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](http://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](http://www.PBworld.com)
NYC’s 311 Complaint Hotline

Up to 5000 complaints per month

“The city that never sleeps.”
The truck and the motor and
trolley car and the elevated train
They make the weary city street
reverberate with pain....

—JOYCE KILMER
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.

~ Mayor Michael Bloomberg, Oct 2002
Team Approach & Consensus Building

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

- 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

Effective July 2007
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 Lmax@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
ACOUSTICAL WINDOWS
- Harvey Industries Acoustical Windows
- Peerless Products Acoustical Windows
- Acoustic Standards Quiet Window
- Soundproof Windows Soundproof Windows

WHITE NOISE MACHINES
- Metmac Sound Screen
- Speech Privacy Systems Secret System

PILE DRIVERS
- Ken-Jet Still Worker
- Gilson Silent Piler

DOZERS
- John Deere 450H, 550H
- Caterpillar D9R III

LOADERS
- Volvo L50E
- John Deere 444J
- Caterpillar 950

GRADERS
- Caterpillar 14H, 12E, 12F, 140

SCAPERS
- Caterpillar 613

BACKHOES
- Caterpillar 420D, 416D
- John Deere 410C
- 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
- Case 440C

BACKUP ALARMS
- Preco Electronics 200 Series, 45 Series, 6000 Series
- Eco Group Smart Alarms, 500 Series, 700 Series
- Groote Industries Model 71940
- Brigade Electronics BBS-TBK Series

JACKHAMMERS
- Better World Gentle Jack
- Atlas Copco TEX PE Series
- Chicago Pneumatic CP 1240-L
- Makita Makita HM1810

VACUUM EXCAVATORS (VAC-TRUCKS)
- Guzzler LV ACE
- GarVax HV Series

NOISE BARRIERS
- Carusone Sound Barrier
- Sound Fighter LSE Sound Barrier
- Kinetics Noise Block
- one inch plywood is rated at 30 STC.

NOISE CURTAINS
- Sound Seal B1C-13-2
- libruck-wexner.com
- McGill Airsilence Fibersorb Curtains

SILENCERS & MUFFLERS
- Universal Silencers Mufflers
- Burgess Manning Mufflers

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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. The 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.

www.preco.com
www.ecoiller.com
www.groote.com
www.brigade.com
www.betterworld.com
www.atlascopco.com
www.chicagopneumatic.com
www.makita.com
www.guzzler.com
www.garvax.com
www.carusone.com
www.soundfighter.com
www.kinetics.com
www.librukwexner.com
www.mcgillairsilience.com
www.universal-silencer.com
www.burgessmanning.com

www.soundseal.com
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