

# GRAIN SIZE DISTRIBUTION TEST DATA

1/14/2013

Client: : EQ Northeast

Date: 01/14/13

Project: : Ramapo, NJ

Location: Braen Pit (Tilcon) New York.

Depth: N/A

Sample Number: 004-13

Material Description: 3" Stone.

Liquid Limit: N/A

Plastic Limit: N/A

USCS Classification: GP

Testing Remarks: ASTM C 136, C 117, Stone.

Tested by: ZA

Checked by: HC

Material specification: D.O.T. M.01.01 # 3

## Sieve Test Data

Post #200 Wash Test Weights (grams): Dry Sample and Tare = 4854.20  
Tare Wt. = 0.00  
Minus #200 from wash = 0.9%

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer	Percent Retained	Lower Spec. Limit, %	Upper Spec. Limit, %	Deviation From Spec., %
4898.50	0.00	0.00	3 1/2"	0.00	100.0	0.0			
			3"	1135.30	76.8	23.2			
			2 1/2"	1842.50	62.4	37.6	100.0	100.0	-37.6
			2"	3080.30	37.1	62.9	90.0	100.0	-52.9
			1 1/2"	4544.70	7.2	92.8	35.0	70.0	-27.8
			1"	4809.90	1.8	98.2	0.0	15.0	
			3/4"	4830.10	1.4	98.6			
			1/2"	4830.10	1.4	98.6	0.0	5.0	
			#200	4852.20	0.9	99.1			

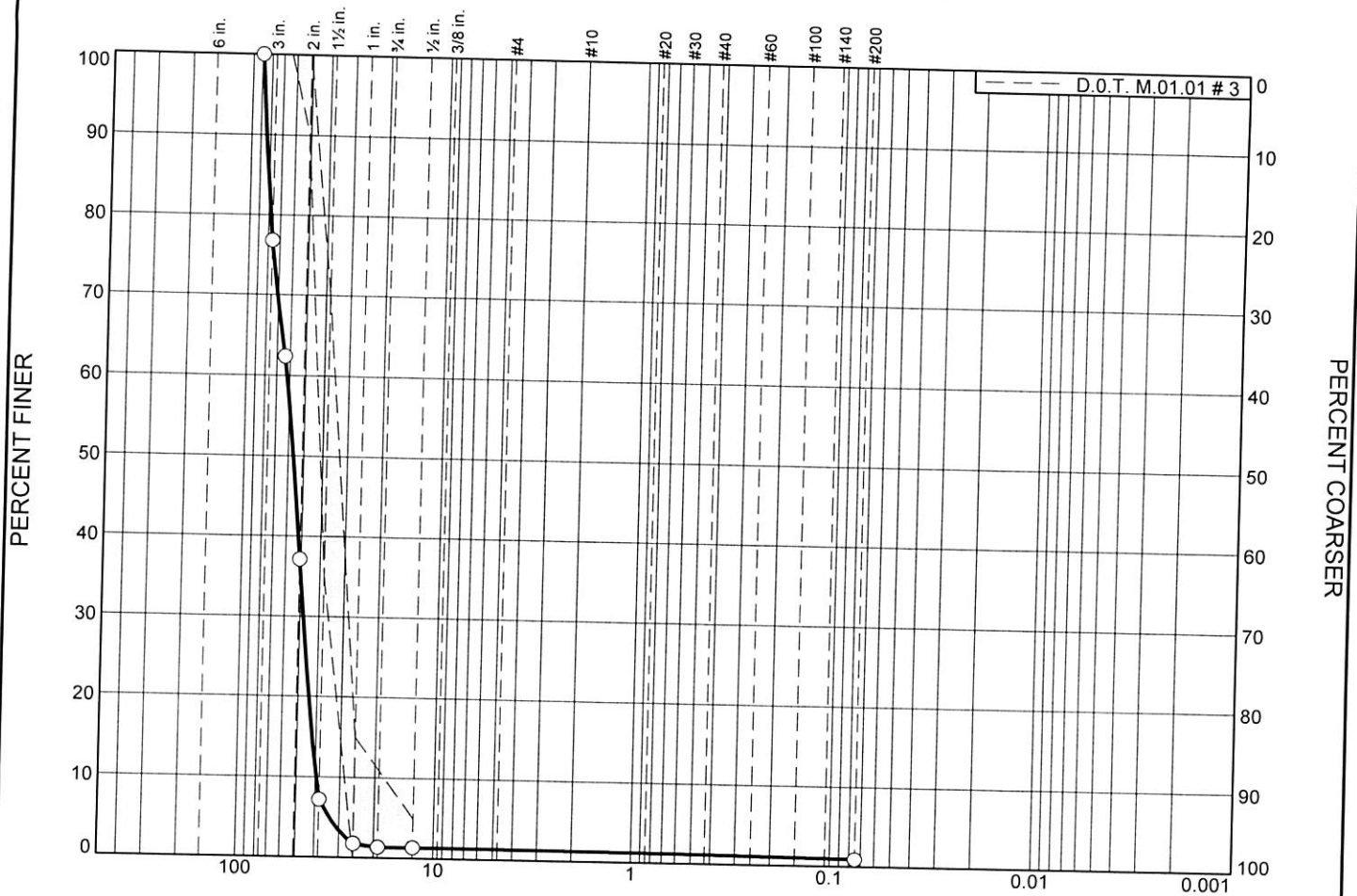
## Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
23.2	75.4	0.0	75.4	0.1	0.1	0.3	0.5			0.9

D <sub>10</sub>	D <sub>15</sub>	D <sub>20</sub>	D <sub>30</sub>	D <sub>50</sub>	D <sub>60</sub>	D <sub>80</sub>	D <sub>85</sub>	D <sub>90</sub>	D <sub>95</sub>
39.6207	41.9459	44.0375	47.9882	56.3260	61.8028	78.2260	81.0726	83.7246	86.3074

Fineness Modulus	C <sub>u</sub>	C <sub>c</sub>
9.06	1.56	0.94

# Particle Size Distribution Report



# GRAIN SIZE DISTRIBUTION TEST DATA

1/14/2013

Client: : EQ Northeast

Date: 01/14/13

Project: : Ramapo, NJ

Location: Braen Pit (Tilcon) New York.

Depth: N/A

Sample Number: 003-13

Material Description: 1 1/2" Minus blend aggregate stone (white color).

Liquid Limit: N/A

Plastic Limit: N/A

USCS Classification: GP

Testing Remarks: ASTM C 136, White blend aggregate.

Tested by: ZA

Checked by: HC

Material specification: D.O.T. M.02.06 -A

## Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer	Percent Retained	Lower Spec. Limit, %	Upper Spec. Limit, %	Deviation From Spec., %
3453.00	0.00	0.00	3 1/2"	0.00	100.0	0.0	100.0	100.0	
			1 1/2"	0.00	100.0	0.0	55.0	100.0	
			3/4"	683.50	80.2	19.8			
			1/4"	2049.80	40.6	59.4	25.0	60.0	
			#4	2067.80	40.1	59.9			
			#10	2316.30	32.9	67.1	15.0	45.0	
			#40	3071.30	11.1	88.9	5.0	25.0	
			#100	3336.60	3.4	96.6	0.0	10.0	
			#200	3398.90	1.6	98.4	0.0	5.0	

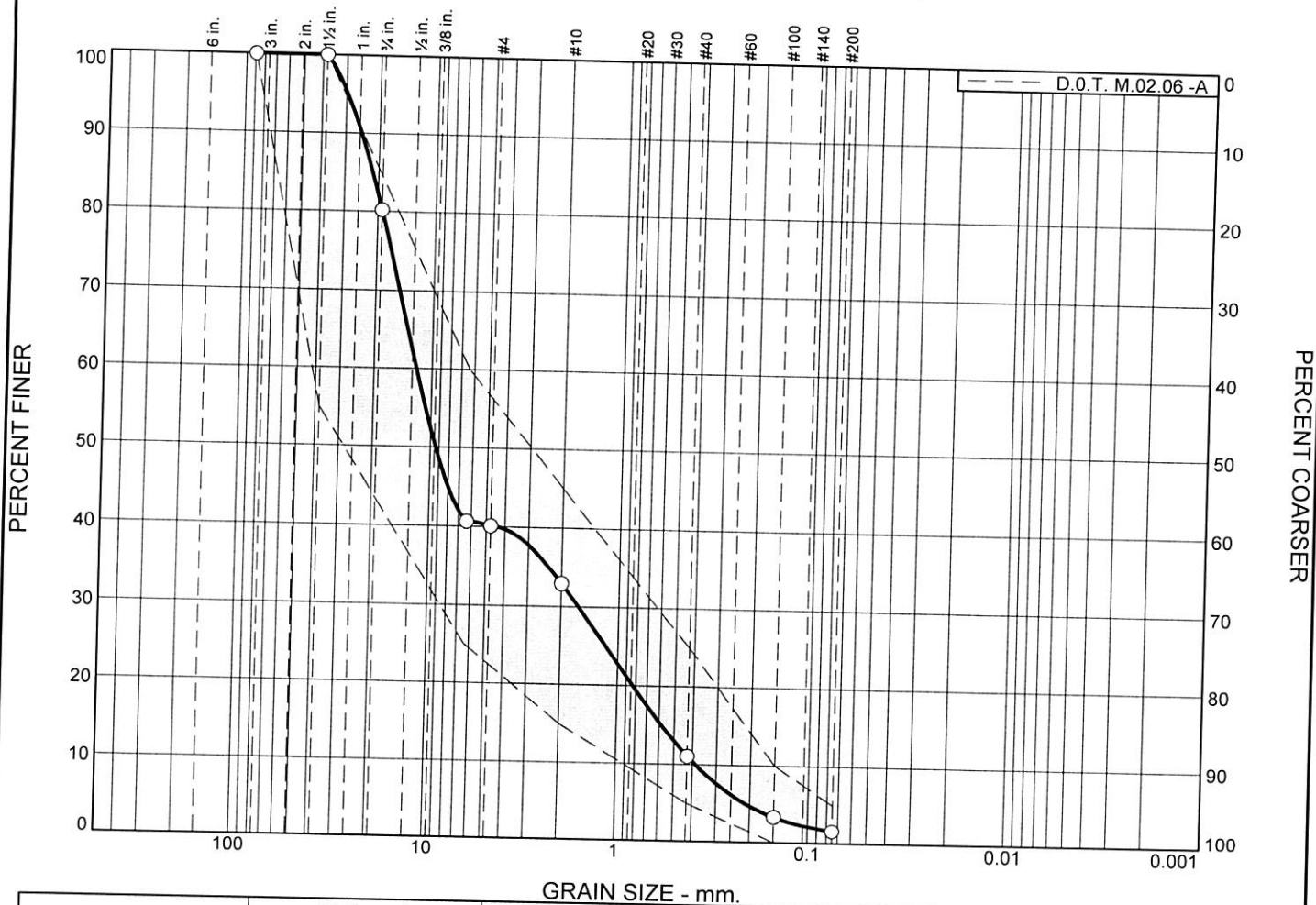
## Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	19.8	40.1	59.9	7.2	21.8	9.5	38.5			1.6

D <sub>10</sub>	D <sub>15</sub>	D <sub>20</sub>	D <sub>30</sub>	D <sub>50</sub>	D <sub>60</sub>	D <sub>80</sub>	D <sub>85</sub>	D <sub>90</sub>	D <sub>95</sub>
0.3856	0.5845	0.8318	1.6247	9.4169	12.0749	18.9553	21.5240	24.8508	29.5581

Fineness Modulus	C <sub>u</sub>	C <sub>c</sub>
5.43	31.32	0.57

# Particle Size Distribution Report

[illegible]

Material Description	USCS	AASHTO
○ 1 1/2" Minus blend aggregate stone (white color).	GP	

<b>Project No.</b>	<b>Client:</b> : EQ Northeast	<b>Date:</b>
<b>Project:</b> : Ramapo, NJ		
<b>Source:</b> Braen Pit (Tilcon) New York.	<b>Depth:</b> N/A	<b>Sample No.:</b> 003-13

**Remarks:**  
○ ASTM C 136, White blend aggregate.

Tri State Materials Testing Lab

**Wallingford, Connecticut**

### Figure

Tested By: ZA Checked By: HC

# GRAIN SIZE DISTRIBUTION TEST DATA

1/14/2013

Client: : EQ Northeast

Date: 01/14/13

Project: : Ramapo, NJ

Location: Braen Pit

Depth: N/A

Sample Number: 008-13

Material Description: 3/4" Minus gray processed Material.

Liquid Limit: N/A

Plastic Limit: N/A

USCS Classification: GW

Testing Remarks: ASTM C 136, gray processed

Tested by: ZA

Checked by: HC

Material specification: D.O.T. M.02.06 -A

## Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Cumulative Pan Tare Weight (grams)	Sieve Opening Size	Cumulative Weight Retained (grams)	Percent Finer	Percent Retained	Lower Spec. Limit, %	Upper Spec. Limit, %	Deviation From Spec., %
2346.50	0.00	0.00	1 1/2"	0.00	100.0	0.0	55.0	100.0	
			1"	0.00	100.0	0.0			
			3/4"	48.40	97.9	2.1			
			1/4"	1034.60	55.9	44.1	25.0	60.0	
			#4	1272.90	45.8	54.2			
			#10	1582.60	32.6	67.4	15.0	45.0	
			#40	1856.50	20.9	79.1	5.0	25.0	
			#100	2173.00	7.4	92.6	0.0	10.0	
			#200	2248.10	4.2	95.8	0.0	5.0	

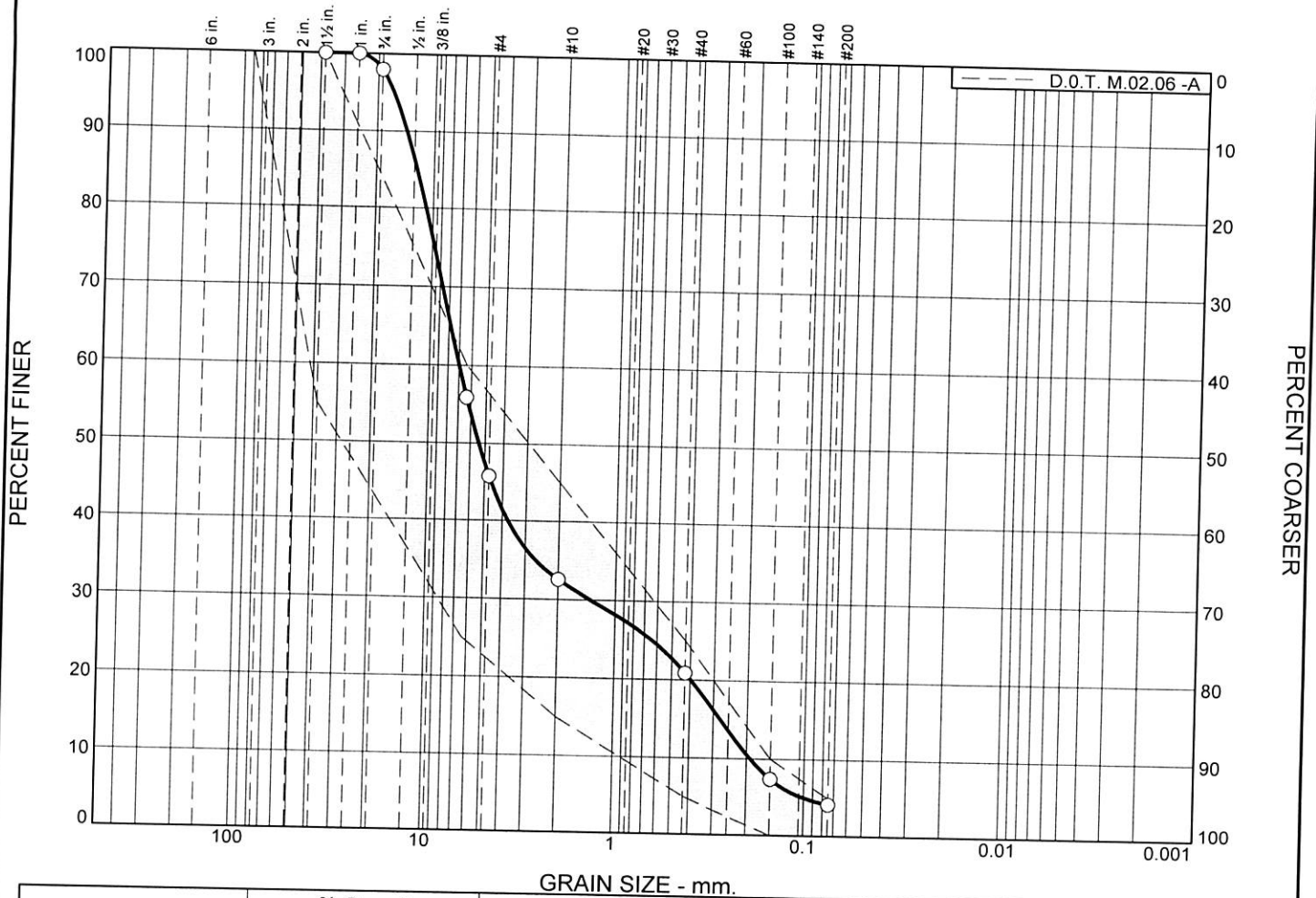
## Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	2.1	52.1	54.2	13.2	11.7	16.7	41.6			4.2

D <sub>10</sub>	D <sub>15</sub>	D <sub>20</sub>	D <sub>30</sub>	D <sub>50</sub>	D <sub>60</sub>	D <sub>80</sub>	D <sub>85</sub>	D <sub>90</sub>	D <sub>95</sub>
0.1916	0.2764	0.3960	1.3522	5.4269	7.0014	10.9101	12.2876	14.0299	16.5318

Fineness Modulus	C <sub>u</sub>	C <sub>c</sub>
4.71	36.54	1.36

# Particle Size Distribution Report

[illegible]

Material Description	USCS	AASHTO
○ 3/4" Minus gray processed Material.	GW	

<b>Project No.</b>	<b>Client:</b> : EQ Northeast	<b>Date:</b>
<b>Project:</b> : Ramapo, NJ		
<input type="radio"/> <b>Source:</b> Braen Pit	<b>Depth:</b> N/A	<b>Sample No.:</b> 008-13

**Remarks:**  
○ASTM C 136, gray processed

Tri State Materials Testing Lab

### Wallingford, Connecticut

### Figure

Tested By: ZA Checked By: HC

**TRI-STATE MATERIALS TESTING LAB LLC.****New England Regional Office**

160 S Turnpike Road Suite 3 Wallingford, CT 06492 • Tel: 203-949-7733 • Fax: 203-949-7735

**Client:** EQ, Northeast  
**Project:** Ramapo, NJ.**Lab #.** 008-13**Test Method:** ASTM D2216**Date Tested:** 01/11/13**Description of Soil:** 3/4" Minus gray processed material.**Tested By:** ZA**DETERMINATION OF MOISTURE CONTENT**

Can No.	Weight of can, W1 (g)	Weight of can + wet soil, W2 (g)	Weight of can + dry soil, W3 (g)	$w (\%) = \frac{W2-W3}{W3-W1} \times 100$
# 4	698.4	1285.7	1249.0	6.665 %

**Source:** BRAEN Pit**Report To:** EQ, Northeast**Submitted By:** Tri-State Materials Testing Lab

Paul Hessel, P.E.

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160 S. Turnpike Rd • Wallingford, CT 06492 • Tel: 203-949-7733 • Fax: 203-949-7735

**TSMT**  
www.tristate-testing.com





09/14/2012

To Whom It May Concern:

As it is supplied by our West Nyack facility, Manufactured Sand is produced to meet New York State Department of Transportation Standard Specifications. Our West Nyack facility, NYSDOT source #8-8R supplies 100% virgin Traprock (Diabase) that is quarried and processed to finished sizes. To the best of our knowledge, the material is clean and free from contaminants prior to shipping.

The following gradation is presented as typical for Manufactured Sand:

**man sand-buell fines**

Procedure	Sieve/Test	Average	Unit
	3/8" (9.5mm)	100.0	%
	1/4" (6.3mm)	100.0	%
	#4 (4.75mm)	97.0	%
	#8 (2.36mm)	63.7	%
	#16 (1.18mm)	40.3	%
	#30 (0.6mm)	26.7	%
	#50 (0.3mm)	17.5	%
	#100 (0.15mm)	11.7	%
	#200 (75um)	8.49	%
	Pan	0.00	%

If you have any questions, or require additional information, please contact me at 845.422.0675.

Very truly yours,  
Tilcon, NY Inc.

Mike Kalinowski  
Supervisor, Quality Control





January 16, 2013

To Whom It May Concern:

As it is produced by our West Nyack facility, Type 2 Subbase is produced to meet New York State Department of Transportation (NYSDOT) Standard Specifications. Our West Nyack facility, NYSDOT Source #8-8R, supplies 100% virgin traprock (diabase) that is quarried and processed to finished sizes. Type 2 Subbase is a byproduct of crushing operations. The material is chemically clean upon loading for shipment.

The following gradation is presented as typical for Type 2 Subbase:

Type 2 Subbase	
<u>Screen Size</u>	<u>Percent Passing</u>
2"	100
1 ½"	100
1"	98.7
¾"	88.8
½"	69.6
⅜"	60.0
¼"	49.2
No. 4	44.9
No. 10	33.1
No. 20	24.8
No. 40	19.5
No. 60	15.9
No. 100	12.9
No. 200	9.7

If you have any questions or require additional information, please contact me by phone at 845.422.0675 or by email at [mkalinowski@tilconny.com](mailto:mkalinowski@tilconny.com).

Very truly yours,  
Tilcon New York, Inc.

Mike Kalinowski  
Supervisor, Quality Control



January 18, 2013

To Whom It May Concern:

As it is supplied by our Haverstraw facility, NYSDOT #2 Stone is produced to meet New York State Department of Transportation (NYSDOT) standard specifications. Our Haverstraw facility, NYSDOT Source #8-10R, supplies 100% virgin trap rock (diabase) that is quarried and processed to finished sizes. Material shipped from our Haverstraw facility is clean and free of contaminants prior to loading.

The following gradation is presented as typical for NYSDOT #2 Stone:

NYSDOT #2 Stone	
<u>Screen Size</u>	<u>Percent Passing</u>
1 ½"	100
1"	92.0
¾"	43.8
½"	3.9
⅜"	1.7
¼"	1.2
No. 4	1.1

If you have any questions or require additional information, please contact me by phone at 845.422.0675 or by email at [mkalinowski717@gmail.com](mailto:mkalinowski717@gmail.com).

Very truly yours,  
Tilcon New York, Inc.

Mike Kalinowski  
Supervisor, Quality Control



162 Old Mill Road  
West Nyack, NY 10994  
845.358.4500

August 13, 2013

To Whom It May Concern:

As it is supplied by our West Nyack facility, NYSDOT #2 Stone is produced to meet New York State Department of Transportation (NYSDOT) standard specifications. Our West Nyack facility, NYSDOT Source #8-8R, supplies 100% virgin trap rock (diabase) that is quarried and processed to finished sizes. Material shipped from our West Nyack facility is clean and free of contaminants prior to loading.

The following gradation is presented as typical for NYSDOT#2 Stone:

<u>Screen Size</u>	<b>NYSDOT#2 Stone</b> <u>Percent Passing</u>	<u>Specification</u>
1 ½"	100	100-100
1"	91.3	90-100
¾"	37.7	
½"	2.4	0-15
⅜"	1.8	
No. 4	1.5	

If you have any questions or require additional information, please contact me at 845.422.0675 or [mkalinowski@tilconny.com](mailto:mkalinowski@tilconny.com).

Very truly yours,  
**Tilcon New York, Inc.**

A handwritten signature in black ink, appearing to read "M. Kalinowski".

Mike Kalinowski  
Supervisor, Quality Control



162 Old Mill Road  
West Nyack, NY 10994  
845.358.4500

August 13, 2013

To Whom It May Concern:

As it is supplied by our West Nyack facility, Manufactured Sand is produced to meet New York State Department of Transportation (NYSDOT) standard specifications. Our West Nyack facility, NYSDOT Source #8-8R, supplies 100% virgin trap rock (diabase) that is quarried and processed to finished sizes. Material shipped from our West Nyack facility is clean and free of contaminants prior to loading.

The following gradation is presented as typical for Manufactured Sand:

<b>Manufactured Sand</b>	
<b><u>Screen Size</u></b>	<b><u>Percent Passing</u></b>
$\frac{3}{8}$ "	100
$\frac{1}{4}$ "	100
No. 4	97
No. 8	58.7
No. 16	34.4
No. 30	21
No. 50	12.2
No. 100	7.8
No. 200	6.44

If you have any questions or require additional information, please contact me at 845.422.0675 or [mkalinowski@tilconny.com](mailto:mkalinowski@tilconny.com).

Very truly yours,  
**Tilcon New York, Inc.**

A handwritten signature in black ink, appearing to read "M. Kalinowski".

Mike Kalinowski  
Supervisor, Quality Control



162 Old Mill Road  
West Nyack, NY 10994  
845.358.4500

September 25, 2013

To Whom It May Concern:

As it is supplied by our West Nyack facility, Item 4 is produced to meet New York State Department of Transportation (NYSDOT) standard specifications. Our West Nyack facility, NYSDOT Source #8-8R, supplies 100% virgin trap rock (diabase) that is quarried and processed to finished sizes. Material shipped from our West Nyack facility is clean and free of contaminants prior to loading.

The following gradation is presented as typical for Item 4:

Item 4		
<u>Screen Size</u>		<u>Percent Passing</u>
2"		100
1 ½"		100
1"		97.8
¾"		87.9
½"		66.7
3/8"		54.9
¼"		43.6
No. 4		38.1
No. 10		26.1
No. 20		18.7
No. 40		14.5
No. 60		11.7
No. 100		9.5
No. 200		7.25

If you have any questions or require additional information, please contact me at 845.422.0675 or [mkalinowski@tilconny.com](mailto:mkalinowski@tilconny.com).

Very truly yours,  
**Tilcon New York, Inc.**

A handwritten signature in black ink, appearing to read "M. Kalinowski".

Mike Kalinowski  
Supervisor, Quality Control