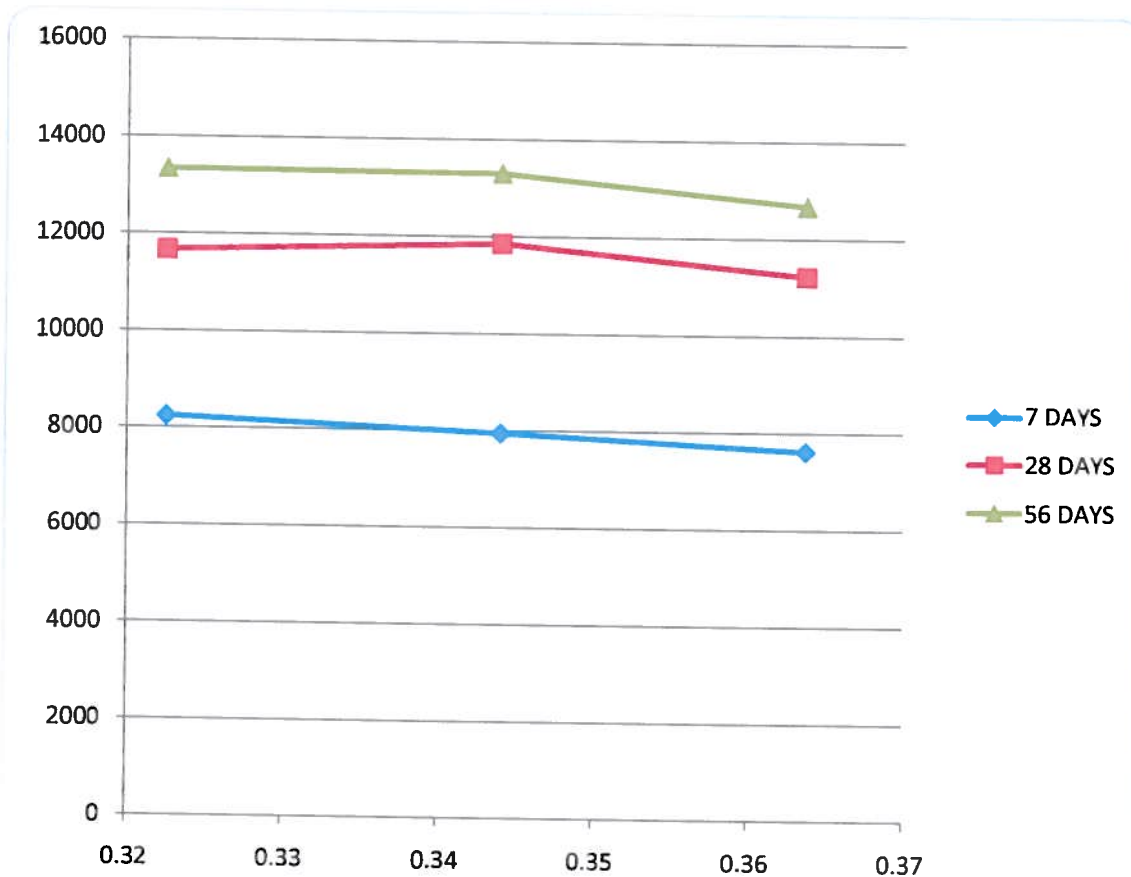


CLIENT: Hayward Baker Geotechnical
PROJECT: Hudson Yards Tower C
513 West 30th Street
New York, NY

DATE ISSUED: 03-29-2012
TYPE: 10,000 psi Pump
MIX #: Hayward 032912-100kPNA
PRODUCER: FERRARA BROS.


PSI: 10,000 +1700 AT 56 DAYS

COMPRESSIVE STRENGTH VS W/C RATIOS



NOTES:

1. Adjust air-entraining admixtures and water reducing admixtures to meet specification requirements as per manufacturers recommendations and according to NYCDOB bulletin 2010-018
2. Structural Engineer of Record must approve this design mix before use on the project stated above.
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*This mix has been reviewed by Gleb Shevchenko of ACT, LLC.  Date: 10-16-2012



AGGREGATE
& CONCRETE
TESTING, LLC

TO ALL CLIENTS:

To assist you in obtaining the building permit from the NYC Department of Buildings, please find the TR-3P and Mix Design submittal procedure that must be followed.

Aggregate and Concrete Testing, LLC (ACT) is licensed as an Approved Fabricator (License No. 85) to prepare and submit concrete mix designs to the New York City Department of Buildings in accordance with section 1704.2.2 of the 2008 NYC Building Code.

As this program is a new initiative of the NYC Department of Buildings, it is important to note that the TR-3P and Mix Design Forms must be sent to an alternate address for approval in order to make sure the application is processed properly and expeditiously. (See Item 4 on procedure).

If you have any questions, please contact us. Thank you.

Sincerely,

AGGREGATE & CONCRETE TESTING, LLC.

Kenneth Krautheim
Technical Director

120-05 31st Avenue, Flushing, NY 11354-2516
Office Phone: (347) 532-2992 - Email: INFO@ACTLABNY.COM



AGGREGATE
& CONCRETE
TESTING, LLC

TR-3P Form Submittal Procedure

1. Mix designs and TR-3P forms are prepared and signed by Aggregate and Concrete Testing, LLC (ACT, LLC)
2. The TR-3P form and Mix Design Forms will be returned to the Contractor (or Expeditor) to be signed by all remaining appropriate parties.
3. After these signatures are obtained, the Contractor (or Expeditor) shall affix the appropriate NYC Building Departments Bar Code Sticker.
4. All properly signed documentation shall then be mailed directly to the attention of the following person **ONLY**:

**Mr. Joseph Ackroyd
New York City Department of Buildings
280 Broadway, 7th Floor
New York, NY 10007**

Do Not send these forms to the standard NYC Building Department address as this will delay your project approval.

5. Please send a final executed copy to ACT, LLC for our records.

If you have any questions regarding this procedure, please contact us. Thank you.

Sincerely,

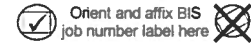
AGGREGATE & CONCRETE TESTING, LLC

Ken Krautheim
Technical Director



TR3P: Technical Report
Approved Producer
Concrete Design Mix

121324290



Must be typewritten.

The TR3P is required prior to permit

1 Location Information Required for all applications.

House No(s) 513

Street Name West 30th Avenue

Borough Manhattan

Block 702

Lot 50

BIN 1012456

CB No. 104

2 Applicant Information - Approved Producer Required for all applications (QM = Producer Quality Manager).

QM Last Name Shevchenko

QM First Name Gleb

QM Middle Initial

Business Name Aggregate and Concrete Testing, LLC (Subsidiary Ferrara Bros)

Business Telephone (347) 532-2992

Business Address 120-05 31st Avenue

Business Fax (718) 539-1998

City Flushing

State NY

Zip 11354

Mobile Telephone (914) 484-7330

E-Mail gshevchenko@actlabny.com

Approved Producer's Identification Number: 85

3 Strength Requirements and Design Required for all applications. Attach Trial Mixture Reports and/or Field Experience Results.

				Mix #1	Mix #2	Mix #3
Method of Determining Proportions (Trial Mixture and/or Field Experience)				<input checked="" type="checkbox"/> Trial Mix <input type="checkbox"/> Field Experience	<input type="checkbox"/> Trial Mix <input type="checkbox"/> Field Experience	<input type="checkbox"/> Trial Mix <input type="checkbox"/> Field Experience
Date Trial Mixture Performed				03-29-12		
Specified Strength (f'_c)				10000 PSI	PSI	PSI
Required Strength (f'_r)				11700 PSI	PSI	PSI
Specified Test Age (Days)				56		
	Material Type	Material Source	ASTM Standard			
Cementitious #1 (lbs)	Type I/II	Lafarge	ASTM C-150	385 lbs.	lbs.	lbs.
Cementitious #2 (lbs)	Fly ASH	STI/ProAsh	ASTM C-618	125 lbs.	lbs.	lbs.
Cementitious #3 (lbs)	SLAG	Holcim	ASTM C-989	340 lbs.	lbs.	lbs.
Fine Aggregate (lbs)	Long Island Natural	Roanoke S&G	ASTM C-33	1130 lbs.	lbs.	lbs.
Coarse Aggregate #1 (lbs)	#8 Stone	Tilcon	ASTM C-33	1800 lbs.	lbs.	lbs.
Coarse Aggregate #2 (lbs)				lbs.	lbs.	lbs.
Coarse Aggregate #3 (lbs)				lbs.	lbs.	lbs.
Amount of Water (gals)	Water	NYC DEP	Potable	32.2 gals.	gals.	gals.
Admixture #1 (oz)	Rheotec Z-60	BASF	ASTM C-494	30 oz	oz	oz
Admixture #2 (oz)	HRWR-Glenium 7500	BASF	ASTM C-494	88 oz	oz	oz
Admixture #3 (oz)	Delvo Stabilizer	BASF	ASTM C-494	17 oz	oz	oz
Other						
Water-Cement Ratio				.32		
Slump/Spread (inches \pm tolerance)				24 \pm 3	\pm	\pm
Air Content (% \pm tolerance)				3 % \pm	% \pm	% \pm
Unit Weight (lbs./ft ³)				150 lbs./ft ³	lbs./ft ³	lbs./ft ³

4 Quality Manager's Statement and Signature *Required for all applications.*

I hereby state that the information reported in section 3 above is correct and complete and that the tests reported in section 3 above were performed under my supervision in accordance with all applicable New York City Construction Code provisions, and Departmental rules.

Falsification of any statement is a misdemeanor and is punishable by a fine or imprisonment, or both.

It is unlawful to give to a city employee, or for a city employee to accept, any benefit, monetary or otherwise, either as a gratuity for properly performing the job or in exchange for special consideration. Violation is punishable by imprisonment or fine or both.

Name (print) **Gleb Shevchenko**Title **Quality Control Manager**

Signature

*Gleb Shevchenko*Date **10-16-12****5 Concrete Producer's Statement and Signature** *Required for all applications. Must be filled out by Owner of Production Facility.*

I certify that the material type and source specified in section 3 above are available at my facility and that I will use such materials to produce the concrete mix(es) specified in section 3. I further certify that I will produce and deliver such mix(es) to the project site in accordance with the applicable code provisions of the NYC construction codes and that such mix(es) are appropriate for the placement conditions for the project identified in section 1 above (BC 1905.8.2).

Name (print) **Alex Ferrara**Title **QC/QA**

Signature

*Alex Ferrara*Date **10-16-12**NRMCA Certification Expiration Date (BC 1905.8.2) **06-02-14**Business Name **Ferrara Bros. Building Materials Corp.**Business Telephone **718-939-3030**Business Address **120-05 31st Avenue**Business Fax: **718-539-1998**City **Flushing**State **NY**Zip **11354****6 Design Applicant's Statement and Signature** *Required for all applications. Must be filled out by P.E./R.A. responsible for plans.*

- ☐ I certify I have reviewed the concrete design mix(es) reported by the Approved Concrete Producer and found them to be in compliance with the approved construction documents (BC 1905.6.3.3).

Name (please print)

Signature



Date

12/18/12

P.E. / R.A. Seal (apply seal, then sign and date over seal)

7 Building Owner's Statement and Signature *Required for all applications.*

Falsification of any statement is a misdemeanor and is punishable by a fine or imprisonment, or both. It is unlawful to give to a city employee, or for a city employee to accept, any benefit, monetary or otherwise, either as a gratuity for properly performing the job or in exchange for special consideration. Violation is punishable by a fine or imprisonment, or both. I understand that if I am found after hearing to have knowingly or negligently made a false statement or to have knowingly or negligently falsified or allowed to be falsified any certificate, form, signed statement, application, report or certification of the correction of a violation required under the provisions of this code or of a rule of any agency, I may be barred from filing further applications or documents with the Department.

Name (print)

Ron Wackrow

Title

Executive Vice President

Signature

Ron Wackrow

Date

*12/20/12***INTERNAL USE ONLY.**

Examiner Name (print)

Title

Signature

Date



CLIENT: Hayward Baker Geotechnical Construction
PROJECT: Hudson Yards Tower C
513 West 30th Street
New York, NY

DATE ISSUED: 03-29-2012
TYPE: 10,000 psi Pump
MIX #: Hayward 032912-100kPNA
PRODUCER: FERRARA BROS.

STRENGTH AT 56 DAYS (PSI)	SPREAD (IN)	AIR CONTENT (%)	W/C RATIO	UNIT WEIGHT (PCF)
10,000 +1700	24" +/- 3"	Max 3%	0.32	150.2

RECOMMENDED POINT # 3

MATERIAL	BRAND	STANDARD	SPECIFIC GRAVITY	RECOMMENDED PROPORTIONS PER CUBIC YARD
CEMENT (LBS)	La Farge Type I/II	ASTM C150	3.15	385
FLY ASH (LBS)	STI Pro Ash	ASTM C618	2.13	125
SLAG (LBS)	Holcim Grade 100	ASTM C989	2.88	340
SAND (LBS)	L.I. Natural (Roanoke)	ASTM C33	2.64	1130
STONE 1 (LBS)	# 8 Tilcon (Clinton Point)	ASTM C33	2.81	1800
WATER (LBS)	NYC POTABLE	ASTM C1602	1.00	268.0
WATER (GAL)	NYC POTABLE	ASTM C1602	1.00	32.2
ADMIX 1 (OZ)	RheoTec Z-60 (BASF)	ASTM C494	1.04	30.0
ADMIX 2 (OZ)	Glenium 7500 (BASF)	ASTM C494	1.05	88.0
ADMIX 3 (OZ)	Delvo Stabilizer (BASF)	ASTM C494	1.07	17.0

SAND GRADATION									
SAND	SIEVE SIZE	3/8"	#4	#8	#16	#30	#50	#100	F.M
	% PASS	100	97.4	92.2	82.3	53.9	13.2	1.1	2.6

STONE GRADATIONS									
SIEVE SIZE	2"	1-1/2"	1"	3/4"	1/2"	3/8"	#4	#8	#16
STONE #8					100	93.9	20.8	4.8	2.9

NOTES:

1. Adjust air-entraining admixtures and water reducing admixtures to meet specification requirements as per manufacturers recommendations and according to NYCDOB bulletin 2010-018
2. Structural Engineer of Record must approve this design mix before use on the project stated above.
3. This mix is explicitly issued to the client stated above for the project noted. Any reproduction, alteration or use by anyone other than the client is a criminal offense unless written authorization is provided by ACT, LLC.

*This mix has been reviewed by Gleb Shevchenko of ACT, LLC.

Gleb Shevchenko

Date: 10-16-2012



AGGREGATE & CONCRETE TESTING, LLC

120-05 31st Avenue
Flushing, NY 11354
Tel: (347)-532-2992
INFO@ACTLABNY.COM

CLIENT: Hayward Baker Geotechnical
PROJECT: Hudson Yards Tower C
513 West 30th Street
New York, NY

DATE ISSUED: 03-29-2012
TYPE: 10,000 psi Pump
MIX #: Hayward 032912-100kPNA
PRODUCER: FERRARA BROS.


PSI: 10,000 +1700 AT 56 DAYS

TRIAL MIXES

POINT #	1	2	3
DATE OF TRIAL	3/29/2012	3/29/2012	3/29/2012
CEMENT (LBS)	315	350	385
FLY ASH (LBS)	105	115	125
SLAG (LBS)	280	310	340
SAND (LBS)	1340	1220	1130
STONE 1 (LBS)	1755	1775	1800
WATER (LBS)	250.0	261.0	268.0
WATER (GAL.)	30.0	31.3	32.2
ADMIX 1 (OZ)	21.0	25.0	30.0
ADMIX 2 (OZ)	66.0	84.0	88.0
ADMIX 3 (OZ)	14.0	15.0	17.0
SLUMP (IN)	16.50	24.50	25.00
AIR (%)	3.50	1.50	1.10
TEMP (F)	69	69	70
UNIT WEIGHT (PCF)	151.2	152.4	152.8
THEOR. UNIT WEIGHT	150.0	149.5	150.2
W/C RATIO	0.36	0.34	0.32
7 DAY RESULTS (PSI)	7580	7800	8280
	7630	8310	8370
	7680	7750	8100
7 DAY AVERAGE (PSI)	7630	7953	8250
28 DAY RESULTS (PSI)	11140	11630	11460
	11310	12080	12010
	11270	11880	11560
28 DAY AVERAGE (PSI)	11240	11863	11677
56 DAY RESULTS (PSI)	12690	13450	13420
	12750	13300	13480
	12610	13170	13140
56 DAY AVERAGE (PSI)	12683	13307	13347

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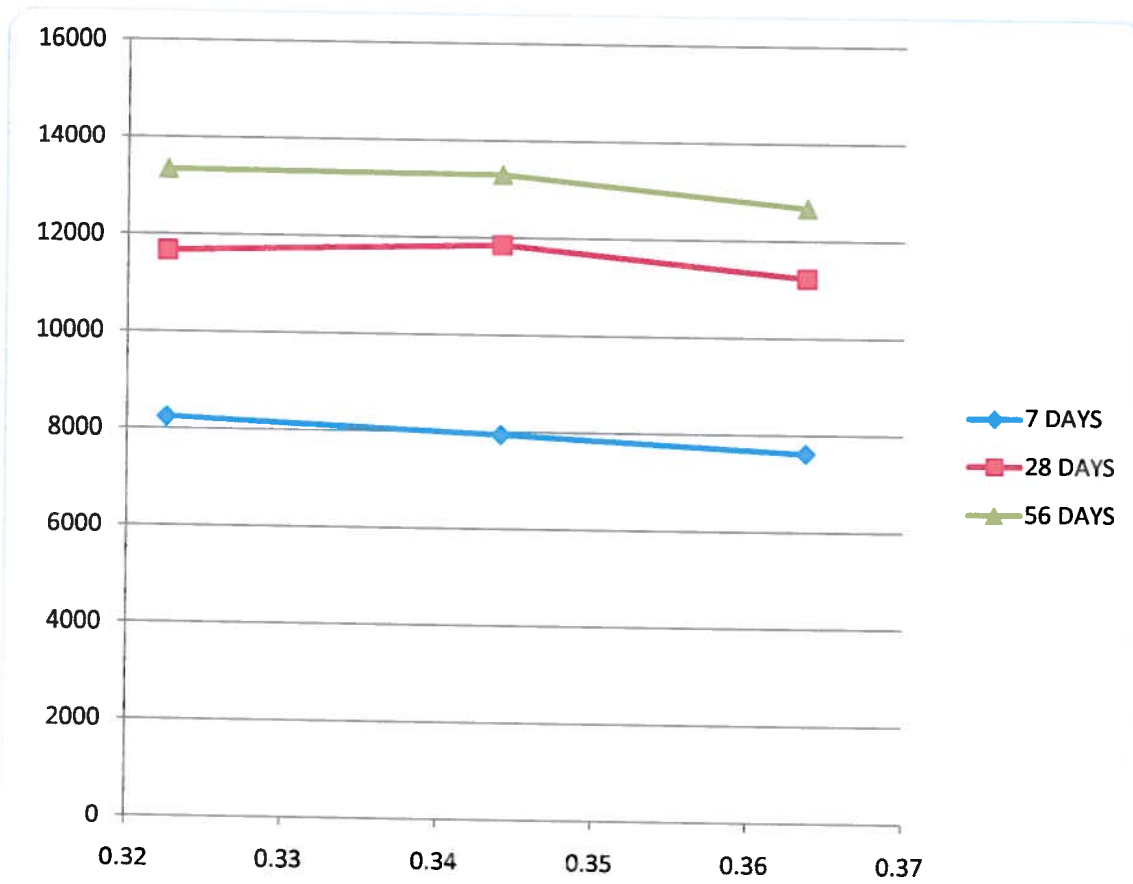


CLIENT: Hayward Baker Geotechnical
PROJECT: Hudson Yards Tower C
513 West 30th Street
New York, NY

DATE ISSUED: 03-29-2012
TYPE: 10,000 psi Pump
MIX #: Hayward 032912-100kPNA
PRODUCER: FERRARA BROS.

PSI: 10,000 +1700 AT 56 DAYS

COMPRESSIVE STRENGTH VS W/C RATIOS



NOTES:

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Flushing, NY 11354
Tel: (347)-532-2992
INFO@ACTLABNY.COM

CLIENT: Hayward Baker Geotechnical Construction
PROJECT: Hudson Yards Tower C
513 West 30th Street
New York, NY

DATE ISSUED: 8/1/2012
TYPE: 12,000 psi Pump
MIX #: Hayward 080112-120kPNA
PRODUCER: FERRARA BROS.

STRENGTH AT 56 DAYS(PSI)	SPREAD (IN)	AIR CONTENT(%)	W/C RATIO	UNIT WEIGHT(PCF)
12000+1900	25" +/- 3"	3 MAX	0.32	150.2

RECOMMENDED POINT # 3


MATERIAL	BRAND	STANDARD	SPECIFIC GRAVITY	RECOMMENDED PROPORTIONS PER CUBIC YARD
CEMENT (LBS)	La Farge Type I/II	ASTM C150	3.15	315
FLY ASH (LBS)	STI Pro Ash	ASTM C618	2.13	95
SLAG (LBS)	Holcim Grade 100	ASTM C989	2.88	520
MICRO SILICA (LBS)	Euclid (Norcem)	ASTM 1240	2.24	20
SAND (LBS)	L.I.Natural (Roanoke)	ASTM C33	2.64	1235
STONE 2 (LBS)	# 8 Tilcon (Clinton Point)	ASTM C33	2.81	1560
WATER (LBS)	NYC POTABLE	ASTM C1602	1.00	299.0
WATER (GAL)	NYC POTABLE	ASTM C1602	1.00	35.9
ADMIX 1 (OZ)	PS-1390 (BASF)	ASTM C260	1.01	42.0
ADMIX 2 (OZ)	Glenium 7500 (BASF)	ASTM C494	1.05	87.0
ADMIX 3 (OZ)	Delvo Stabilizer (BASF)	ASTM C494	1.07	40.0
ADMIX 4 (OZ)	RheoTec Z-60(BASF)	ASTM C494	1.04	40.0

SAND GRADATION									
SAND	SIEVE SIZE	3/8"	#4	#8	#16	#30	#50	#100	F.M
	% PASS	100	96.7	92.7	82.6	54	13.8	1.2	2.59

STONE GRADATIONS									
SIEVE SIZE	2"	1-1/2"	1"	3/4"	1/2"	3/8"	#4	#8	#16
STONE #8					100	97.4	40.1	5.6	1.6

NOTES:

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Flushing, NY 11354
Tel: (347)-532-2992
INFO@ACTLABNY.COM

CLIENT: Hayward Baker Geotechnical Construction
PROJECT: Hudson Yards Tower C
513 West 30th Street
New York, NY

DATE ISSUED: 8/1/2012
TYPE: 12,000 psi Pump
MIX #: Hayward 080112-120kPNA
PRODUCER: FERRARA BROS.

PSI: 12000+1900 AT 56 DAYS

TRIAL MIXES

POINT #	1	2	3
DATE OF TRIAL	8/1/2012	8/1/2012	8/1/2012
CEMENT (LBS)	323	317	315
FLY ASH (LBS)	105	104	95
SLAG (LBS)	591	579	520
MICRO SILICA (LBS)	37	35	20
SAND (LBS)	1205	1160	1235
STONE 2 (LBS)	1500	1540	1560
WATER(LBS)	289.0	300.0	299.0
WATER(GAL)	34.7	36.0	35.9
ADMIX 1(OZ)	42.0	42.0	42.0
ADMIX 2(OZ)	111.0	97.0	87.0
ADMIX 3(OZ)	53.0	50.0	40.0
ADMIX 4(OZ)	53.0	50.0	40.0
SPREAD (IN)	21.0	20.5	20.5
AIR (%)	1.90	1.90	1.60
TEMP (F)	75	74	75
UNIT WEIGHT(PCF)	150.4	149.6	150.4
THEOR. UNIT WEIGHT	150.6	150.0	150.2
W/C RATIO	0.28	0.30	0.32
7 DAY RESULTS(Psi)	10530	9920	8900
	10830	9560	8930
	10760	9610	8960
7 DAY AVERAGE(Psi)	10707	9697	8930
28 DAY RESULTS(Psi)	14450	13500	13090
	14080	13890	12770
	14150	14040	13110
28 DAY AVERAGE(Psi)	14227	13810	12990
56 DAY RESULTS(Psi)	15170	14810	13870
	15150	14790	14350
	15690	14670	14470
56 DAY AVERAGE(Psi)	15337	14757	14230

NOTES:

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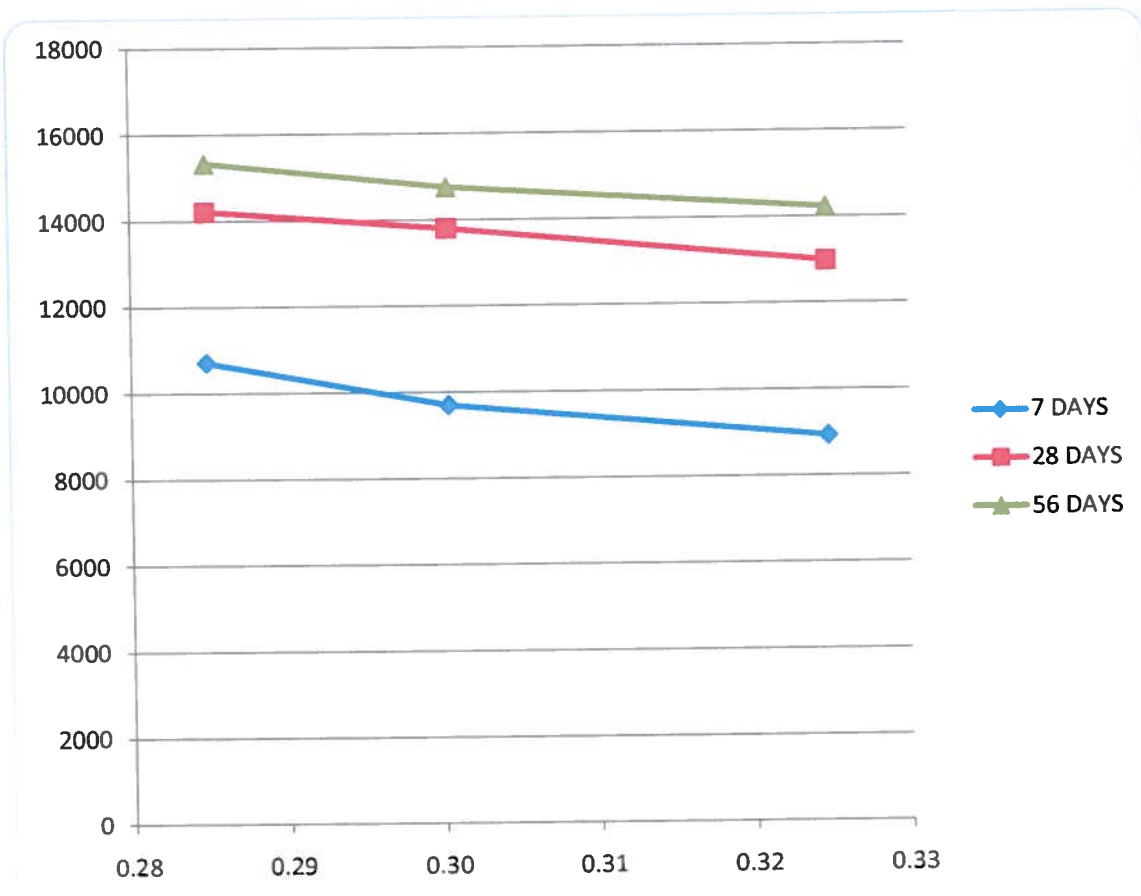


CLIENT: Hayward Baker Geotechnical Construction
PROJECT: Hudson Yards Tower C
513 West 30th Street
New York, NY

DATE ISSUED: 8/1/2012
TYPE: 12,000 psi Pump
MIX #: Hayward 080112-120kPNA
PRODUCER: FERRARA BROS.

PSI: 12000+1900 AT 56 DAYS

COMPRESSIVE STRENGTH VS W/C RATIOS



NOTES:

1. Adjust air-entraining admixtures and water reducing admixtures to meet specification requirements as per manufacturers recommendations and according to NYCDOB bulletin 2010-018
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- *This mix has been reviewed by Gleb Shevchenko of ACT, LLC. *Gleb Shevchenko* Date: 12-11-12



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PROJECT: Hudson Yards Tower C
513 West 30th Street
New York, NY

DATE ISSUED: 8/1/2012
TYPE: 12,000 psi Pump
MIX #: Hayward 080112-120kPNA
PRODUCER: FERRARA BROS.

STRENGTH AT 56 DAYS(PSI)	SPREAD (IN)	AIR CONTENT(%)	W/C RATIO	UNIT WEIGHT(PCF)
12000+1900	25" +/- 3"	3 MAX	0.32	150.2

RECOMMENDED POINT # 3

MATERIAL	BRAND	STANDARD	SPECIFIC GRAVITY	RECOMMENDED PROPORTIONS PER CUBIC YARD
CEMENT (LBS)	La Farge Type I/II	ASTM C150	3.15	315
FLY ASH (LBS)	STI Pro Ash	ASTM C618	2.13	95
SLAG (LBS)	Holcim Grade 100	ASTM C989	2.88	520
MICRO SILICA (LBS)	Euclid (Norcem)	ASTM 1240	2.24	20
SAND (LBS)	L.I.Natural (Roanoke)	ASTM C33	2.64	1235
STONE 2 (LBS)	# 8 Tilcon (Clinton Point)	ASTM C33	2.81	1560
WATER (LBS)	NYC POTABLE	ASTM C1602	1.00	299.0
WATER (GAL)	NYC POTABLE	ASTM C1602	1.00	35.9
ADMIX 1 (OZ)	PS-1390 (BASF)	ASTM C260	1.01	42.0
ADMIX 2 (OZ)	Glenium 7500 (BASF)	ASTM C494	1.05	87.0
ADMIX 3 (OZ)	Delvo Stabilizer (BASF)	ASTM C494	1.07	40.0
ADMIX 4 (OZ)	RheoTec Z-60(BASF)	ASTM C494	1.04	40.0

SAND GRADATION									
SAND	SIEVE SIZE	3/8"	#4	#8	#16	#30	#50	#100	F.M
	% PASS	100	96.7	92.7	82.6	54	13.8	1.2	2.59

STONE GRADATIONS									
SIEVE SIZE	2"	1-1/2"	1"	3/4"	1/2"	3/8"	#4	#8	#16
STONE #8					100	97.4	40.1	5.6	1.6

NOTES:

1. Adjust air-entraining admixtures and water reducing admixtures to meet specification requirements as per manufacturers recommendations and according to NYCDOB bulletin 2010-018
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Tel: (347)-532-2992
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CLIENT: Hayward Baker Geotechnical Construction
PROJECT: Hudson Yards Tower C
513 West 30th Street
New York, NY

DATE ISSUED: 8/1/2012
TYPE: 12,000 psi Pump
MIX #: Hayward 080112-120kPNA
PRODUCER: FERRARA BROS.

PSI: 12000+1900 AT 56 DAYS

TRIAL MIXES

POINT #	1	2	3
DATE OF TRIAL	8/1/2012	8/1/2012	8/1/2012
CEMENT (LBS)	323	317	315
FLY ASH (LBS)	105	104	95
SLAG (LBS)	591	579	520
MICRO SILICA (LBS)	37	35	20
SAND (LBS)	1205	1160	1235
STONE 2 (LBS)	1500	1540	1560
WATER(LBS)	289.0	300.0	299.0
WATER(GAL.)	34.7	36.0	35.9
ADMIX 1(OZ)	42.0	42.0	42.0
ADMIX 2(OZ)	111.0	97.0	87.0
ADMIX 3(OZ)	53.0	50.0	40.0
ADMIX 4(OZ)	53.0	50.0	40.0
SPREAD (IN)	21.0	20.5	20.5
AIR (%)	1.90	1.90	1.60
TEMP (F)	75	74	75
UNIT WEIGHT(PCF)	150.4	149.6	150.4
THEOR. UNIT WEIGHT	150.6	150.0	150.2
W/C RATIO	0.28	0.30	0.32
7 DAY RESULTS(Psi)	10530	9920	8900
	10830	9560	8930
	10760	9610	8960
7 DAY AVERAGE(Psi)	10707	9697	8930
28 DAY RESULTS(Psi)	14450	13500	13090
	14080	13890	12770
	14150	14040	13110
28 DAY AVERAGE(Psi)	14227	13810	12990
56 DAY RESULTS(Psi)	15170	14810	13870
	15150	14790	14350
	15690	14670	14470
56 DAY AVERAGE(Psi)	15337	14757	14230

NOTES:

1. Adjust air-entraining admixtures and water reducing admixtures to meet specification requirements as per manufacturers recommendations and according to NYCDob bulletin 2010-018
2. Structural Engineer of Record must approve this design mix before use on the project stated above.
3. This mix is explicitly issued to the client stated above for the project noted. Any reproduction, alteration or use by anyone other than the client is a criminal offense unless written authorization is provided by ACT, LLC.

*This mix has been reviewed by Gleb Shevchenko of ACT, LLC.  Date: 12-11-12

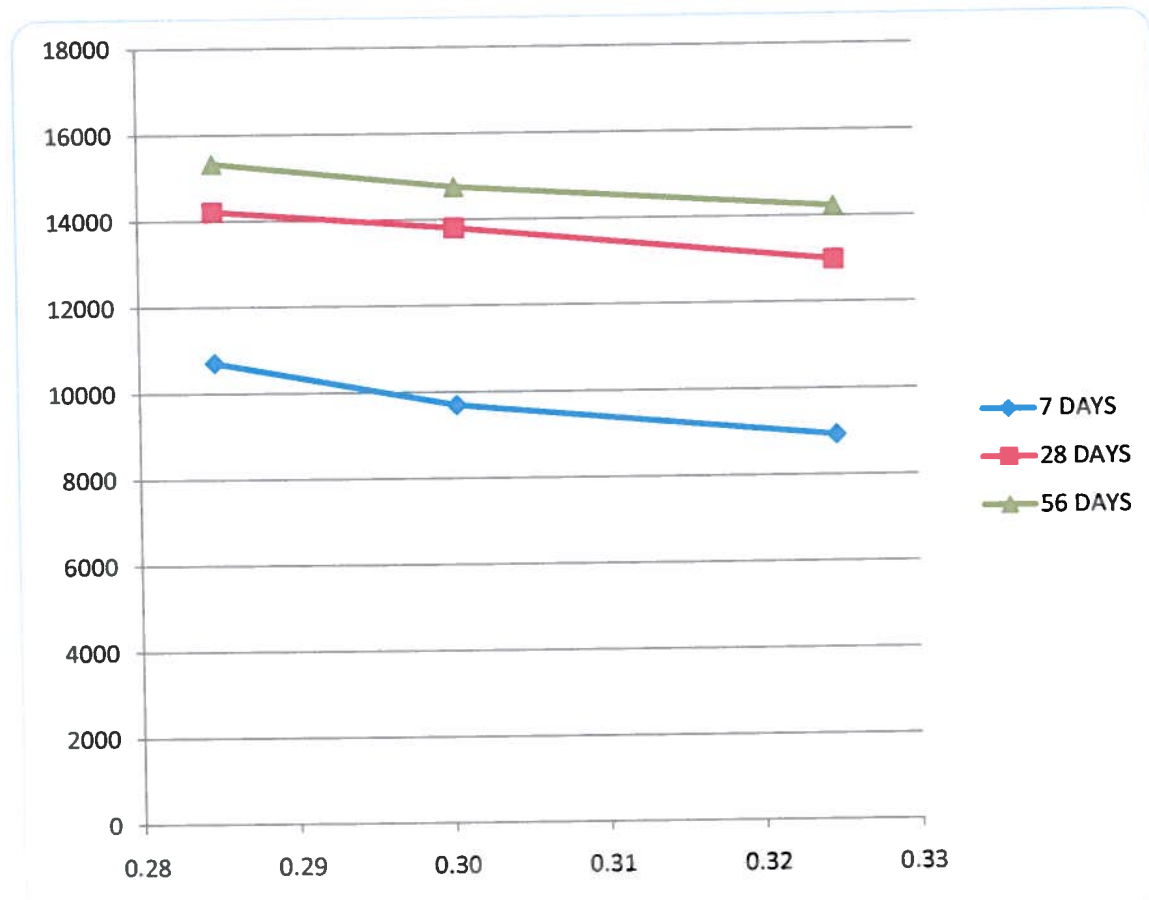


CLIENT: Hayward Baker Geotechnical Construction
PROJECT: Hudson Yards Tower C
513 West 30th Street
New York, NY


DATE ISSUED: 8/1/2012
TYPE: 12,000 psi Pump
MIX #: Hayward 080112-120kPNA
PRODUCER: FERRARA BROS.

PSI: 12000+1900 AT 56 DAYS

COMPRESSIVE STRENGTH VS W/C RATIOS



NOTES:

1. Adjust air-entraining admixtures and water reducing admixtures to meet specification requirements as per manufacturers recommendations and according to NYCDOB bulletin 2010-018
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- *This mix has been reviewed by Gleb Shevchenko of ACT, LLC.  Date: 12-11-12



AGGREGATE & CONCRETE TESTING, LLC

120-05 31st Avenue
Flushing, NY 11354
Tel: (347)-532-2992
INFO@ACTLABNY.COM

CLIENT: Hayward Baker Geotechnical Construction
PROJECT: Hudson Yards Tower C
513 West 30th Street
New York, NY

DATE ISSUED: 8/1/2012
TYPE: 12,000 psi Pump
MIX #: Hayward 080112-120kPNA
PRODUCER: FERRARA BROS.

STRENGTH AT 56 DAYS(PSI)	SPREAD (IN)	AIR CONTENT(%)	W/C RATIO	UNIT WEIGHT(PCF)
12000+1900	25" +/- 3"	3 MAX	0.32	150.2

RECOMMENDED POINT # 3

MATERIAL	BRAND	STANDARD	SPECIFIC GRAVITY	RECOMMENDED PROPORTIONS PER CUBIC YARD
CEMENT (LBS)	La Farge Type I/II	ASTM C150	3.15	315
FLY ASH (LBS)	STI Pro Ash	ASTM C618	2.13	95
SLAG (LBS)	Holcim Grade 100	ASTM C989	2.88	520
MICRO SILICA (LBS)	Euclid (Norbem)	ASTM 1240	2.24	20
SAND (LBS)	L.I.Natural (Roanoke)	ASTM C33	2.64	1235
STONE 2 (LBS)	# 8 Tilcon (Clinton Point)	ASTM C33	2.81	1560
WATER (LBS)	NYC POTABLE	ASTM C1602	1.00	299.0
WATER (GAL)	NYC POTABLE	ASTM C1602	1.00	35.9
ADMIX 1 (OZ)	PS-1390 (BASF)	ASTM C260	1.01	42.0
ADMIX 2 (OZ)	Glenium 7500 (BASF)	ASTM C494	1.05	87.0
ADMIX 3 (OZ)	Delvo Stabilizer (BASF)	ASTM C494	1.07	40.0
ADMIX 4 (OZ)	RheoTec Z-60(BASF)	ASTM C494	1.04	40.0

SAND GRADATION									
SAND	SIEVE SIZE	3/8"	#4	#8	#16	#30	#50	#100	F.M
	% PASS	100	96.7	92.7	82.6	54	13.8	1.2	2.59

STONE GRADATIONS									
SIEVE SIZE	2"	1-1/2"	1"	3/4"	1/2"	3/8"	#4	#8	#16
STONE #8					100	97.4	40.1	5.6	1.6

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513 West 30th Street
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DATE ISSUED: 8/1/2012
TYPE: 12,000 psi Pump
MIX #: Hayward 080112-120kPNA
PRODUCER: FERRARA BROS.

PSI: 12000+1900 AT 56 DAYS

TRIAL MIXES

POINT #	1	2	3
DATE OF TRIAL	8/1/2012	8/1/2012	8/1/2012
CEMENT (LBS)	323	317	315
FLY ASH (LBS)	105	104	95
SLAG (LBS)	591	579	520
MICRO SILICA (LBS)	37	35	20
SAND (LBS)	1205	1160	1235
STONE 2 (LBS)	1500	1540	1560
WATER(LBS)	289.0	300.0	299.0
WATER(GAL.)	34.7	36.0	35.9
ADMIX 1(OZ)	42.0	42.0	42.0
ADMIX 2(OZ)	111.0	97.0	87.0
ADMIX 3(OZ)	53.0	50.0	40.0
ADMIX 4(OZ)	53.0	50.0	40.0
SPREAD (IN)	21.0	20.5	20.5
AIR (%)	1.90	1.90	1.60
TEMP (F)	75	74	75
UNIT WEIGHT(PCF)	150.4	149.6	150.4
THEOR. UNIT WEIGHT	150.6	150.0	150.2
W/C RATIO	0.28	0.30	0.32
7 DAY RESULTS(Psi)	10530	9920	8900
	10830	9560	8930
	10760	9610	8960
7 DAY AVERAGE(Psi)	10707	9697	8930
28 DAY RESULTS(Psi)	14450	13500	13090
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Gleb Shevchenko

Date: 12-11-12

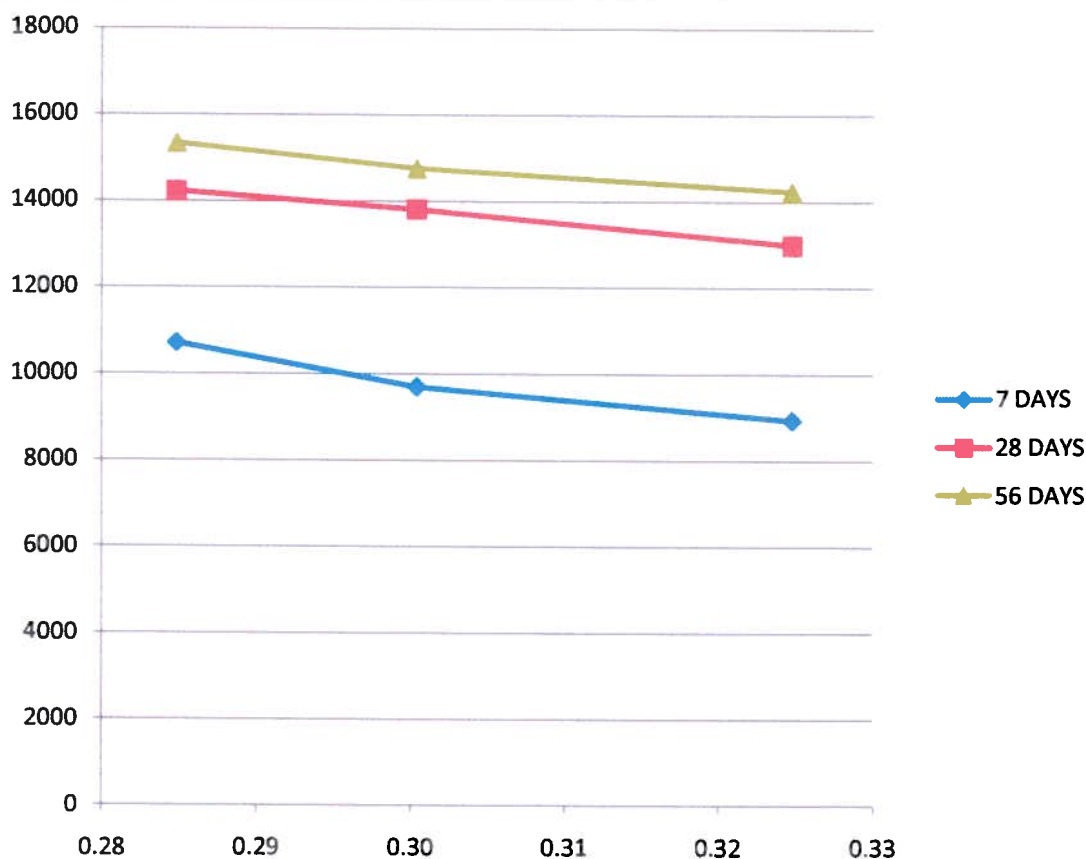


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COMPRESSIVE STRENGTH VS W/C RATIOS



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*This mix has been reviewed by Gleb Shevchenko of ACT, LLC.  Date: 12-11-12



TO ALL CLIENTS:

To assist you in obtaining the building permit from the NYC Department of Buildings, please find the TR-3P and Mix Design submittal procedure that must be followed.

Aggregate and Concrete Testing, LLC (ACT) is licensed as an Approved Fabricator (License No. 85) to prepare and submit concrete mix designs to the New York City Department of Buildings in accordance with section 1704.2.2 of the 2008 NYC Building Code.

As this program is a new initiative of the NYC Department of Buildings, it is important to note that the TR-3P and Mix Design Forms must be sent to an alternate address for approval in order to make sure the application is processed properly and expeditiously. (See Item 4 on procedure).

If you have any questions, please contact us. Thank you.

Sincerely,

AGGREGATE & CONCRETE TESTING, LLC.

Kenneth Krautheim
Technical Director

120-05 31st Avenue, Flushing, NY 11354-2516
Office Phone: (347) 532-2992 - Email: INFO@ACTLABNY.COM



TR-3P Form Submittal Procedure

1. Mix designs and TR-3P forms are prepared and signed by Aggregate and Concrete Testing, LLC (ACT, LLC)
2. The TR-3P form and Mix Design Forms will be returned to the Contractor (or Expeditor) to be signed by all remaining appropriate parties.
3. After these signatures are obtained, the Contractor (or Expeditor) shall affix the appropriate NYC Building Departments Bar Code Sticker.
4. **All properly signed documentation shall then be mailed directly to the attention of the following person ONLY:**

**Mr. Joseph Ackroyd
New York City Department of Buildings
280 Broadway, 7th Floor
New York, NY 10007**

Do Not send these forms to the standard NYC Building Department address as this will delay your project approval.

5. Please send a final executed copy to ACT, LLC for our records.

If you have any questions regarding this procedure, please contact us. Thank you.

Sincerely,

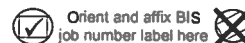
AGGREGATE & CONCRETE TESTING, LLC

**Ken Krautheim
Technical Director**



TR3P: Technical Report
Approved Producer
Concrete Design Mix

121324290



Must be typewritten.

The TR3P is required prior to permit

1 Location Information Required for all applications.

House No(s) 513

Street Name West 30th Avenue

Borough Manhattan

Block 702

Lot 50

BIN 1012456

CB No. 104

2 Applicant Information - Approved Producer Required for all applications (QM = Producer Quality Manager).

QM Last Name Shevchenko

QM First Name Gleb

QM Middle Initial

Business Name Aggregate and Concrete Testing, LLC (Subsidiary Ferrara Bros)

Business Telephone (347) 532-2992

Business Address 120-05 31st Avenue

Business Fax (718) 539-1998

City Flushing

State NY

Zip 11354

Mobile Telephone (914) 484-7330

E-Mail gshevchenko@actlabny.com

Approved Producer's Identification Number: 85

3 Strength Requirements and Design Required for all applications. Attach Trial Mixture Reports and/or Field Experience Results.

				Mix #1	Mix #2	Mix #3
Method of Determining Proportions (Trial Mixture and/or Field Experience)				<input checked="" type="checkbox"/> Trial Mix	<input type="checkbox"/> Trial Mix	<input type="checkbox"/> Trial Mix
				<input type="checkbox"/> Field Experience	<input type="checkbox"/> Field Experience	<input type="checkbox"/> Field Experience
Date Trial Mixture Performed				08-01-12		
Specified Strength (f'_c)				12000 PSI	PSI	PSI
Required Strength (f'_cr)				13900 PSI	PSI	PSI
Specified Test Age (Days)				56		
	Material Type	Material Source	ASTM Standard			
Cementitious #1 (lbs)	Type I/II	Lafarge	ASTM C-150	315 lbs.	lbs.	lbs.
Cementitious #2 (lbs)	Fly ASH	STI/ProAsh	ASTM C-618	95 lbs.	lbs.	lbs.
Cementitious #3 (lbs)	SLAG	Holcim	ASTM C-989	520 lbs.	lbs.	lbs.
Fine Aggregate (lbs)	Long Island Natural	Roanoke S&G	ASTM C-33	1235 lbs.	lbs.	lbs.
Coarse Aggregate #1 (lbs)	#8 Stone	Tilcon	ASTM C-33	1560 lbs.	lbs.	lbs.
Coarse Aggregate #2 (lbs)				lbs.	lbs.	lbs.
Coarse Aggregate #3 (lbs)				lbs.	lbs.	lbs.
Amount of Water (gals)	Water	NYC DEP	Potable	35.9 gals.	gals.	gals.
Admixture #1 (oz)	PS - 1390	BASF	ASTM C-260	42 oz	oz	oz
Admixture #2 (oz)	HRWR-Glenium 7500	BASF	ASTM C-494	87 oz	oz	oz
Admixture #3 (oz)	Delvo Stabilizer	BASF	ASTM C-494	40 oz	oz	oz
Other	Rheotec Z-60	BASF	ASTM C-494	40 oz		
Water-Cement Ratio				.32		
Slump/Spread (inches \pm tolerance)				25 \pm 3	\pm	\pm
Air Content (% \pm tolerance)				3 % \pm	% \pm	% \pm
Unit Weight (lbs./ft ³)				150 lbs./ft ³	lbs./ft ³	lbs./ft ³

* CEMENTITIOUS #4 (LBS)

MICRO SILICA

EUCLID (NORCEM)

ASTM C-1240

20 LBS

4 Quality Manager's Statement and Signature *Required for all applications.*

I hereby state that the information reported in section 3 above is correct and complete and that the tests reported in section 3 above were performed under my supervision in accordance with all applicable New York City Construction Code provisions, and Departmental rules.

Falsification of any statement is a misdemeanor and is punishable by a fine or imprisonment, or both.

It is unlawful to give to a city employee, or for a city employee to accept, any benefit, monetary or otherwise, either as a gratuity for properly performing the job or in exchange for special consideration. Violation is punishable by imprisonment or fine or both.

Name (print) **Gleb Shevchenko**Title **Quality Control Manager**Signature *Gleb Shevchenko*Date **12-11-12****5 Concrete Producer's Statement and Signature** *Required for all applications. Must be filled out by Owner of Production Facility.*

I certify that the material type and source specified in section 3 above are available at my facility and that I will use such materials to produce the concrete mix(es) specified in section 3. I further certify that I will produce and deliver such mix(es) to the project site in accordance with the applicable code provisions of the NYC construction codes and that such mix(es) are appropriate for the placement conditions for the project identified in section 1 above (BC 1905.8.2).

Name (print) **Alex Ferrara**Title **QC/QA**Signature *Alex Ferrara*Date **12-11-12**NRMCA Certification Expiration Date (BC 1905.8.2) **06-02-14**Business Name **Ferrara Bros. Building Materials Corp.**Business Telephone **718-939-3030**Business Address **120-05 31st Avenue**Business Fax: **718-539-1998**City **Flushing**State **NY**Zip **11354****6 Design Applicant's Statement and Signature** *Required for all applications. Must be filled out by P.E./R.A. responsible for plans.*

☐ I certify I have reviewed the concrete design mix(es) reported by the Approved Concrete Producer and found them to be in compliance with the approved construction documents (BC 1905.6.3.3).

Name (please print) *AIME BRAZIL*Signature *AIME BRAZIL*Date *12/18/12*

P.E. / R.A. Seal (apply seal, then sign and date over seal)

7 Building Owner's Statement and Signature *Required for all applications.*

Falsification of any statement is a misdemeanor and is punishable by a fine or imprisonment, or both. It is unlawful to give to a city employee, or for a city employee to accept, any benefit, monetary or otherwise, either as a gratuity for properly performing the job or in exchange for special consideration. Violation is punishable by a fine or imprisonment, or both. I understand that if I am found after hearing to have knowingly or negligently made a false statement or to have knowingly or negligently falsified or allowed to be falsified any certificate, form, signed statement, application, report or certification of the correction of a violation required under the provisions of this code or of a rule of any agency, I may be barred from filing further applications or documents with the Department.

Name (print) **Ron Wickrow**Title **Executive Vice President**Signature *Ron Wickrow*Date **12/20/12****INTERNAL USE ONLY**

Examiner Name (print)

Title

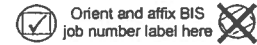
Signature

Date



TR3P: Technical Report
Approved Producer
Concrete Design Mix

121324290



Must be typewritten.

The TR3P is required prior to permit

1 Location Information Required for all applications.

House No(s) 513 Street Name West 30th Avenue

Borough Manhattan Block 702 Lot 50 BIN 1012456 CB No. 104

2 Applicant Information - Approved Producer Required for all applications (QM = Producer Quality Manager).

QM Last Name Shevchenko QM First Name Gleb QM Middle Initial

Business Name Aggregate and Concrete Testing, LLC (Subsidiary Ferrara Bros) Business Telephone (347) 532-2992

Business Address 120-05 31st Avenue Business Fax (718) 539-1998

City Flushing State NY Zip 11354 Mobile Telephone (914) 484-7330

E-Mail gshevchenko@actlabny.com

Approved Producer's Identification Number: 85

3 Strength Requirements and Design Required for all applications. Attach Trial Mixture Reports and/or Field Experience Results.

				Mix #1	Mix #2	Mix #3
Method of Determining Proportions (Trial Mixture and/or Field Experience)				<input checked="" type="checkbox"/> Trial Mix	<input type="checkbox"/> Trial Mix	<input type="checkbox"/> Trial Mix
				<input type="checkbox"/> Field Experience	<input type="checkbox"/> Field Experience	<input type="checkbox"/> Field Experience
Date Trial Mixture Performed				08-01-12		
Specified Strength (f'_c)				12000 PSI	PSI	PSI
Required Strength (f'_cr)				13900 PSI	PSI	PSI
Specified Test Age (Days)				56		
	Material Type	Material Source	ASTM Standard			
Cementitious #1 (lbs)	Type I/II	Lafarge	ASTM C-150	315 lbs.	lbs.	lbs.
Cementitious #2 (lbs)	Fly ASH	STI/ProAsh	ASTM C-618	95 lbs.	lbs.	lbs.
Cementitious #3 (lbs)	SLAG	Holcim	ASTM C-989	520 lbs.	lbs.	lbs.
Fine Aggregate (lbs)	Long Island Natural	Roanoke S&G	ASTM C-33	1235 lbs.	lbs.	lbs.
Coarse Aggregate #1 (lbs)	#8 Stone	Tilcon	ASTM C-33	1560 lbs.	lbs.	lbs.
Coarse Aggregate #2 (lbs)				lbs.	lbs.	lbs.
Coarse Aggregate #3 (lbs)				lbs.	lbs.	lbs.
Amount of Water (gals)	Water	NYC DEP	Potable	35.9 gals.	gals.	gals.
Admixture #1 (oz)	PS - 1390	BASF	ASTM C-260	42 oz	oz	oz
Admixture #2 (oz)	HRWR-Glenium 7500	BASF	ASTM C-494	87 oz	oz	oz
Admixture #3 (oz)	Delvo Stabilizer	BASF	ASTM C-494	40 oz	oz	oz
Other	Rheotec Z-60	BASF	ASTM C-494	40 oz		
Water-Cement Ratio				.32		
Slump/Spread (inches \pm tolerance)				25 \pm 3	\pm	\pm
Air Content (% \pm tolerance)				3 % \pm	% \pm	% \pm
Unit Weight (lbs./ft ³)				150 lbs./ft ³	lbs./ft ³	lbs./ft ³

* CEMENTITIOUS #4 (LBS) MICRO SILICA EUCLID (NORCEM) ASTM C-1240 20 LBS

4 Quality Manager's Statement and Signature *Required for all applications.*

I hereby state that the information reported in section 3 above is correct and complete and that the tests reported in section 3 above were performed under my supervision in accordance with all applicable New York City Construction Code provisions, and Departmental rules.

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Name (print) Gleb Shevchenko

Title Quality Control Manager

Signature

Gleb Shevchenko

Date 12-11-12

5 Concrete Producer's Statement and Signature *Required for all applications. Must be filled out by Owner of Production Facility.*

I certify that the material type and source specified in section 3 above are available at my facility and that I will use such materials to produce the concrete mix(es) specified in section 3. I further certify that I will produce and deliver such mix(es) to the project site in accordance with the applicable code provisions of the NYC construction codes and that such mix(es) are appropriate for the placement conditions for the project identified in section 1 above (BC 1905.8.2).

Name (print) Alex Ferrara

Title QC/QA

Signature

Alex Ferrara

Date 12-11-12

NRMCA Certification Expiration Date (BC 1905.8.2) 06-02-14

Business Name Ferrara Bros. Building Materials Corp.

Business Telephone 718-939-3030

Business Address 120-05 31st Avenue

Business Fax: 718-539-1998

City Flushing

State NY

Zip 11354

6 Design Applicant's Statement and Signature *Required for all applications. Must be filled out by P.E./R.A. responsible for plans.*

☐ I certify I have reviewed the concrete design mix(es) reported by the Approved Concrete Producer and found them to be in compliance with the approved construction documents (BC 1905.6.3.3).

Name (please print)

AINE BRAZIL

Signature

Aine Brazil

Date

12/18/12

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Name (print)

Ron Wickrow

Title

Executive Vice President

Signature

Ron Wickrow

Date

*12/20/12***INTERNAL USE ONLY.**

Examiner Name (print)

Title

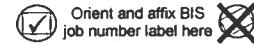
Signature

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TR3P: Technical Report
Approved Producer
Concrete Design Mix

121324290



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House No(s) 513 Street Name West 30th Avenue

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E-Mail gshevchenko@actlabny.com

Approved Producer's Identification Number: 85

3 Strength Requirements and Design Required for all applications. Attach Trial Mixture Reports and/or Field Experience Results.

				Mix #1	Mix #2	Mix #3
Method of Determining Proportions (Trial Mixture and/or Field Experience)				<input checked="" type="checkbox"/> Trial Mix <input type="checkbox"/> Field Experience	<input type="checkbox"/> Trial Mix <input type="checkbox"/> Field Experience	<input type="checkbox"/> Trial Mix <input type="checkbox"/> Field Experience
Date Trial Mixture Performed				08-01-12		
Specified Strength (f'_c)				12000 PSI	PSI	PSI
Required Strength (f'_cr)				13900 PSI	PSI	PSI
Specified Test Age (Days)				56		
	Material Type	Material Source	ASTM Standard			
Cementitious #1 (lbs)	Type I/II	Lafarge	ASTM C-150	315 lbs.	lbs.	lbs.
Cementitious #2 (lbs)	Fly ASH	STI/ProAsh	ASTM C-618	95 lbs.	lbs.	lbs.
Cementitious #3 (lbs)	SLAG	Holcim	ASTM C-989	520 lbs.	lbs.	lbs.
Fine Aggregate (lbs)	Long Island Natural	Roanoke S&G	ASTM C-33	1235 lbs.	lbs.	lbs.
Coarse Aggregate #1 (lbs)	#8 Stone	Tilcon	ASTM C-33	1560 lbs.	lbs.	lbs.
Coarse Aggregate #2 (lbs)				lbs.	lbs.	lbs.
Coarse Aggregate #3 (lbs)				lbs.	lbs.	lbs.
Amount of Water (gals)	Water	NYC DEP	Potable	35.9 gals.	gals.	gals.
Admixture #1 (oz)	PS - 1390	BASF	ASTM C-260	42 oz	oz	oz
Admixture #2 (oz)	HRWR-Glenium 7500	BASF	ASTM C-494	87 oz	oz	oz
Admixture #3 (oz)	Delvo Stabilizer	BASF	ASTM C-494	40 oz	oz	oz
Other	Rheotec Z-60	BASF	ASTM C-494	40 oz		
Water-Cement Ratio				.32		
Slump/Spread (inches \pm tolerance)				25 \pm 3	\pm	\pm
Air Content (% \pm tolerance)				3 % \pm	% \pm	% \pm
Unit Weight (lbs./ft ³)				150 lbs./ft ³	lbs./ft ³	lbs./ft ³

* CEMENTITIOUS #4 (LBS) MICRO SILICA EUCLID (NORCEM) ASTM C-1240 20 LBS

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Falsification of any statement is a misdemeanor and is punishable by a fine or imprisonment, or both.

It is unlawful to give to a city employee, or for a city employee to accept, any benefit, monetary or otherwise, either as a gratuity for properly performing the job or in exchange for special consideration. Violation is punishable by imprisonment or fine or both.

Name (print) Gleb ShevchenkoTitle Quality Control ManagerSignature *Gleb Shevchenko*Date 12-11-12**5 Concrete Producer's Statement and Signature** *Required for all applications. Must be filled out by Owner of Production Facility.*

I certify that the material type and source specified in section 3 above are available at my facility and that I will use such materials to produce the concrete mix(es) specified in section 3. I further certify that I will produce and deliver such mix(es) to the project site in accordance with the applicable code provisions of the NYC construction codes and that such mix(es) are appropriate for the placement conditions for the project identified in section 1 above (BC 1905.8.2).

Name (print) Alex FerraraTitle QC/QASignature *Alex Ferrara*Date 12-11-12NRMCA Certification Expiration Date (BC 1905.8.2) 06-02-14Business Name Ferrara Bros. Building Materials Corp.Business Telephone 718-939-3030Business Address 120-05 31st AvenueBusiness Fax: 718-539-1998City FlushingState NYZip 11354**6 Design Applicant's Statement and Signature** *Required for all applications. Must be filled out by P.E./R.A. responsible for plans.*

☐ I certify I have reviewed the concrete design mix(es) reported by the Approved Concrete Producer and found them to be in compliance with the approved construction documents (BC 1905.6.3.3).

Name (please print) AINE BRAZILSignature *AINE BRAZIL*Date 12/18/12

P.E. / R.A. Seal (apply Seal, then sign and date over seal)

7 Building Owner's Statement and Signature *Required for all applications.*

Falsification of any statement is a misdemeanor and is punishable by a fine or imprisonment, or both. It is unlawful to give to a city employee, or for a city employee to accept, any benefit, monetary or otherwise, either as a gratuity for properly performing the job or in exchange for special consideration. Violation is punishable by a fine or imprisonment, or both. I understand that if I am found after hearing to have knowingly or negligently made a false statement or to have knowingly or negligently falsified or allowed to be falsified any certificate, form, signed statement, application, report or certification of the correction of a violation required under the provisions of this code or of a rule of any agency, I may be barred from filing further applications or documents with the Department.

Name (print) Ron WackrowTitle Executive Vice PresidentSignature *Ron Wackrow*Date 6/20/12**INTERNAL USE ONLY.**

Examiner Name (print)

Title

Signature

Date