



# **Construction Green Report**

The New York City School Construction Authority  
LLW #053004

**New School PS 335Q  
150-15 Raleigh Street  
Queens, N.Y. 11417**

2/16/18



**Lorraine Grillo, President & CEO**

**E. Bruce Barrett, R.A., Vice President, Architecture & Engineering**

**Maria Gomez, P.E., Director – In-House Studio**

**John Dias, R.A. LEED AP BD+C, Director Capacity Projects – In-House Studio**



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The New York City School Construction Authority  
LLW #053004

## **CONSTRUCTION PHASE GREEN REPORT**

### **NEW SCHOOL PS 335**

### **QUEENS**

**Prepared by SCA – In – House Design Studio**

John Dias, R.A. LEED AP B+C, Director, Capacity Projects – In-House Studio

Jose Julio Ricardo. – Lead Architect

Atiqur Rahman – Asst. Architect

Billy Wong, P.E. - Structural Engineer

Richard Xiao, P.E. - Mechanical Engineer

Samy Khalil, P.E. - Plumbing Engineer

Hussein Mohammed, P.E. - Electrical Engineer

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# Project Checklist - page 2 of 2

Project: **PS 335Q**  
 Address | Zip Code: **9840 Albert Road, Queens NY | 11417**  
 LLW #: **65523**  
 Design #: \_\_\_\_\_  
 Architect: **SCA In-house**

Submission (Check one): ☐ SD ☐ DD ☒ 60% ☒ 100% ☐ Const  
 Submission Date: **Revised 7/15/15**

Reviewer: \_\_\_\_\_  
 Reviewer Sign Off: \_\_\_\_\_

Credit Names	BD&C Reference LEED for Schools 2009	CHPS Reference	NYC GSG 2009	Credit Description and Relevant Information and Drop-Down Menus	RPC (check project zipcode in GSG)	Required For all Projects	Required if Feasible <sup>1</sup>	Optional Credits <sup>2</sup>	Design Phase	Construction Phase	Auto Filled: Blank if Pursued, No. of Points if Not Pursued or if Not Feasible or Additional Credit Not Pursued
<b>Indoor Environmental Quality 36% of Total Points</b>									<b>Points: 16 out of 17</b>		
<b>IAQ Post-occupancy</b>	IEQ Pr 1	Q 1.1R	<b>Minimum IAQ Performance</b>		NP	<input checked="" type="checkbox"/> YES					Credit Req'd - Confirm Pursuit
	IEQ 2	Q 1.1R	<b>Increased Ventilation</b> (included in Q 1.1R credit language)		1			1			
	IEQ 1	Q 1.2R	<b>Air Flow Stations, Outside Air Intakes</b>		1			1			
<b>IAQ Pre-occupancy</b>	IEQ 3.1	Q 2.1R	<b>Construction IAQ Management Plan, During Construction</b>		1				1		
	IEQ 3.2	Q 2.2R	<b>Construction IAQ Management Plan, Before Occupancy</b>		1				1		
<b>Low-Emitting Materials</b>	IEQ 4.1	Q 3.1R	<b>Low-Emitting Materials, Adhesives &amp; Sealants<sup>4</sup></b>		1				1		
	IEQ 4.2	Q 3.2R	<b>Low-Emitting Materials, Paints &amp; Coatings<sup>4</sup></b>		1				1		
	IEQ 4.3	Q 3.3R	<b>Low-Emitting Materials, Flooring Systems<sup>4</sup></b>		1				1		
	IEQ 4.4	Q 3.4R	<b>Low-Emitting Materials, Comp Wood &amp; Agrifiber Products<sup>4</sup></b>		1				1		
<b>Pollution Source Control</b>	IEQ 5	Q 4.1R	<b>Indoor Chemical &amp; Pollutant Source Control</b>		1			1			
	5.3.5	Q 4.2R	<b>Electric Ignition Stoves</b>		NP	<input checked="" type="checkbox"/> YES			Indicate Pursuit	<input type="checkbox"/> NO	
	6.2.4	Q 4.3R	<b>Provide HEPA Vacuums</b>		NP	<input checked="" type="checkbox"/> YES			Indicate Pursuit	<input type="checkbox"/> NO	
<b>Controllability of Systems</b>	IEQ 6.1	Q 5.1R	<b>Controllability of Systems, Lighting</b>		1			1			
	IEQ 6.2	Q 5.2R	<b>Controllability of Systems, Thermal Comfort</b>		1			1			
<b>Thermal Comfort</b>	IEQ 7.1	Q 6.1R	<b>Thermal Comfort, Comply with ASHRAE 55-2004</b>		1			1			
<b>Lighting and Views</b>	IEQ 8.1	Q 7.1	<b>Daylight &amp; Views, Daylight 75% of Classrooms</b>				1	1			
	IEQ 8.1	Q 7.2	<b>Daylight &amp; Views, Daylight for 90% of Classrooms</b>				1	1			
	IEQ 8.1	Q 7.3	<b>Daylight &amp; Views, Daylight for 75% of Other Spaces</b>				1	NF			1
	IEQ 8.2	Q 7.4	<b>Daylight &amp; Views, Views</b>				1	1			
	5.2.1	Q 7.5	<b>Visual Performance, Artificial Direct-Indirect Lighting</b>		NP	<input checked="" type="checkbox"/> YES			Indicate Pursuit	<input type="checkbox"/> NO	
<b>Acoustics</b>	IEQ Pr 3	Q 8.1R	<b>Minimum Acoustical Performance</b>		NP	<input checked="" type="checkbox"/> YES			Credit Req'd - Confirm Pursuit		
	IEQ 9	Q 8.2	<b>Enhanced Acoustical Performance &amp; Sound for Special Spaces</b>		1			1			
	SCA	Q 8.3	<b>Acoustic Windows</b>		NP	<input type="checkbox"/> YES			Indicate Pursuit	<input checked="" type="checkbox"/> NO	
<b>IEQ Category Sub-Total:</b>					13	4		10	0		1
<b>Regional 0% of Total Points</b>									<b>Points: 0 out of 4</b>		
<b>Regionally Appropriate<sup>5</sup></b>	RP 1.1	R 1.1	<b>Regionally Defined Credit Achieved</b>	Blank	1						1
	RP 1.2	R 1.2	<b>Regionally Defined Credit Achieved</b>	Blank	1						1
	RP 1.3	R 1.3	<b>Regionally Defined Credit Achieved</b>	Blank	1						1
	RP 1.4	R 1.4	<b>Regionally Defined Credit Achieved</b>	Blank	1						1
<b>Regional Category Sub-Total:</b>					0	4	0	0			4
<b>Additional Credits 2% of Total Points</b>									<b>Points: 1 out of 30</b>		
<b>Innovation in Design</b>	ID 2	A 1.1R	<b>LEED® Accredited Professional</b>		1			1			
	ID 1	A 1.2	<b>Innovation or Exemplary Performance</b>				1	1			1
	ID 1	A 1.3	<b>Innovation or Exemplary Performance</b>				1	1			1
<b>Optional - Site Impact</b>	SS 7.1	A 2.1	<b>Heat Island Effect, Non-Roof</b>				1	1			1
	SS 6.1	A 2.2	<b>Stormwater Design, Quantity Control</b>				1	1			1
<b>Optional - Energy</b>	EA 1	A 3.1	<b>Optimize Energy Performance<sup>6</sup></b>	If NOT Approved, 0 pts			15	15			15
	EA 2	A 3.2	<b>On-Site Renewable Energy</b>	If NOT Approved, 0 pts			7	7			7
<b>Optional - IEQ</b>	IEQ 4.5	A 4.1	<b>Low-Emitting Materials, Furniture and Furnishings<sup>4</sup></b>				1	1			1
	IEQ 4.6	A 4.2	<b>Low-Emitting Materials, Ceiling and Wall Systems<sup>4</sup></b>				1	1			1
<b>Optional - Education</b>	ID 3	A 5.1	<b>The School Building as a Teaching Tool</b>				1	1			1
<b>Additional Credit Category Sub-Total:</b>					1		29	1	0		29
<b>Column Totals:</b>					28	37	29	32	13		50
<b>LEED® Equivalent Point Total:</b>					45 out of 94						

SCA Credit Name:

Letter prefix indicates credit section (S, W, E, M, Q, R, A)  
 First number indicates the category within the section  
 Second number indicates the specific credit within the section category  
 Suffix "R" is added for credits that are required of all projects

- Projects required to achieve all "feasible" credits that are possible for a particular project.
- Projects may only pursue optional "Additional" section credits with permission from SCA unless otherwise noted.
- During GSG submission phases, enter anticipated design and construction credits, keeping the Checklist current.
- A maximum total value of four (4) points is allowed between these six low-emitting material credits (Q3.1, 3.2, 3.3, 3.4; A5.1, 5.2)
- RPC incentive regional credits as indicated. If the referenced credit is achieved, then the associated RPC can be claimed.
- This credit requires project-specific energy modeling and can not be achieved by use of proto-typical modeling.
- LL86/05 requires Certified LEED® 2009 for Schools or equivalent of a no-less stringent rating system - Minimum 40-49 Points

NP: To be consistent with LEED®, the NYC GSG assigns no point value to credits based on prerequisites or non-LEED® credits.  
 NYC GSG: Requires that all credits be attempted and proof through calculation for those which are not-feasible.  
 NYC GSG: PENDING = Has been reviewed for equivalence to LEED® for Schools 2009 through the Mayor's Office of Environmental Coordination.

**Design Team Certification Form**  
**CONSTRUCTION PHASE**



Architect:	Firm Name: Jose J. Ricardo SCA A&E	Date: 2/16/2018
	Address: 30-30 Thompson Ave	Project Name: PS 335Q
	LIC, NY 11101	Project Address: 150-15 raleigh St
	Telephone:	Queens, NY
	email: <a href="mailto:Jricardo@nycsca.org">Jricardo@nycsca.org</a>	
		LLW #: 53004
		Design #:
Engineer:	Firm Name: Richard Xiao, SCA A&E	BCC #:
	Address: 30-30 Thompson Ave	Design Manager: J. Dias
		Constr Specialist: G. Caesar
	Telephone:	BCC Reviewer: Various
	email: <a href="mailto:Rxiao@nycsca.org">Rxiao@nycsca.org</a>	Commissioning: EME Group

**Architect's Statement - Construction Phase:**

As Architect of Record, I verify that the statements initialed by me on the following pages are accurate to the best of my knowledge.

Narratives for all credits have been provided and updated as necessary with the final design submission.

Calculations have been provided, according to the credit requirements, and updated as necessary with the final design submission.

<u>JOSE J. RICARDO</u>	<u>ARCHITECT "C"</u>	<u>[Signature]</u>	<u>2/27/18</u>
Name	Title	Signature	Date

**Engineer's Statement - Construction Phase:**

As Engineer of Record, I verify that the statements initialed by me on the following pages are accurate to the best of my knowledge.

Narratives for all credits have been provided and updated as necessary with the final design submission.

Calculations have been provided, according to the credit requirements, and updated as necessary with the final design submission.

<u>RICHARD XIAO</u>	<u>ENGINEER "C"</u>	<u>[Signature]</u>	<u>02/27/18</u>
Name	Title	Signature	Date



Design Team Certification Form  
**CONSTRUCTION PHASE**



Architects  
Initials

Engineers  
Initials

**Site**

JR

**S1.6R - Environmental Site Assessment**

A Phase I Environmental Site Assessment as described in ASTM E1527-05 was conducted. If the Phase I indicated contamination, then a Phase II ESA was conducted and the site was remediated as required.

**S1.7 - Brownfield Redevelopment**

This project site was determined to be contaminated by the method indicated below. A narrative summary of the  
☐ ASTM E 1903-97 Phase II Environmental Site Assessment.

OR

☐ Defined as a Brownfield by a New York City, New York State, or federal government agency.

OR

☐ Reg. 40CFR Part 763

OR

☐ Local Voluntary Cleanup Program (Such as with NYC DEC).

**S3.1 - Site Development, Protect or Restore Habitat**

The project site was previously developed or graded and 50% of the site area was restored using native and/or adaptive plantings.

The total site area excluding the building footprint) is: \_\_\_\_\_

The total site area that has been restored using native and/or adaptive plantings is: \_\_\_\_\_

The percentage of site that has been restored using native and/or adaptive plantings is: \_\_\_\_\_

**Water**

**There are no construction Phase Water Section credits.**

**Energy**

hex

**E3.1R - Measurement & Verification**

This project implements a Measurement & Verification (M&V) Plan consistent with IPMVP Option C - Whole Building Comparison.

hex

**E5.1 - Green Power**

The SCA has provided documentation to the Design Team that they have applied for and have received approval for obtaining the required 35% building electrical consumption through Green Power credits.



### Materials

#### M1.2 & M1.3- Building Reuse, Maintain Existing Walls, Floor & Roof

On this project, the following percentage of the existing floor, wall and roof structure of the existing building were reused. I have provided a completed copy of the Building Reuse Form.

☐ 75%

☐ 95%

#### M1.4 - Building Reuse, Maintain Interior Non-Structural Elements

On this project, 50% of the existing interior non-structural elements from the existing building were reused. I have provided a completed copy of the Building Reuse Form.

#### M2.1R - Recycled Content

The materials for this project include 10% or more recycled content. A Recycled Content Summary Form has been submitted as documentation.

☐ 20%

#### M2.3 - Regional Materials

The materials for this project include 10% or more regional materials (extracted, processed and manufactured). A Regional Materials Summary Form has been submitted as documentation.

☐ 20%

### Indoor Environmental Quality

#### Q3.1R - Low Emitting Materials, Adhesives and Sealants

All adhesives and sealants used on the interior of the building comply with the VOC limits and requirements. A Low Emitting Materials - Summary Form has been submitted as documentation.

#### Q3.2R - Low Emitting Materials, Paints and Coatings

All paints and coatings used on the interior of the building comply with the VOC limits and requirements as established by Green Seal Standard GS-11 Paints, and Green Seal Standard GC-03, Anti-Corrosive Paints, and South Coast Air Quality Management District. A Low Emitting Materials - Summary Form has been submitted as documentation.

#### Q3.3R - Low Emitting Materials, Flooring Systems

All carpet and carpet cushions for the project meet the testing and product requirements of the Carpet and Rug Institute's Green Label Plus program. A Low Emitting Materials - Summary Form has been submitted as documentation.

#### Q3.4R - Low-Emitting Materials, Composite Wood & Agrifiber Products

All composite wood and agrifiber products used on the interior of the building (defined as inside the weatherproofing system) contain no added urea-formaldehyde resins. Laminating adhesives used to fabricate on-site and shop-applied composite wood and agrifiber assemblies contain no added urea-formaldehyde resins.

**Additional Credits**

**A4.1 - Low Emitting Materials, Furniture and Furnishings**

The SCA/FFE group has provided written documentation to the design team indicating that each furniture system (work station) and seating product item is Greenguard certified or registered or that its emissions meet or exceed the best practice air emissions standards as established by the US EPA's Environmental Technology Verification (ETV).

**A4.2 - Low Emitting Materials, Ceiling and Wall Systems**

All ceiling and wall systems meet the requirements. A Low Emitting Materials-Summary Form has been submitted as documentation.

**A5.1 - The School Building as a Teaching Tool**

Built-in architectural features or signage have been developed to communicate the sustainable features of this project. These are supported by educational program, literature or curriculum related to the sustainable features of this project. A descriptive narrative has been submitted as documentation.

**Contractor's Certification Form  
CONSTRUCTION PHASE**



Contractor: Firm Name: Petracca & Sons, Inc. Date: 14-Dec-17  
Address: 18-02 Petracca Place Project Name: PS 335Q  
Whitestone, NY 11357 Project Address: \_\_\_\_\_  
Telephone: 718-746-8000  
email: \_\_\_\_\_

**Contractor's Statement**

I verify that the sustainable requirements summarized below have been achieved.

Frank Gaudio Project Engineer [Signature] 12/14/17  
Name Title Signature Date

**Contractor's  
Initials**

FG FG Site

**S 1.1R - Construction Activity Pollution Prevention**

☒ An erosion and sedimentation control plan complying with NYS DEC SPDES General Permit for Construction Activity, including measures from NYS DEC Standards and Specifications for Erosion and Sediment Control in accordance with the specification Section 02200, was implemented.

OR

☐ Project is completely interior and a dust control plan has been submitted in accordance with specification Section S01900 and such plan was implemented.

**Materials**

FG FG

**M 1.5R - Construction Waste Management 50%**

The project implements a waste management plan that diverts 50% of the construction waste away from landfills and incinerators. A Construction Waste Management Plan and calculation tables have been submitted as documentation in accordance with Specification Section S01524.

FG FG

**M 1.6 - Construction Waste Management 75%**

The project implements a waste management plan that diverts 75% of the construction waste away from landfills and incinerators. A Construction Waste Management Plan and calculation tables have been submitted as documentation in accordance with Specification Section S01524.

**M 1.7 - Construction Waste Management 95%**

The project implements a waste management plan that diverts 95% of the construction waste away from landfills and incinerators. A Construction Waste Management Plan and calculation tables have been submitted as documentation in accordance with Specification Section S01524.



**Contractor's Certification Form  
CONSTRUCTION PHASE**



**Indoor Environmental Quality**

EG FG

**Q2.1R - Construction IAQ Management Plan, During Construction**

- ☒ A copy of the Indoor Air Quality (IAQ) Management Plan for construction developed and implemented for this project has been submitted as documentation in accordance with Specification Section 01550.
- ☒ Permanently installed air handling equipment was not used during construction.
- ☐ Permanently installed air handling equipment was used during construction. The chart below has been completed for filtration media used during construction.

Merv Rating	Filter Manufacturer	Filter Model #	Location of Installed Filter	Filter Replaced immediately prior to Occupancy (YES or NO)

- ☒ I have provided six photos showing IAQ practices which were used during the building construction from SMACNA IAQ Guideline for Occupied Buildings under Construction, 1995, Chapter 3. Each photo is labelled indicating which SMACNA IAQ practice is shown.
- ☐ For Phased Occupancy or Modernization Projects, a letter has been submitted stating that carpeting in occupied areas was HEPA vacuumed daily.

EG FG

**Q2.2R - Construction IAQ, Management Plan, Before Occupancy**

A building flush-out was carried out per the specification requirements in Specification Section 01550.

- ☒ I have provided a narrative describing the project's specific flush-out procedures including data regarding temperature, airflow, filters used during flush-out and duration of the flush out.
- AND
- ☐ I have provided a construction schedule showing building flush-out as documentation.

## Credit Compliance Narratives

Project: PS 335 Q Date: 2/16/18  
Address: 9840 Albert Road, Queens, NY Architect: SCA In-house  
LLW #: 53004 Submission: Design Development  
Design #: \_\_\_\_\_ Reviewer: \_\_\_\_\_  
Reviewer Sign Off: \_\_\_\_\_

### Site Credits

Site Selection  
S 1.1R Construction Activity Pollution Prevention

The area of the Site is approximately 70,000 sf in area and storm water will discharge into a combined sewer. The Erosion and Sedimentation Control Plan will be schematically shown on the contract documents and implemented and completed by the contractor per the project specification section 02200. There are two single and separate lots associated with this project. The combined area is over one (1) acre. Therefore, a New York State Discharge Pollution Elimination System (NY-SPDES) permit is required. Drawing T-003 calls for the contractor to obtain a NY-SPDES permit for this project. Contract Drawing A-030 shows the information required for the erosion control.

SCA Standard Specification:

02200 – Earthwork

**The Construction Activity Pollution Prevention Plan was submitted, approved and implemented by the contractor during construction. See attached plan and photographs.**

**Credit was achieved.**

**Project meets the requirements for this credit**



J&A Concrete Corp.  
"Our Strength is Concrete"  
1876 Washington Avenue  
Brooklyn, NY 11218  
(718) 557-5555



NYC SCA Contract #C000013929  
PETRACCA & SONS, INC.  
1670 Boulevard Pl. Whitehouse, NY 11957

02200-020-01

<b>SCA</b> 30-30 Thomson Avenue Long Island City, NY 11101-3045	
General Contractor Petracca & Sons, Inc. Submittal No. / Review Cycle 02200-014 / 001	
Project P5335Q02	
Architect/Engineer SCA - Architecture & Engineering	
Contract No. C000013929	
Drawn By J. Riccio	
Checked By J. Riccio	
Reviewed By J. Riccio	
Date 10/28/15	
By J. Riccio	
For J. Riccio	
Submittal Reviewed At: <input checked="" type="checkbox"/> For Design <input type="checkbox"/> For Equal Substitution / <input type="checkbox"/> For Equal Substitution / <input type="checkbox"/> For Equal Substitution /	
Remarks: CONTRACTOR TO COMPLY WITH ALL CITY ORDINANCES AND ALL CITY DEPARTMENT OF ENVIRONMENTAL CONSERVATION (DEC) REGULATIONS. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF BROOKLYN AND THE STATE OF NEW YORK. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF BROOKLYN AND THE STATE OF NEW YORK. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF BROOKLYN AND THE STATE OF NEW YORK.	

EROSION CONTROL PLAN  
SCALE: 1/8"=1'-0"





1676 Washington Avenue  
Bohemia, New York 11716

T 631.567.5959  
F 631.567.2326  
www.jandaconcrete.com

James Delaney  
Petracca & Sons, Inc.  
18-02 Petracca Place  
Whitestone, NY 11357  
(718)746-8000

October 25, 2016

**Re: PS-335 Erosion Control Narrative**

The New York City school construction authority project, PS3 35 is located at address. The construction site is an empty lot bound by Albert Rd., Raleigh Street, and N. Conduit Ave.

During the excavation and foundation portion of the project there will be two vehicular entrances available at the project; one along Albert Road and the other on Raleigh Street. Both entrances will have a "rip rap" stone stabilized track out pad installed. In addition to the Stone at the Raleigh Street entrance, a timber rumble strip will be constructed to assist in removing sediment from truck tires as a vehicle exits the site.

Silt fence will be installed along the perimeter of the site where plywood construction fence is not present. All drain inlets at the site will be protected using filter fabric to prevent sediment from entering the system.

The existing stone road along the south side of the site will be used as a staging area for trucks, equipment and materials.

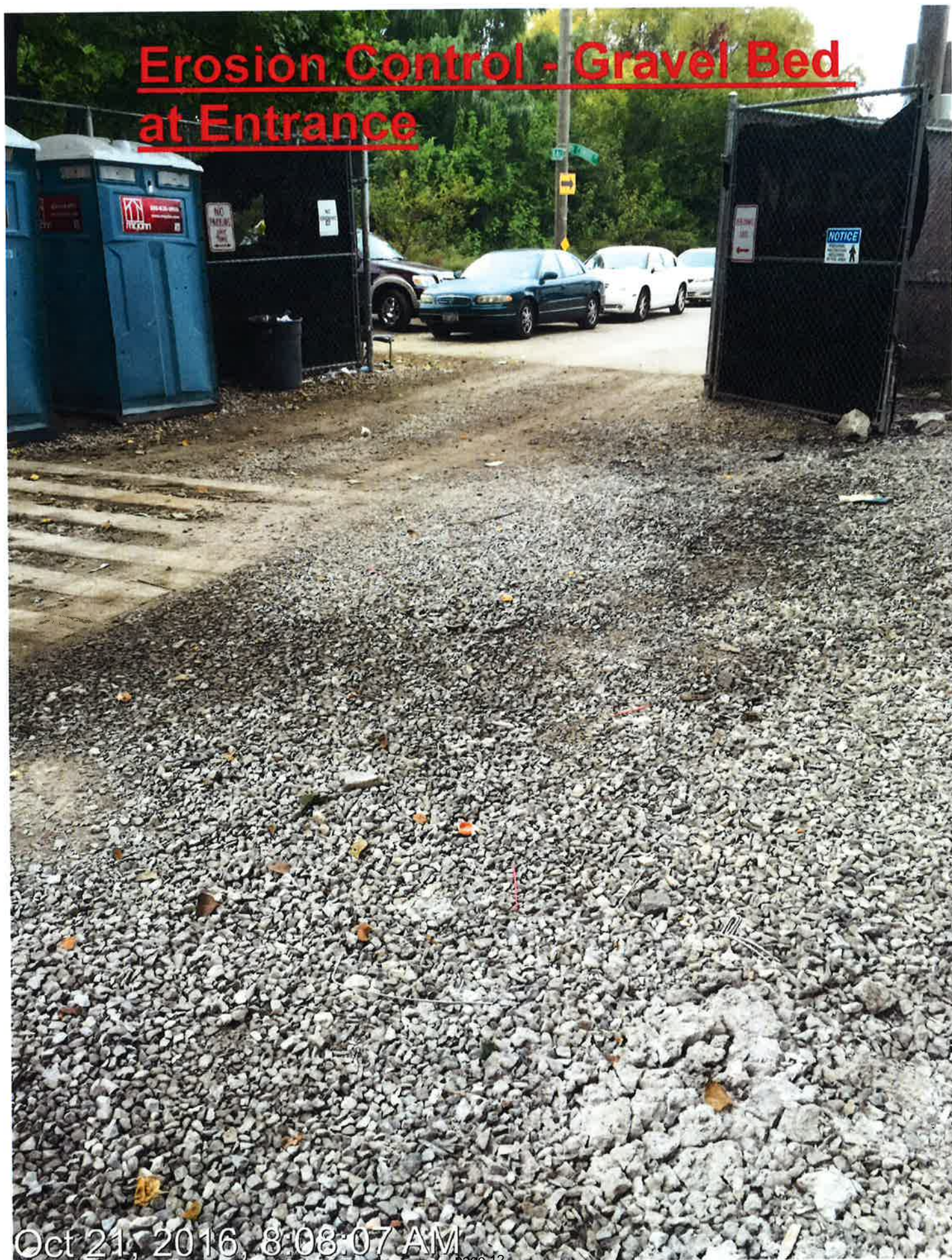
Further information regarding the erosion control plan for this project can be found on drawing EP-01 dated 9/28/15.

N.Y.C. SCA Contract #C000013929  
PETRACCA & SONS, INC.  
18-02 Petracca Pl. Whitestone, NY 11357

02200-020-01



# Erosion Control - Gravel Bed at Entrance



Oct 21, 2016, 8:08:07 AM



# Erosion Control





# Erosion Control - Gravel bed at Entrance



Jun 23, 2017, 2:30:00 PM  
New York



Erosion Control - Silt Fence

Erosion Control - Silt Fence

Nov 7, 2016, 3:04:52 PM



Erosion Control

Erosion Control - Silt Fence



Nov 22, 2016, 9:17:12 AM



1. The project site is not on 'previously undeveloped land'. The site is vacant land and was previously a parking lot. See attached copy of Aerial photograph – Appendix S1.2A and excerpt from the Phase I Report- Appendix S1.2B.
2. The site is not within a 100-year flood plane as defined by the Federal Emergency Management Agency. Based on the 2007 FEM FIRM Map, the Site is located in Zone "X", an area determined to be outside the 0.2% annual chance floodplain - Appendix S1.2B1. Additionally, the site is also outside the flood zone for the proposed FEMA maps- See appendix S1.2B2.
3. This entire site has been developed and the location is not within 100 feet of bodies of water, it is unlikely that there are any rare or state listed species on site. The NY State DEC Environmental Resource Mapper does not identify any rare plants or animals. This was confirmed by the New York State Department of Environmental Conservation Division of Fish, Wildlife & marine Resources, New York Natural Heritage Program. See Appendix S1.2 C and Appendix S1.2D.
4. The site is not within 100 feet of any wetlands as defined by 40 CFR, Parts 2130-233 and Part 22, isolated wetlands or areas of special concern identified by state or local rule or within setback distances from wetlands prescribed in state or local regulations, as defined by state or local rule or law. Appendix S1.2D.
5. The project site is not on any previously undeveloped land and is not within 50 feet of a body of water that supports or could support fish, recreation or industrial use as defined by the clean water act. See attached Appendix S1.2D.
6. The project site, prior to acquisition, was not public parkland. The site is currently vacant and was previously used as a parking lot. See attached copy of aerial photograph – Appendix S1.2A.

Project meets the requirements for this credit

**No Credit submittal required for this Phase.**

The project will meet the requirements of this credit by following the three sustainable site analyses:

1. Orient and align the building axis to take advantage of natural day lighting. This is achieved by:
  - The new two/four story classroom building is oriented mainly along an east-west axis to receive morning and afternoon sun.
  - Per SCA Standard (A4.3.1 -Window types-large windows) the classrooms will have wall to wall windows, maximizing access to natural daylight. Glare is controlled by manually operated shades. The selected visible transmittance of the glazing, per SCA standard specifications also contributes to glare control.
  - The Early Childhood and main play yards are located on the east side of the site which provides access to natural daylight for these outdoor spaces.
  - **See Appendix S1.3A**
2. Plot Shadow pattern from surrounding buildings onto project site to optimize daylight:
  - The proposed building is two/four stories and slightly higher than the adjacent buildings. The placement minimizes the casting of shadows on and from shadows from the existing buildings.  
**See shadow plots - Appendix S1.3B**
3. Plot shadow patterns from proposed building on adjacent properties and buildings and consider design options to address impact as necessary.
  - The proposed building will not cast a shadow on the existing adjacent properties.
  - **See shadow plots - Appendix S1.3B**

Project meets the requirements for this credit

**No Credit submittal required for this Phase.**



#### S 1.4 Development Density & Community Connectivity

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The project site complies with option 1 of this credit by:

1. The project is on a previously developed site that is within half a mile of a residential zone neighborhood with an average density of 10 dwelling units per acre and within half a mile radius of at least 10 basic services and with pedestrian access between the building and the services.
2. The existing property is situated within a **R4-1** Residential District (detached and semi-detached residential area). See attached Appendix S1.4A.
3. The ten basic services within the areas are shown on attached Appendixes S1.4B and S1.4C "Community and Connectivity Form"

Project meets the requirements for this credit

**No Credit submittal required for this Phase.**

#### S 1.5R Joint Use of Facilities, Community Access

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The project design complies with the requirements of this credit through compliance with SCA Design Requirement 1.3.1.1 – Building Location and Orientation, 1.3.1.2 Building Organization and Space Relationship, 1.3.5.1 Cafeteria and 1.3.5.2 Gymnasium PK-8. The Gymnasium on this project will serve as a Gymnasium/Multi-Purpose Room.

- Common spaces likely to be used by the community will be located on the First Floor accessible directly from the Lobby. These spaces include the Cafeteria and Gymnasium on the first floor.
- Toilets and Drinking Fountains will be accessible from main corridor.
- Segregation of these spaces is not being provided. The layout does not lend itself to that without creating a conflict with egress requirements. To maintain direct sight lines along corridors and main lobby, the spaces will satisfy school's functional and security concerns and comply with egress requirements.

Project meets the requirements for this credit

**No Credit submittal required for this Phase.**

The SCA/IEH has completed Phase I Environmental Assessment of the Site. The issues that will be reviewed and recommended are:

- Suspect 55-gallon drum on the northwest side of the site.
- Suspect historical placement of dirt, construction and demolition debris of unknown origin.

The Phase I Executive summary is attached – see appendix S1.6R A.

Also, a Phase II Report has been completed.

Project meets the requirements for this credit

**No Credit submittal required for this Phase.**

S 1.7     Brownfield Redevelopment

---

The site remediation will be conducted under a separate "Site Clearing" bid package.

Credit is not feasible

The project site is in compliance with the requirements of this credit.

- The site is less than half a mile away from N.Y.C. Transit "A" Line Aqueduct North Conduit station (800 feet from proposed entrance).
- Bus line (Q11) with a stop within 250 ft. from proposed entrance.

See attached map indicating paths of travel and distances. Appendix S2.1A

Project meets the requirements for this credit

**No Credit submittal required for this Phase.**

S 2.2 Alternative Transportation, Bicycle Storage & Changing Rooms NARRATIVE AT SCHEMATIC SUB.

This credit will be achieved for this project site by providing secure bicycle storage within 200 feet of the main entrance. Interior space to accommodate 9 bicycles (1 per 10,000 sq. feet as per NYC Zoning) and 11 bicycles on the exterior (total = .05 x 399 FTE total occupants = 20) will be provided (20 total (interior and exterior) provided). One (.005 X 96 FTE staff = .48 shower/changing room will be provided adjacent to the Custodian's Work Room located on the first level. All will be in compliance with DR 1.3.1.12 (storage) and DR 2.3.3 (racks) and Specification Sections 02870 and 05700.

Occupancy Calculation:

No. of typical classrooms (4 to 5<sup>th</sup> grade): 4, occupants = 150

No. of SE classrooms (grade 4 to 5): 2, occupants = 65

Art: 1 total, occupants = 28

Music: 1 total, occupants = 28

Science: 1 total, occupants = 28

Total	<u>299</u>
FT Staff (1 per 35 classrooms)	37
5 Adults for Lobby	5
1 Adult for every 100sf (office)	25
Aids	19
Kitchen Staff	7
PT Staff	5
Visitors	2
	<u>100</u>
Total FTE =	399

Project meets the requirements for this credit

**No Credit submittal required for this Phase.**

s 2.3R Alternative Transportation, Fuel-Efficient Vehicles/Parking

This credit will be achieved for this project site. No new on-site parking will be provided. Students attending the school live near by and will walk or take public transportation to the school.

Project meets the requirements for this credit

**No Credit submittal required for this Phase.**



This credit is not feasible for this project. The primary school will have exterior paved areas for exercise and recreation. The landscaped area is approximately 12% of a 72,487 sq. ft site (8,941sq ft. total). See Appendix 3.1A

Credit is not feasible and will not be pursued

The vegetated space requirement for schools in urban areas with no open space zoning requirement is 20% of the total site area less the building footprint. The site area is 72,487 the building footprint is 30,517 square feet.  $72,487 \text{ sq. ft.} - 30,517 = 41,970 \text{ sq. ft.} \times .20 = 8,394$ . The design is for 8,941 sq. ft. of vegetated area.

Credit is feasible and will be pursued

**No Credit submittal required for this Phase.**

This credit is not feasible since we are connecting to a combined sewer and there are no requirements for filtration of storm water.

Credit is not feasible and will not be pursued



This Credit will be complied with by the use of white pre-cast concrete roofing pavers. The roofing pavers shall have a Solar Reflectance Index (SRI) of 78 minimum when tested in accordance with ASTM E1980 and as per SCA DR 4.4.1.1 and Standard Specification Section 07560. As per the attached roof plans, the roof pavers will cover 100% of the effective roof surface.

Credit is feasible and will be pursued

**No Credit submittal required for this Phase.**

The project will minimize light trespass from the building and site and reduce the development impact on the local nocturnal environment. The project will comply with the credit requirements for interior and exterior lighting. The exterior lighting will be provided at the following locations:

- All entrances, exits and walkways including exit discharge
- Building perimeter

All non-emergency interior luminaires, with a direct line of sight to any openings in the envelope (translucent or transparent), shall have its input power reduced (by automatic device) by at least 50% after 10 p.m. or directly after closing. An after-hours override will be provided by a vacancy-sensing device with manual override provided that the override lasts no more than 30 minutes. The lighting design shall achieve this operation by using Programmable Lighting Control Panels. Non-emergency interior lighting will be automatically turned off when the school is not in operation with manual override capability for afterhours use.

The exterior lighting requirement of the credit will be met by designing building mounted fixtures that do not exceed a maximum initial luminance at the boundary as indicted above. Lighting power densities shall not exceed ASHRAE/IESNA Standard 90.1-2007 (with errata but without addenda) for the classified zone. Exterior lighting control requirements from ASHRAE/IESNA Standard 90.1-2007, Section 9, Table 9.4.5, Exterior Lighting Section, without amendments will be met.

Site is located in an LZ 2 zone (all R districts as per 1RCNY Chapter 5000 New York City Energy Conservation Code). Therefore, exterior lighting requirement for this credit will be met by selecting building mounted luminaires value no greater than 0.01 horizontal and vertical foot-candles at the site boundary and no greater than 0.01 horizontal foot-candles 10 feet beyond the site. No more than 2% of the total initial designed fixture lumens (sum total of all fixtures on site) are emitted at an angle of 90 degrees or higher from nadir (straight down).

Based on the attached calculations, the project will not meet the requirements for this credit. The Building is too close to the property line.

## Water Credits

Outdoor Systems

### W 1.1 Water Efficient Landscaping, Reduce by 50%

This Credit can be achieved by designing the landscaping with native or adapted plants to eliminate the need for a permanent irrigation system. Planting new trees and landscaping in accordance with NYC Parks Department standards and Design Requirement 2.5.1 Trees, Shrubs and Ground Cover will satisfy the requirements for this credit. 20% of the site less the building area will be vegetated.

The new trees and landscaping will eliminate the use of potable water for landscape irrigation. Temporary irrigation for the first year of the plantings will be provided by maintenance hose bibs located on the exterior of the building.

Trees will be non-flowering type; shrubs will be non-flowering type. Planting list will be as follows:

Common Name	Drought Tolerance	Moisture Requirements (Species factor Ks)	AREA (SF)	Density Factor (KD)
<b>Trees</b>				
HERITAGE RIVER BIRCH	Drought Tolerant	0	1270	1
DOWNY SHADBLOW	Drought Tolerant	0	1590	1
ARMSTRONG RED MAPLE	Drought Tolerant	0	84	1
COLUMNAR RED MAPLE	Drought Tolerant	0	1096	1
<b>Shrubs</b>				
WILLOW COTTON EASTER	Drought Tolerant	0	817	1
RED TWIG DOGWOOD	Drought Tolerant	0	817	1
JAPANESE HOLLY (MALE ONLY)	Drought Tolerant	0	817	1
<b>Groundcover, Grasses, and Ferns</b>				
LILY TURF	Drought Tolerant	0	816	1
STELLA D'ORO DAYLILY	Drought Tolerant	0	817	1
DWARF FOUNTAIN GRASS	Drought Tolerant	0	817	1
Proposed Total and/or Average		0.0	8941	1
Baseline Trees		0.5	4040	1
Baseline Mixed Planting		0.5	2451	1.1
Baseline Turf Grass		0.7	2450	1
Reference Evapotranspiration rate (ETo)	5.89	Typical for region.		
Microclimate Factor (Kmc)	1.2	Typical for this project time and region.		



Table 1. Design Case

Regional evapotranspiration rate (ET <sub>e</sub> ) for July [in]						5.89						
Landscape Type	Area [sf]	Species Factor (K <sub>s</sub> )	Density Factor (K <sub>d</sub> )	Microclimate Factor (K <sub>mc</sub> )	K <sub>L</sub>	ET <sub>L</sub>		IE	CE	TWA [gal]		
Trees	4,040	Avg	0.5	Avg	1.0	Avg	1.0	0.5	2.95	Sprinkler	0.625	
Shrubs		Avg	0.5	Avg	1.0	Avg	1.0	0.5	2.95	Sprinkler	0.625	
Groundcovers		Avg	0.5	Avg	1.0	Avg	1.0	0.5	2.95	Sprinkler	0.625	
Mixed	2,451	Avg	0.6	Avg	1.1	Avg	1.0	0.6	3.24	Sprinkler	0.625	
Turfgrass	2,460	Avg	0.7	Avg	1.0	Avg	1.0	0.7	4.12	Sprinkler	0.625	
		--	--	--	--					Sprinkler	0.625	
		--	--	--	--					Sprinkler	0.625	
		--	--	--	--					Sprinkler	0.625	
Total	8,941									Subtotal TWA [gal]		
											July Rainwater and Graywater Harvest [gal]	
											Net TPWA [gal]	

Table 2. Baseline Case

Landscape Type	Area [sf]	Species Factor (K <sub>s</sub> )	Density Factor (K <sub>d</sub> )	Microclimate Factor (K <sub>mc</sub> )	K <sub>L</sub>	ET <sub>L</sub>	IE	TWA [gal]	
Trees	4,040	Avg 0.5	Avg 1.0	Avg 1.0	0.5	2.95	Sprinkler	0.625	11,865.44
Shrubs		Avg 0.5	Avg 1.0	Avg 1.0	0.5	2.95	Sprinkler	0.625	
Groundcovers		Avg 0.5	Avg 1.0	Avg 1.0	0.5	2.95	Sprinkler	0.625	
Mixed	2,451	Avg 0.5	Avg 1.1	Avg 1.0	0.6	3.24	Sprinkler	0.625	7,918.42
Turfgrass	2,460	Avg 0.7	Avg 1.0	Avg 1.0	0.7	4.12	Sprinkler	0.625	10,073.87
		--	--	--			Sprinkler	0.625	
		--	--	--			Sprinkler	0.625	
		--	--	--			Sprinkler	0.625	
Total	8,941	Subtotal TWA [gal]							29,857.73
Irrigation Potable Water Use Reduction									-100.00%

The above calculations show a 100% savings thus earning this credit.

For W1.1R, W: The SCA Design Standards are:

- DR2.5.1 Trees, Shrubs, Ground Cover and Lawns
- SS02900 Landscaping

Project meets the requirement for this credit

Project meets the requirement for this credit  
**No Credit submittal required for this Phase.**

This Credit can be achieved by designing the landscaping with native or adapted plants to eliminate the need for a permanent irrigation system. Planting new sidewalk trees and perimeter landscaping in accordance with NYC Parks Department standards and Design Requirement 2.5.1 Trees, Shrubs, Ground Cover and Lawns will satisfy the requirements for this credit.

The new sidewalk trees and perimeter landscaping will eliminate the use of potable water for landscape irrigation. Temporary irrigation for the first year of the plantings will be provided by maintenance hose bibs located on the exterior of the building.

For W1.1R, W: The SCA Design Standards are:

- DR2.5.1 Trees, Shrubs, Ground Cover and Lawns
- SS02900 Landscaping

- 1) All of the specified species were selected for there drought tolerance
- 2) All of the specified species should have a  $K_s=0$ . Based on LEED Guidance (the 2009 Reference Guide Page 184) " If a species does not require irrigation once it is established, then the effective  $K_s=0$ .

All of the plant species specified are either native to the region or adapted to the climate. The landscaping to installed will not require a permanent irrigation system. Temporary irrigation will only be required for the initial period of establishment.

As clarification, the planting plan has been designed to minimize the need for irrigation and maintenance.

Plant species were selected for the site conditions including the typical rainfall expected. Plants have been located throughout the site according to their need for sun/shade. All of the planting beds will be densely planted. 6 of the trees shown will be planted in 50 SF tree pits with impervious pavers. The Hophornbeam w be located in a planting bed with mixed vegetation.

Project meets the requirement for this credit

**No Credit submittal required for this Phase.**

W 2.1R Water Use Reduction, 20% Reduction

---

**See narrative below**

W 2.2 Water Use Reduction, 30% Reduction

---

Compliance with this credit will be achieved by the implementation of all New York City SCA Standard Specifications and Plumbing Design Requirements for dual flushometer toilets, high water efficiency urinals, low water flow shower heads, and metered faucets. Based on the project specific calculations, the project will achieve 30% water use reduction.

For W2.1R, W2.2R and W2.3R: The SCA Design Standards are:

- DR 6.1.16 Compliance with LL86/05
- SS15440 Plumbing Fixtures

The completed Water Use Reduction Certification Form is attached.

Project meets the requirements for this credit

**No Credit submittal required for this Phase.**

W 2.3 Water Use Reduction, 35% Reduction

---

This is a PS school with only a few urinals. Therefore, this credit is not feasible.

W 2.4 Water Use Reduction, 40% Reduction

---

This is a PS school with only a few urinals. Therefore, this credit is not feasible.

## Energy

### Commissioning

#### E 1.1R Fundamental Commissioning

---

**SCA Standard requires all new capacity projects to undergo whole building commissioning which exceeds LEED requirements for commissioning. The Commissioning Agent for this project will be EME Group.**

**For E1.1R: The SCA Design Standards are:**

- **SSS01650 Facility Start-up, Demonstration and Training**
- **SSS01660 Commissioning**

**Commissioning is being conducted by EME. See attached documentation.**

**Credit is achieved.**

**Project meets the requirements for this credit**

#### E 1.2R Enhanced Commissioning

---

**Based on current SCA directives, this credit will not be pursued.**

**E 2.1R Fundamental Refrigerant Management**

---

No CFC-based refrigerants will be used in the HVAC or refrigerant systems of this project. This project design complies with the requirements of this credit. This credit will be achieved through the description below.

The central air conditioning system for the school will consist of rooftop units that utilize refrigerant R-407C or R-410A, split air cooled chiller and split heat pump units that utilize refrigerant R-410A.

For E2.1R: The SCA Design Standards are:

- SS11400 Food Service Equipment
- SS13031 Walk-in Trash Refrigerator
- SS15650 Split Air Cooled Chillers
- SS15783 Split Heat Pump System
- SS15853 Custom Packaged Rooftop Heating and Cooling Units (Variable Air Volume System)
- SS15854 Custom Packaged Rooftop Heating and Cooling Units (Constant Volume System)

Project meets the requirements for this credit

**No Credit submittal required for this Phase**

**E 2.2 Enhanced Refrigerant Management**

---

**Based on the SCA standard equipment specified for this project this credit is not feasible.**

Verification



### E 3.1R Measurement & Verification

---

The requirements of this credit will be achieved through compliance with SCA Design Requirement 6.2.20 Building Management Control System/Direct Digital Control BMS/DDC.

The SCA controls design will incorporate sensors, sub-meters, watt-meters and instrumentation, as well as a Building Management System that will provide the energy information. The Building Management Control System (BMS) for the new building will measure/monitor gas consumption by the hot water boilers, rooftop HVAC units, new kitchen gas consumption and individual electrical power consumption by rooftop HVAC units, split air cooled chillers and lighting panels, and other such items per standard SCA design.

The applicable SCA standards are:

Design Requirements:

- 6.2.20 Building Management Control System / Direct Digital Control BMS/DDC

Standard Specifications:

- 15416 Gas Piping Standards
- 15970 Temperature Control System (LonWorks BMS/DDC With School Operating Console)
- 15973 Facility Management Systems Integration
- 15985 Sequence of Operations
- 16420 Service Entrance Equipment

Standard Details:

- 15985 HVAC Standard Details

**See Specification Sections 15970, 15973 and 15985.**

**Measurement and verification is in progress. See attached Documentation from CTI.**

**Project meets the requirement for this credit**

### E 3.2R Energy Management System Controls, HVAC and Hot Water

The requirements of this credit will be achieved through compliance with SCA Design Requirement 6.2.20 Building Management Control System/Direct Digital Control BMS/DDC.

The new building will be provided with Building Management System (BMS) that will be connected to the NYCDOE Wide Area Intranet Network (WAN). This connection allows complete monitoring and control of the school's MEP systems from both the local BMS station in the Custodian's office as well as the DOE central monitoring and control station located at 44-46 Vernon Blvd., Long Island City, NY.

The applicable Standard Specifications are:

- 15970 Temperature Control System (LonWorks BMS/DDC With School Operating Console)
- 15973 Facility Management Systems Integration
- 15985 Sequence of Operations

Standard Details:

- 15985 HVAC Standard Detail

See specification sections 15970, 5973 and 15985

**Energy Systems controls are in progress. See attached Documentation from CTI.**

Project meets the requirement for this credit

This project complies with this credit by complying with SCA standard design requirements and specifications and by complying with the prototypical energy model for buildings less than 150,000 square feet.

The HVAC design for the new building will utilize custom rooftop air handling units; gas fired hot water condensing boilers, hot water perimeter heating, packaged rooftop modular chillers and chilled beam units as required by the NYC Green Schools Guidelines and SCA Design Requirements.

For interior Lighting, vacancy motion sensors manual on /automatic off will be designed for control of lights in classrooms and offices. Power densities for the lighting layouts will be designed to comply with the NYCSCA Electrical Design Requirement 7.2.1 for interior and 7.2.5 for the exterior.

The prototypical energy model for new school building requirements demonstrate a 10% or better improvement in the proposed building performance rating compared to the baseline building performance rating per ASHRAE/IESNA Standard 90.1-2007 (with errata but without addenda) by a whole building project simulation using the Building Performance Rating Method in Appendix G of the Standard. Appendix G of Standard 90.1-2007 requires that the energy analysis done for the Building Performance Rating Method include ALL of the energy costs within and associated with the building project. To achieve points using this credit, the proposed design will comply with:

- The mandatory provisions (Sections 5.4, 6.4, 7.4, 8.4, 9.4 and 10.4) of ASHRAE/IESNA Standard 90.1-2007 (without addenda);
- Must include all the energy costs within and associated with the building project.
- Must be compared against a baseline building that complies with Appendix G to Standard 90.1-2007 (with errata but without addenda). The default process energy cost is 25% of the total energy cost for the baseline building. For buildings where the process energy cost is less than 25% of the baseline building energy cost, the GSG submittal must include supporting documentation substantiating that process energy inputs are appropriate.

**The overall Lighting Power Density (LPD) for this building is 0.54 (45,109 Watts / 83373 square feet) using LED Fixtures throughout.**

For E4.1R: The SCA Design Standards are:

- DR1.1.5.2 Building Areas –Energy Saving and Non-Energy Saving Spaces - Fenestration
- DR1.3.1.10 Prototypical Energy Modeling (Capacity & CIP) / Green Building Multi-Discipline Design Parameters.
- DR4.2.1 Exterior Masonry Wall
- DR6.2.0 General Overview of Heating Ventilation and Air Conditioning Systems
- DR6.2.3 Non-Assembly Spaces
- DR6.2.4 Public Assembly Spaces
- DR6.2.9 Heating and Cooling Design parameters (Load Calculations)
- DR6.2.20 Building Management Control System/DOC Control BMS
- DR6.2.28 HVAC Design Requirements for Special Spaces
- DR6.2.34 Verification of Air System Design
- DR7.2.1 Interior Lighting
- DR 7.2.5 Exterior Lighting
- SS08524 Aluminum Windows Projected
- SS15517 Water Treatment Hydronic Systems
- SS15540 HVAC Pumps
- SS15565 Condensing Boilers
- SS15660 Packaged Modular Outdoor Chillers
- SS15783 Packaged Heat Pump System

- SS15932 Active Chilled Beams
- SS15933 DOAS Units
- SS15934 Rooftop AHU's For PA Spaces
- SS15970 Temperature Control System
- SS15973 Facility Management Systems Integration
- SS15985 Sequence of Operations
- SS16145 Lighting Control Devices
- SS16500 Interior Building Lighting
- SS16501 Lamps, Ballast and Accessories
- SD04200 Unit Masonry
- SD15970 BMS Control Diagram

**In progress. See attached Documentation from CTI.**

This project complies with this credit by the following:

The new HVAC Systems for the new building will be sized per NYCSCA DR 6.2.13 "Arrangement and Sizing of Equipment" and 6.2.9 "Heating and Cooling Design" (Load calculations) and will not be oversized. Ventilation calculations will be based on ASHRAE 62.1 methodology.

For E4.2R: The SCA Design Standards are:

- DR6.2.9 Heating and Cooling Design Parameters (Load Calculations)
- DR6.2.13 Arrangement and Sizing of Equipment
- DR6.2.34 Verification of Air System Designs
- SS15540 HVAC Pumps
- SS15565 Condensing Boilers
- SS15660 Packaged Modular Outdoor Chillers
- SS15783 Split Heat Pump System
- SS15932 Active Chilled Beams
- SS15933 DOAS Units
- SS15934 Rooftop AHU's For PA Spaces

**Project meets the requirement for this credit**

**No Credit submittal required for this Phase**



An application will be filed with the City of New York after the CP is issued by OMB for green power allocation. The City of New York purchases wind credits that support the production of approximately 29,000 MWH a year. The City has arranged with the U.S. Green Buildings Council (USGBC) to utilize this purchase in order to qualify for green power credits that contribute to the achievement of a LEED® rating on city projects.

The 100% construction documents will include calculation of annual Green Power Allocation Request (NYC LL86/05 LEED Reporting Form using lines 39-40-41).

Project meets the requirement for this credit

**No Credit submittal required for this Phase**

## Materials Credits

### Efficient Material Use

#### M 1.1R Storage & Collection of Recyclables

---

Compliance with this credit will be accomplished by (1) providing an easily accessible dedicated area to the collection and storage of non-hazardous materials for recycling for the entire building. Materials will include at a minimum paper, corrugated cardboard, glass, plastics and metal. A space will be provided in, or adjacent to, this recycling area, for the storage of utility carts used for collecting trash and recyclables. Equipment for storing and processing recyclables is provided by the SCA/F&E Unit based on a standard list of items per project type.

(2) Sizing central recycling collection/storage will be in accordance with the guidelines in the Design Requirement DR 1.3.1.8 Refuse and Recycling Storage, which are consistent with LEED for Schools 2009 space guidelines. Allow space for bailers and compactor in the Trash Room.

(3) At the cafeteria, a designated area(s) for bin(s) for recycling will be provided. Since the NYC Department of Sanitation sorts glass, plastic, metal, and milk and juice boxes off-site, only one type of recycling container needs to be provided at cafeterias. The amount of space for recycling containers is established by the Design Team based on criteria in DR 1.3.1.8.

Wall-mounted sign holder(s) will be provided at cafeteria trash and recycling areas for the display of recycling instructional posters.

(4) Within the kitchen area, space will be provided for two types of recycling containers to accommodate glass/plastic/metal and paper/cardboard.

For M1.1R: The SCA Design Standards are:

- DR 1.3.1.2 Building Organization - Space Relationships
- DR 1.3.1.8 Refuse and Recycling Storage
- DR 1.3.5.01 Cafeterias PK-5
- SS1172 Waste Handling Equipment

**No Credit submittal required for this Phase**

M 1.2 Building Reuse, Maintain 75% of Existing Walls, Floors & Roof

**This credit is not feasible**

The credit is not feasible for this project because there is no building on site. The Site was used as a Parking lot.

M 1.3 Building Reuse, Maintain 95% of Existing Walls, Floors & Roof

**This credit is not feasible**

The credit is not feasible for this project because there is no building on site. The Site was used as a Parking lot.

M 1.4 Building Reuse, Maintain 50% of Interior Non-Structural Elements

**This credit is not feasible**

The credit is not feasible for this project because there is no building on site. The Site was used as a Parking lot.

M 1.5R Construction Waste Management, Divert 50% from Disposal

**Credit is feasible See Narrative below**

M 1.6 Construction Waste Management, Divert 75% from Disposal

**Credit is achieved**

M 1.7 Construction Waste Management, Divert 95% from Disposal

**Credit is feasible and will be pursued (30% Submission)**

This credit will be achieved by requiring the contractor to develop a construction waste management plan and to record the amount and type of construction waste diverted/recycled. The contractor will be required to comply with the following SCA Standard Specification sections in the Contract documents:

- S01524 Construction Waste Management

**Construction Waste Management is complete. 92% of construction waste was diverted from landfills. Out of total 1644 tons of waste, 1520 tons was diverted to Westbury Recycling located at 117 Magnolia Avenue, Westbury, NY 11590. Project has achieved both M 1.5R and M1.6. Attached are also monthly Construction waste reports from Rizzo Environmental, the waste hauler for this project.**

**Construction Waste Management**  
Credit M1.5R, M1.6 and M1.7



Project: PS 335Q  
Address: 150-15 Raleigh Street  
LLW: 53004  
Date: ~~10/17~~ 2/16/18

Contractor: Petracca & Sons  
Preparer: J. Dias  
Telephone: X8422

**Table 1: Construction Waste Management diversion Summary**

Diverted / Recycled Materials Description	Diversion / Recycling Hauler or Location	Quantity of Diverted / Recycled Waste	Units (tons or cubic yards)
Concrete		598	Tons
Wood		555	Tons
Gypsum Wallboard		14	Tons
Steel		157	Tons
Crushed Asphalt			
Masonry			
Cardboard		98	Tons
Plastic		98	Tons
Other:			
Other:			
Other:			
Other:			
Other:			
Other:			
Other:			
Other:			
Other:			
Other:			
Other:			
Other:			
Other:			
Other:			
Other:			
Other:			
<b>TOTAL CONSTRUCTION WASTE DIVERTED</b>		1,520	

Landfill materials Description	Landfill Hauler or Location	Quantity of Diverted / Recycled Waste	Units (tons or cubic yards)
General Mixed Waste		124	
Other:			
Other:			
<b>TOTAL CONSTRUCTION WASTE SENT TO LANDFILL</b>		124	

<b>TOTAL OF ALL CONSTRUCTION WASTE</b>	1,644	
<b>PERCENTAGE OF CONSTRUCTION WASTE DIVERTED FROM LANDFILL</b>	92%	

05/01/09

Electronic copy of Form can be downloaded from SCA web site



## **CONSTRUCTION WASTE MANAGEMENT PLAN (CWM PLAN)**

**SCA – PS 335  
Queens, New York**

**General Contractor:     Petracca & Sons  
Project:                     PS 335  
Project No.:                LLW #053004**

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### **Project Information**

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**Project:** SCA – PS 335  
Queens, New York  
Project # LLW #053004

**General Contractor:** Petracca & Sons      **Contact:** Lou Gaudio

**CWM Coordinators:** Maggie Sciubba (KR) & Lou Gaudio (Petracca)

**Project Location:** PS 335 - Queens, NY

**Project Description:** New School Construction

### **Waste Management Goals**

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This project will recycle or salvage for reuse, a **minimum of 75%** (by weight) of the demolition and construction waste generated onsite. Waste reduction will be achieved through reuse and recycling efforts to be maintained throughout the construction process.

### **Waste Prevention**

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This project will be in compliance with the requirements of specification section S01524 dated December 30, 2014.

As part of the Project Manual's Specifications the requirements for waste management are defined in Division One: Section S01524: Construction Waste Management and Disposal. The General Contractor is required to develop a waste management plan, require all subcontractors to comply with said plan, review said plan at a kick-off meeting and at every project meeting thereafter with the subcontractors. A copy of this Construction Waste Management Plan shall accompany all Subcontractor Agreements requiring subcontractor participation.

The Construction Waste Plan shall be implemented and executed as:

- There will be designated areas at the construction site for dumpsters for
- All containers with comingled items will be hauled off site and divert materials from landfill as appropriate by the recycling center.

#### **Communication & Education Plan**

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##### **Pre-Construction Meeting:**

The General Contractor and LEED Consultant for GC (Knowledge Resource, LLC) shall conduct onsite pre-demo and pre-construction meetings with subcontractors to review all waste management goals. Attendance will be required for the subcontractor's key field personnel, as a prerequisite to award. The meeting shall reinforce the commitments made by their companies with regard to the project goals and requirements for each of the subcontractor's key field employees. Each subcontractor attending the meeting will be required to sign a compliance sheet, to ensure the project goals are understood and will be followed.

**Weekly Meetings:** Waste prevention and recycling activities shall be discussed at the beginning of each weekly subcontractor coordination meeting to reinforce project goals and communicate progress to date.

As each new subcontractor comes on to the project site, the jobsite foreman will present him/her with a copy of the Waste Management Plan and provide a tour of the recycling and reuse areas. The subcontractor will be expected to make sure each of their team members comply with the Construction Waste Management Plan.



### **Implementation Plan**

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This plan will be distributed to the subcontractors, attached to subcontract agreements and/or at the weekly meeting if not in receipt, and posted at the jobsite.

The project team will designate and label specific areas on Project site necessary for separating materials that are to be salvaged, recycled, reused, donated, and sold.

The project team will designate and label a specific person(s) on Project site necessary for reviewing, implementing and confirming the compliance of this plan. The persons are Maggie Sciubba of Knowledge Resource and Lou Gaudio (Petracca).

All waste containers shall be located in close proximity to the location(s) under construction in which materials to be diverted or land filled will be collected in a comingled fashion. All designated containers for single material separation shall be properly and boldly labeled.

Lists of acceptable/unacceptable materials will be posted at the site. All subcontractors will be informed through this plan and at weekly meetings of the importance of non-contamination with other materials or trash. Recycling coordinators shall inspect the containers on a weekly basis to insure that no contamination is occurring and precautions shall also be taken to deter any contamination by the public.

All demolition and construction debris recycling will be done by Rizzo Environmental Services located at Westbury, New York.

Reporting forms will be provided by Rizzo showing amounts of materials diverted from Landfills.

## Evaluation Plan

The General Contractor will develop, update and post at the jobsite a graph indicating the progress to date for achieving the project's waste recycling goal of 75% by weight of the total project waste stream.

## Expected Project Waste, Disposal and Handling

Salvaging Demolition Waste	
No Demo Done	No Demo Done

Recycling Construction Waste	
Material	Handling Procedure
Packaging/Paper/Cardboard (25 T) RECYCLED	1. Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location. 2. Polystyrene Packaging: Separate and bag materials.  3. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project site. For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.  4. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.
Wood Materials (120 T)	1. Clean Cut-Offs of Lumber: Grind or chip

RECYCLED	into small pieces.  2. Clean Sawdust: Bag sawdust that does not contain painted or treated wood.
Gypsum Board/Insulation (2 T)	Stack large clean pieces on wood pallets and store in a dry location.
Masonry/Concrete (200 T)	Remove reinforcement and other metals from concrete and sort with other metals and pulverize concrete and screen.
Metal (50 T)	Separate metal by type: 1. Structural Steel: Stack members according to size, type of member, and length. 2. Remove and dispose of bolts, nuts, washers, and other rough hardware.
Plastics (20 T)	General Treatment
Flooring (1 T)	Roll large pieces tightly after removing debris, trash, adhesive, and tack strips.
Field Adh/Sealants/Caulking Tubes (.1 T)	

## Estimated Cost/Revenue Analysis of Construction Waste

Cost / Revenue Analysis of Construction Waste								
Materials	Total Quantity of Materials (lbs) (A)	Estimated Cost of Disposal (B)	Total Estimated Cost of Disposal (C=AxB)	Revenue from Salvaged Materials per pound (D)	Revenue from Recycled Materials (E)	Landfill Tipping Fees Avoided (F)	Handling and Transportation Costs Avoided (G)	Net Cost Savings of Work Plan (H = D+E+F+G)
Packaging: Cardboard/Paper	50,000.00	0.035	\$1,750.00	\$0.02	\$1,000.00	\$1,750.00	0	\$2,750.02
Construction: Masonry or CMU	400,000.00	0.005	\$2,000.00	\$0.03	\$10,000.00	\$2,000.00	0	\$12,000.03
Construction: Lumber	240,000.00	0.035	\$8,400.00	\$0.03	\$6,000.00	\$8,400.00	0	\$14,400.03
Construction: Metals	100,000.00	0.035	\$3,500.00	\$0.03	\$3,000.00	\$3,500.00	0	\$6,500.03
Construction: Insulation	800.00	0.035	\$28.00	\$-	\$-	\$28.00	0	\$28.00
Joint Sealant Tubes	200.00	0.035	\$7.00	\$-	\$-	\$7.00	0	\$7.00
Construction: Gypsum Board	3,200.00	0.035	\$112.00	\$-	\$-	\$112.00	0	\$112.00
Construction: Carpet and Pad	2,000.00	0.035	\$70.00	\$-	\$-	\$70.00	0	\$70.00
<b>Totals</b>	<b>796,200.00</b>		<b>15,867.00</b>		<b>\$20,000.00</b>	<b>15,867.00</b>	<b>-</b>	<b>35,867.10</b>

The above estimates are based upon project drawings and specification reviews.



### **Disposal of Waste**

Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.

- a. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
- b. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

Burning: Do not burn waste materials.

### **Monthly Reporting**

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Knowledge Resource, LLC (KR) will produce the monthly CWM Management Form (Appendix A Form) tracking report, based on the four (4) submittals listed below, provided by the General Contractor.

1. A record of the type and quantity, by weight, of each material salvaged, reused, recycled, or disposed of;
2. Total quantity of waste recycled as a percentage of total waste;
3. Disposal Receipts;
  - a. Copy of receipts issued by a disposal facility for Construction, Demolition, and Land clearing (CDL) waste debris that is disposed in a landfill
4. Recycling Receipts;
  - a. Copy of receipts issued by approved recycling facilities for comingled materials

## Appendix A- Constuction Waste Management Form

Construction Water Management  
Credit M 1.5R, M1.6, and M1.7

Project: PS 335 (Queens)  
Address: 150-15 Raleigh Str., Ozone Park, NY  
LLW: 53004  
Date: Sep-2017

Contractor: Petracca  
Preparer: Knowledge Resource, LLC  
Telephone: 732.770.9221

**Table 1: Construction Wate Management Diversion Summary**

Diverted/Recycled Materials Description	Diversion/Recycled Hauler or Location	Quantity of Diverted/Recycled Waste	Units (ton or cubic yards)
Concrete	Rizzo Environmental	597.65	Tons
Wood	Rizzo Environmental	554.68	Tons
Gypsum Wallboard	Rizzo Environmental	13.72	Tons
Metal	Rizzo Environmental	156.60	Tons
Crushed Asphalt	Rizzo Environmental	0.000	Tons
Masonry	Rizzo Environmental	0.00	Tons
Carboard/paper	Rizzo Environmental	98.07	Tons
Plastic	Rizzo Environmental	98.68	Tons
Carpet	Rizzo Environmental	0.00	Tons
6" Minus	Rizzo Environmental	0.00	Tons
Screen Fine	Rizzo Environmental	0.00	Tons

**Total Construction Waste Diverted 1519.40 Tons**

Landfill Materials Description	Landfill Hauler or Location	Quantity of Diverted/Recycled Waste	Units (tons or cubic yards)
General mixed Waste	Rizzo Environmental	123.50	Tons
<b>Total Construction Waste Sent to Landfill</b>		<b>123.5</b>	<b>Tons</b>

Total of All Constuction Waste 1642.9  
Percentage of Construction Waste Diverted From Landfill 92%

Project: PS 335 (Queens)  
Address: 150-15 Raleigh Str., Ozone Park, NY  
Hauler: Rizzo Environmental

September 2017 Report

Date	Ticket #	Weight (Tons)	Plastic	Paper/Cardboard	Metal	Masonry	Sheet Rock	Brick/Concrete	Asphalt	Carpet	Wood	6" Minus	Screen Fines	Waste
6/1-30/16	no pick up	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals for June 2016		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7/1-31/16	various	23.07	0.00	0.00	3.01	0.00	0.00	7.82	0.00	0.00	9.93	0.00	0.00	2.31
Totals for July 2016		23.07	0.00	0.00	3.01	0.00	0.00	7.82	0.00	0.00	9.93	0.00	0.00	2.31
8/1-31/16	various	48.17	0.71	3.12	4.12	0.00	0.00	29.48	0.00	0.00	9.04	0.00	0.00	1.71
Totals for August 2016		48.17	0.71	3.12	4.12	0.00	0.00	29.48	0.00	0.00	9.04	0.00	0.00	1.71
9/1-30/16	various	112.33	3.75	4.33	10.32	0.00	0.00	58.83	0.00	0.00	26.11	0.00	0.00	8.99
Totals for September 2016		112.33	3.75	4.33	10.32	0.00	0.00	58.83	0.00	0.00	26.11	0.00	0.00	8.99
10/1-31/16	various	148.46	11.00	10.43	16.79	0.00	0.00	46.46	0.00	0.00	53.30	0.00	0.00	10.48
Totals for October 2016		148.46	11.00	10.43	16.79	0.00	0.00	46.46	0.00	0.00	53.30	0.00	0.00	10.48
11/1-30/16	various	85.57	7.06	9.59	11.09	0.00	0.00	27.86	0.00	0.00	21.41	0.00	0.00	8.56
Totals for Nov 2016		85.57	7.06	9.59	11.09	0.00	0.00	27.86	0.00	0.00	21.41	0.00	0.00	8.56
12/1-31/16	various	70.21	5.01	5.01	7.06	0.00	0.00	24.26	0.00	0.00	22.45	0.00	0.00	6.43
Totals for Dec 2016		70.21	5.01	5.01	7.06	0.00	0.00	24.26	0.00	0.00	22.45	0.00	0.00	6.43
1/1-31/17	various	106.13	7.73	6.08	9.94	0.00	0.00	40.44	0.00	0.00	32.87	0.00	0.00	9.08
Totals for Jan 2017		106.13	7.73	6.08	9.94	0.00	0.00	40.44	0.00	0.00	32.87	0.00	0.00	9.08
2/1-28/17	various	163.92	9.76	9.66	18.56	0.00	0.00	67.49	0.00	0.00	45.39	0.00	0.00	13.06
Totals for Feb 2017		163.92	9.76	9.66	18.56	0.00	0.00	67.49	0.00	0.00	45.39	0.00	0.00	13.06
3/1-31/17	various	163.92	9.76	9.66	18.56	0.00	0.00	67.49	0.00	0.00	45.39	0.00	0.00	13.06
Totals for March 2017		163.92	9.76	9.66	18.56	0.00	0.00	67.49	0.00	0.00	45.39	0.00	0.00	13.06

Project: PS 335 (Queens)  
 Address: 150-15 Raleigh Str., Ozone Park, NY  
 Hauler: Rizzo Environmental

September 2017 Report

Date	Ticket #	Weight (Tons)	Plastic	Paper/Cardboard	Metal	Masonry	Sheet Rock	Brick/Concrete	Asphalt	Carpet	Wood	6" Minus	Screen Fines	Waste
3/1-31/17	various	201.69	8.44	8.27	21.48	0.00	0.00	100.38	0.00	0.00	48.39	0.00	0.00	14.73
Totals for March 2017		201.69	8.44	8.27	21.48	0.00	0.00	100.38	0.00	0.00	48.39	0.00	0.00	14.73
4/1-28/17	various	92.25	7.41	7.90	7.10	0.00	0.99	16.32	0.00	0.00	46.85	0.00	0.00	5.67
Totals for April 2017		92.25	7.41	7.90	7.10	0.00	0.99	16.32	0.00	0.00	46.85	0.00	0.00	5.67
5/1-30/17	various	167.77	17.90	21.31	12.63	0.00	11.55	35.25	0.00	0.00	49.30	0.00	0.00	19.81
Totals for May 2017		167.77	17.90	21.31	12.63	0.00	11.55	35.25	0.00	0.00	49.30	0.00	0.00	19.81
6/1-30/17	various	136.89	7.91	8.07	10.20	0.00	1.18	24.92	0.00	0.00	78.11	0.00	0.00	6.53
Totals for June 2017		136.89	7.91	8.07	10.20	0.00	1.18	24.92	0.00	0.00	78.11	0.00	0.00	6.53
7/5-27/17	various	138.91	6.55	0.64	13.23	0.00	0.01	60.92	0.00	0.00	49.43	0.00	0.00	8.10
Totals for July 2017		138.91	6.55	0.64	13.23	0.00	0.01	60.92	0.00	0.00	49.43	0.00	0.00	8.10
8/1-30/17	various	99.56	4.65	2.18	7.79	0.00	0.00	30.07	0.00	0.00	43.44	0.00	0.00	5.09
Totals for August 2017		99.56	4.65	2.18	7.79	0.00	0.00	30.07	0.00	0.00	43.44	0.00	0.00	5.09
9/1-29/17	various	54.3	0.80	1.48	3.28	0.00	0.00	27.15	0.00	0.00	18.66	0.00	0.00	2.95
Totals for September 2017		54.3	0.80	1.48	3.28	0.00	0.00	27.15	0.00	0.00	18.66	0.00	0.00	2.95
Totals:		757.86	45.02	48.22	80.89	0.00	0.00	302.64	0.00	0.00	220.50	0.00	0.00	60.62

Total Hauled:	757.86
Total Recycled:	697.27
Total to Landfill:	60.62
	92%
	8%

## Appendix A- Constuction Waste Management Form

Construction Water Management  
Credit M 1.5R, M1.6, and M1.7

Project: PS 335 (Queens)  
Address: 150-15 Raleigh Str., Ozone Park, NY  
LLW: 53004  
Date: Aug-2017

Contractor: Petracca  
Preparer: Knowledge Resource, LLC  
Telephone: 732.770.9221

**Table 1: Construction Waste Management Diversion Summary**

Diverted/Recycled Materials Description	Diversion/Recycled Hauler or Location	Quantity of Diverted/Recycled Waste	Units (ton or cubic yards)
Concrete	Rizzo Environmental	302.64	Tons
Wood	Rizzo Environmental	220.50	Tons
Gypsum Wallboard	Rizzo Environmental	0.00	Tons
Metal	Rizzo Environmental	80.89	Tons
Crushed Asphalt	Rizzo Environmental	0.000	Tons
Masonry	Rizzo Environmental	0.00	Tons
Carboard/paper	Rizzo Environmental	48.22	Tons
Plastic	Rizzo Environmental	45.02	Tons
Carpet	Rizzo Environmental	0.00	Tons
6" Minus	Rizzo Environmental	0.00	Tons
Screen Fine	Rizzo Environmental	0.00	Tons
<b>Total Construction Waste Diverted</b>		<b>697.27 Tons</b>	

Landfill Materials Description	Landfill Hauler or Location	Quantity of Diverted/Recycled Waste	Units (tons or cubic yards)
General mixed Waste	Rizzo Environmental	60.62	Tons
<b>Total Construction Waste Sent to Landfill</b>		<b>60.62 Tons</b>	

Total of All Constuction Waste      757.89  
Percentage of Construction Waste Diverted From Landfill      92%



## Appendix A- Constuction Waste Management Form

Construction Water Management  
Credit M 1.5R, M1.6, and M1.7

Project:	PS 335 (Queens)	Contractor:	Petracca
Address:	150-15 Raleigh Str., Ozone Park, NY	Preparer:	Knowledge Resource, LLC
LLW:	53004	Telephone:	732.770.9221
Date:	Jul-2017		

**Table 1: Construction Waste Management Diversion Summary**

Diverted/Recycled Materials Description	Diversion/Recycled Hauler or Location	Quantity of	
		Diverted/Recycled Waste	Units (ton or cubic yards)
Concrete	Rizzo Environmental	540.43	Tons
Wood	Rizzo Environmental	492.58	Tons
Gypsum Wallboard	Rizzo Environmental	13.72	Tons
Metal	Rizzo Environmental	145.53	Tons
Crushed Asphalt	Rizzo Environmental	0.000	Tons
Masonry	Rizzo Environmental	0.00	Tons
Carboard/paper	Rizzo Environmental	94.41	Tons
Plastic	Rizzo Environmental	93.23	Tons
Carpet	Rizzo Environmental	0.00	Tons
6" Minus	Rizzo Environmental	0.00	Tons
Screen Fine	Rizzo Environmental	0.00	Tons
<b>Total Construction Waste Diverted</b>		<b>1379.90 Tons</b>	

Landfill Materials Description	Landfill Hauler or Location	Quantity of	
		Diverted/Recycled Waste	Units (tons or cubic yards)
General mixed Waste	Rizzo Environmental	115.46	Tons
<b>Total Construction Waste Sent to Landfill</b>		<b>115.46 Tons</b>	

Total of All Constuction Waste	1495.36
Percentage of Construction Waste Diverted From Landfill	92%

## Appendix A- Constuction Waste Management Form

Construction Water Management  
Credit M 1.5R, M1.6, and M1.7

Project:	PS 335 (Queens)	Contractor:	Petracca
Address:	150-15 Raleigh Str., Ozone Park, NY	Preparer:	Knowledge Resource, LLC
LLW:	53004	Telephone:	732.770.9221
Date:	Jun-2017		

**Table 1: Construction Wate Management Diversion Summary**

Diverted/Recycled Materials Description	Diversion/Recycled Hauler or Location	Quantity of Diverted/Recycled Waste	Units (ton or cubic yards)
Concrete	Rizzo Environmental	479.51	Tons
Wood	Rizzo Environmental	443.15	Tons
Gypsum Wallboard	Rizzo Environmental	13.72	Tons
Metal	Rizzo Environmental	132.30	Tons
Crushed Asphalt	Rizzo Environmental	0.000	Tons
Masonry	Rizzo Environmental	0.00	Tons
Carboard/paper	Rizzo Environmental	93.77	Tons
Plastic	Rizzo Environmental	86.68	Tons
Carpet	Rizzo Environmental	0.00	Tons
6" Minus	Rizzo Environmental	0.00	Tons
Screen Fine	Rizzo Environmental	0.00	Tons

**Total Construction Waste Diverted                      1249.13 Tons**

Landfill Materials Description	Landfill Hauler or Location	Quantity of Diverted/Recycled Waste	Units (tons or cubic yards)
General mixed Waste	Rizzo Environmental	107.36	Tons
	<b>Total Construction Waste Sent to Landfill</b>	<b>107.36</b>	<b>Tons</b>

Total of All Constuction Waste	1356.49
Percentage of Construction Waste Diverted From Landfill	92%

## Appendix A- Constuction Waste Management Form

Construction Water Management  
Credit M 1.5R, M1.6, and M1.7

Project:	PS 335 (Queens)	Contractor:	Petracca
Address:	150-15 Raleigh Str., Ozone Park, NY	Preparer:	Knowledge Resource, LLC
LLW:	53004	Telephone:	732.770.9221
Date:	May-2017		

Table 1: Construction Waste Management Diversion Summary

Diverted/Recycled Materials Description	Diversion/Recycled Hauler or Location	Quantity of Diverted/Recycled Waste	Units (ton or cubic yards)
Concrete	Rizzo Environmental	454.59	Tons
Wood	Rizzo Environmental	365.04	Tons
Gypsum Wallboard	Rizzo Environmental	12.54	Tons
Metal	Rizzo Environmental	122.10	Tons
Crushed Asphalt	Rizzo Environmental	0.000	Tons
Masonry	Rizzo Environmental	0.00	Tons
Carboard/paper	Rizzo Environmental	85.70	Tons
Plastic	Rizzo Environmental	78.77	Tons
Carpet	Rizzo Environmental	0.00	Tons
6" Minus	Rizzo Environmental	0.00	Tons
Screen Fine	Rizzo Environmental	0.00	Tons

**Total Construction Waste Diverted                      1118.74 Tons**

Landfill Materials Description	Landfill Hauler or Location	Quantity of Diverted/Recycled Waste	Units (tons or cubic yards)
General mixed Waste	Rizzo Environmental	100.83	Tons
<b>Total Construction Waste Sent to Landfill</b>		<b>100.83</b>	<b>Tons</b>

Total of All Constuction Waste	1219.57
Percentage of Construction Waste Diverted From Landfill	92%

# CONSTRUCTION WASTE MANAGEMENT PROJECT REPORT

Rizzo Environmental Services  
117 Magnolia Ave Westbury, NY 11590

Project Title:	P.S. 333	Superintendent:	
Month:	April 2017	Business Unit:	
Project Address:	150-15 Katonah Street	CWM Contractor:	Rizzo Environmental Services
Project Number:			

Rizzo Haul Ticket #	Haul Date	LEED Recycling Ticket #	Total Tonnage (sum of concrete, metal, wood, other and residual)	Concrete/ Rock Tonnage (diverted)	Metal Tonnage (diverted)	Wood Tonnage (diverted)	Paper and Card-board Products Tonnage (diverted)	Sheetrock/ Wallboard Tonnage (diverted)	Plastic	Carpet	Other Diverted Tonnage (Explain in Comments)	Total Diverted Tonnage	Residual or Tonnage (unfilled)	% Recycled/ Diverted Material	Name and location material was sent to.	Comments
90070	4/6/2017	35828	13.59	8.15	1.36	2.72	0.68	0.00	0.00	0.00	0.00	12.91	0.68	95%	Westbury Recycling 117 Magnolia Ave, NY	
88374	4/6/2017	35821	7.31	0.00	0.73	5.85	0.00	0.00	0.37	0.00	0.00	6.94	0.37	95%	Westbury Recycling 117 Magnolia Ave, NY	
88331	4/7/2017	35881	9.11	0.00	0.46	7.29	0.46	0.00	0.48	0.00	0.00	8.65	0.46	95%	Westbury Recycling 117 Magnolia Ave, NY	
90079	4/10/2017	35935	7.84	1.57	0.76	4.70	0.00	0.00	0.00	0.00	0.00	7.06	0.78	90%	Westbury Recycling 117 Magnolia Ave, NY	
90320	4/14/2017	36118	7.84	0.00	0.39	6.27	0.39	0.00	0.39	0.00	0.00	7.45	0.39	95%	Westbury Recycling 117 Magnolia Ave, NY	
90090	4/14/2017	36107	5.39	0.00	0.27	4.31	0.27	0.00	0.27	0.00	0.00	5.12	0.27	95%	Westbury Recycling 117 Magnolia Ave, NY	
88670	4/21/2017	645984	9.93	0.99	0.99	3.97	0.99	0.99	1.99	0.00	0.00	9.93	0.00	100%	Cooper Tank 222 Maspeth Avenue	
88672	4/21/2017	645985	5.68	1.70	0.57	2.27	0.57	0.00	0.57	0.00	0.00	5.68	0.00	100%	Cooper Tank 222 Maspeth Avenue	
88675	4/24/2017	646392	11.71	0.00	1.17	4.68	2.34	0.00	1.17	0.00	0.00	9.37	2.34	80%	Cooper Tank 222 Maspeth Avenue	
90344	4/26/2017	646877	3.78	1.89	0.38	0.76	0.19	0.00	0.19	0.00	0.00	3.40	0.38	90%	Cooper Tank 222 Maspeth Avenue	
88689	4/28/2017	647416	10.07	2.01	0.00	4.03	2.01	0.00	2.01	0.00	0.00	10.07	0.00	100%	Cooper Tank 222 Maspeth Avenue	
TOTALS			92.25	16.32	7.10	48.85	7.90	0.99	7.41	0.00	0.00	86.56	5.67	94%		

Verified by:	
Date:	
Name:	
Title:	
Bus. Unit:	

Prepared by:	
Date:	30-Apr-17
Name:	Ray Rizzo
Title:	Vice President
Company:	Rizzo Environmental Services

Leads Manager: Please transfer the totals for each month below into the Business Unit Summary each month by using the Paste Special feature.

Project Summary	January	February	March	April	May	June	July	August	September	October	November	December	YTD TOTAL	2016 TOTAL
CONCRETE	40.44	67.49	100.38	16.32									224.63	194.70
ROCK	0.00	0.00	0.00	0.00									0.00	0.00
METAL	9.94	18.56	21.48	7.10									57.08	52.39
WOOD	32.87	45.39	48.39	46.85									173.50	142.24
PAPERCARDBOARD	6.08	9.86	8.27	7.90									31.91	32.48
SHEETROCKWALLBOARD	0.00	0.00	0.00	0.99									0.99	0.00
PLASTIC	7.73	9.76	8.44	7.41									33.35	26.82
CARPET	0.00	0.00	0.00	0.00									0.00	0.00
OTHER DIVERTED	0.00	0.00	0.00	0.00									0.00	0.00
SUBTOTAL DIVERTED	97.05	150.88	186.96	86.58									521.45	449.34
RESIDUAL/TRASH	9.08	13.06	14.73	5.57									42.54	36.47
SUBTOTAL	106.13	163.92	201.69	92.25									563.99	487.81
% of Recycled Material	91%	92%	93%	94%									80%	80%



# CONSTRUCTION WASTE MANAGEMENT PROJECT REPORT

Rizzo Environmental Services  
117 Magnolia Ave Westbury, NY 11590

Project Title:	P. 3. 335	Superintendent:	
Month:	March 2017	Business Unit:	
Project Address:	150-15 Raleigh Street	CWM Contractor:	Rizzo Environmental Services
Project Number:			

Rizzo Haul Ticket #	Haul Date	LEED Recycling Ticket #	Total Tonnage (sum of concrete, metal, wood, other and residual)	Concrete/ Rock Tonnage (diverted)	Metal Tonnage (diverted)	Wood Tonnage (diverted)	Paper and Cardboard Products Tonnage (diverted)	Sheetrock/ Wallboard	Plastic	Carpet	Other Diverted Tonnage (Explain in Comments) (diverted)	Total Diverted Tonnage	Residual or Trash Tonnage (landfilled)	% Recycled/ Diverted Material	Name and location material was sent to:	Comments
87726	3/1/2017	34718	18.41	5.52	3.68	5.52	1.84	0.00	0.00	0.00	0.00	16.57	1.84	90%	Westbury Recycling 117 Magnolia Ave, NY	
87731	3/2/2017	34778	17.31	10.39	1.73	3.46	0.00	0.00	0.87	0.00	0.00	18.44	0.87	95%	Westbury Recycling 117 Magnolia Ave, NY	
87619	3/8/2017	34988	11.84	3.49	2.33	3.49	0.59	0.00	0.59	0.00	0.00	10.48	1.16	90%	Westbury Recycling 117 Magnolia Ave, NY	
88127	3/8/2017	34991	19.41	7.76	1.94	3.88	1.94	0.00	1.94	0.00	0.00	17.47	1.94	90%	Westbury Recycling 117 Magnolia Ave, NY	
87834	3/16/2017	35169	16.56	6.62	0.83	6.82	0.83	0.00	0.00	0.00	0.00	14.90	1.66	90%	Westbury Recycling 117 Magnolia Ave, NY	
87637	3/17/2017	35184	17.31	10.39	0.87	5.19	0.87	0.00	0.00	0.00	0.00	17.31	0.00	100%	Westbury Recycling 117 Magnolia Ave, NY	
88039	3/20/2017	35221	14.95	7.48	1.50	2.99	0.75	0.00	0.75	0.00	0.00	13.46	1.50	90%	Westbury Recycling 117 Magnolia Ave, NY	
88528	3/22/2017	35287	21.49	12.89	2.15	4.30	0.00	0.00	1.07	0.00	0.00	20.42	1.07	95%	Westbury Recycling 117 Magnolia Ave, NY	
87786	3/24/2017	35377	20.49	12.29	2.05	4.10	0.00	0.00	1.02	0.00	0.00	19.47	1.02	95%	Westbury Recycling 117 Magnolia Ave, NY	
88301	3/24/2017	35396	13.24	6.62	1.32	2.65	0.66	0.00	0.66	0.00	0.00	11.92	1.32	90%	Westbury Recycling 117 Magnolia Ave, NY	
90051	3/30/2017	35592	16.06	8.03	1.61	3.21	0.80	0.00	0.80	0.00	0.00	14.45	1.61	90%	Westbury Recycling 117 Magnolia Ave, NY	
90054	3/31/2017	35654	14.81	8.89	1.48	2.96	0.00	0.00	0.74	0.00	0.00	14.07	0.74	95%	Westbury Recycling 117 Magnolia Ave, NY	
TOTALS			201.69	100.38	21.48	48.39	8.27	0.00	8.44	0.00	0.00	186.96	14.73	93%		

Prepared by:  
Date:  
Name:  
Title:  
Company:

31-Mar-17  
Ray Rizzo  
Vice President  
Rizzo Environmental Services

Verified by:  
Date:  
Name:  
Title:  
Bus. Unit:

LEADS CO-ORDINATOR

Leads Manager: Please transfer the totals for each month below into the Business Unit Summary each month by using the Paste Special feature.

Project Summary	January	February	March	April	May	June	July	August	September	October	November	December	YTD TOTAL	2016 TOTAL
CONCRETE	40.44	67.49	100.38										208.31	194.70
ROCK	0.00	0.00	0.00										0.00	0.00
METAL	9.94	18.56	21.48										49.98	52.39
WOOD	32.87	45.39	48.39										126.64	142.24
PAPER/CARDBOARD	6.08	9.66	8.27										24.00	32.48
SHEETROCK/WALLBOARD	0.00	0.00	0.00										0.00	0.00
PLASTIC	7.73	9.76	8.44										25.94	26.82
CARPET	0.00	0.00	0.00										0.00	0.00
OTHER DIVERTED	0.00	0.00	0.00										0.00	0.00
SUBTOTAL DIVERTED	97.05	150.86	186.96										434.87	449.34
RESIDUAL TRASH	9.08	13.06	14.73										36.87	38.47
SUBTOTAL	106.13	163.92	201.69										471.74	487.81
% of Recycled Material	91%	92%	93%										80%	80%



# CONSTRUCTION WASTE MANAGEMENT PROJECT REPORT

Rizzo Environmental Services  
117 Magnolia Ave Westbury, NY 11590

Project Title:	P.S. 335	Superintendent:	
Month:	February 2017	Business Unit:	CWM Contractor, Rizzo Environmental Services
Project Address:	150-15 Raleigh Street		
Project Number:			

Rizzo Haul Ticket #	Haul Date	LEED Recycling Ticket #	Total Tonnage (landfill, metal, wood, other and residual)	Concrete/ Rock Tonnage (diverted)	Metal Tonnage (diverted)	Wood Tonnage (diverted)	Paper and Card-board Products Tonnage (diverted)	Sheetrock/ Wallboard Tonnage (diverted)	Plastic	Carpet	Other Diverted Tonnage (Explain in Comments)	Total Diverted Tonnage	Residual or Trash Tonnage (landfill)	% Recycled/ Diverted Material	Name and location material was sent to	Comments
87494	2/1/2017	33937	13.26	5.78	1.93	5.78	1.93	0.00	1.93	0.00	0.00	17.23	1.93	90%	Westbury Recycling 117 Magnolia Ave, NY	
87492	2/1/2017	33804	19.69	5.91	3.94	5.91	0.98	0.00	0.98	0.00	0.00	17.72	1.97	90%	Westbury Recycling 117 Magnolia Ave, NY	
87556	2/6/2017	33973	14.03	1.40	1.40	5.61	2.10	0.00	2.10	0.00	0.00	12.63	1.40	90%	Westbury Recycling 117 Magnolia Ave, NY	
87827	2/6/2017	33983	14.67	5.87	1.47	2.93	1.47	0.00	1.47	0.00	0.00	13.20	1.47	90%	Westbury Recycling 117 Magnolia Ave, NY	
87248	2/13/2017	34100	13.09	5.24	0.65	5.24	0.65	0.00	0.00	0.00	0.00	11.76	1.31	90%	Westbury Recycling 117 Magnolia Ave, NY	
87940	2/13/2017	34110	16.61	4.99	3.32	4.98	0.63	0.00	0.63	0.00	0.00	14.95	1.68	90%	Westbury Recycling 117 Magnolia Ave, NY	
87845	2/17/2017	34263	17.57	10.54	1.76	3.51	0.88	0.00	0.00	0.00	0.00	16.69	0.88	95%	Westbury Recycling 117 Magnolia Ave, NY	
87871	2/17/2017	34271	16.24	8.12	0.61	4.87	0.61	0.00	0.61	0.00	0.00	15.43	0.81	95%	Westbury Recycling 117 Magnolia Ave, NY	
87716	2/24/2017	34508	14.20	8.52	1.42	2.84	0.00	0.00	0.71	0.00	0.00	13.46	0.71	95%	Westbury Recycling 117 Magnolia Ave, NY	
88003	2/24/2017	34507	18.56	11.14	1.85	3.71	0.00	0.00	0.93	0.00	0.00	17.63	0.93	95%	Westbury Recycling 117 Magnolia Ave, NY	
TOTAL \$			163.92	67.49	18.56	45.39	9.66	0.00	9.76	0.00	0.00	150.86	13.06	92%		

Prepared by:	28-Feb-17	Verified by:	
Date:	Ray Rizzo	Date:	
Name:	Vice President	Name:	
Title:	Rizzo Environmental Services	Title:	LEEDS CO-ORDINATOR
Company:		Bus. Unit:	

Prepared by:	28-Feb-17
Date:	Ray Rizzo
Name:	Vice President
Title:	Rizzo Environmental Services
Company:	

Leeds Manager: Please transfer the totals for each month below into the Business Unit Summary each month by using the Paste Special feature.

Project Summary	January	February	March	April	May	June	July	August	September	October	November	December	YTD TOTAL	2016 TOTAL
CONCRETE	40.44	67.49											107.93	194.70
ROCK	0.00	0.00											0.00	0.00
METAL	9.94	18.56											28.50	52.39
WOOD	32.87	45.39											78.26	142.24
PAPER/CARDBOARD	6.08	9.66											15.73	32.48
SHEETROCK/WALLBOARD	0.00	0.00											0.00	0.00
PLASTIC	7.73	9.76											17.50	26.82
CARPET	0.00	0.00											0.00	0.00
OTHER DIVERTED	0.00	0.00											0.00	0.00
SUBTOTAL DIVERTED	97.85	150.89											247.91	449.34
RESIDUAL/TRASH	9.08	13.06											22.14	38.47
SUBTOTAL	106.13	163.92											270.05	487.81
% of Recycled Material	91%	92%											80%	80%

# CONSTRUCTION WASTE MANAGEMENT PROJECT REPORT

Rizzo Environmental Services  
117 Magnolia Ave Westbury, NY 11590

Project Title:	P.S. 335	Superintendent:	
Month:	January 2017	Business Unit:	
Project Address:	150-15 Raleigh Street	CWM Contractor:	Rizzo Environmental Services
Project Number:			

Rizzo Haul Ticket #	Haul Date	LEED Recycling Ticket #	Total Tonnage (sum of concrete, metal, wood, other and residual)	Concrete/ Rock Tonnage (diverted)	Metal Tonnage (diverted)	Wood Tonnage (diverted)	Paper and Card-board Products Tonnage (diverted)	Sheetrock/ Wallboard Tonnage (diverted)	Plastic	Carpet	Other Diverted Tonnage (Explain in Comments)	Total Diverted Tonnage	Residual or Tonnage (landfill)	% Recycled/ Diverted Material	Name and location material was sent to.	Comments
87454	1/4/2017	33071	15.81	9.49	1.58	3.18	0.00	0.00	0.79	0.00	0.00	15.02	0.79	95%	Westbury Recycling 117 Magnolia Ave, NY	
83074	1/5/2017	33106	19.18	1.92	1.92	9.59	1.92	0.00	1.92	0.00	0.00	17.26	1.92	90%	Westbury Recycling 117 Magnolia Ave, NY	
83088	1/11/2017	33220	13.43	5.37	0.87	5.37	0.67	0.00	0.00	0.00	0.00	12.09	1.34	90%	Westbury Recycling 117 Magnolia Ave, NY	
87802	1/19/2017	33424	9.68	0.99	0.99	3.95	1.98	0.00	0.99	0.00	0.00	8.89	0.99	90%	Westbury Recycling 117 Magnolia Ave, NY	
87810	1/23/2017	33520	14.94	7.47	1.49	4.48	0.00	0.00	0.75	0.00	0.00	14.19	0.75	95%	Westbury Recycling 117 Magnolia Ave, NY	
87477	1/26/2017	33505	15.11	4.53	1.51	4.53	1.51	0.00	1.51	0.00	0.00	13.80	1.51	90%	Westbury Recycling 117 Magnolia Ave, NY	
87478	1/26/2017	33615	17.78	10.67	1.78	1.78	0.00	0.00	1.78	0.00	0.00	16.00	1.78	90%	Westbury Recycling 117 Magnolia Ave, NY	
TOTALS			106.13	40.44	9.94	32.87	6.08	0.00	7.73	0.00	0.00	97.05	9.08	91%		

Verified by:	
Date:	31-Jan-17
Name:	Ray Rizzo
Title:	Vice President
Company:	Rizzo Environmental Services

Prepared by:	
Date:	31-Jan-17
Name:	Ray Rizzo
Title:	Vice President
Company:	Rizzo Environmental Services

Leads Manager: Please transfer the totals for each month below into the Business Unit Summary each month by using the Paste Special feature.

Project Summary	January	February	March	April	May	June	July	August	September	October	November	December	YTD TOTAL	2016 TOTAL
CONCRETE	40.44												40.44	194.70
ROCK	0.00												0.00	0.00
METAL	9.94												9.94	52.39
WOOD	32.87												32.87	142.24
PAPER/CARDBOARD	6.08												6.08	32.48
SHEETROCK/WALLBOARD	0.00												0.00	0.00
PLASTIC	7.73												7.73	26.82
CARPET	0.00												0.00	0.00
OTHER DIVERTED	0.00												0.00	0.00
SUBTOTAL DIVERTED	97.05												97.05	448.34
RESIDUAL/TRASH	9.08												9.08	38.47
SUBTOTAL	106.13												106.13	487.81
% of Recycled Material	91%												80%	80%

# CONSTRUCTION WASTE MANAGEMENT PROJECT REPORT

Rizzo Environmental Services  
117 Magnolia Ave Westbury, NY 11590

Project Title:	P-3, 335	Supervisor:	
Month:	December 2016	Business Unit:	
Project Address:	150-15 Raleigh Street	CRM Contractor:	Rizzo Environmental Services
Project Number:			

Rizzo Haul Ticket #	Haul Date	LEED Recycling Ticket #	Total Tonnage (sum of concrete, metal, wood, other and residual)	Concrete/ Rock Tonnage (diverted)	Metal Tonnage (diverted)	Wood Tonnage (diverted)	Paper and Card-board Products Tonnage (diverted)	Sheetrock Wallboard	Plastic	Carpet	Other Diverted Tonnage (Explain in Comments)	Total Diverted Tonnage	Residual or Trash Tonnage (landfill)	% Recycled/ Diverted Material	Name and location material was sent to	Comments
89521	12/29/2016	32433	14.16	5.66	1.42	5.66	0.00	0.00	0.00	0.00	0.00	12.74	1.42	90%	Westbury Recycling 117 Magnolia Ave, NY	
89887	12/15/2016	32645	18.39	9.20	1.84	1.84	0.00	0.00	1.84	0.00	0.00	18.56	1.84	90%	Westbury Recycling 117 Magnolia Ave, NY	
87551	12/16/2016	32667	11.91	3.57	0.60	5.96	0.60	0.00	0.60	0.00	0.00	11.31	0.60	95%	Westbury Recycling 117 Magnolia Ave, NY	
87567	12/20/2016	32746	12.64	1.90	1.90	5.06	1.26	0.00	1.26	0.00	0.00	11.38	1.26	90%	Westbury Recycling 117 Magnolia Ave, NY	
87576	12/27/2016	32885	13.11	3.93	1.31	3.93	1.31	0.00	1.31	0.00	0.00	11.80	1.31	90%	Westbury Recycling 117 Magnolia Ave, NY	
TOTALS			70.21	24.26	7.06	22.45	5.01	0.00	5.01	0.00	0.00	63.76	6.43	91%		

Prepared by:		Verified by:	
Date:	31-Dec-16	Date:	
Name:	Ray Rizzo	Name:	
Title:	Vice President	Title:	LEEDS CO-ORDINATOR
Company:	Rizzo Environmental Services	Bus. Unit:	

Leeds Manager, Please transfer the totals for each month below into the Business Unit Summary each month by using the Paste Special feature.

Project Summary	January	February	March	April	May	June	July	August	September	October	November	December	YTD TOTAL	2016 TOTAL
CONCRETE	0.00	0.00	0.00	0.00	0.00	0.00	7.82	29.48	56.83	46.46	27.86	24.26	194.70	194.70
ROCK	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
METAL	0.00	0.00	0.00	0.00	0.00	0.00	3.01	4.12	10.32	16.79	11.09	7.06	52.39	52.39
WOOD	0.00	0.00	0.00	0.00	0.00	0.00	9.93	9.04	26.11	53.30	21.41	22.45	142.24	142.24
PAPER/CARDBOARD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.12	4.33	10.43	9.59	5.01	32.48	32.48
SHEETROCK/WALLBOARD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PLASTIC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.75	11.00	7.06	5.01	26.82	26.82
CARPET	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER DIVERTED	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SUBTOTAL DIVERTED	0.00	0.00	0.00	0.00	0.00	0.00	20.76	46.46	103.34	137.98	77.81	63.76	449.34	449.34
RESIDUAL/TRASH	0.00	0.00	0.00	0.00	0.00	0.00	2.31	1.71	8.99	10.48	8.56	6.43	38.47	38.47
SUBTOTAL	0.00	0.00	0.00	0.00	0.00	0.00	23.07	48.17	112.33	148.46	86.37	70.21	487.81	487.81
% of Recycled Material	0%	0%	0%	0%	0%	0%	90%	96%	92%	93%	90%	91%	80%	80%



# CONSTRUCTION WASTE MANAGEMENT PROJECT REPORT

Rizzo Environmental Services  
117 Magnolia Ave Westbury, NY 11590

Project Title:	P.S. 335	Superintendent:	
Month:	November 2016	Business Unit:	
Project Address:	150-15 Baisley Blvd	CWM Contractor:	Rizzo Environmental Services
Project Number:			

Rizzo Haul Ticket #	Haul Date	LED Recycling Ticket #	Total Tonnage (sum of concrete, metal, wood, other and residual)	Concrete/Block Tonnage (diverted)	Metal Tonnage (diverted)	Wood Tonnage (diverted)	Paper and Card-board Tonnage (diverted)	Sheetrock/Wallboard Tonnage (diverted)	Plastic	Carpet	Other Diverted Tonnage (Explain in Comments)	Total Diverted Tonnage	Residual or Trash Tonnage (landfill)	% Recycled/Diverted Material	Name and location material was sent to.	Comments
86382	11/14/2016	31437	15.54	4.69	1.55	4.66	1.55	0.00	1.55	0.00	0.00	13.98	1.55	90%	Westbury Recycling 117 Magnolia Ave, NY	
86514	11/14/2016	31420	14.96	4.49	2.99	4.49	1.50	0.00	0.00	0.00	0.00	13.46	1.50	90%	Westbury Recycling 117 Magnolia Ave, NY	
87031	11/14/2016	31693	17.14	6.86	1.71	3.43	1.71	0.00	1.71	0.00	0.00	15.43	1.71	90%	Westbury Recycling 117 Magnolia Ave, NY	
87038	11/17/2016	31820	15.08	6.03	1.51	3.02	1.51	0.00	1.51	0.00	0.00	13.57	1.51	90%	Westbury Recycling 117 Magnolia Ave, NY	
89368	11/28/2016	32055	12.49	3.75	1.25	3.75	1.25	0.00	1.25	0.00	0.00	11.24	1.25	90%	Westbury Recycling 117 Magnolia Ave, NY	
89506	11/30/2016	32139	10.36	2.07	2.07	2.07	2.07	0.00	1.04	0.00	0.00	9.32	1.04	90%	Westbury Recycling 117 Magnolia Ave, NY	
<b>TOTALS</b>			<b>85.57</b>	<b>27.86</b>	<b>11.08</b>	<b>21.41</b>	<b>9.59</b>	<b>0.00</b>	<b>7.06</b>	<b>0.00</b>	<b>0.00</b>	<b>77.91</b>	<b>8.56</b>	<b>90%</b>		

Prepared by:	
Date:	30-Nov-16
Name:	Roy Rizzo
Title:	Vice President
Company:	Rizzo Environmental Services

Verified by:	
Date:	
Name:	
Title:	LEEDS CO-ORDINATOR
Bus. Unit:	

Leeds Manager: Please transfer the totals for each month below into the Business Unit Summary each month by using the Paste Special feature.

Project Summary	January	February	March	April	May	June	July	August	September	October	November	December	YTD TOTAL	2016 TOTAL
CONCRETE	0.00	0.00	0.00	0.00	0.00	0.00	7.82	29.48	58.83	46.45	27.85		170.44	170.44
ROCK	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00
METAL	0.00	0.00	0.00	0.00	0.00	0.00	3.01	4.12	10.32	16.79	11.09		45.33	45.33
WOOD	0.00	0.00	0.00	0.00	0.00	0.00	9.93	9.94	26.11	53.30	21.41		119.79	119.79
PAPER/CARDBOARD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.12	4.33	10.43	9.59		27.47	27.47
SHEETROCK/WALLBOARD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.75	11.00	7.06		21.81	21.81
PLASTIC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00
CARPET	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00
OTHER DIVERTED	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00
<b>SUBTOTAL DIVERTED</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>20.76</b>	<b>46.46</b>	<b>103.34</b>	<b>137.58</b>	<b>77.91</b>		<b>385.56</b>	<b>385.56</b>
RESIDUAL TRASH	0.00	0.00	0.00	0.00	0.00	0.00	2.31	1.71	8.99	10.48	8.56		32.04	32.04
<b>SUBTOTAL</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>23.07</b>	<b>48.17</b>	<b>112.33</b>	<b>148.06</b>	<b>86.47</b>		<b>417.60</b>	<b>417.60</b>
% of Recycled Material	0%	0%	0%	0%	0%	0%	90%	96%	92%	93%	90%		80%	80%

# CONSTRUCTION WASTE MANAGEMENT PROJECT REPORT

Rizzo Environmental Services  
117 Magnolia Ave Westbury, NY 11590

Project Title:	P.S. 335	Superintendent:	
Month:	October 2016	Business Unit:	
Project Address:	150-15 Raleigh Street	CWM Contractor:	Rizzo Environmental Services
Project Number:			

Rizzo Haul Ticket #	Haul Date	LEED Recycling Ticket #	Total Tonnage (sum of concrete, metal, wood, other and residual)	Concrete/ Rock Tonnage (diverted)	Metal Tonnage (diverted)	Wood Tonnage (diverted)	Paper and Card-board Products Tonnage (diverted)	Sheetrock/ Wallboard Tonnage (diverted)	Plastic	Carpet	Other Diverted Tonnage (Explain in Comments) (diverted)	Total Diverted Tonnage	Residual or Tonnage (unrecycled)	% Recycled/ Diverted Material	Name and location material was sent to.	Comments
86292	10/4/2016	30562	13.80	2.07	2.07	8.28	0.00	0.00	0.00	0.00	0.00	12.42	1.38	90%	Westbury Recycling 117 Magnolia Ave, NY	
86753	10/4/2016	30554	19.41	5.62	3.88	3.88	1.94	0.00	1.94	0.00	0.00	17.47	1.94	90%	Westbury Recycling 117 Magnolia Ave, NY	
86295	10/5/2016	30593	13.66	2.05	0.68	8.20	0.00	0.00	1.37	0.00	0.00	12.29	1.37	90%	Westbury Recycling 117 Magnolia Ave, NY	
86857	10/4/2016	30995	24.24	14.54	2.42	4.85	0.00	0.00	1.21	0.00	0.00	23.03	1.21	95%	Westbury Recycling 117 Magnolia Ave, NY	
86414	10/14/2016	30866	8.24	0.00	0.82	6.59	0.41	0.00	0.00	0.00	0.00	7.83	0.41	95%	Westbury Recycling 117 Magnolia Ave, NY	
86336	10/20/2016	31068	14.24	7.12	1.42	2.85	0.71	0.00	0.71	0.00	0.00	12.80	1.42	90%	Westbury Recycling 117 Magnolia Ave, NY	
86433	10/24/2016	31100	23.09	4.62	2.31	3.45	5.77	0.00	5.77	0.00	0.00	21.94	1.15	95%	Westbury Recycling 117 Magnolia Ave, NY	
86787	10/26/2016	31182	20.47	10.24	2.05	6.14	1.02	0.00	0.00	0.00	0.00	19.45	1.02	95%	Westbury Recycling 117 Magnolia Ave, NY	
80753	10/28/2016	31250	11.31	0.00	1.13	9.05	0.57	0.00	0.00	0.00	0.00	10.74	0.57	95%	Westbury Recycling 117 Magnolia Ave, NY	
TOTALS			148.46	46.46	16.79	53.30	10.43	0.00	11.00	0.00	0.00	137.98	10.48	93%		

Verified by:	
Date:	
Name:	
Title:	LEEDS CO-ORDINATOR
Bus. Unit:	

Prepared by:	
Date:	31-Oct-16
Name:	Ray Rizzo
Title:	Vice President
Company:	Rizzo Environmental Services

Leeds Manager, Please transfer the totals for each month below into the Business Unit Summary each month by using the Plastic Special feature.

Project Summary	January	February	March	April	May	June	July	August	September	October	November	December	YTD TOTAL	2016 TOTAL
CONCRETE	0.00	0.00	0.00	0.00	0.00	0.00	7.82	29.48	58.83	46.46			142.58	142.58
ROCK	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00
METAL	0.00	0.00	0.00	0.00	0.00	0.00	3.01	4.12	10.32	16.79			34.25	34.25
WOOD	0.00	0.00	0.00	0.00	0.00	0.00	9.93	9.04	25.11	53.30			98.38	98.38
PAPER/CARDBOARD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.12	4.33	10.43			17.88	17.88
SHEETROCK/WALLBOARD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00
PLASTIC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.75	11.00			14.75	14.75
CARPET	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00
OTHER DIVERTED	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00
SUBTOTAL DIVERTED	0.00	0.00	0.00	0.00	0.00	0.00	20.76	46.46	103.34	137.98			308.54	308.54
RESIDUAL/TRASH	0.00	0.00	0.00	0.00	0.00	0.00	2.31	1.71	8.99	10.48			23.49	23.49
SUBTOTAL	0.00	0.00	0.00	0.00	0.00	0.00	23.07	48.17	112.33	148.46			332.03	332.03
% of Recycled Material	0%	0%	0%	0%	0%	0%	90%	96%	92%	93%			80%	80%



# CONSTRUCTION WASTE MANAGEMENT PROJECT REPORT

Rizzo Environmental Services  
117 Magnolia Ave Westbury, NY 11590

Project Title:	P-5, 315
Month:	September 2016
Project Address:	120-15 Range Street
Project Number:	
Superintendent:	CWM Contractor, Rizzo Environmental Services
Business Unit:	

Rizzo Haul Ticket #	Haul Date	LEED Recycling Ticket #	Total Tonnage (sum of concrete, metal, wood, other and residual)	Concrete/ Tonnage (diverted)	Metal Tonnage (diverted)	Wood Tonnage (diverted)	Paper and Cardboard Products Tonnage (diverted)	Sheetrock/ Wallboard	Plastic	Carpet	Other Diverted Tonnage (Recap in concrete, diverted)	Total Diverted Tonnage	Residual or Trash Tonnage (landfill)	% Recycled/ Diverted Material	Name and location material was sent to.	Comments
82789	9/22/2016	29377	13.24	6.62	1.32	2.69	0.66	0.00	0.96	0.00	0.00	11.92	1.32	90%	Westbury Recycling 117 Magnolia Ave, NY	
82318	9/7/2016	29496	16.31	8.16	1.63	3.26	0.92	0.00	0.92	0.00	0.00	14.68	1.63	90%	Westbury Recycling 117 Magnolia Ave, NY	
83184	9/16/2016	29885	19.22	7.29	0.91	7.28	0.91	0.00	0.00	0.00	0.00	16.40	1.82	90%	Westbury Recycling 117 Magnolia Ave, NY	
83232	9/21/2016	30050	19.16	11.50	1.92	3.83	0.96	0.00	0.00	0.00	0.00	18.20	0.96	95%	Westbury Recycling 117 Magnolia Ave, NY	
83587	9/27/2016	30247	19.74	9.87	1.97	3.95	0.99	0.00	0.99	0.00	0.00	17.77	1.97	90%	Westbury Recycling 117 Magnolia Ave, NY	
86284	9/29/2016	30418	25.66	15.40	2.57	5.13	0.00	0.00	1.28	0.00	0.00	24.38	1.28	95%	Westbury Recycling 117 Magnolia Ave, NY	
TOTALS			112.33	56.83	10.32	26.11	4.33	0.00	3.75	0.00	0.00	103.34	8.98	92%		

Prepared by:	30-Sept-16
Date:	Ray Rizzo
Name:	Vice President
Title:	Rizzo Environmental Services
Company:	

Verified by:	
Date:	
Name:	
Title:	LEEDS CO-ORDINATOR
Bus. Unit:	

Leads Manager: Please transfer the totals for each month below into the Business Unit Summary each month by using the Paste Special feature.

Project Summary	January	February	March	April	May	June	July	August	September	October	November	December	YTD TOTAL	2016 TOTAL
CONCRETE	0.00	0.00	0.00	0.00	0.00	0.00	7.82	29.46	56.83				96.13	96.13
ROCK	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00	0.00
METAL	0.00	0.00	0.00	0.00	0.00	0.00	3.01	4.12	10.32				17.45	17.45
WOOD	0.00	0.00	0.00	0.00	0.00	0.00	9.93	9.94	26.11				45.08	45.08
PAPER/CARDBOARD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.12	4.33				7.45	7.45
SHEETROCK/WALLBOARD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00	0.00
PLASTIC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.75				3.75	3.75
CARPET	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00	0.00
OTHER DIVERTED	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00	0.00
SUBTOTAL DIVERTED	0.00	0.00	0.00	0.00	0.00	0.00	20.78	46.46	103.34				170.56	170.56
RESIDUAL/TRASH	0.00	0.00	0.00	0.00	0.00	0.00	2.31	1.71	8.99				13.01	13.01
SUBTOTAL	0.00	0.00	0.00	0.00	0.00	0.00	23.07	48.17	112.33				183.57	183.57
% of Recycled Material	0%	0%	0%	0%	0%	0%	90%	96%	92%				80%	80%

# CONSTRUCTION WASTE MANAGEMENT PROJECT REPORT

Rizzo Environmental Services  
117 Magnolia Ave Westbury, NY 11590

Project Title:	P.S. 335
Month:	August 2016
Project Address:	150-15 Raleigh Street
Project Number:	

Superintendent:  
Business Unit:  
CWM Contractor Rizzo Environmental Services

Rizzo Haul Ticket #	Haul Date	LEED Recycling Ticket #	Total Tonnage (sum of concrete, metal, wood, cardboard and residual)	Concrete/ Rock Tonnage (diverted)	Metal Tonnage (diverted)	Wood Tonnage (diverted)	Paper and Cardboard Products Tonnage (diverted)	Sheetrock/ Wallboard Tonnage (diverted)	Plastic	Curbside	Other Diverted Tonnage (diverted)	Total Diverted Tonnage	Residual or Trash Tonnage (landfill)	% Recycled/ Diverted Material	Name and location material was sent to.	Comments
81543	8/9/2016	28239	14.01	8.41	0.70	4.20	0.70	0.00	0.00	0.00	0.00	14.01	0.00	100%	Westbury Recycling 117 Magnolia Ave NY	
82624	8/19/2016	28849	14.17	7.09	1.42	2.83	1.42	0.00	0.71	0.00	0.00	13.46	0.71	95%	Westbury Recycling 117 Magnolia Ave NY	
83029	8/22/2016	28962	19.99	13.99	2.00	2.00	1.00	0.00	0.00	0.00	0.00	18.99	1.00	95%	Westbury Recycling 117 Magnolia Ave NY	
TOTALS			48.17	29.48	4.12	9.04	3.12	0.00	0.71	0.00	0.00	46.46	1.71	96%		

Prepared by:	31-Aug-16
Date:	Rizzo
Name:	Rizzo
Title:	Vice President
Company:	Rizzo Environmental Services

Verified by:	
Date:	
Name:	
Title:	LEEDS CO-ORDINATOR
Bus. Unit:	

Leads Manager: Please transfer the totals for each month below into the Business Unit Summary each month by using the Paste Special feature.

Project Summary	January	February	March	April	May	June	July	August	September	October	November	December	YTD TOTAL	2016 TOTAL
CONCRETE	0.00	0.00	0.00	0.00	0.00	0.00	7.82	28.48					37.30	37.30
ROCK	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00	0.00
METAL	0.00	0.00	0.00	0.00	0.00	0.00	3.01	4.12					7.13	7.13
WOOD	0.00	0.00	0.00	0.00	0.00	0.00	9.93	9.04					18.97	18.97
PAPER/CARDBOARD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.12					3.12	3.12
SHEETROCK/WALLBOARD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00	0.00
PLASTIC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00	0.00
CARPET	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00	0.00
OTHER DIVERTED	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00	0.00
SUBTOTAL DIVERTED	0.00	0.00	0.00	0.00	0.00	0.00	20.76	46.46					67.23	67.23
RESIDUAL/TRASH	0.00	0.00	0.00	0.00	0.00	0.00	2.31	1.71					4.02	4.02
SUBTOTAL	0.00	0.00	0.00	0.00	0.00	0.00	23.07	48.17					71.24	71.24
% of Recycled Material	0%	0%	0%	0%	0%	0%	90%	96%					80%	80%

# CONSTRUCTION WASTE MANAGEMENT PROJECT REPORT

Rizzo Environmental Services  
117 Magnolia Ave Westbury, NY 11590

Project Title:	P.S. 336	Superintendent:	
Month:	July 2016	Business Unit:	
Project Address:	150-15 Ralfeigh Street	CWM Contractor:	Rizzo Environmental Services
Project Number:			

Rizzo Haul Ticket #	Haul Date	LEED Recycling Ticket #	Total Tonnage (sum of concrete, metal, wood, paper and residual)	Concrete/ Rock Tonnage (diverted)	Metal Tonnage (diverted)	Wood Tonnage (diverted)	Paper and Cardboard Tonnage (diverted)	Sheetrock/ Wallboard Tonnage (diverted)	Plastic	Carpet	Other Diverted (Specify in Comments)	Total Diverted Tonnage	Residual or Trash Tonnage (landfill)	% Recycled/ Diverted Material	Name and location material was sent to.	Comments
81743	7/13/2016	27125	7.06	1.41	1.41	3.53	0.00	0.00	0.00	0.00	0.00	6.35	0.71	90%	Westbury Recycling 117 Magnolia Ave, NY	
90993	7/27/2016	27819	16.01	6.40	1.60	6.40	0.00	0.00	0.00	0.00	0.00	14.41	1.60	90%	Westbury Recycling 117 Magnolia Ave, NY	
TOTALS			23.07	7.82	3.01	9.93	0.00	0.00	0.00	0.00	0.00	20.76	2.31	90%		

Prepared by:	
Date:	31-Jul-16
Name:	Ray Rizzo
Title:	Vice President
Company:	Rizzo Environmental Services

Verified by:	
Date:	
Name:	
Title:	LEEDS CO-ORDINATOR
Bus. Unit:	

Leeds Manager: Please transfer the totals for each month below into the Business Unit Summary each month by using the Paste Special feature.

Project Summary	January	February	March	April	May	June	July	August	September	October	November	December	YTD TOTAL	2016 TOTAL
CONCRETE	0.00	0.00	0.00	0.00	0.00	0.00	7.82						7.82	7.82
ROCK	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00	0.00
METAL	0.00	0.00	0.00	0.00	0.00	0.00	3.01						3.01	3.01
WOOD	0.00	0.00	0.00	0.00	0.00	0.00	9.93						9.93	9.93
PAPER/CARDBOARD	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00	0.00
SHEETROCK/WALLBOARD	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00	0.00
PLASTIC	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00	0.00
CARPET	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00	0.00
OTHER DIVERTED	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00	0.00
SUBTOTAL DIVERTED	0.00	0.00	0.00	0.00	0.00	0.00	20.76						20.76	20.76
RESIDUAL/TRASH	0.00	0.00	0.00	0.00	0.00	0.00	2.31						2.31	2.31
SUBTOTAL	0.00	0.00	0.00	0.00	0.00	0.00	23.07						23.07	23.07
% of Recycled Material	0%	0%	0%	0%	0%	0%	90%						80%	80%



**M 2.1R Recycled Content, 10% (post-consumer + ½ pre-consumer)**

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This credit will be achieved by using materials with recycling content such that the sum of post-consumer content plus one-half of pre-consumer recycling content constitutes at least 20% of the total value of the materials in the project. The recycled content value of a material assembly shall be determined by weight. The recycled fraction of the assembly is then multiplied by the cost of assembly to determine the recycled content value. Recycled contents shall be defined in accordance with the International Organization for Standardization document, ISO 14021 – Environmental labels and declaration – Self-declared environmental claims (Type II environmental labeling). Per the methodology for this credit in the current version of LEED, the typical value of materials on the project will be assumed to be 45% of the cost of Divisions 2-10. The contractor will be required to comply with the following SCA Standard Specification sections in the Contract documents:

- 02200 Earthwork
- 02511 Asphaltic Concrete Paving
- 02513 Sidewalk and Street Paving
- 03300 Cast-in-Place Concrete
- 04200 Unit Masonry
- 05120 Structural Steel
- 05710 Steel Stairs
- 07211 Perimeter Foundation Building Insulation
- 07212 Miscellaneous Building Insulation
- 07250 Sprayed Fire Resistive Materials
- 07560 Fluid-applied Protected Membrane Roofing
- 08524 Aluminum Projected Windows
- 09260 Gypsum Board Assemblies
- 09310 Ceramic Tile
- 09510 Acoustic Ceilings
- 09650 Resilient Floorings
- 09680 Carpets
- 10151 Toilet Compartments

**Project has incorporated several products with post consumer and post industrial recycled content. All materials were tracked using SCA Sustainable Materials form and USGBC Calculator with their respective cost and recycled content information. See completed Recycled and Regional Materials form. Project has achieved 14.13% project Recycled content.**

**Credit was achieved****M 2.2 Recycled Content, 20% (post-consumer + ½ pre-consumer)**

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**Credit was not achieved**

**Project has only achieved 14.13% project Recycled content.**

**RECYCLED CONTENT - SUMMARY FORM**  
Credit M2.1R



Project: PS 335Q  
Address: 150-15 Raleigh St  
LLW #: 53004  
Date: 2/16/2018

Architect: NYC SCA  
Preparer: J. Dias  
Telephone:

Contractors Total Construction Cost for CSI Divisions 2-10:	\$38,800,500
Assumed Materials Cost based on 45% of cost above:	\$17,460,225
<b>Recycled Materials Content Target (20% of the cost of Materials):</b>	<b>\$3,492,045</b>

Product Name	Manufacturer	Material Cost (no Labor & Equip.)	Percentage Post Consumer* by weight	Percentage Pre-Consumer** by weight	Cost of Complying Material	Recycled Content Information Source
Cement	Holcom	\$46,094	0%	19%	\$4,379	Manufacturer
Rebar	Nucor	\$115,304	83%	17%	\$105,503	Manufacturer
CMU	Barrasso	\$814,531	0%	20%	\$81,453	Manufacturer
Motar- Type M,S,&N	Package Pavement	\$248,800	0%	2%	\$2,488	Manufacturer
Cement Base	Laticrete	\$34,500	10%	0%	\$3,450	Manufacturer
Brick	Interstate	\$814,531	12%	2%	\$105,889	Manufacturer
Cavitymate 3' insulation	Dow	\$248,800	10%	0%	\$24,880	Manufacturer
Mortar Net	Motar Net Solutions	\$34,500	42%	0%	\$14,490	Manufacturer
Mortar Net	Motar Net Solutions	\$560	17%	33%	\$95	Manufacturer
Structual Steel	Nucor-Yamato	\$237,285	83%	17%	\$236,099	Manufacturer
Structual Steel	Nucor- Berkley	\$119,518	40%	8%	\$57,966	Manufacturer
Structual Steel	Gerdau	\$330,454	80%	6%	\$277,581	Manufacturer
Steel Deck	Canam	\$131,000	24%	9%	\$35,763	Manufacturer
Steel Stairs	Steel Dynamics	\$75,998	77%	19%	\$62,090	Manufacturer
Galvanized Grating	Harsco IKG	\$10,920	83%	17%	\$10,068	Manufacturer
Square Mesh	Miller Wire Works	\$9,200	83%	18%	\$8,367	Manufacturer
AL/6063TG Gal 125	McNichols	\$5,142	25%	50%	\$1,748	Manufacturer
Structual Metal	Nucor	\$44,287	54%	11%	\$26,351	Manufacturer
Structual Metal	Nova	\$22,551	69%	19%	\$17,702	Manufacturer
Structual Metal	Gerdau	\$26,151	77%	18%	\$22,490	Manufacturer
Structual Metal	Steel Dynamics	\$27,677	80%	18%	\$24,633	Manufacturer
Plywood core veneer panels	Columbia Forest Product	\$62,000	80%	0%	\$49,600	Manufacturer
MDF	Flakeboard	\$15,000	100%	0%	\$15,000	Manufacturer
Laminate	Formica	\$46,000	0%	27%	\$6,210	Manufacturer
Mineral wool	Hilti	\$450	90%	0%	\$405	Manufacturer
MK-6/HY	Grace	\$72,000	7%	0%	\$5,134	Manufacturer
Z-106/HY	Grace	\$15,000	5%	0%	\$750	Manufacturer
FR701(2100)	Guilford of Maine	\$2,600	100%	0%	\$2,600	Manufacturer
Whisperton Wallboard	Johns Manville	\$2,600	20%	5%	\$585	Manufacturer
EDSRUF 42-47 UF ( wood doors)	Marshfield	\$45,150	0%	44%	\$9,933	Manufacturer
EDCLUF (wood doors)	Marshfield	\$45,150	0%	44%	\$9,933	Manufacturer
Overhead stop & holder	ABH	\$11,856	80%	0%	\$9,485	Manufacturer
Exit device	Falcon	\$1,757,186	39%	32%	\$966,452	Manufacturer
Kickplates	Ives	\$1,541	57%	34%	\$1,140	Manufacturer
Closers	LCN	\$24,652	57%	31%	\$17,873	Manufacturer
Door Pull	Rockwood	\$4,108	90%	0%	\$3,697	Manufacturer
Overhead Closers	Rixon	\$8,515	60%	0%	\$5,109	Manufacturer
Locksets	Schlage	\$55,360	40%	19%	\$27,403	Manufacturer
Hinges	Stanley	\$11,315	25%	0%	\$2,829	Manufacturer
Weatherstrip	Zero	\$5,259	5%	20%	\$789	Manufacturer
Threshold	Zero	\$2,368	5%	40%	\$592	Manufacturer
Vanguard security screen	kane innovations	\$11,548	25%	5%	\$3,176	Manufacturer
Steel Doors and Frames	LIF	\$114,810	25%	7%	\$32,721	Manufacturer
vent cove base	Johnsonite	\$6,200	0%	32%	\$992	Manufacturer
VET color essence(resinous	johnsonite	\$90,400	6%	23%	\$15,820	Manufacturer
Ultima 1911	Armstrong	\$15,628	1%	74%	\$5,939	Manufacturer
Ultima 1914	Armstrong	\$46,793	1%	74%	\$17,781	Manufacturer
MetalWorks	Armstrong	\$52,133	0%	25%	\$6,517	Manufacturer
4' Cross Tee XL7348	Armstrong	\$10,961	23%	7%	\$2,905	Manufacturer
2' Cross Tee XL7328	Armstrong	\$1,787	23%	7%	\$474	Manufacturer



12' Heavy Duty Main Beam 7	Armstrong	\$6,201	23%	7%	\$1,643	Manufacturer
10' Shadow Moulding 7823	Armstrong	\$366	23%	7%	\$97	Manufacturer
12' Wall Molding 7800	Armstrong	\$3,724	23%	7%	\$987	Manufacturer
10' Channel Molding 7830	Armstrong	\$1,730	23%	7%	\$459	Manufacturer
Adagio 1662-IOF	Certaiteed	\$15,158	14%	17%	\$3,411	Manufacturer
220AF Fibred Emulsion	Karnak	\$2,400	0%	0%	\$0	Manufacturer
Light Gauge Steel Framing&Acc	Marino Ware	\$165,300	20%	14%	\$44,631	Manufacturer
5/8" Gold Bond XP Fire-Shield C	National Gypsum	\$81,197	5%	0%	\$4,060	Manufacturer
5/8" Gold Bond Fire-Shield Gyp	National Gypsum	\$625	5%	0%	\$31	Manufacturer
5/8" Gold Bond Hi-Impact fire	National Gypsum	\$162,736	5%	0%	\$8,137	Manufacturer
1" Gold Bond Fire-Shield Sha	National Gypsum	\$10,885	5%	0%	\$544	Manufacturer
5/8" permabase	National Gypsum	\$25,500	0%	14%	\$1,785	Manufacturer
All purpose, multi use joint c	National Gypsum	\$46,640	0%	35%	\$8,162	Manufacturer
Acoustical Fire Bat	Roxul	\$2,017	0%	40%	\$403	Manufacturer
Guardian Unfaced Ecobatt	Knauf	\$17,977	17%	30%	\$5,753	Manufacturer
Toilet Partitions	Comtec/Scranton	\$37,670	25%	0%	\$9,418	Manufacturer
Metal lockers	Republic	\$10,065	33%	33%	\$4,982	Manufacturer
Shelving	Republic	\$37,180	33%	33%	\$18,404	Manufacturer
Shower Compartments	Comtec/Scranton	\$37,670	25%	0%	\$9,418	Manufacturer
						Manufacturer
Total Cost of Complying Material					<b>\$2,467,652</b>	

Confirm that Total Cost of Complying Materials is greater than or equal to Project's Recycled Materials Content Target:  
2467652/17460225=14.13%

NO

#### Definitions:

\* **Post-Consumer Recycled Content:** Material or finished product that has served its intended consumer use and has been discarded by consumer.

\*\* **Pre-Consumer Recycled Content:** Recovered industrial and manufacturing materials diverted from municipal solid waste for the purpose of collection and recycling.

#### Notes:

1. Recycled content for concrete - provide cost for cementitious materials and percentage of cementitious materials that are recycled content.
2. Recycled content for steel products - where it is not possible to determine recycled content - use default assumption of 25% post-consumer recycled content

05/01/09

M 2.3 Regional Materials, 10% Extracted, Processed & Manufactured Regionally

**Credit is feasible See Narrative below**

M 2.4 Regional Materials, 20% Extracted, Processed & Manufactured Regionally

**Credit is feasible and will be pursued**

This credit will be achieved by using building materials or products that have been extracted, harvested or recovered, as well as manufactured, within 500 miles of the project site for a minimum of 10% the total material value. Per the methodology of this credit in the current version of LEED, the typical value of materials on the project can be assumed to be 45% of the cost of Divisions 2-10. The contractor will be required to comply with the following SCA Standard Specification sections in the Contract documents:

- 02200 Earthwork
- 02511 Asphaltic Concrete Paving
- 02513 Sidewalk and Street Paving
- 02900 Landscaping
- 03300 Cast-in-Place Concrete
- 04200 Unit Masonry
- 05120 Structural Steel
- 05300 Metal Deck
- 09260 Gypsum Board Assemblies
- 09310 Ceramic Tile

**Project has incorporated several regional products manufactured and extracted within 500 miles of the project site. All materials were tracked using SCA Sustainable Materials form and USGBC calculator with their respective cost and location information. See completed Recycled and Regional Materials form. Project has far exceeded the 10% regional requirement by achieving 11.58% regional content.**

## REGIONAL MATERIALS - SUMMARY FORM

Credit M2.2R

Project: PS 335Q

Address: 150-15 Raleigh St

LLW #: 53004

Date: 2/16/2018

Architect: NYC SCAPreparer: John Dias

Telephone: **718-472-8422**

Contractors Total Construction Cost for CSI Divisions 2-10:	\$38,800,500
Assumed Materials Cost based on 45% of cost above:	\$17,460,225
<b>Regional Materials Content Target (20% of the cost of Materials):</b>	<b>\$3,492,045</b>

Product Name	Manufacturer	Material Cost (no Labor & Equip.)	Percentage Regionally Extracted*** by weight	Cost of Complying Material	Distance in miles between project site and site of		Regional Materials Information Source
					extraction	manufacture	
CMU	Barrasso	\$814,531	100%	\$814,531	40	40	Manufacturer
Motar- Type M,S,&N	Package Pavement	\$248,800	100%	\$248,800	490	73	Manufacturer
Brick	Interstate	\$814,531	2%	\$0	>500	>500	Manufacturer
Cavitymate 3' insulation	Dow	\$248,800	10%	\$24,880	>500	>500	Manufacturer
Rebar	Nucor	\$115,304	100%	\$115,304	273	273	Manufacturer
Cement	Holcom	\$46,094	100%	\$46,094	55	10	Manufacturer
Slag	Holcom	\$30,728	100%	\$30,728	55	10	Manufacturer
Sand	Coram materials	\$25,837	100%	\$25,837	100	10	Manufacturer
Stone	Tilcon	\$44,422	100%	\$44,422	45	10	Manufacturer
Structual Steel	Nucor-Yamato	\$237,285	2%	\$4,746	<500	19	Manufacturer
Structual Steel	Nucor- Berkley	\$119,518	25%	\$29,880	<500	19	Manufacturer
Structual Steel	Gerdau	\$330,454	92%	\$304,018	<500	19	Manufacturer
Steel Deck	Canam	\$131,000	100%	\$131,000	65	30	Manufacturer
Steel Stairs	Steel Dynamics	\$75,998	0%	\$0	>500	>500	Manufacturer
Galvanized Grating	Harsco IKG	\$10,920	100%	\$10,920	458	27	Manufacturer
Square Mesh	Miller Wire Works	\$9,200	100%	\$9,200	365	27	Manufacturer
AL/6063TG Gal 125	McNichols	\$5,142	100%	\$5,142	139	27	Manufacturer
Structual Metal	Nucor	\$44,287	100%	\$44,287	458	27	Manufacturer
Structual Metal	Nova	\$22,551	70%	\$15,785	438	27	Manufacturer
Structual Metal	Gerdau	\$26,151	100%	\$26,151	27	77	Manufacturer
Structual Metal	Steel Dynamics	\$27,677	100%	\$27,677	446	27	Manufacturer
Plywood core veneer panels	Columbia Forest Products	\$62,000	100%	\$62,000	455	415	Manufacturer
Door Pull	Rockwood	\$4,108	100%	\$4,108	336	336	Manufacturer
Vanguard security screen	kane innovations	\$11,548	100%	\$11,548	420	350	Manufacturer
Steel Doors and Frames	LIF	\$114,810	100%	\$114,810	446	13	Manufacturer
vent cove base	Johnsonite	\$6,200	100%	\$6,200	447	447	Manufacturer
Ultima 1911	Armstrong	\$15,628	100%	\$15,628	499	499	Manufacturer
Ultima 1914	Armstrong	\$46,793	100%	\$46,793	499	499	Manufacturer
4' Cross Tee XL7348	Armstrong	\$10,961	100%	\$10,961	499	172	Manufacturer
2' Cross Tee XL7328	Armstrong	\$1,787	100%	\$1,787	499	172	Manufacturer
12' Heavy Duty Main Beam 75	Armstrong	\$6,201	100%	\$6,201	499	172	Manufacturer
10' Shadow Moulding 7823	Armstrong	\$366	100%	\$366	499	172	Manufacturer
12' Wall Molding 7800	Armstrong	\$3,724	100%	\$3,724	499	172	Manufacturer
10' Channel Molding 7830	Armstrong	\$1,730	100%	\$1,730	499	172	Manufacturer
Light Gauge Steel Framing&Accessories	Marino Ware	\$165,300	100%	\$165,300	82	44	Manufacturer
5/8" Gold Bond XP Fire-Shield Gypsum	National Gypsum	\$81,197	100%	\$81,197	82	82	Manufacturer
5/8" Gold Bond Fire-Shield Gypsum	National Gypsum	\$625	100%	\$625	82	82	Manufacturer
5/8" Gold Bond Hi-Impact fire	National Gypsum	\$162,736	100%	\$162,736	82	82	Manufacturer
1" Gold Bond Fire-Shield Sheetrock	National Gypsum	\$10,885	100%	\$10,885	197	197	Manufacturer
Acoustical Sheetrock Sealant	USG	\$6,165	100%	\$6,165	400	352	Manufacturer
Toilet Partitions	Comtec/Scranton	\$37,670	100%	\$37,670	142	142	Manufacturer
Shower Compartments	Comtec/Scranton	\$37,670	100%	\$37,670	142	142	Manufacturer
Lab Resin	JHC	\$7,526	100%	\$7,526	16	16	Manufacturer
3/4" Particle Core Plywood	Columbia Forest Products	\$2,334	100%	\$2,334	450	450	Manufacturer
3/4" Veneer Core Plywood	Columbia Forest Products	\$4,084	100%	\$4,084	450	450	Manufacturer

<b>Total Cost of Complying Material</b>	<b>\$2,021,402</b>
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Confirm that Total Cost of Complying Materials is greater than or equal to Project's Regional Materials Content Target:

No

11.58%

**Definitions:**

\*\*\* **Regional Materials:** Regionally manufactured materials that have their origin within 500 miles of the project site. These would included products that are regionally mined, harvested or re-used (including those salvaged from the site).

**Notes:**

1. Regional content for concrete provide combined cost for all concrete materials, and distance information requested.
2. Regional content for materials with various points of extraction all within the 500-mile radius list single item with the greatest distance.

★ See Back-up Data

**Credit is feasible and will be pursued**

This credit will be achieved by using building materials for the exterior envelope construction that are resistant to mold. The contractor will be required to comply with the following SCA Standard Specification sections in the Contract documents:

- 06100 Rough Carpentry
- 07212 Miscellaneous Building Insulation
- 07250 Sprayed Fire-Resistive Materials
- 09260 Gypsum Board Assemblies

**No Credit submittal required for this Phase**

**M 2.6R Low-Mercury Lighting, Reduce Mercury Waste**

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The interior lighting fixtures for the school will all be LED. There are no fluorescent fixtures specified for this project.

**Credit is not feasible**



## Indoor Environmental Quality Credits

IAQ Post-occupancy

### Q 1.1R Minimum IAQ Performance & Increased Ventilation

#### **Credit is feasible and will be pursued**

The IEH Consultant's outdoor air analysis report concluded the following:

"TRC's outdoor air assessment of the proposed public school, PS 335Q, located at the South intersection of Raleigh Street and Albert Road, Queens, New York revealed no significant sources of air contaminants in the vicinity of the site, with the exception of the USEPA listing of Queens as a "non-attainment" area for ozone (8-hour) and particulate matter [PM-2.5] with respect to the primary NAAQS."

The ventilation system for the new building will be designed to provide 30% more outdoor air ventilation than the ASHRAE Standard 62.1-2004 requirements, with the exception of the Cafeteria. For those spaces, the ventilation system will comply with the minimum ASHRAE 62.1-2004 requirements, which exceed DOB ventilation rates. All calculations will be based on ASHRAE 62.1 methodology.

For Q1.1R : The SCA Design Standards are:

- DR6.2.0 General Overview of Heating Ventilation and Air Conditioning Systems
- DR6.2.1 HVAC Unit Centralization and Coordination
- DR6.2.3 Non-Assembly Spaces (Classrooms, Offices, etc.)
- DR6.2.4 Public Assembly Spaces
- DR6.2.9 Heating and Cooling Design Parameters (Load Calculations)
- DR6.2.20 Building Management System/DDC BMS and DDC only Systems
- SSS01550 Indoor Air Quality Requirements
- SS15932 Active Chilled Beams
- SS15933 DOAS Units
- SS15934 Rooftop AHU's For PA Spaces
- SS15985 Sequence of Operations
- SS15992 Cleaning and Testing
- SS15993 Balancing of Systems

#### Appendix

Q1.1R A TRC Letter Dated 2/24/14

**No Credit submittal required for this Phase**

# PRECISION TEST & BALANCE CORP.

345 CALYER STREET  
BROOKLYN, NY 11222



PHONE: 718-994-2300

FAX: 718-383-1638

## CERTIFIED TEST, ADJUST AND BALANCE REPORT

Project: P.S. 335

Location: 150-15 RALEIGH STREET QUEENS, NY

Architect: \_\_\_\_\_

Engineer: \_\_\_\_\_

Prepared For: TOMCO MECHANICAL CORP.



THIS IS TO CERTIFY THAT PRECISION TEST & BALANCE CORP. HAS BALANCED THE SYSTEMS DESCRIBED HEREIN TO THEIR OPTIMUM PERFORMANCE CAPABILITIES. THE TESTING & BALANCING HAS BEEN PERFORMED IN ACCORDANCE WITH STANDARD REQUIREMENTS AND PROCEDURES OF THE ASSOCIATED AIR BALANCE COUNCIL AND THE RESULTS OF THESE TESTS ARE HEREIN RECORDED.

ASSOCIATED AIR BALANCE COUNCIL CERTIFICATION NUMBER: 04-08-28

1/2/2018

Date

Vincent Ciccarella

Test & Balance Engineer



AABC Seal

# TOMCO ME

125 State

## SUBMISSION

Job Name:

**P.S. 335 - G**

150 -15 Ralengton  
Ozone Park N.Y. 11417

Submitted To:

Petracca & Sons, Inc.  
18-02 Petracca Place  
Whitestone, N.Y. 11357

SCA Contract No.: C000013929

Submitted By:

Tomco Mechanical Corp.  
125 State Street  
Westbury, New York 11590

Date:

**January 9, 2018**

Re:

Div. 15/ Sect. 15993-004-02  
**AIR BALANCING REPORT**

<b>NYC</b> Department of Education		<b>SCA</b> School Construction Authority		30-30 Thomson Avenue Long Island City, NY 11101-3045	
Architect / Engineer SCA - Architecture & Engineering			General Contractor Petracca & Sons, Inc.		
Project PS335Q02			Submittal No. / Review Cycle 15993-004 / 002		
<input checked="" type="checkbox"/> <b>NET</b>	No Exceptions Taken	Design Number 053004	Contract No. C000013929		
<input type="checkbox"/> <b>MCN</b>	Make Corrections Noted	Date Received 01/19/18	by Submittal Coordinator Plans Desk		
<input type="checkbox"/> <b>RRS</b>	Rejected: Revisa & Resubmit	Date Sent 01/19/18	To Reviewer Hua Xiao		
<input type="checkbox"/> <b>REJ</b>	Rejected: Not Acceptable	Date Returned 01/25/18	Reviewed By Signature <i>[Signature]</i>		
Submittal Reviewed As:					
<input checked="" type="checkbox"/> Per Spec / Basis of Design		<input type="checkbox"/> "Or Equal Substitution" / Non-Basis of Design		<input type="checkbox"/> "Alternate Substitution"	
<small>CORRECTIONS OR COMMENTS MADE ON THE SHOP DRAWINGS DURING THIS REVIEW DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS. SHOP DRAWING APPROVAL IS ONLY FOR GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS, SELECTING FABRICATION, PROCESSES AND TECHNIQUES OF CONSTRUCTION, COORDINATING THE WORK WITH THAT OF ALL OTHER TRADES AND PERFORMING THE WORK IN A SAFE AND SATISFACTORY MANNER.</small>					

*HVAC copy*

## Q 1.2R Outdoor Air Delivery Monitoring

### **Credit is feasible and will be pursued**

The requirements of this credit will be achieved through compliance with SCA Design Requirements:

DR 6.2.0 General Overview of HVAC Systems

DR 6.2.1 HVAC Unit Centralization and Coordination

DR 6.2.3 Non-Assembly Spaces (Classrooms, Offices, etc.)

DR 6.2.4 Public Assembly Spaces

DR 6.2.9 Heating and Cooling Design Parameters (Load Calculations)

DR 6.2.20 Building Management System/DDC BMS and DDC only Systems

The new central ventilation system (rooftop HVAC units) for the new building will be provided with air flow measuring stations at the outside air intakes in order to measure/monitor the outside air supplied to the school. Data for outside air measurement will be available for verification at the school level through the BMS system schools operating console in the Custodian's office or through the DOE centralized host control station for Automatic Temperature Control of Schools in NYC. The monitoring equipment will be configured to generate an alarm when the conditions (either airflow value or CO2 level) vary by 10% or more from the value expected at design conditions, via the building automation system alarm to the building operator. Monitoring will be in accordance with the following:

#### **FOR MECHANICALLY VENTILATED SPACES**

- Monitor carbon dioxide concentrations within all public assembly spaces. For densely occupied non-assembly spaces (those with a design occupant density greater than or equal to 25 people per 1000 sq.ft.) served by a common Central Variable Air Volume System, monitor total outside ventilation airflow. Monitor for carbon dioxide concentrations for all densely occupied non-assembly spaces provided with a decoupled or dedicated ventilation systems. CO2 monitoring locations shall be between 3 feet and 6 feet above the floor.
- Provide a direct outdoor airflow measurement device capable of measuring the minimum outdoor air intake flow with an accuracy of plus or minus 15% of the design minimum outdoor air rate, as defined by ASHRAE 62.1-2007 (with errata but without addenda) for mechanical ventilation systems where 20% or more of the design supply airflow serves non-densely occupied spaces.

Applicable specification sections to be included:

- 15970 Temperature Control System (LonWorks BMS/DDC with School Operating Console)
- 15985 Sequence of operations

Q 2.1R Construction IAQ Management Plan, During Construction**Credit is feasible and will be pursued**

The construction of the new building will follow the Sheet Metal and Air-Conditioning Contractors National Association (SMACNA) IAQ Guidelines for Occupied Building Under Construction, 2nd Edition 2007, ANSI/SMACNA 008-2008 (Chapter 3). Specification Section S01550 Indoor Air Quality Requirements, requires the development of an Indoor Air Quality Plan. Specification Section S01560 Installation Sequence of Finish Materials requires the Contractor to avoid contamination of absorptive materials.

Applicable specification sections to be included are:

- S01550 Indoor Air Quality Requirements
- S01560 Installation Sequence of Finish Materials

**The IAQ Management Plan was implemented to protect the HVAC system during construction, control pollutant sources and interrupt pathways for contamination. Sequence installation of materials to avoid contamination of absorptive materials, such as insulation, carpeting, ceiling tile, and gypsum board. Prior to occupancy and after final validation of the HVAC system and the Building Automation System (BAS), a flush-out was performed.**

**See attached plan and photos documenting compliance.**

Q 2.2R Construction IAQ Management Plan, Before Occupancy**Credit is feasible and will be pursued**

Design documents will require the Contractor to follow one of the following alternates for flushing out the building at completion of construction:

After construction ends, but prior to occupancy and with all interior finishes installed, contractor is to install new filtration media and perform a building full flush-out. Supply the total air volume of 14,000 cubic foot of outdoor air per square foot of floor area prior to occupancy maintaining an internal temperature at least 60°F dry bulb and relative humidity no higher than 60%.

If there is not enough time for full flush-out in the construction schedule, the space may be occupied following delivery of a minimum of 3,500 cubic foot of outdoor air per square foot of floor area to the space. Once the school is occupied, it shall be ventilated at a rate of 0.30 cubic feet per minute per square foot of outside air or the design minimum outside air rate, whichever is greatest. During each day of the flush-out period, ventilation shall begin a minimum of three hours prior to occupancy and continue during occupancy and shall continue until a total of 14,000 cubic foot of outside air per square foot of floor area has been delivered to the space. After complying with this requirement, all ventilation systems will operate in normal mode.

The following SCA Standard Specification section will be incorporated in Contract Documents:

- S01550 Indoor Air Quality Requirements

**Flush out commenced on 08/31/17 at 8am, after the start-up/testing of the five (5) RTUs was substantially complete. Flushout performed in accordance with the approved IAQ Plan & the contract documents for the required period of time established (19 days).**

**Attached find the mechanical subcontractor flushout closeout documentation.**



# **CONSTRUCTION INDOOR AIR QUALITY PLAN (IAQ PLAN)**

**SCA – PS 335  
Queens, New York**

**General Contractor:     Petracca & Sons**  
**Project:                     PS 335**  
**Project No.:                LLW #053004**

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## **Project Information**

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**Project:** SCA – PS 335

**Queens, New York**  
**Project # LLW #053004**

**General Contractor:** Petracca & Sons      **Contact:** Lou Gaudio

**CWM Coordinators:** Maggie Sciubba (KR) & Lou Gaudio (Petracca)

**Project Location:** Queens, New York

**Project Description:** New School Construction

## **Executive Summary**

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- **Plan Goals**

The Construction Indoor Air Quality Management Plan (CIAQMP) is designed to implement best practice approaches for managing Indoor Air Quality (IAQ) during and after construction, prior to occupancy. The goal of the CIAQMP is to reduce contamination and pollution of materials by dust, debris or odor, and to reduce the potential of long-term pollution of interior environments by building construction materials. Additionally, the CIAQMP aims to reduce damage and other negative affects from environmental conditions, such as heat/cold, humidity and moisture.

- **Plan Highlights**

The CIAQMP covers procedures for handling and storing materials, protecting work in place, managing potential contaminants through source control, work practices, housekeeping, and scheduling of materials during construction. The plan also addresses the installation of materials, inspection and repair of damaged materials. The plan also addresses procedures required for inspection during construction, project closeout, system start-up, and the indoor air quality prior to building before occupancy.

- **Plan Benefits**

Utilizing a best practice approach to indoor air quality during construction can greatly contribute to the quality of the building construction and the overall quality of the interior environment of the building in operation. A CIAQMP can reduce damage to materials and reduce damage and harm to materials, equipment and systems already installed. These practices improve the environmental conditions for workers during construction. They also reduce the number and amount of potential contaminants and pollution sources that can have negative effects on the building during and after construction. Proper construction IAQ management reduces the amount of airborne dust and construction debris, protects finished work from exposure to dust and debris, and prevents air-handling systems from distributing dust and debris throughout the building. These practices reduce the negative effects of water and moisture that damage materials and finished construction, and that directly contribute to the growth of mold and bacteria. Used in conjunction with the specification of low-emitting materials, construction IAQ management controls potential pollution sources, mitigates those sources present in installed materials, and reduces the long-term potential for ongoing pollution of interior environments.

- **Sequence of Finish Installation**

Please reference the project schedule. All items will be delivered, stored and installed with the IAQ plan requirements.

## **Intent**

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For the owner to prevent indoor air quality problems resulting from the construction process in order to help sustain the comfort and well being of construction workers and building occupants.

## **Requirements**

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Implement an Indoor Air Quality Management Plan for the construction and pre-occupancy phases, as follows:

1. During construction, meet or exceed the recommended Control Measures of the Sheet Metal and Air Conditioning Contractors National Association (SMACNA) IAQ Guidelines for Occupied Buildings Under Construction, 2nd edition 2007 Chapter 3.
2. Protect stored on-site or installed absorptive materials from moisture damage.
3. If air handlers are used during construction, provide filtration media with a Minimum Efficiency Reporting Value (MERV) of 13 at each return air grille, as determined by ASHRAE 52.2-1999. Replace all filtration media immediately prior to occupancy.

## **Strategy**

---

Implement this IAQ Management Plan to protect the HVAC system during construction, control pollutant sources and interrupt pathways for contamination. Sequence installation of materials to avoid contamination of absorptive materials, such as insulation, carpeting, ceiling tile, and gypsum board. Prior to occupancy and after final validation of the HVAC system and the Building Automation System (BAS), conduct air quality testing.

### **Submittals:**

1. Contractor's Construction Indoor Air Quality Management Plan.
2. Confirmation on air handling operation during construction.
3. Provide six photographs at three different times during the construction period, along with a brief description of the SMACNA approach employed, documenting implementation of the indoor air quality management measures, such as:
  - a. Filtration media installation
  - b. Protection of ducts and onsite stored or installed absorptive materials
4. Provide cut sheets of filtration media used during construction and installed immediately prior to air quality testing and also prior to occupancy with MERV



- 13 filters, highlighting the media values. Include a schedule listing when the filtration media is changed during construction.
- 5. Narrative describing any special circumstances or nonstandard approaches taken by the project.

## **SMACNA Guidelines**

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Construction of the new imagination Activity Center in New York, New York will conform to the recommended construction approaches of the Sheet Metal and Air Conditioning National Contractors Association (SMACNA) IAQ Guidelines for Occupied Buildings Under Construction, 2nd edition 2007 Chapter 3. The scope includes the handling and protection of materials stored on site, protection of completed work and installed systems, source control of contaminants, and recommended work practices. Highlights of those requirements are as follows:

### **PROTECTION**

#### **HVAC Systems**

- HVAC equipment and ductwork shall be protected from contamination by dust, water, construction debris and odors produced by chemical off-gassing of building products and materials.
- Ducts and openings in equipment shall be sealed during all steps of construction.
- Ductwork awaiting installation shall be elevated off the floor and protected by plastic.

The design of each system must be evaluated by the installation contractor to determine major areas of protection and how they may be affected by dust and odor. Refer to manufacturer's recommended installation procedures for additional information on the protection of equipment before, during and after installation.

Coordinate the protection of equipment with ongoing ventilation of building spaces during construction, either by the use of natural ventilation, or mechanical ventilation. Protect installed equipment that is being used to provide construction ventilation by installing high quality filtration, **MERV 13 or better** in all equipment.

- **HVAC Return Side Protection:**

The return side of the system by definition is under negative pressure and is capable of drawing in construction dust and odor. Attention must be paid to construction activities, access to environmental conditions, and storage of materials in relation to return vents, return ducts, ceiling plenums, return shafts, VAV plenum intakes, transfer vents, and the air-handler units themselves. The following is mandated:

- The entire system should be shut down during periods of heavy construction or demolition.
- Systems should be isolated from the surrounding environment as much as possible to prevent the induction of contaminants and pollutants. This includes such things as maintaining all ceiling tiles in place in ceiling plenum areas and repairing air handler leaks.
- All return system openings in or immediately adjacent to construction areas should be sealed in plastic.
- When systems are operational during construction, temporary filters, MERV 8 or better should be installed at openings to the return system (e.g. on grills at return air openings). All filters must be frequently maintained and replaced as necessary during construction.
- When systems are operational during construction, the heaviest work areas should be dampered off (or otherwise blocked) if temporary imbalance of the return air system does not create a greater operational problem.
- Mechanical spaces shall not be used to store construction or waste materials.

- **HVAC Central Filtration:**

When systems are operational during construction, consideration should be given to upgrading the filter efficiency of system equipment as long as minimum airflow can be maintained. Where other control options for construction related odors is not deemed effective, consideration should be given to filtration with media such as activated charcoal or potassium permanganate.

- Central filtration media shall be at minimum, MERV 8 or better as defined in ASHRAE 52.2-1999.
- At least two weeks prior to the completion of construction, after substantial completion of work and prior to occupancy, all filtration media shall be replaced with new media having a MERV 13 as defined in ASHRAE 52.2-1999.

- **HVAC Supply Side Protection:**

After installation, diffusers, VAV boxes, window units and ducts shall be sealed in plastic for protection prior to operation. All work shall be inspected upon completion and cleaned where needed. If significant dust deposits are observed in the system during construction, some particulate discharge can be expected during start-up. In severe cases, temporary coarse filters should be installed on diffusers during initial system start-up to prevent the spread of dust throughout the building.

- **Duct Cleaning:**

In the event that excessive dust and debris is observed in the ductwork during installation or prior to systems operation, these ducts and associated equipment shall be cleaned to avoid recontamination of completed work.

**Mechanical Rooms:**

The mechanical rooms should not be used to store construction or waste materials. Rooms should be kept clean and neat. This is the responsibility of all prime contractors and their subcontractors.

**Insulation:**

Insulation shall be protected from moisture and water damage. Insulation shall be stored in clean dry areas away from sources of water or moisture, and stored raised off the ground. Damaged insulation shall be immediately removed and replaced with new product.

**Drywall:**

Gypsum drywall products shall be protected from moisture and water damage. Materials shall be periodically inspected for signs of moisture contamination and mold. Gypsum drywall products shall be stored in dry areas away from sources of water and moisture and shall be stored on pallets raised off the ground or floor. Damaged gypsum products shall be immediately removed and replaced with new product.

**Finish Materials:**

New finish materials stored on site and installed as part of construction shall be protected from water, mold, dust and odors produced by chemical off-gassing of other building products and materials. Porous finish materials are particularly susceptible to water dust and odors, and tend to absorb contaminants, which are later released into the finished building. Materials such as carpet, ceiling tiles, fabrics, and wall coverings, or flexible vinyl products should not be delivered or stored onsite until just prior to installation. Once onsite, these materials should be stored in sealed packaging to prevent contamination. Finish products that produce chemical off-gassing should be ventilated and allowed to off-gas prior to installation in an area away from finished construction or other porous materials.

**SOURCE CONTROL**

The most effective type of pollution control is generally at the source. A variety of options may be available depending on the type of products and materials. Refer to product specifications for specific product requirements related to VOC content and other contaminant sources. Combine source control strategies with other measures to control IAQ contamination and the contamination of materials and products.

**Product Substitutions:**

In response to IAQ concerns, many manufacturers have formulated lower emitting products that meet performance requirements of contract specifications. Product emissions data is available in the form of MSDS sheets and is readily available from the manufacturers. Cost and performance data for different products needs to be evaluated when considering product substitutions.

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**Modifying Construction Equipment and Operation:**

The use of certain equipment will need to be restricted in order to meet IAQ objectives. This could involve substituting cleaner equipment, modifying existing equipment to operate cleaner, or simply changing operating procedures. The following is recommended:

- Restrict traffic volume or prohibit idling of motor vehicles where emissions could be drawn into the building construction or occupied areas.
- Switch from diesel fuel to bottled gas for equipment such as generators or fork lifts (note that the emissions are cleaner but still potentially harmful under certain circumstances). The use of electric forklifts and other equipment should be considered where feasible.
- Modify equipment to run on low-sulfur diesel or bio-diesel fuel.
- Cycle equipment off when not needed or in operation.

**Changing Work Practices:**

Consider work practices that control pollution and contaminants. For some demolition tasks, there may be techniques and procedures that produce less airborne dust and contaminants. Some painting techniques release fewer odors. Some cleaning practices raise less dust and some cleaning products release less odor. Local Exhaust: Pollution sources should be directly exhausted to the outside during construction. This should be accomplished by a portable exhaust fan system vented directly to the outside, or may be done through an exhaust system already installed in the building. Special filtration of the exhaust may be required. Any outside emissions must be in compliance with applicable regulations and should be directed away from air intakes. Where local exhaust is not feasible, localized recirculation of air through a portable air cleaner may be effective. The type of filtration should be compatible with the material or conditions being controlled (e.g. charcoal or potassium permanganate filtration for odors and moderate to high efficiency filtration for dust).



### **Cover or Seal:**

VOC emissions resulting from the evaporation of chemicals from exposed surfaces should be reduced. Containers of wet products should be kept closed as much as possible. Enclosed tankers are preferable to open kettles for roofing. Waste materials that can release odors from chemical off gassing should be covered or sealed. Materials and surfaces with a persistent odor source should be controlled with a sealer.

### **PATHWAY INTERRUPTION**

Practical methods are available to prevent air movement and the movement of contaminants from work areas to other areas of building construction, or occupied areas within the building. Interruption of contaminant pathways is an effective control option. Once major pathways are identified for a given project, the following strategies can be used to achieve environmental control:

#### **Depressurization of The Work Area:**

This can be accomplished by adjusting the balance of existing or temporary HVAC and exhaust systems or by installing portable exhaust fans. Some ventilation of the work area will still be required to dilute contaminants, and may be provided by outside air or air drawn from adjoining areas. See comments on "Local Exhaust" section on the previous page for clarification.

As a general rule, the work area should be exhausted at a rate of 10% greater than the rate of supply air in order to maintain effective negative pressure. It is important that the HVAC system remains protected from construction emissions. During depressurization, the RTU return air fan should be turned off to avoid contaminating the supply air.

#### **Pressurize Finished Or Occupied Space:**

Increasing the supply air in areas of finished construction or in occupied spaces will help exclude airborne dust and odors. Consideration should be given to extending the fan schedule to provide overnight pressurization in systems programmed to shut

down at night. Temporary rebalancing during construction should be carefully planned and executed.

**Erect Barriers to Contain Construction:**

Barriers can range from simple dust barriers to a continuous plastic seal around the construction area, with only a controlled inflow of make-up air and dedicated exhaust. The extent of the barrier should be based on the type of construction activity and materials involved. Attention should be given to openings in the work area, such as return air vents, open wall cavities, or penetrations in walls and floors.

Solid barriers should control materials and procedures that generate high levels of dust. Materials and procedures that generate odors and chemical off gassing should be controlled by local exhaust. If the release is not considered a hazard, it can be controlled through regular housekeeping practices.

In general, full containment of the work area with barriers, capping of return air ducts, and the application of negative pressure is recommended for spaces adjacent to finished construction or occupied spaces.

**Relocate Pollutant Sources:**

When project equipment or staging areas coincide with critical airflow pathways, IAQ problems are likely to occur. Equipment should be moved to a more favorable location in regard to air quality. Work on equipment or materials prior to final installation that is a source of contamination should be done in areas away from finished construction and critical airflow pathways where possible. Construction products and waste materials should be stored in areas away from critical airflow pathways and away from air handling equipment.

**Temporarily Seal the Building:**

Where construction activities generate emissions occur adjacent to the building or areas of finished construction, contaminants may be drawn in through outside air intakes or other points of entry. If contaminant levels are unacceptable and there is no



better solution, such as source control, temporary relocation of intakes, or rescheduling, then sealing of intake dampers may be necessary. This approach should not be weighed against worker comfort and well-being within the work area and any regulatory requirements for ventilation and comfort. Construction activities that require dilution of interior construction emissions may need to be temporarily discontinued or rescheduled. Other points of entry to consider when sealing the building include exterior doors, windows, top of elevator shafts, etc.

## **HOUSEKEEPING**

Housekeeping and attention to site cleaning is important to maintaining good indoor air quality during construction. Dust accumulated in work areas will become airborne and spread throughout the construction area and areas of finished work. Spills and the excessive application of products containing solvents will increase odors and levels of chemical off gassing. Work areas that are wet or even just damp for more than a day can result in the growth of mold and bacteria.

### **Dust Control:**

Increased frequency of cleaning is the most effective way to control dust. Switch to more efficient dust collection methods such as damp rag, wet mop or vacuums equipped with high efficiency particulate filters or wet scrubbers. Ensure that all surfaces and equipment are kept clean (including the inside of mechanical equipment).

### **Spill Control:**

Remove excess applications of solvent containing products as soon as possible. Select non-toxic and low- emitting spot removers and cleaning agents, especially around occupied areas. Provide sufficient ventilation when using spot removers and cleaning agents. If possible, use products after hours.

### **Cleaning Materials:**

Materials used for general cleaning and for preparation of surfaces for construction should be non-toxic and low-emitting. Where low-emitting products or materials are

not available or do not perform as required, then special precaution must be taken to protect workers and materials. Direct exhaust of the workspace to the outside, and high ventilation rates should be used to remove chemicals and odors from the workspace.

#### **HVAC Equipment Cleaning:**

Prior to system start-up and final testing and balancing, inspect and clean all HVAC coils and fans.

### **SCHEDULING**

Scheduling and sequencing of work is an important aspect of control of contaminants and pollutants. The sequence of construction activities and work within the building, the scheduling of material delivery and storage time for materials, and the scheduling of periods for work area ventilation, and curing all can help mitigate construction IAQ problems.

#### **Sequence of Work:**

Schedule the sequence of work to avoid contamination of completed work. Isolate areas of completed work and sequence work activities to avoid completed work areas or occupied spaces. Isolate areas adjacent to current work areas. To the greatest extent possible complete the application of wet materials with high short-term emissions of VOCs, formaldehyde, particulates, or other air-borne compounds that require curing and drying time, and of odorous materials that off-gas prior to the installation of porous and finish materials such as ceiling tiles, carpet, acoustic wall panels, fabric and furnishings.

#### **Scheduling of Materials:**

Schedule materials to be delivered to the site just prior to installation. Prevent materials from being stored for extended periods in or adjacent to work areas where they may become contaminated by construction emissions. Schedule deliveries for times when their handling does not expose them to construction emissions.

## **Installation**

---

### **INSTALLING MATERIALS**

Materials and finishes that are scheduled to be installed, but emit odor and chemical off gassing should be cured and allowed to off-gas before installation whenever possible. Isolate these materials during this period to reduce the possibility of contamination of finished construction.

Many building related IAQ problems are built in to construction due to improper installation and lack of care. Damaged materials compromise the performance of the building envelope and systems and can be the catalyst for greater IAQ problems after the building is occupied. Damaged materials should not be installed and great care should be taken to inspect for damage and water intrusion as components are installed and sealed in the finished construction.

#### **Manufacturer's Recommendations:**

Follow manufacturer's recommendations for installation on materials. Note handling, storage and safety requirements of products to be installed. Familiarize workers with proper installation and handling procedures. Follow recommended industry standards for placement or spacing of materials to prevent moisture intrusion.

#### **Environmental Conditions:**

Maintain proper environmental conditions with regard to temperature and relative humidity for work being performed and while work is aged or cured. Protect other material as necessary during aging and curing periods. Install materials only when manufacturer's recommended environmental conditions can be met. Provide temporary heat as necessary in work areas. Maintain temperature and humidity thresholds for the required period after installation. Provide dehumidification in work areas as necessary. Allow for proper curing and drying times for all materials.

## **INSTALLED WORK**

**Protection of Installed Work:** Protect all installed work from dust, dirt, water, moisture, mold and odor from chemical off gassing of materials. Isolate and seal areas of completed work. Protect porous and wet materials. Cap and seal ductwork and openings in air-handling equipment. Cap and seal all pipes and plumbing. Protect installed equipment and fixtures from moisture and dust.

## **INSPECTION**

Ongoing inspection of completed work and work in progress is critical to good construction IAQ management. A regular schedule of daily, weekly and monthly inspections and documentation should be incorporated into the contractors schedule and recorded as part of the project record documents.

### **Daily Inspection of Installed Materials:**

On a daily basis, inspect all installed materials and completed work for sign of contamination by water, dust, or other construction emissions. The jobsite supervisor should take these actions to help reduce the potential for damaged materials and work in place:

- Inspect the work at the beginning of each day for dust, dirt, water intrusion or mold. IAQ Management Plan Page 12 of 18
- Respond to problems identified during inspection or reported by workers and make sure they are resolved before additional work is performed and problems are sealed into finished construction.
- Inspect work areas at the end of shift to make certain that protective measures are in place and that work areas are secure from environmental conditions.

### **Weekly Inspection of Stored Materials and Storage Areas:**

On a weekly basis material storage and staging areas should be inspected for environmental conditions and evidence of damage to materials stored. Maintain minimum temperatures during cold weather construction and monitor humidity levels



during hot weather construction. The following is recommended on a weekly basis:

- Inspect material storage areas for adverse conditions and evidence of damage.
- Inspect stored materials for evidence of damage.
- Document the condition, temperature and relative humidity as necessary, especially for environmentally sensitive materials.
- Inspect HVAC systems to make sure they are adequately protected and ductwork is closed off.
- Inspect areas of completed work for evidence of damage from water or construction emissions.

#### **Monthly Inspections of Work Areas:**

On a monthly basis, all work areas and adjacent occupied areas should be inspected and documented for dust, dirt, and evidence of damage from water and for construction emissions.

#### **REPAIR OF DAMAGE**

##### **Materials Damaged by Water:**

Sources of water intrusion or excessive moisture build-up must be mitigated immediately:

##### **Drywall or Plaster:**

Remove and replace all water damaged drywall and insulation within 24 hours. If longer than 24 hours, or if mold has already begun to grow, contact a professional remediation firm.

##### **Building Insulation:**

Remove and dispose of all water damaged loose, batt- and rigid insulation within 24 hours.

##### **Ceiling Tiles:**

Remove and dispose of wet ceiling tiles within 24-48 hours of water damage.

**Concrete and CMU:**

Scrub water damaged surfaces with a mild detergent followed by a rinse using a solution of 1/4 to 1/2 cup bleach per one gallon of water. Do not follow with a clear water rinse, as it is desirable for the bleach to remain. Dry thoroughly. Use bleach in a well-ventilated area and do not mix bleach with ammonia or other cleaning fluids as hazardous vapors will occur.

**Metal Surfaces:**

Scrub surfaces with a mild detergent. Dry thoroughly. Do not use a bleach rinse, as bleach may cause corrosion on metal surfaces.

**Carpet and Upholstered Furniture:**

Carpet and upholstered furniture damaged by steam leaks or potable water should be cleaned, dried and closely monitored for mold growth and odors. Wet carpet and padding should be pulled up and dried quickly, if not it should be removed. Carpet and upholstered furniture damaged by flood, sewage, groundwater or roof leaks should be disposed of immediately.

**Hardwood and Laminate Furniture:**

If laminate is intact, hardwood and laminate furniture should be cleaned with a solution of 1/4 to 1/2 cup of bleach per one gallon of water, and air-dried. Bleach may damage or fade colors, therefore test the bleach solution in an inconspicuous area before proceeding. If laminate is de-laminated, dispose of furniture.

**Particleboard and Composite Wood Products:**

Dispose of materials properly in accordance with Construction Waste Management Plan.

**Files and Paper:**

Dispose of non-essential wet files and paper in accordance with Construction Waste Management Plan. Paper damaged by steam leaks or potable can be dried and

monitored for mold growth and odors. Essential files and paper should be removed to a location where they can be dried, photocopied, and then discarded. If files and paperwork cannot be evaluated within 24-48 hours of water damage, they may be rinsed with clean water and temporarily frozen until proper drying and evaluation can be completed.

### **Summary of Standards**

Do not exceed the following standards for indoor air quality. Refer to specific specification requirements for other limits.

<b>Indoor Contaminants</b>	<b>Allowable Concentration Levels</b>
Carbon Monoxide	<9PPM
Carbon Dioxide	<530 PPM Higher Than Outdoor Ambient Conditions
Airborne Mold and Mildew	Simultaneous Indoor and Outdoor Readings
Formaldehyde	<20 Micrograms Per Cubic Meter
Total VOC	<200 Micrograms Per Cubic Meter
4-Phenylcyclohexene (4-PC)	<3 Micrograms Per Cubic Meter
Total Particulates (PM)	<20 Micrograms Per Cubic Meter
Regulated Pollutants	<NAAQs

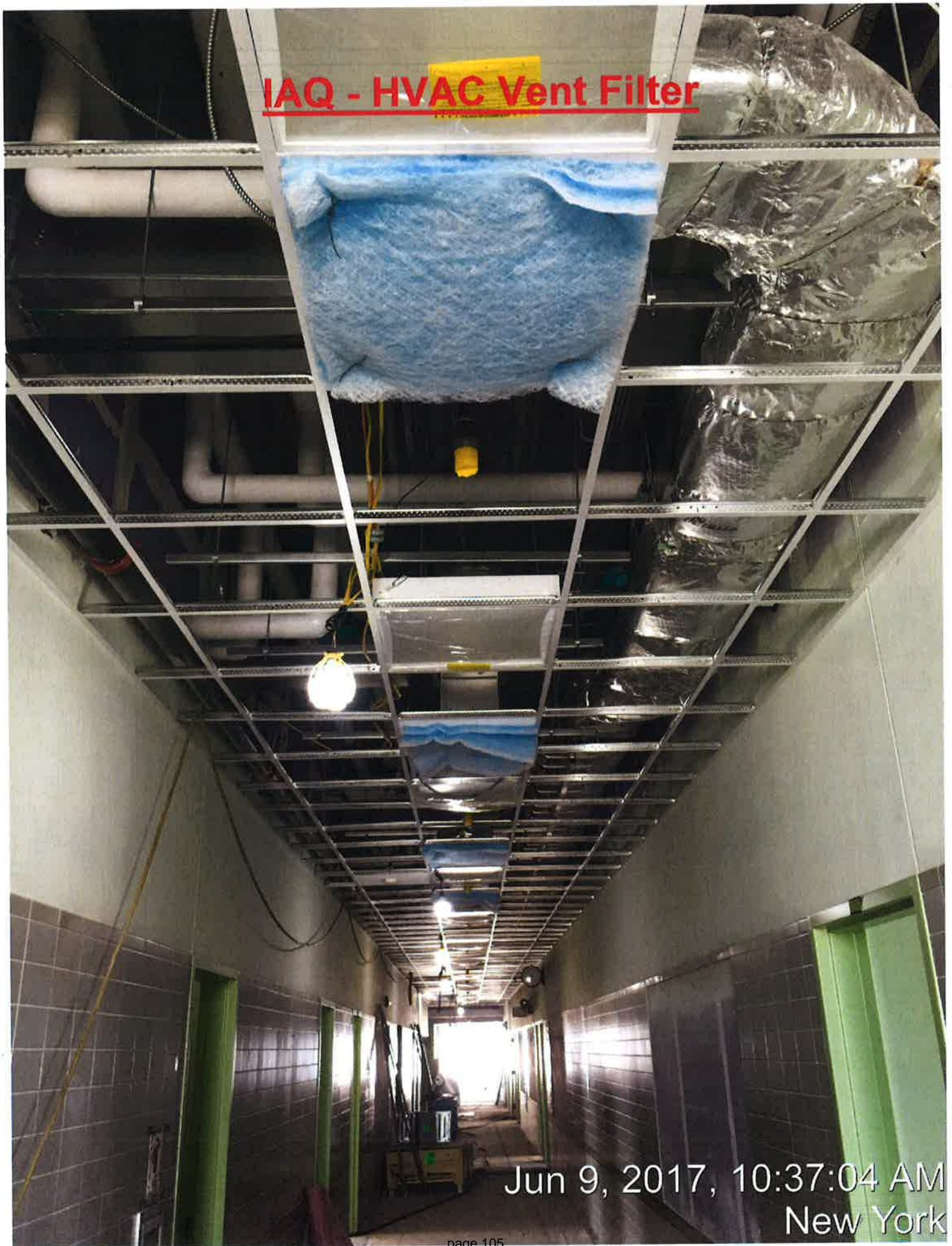
Floor / Material Protection



Jun 6, 2017, 2:01:07 PM  
New York



IAQ - HVAC Vent Filter



Jun 9, 2017, 10:37:04 AM  
New York

# IAQ - HVAC Duct Sealed

Oct 21, 2016, 8:31:02 AM

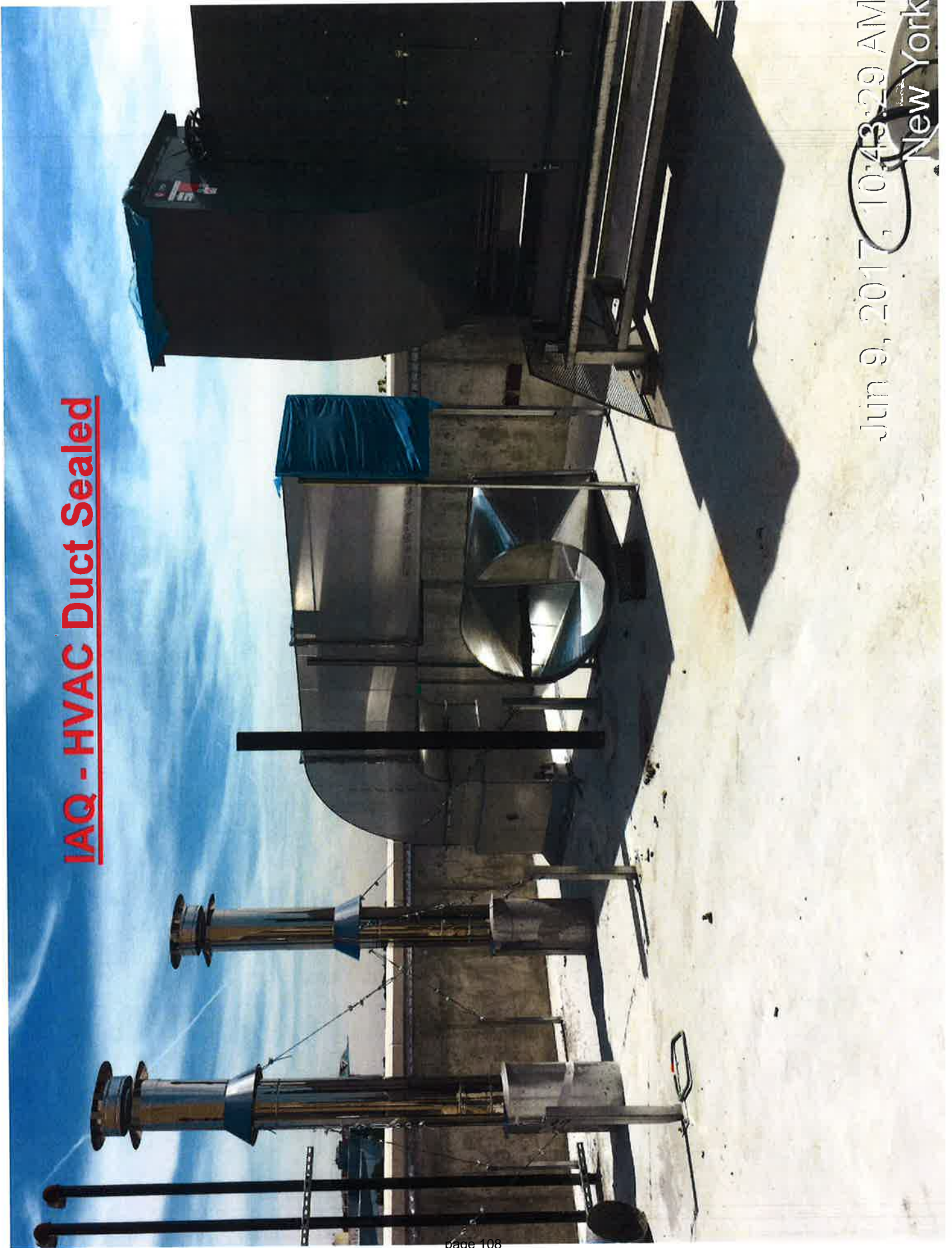


# IAQ - HVAC Ducts Sealed



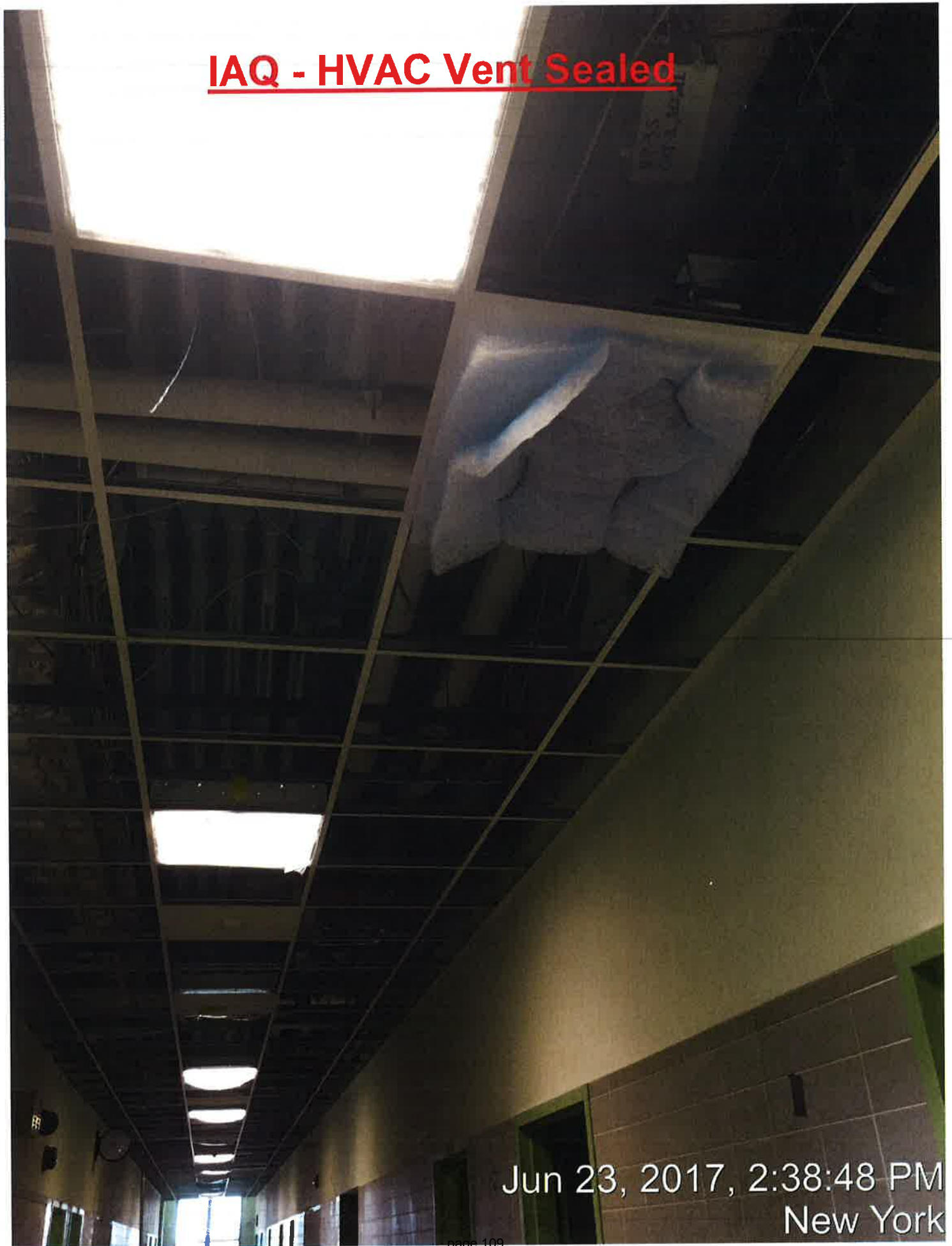
Nov 22, 2016, 9:29:42 AM

## IAQ - HVAC Duct Sealed





## IAQ - HVAC Vent Sealed



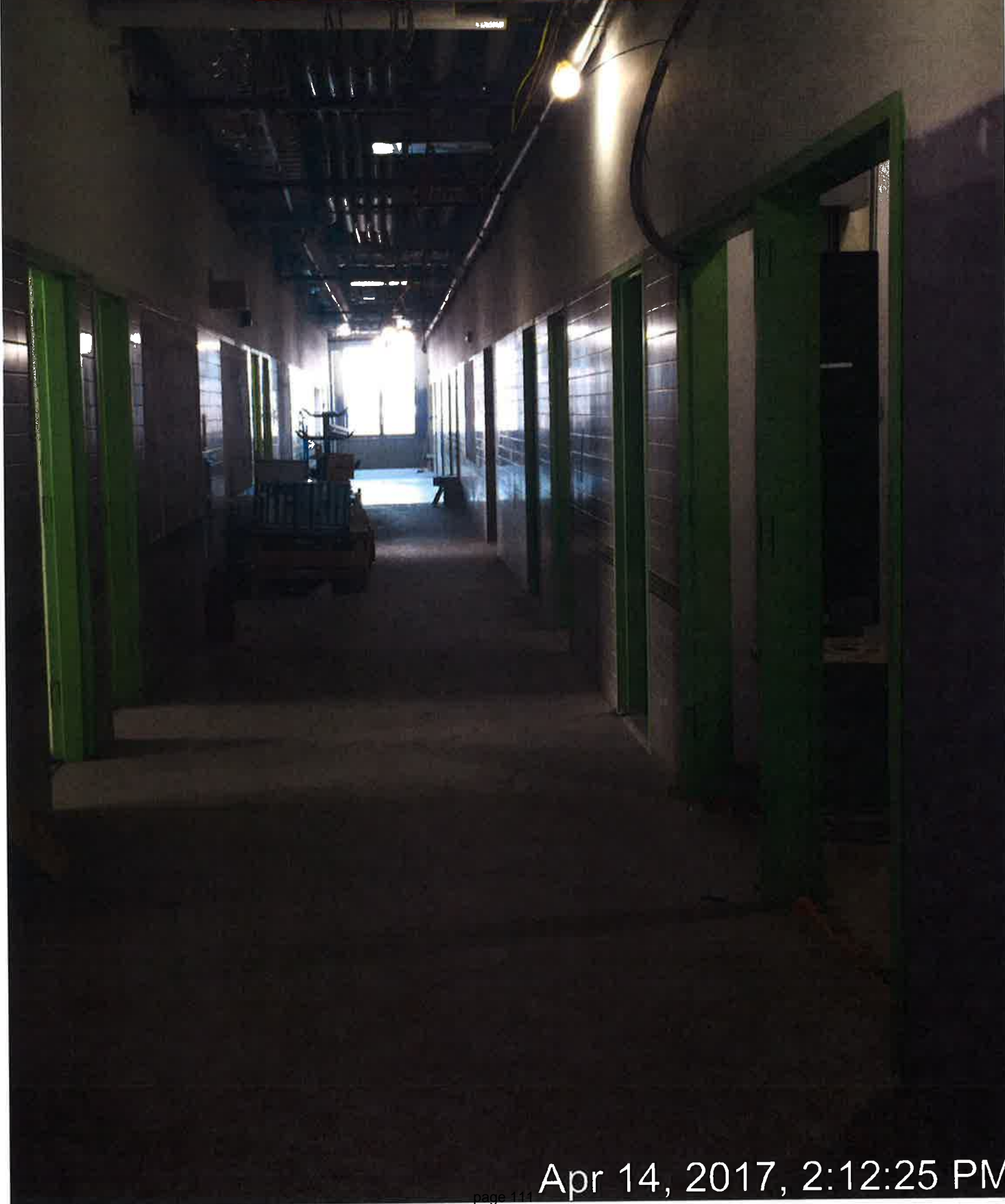
Jun 23, 2017, 2:38:48 PM  
New York

## Site Cleanliness- Floor Protection



Jun 15, 2017, 2:29:35 PM  
New York

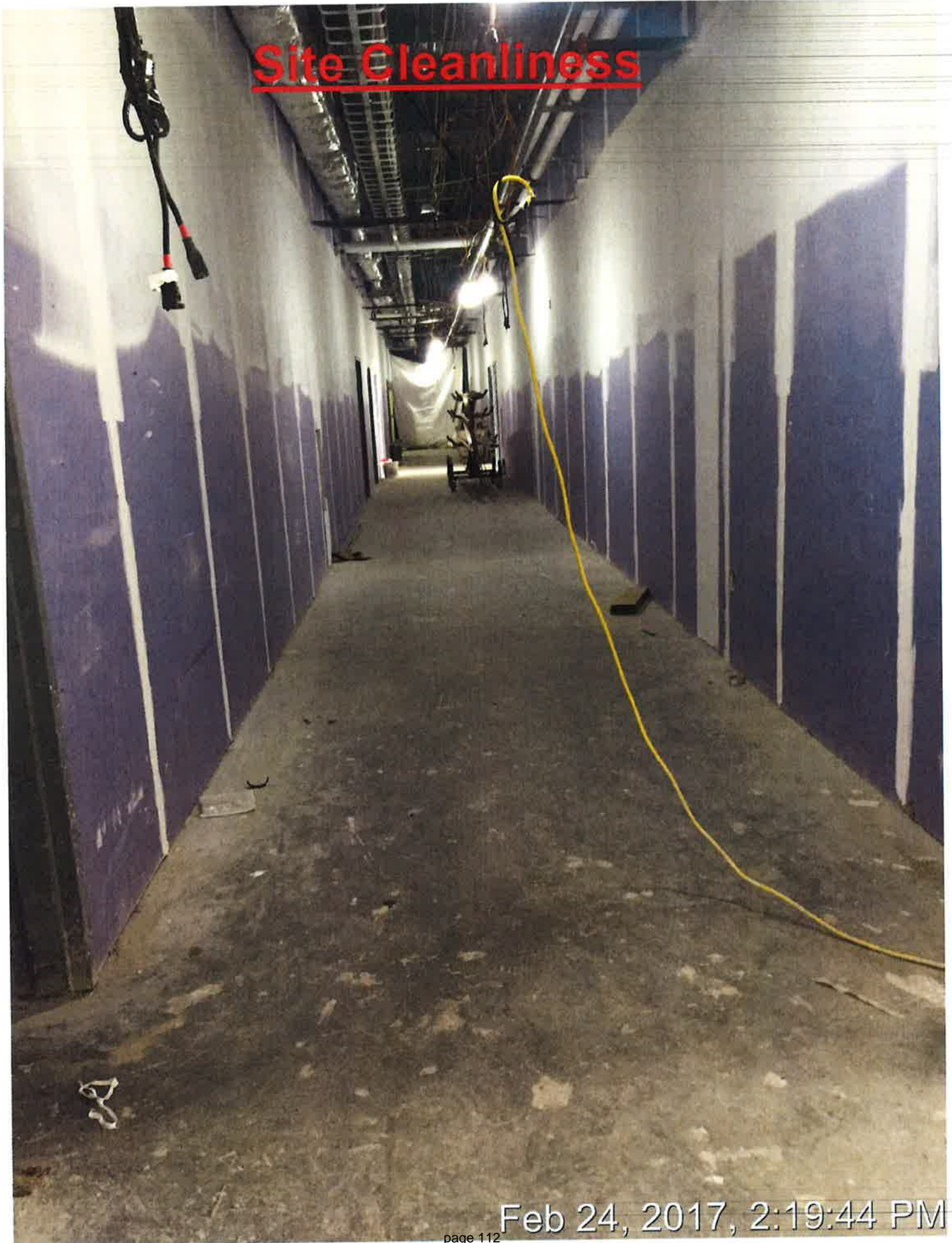
# Site Cleanliness



Apr 14, 2017, 2:12:25 PM



## Site Cleanliness



Feb 24, 2017, 2:19:44 PM

Site Cleanliness

Aug 21, 2017, 7:26:02 AM

March 1, 2017  
 Revised: July 27, 2017

**P.S. 335**  
**150-15 Raleigh Street, Queens, NY 11417**

#### AIR FLUSH CALCULATION

Requirement 14000cfsf @ 60 degrees min &  
60% max humidity

This project will be pursuing to a Before Occupancy flushout broken into two segments since occupancy is desired prior to finishing the flushout.  
 In order to accomplish this the following flushout calculations must be followed:

Prior to the occupancy:

<u><b>sf per bldg</b></u>	<u><b>cf required</b></u>	<u><b>total CFSF required</b></u>			
76,064.00	3,500.00	266,224,000			
<u><b>CFM (ea)</b></u>	<u><b># of fans</b></u>	<u><b>CFM</b></u>	<u><b>Minutes</b></u>	<u><b>24 hr - Days</b></u>	<u><b>8 hr - days</b></u>
38,812	1.00	38812	6859	5	14

Once occupancy then the following calculation must be followed:

<u><b>sf per bldg</b></u>	<u><b>cf required</b></u>	<u><b>total CFSF required</b></u>			
76,064.00	14,000.00	1,064,896,000			
<u><b>CFM (ea)</b></u>	<u><b># of fans</b></u>	<u><b>CFM</b></u>	<u><b>Minutes</b></u>	<u><b>24 hr - Days</b></u>	<u><b>8 hr - days</b></u>
11,644	1.00	11,644	91,454	64	191

BMS system will not be used. The humidity (not to go above 60%) and temperature (not to go below 60 degrees) will be manually set by Tomco Mechanical Corp. On the first day of flushout, all filters will be checked and logged in. On a weekly basis the filters will be checked and if they need to be changed then filter information will be noted and pictures will be taken. If no filter change is necessary, then pictures will be taken to demonstrate. The delivery rates, humidity and temperature will be monitored and recorded on a daily basis to verify that they are being kept at the prescribed minimums and maximums. Periodic photos will serve as backup documentation.

On the none occupancy flushout days, the systems will run at 100% for 24 hours for 5 days. On the occupied flushout days, ventilation (at 30%) must begin 3 hours prior to occupants arriving on the first day and must continue at this rate for 24 hours for 64 days. The monitoring protocols set above will be maintained during the whole flushout.

Items that will be reported: Dates, Outdoor Air Delivery Rates, Internal Temperature, Internal Humidity Level and Filters

All construction activities must be finished prior to the flushout beginning. Whether the furniture should be in or not is optional.



**TOMCO MECHANICAL CORPORATION**  
**125 STATE STREET**  
**WESTBURY, NEW YORK 11590**  
**(516) 546-5700 (Tel.)**  
**(516) 546-7521 (Fax)**

**FLUSH-OUT PROCEDURE AND CALCULATION FOR PS-335**

September 20, 2016

PS-335  
150-15 Raleigh Street  
Queens, New York 11417

**PROCEDURE**

- Set all roof top and exhaust fans units for 100% outside air
- Maintain air temperature to specified design
- RH to be no higher than 60%
- Set BMS system to show start time, operating hours, temperature, RH and volume of outside air on each roof top unit #1 thru #5.
- Testing will start on 8/01/17 and run for 456 hours continuously

**CALCULATION**

- Based on SCA Specifications 14,000 C.F.M. Flush out required per square foot.
- This is a calculation for the flush-out at PS-335Q
- Total area of new building is approx. 84,000 Sq. Ft.
- The total flush-out requirement for the building is 1,176,000,000 cu. ft. of outdoor air
- The total capacity of all rooftop units exhaust fans is 42,600 C.F.M. at 100% outside air intake

**See below for Flush-Out Calculation**

Total Building Sq. Ft.	SCA Required Cu Ft x Sq Ft	Total Cu Ft To be Purged	(5) RTU Employed to Exhaust	(Min x Hrs) 60 x 24	Total Cu Ft Exhausted Per Day
<u>84,000</u>	X 14,000	= <u>1,176,000,000</u>	CFM <u>42,600</u>	X 1,440 minutes	<u>61,344,000</u>

Total Cu. Ft. Flushout Required  
1,176,000,000

Flushout X Day  
61,344,000

Required Flushout Days  
19 Days



**SPEC. SECTION S01550**

1. Prior to Occupancy: Flush-out after construction ends with all interior finishes installed. Perform building flush-out by supplying a total air volume of 14,000 cu. Ft. outdoor air per square foot or floor area while maintaining an internal temperature of at least 60/75 degrees F. and RH no higher than 60%.
2. Before Occupancy install Merv 13 filters at each return air grill, replace as necessary, temporarily "seal" building from construction emissions and contaminants, keep dust to a minimum, and clean frequently, keep area clean and dry. All volatile liquids should be kept out of the building. Perform before occupancy flush-out by supplying a total of 14,000 cu. Ft. of outdoor air (100% fresh air) per square foot while maintaining an internal temperature of at least 60/75 degrees F. and RH no higher than 60%.

  
Anthony Martinelli  
President

9/20/2016  
Date



**MECHANICAL CORPORATION**  
COMMERCIAL-INDUSTRIAL-REFRIGERATION-H.V.A.C.

125 STATE STREET, WESTBURY, NEW YORK 11590  
TELEPHONE (516) 546-5700 FAX (516) 546-7521

**October 26, 2017**

**Submitted to:**  
**Petracca & Sons, Inc.**  
**18-02 Petracca Place**  
**Whitestone, NY 11357**

**Project:**  
**PS 335 - Queens**  
**150-15 Raleigh Street**  
**Ozone Park, New York 11417**

**Attn: Mr. Jim Delaney**

**RE: Building Flush Out**

**I, Anthony Martinelli, am the Owner/President of Tomco Mechanical Corp. and have been in business for over fifty years. I affirm that Tomco Mechanical has performed the flush Out procedure at PS 335 per specs, manufacturers recommendations, and the attached approved submittal (see attached mechanical reports).**

  
Anthony Martinelli

10/26/17  
**Date**

**FRANCESCA MARTINELLI**  
**NOTARY PUBLIC-STATE OF NEW YORK**  
No. 01MA8204724  
Qualified in Kings County  
My Commission Expires 04-20-2021  


**TOMCO MECHANICAL CORP**

**125 State Street  
Westbury, NY 11590  
(516) 546-5700 FAX (516) 546-7521**



Ticket No. \_\_\_\_\_

Invoice No. \_\_\_\_\_

CUSTOMER: PETRACIA CONST. CITY: 150-15 07 ONE PK Queens STATE: N.Y.

CUSTOMER P.O. # N/A DAY: TUESDAY DATE: 8/31/17

MECHANIC	START	FINISH	HOURS & DISTRIBUTION
#1 JEFF J.	8:00	4:30	<input checked="" type="checkbox"/> A.M. <input checked="" type="checkbox"/> P.M.
#2			<input type="checkbox"/> A.M. <input type="checkbox"/> P.M.
#3			<input type="checkbox"/> A.M. <input type="checkbox"/> P.M.
Use a Separate Service Ticket For Each Mechanic.			For Office Use Only
			S T Hours @ \$ O T Hours @ \$ D T Hours @ \$ 09 Mileage: Miles @ ¢

## SYSTEM INFORMATION

MAKE MERV 13

## MODEL

SER. #

**ADVISED MANAGER OF THE FOLLOWING HAZARDS/CONDITIONS:**

- ☐ Floor drain backing up
- ☐ Case drain clogged with tags and product
- ☐ Case sweating
- ☐ Mistting system spilling water on floor
- ☐ Need to install anti-slip mats in front of cases
- ☐ Residual water must be mopped

Comments:

- ☐ Case insulation deteriorated
- ☐ Need to schedule case washing
- ☐ Iced melon bar loaded incorrectly
- ☐ Produce wet and spilling water on floor
- ☐ Keep warning cones in place until dry
- ☐ Case leaking since (Date) \_\_\_\_\_

**Labor Total:**

**COMPLAINT:**

WORK AUTHORIZED BY CUSTOMER: (DESCRIBE IN DETAIL) FLUSH OUT PROCEDURE PHASE #1

FURNISHED & INSTALLED CONSTRUCTION FILTERS MERV 13  
ON 5 RTU RETURNS AIR COILS, RETURN AIR DUCTS GRILLS  
CONNECTED TO THE 5 RTU, INCLUDING EACH  
CLASS ROOM R.A. & GYM R.A. GRILLS

[illegible]

Jeff Joseph  
TOYCO MECHANICS

### Total Materials

## Labor

**Sub Total**

## Sales Tax

**Grand Total**

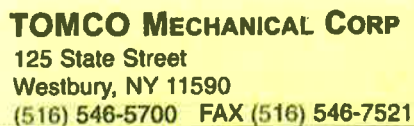
**Customer's Signature**

**Customer's Signature** \_\_\_\_\_ **Printed Name** \_\_\_\_\_  
 This service is computed on a portal-to-portal basis and the hourly rate includes truck and tool expenses. Materials used are extra. The regular hourly rate applies between 8:00am and 4:30pm weekdays. All other times, including all day Saturday, Sundays and Holidays will be computed at overtime rates

**Print Name**

169800  
page 119





Ticket No. \_\_\_\_\_

Invoice No.

CUSTOMER: PETMAN COURT CITY: 150-15 07 ONE PK-Queens STATE: N.Y.

CUSTOMER P.O. # DAY: MONDAY DATE: 04/18/17

MECHANIC	START	FINISH	HOURS & DISTRIBUTION
#1 JEFF S.	8:00 A.M.	4:00 P.M.	ST Hours @ \$
#2	A.M.	A.M.	OT Hours @ \$
#3	A.M.	A.M.	DT Hours @ \$
Use a Separate Service Ticket For Each Mechanic			Mileage: Miles @ \$

## SYSTEM INFORMATION

**ADVISED MANAGER OF THE FOLLOWING HAZARDS/CONDITIONS:**

**Labor Total:**

MAKE HERV 13

## MODEL

SER. #

- ☐ Floor drain backing up
- ☐ Case drain clogged with tags and product
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- ☐ Mistig system spilling water on floor
- ☐ Need to install anti-slip mats in front of cases
- ☐ Residual water must be mopped

- ☐ Case insulation deteriorated
- ☐ Need to schedule case washing
- ☐ Iced melon bar loaded incorrectly
- ☐ Produce wet and spilling water on floor
- ☐ Keep warning cones in place until dry
- ☐ Case leaking since (Date) \_\_\_\_\_

Comments:

**COMPLAINT:**

WORK AUTHORIZED BY CUSTOMER: (DESCRIBE IN DETAIL) FLIGHT OUT PROCEDURE #2

BEFORE OCCUPANCY-

REMOVE CONSTRUCTION FILTERS AND INSTALLED

NEW FILTERS ON ALL 5 RTU RETURN AIR COILS.

ALL FILTERS MERV 13

QTY	TSP	PART NO.	PART NAME - DESCRIPTION	PO NUMBER	UNIT PRICE
			Self Joseph		
			16416 H' ECH 1MCH		

## Total Materials

## Labor

**Sub Total**

## Sales Tax

**Grand Total**

**Customer's Signature**

Print Name \_\_\_\_\_

This service is computed on a portal-to-portal basis and the hourly rate includes truck and tool expenses. Materials used are extra. The regular hourly rate applies between 8:00am and 4:30pm weekdays. All other times, including all day Saturday, Sundays and Holidays will be computed at overtime rates.

**Q 3.1R Low-Emitting Materials, Adhesives & Sealants**

---

**Credit is feasible and will be pursued**

All adhesives and sealants specified in this project will comply with VOC limits established by New York State as well as by rule # 1168 of the South Coast Air Quality Management District (SCAQMD) and the Green Seal Standard for commercial adhesives GS-36 requirements, as listed in the SCA Standard Specification Section G01600 Materials and Equipment.

The following SCA Standard Specification Sections will be incorporated in the Contract Documents:

- G01600 Materials and Equipment
- 07900 Joint Sealants
- 09310 Ceramic Tile
- 09650 Resilient Flooring
- 09680 Carpet
- 15401 Supplemental General Requirements
- 15440 Plumbing Fixtures

**See attached calculator which shows all adhesives and sealants installed in this project with VOC contents. All materials complied.**

**Q 3.2R Low-Emitting Materials, Paints & Coatings**

---

**Credit is feasible and will be pursued**

All paints and coatings specified in this project will comply with VOC limits established by New York State and the by rule # 1113 of the South Coast Air Quality Management District (SCAQMD) and the Green Seal Standard for GS-11, GS-03 as listed in SCA Standard Specification Section G01600 Materials and Equipment and 0900 Painting Requirements for compliance documentation are found throughout the SCA Standard Specifications.

The following SCA Standard Specification Sections will be incorporated in the Contract Documents:

- G01600 Materials and Equipment
- 09900 Painting

**See attached calculator which shows all paints and coatings installed in this project with VOC contents. All materials complied.**



#### Q 3.3R Low-Emitting Materials, Flooring Systems

##### **Credit is feasible and will be pursued**

All carpet systems specified in this project will comply with VOC limits established by the Carpet and Rug Institute's Green Label Program, as listed in SCA Standard Specification Section G01600 Materials and Equipment. All carpet adhesive shall meet the requirements of Q3.1 VOC limit of 50g/L. All of the hard surface flooring must be certified as compliant with the FloorScore standard (current as of the date of this Rating System, or more stringent version) by an independent third-party. Flooring products covered by FloorScore include vinyl, linoleum, laminate flooring, wood flooring, ceramic flooring, rubber flooring, wall base, and associated sundries.

The following SCA Standard Specification Sections will be incorporated in the Contract Documents:

- G01600 Materials and Equipment
- 09680 Carpet
- 09310 Ceramic Tile

**See attached calculator, which shows all flooring installed in this project. All materials complied with either a Floorscore certification or a CRI certification.**

#### Q 3.4R Low-Emitting Materials, Comp Wood & Agrifiber Products

##### **Credit is feasible and will be pursued**

Compliance will be achieved by using composite wood and agrifiber products used on the interior of the building that contain no added urea-formaldehyde resins.

For Q3.4R: The SCA Design Standards are:

- SS06100 Rough Carpentry
- SS06200 Finish Carpentry
- SS06410 Custom Casework
- SS08210 Wood Doors
- SS09590 Wood Flooring
- SS10100 Visual Display Boards
- SS12761 Wood Bleachers
- SS10415 Bulletin Boards, Display Boards, Display Cabinets and Cases
- SS10652 Folding Metal Partitions
- SS12302 Manufactured Wood Casework
- SD06200 Finish Carpentry
- SD06410 Custom Casework

**See attached calculator, which shows all composite wood, and agrifiber products installed in this project. All materials complied with NAUF.**

LOW EMITTING MATERIALS - SUMMARY FORM A (page 1)

Adhesives and Sealants

Credit Q 3.1R



**School Construction Authority**

NYC Green Schools Rating System

Project:	PS 335Q	Architect:	J. Ricardo
Address:	150-15 Ralieggh Street	Preparer:	J. Dias
LLW #:	53004	Design #:	
Date:	2/16/2018	Telephone:	X8422

**Adhesives**

Product Use	Manufacturer's Name	Product Name	Product's VOC Level [g/L less water]	VOC Limit [g/L less water]
<b>Architectural Applications</b>				
Indoor Carpet Adhesives				50
Carpet Pad Adhesives				50
Wood Flooring Adhesives				100
Rubber Floor Adhesives				60
Subfloor Adhesives				50
Ceramic Tile Adhesives	Laticrete	255 Multimax	0 g/L	65
VCT & Asphalt Adhesives	Tarkett	800 Pressue Sensitive Adhe	0 g/L	50
Drywall & Panel Adhesives				50
				50
Cove Base Adhesives	Mapei	Ultrabond Eco 575	40 g/L	50
Multipurpose Construction Adhesives				70
Structural Glazing Adhesives				100
Resilient Adhesive				50
Plastic laminate	Wilsonart	Laminate Adhesive 170	0 g/L	50
Duct liner	Elgen	Water based Adhesive	22 g/L	50
<b>Specialty Applications</b>				
PVC Welding				510
CPVC Welding				490
ABS Welding				325
Plastic Cement Welding				250
Adhesive Primer for Plastic				550
Contact Adhesive	PC-3	Smooth on	0 g/L	80
Special Purpose Contact Adhesive				250
Structural Wood Member Adhesive				140
Sheet Applied Rubber Lining Operatic				850
Top & Trim Adhesive				250

05/01/09

LOW EMITTING MATERIALS - SUMMARY FORM A (page 2)

Adhesives and Sealants

Credit Q 3.1R



**School Construction Authority**

NYC Green Schools Rating System

Project: PS 335Q Architect: J. Ricardo  
 Address: 150-15 Ralieggh Street Preparer: J. Dias  
 LLW #: 53004 Design #: Telephone:  
 Date: 2/16/2018

**Adhesives**

Product Use	Manufacturer's Name	Product Name	Product's VOC Level [g/L less water]	VOC Limit [g/L less water]
<b>Architectural Applications</b>				
<b>Substrate Specific Applications</b>				
Metal to Metal				30
Plastic Foams				50
Porous Material (except wood)				50
Wood				30
Fiberglass				80
<b>Substrate Specific Applications</b>				
General purpose mist spray				65% VOCs by wt.
General purpose web spray				55% VOCs by weight
Special purpose aerosol adhesives (all types)				70% VOCs by weight

**Sealants**

Product Use	Manufacturer's Name	Product Name	Product VOC Level [g/L less water]	VOC Limit [g/L less water]
Architectural	Sikasil	WS-295	37	250
Acoustical	USG	Acoustical	15	250
Nonmembrane Roof				300
Roadway				250
Single-Ply Roof Membrane				450
Other				420
Architectural Non Porous				250
Architectural Porous				775
Other Firestopping	Hilti	CP606	71	750
Firestopping	Hilti	CFS-SP	36	750
Firestopping	Hilti	FS-ONE	75	750
				750

05/01/09

**LOW EMITTING MATERIALS - SUMMARY FORM B**

Paints, Coatings, Carpets  
Composite Wood & Agrifiber Products  
Credit Q 3.2R, 3.3R and 3.4R


**School Construction Authority**

NYC Green Schools Rating System

Project: PS 335Q  
Address: 150-15 Ralieg Street  
LLW #: 53004 Design #:   
Date: 2/16/2018

Architect: J. Ricardo  
Preparer: J. Dias  
Telephone:

**Paints and Coatings**

Product Use	Manufacturer's Name	Product Name	Product's VOC Level [g/L less water]	VOC Limit [g/L less water]
<b>Architectural paints</b>				
Flats	Sherwin Williams	PM 200 Latex Flat	<50 g/L	50 g / L
Block Filler	Sherwin Williams	Preprite Block Filler	<50 g/L	50 g / L
Primer	Sherwin Williams	PM 200 Latex Primer	<50 g/L	50 g / L
Acrylic	Sherwin Williams	Waterborne Acrylic	<50 g/L	50 g / L
Non-Flats	Sherwin Williams	PM 200 Eggshell semi gloss	<50 g/L	150 g / L
	Sherwin Williams	ProMar 200 semigloss	<50 g/L	150 g / L
	Sherwin Williams	Pro Industrial HP Acrylic	50 g/L	150 g / L
Line paint	Bona Sport* See narative	Courtlines Sport Floor Paint	150 g/L	350 g / L
Resinous Floor	Sherwin Williams	Ceramic carpet#400	100 g/L	100 g / L
Resinous Floor	Dex-o-tex	ME Flooring NR	0 g/L	100 g / L
<b>Clear wood finishes</b>				
varnish	Bona	Supersport	350	350 g / L
lacquer				550 g / L
Floor coatings				100 g / L
<b>Sealer</b>				
waterproofing sealers				250 g / L
sanding sealers				275 g / L
all other sealers				200 g / L
Stains				250 g / L

**Flooring**

Product Use	Manufacturer's Name	Product Name	Type of CRI Green Label Plus Documentation Attached
<b>Carpet</b>			
VCT	Tarkett	Classic Essense	Floor-Score - Manuf. Data
VCT Base	Tarkett	VET	Floor-Score - Manuf. Data

**Composite Wood & Agrifiber Products**

Product Use	Manufacturer's Name	Product Name	Documentation of Lack of added Urea Formaldehyde
Interior wood door	Marshfield	Doorsystem	Product info attached
Wood Panels			
Millwork	Artone/PureBond/Columbia	PureBond/Columbia	Product info attached
MDF	Fiberboard	Fibrex	Product info attached

**Credit is feasible and will be pursued**

This project will comply with the requirement of this credit by designing according to following design requirements:

- 1.3.4.1 Entrance and Exits
- 6.2.0 General Overview of Heating Ventilation and Air Conditioning Systems
- 6.2.28 HVAC Design Requirement for special spaces

An entryway foot grille will be provided per Specification Section 12485 at the new main entrances.

A storage room for garbage is provided. Janitor's sink closets, Grounds Equipment rooms, General Storage Rooms, and copy rooms will be sufficiently exhausted to create negative air balance with respect to adjacent spaces and will be designed with self closing doors.

The occupied areas will be provided with air filtration media that provides a Minimum Efficiency Reporting Value (MERV) of 13 or better. Filtration will be applied to both return and outside air that is to be delivered as supply air.

The following SCA Standard Specification Sections will be incorporated in the Contract Documents:

- 12485 Foot Grilles
- SS15932 Active Chilled Beams
- SS15933 DOAS Units
- SS15934 Rooftop AHU's For PA Spaces

**No Credit submittal required for this Phase**



**Credit is feasible and will be pursued**

The convection oven and skillet will be specified with electronic spark ignition. Range with safety-type pilot which shuts off the main gas valve in the event of accidental pilot outage will be utilized.  
Project will comply by incorporating the following SCA Standard Specification Sections:

- SS11400 Food Service Equipment
- SS16722 Carbon Monoxide Detectors
- DR 7.3.13

**No Credit submittal required for this Phase**

Q 4.3R Provide HEPA Vacuums

---

**Credit is feasible and will be pursued**

The design team will comply with the requirements of this credit by verifying that SCA F & E will include HEPA vacuums in the package of items for this school.

**No Credit submittal required for this Phase**

**Credit is feasible and will be pursued**

Compliance of this credit is achieved by providing the following:

Provide individual lighting controls for 90% (minimum) of the building occupants in Administrative Offices and other regularly occupied spaces to enable adjustments to suit individual task needs and preferences. Provide lighting system controls for all learning spaces including classrooms, science laboratories, art rooms, music rooms, gymnasium and gymnasium to enable adjustments that meet group needs and preferences. Additionally, during school occupancy, the lighting system in classrooms will have the ability to be dimmed from 100% down to 10% or be dimmed at pre-set dimming percentages. SCA specification sections will be amended accordingly.

- DR 7.2.1 Interior Lighting
- SS16140 Wiring Devices
- SS16145 Lighting Control Devices

**No Credit submittal required for this Phase**

**Credit is feasible and will be pursued**

This project will comply with the requirements of this credit by providing comfort controls for 50% or more of building occupants in workspaces. This credit will be achieved by following SCA standards for thermal comfort controls by providing controllability at shared group multi-occupancy spaces (i.e., instructional rooms, cafeteria, gyms, and library) and in select office areas. The design will be in accordance with the following design requirements:

- 6.2.0 General Overview of HVAC Systems
- 6.2.1 HVAC Unit Centralization and Coordination
- 6.2.3 Non-Assembly Spaces (Classrooms, Offices, etc.)
- 6.2.4 Public Assembly Spaces

All classrooms, offices and assembly areas in the new building will be provided with adjustable individual room sensors for temperature control.

Applicable specification sections to be included are listed below:

- 15970 Temperature Control System (LonWorks BMS/DDC with school operating console)
- 15985 Sequence of operations
- 15985 HVAC Standard Detail Series

**No Credit submittal required for this Phase**

**Credit is feasible and will be pursued**

This project will comply with the requirements of this credit by designing according to ASHRAE 55-2004 and following design requirements:

- 6.2.0 General Overview of HVAC Systems
- 6.2.1 HVAC Unit Centralization and Coordination
- 6.2.3 Non-Assembly Spaces (Classrooms, Offices, etc.)
- 6.2.4 Public Assembly Spaces
- 6.2.9 Heating and Cooling Design Parameters (Load Calculations)
- 6.2.22 Kitchen Ventilation
- 6.2.28 HVAC Design Requirement for special spaces

Applicable specification sections to be included are listed below:

- 15970 Temperature Control System (LonWorks BMS/DDC with school operating console)
- 15985 Sequence of operations

**No Credit submittal required for this Phase**

**Credit is feasible and will be pursued**

This credit will be achieved by using windows to achieve a total Day lighting Zone that is at least 75% of all the regularly occupied classrooms by the prescriptive method. The modeling performed by YR&G demonstrates 90% compliance.

This project will comply with the requirements of this credit by designing according to following design requirement:

- 1.3.1.1 Building Location and Orientation

Applicable specification sections to be included are listed below:

- 08524 Aluminum Projected Windows
- 08800 Miscellaneous Glazing
- 12501 Chain and Clutch Operated Window Shades

See attached YR&G report dated 11/14/14

**No Credit submittal required for this Phase**

This credit will be achieved by using windows to achieve a total Day lighting Zone that is at least 75% of all the regularly occupied classrooms by the prescriptive method. The modeling performed by YR&G demonstrates 90% compliance.

This project will comply with the requirements of this credit by designing according to following design requirement:

- 1.3.1.1 Building Location and Orientation

Applicable specification sections to be included are listed below:

- 08524 Aluminum Projected Windows
- 08800 Miscellaneous Glazing
- 12501 Chain and Clutch Operated Window Shades

**This credit is feasible**

See attached YR&G report dated 11/14/14

**No Credit submittal required for this Phase**



Q 7.3 Daylight & Views, Daylight for 75% of Other Spaces

---

Only 41% of remaining spaces are compliant. See attached report.

**This credit is not feasible**

Q 7.4 Daylight & Views, Views

---

Because the building does not have a cellar, 92% of occupied spaces have views conforming to the following SCA Standards and Design Requirements:

- 1.3.1.1 Building Location and Orientation

The following areas that are not normally occupied will be excluded from consideration:

Mechanical / Circulation / Storage spaces

Currently, the following occupied spaces do not have views due to high or no fenestration:

Changing Room  
Gym Instructor's Office  
Teacher's mail Room  
Nurses' Suite  
Guidance Conference Room

**Credit is feasible**

**No Credit submittal required for this Phase**

#### Q 7.5 Visual Performance, Artificial Indirect Lighting

---

##### **Credit is feasible and will be pursued**

All classrooms shall be provided with pendant mounted **direct/indirect** LED lighting fixtures. The use of this type of lighting fixtures will reduce lighting power density (LPD) and, therefore use less energy while delivering a better quality of light to the space. Typically, the ceiling heights will be a 10 feet. The lighting will be at 8'-6" providing an 18" area for deflection of light.

The following SCA Standard Specifications and Design Requirements will be incorporated:

- 16500 Interior Building Lighting
- 16501 Lamps, Ballasts and Accessories
- DR 7.2.1 Interior Lighting

The construction documents show the lighting layouts and light fixture schedules. Attached to this report are the point lighting levels (photometrics) calculations for typical and non-typical spaces.

Acoustics

##### **No Credit submittal required for this Phase**

**Credit is feasible and will be pursued**

The credit will be achieved by complying with all the SCA Design Standards:

The design team includes an Acoustical Consultant Ostergaard Acoustical Associates who will review the design for compliance with LEED for Schools 2009 IEQ PR 3 Minimum Acoustical Performance; ANSI/ASHRAE Standard S12.60-2002 Acoustical Performance Criteria, Design Requirements, and Guidelines for Schools and ASHRAE Handbook Chapter 47 Sound and Vibration Control 2003 HVAC.

The Acoustical Consultant will review the following acoustical performance requirements for classrooms:

1. Reverberation time;
2. Sound isolation performance of exterior façade construction assemblies
3. Sound isolation from exterior noise sources;
4. Background noise levels associated with HVAC equipment ;
5. Interior construction assemblies to meet the required STC rating.
6. Isolation from other interior spaces (offices, cafeteria).

On July 2, 2015, the acoustical consultant confirmed compliance with the exception of the Gymnasium ductwork. The SCA will test the installation when completed to verify compliance. If the present design does not comply, the credit will not be pursued.

For Q8.1R: The SCA Design Standards are:

- DR1.3.1.9 Architectural Acoustic Standards
- DR4.2.1 Exterior Masonry Walls
- DR4.3.1 Window Types
- DR5.1.1 Typical Room Finishes
- DR5.2.2 Interior Partitions
- DR5.3.1 Floor Types
- DR5.4.1 Suspended Ceilings
- DR5.5.1 Interior Doors and Frames
- DR6.2.25 HVAC Acoustical Standards
- SS08524 Aluminum Projected Windows
- SS09260 Gypsum Board Assemblies
- SS09510 Acoustical Ceilings
- SS15932 Active Chilled Beams
- SS15933 DOAS Units
- SS15934 Rooftop AHU's For PA Spaces
- SS15891 Metal Ductwork
- SS15910 Duct Accessories
- SS15993 Balancing of Systems
- SD0926010a Partition Details
- SD0926010b Partition Details

**No Credit submittal required for this Phase**

**Credit is feasible and will be pursued (60% Submission)**

The credit will be achieved by complying with the current SCA Design Standards.

The spaces below the Music Suite will have a Gypsum board ceiling to mitigate transmission of noise. The MER equipment will be on isolators for vibration control. Mechanical equipment will be selected to reduce background noise levels to 45 dBA or less in classrooms and library; 30 dBA in Gymnasium; 40dBa in offices and 50 dBA in corridors. The building shell, classroom partitions and the other core learning space partitions will be designed to meet the Sound Transmission Class (STC) requirements of ANSI Standard S12.60-2002. Windows will meet an STC of at least 35.

On July 2, 2015, the acoustical consultant confirmed compliance with the exception of the Gymnasium ductwork.

This project will comply with the requirements of this credit by designing to the following design requirements:

- DR1.3.1.9 Architectural Acoustic Standards
- DR4.2.1 Exterior Masonry Walls
- DR4.3.1 Window Types
- DR5.1.1 Typical Room Finishes
- DR5.2.2 Interior Partitions
- DR5.3.1 Floor Types
- DR5.5.1 Interior Doors and Frames
- DR6.2.25 HVAC Acoustical Standards

Applicable Specification Sections to be included are listed below:

- SS08524 Aluminum Projected Windows
- SS09260 Gypsum Board Assemblies
- SS09510 Acoustical Ceilings

Applicable Specification Sections to be included are listed below:

- 0926010a Partition Details
- 0926010b Partition Details

**No Credit submittal required for this Phase**

**Q 8.3 Acoustic Windows**

---

This project is close to JFK airport and the Belt parkway. The Acoustical Consultant has advised the design team that acoustical windows are not required (see attached).

This Credit will not be pursued.



## Additional Credits

Required Support

A 1.1R LEED® Accredited Professional

**Credit is feasible and will be pursued**

See attached copy of certificate for John Dias.

A 2.1 Heat Island Effect, Non-Roof

**Credit will not be pursued**

A 2.2 Storm water Design, Quantity Control

**Credit will not be pursued**

Optional - Energy

A 3.1 Optimize Energy Performance

**Credit will not be pursued**

A 3.2 Renewable Energy

**Credit will not be pursued**

Optional - IEQ

A 5.1 Low-Emitting Materials, Furniture and Furnishings

**Credit will not be pursued**

A 5.2 Low-Emitting Materials, Ceiling and Wall Systems

**Credit will not be pursued**

Optional - Education

A 6.1 The School Building as a Teaching Tool

**Credit will not be pursued**

**CONTRACTORS SUSTAINABLE MATERIALS FORM**  
Credit M 2.1R, M 2.2, M2.3R and M2.4

Indefinite  
dtush



Project: PS335Q  
Address: 50-51 98th Street, Corona, NY 11368  
LLW/S3004 Date: May 17, 2016

Contractor: J&A Concrete Corp  
Contractor Contact: Jonathan Martins  
Spec Section: 03200 Telephone: (631) 567-5959

Product Name	Manufacturer	Material Cost (no Labor & Equip.)	Recycled Content			Regional*** Materials		
			Percentage Post-Consumer* by weight	Percentage Pre-Consumer** by weight	Percentage Regionally Extracted*** by weight	Distance between project site and extraction site	Distance between project site and manufacture site	
Reinforcing Bars	NUCOR Corp.	\$19,408.32	82.50%	16.90%	100.00%	273 -miles	273 -miles	miles
								miles
								miles
								miles
								miles

**Definitions:**

\* Post-Consumer Recycled Content: Material or finished product that has served its intended consumer use and has been discarded by consumer.

\*\* Pre-Consumer Recycled Content: Recovered industrial and manufacturing materials diverted from municipal solid waste for the purpose of collection, recycling and disposition. Examples include fly-ash and synthetic gypsum, because they are waste products from coal burning electricity plants. (Scrap raw materials that can be reused in the same manufacturing process from which they are recovered are not considered Pre-Consumer Recycled Content.)

\*\*\* Regional Materials: Regionally manufactured materials that have their origin within 500 miles of the project site. These would include products that are regionally mined, harvested, salvaged or re-used (including those salvaged from the site.)

**Notes:**

- 1 Recycled content for concrete - provide cost for cementitious materials and percentage of cementitious materials that are recycled-content.
- 2 Recycled content for steel products - where it is not possible to determine recycled content use default assumption of 25% post-consumer recycled content
- 3 Regional content for concrete - provide combined cost for all concrete materials and distance information requested.
- 4 Regional content - for materials with anyone point of extraction all within the 500-mile radius list a single item with the greatest distance.
- 5 Provide back-up documentation for information on form above - such as product data or manufacturer's statements.

**Contractor Certification:**

I, Jonathan Martins a duly authorized representative of J&A Concrete Corp hereby certify that the material information herein is an accurate representation of the material qualifications provided, as components of the final building construction. Furthermore, I understand that any change in such qualifications during the purchasing period will require prior written approval from the Construction Manager and Owner.

Signature of Authorized Representative: \_\_\_\_\_

Date: May 17, 2016

05/01/09

This form may be downloaded from SCA web site

**CONTRACTOR'S SUSTAINABLE MATERIALS FORM**  
Credit M 2.1R, M 2.2, M2.3R and M2.4



Project: PS335Q  
Address: 50-51 98th Street, Corona, NY 11368  
LLW: 53004 Date: May 17, 2016

Contractor: J&A Concrete Corp  
Contractor Contact: Jonathan Martins  
Spec Section: 03200 Telephone: (631) 567-5959

Product Name	Manufacturer	Material Cost (no Labor & Equip.)	Recycled Content			Regional*** Materials	
			Percentage Post-Consumer** by weight	Percentage Pre-Consumer*** by weight	Percentage Regionally Extracted*** by weight	Distance between project site and extraction site	Distance between project site and manufacture site
Reinforcing Bars	NUCOR Corp.	\$18,610.27	82.50%	16.50%	100.00%	273 -miles	273 -miles
							miles
							miles
							miles
							miles
							miles

**Definitions:**

\* **Post-Consumer Recycled Content:** Material or finished product that has served its intended consumer use and has been discarded by consumer.

\*\* **Pre-Consumer Recycled Content:** Recovered industrial and manufacturing materials diverted from municipal solid waste for the purpose of collection, recycling and disposition. Examples include fly-ash and synthetic gypsum, because they are waste products from coal burning electricity plants. (Scrap raw materials that can be reused in the same manufacturing process from which they are recovered are not considered Pre-Consumer Recycled Content.)

\*\*\* **Regional Materials:** Regionally manufactured materials that have their origin within 500 miles of the project site. These would include products that are regionally mined, harvested, salvaged or re-used (including those salvaged from the site.)

**Notes:**

- 1 Recycled content for concrete - provide cost for cementitious materials and percentage of cementitious materials that are recycled-content.
- 2 Recycled content for steel products - where it is not possible to determine recycled content use default assumption of 25% post-consumer recycled content
- 3 Regional content for concrete - provide combined cost for all concrete materials and distance information requested.
- 4 Regional content - for materials - provide combined cost for all concrete materials and distance information requested.
- 5 Provide back-up documentation for information on form above - such as product data or manufacturer's statements.

**Contractor Certification:**

I, Jonathan Martins a duly authorized representative of J&A Concrete Corp hereby certify that the material information herein is an accurate representation of the material qualifications provided, as components of the final building construction. Furthermore, I understand that any change in such qualifications during the purchasing period will require prior written approval from the Construction Manager and Owner.

Signature of Authorized Representative: \_\_\_\_\_

Date: May 17, 2016

05/01/09

This form may be downloaded from SCA web site

**CONTRACTOR'S SUSTAINABLE MATERIALS FORM**  
Credit: M 2.1R, M 2.2, M2.3R and M2.4



Project: PS3350  
Address: 50-51 98th Street, Corona, NY 11368  
LLW#: 53004 Date: May 17, 2016  
Contractor: J&A Concrete Corp  
Contractor Contact: Jonathan Martins  
Spec Section: 03200 Telephone: (631) 567-5959  
March 2016

Product Name	Manufacturer	Material Cost (no Labor & Equip.)	Recycled Content			Regional*** Materials	
			Percentage Post-Consumer* by weight	Percentage Pre-Consumer** by weight	Percentage Regionally Extracted*** by weight	Distance between project site and extraction site	Distance between project site and manufacture site
Reinforcing Bars	NUCOR Corp.	\$76,115.98	82.50%	16.90%	100.00%	273 -miles	273 -miles
							miles
							miles
							miles
							miles
							miles

**Definitions:**

\* Post-Consumer Recycled Content: Material or finished product that has served its intended consumer use and has been discarded by consumer.

\*\* Pre-Consumer Recycled Content: Recovered industrial and manufacturing materials diverted from municipal solid waste for the purpose of collection, recycling and disposition. Examples include fly-ash and synthetic gypsum, because they are waste products from coal burning electricity plants. (Scrap raw materials that can be reused in the same manufacturing process from which they are recovered are not considered Pre-Consumer Recycled Content.)

\*\*\* Regional Materials: Regionally manufactured materials that have their origin within 500 miles of the project site. These would include products that are regionally mined, harvested, salvaged or re-used (including those salvaged from the site.)

**Notes:**

- 1 Recycled content for concrete - provide cost for cementitious materials and percentage of cementitious materials that are recycled-content.
- 2 Recycled content for steel products - where it is not possible to determine recycled content use default assumption of 25% post-consumer recycled content
- 3 Regional content for concrete - provide combined cost for all concrete materials and distance information requested.
- 4 Regional content - for materials with varying point of extraction all within the 500-mile radius list a single item with the greatest distance.
- 5 Provide back-up documentation for information on form above - such as product data or manufacturer's statements.

**Contractor Certification:**

I, Jonathan Martins a duly authorized representative of J&A Concrete Corp hereby certify that the material information herein is an accurate representation of the material qualifications provided, as components of the final building construction. Furthermore, I understand that any change in such qualifications during the purchasing period will require prior written approval from the Construction Manager and Owner.

Signature of Authorized Representative:  Date: May 17, 2016

05/01/09

This form may be downloaded from SCA web site

**CONTRACTOR'S SUSTAINABLE MATERIALS FORM**  
Credit M 2.1R, M 2.2, M2.3R and M2.4



Project: PS335 Q  
Address: 150-15 Raleigh Street, Queens, NY 11417  
LLW: S3004 Date: June 7, 2016

Contractor: J&A Concrete Corp  
Contractor Contact: Jonathan Martins  
Spec Section: 03200 Telephone: (631) 567-5959

April 2016

Product Name	Manufacturer	Material Cost (no Labor & Equip.)	Recycled Content			Regional*** Materials		
			Percentage Post-Consumer* by weight	Percentage Pre-Consumer** by weight	Percentage Regionally Extracted*** by weight	Distance between project site and extraction site	Distance between project site and manufacture site	
Reinforcing Bars	NUCOR Corp.	\$900.00	82.50%	16.90%	100.00%	273 -miles	273 -miles	miles
								miles
								miles
								miles
								miles

**Definitions:**

\* Post-Consumer Recycled Content: Material or finished product that has served its intended consumer use and has been discarded by consumer.

\*\* Pre-Consumer Recycled Content: Recovered industrial and manufacturing materials diverted from municipal solid waste for the purpose of collection, recycling and disposition. Examples include fly-ash and synthetic gypsum, because they are waste products from coal burning electricity plants. (Scrap raw materials that can be reused in the same manufacturing process from which they are recovered are not considered Pre-Consumer Recycled Content.)

\*\*\* Regional Materials: Regionally manufactured materials that have their origin within 500 miles of the project site. These would include products that are regionally mined, harvested, salvaged or re-used (including those salvaged from the site.)

**Notes:**

- 1 Recycled content for concrete - provide cost for cementitious materials and percentage of cementitious materials that are recycled-content.
- 2 Recycled content for steel products - where it is not possible to determine recycled content use default assumption of 25% post-consumer recycled content
- 3 Regional content for concrete - provide combined cost for all concrete materials and distance information requested.
- 4 Regional content - for materials with varying point of extraction all within the 500-mile radius list a single item with the greatest distance.
- 5 Provide back-up documentation for information on form above - such as product data or manufacturer's statements.

**Contractor Certification:**

I, Jonathan Martins a duly authorized representative of J&A Concrete Corp hereby certify that the material information herein is an accurate representation of the material qualifications provided, as components of the final building construction. Furthermore, I understand that any change in such qualifications during the purchasing period will require prior written approval from the Construction Manager and Owner.

Signature of Authorized Representative: \_\_\_\_\_

Date: June 7, 2016

05/01/09

This form may be downloaded from SCA web site





March 11, 2014

**To: All Nucor Customers**

**Re: 2013 Recycled Content of Nucor Steel Products**

Nucor Corporation is the nation's largest recycler, using over 19 million tons of scrap steel in 2013 to create new products. Nucor uses Electric Arc Furnace (EAF) technology at all of its steel recycling facilities. EAFs use post-consumer scrap steel material as the major feedstock, unlike blast furnace operations that use mined iron ore as the major feedstock. Nucor has prepared the following information to help calculate the recycled content for products being used in "Green Building" applications or for projects in the LEED® program. These percentages are approximate and are based on the total weight of the products. The calculations are based on 2013 scrap steel delivered and finished materials produced and are defined in accordance with ISO 14021:1999. More specific product information may be available from facility representatives.

**Recycled Content – LEED Version 2.2 Credits 4.1 & 4.2 and LEED V 3 Credit 4**

<b>2013 Recycled Steel Content of Nucor Products (% by Total Weight)</b>	
<b>Product Group</b>	<b>Average Recycled Content</b>
Nucor Bar Products	99.4%
Nucor Beam Products (and Nucor Castrip® Arkansas, LLC's sheet products)	82.9%
Nucor Plate Products	77.6%
Nucor Sheet Products	77.1%
Nucor Castrip® Crawfordsville, IN	91.2%
<b>Total Nucor Steel Combined</b>	<b>90.7%</b>
Vulcraft Structural Products	99.4%
Vulcraft Decking	77.1%
Nucor Building Group	90.7%
Nucor Fastener Products	99.4%
Nucor Wire Products	99.4%
Nucor Cold Finish	99.4%

**Regional Materials – LEED Version 2.2 Credits 5.1 & 5.2 and LEED Version 3 Credit 5**

Nucor tracks the origin of scrap shipments to our mills. Nucor can approximate the amount of scrap extracted from any project site region. Nucor owns steel and steel products manufacturing facilities throughout the US that are often within 500 miles of the project site. Please refer to the LEED Contact List ([www.nucor.com/responsibility/environment/leed](http://www.nucor.com/responsibility/environment/leed), then click on "Nucor Regional Material Contacts"), and contact the specific Nucor representative at the facility directly.

# **NUCOR** CORPORATE OFFICE

**Bar Mill Group** – Darlington, SC; Norfolk, NE; Jewett, TX; Plymouth, UT; Auburn, NY; Birmingham, AL; Kankakee, IL; Jackson, MS; Seattle, WA; Marion, OH; Memphis, TN; Kingman, AZ

2013 Approximate Recycled Steel Content Of All Nucor Bar Mill Group Products <sup>(*)</sup>				
Facility	Total Scrap Steel Used	Total Alloys and Other Iron Units	Total Post-consumer Recycled Content	Total Pre-consumer/ Post-industrial Recycled Content
All	99.4%	0.6%	82.5%	16.9%

The Nucor Bar Mill Group produces rebar, angles, flats, rounds and other miscellaneous shapes. The bar mill group uses recycled scrap steel for 99.4% of the feedstock.

**Sheet Mill Group** – Crawfordsville, IN; Hickman, AR; Huger, SC; Decatur, AL

2013 Approximate Recycled Steel Content Of Nucor Sheet Mill Group Products <sup>(*)</sup>				
Facility	Total Scrap Steel Used	Total Alloys and Other Iron Units	Total Post Consumer Recycled Content	Total Pre-consumer/ Post-industrial Recycled Content
Crawfordsville, IN	95.6%	4.4%	79.4%	16.3%
Nucor Castrip® Crawfordsville, IN	91.2%	8.8%	75.7%	15.5%
Hickman, AR	72.0%	28.0%	59.8%	12.2%
Berkeley, SC	66.7%	33.3%	55.3%	11.3%
Decatur, AL	73.9%	26.1%	61.3%	12.6%

The Nucor Sheet Mill Group produces hot band, cold rolled, pickled and galvanized products. Nucor Sheet mills use varying amounts of recycled materials depending on metallurgical product demands and market conditions. The combined sheet mill total recycled content is approximately 77.1%.

**Beam Group** – Blytheville, AR; Huger, SC

2013 Approximate Recycled Steel Content of Beam Mill Products <sup>(*)</sup>				
Facility	Total Scrap Steel Used	Total Alloys and Other Iron Units	Total Post Consumer Recycled Content	Total Pre-consumer/ Post-industrial Recycled Content
Nucor Yamato Steel, Blytheville, AR and Nucor Castrip Arkansas, LLC	99.9%	0.1%	83.0%	17.0%
Nucor Berkeley, Huger, SC	65.8%	34.2%	54.6%	11.2%

Nucor Beam mills produce narrow and wide flange structural beams. Nucor Yamato uses approximately 99.9% scrap steel for their feedstock. Nucor Castrip Arkansas, LLC uses steel melted at Nucor Yamato and products would be equivalent. Nucor Steel Berkeley uses a higher percentage of non-scrap iron due to metallurgical product demands for sheet steel produced using the same EAF's. The combined beam mill recycled content is approximately 82.9%.

**Plate Group** - Hertford County, NC; Tuscaloosa, AL

2013 Approximate Recycled Steel Content of Plate Mill Products <sup>(*)</sup>				
Facility	Total Scrap Steel Used	Total Alloys and Other Iron Units	Total Post Consumer Recycled Content	Total Pre-consumer/ Post-industrial Recycled Content
Hertford County, NC	85.1%	14.9%	70.6%	14.5%
Tuscaloosa, AL	70.0%	30.0%	58.1%	11.9%

The Nucor Plate combined recycled content by weight is approximately 77.6%.

<sup>(\*)</sup> Studies show that the recycled steel used for Nucor products consists of approximately 83% post-consumer scrap. The remaining 17% typically consists of pre-consumer scrap generated by manufacturing processes.

## NUCOR

### CORPORATE OFFICE

**Vulcraft Group** – Florence, SC; Norfolk, NE; Brigham City, UT; Grapeland, TX; St. Joe, IN; Fort Payne, AL; Chemung, NY; **Verco Decking, Inc.** – Phoenix, AZ; Fontana, CA; Antioch, CA

**Joists** - The bar steel for Vulcraft joists is typically obtained from one of the eleven Nucor bar mills. That would mean that the average recycled content percentage for the Vulcraft group is 99.4%. The post consumer and pre consumer recycled content have been calculated to be approximately 82.5% and 16.9% respectively.

**Deck** – Steel for decking produced by Vulcraft facilities is typically obtained from one of the four Nucor sheet mills. That would mean that the Vulcraft deck products contain approximately 77.1% recycled steel. The post and pre consumer recycled content were calculated to be approximately 64.0% and 13.1% respectively. Verco Decking, Inc. may obtain steel from sources outside of Nucor that may contain lower amounts of recycled content; specific product information regarding Verco Decking, Inc. is available from facility representatives.

### **Products Group -**

- **Nucor Building Group** –
  - Swansea, SC; Waterloo, IN; Terrell, TX; Brigham City, UT;
  - **American Buildings Company** – Eufaula, AL; La Crosse, VA; Carson City, NV; El Paso, IL;
  - **Kirby Building Systems** – Portland, TN;
  - **Gulf States Manufacturer** – Starkville, MS;
  - **CBC Steel** – Lathrop, CA;
- **Nucor Fastener** – St. Joe IN
- **LMP Steel** – Maryville, MO;
- **Nucor Cold Finish** – Milwaukee, WI; Darlington, SC; Brigham City, UT; Norfolk, NE
- **Nucor Steel Kingman, LLC**

**Nucor Building Group** (Including American Buildings Company, Kirby Building Systems, Gulf States Manufacturer, and CBC Steel) – Nucor Building Group products may contain steel from all of the Nucor steel mills or obtain steel from outside of Nucor Corporation for their sheet, plate, bar and beam steel needs. The Nucor Building Systems, when using Nucor steel, contains an average of 90.7% total recycled content. The post and pre consumer recycled content was 69.9% and 14.3% respectively.

**Nucor Fastener** – Steel for Nucor fasteners is typically obtained from Nucor bar mills that use scrap steel as their feedstock. Some fasteners may contain high percentages of alloys that may reduce the total recycled content of the products, but Nucor Fastener products typically contain 99.4% recycled materials. That would mean that the post and pre consumer recycled content would be approximately 82.5% and 16.9% respectively.

**Nucor Connecticut, LMP Steel** – Steel for wire is typically obtained from a Nucor bar mill that uses scrap as the feedstock. Nucor wire products, when using Nucor bar steel, would contain an average 99.4% recycled steel. The post and pre consumer recycled content was calculated to be approximately 82.5% and 16.9% respectively.

**Nucor Cold Finish** – Steel processed at Nucor Cold Finish is typically obtained from Nucor bar mills. The Nucor Cold Finish, when using Nucor steel, would contain an average amount of 99.4% recycled steel. The post and pre consumer recycled content was calculated to be approximately 82.5% and 16.9% respectively.

**Nucor Steel Kingman, LLC** – Steel for Nucor Steel Kingman, LLC products is typically obtained from Nucor bar mills that use scrap steel as their feedstock. Nucor Steel Kingman, LLC products would then typically contain 99.4% recycled materials. That would mean that the post and pre consumer recycled content would be approximately 82.5% and 16.9% respectively.

Additional information regarding specific recycled content of Nucor Corporation products group for a customer's specific order is available from facility representatives.

Additional information is available online through the Steel Recycling Institute at <http://www.recycle-steel.org>.

**CONTRACTOR'S SUSTAINABLE MATERIALS FORM**  
Credit M 2.1R, M 2.2, M2.3R and M2.4



Contractor: **J&A Concrete Corp**  
Contractor Contact: **Jonathan Martins**  
Spec Section: **03300** Telephone: **(631) 567-5959**

Project: **I PS3350**  
Address: **50-51 98th Street, Corona, NY 11368**  
LLW: **53004** Date: **May 13, 2016**

**4,000psi Conv: 71 cy Poured in the month of December '15**

Product Name	Manufacturer	Material Cost (no Labor & Equip.)	Recycled Content		Regional*** Materials	
			Percentage Post-Consumer** by weight	Percentage Pre-Consumer** by weight	Percentage Regionally Extracted*** by weight	Distance between project site and extraction site miles
Cement	\$33.45 HOLCIM	\$2,375	0	19%	100 %	55 miles
Slag	\$22.30 HOLCIM	\$1,583	0	100%	100 %	55 miles
Sand	\$18.75 CORAM Materials Corp	\$1,331	0	0	100%	100 miles
Stone	\$32.25 TILCON	\$2,290	0	0	100%	45 miles
Alr	\$0.50 BASF	\$36	0	0	87%	115 miles
Water Reducer	\$2.75 BASF	\$195	0	0	68%	115 miles
		\$110.00				

**Definitions:**

- \* **Post-Consumer Recycled Content:** Material or finished product that has served its intended consumer use and has been discarded by consumer.
- \*\* **Pre-Consumer Recycled Content:** Recovered industrial and manufacturing materials diverted from municipal solid waste for the purpose of collection, recycling and disposition. Examples include fly-ash and synthetic gypsum, because they are waste products from coal burning electricity plants. (Scrap raw materials that can be reused in the same manufacturing process from which they are recovered are not considered Pre-Consumer Recycled Content.)
- \*\*\* **Regional Materials:** Regionally manufactured materials that have their origin within 500 miles of the project site. These would include products that are regionally mined, harvested, salvaged or re-used (including those salvaged from the site.)

**Notes:**

- 1 Recycled content for concrete - provide cost for cementitious materials and percentage of cementitious materials that are recycled-content.
- 2 Recycled content for steel products - where it is not possible to determine recycled content use default assumption of 25% post-consumer recycled content
- 3 Regional content for concrete - provide combined cost for all concrete materials and distance information requested.
- 4 Regional content - for materials with varryone point of extraction all within the 500-mile radius list a single item with the greatest distance.
- 5 Provide back-up documentation for information on form above - such as product data or manufacturer's statements.

**Contractor Certification:**

I, **Jonathan Martins** a duly authorized representative of **J&A Concrete Corp** hereby certify that the material information herein is an accurate representation of the material qualifications provided, as components of the final building construction. Furthermore, I understand that any change in such qualifications during the purchasing period will require prior written approval from the Construction Manager and Owner.

Signature of Authorized Representative: \_\_\_\_\_ Date: **May 13, 2016**

05/01/09

This form may be downloaded from SCA web site

**CONTRACTOR'S SUSTAINABLE MATERIALS FORM**  
Credit M 2.1R, M 2.2, M2.3R and M2.4



Project: PS 335Q  
Address: 50-51 98th Street, Corona, NY 11368  
LLW: 53004 Date: May 13, 2016  
Contractor: J&A Concrete Corp  
Contractor Contact: Jonathan Martins  
Spec Section: 03300 Telephone: (631) 567-5959

**4,000psi Conv: 14 cy Poured in the month of January '16**

Product Name	Manufacturer	Material Cost (no Labor & Equip.)	Recycled Content		Regional*** Materials	
			Percentage Post-Consumer** by weight	Percentage Pre-Consumer** by weight	Percentage Regionally Extracted*** by weight	Distance between project site and manufacture site miles
Cement	\$33.45 HOLCIM	\$468	0	19%	100%	55 miles
Slag	\$22.30 HOLCIM	\$312	0	100%	100%	55 miles
Sand	\$18.75 CORAM Materials Corp	\$263	0	0	100%	100 miles
Stone	\$32.25 TILCON	\$452	0	0	100%	45 miles
Air	\$0.50 BASF	\$7	0	0	87%	115 miles
Water Reducer	\$2.75 BASF	\$39	0	0	68%	115 miles
		\$110.00				

**Definitions:**

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Signature of Authorized Representative: \_\_\_\_\_

Date: May 13, 2016

05/01/09

This form may be downloaded from SCA web site



**CONTRACTOR'S SUSTAINABLE MATERIALS FORM**  
Credit M 2.1R, M 2.2, M2.3R and M2.4



Project: PS 335Q  
Address: 50-51 98th Street, Corona, NY 11368  
LLW: 53004 Date: May 13, 2016  
Contractor: J&A Concrete Corp  
Contractor Contact: Jonathan Martina Telephone: (631) 567-5959  
Spec Section: 03300

**4,000psi Conv: 67 cy Poured in the month of February '16**

Product Name	Manufacturer	Material Cost (no Labor & Equip.)	Recycled Content		Regional*** Materials	
			Percentage Post-Consumer* by weight	Percentage Pre-Consumer** by weight	Percentage Regionally Extracted*** by weight	Distance between project site and manufacture site
Cement	\$33.45 HCLM	\$2,241	0	19%	100%	55 miles
Slag	\$22.30 HCLM	\$1,494	0	100%	100%	55 miles
Sand	\$18.75 CORAM Materials Corp	\$1,256	0	0	100%	100 miles
Stone	\$32.25 TILCON	\$2,161	0	0	100%	45 miles
Air	\$0.50 BASF	\$34	0	0	87%	115 miles
Water Reducer	\$2.75 BASF	\$184	0	0	68%	115 miles
		\$110.00				

**Definitions:**

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- \*\*\* Regional Materials: Regionally manufactured materials that have their origin within 500 miles of the project site. These would include products that are regionally mined, harvested, salvaged or re-used (including those salvaged from the site.)

**Notes:**

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Signature of Authorized Representative: \_\_\_\_\_ Date: May 13, 2016

05/01/09

This form may be downloaded from SCA web site

**CONTRACTOR'S SUSTAINABLE MATERIALS FORM**  
Credit M 2.1R, M 2.2, M2.3R and M2.4



Project: PS 3350  
Address: 50-51 98th Street, Corona, NY 11368  
LLW: 53004 Date: May 13, 2016  
Contractor: J&A Concrete Corp  
Contractor Contact: Jonathan Martins  
Spec Section: 03300 Telephone: (631) 567-5959

**4,000psi Conv: 1,168 cy Poured in the month of March '16**

4,000psi Conc: 1,168 cy Poured in the month of March 19								
Product Name Caste-In-Place Concrete	Manufacturer	Material Cost (no Labor & Equip.)	Recycled Content		Regional*** Materials			
			Percentage Post-Consumer** by weight	Percentage Pre- Consumer** by weight	Percentage Regionally Extracted*** by weight	Distance between project site and extraction site	Distance between project site and manufacture site	
Cement	\$33.45	HOLCIM	\$39,070	0	19%	100%	55 miles	10 miles
Slag	\$22.30	HOLCIM	\$26,046	0	100%	100%	55 miles	10 miles
Sand	\$18.75	CORAM Materials Corp	\$21,900	0	0	100%	100 miles	10 miles
Stone	\$32.25	TILCON	\$37,668	0	0	100%	45 miles	10 miles
Air	\$0.50	BASF	\$584	0	0	87%	115 miles	10 miles
Water Reducer	\$2.75	BASF	\$3,212	0	0	68%	115 miles	10 miles
						</		

**Definitions:**

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Signature of Authorized Representative: \_\_\_\_\_

Date: May 13, 2016

05/01/09

This form may be downloaded from SCA web site

**CONTRACTOR'S SUSTAINABLE MATERIALS FORM**  
Credit M 2.1R, M 2.2, M2.3R and M2.4



Project: PS335 Q  
Address: 150-15 Raleigh Street, Queens, NY  
LLW: 53004 Date: JUNE 7, 2016  
Contractor: J&A Concrete Corp  
Contractor Contact: Jonathan Martins  
Spec Section: 03300 Telephone: (631) 567-5959

4,000psi Conv: 55 cy Poured in the month of April '16

Product Name	Manufacturer	Material Cost (no Labor & Equip.)	Recycled Content		Regional*** Materials		Distance between project site and manufacture site
			Percentage Post-Consumer** by weight	Percentage Pre-Consumer** by weight	Percentage Regionally Extracted*** by weight	Distance between project site and extraction site	
Cement	\$33.45 HOLCIM	\$1,840	0	19%	100%	55 miles	10 miles
Slag	\$22.30 HOLCIM	\$1,227	0	100%	100%	55 miles	10 miles
Sand	\$18.75 CORAM Materials Corp	\$1,031	0	0	100%	100 X miles	10 miles
Stone	\$32.25 TILCON	\$1,774	0	0	100%	45 miles	10 miles
Air	\$0.50 BASF	\$28	0	0	87%	115 miles	10 miles
Water Reducer	\$2.75 BASF	\$151	0	0	68%	115 miles	10 miles
		\$110.00					

**Definitions:**

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Signature of Authorized Representative: \_\_\_\_\_

Date: June 7, 2016

05/01/09

This form may be downloaded from SCA web site

**CONTRACTOR'S SUSTAINABLE MATERIALS FORM**  
**Credit M 2.1R, M 2.2, M2.3R and M2.4**



Project: PS335 Q

Address: 150-15 Raleigh Street, Queens, NY 11417

LLW: 53004 Date: June 16, 2016

Contractor: J&A Concrete Corp

Contractor Contact: Jonathan Martins

Spec Section: 03300 Telephone: (631) 567-5959

**4,000psi Conv: 3cy Poured in the month of May '16**

Product Name	Manufacturer	Material Cost (no Labor & Equip.)	Recycled Content		Regional*** Materials	
			Percentage Post-Consumer* by weight	Percentage Pre-Consumer** by weight	Percentage Regionally Extracted*** by weight	Distance between project site and extraction site
Cement	\$33.45 HOLCIM	\$100	0	19%	100%	55 miles
Slag	\$22.30 HOLCIM	\$67	0	100%	100%	55 miles
Sand	\$18.75 CORAM Materials Corp	\$56	0	0	100%	100 X miles
Stone	\$32.25 TILCON	\$97	0	0	100%	45 miles
Air	\$0.50 BASF	\$2	0	0	87%	115 miles
Water Reducer	\$2.75 BASF	\$8	0	0	68%	115 miles
		\$110.00				

**Definitions:**

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\*\*\* Regional Materials: Regionally manufactured materials that have their origin within 500 miles of the project site. These would include products that are regionally mined, harvested, salvaged or re-used (including those salvaged from the site.)

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Signature of Authorized Representative: \_\_\_\_\_

Date: June 16, 2016

05/01/09

This form may be downloaded from SCA web site

Coram Materials Corp.  
P.O. Box 5810  
Miller Place, NY 11764  
(631)924-5703

Sept 1, 2012

Coram Materials Corporation is located at 416 Miller Place Yaphank Rd. in Miller Place, Long Island, New York. We extract, process and manufacture New York State approved concrete sand. Our source # 10-18F. We supply Best Concrete with this sand and we are within 100 miles of Best Concrete's plant.

Sincerely,

Lorraine Vigliarolo



The Chemical Company

May 15, 2013

**Pozzolith® 200 N**

**Product Information Statement for LEED® New Construction (NC) Version 2.2  
Credit Documentation**

**Project Name - Location:** Best Concrete - Queens, New York

Pozzolith 200 N ready-to-use, liquid admixture is used for making more uniform and predictable quality concrete.

BASF Corporation certifies the following information for Pozzolith 200 N.

**Recycled Content**

That Pozzolith 200 N is manufactured with approximately 0.0% post-consumer and 25.4% pre-consumer materials for a combined recycled content of 12.7%. Normal manufacturing variances may result in slight variation in the combined recycled materials content.

**Regional Materials**

That approximately 68% by weight of Pozzolith 200 N was produced with materials extracted, processed and manufactured at a location within 500 miles from project.

**Plant Location:**

BASF Allentown, PA Plant  
Allentown, PA 18106

Based on the above information, BASF Corporation certifies that Pozzolith 200 N will contribute towards the following LEED NC Credits:

**MR Credit 4.1:** Recycled Content: 10% (post-consumer + ½ pre-consumer)

**MR Credit 5.1:** Regional Materials: 10% Extracted, Processed & Manufactured Regionally

**MR Credit 5.2:** Regional Materials: 20% Extracted, Processed & Manufactured Regionally

Mark E. Plechuta  
Sr. Technical Marketing Specialist



"LEED" is a trademark of the  
U.S. Green Building Council

BASF Corporation  
23700 Chagrin Boulevard  
Cleveland, Ohio 44122 USA  
216 839-7500 ph  
www.masterbuilders.com

**Master  
Builders**  
Admixture Solutions





**NUCOR STEEL - BERKELEY**

PO BOX 2259  
Mt. Pleasant, SC 29465



May 27, 2016

To: Nucor Customer

Re: Nucor Scrap Steel Harvest Locations

---

Dear Potential Customer,

Thank you for using Nucor Steel products. Nucor tracks the harvest location of the scrap steel recycled at each of our steel mills. We have compiled the following data in regards to scrap harvested within 500 miles of your location in Ozone Park, NY 11417.

Product Final Manufacturing Location	Steel Recycling Mill Location	Percent of Scrap Steel Harvested within 500 miles of 11417	Percent of Virgin Material Harvested within 500 miles of 11417
Nucor Steel – Berkeley Huger, SC	Nucor Steel – Berkeley Huger, SC	25.2%	0%

All data is approximate totals based on tons of scrap steel received at our steel recycling facilities in 2014. If you have any questions please feel free to contact me at (843) 336-6255.

Sincerely,

A handwritten signature in black ink that reads "Jennifer Hawthorne".

Jennifer Hawthorne  
Environmental Engineer

# Nucor-Yamato Steel Co.



Post Office Box 1228, Blytheville, AR 72315

Date: Friday, May 27, 2016

To: Allison Weir

Re: Nucor-Yamato Steel Scrap Steel Harvest Locations

Dear Allison,

Thank you for using Nucor-Yamato's Steel products. Nucor tracks the harvest location of the scrap steel recycled at each of our steel mills. We have compiled the following data in regards to scrap harvested within 500 miles of your site location for Postal Code Area 11417 and or Steel Fabricator/Processor and product specific recycled content in the below table.

Product Final Manufacturing or Usage/Application Location	Steel Recycling Mill Location or Fabricator/Processor	Percent of Scrap Steel Harvested within 500 miles of project location	Quantity of Scrap Steel Harvested within 500 miles of project location (tons)
Job Site: PS 335, 150-15 Raleigh Street, Ozone Park, NY. 11417	Nucor-Yamato Steel Blytheville, AR.	0.2%	4,076
Total Scrap Steel Used	Total Alloys and Other Iron Units	Total Post-Consumer Recycled Content	Total Pre-consumer/Post-Industrial Recycled Content
99.8%	0.2%	82.9%	16.9%

All data is approximate totals based on 2014 tons of scrap steel received at our steel recycling facilities. If you have any questions please feel free to contact me.

Sincerely,

*Tony Hodge*

Tony Hodge  
Environmental Engineer  
Phone 870-762-7164, Fax 870-763-2019



April 7, 2015

To: All Nucor Customers

Re: 2014 Recycled Content of Nucor Steel Products

Nucor Corporation is North America's largest recycler, using nearly 20 million tons of scrap steel in 2014 to create new products. Nucor uses Electric Arc Furnace (EAF) technology at all of its steel recycling facilities. EAFs use post-consumer scrap steel material as the major feedstock, unlike blast furnace operations that use mined iron ore as the major feedstock. Nucor has prepared the following information to help calculate the recycled content for products being used in "Green Building" applications or for projects in the LEED® program. These percentages are approximate and are based on the total weight of the products. The calculations are based on 2014 scrap steel delivered and hot metal tons produced and are defined in accordance with ISO 14021:2001. More specific product information may be available from facility representatives.

**Recycled Content – LEED V 3 Credit 4**

<b>2014 Recycled Steel Content of Nucor Products (% by Total Weight)</b>	
<b>Product Group</b>	<b>Average Recycled Content</b>
Nucor Bar Products	99.8%
Nucor Beam Products	90.7%
Nucor Plate Products	80.0%
Nucor Sheet Products	70.2%
Nucor Castrip®	96.7%
<b>Total Nucor Steel Combined</b>	<b>83.1%</b>
Vulcraft Structural Products	99.8%
Vulcraft Decking	70.2%
Nucor Building Group	83.1%
Nucor Fastener Products	99.8%
Nucor Wire Products	99.8%
Nucor Cold Finish	99.8%

**Regional Materials – LEED Version 3 Credit 5**

Nucor tracks the origin of scrap shipments to our mills. Nucor can approximate the amount of scrap recovered from any project site region. Nucor owns steel and steel products manufacturing facilities throughout the US that are often within 500 miles of the project site. Please refer to the LEED Contact List (<http://nucor.com/responsibility/sustainability/compliance/leed/>), then click on "LEED Contact", and contact the specific Nucor representative at the facility directly.



# NUCOR

## CORPORATE OFFICE

**Bar Mill Group** – Darlington, SC; Norfolk, NE; Jewett, TX; Plymouth, UT; Auburn, NY; Birmingham, AL; Kankakee, IL; Jackson, MS; Seattle, WA; Marion, OH; Memphis, TN; Kingman, AZ

2014 Approximate Recycled Steel Content Of All Nucor Bar Mill Group Products <sup>(*)</sup>				
Facility	Total Scrap Steel Used	Total Alloys and Other Iron Units	Total Post-consumer Recycled Content	Total Pre-consumer/ Post-industrial Recycled Content
All	99.8%	0.2%	82.8%	17.0%

The Nucor Bar Mill Group produces rebar, angles, flats, rounds and other miscellaneous shapes. The bar mill group uses recycled scrap steel for 99.8% of the feedstock.

**Sheet Mill Group** – Crawfordsville, IN; Hickman, AR; Huger, SC; Decatur, AL; Gallatin, KY; Castrip, IN; Castrip, AR

2014 Approximate Recycled Steel Content Of Nucor Sheet Mill Group Products <sup>(*)</sup>				
Facility	Total Scrap Steel Used	Total Alloys and Other Iron Units	Total Post Consumer Recycled Content	Total Pre-consumer/ Post-industrial Recycled Content
Crawfordsville, IN	92.3%	7.7%	77.5%	15.9%
Hickman, AR	61.4%	38.6%	50.9%	10.4%
Berkeley, SC	53.4%	46.6%	44.3%	9.1%
Decatur, AL	68.6%	31.4%	57.0%	11.7%
Gallatin, KY	81.3%	18.7%	67.4%	13.8%
Nucor Castrip® Blytheville, AR	99.8%	0.2%	82.9%	16.9%
Nucor Castrip® Crawfordsville, IN	92.3%	7.7%	77.5%	15.9%

The Nucor Sheet Mill Group produces hot band, cold rolled, pickled and galvanized products. Nucor Sheet mills use varying amounts of recycled materials depending on metallurgical product demands and market conditions. The combined sheet mill total recycled content is approximately 70.2%.

**Beam Group** – Blytheville, AR; Huger, SC

2014 Approximate Recycled Steel Content of Beam Mill Products <sup>(*)</sup>				
Facility	Total Scrap Steel Used	Total Alloys and Other Iron Units	Total Post Consumer Recycled Content	Total Pre-consumer/ Post-industrial Recycled Content
Nucor Yamato Steel, Blytheville, AR	99.8%	0.2%	82.9%	16.9%
Nucor Berkeley, Huger, SC	48.6%	51.4%	40.4%	8.3%

Nucor Beam mills produce narrow and wide flange structural beams. Nucor Yamato uses approximately 99.8% scrap steel for their feedstock. Nucor Steel Berkeley uses a higher percentage of non-scrap iron due to metallurgical product demands for sheet steel produced using the same EAF's. The combined beam mill recycled content is approximately 90.7%.

**Plate Group** - Hertford County, NC; Tuscaloosa, AL

2014 Approximate Recycled Steel Content of Plate Mill Products <sup>(*)</sup>				
Facility	Total Scrap Steel Used	Total Alloys and Other Iron Units	Total Post Consumer Recycled Content	Total Pre-consumer/ Post-industrial Recycled Content
Hertford County, NC	89.3%	10.7%	74.1%	15.2%
Tuscaloosa, AL	69.5%	30.5%	57.7%	11.8%

The Nucor Plate combined recycled content by weight is approximately 80.0%.

<sup>(\*)</sup> Studies show that the recycled steel used for Nucor products consists of approximately 83% post-consumer scrap. The remaining 17% typically consists of pre-consumer scrap generated by manufacturing processes.

## NYC Green Schools Rating System

Date: 7.26.16

Date: 7.26.16



**CONTRACTOR'S SUSTAINABLE MATERIALS FORM**  
Credit M 2.1R, M 2.2, M2.3R and M2.4

**SCA School Construction Authority**  
**NYC Green Schools Rating System**

**SubContractor:** Donaldson

**Contractor Contact:** Ryan Zdanowicz  
**Spec Section:** 07212

**Telephone: 631-624-1296**

Date 9/12/16

[illegible]

Definitions:

- \* Post-Consumer Recycled Content: Material or finished product that has served its intended consumer use and has been discarded by consumer
- \*\* Pre-Consumer Recycled Content: Recovered industrial and manufacturing materials diverted from municipal solid waste for the purpose of collection, recycling and disposition. Examples include fly-ash and synthetic gypsum, because they are waste products from coal burning electricity plants. (Scrap raw materials that can be reused in the same manufacturing process from which they are recovered are not considered Pre-consumer Recycled Content)
- \*\*\* Regional Materials: Regionally manufactured materials that have their origin within 500 miles of the project site. These would include products that are regionally mined, harvested, salvaged or re-used (including those salvaged from the site)

1. Recycled content for concrete - provide cost for cementitious materials and percentage of cementitious materials that are recycled-content
2. Recycled content for steel products - where it is not possible to determine recycled content use default assumption of 25% post-consumer recycled content
3. Regional content for concrete - provide combined cost for all concrete materials and distance information requested.
4. Regional content - for materials with varyone point of extraction all within the 500-mile radius list a single item with the greatest distance.
5. Provide back-up documentation for information on form above - such as product data or manufacturer's statements.

I, Ryan Zdanowicz a duly authorized representative of Donaldson hereby certify that the material information herein is an accurate representation of the material qualifications provided, as components of the final building construction. Furthermore, I understand that any change in such qualifications during the purchasing period will require prior written approval from the Construction Manager and Owner.

Signature of Authorized Representative Ryan Zdanowicz Date: 9/28/16





## **Division 7- Thermal & Moisture Protection**

SAC School Construction Authority  
 1001 Green Street, Lansing, MI 48906  
 Attention: Director  
 Telephone: 517-331-1100

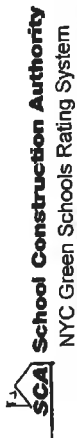
Anthony Martinelli, a duly authorized representative of Tony Mechanical Co., hereby certify that the material information herein is an accurate representation of the material qualifications provided, as components of the final building construction. Furthermore, I understand that any change in such qualifications during the purchasing period will require a written approval from the Construction Manager and Owner.

Signature of Authorized Representative: Anthony Martinelli Date: 03/14/17

page 163



**CONTRACTOR'S SUSTAINABLE MATERIALS FORM**  
Credit M 2.1R, M 2.2, M2.3R and M2.4



Contractor: **PETTRACCA & SONS / LIF**  
Contractor Contact: **EDITH BASILE / EDITH TOLPA**  
Spec Section: **8210** Telephone: **718-845-1270 / 516-390-6895**

Project: **PS335 QUEENS**  
Address: **150-15 RALEIGH STR, QUEENS NY 11417**  
LLW: **53004** Date: **3/30/2016**

Product Name	Manufacturer	Material Cost (no Labor & Equip.)	Recycled Content		Regional*** Materials		
			Percentage Post-Consumer** by weight	Percentage Pre-Consumer** by weight	Percentage Regionally Extracted*** by weight	Distance between project site and extraction site	Distance between project site and manufacture site
WOOD DOORS	MARSHFIELD	\$90,300.00	44%	44%	NA	NA	1090 miles
EDSRUF 42-47 UF			44%	44%	NA	NA	1090 miles
EDCLUF							miles
							miles
							miles

**Definitions:**

\* **Post-Consumer Recycled Content:** Material or finished product that has served its intended consumer use and has been discarded by consumer.

\*\* **Pre-Consumer Recycled Content:** Recovered industrial and manufacturing materials diverted from municipal solid waste for the purpose of collection, recycling and disposition. Examples include fly-ash and synthetic gypsum, because they are waste products from coal burning electricity plants. (Scrap raw materials that can be reused in the same manufacturing process from which they are recovered are not considered Pre-Consumer Recycled Content.)

\*\*\* **Regional Materials:** Regionally manufactured materials that have their origin within 500 miles of the project site. These would included products that are regionally mined, harvested, salvaged or re-used (including those salvaged from the site.)

**Notes:**

- 1 Recycled content for concrete - provide cost for cementitious materials and percentage of cementitious materials that are recycled-content.
- 2 Recycled content for steel products - where it is not possible to determine recycled content use default assumption of 25% post-consumer recycled content
- 3 Regional content for concrete - provide combined cost for all concrete materials and distance information requested.
- 4 Regional content - for materials with varylene point of extraction all within the 500-mile radius list a single item with the greatest distance.
- 5 Provide back-up documentation for information on form above - such as product data or manufacturer's statements.

**Contractor Certification:**

I, EDITH TOLPA a duly authorized representative of LONG ISLAND FIREPROOF DOOR, INC hereby certify that the material information herein is an accurate representation of the material qualifications provided, as components of the final building construction. Furthermore, I understand that any change in such qualifications during the purchasing period will require prior written approval from the Construction Manager and Owner.

Signature of Authorized Representative: Edith Tolpa

Date: 3/30/2016

This form may be downloaded from SCA web site

## Environmental Fact Sheet



Where we can use natural, renewable resources, we do.



Using fewer resources is good for the environment and the bottom line.



We make floors that help people work, play, shop, heal and learn better.



We use more recycled content at the start and recycle more product at the end.

©2011 Tarkett, Inc., 06/11

## Vinyl Enhanced Tile (VET)

Azrock's Vinyl Enhanced Tile (VET) is part of a system that was designed with people, the environment and the bottom line in mind. When we use better materials, practice resource stewardship and create people-friendly spaces while maximizing reused and recycled material in our flooring, we create a flooring solution that provides the ultimate flooring experience.

### BETTER RAW MATERIALS

VET is manufactured in a facility that received ISO 9001 and ISO 14001 Certification for Quality Management of its manufacturing processes.

- Contains 70% natural materials, such as limestone

### RESOURCE STEWARDSHIP

VET is produced in Florence, Alabama. This facility practices environmental initiatives that include:

- Energy reduction initiatives that achieve annual reductions in electricity and natural gas usage.
- All product lines are closed-loop and offer maximum efficiency in production.

### PEOPLE-FRIENDLY SPACES

One of our core beliefs is that people are happiest when they are offered choices that help them balance their needs and stay true to their values.

- FloorScore™ certified as low emitting products for good indoor air quality
- Reduces slip and fall injuries with slip-resistant surfaces on select Advance tiles
- Offers appealing aesthetic through a large variety of color and design options
- Reduces the use of floor strippers and polishes by 90%

### REUSE AND RECYCLE

- VET contains up to 23% pre-consumer and 6% post-consumer recycled content.
- All samples, unused installation material and used flooring is reclaimed and recycled through our ReStart® Reclamation Program.
- VET is manufactured in our Florence plant where production waste is either reworked into future tile or incorporated into residential tile, almost eliminating production waste.
- Tarkett's Florence plant utilizes pre-consumer recycled material from a number of outside sources.

ISO 14001 certificate no. US00011659, ISO 9001 certificate no. US00011675

Please note:

The data available on this Product Fact Sheet relates to Tarkett products and services as of the date of its publication. It is provided for information purposes only. Tarkett does not guarantee that the information contained in the Product Fact Sheet is accurate, complete and up-to-date and shall not be held responsible for any error or omission. Prior to circulation, quoting, or reproducing for distribution purposes it is recommended to have the Product Fact Sheet reviewed and updated by the appropriate department.

For more information visit [johnsonite.com](http://johnsonite.com) or call 1.800.899.8916



THE ULTIMATE  
FLOORING EXPERIENCE

## Sustainable Facts

### Color Essence



Possible  
LEED Credit  
Contribution

### Construction Waste Management

ReStart® Reclamation Program  
MR 2

1-2

### Recycled Content

Pre-Consumer 23%  
Post-Consumer 6%  
MR 4

1-2

### Regional Materials

Manufactured in Florence, Alabama, an ISO 14001 facility  
MR 5

1-2

### Indoor Air Quality

Low Emitting materials EQ 4.3  
FloorScore certified and meets CA 01350

1

### Return on Investment

Easy to clean, less waxing required  
Reduced water, detergent and energy costs

.....  
Requires fewer man-hours to install



THE ULTIMATE  
FLOORING EXPERIENCE

Page 3 of 6

TARKETT 800  
825646PM

Print Date: 04-09-2015

## SAFETY DATA SHEET

Calcium carbonate	* (see below)	No data available.	15 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)
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\*This product contains one or more materials that may be hazardous when present as an airborne dust. During normal handling of the product, the material is encapsulated within the product and will not present an exposure risk. Once the product has reached its final state and is abraded or disturbed, dusting and exposure may occur.

### ENGINEERING CONTROL METHODS:

VENTILATION:	General room ventilation might be required under normal conditions of use.
EYE PROTECTION:	Wear safety glasses when handling this product.
SKIN PROTECTION:	Avoid skin contact by wearing chemically resistant gloves.
GLOVES:	Nitrile
RESPIRATORY PROTECTION:	Respiratory protection may be required to avoid overexposure when handling this product. Use a respirator if general room ventilation is not available or sufficient to eliminate symptoms. Respirators should be selected by and used following requirements found in OSHA's respirator standard (29 CFR 1910.134).

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE:	Semi-solid
COLOR:	Off-white
ODOR:	Slight Aromatic
ODOR THRESHOLD:	Not established
pH:	8.6
FREEZING/MELTING POINT (deg. C):	Not established
BOILING POINT (deg. C):	Not established
FLASH POINT:	Non flammable
EVAPORATION RATE:	Not established
FLAMMABILITY:	Not a flammable solid or gas
UPPER EXPLOSIVE LIMIT (% in air):	Not established
LOWER EXPLOSIVE LIMIT (% in air):	Not established
VAPOR PRESSURE (mm Hg):	Not established
VAPOR DENSITY:	Not established
WEIGHT PER GALLON (lbs.):	9.75
SPECIFIC GRAVITY:	1.170
SOLUBILITY:	Not established
OCTANOL/WATER COEFFICIENT:	Not established
AUTOIGNITION TEMPERATURE:	Not established
DECOMPOSITION TEMPERATURE:	Not established
VISCOSITY:	No data available.
SOLIDS (% by weight):	56.5

VOC, weight percent	0.00
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### SECTION 10: STABILITY AND REACTIVITY

STABILITY:	Stable under normal conditions.
CHEMICAL INCOMPATIBILITY:	Not established
HAZARDOUS POLYMERIZATION:	Will not occur.
HAZARDOUS DECOMPOSITION PRODUCTS:	Aldehydes Carbon monoxide, carbon dioxide Nitrogen containing gases

