

New York City's Construction Noise Regulation



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Developers



New York City Department of Environmental Protection

- 6,000 staff
- Oversees services for 8 million residents
- Air, water, noise, hazmat pollution
- www.NYC.gov/dep



Parsons Brinckerhoff (PB)

- Worldwide Engineering Firm
 - Transportation and Infrastructure
 - Nearly 125 years old; 55,000 staff
 - Boston's Big Dig, FHWA RCNM
- www.PBworld.com

NYC's 311 Complaint Hotline

Up to 5000 complaints per month

"The city that never sleeps."





Text by *Popular Science Monthly*

*The truck and the motor and
trolley car and the elevated train*

*They make the weary city street
reverberate with pain. . . .*

—JOYCE KILMER

CITY NOISE

The Report of the Commission Appointed by Dr.
Shirley W. Wynne, Commissioner of Health,
to Study Noise in New York City and to
Develop Means of Abating It.

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NOISE ABATEMENT COMMISSION
Department of Health, City of New York

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Initiative Announcement

First update of NY City's Noise Code in 30 years



~ Mayor Michael Bloomberg, Oct 2002

"Operation Silent Night aims to effectively fight and control the loud, excessive noise that plagues too many neighborhoods throughout the five boroughs. This coordinated, multi-agency initiative will specifically target those locations where noise adversely affects our everyday lives so New Yorkers may live, work, and enjoy the City in peace."

Team Approach & Consensus Building

2 year process

NYC DEP coordinated with the following:

- State/City/Local Authorities
- Transportation Agencies
- Construction Contractors/Unions/Utilities
- Private Business Interests



*League of the Hard of Hearing
Building Owners & Managers
Nightlife Association
Heavy Equipment Contractors
Affordable Housing
Labor Unions
Empire City Subway
Dept of Design & Construction
Dept of Buildings
Dept of Consumer Affairs
Dept of City Planning*

*Real Estate Board
General Contractors Association
Restaurant Association
Licensed Plumbers
Small Home Builders
Keyspan, Verizon, Con Ed
Mr. Softie Ice Cream
Dept of Transportation
Dept of Health & Mental Hygiene
Dept of Sanitation
Small Business Services*

NYC DEP Strategy



Proactive

- Proactive Avoidance of Noise
- Noise Mitigation Plans
- Technical Assistance Available
- Product & Vendor Guidance Sheet



Reactive

- Reactive Enforcement Ability
- Noise Compliance Readings (FWHA RCNM)
- Fines / Possible Stop Work Orders

New Rule Requirements

Effective July 2007

- Noise Mitigation Plans
- Normal Work Hours: 7:00 AM to 6:00 PM
- Mitigation for Particularly Noisy Devices
- Equipment Noise Emission Limits (FHWA RCNM)
- Mufflers and Silencers
- Enclosures for Stationary Equipment
- Quieter-type Backup Alarms
- Noise Barriers and/or Curtain Systems
- Laborer Training Program
- Public Outreach Program

Top 10 Benefits for Laborers

1. Noise training for workers
2. Required noise mitigation plans
3. List of suggested quieter tools
4. Equipment noise emission limits (dBA L_{max}@50 ft)
5. Noise barriers proximal to sources
6. Jackhammer mufflers
7. Quieter backup alarms
8. Enclose stationary loud devices
9. Sound absorptive barrier liners
10. Source noise avoidance requirements

Example Laborer Benefits



Zo-Air Jackhammer Noise Muffler
Reduces emissions by 7 to 9 dBA



SoundSeal Absorptive Curtains
Required inside noise barriers
Reduces reverberant noise on-site

Product & Vendor Guidance Sheet

• Caterpillar 246B, 226B

DUMP TRUCKS

• John Deere 250C, 400C

ROLLERS

• Multiquip AR20-2

CRANES

• Link-Belt 218-HSL
• American 5299
• Bucyrus Erie 30B

GENERATORS

• Multiquip GA29R, GA36HA
• Atlas VSS-125Dd, VSS-170Dd

STREET SWEEPERS

• Elgin GeoVac
• Schwarze A-7000

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ACOUSTICAL WINDOWS

• Harvey Industries Acoustical Windows
• Peerless Products Acoustical Windows
• Acoustic Standards Quiet Window
• Soundproof Windows Soundproof Windows

WHITE NOISE MACHINES

• Marpac Sound Screen
• Speech Privacy Systems Sonet System

PILE DRIVERS

• Ken-Jet Still Worker
• Giken Silent Piler

DOZERS

• John Deere 450H, 550H
• Caterpillar D6R III

LOADERS

• Volvo L50E
• John Deere 444J
• Caterpillar 950

GRADERS

• Caterpillar 14H, 12E, 12F, 140

SCAPERS

• Caterpillar 613

BACKHOES

• Caterpillar 420D, 416D
• John Deere 410G
• Case 680C

EXCAVATORS

• John Deere 35D
• Caterpillar 307C

TRACTORS

• John Deere 210LE
• Caterpillar 621G

HOE RAMS

• Chicago Pneumatic CP 100, CP 400
• Allied Hammer Head
• Allied-Rammer City Series

SKID STEERS

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Construction Noise Control Products and Vendor Guidance Sheet

23 March 2007

Distributed by:
New York City Department
Of Environmental Protection

The following is intended to provide guidance to construction contractors with respect to finding and selecting suitable noise control products. These products and vendors may be helpful to contractors for achieving compliance with the New York City Noise Regulations. These items are provided only as suggestions for contractors to consider and should not be construed as an official endorsement of any product and/or vendor by the City of New York. Contractors are free to choose other products/vendors that meet the requirements of such Code. This sheet will be updated from time to time as new noise control technologies gain acceptance.

BACKUP ALARMS

• Preco Electronics 200 Series, 45 Series, 6000 Series www.preco.com
• Ecco Group Smart Alarms, 500 Series, 700 Series www.eccolink.com
• Grote Industries Model 73040 www.grote.com
• Brigade Electronics BBS-TEK Series www.bbs-tek.com

JACKHAMMERS

• Better World Gentle Jack www.bwanetwork.com
• Atlas Copco TEX PE Series www.atlascopco.com
• Chicago Pneumatic CP 1240-S www.cp.com
• Makita Makita HM1810 www.makita.com

VACUUM EXCAVATORS (VAC-TRUCKS)

• Guzzler LR ACE www.guzzler.com
• GapVax HV Series www.gapvax.com

NOISE BARRIERS

• Carsonite Sound Barrier www.carsonite.com
• Sound Fighter LSE Sound Barrier www.soundfighter.com
• Kinetics Noise Block www.kineticsnoise.com
• one inch plywood is rated at 30 STC.

NOISE CURTAINS

• Sound Seal BBC-13-2 www.soundseal.com
• Illbruck Acoustic SONEX Curtain www.illbruck-sonex.com
• McGill AirSilence Fibersorb Curtains www.mcgillairsilence.com

SILENCERS & MUFFLERS

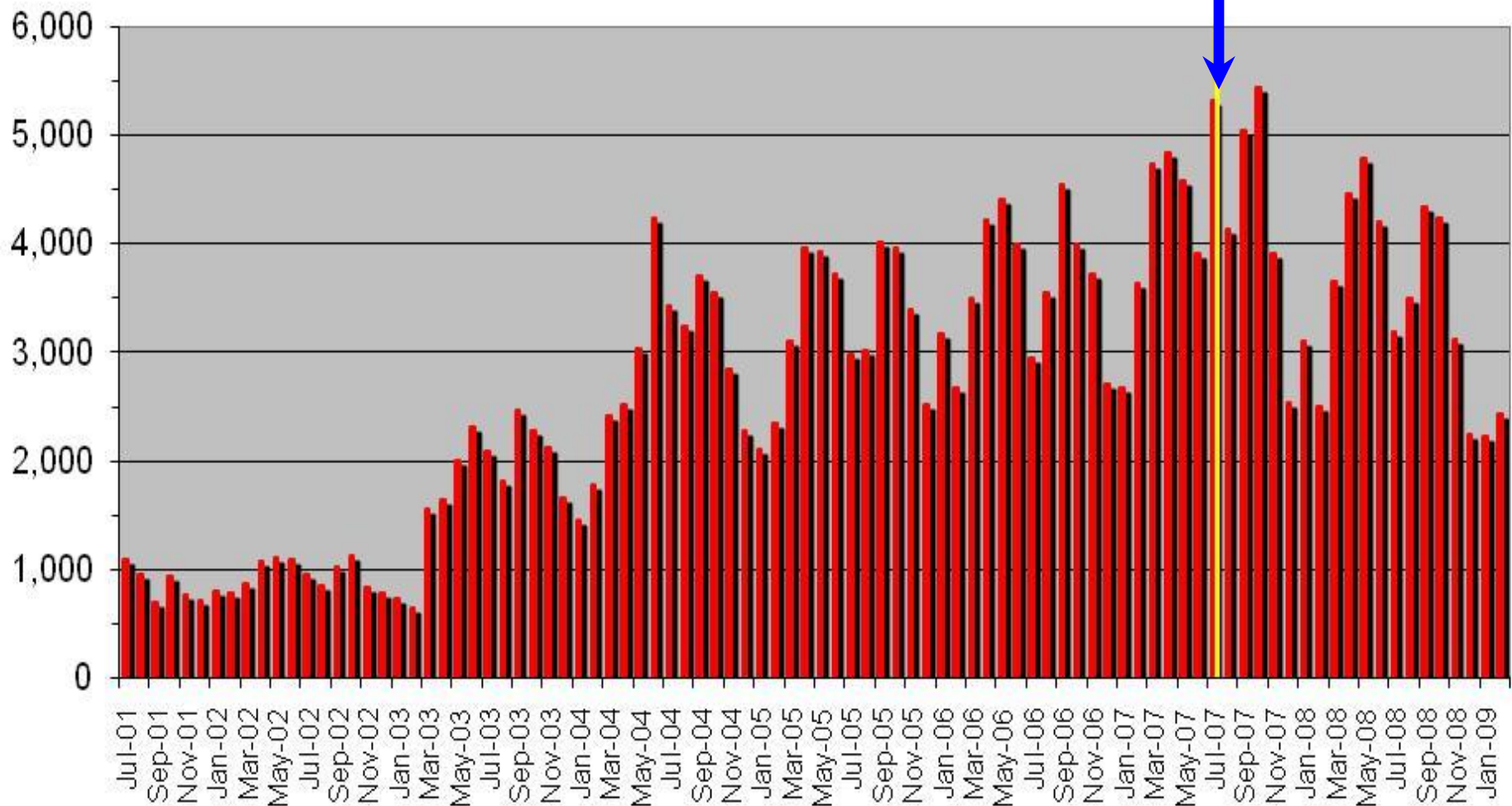
• Universal Silencers Silencers www.universal-silencer.com
• Burgess Manning Silencers www.burgessmanning.com

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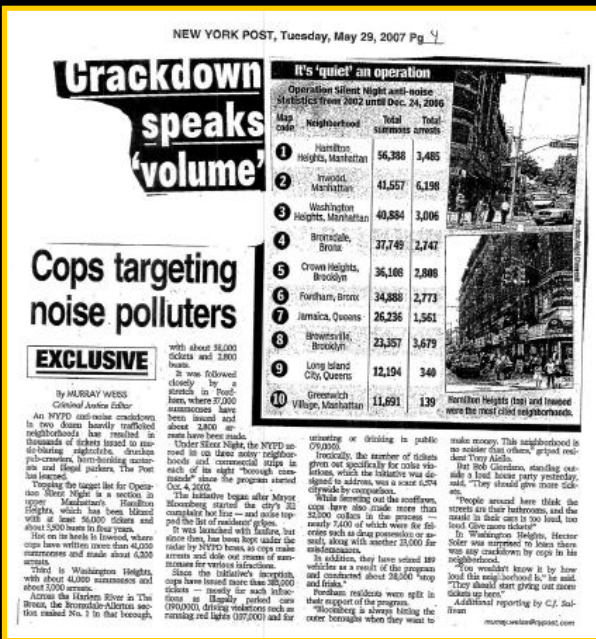
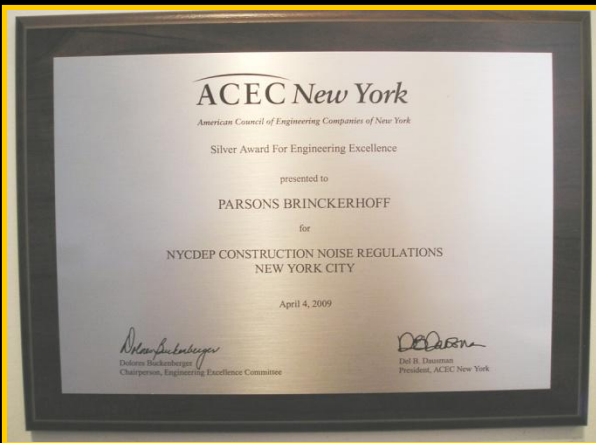
Complaint Effects: Post Implementation

NYC DEP 311 Noise Complaints

Per Month, Jul-01 through Feb-09



Industry and Public Reaction



- ✓ Winner - 2010 NIOSH/NHCA Safe-In-Sound Award
- ✓ Winner - 2009 ACEC Silver Award
- ✓ Hundreds of U.S. articles
- ✓ International articles; Britain, India, Russia, China
- ✓ Television, Radio, Internet press
- ✓ Trade Association interest

Lessons Learned

- Construction noise can be regulated
- Requires early legislative cooperation
- Requires dialog and consensus building
- Must be technically correct & defensible
- Proactive avoidance with reactive ability
- Benefits to community and laborers
- Rules have not hindered construction
- Nationwide interest



Future Directions

- Supportive enforcement and outreach
- Advisory Committee can change Rules
- Coordinate with equipment manufacturers
- Update the Product & Vendor Sheet
- Continue to share NYC's experiences

