

THE CITY OF NEW YORK
INDEPENDENT BUDGET OFFICE

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October 9, 2009

Scott Stringer
President of the Borough
Office of the Manhattan Borough President
1 Centre Street, 19th Floor
New York, NY 10007

Dear Borough President Stringer:

At your request, the New York City Independent Budget Office (IBO) has conducted a review of inspector staffing and inspection activity at the Department of Buildings (DOB). The full results of our analysis are in the enclosed memo, *Trends in Construction Inspection Activity and Construction Inspector Staffing at the Department of Buildings*.

IBO found that the construction inspector staffing increased 64 percent from 2002 to 2008. DOB ended 2009 with 220 construction inspectors, down from 222 at the end of 2008. From 2002 to 2009, the number of inspections increased by 45 percent. The DOB's Special Enforcement Plan (SEP), launched in 2007, has targeted resources to especially dangerous activities, such as excavation and gut renovation. Assuming SEP fills all of its budgeted positions in 2010 it would have added 105 staff to DOB, including 49 new construction inspectors.

If you have any questions, please feel free to contact me (212-442-0225 or ronniel@ibo.nyc.ny.us) or Ana Champeny (212-442-1524 or anac@ibo.nyc.ny.us), who oversaw this analysis.

Sincerely,

Ronnie Lowenstein,
Director

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New York City Independent Budget Office
Memorandum

DATE: October 7, 2009
TO: George Sweeting, Deputy Director
FROM: Ana Champeny, Supervising Analyst
SUBJECT: Trends in Construction Inspection Activity and Construction Inspector Staffing at the Department of Buildings

Summary. Mayor Michael Bloomberg has made reforming the Department of Buildings (DOB) and its oversight of construction in the city a priority since taking office in 2002. The Mayor and the City Council have passed laws increasing fines for illegal construction work, as well as increasing safety provisions in specific high risk areas like concrete, suspended scaffolds and crane operations. In 2007, the department and the Council overhauled the building code including new provisions to increase construction safety.

In addition, the department has increased its budget for construction inspections, from \$14.4 million in 2002 to \$21.0 million in 2009. During this time, there had been a significant increase in construction activity that increased demand for inspections; building permits issued or renewed increased by 42 percent between 2002 and 2008, before declining by 4 percent in 2009. At the same time, complaints regarding construction also rose dramatically in part due to the implementation of the 311 system; priority A and B complaints—the more serious—increased by 250 percent through 2008 followed by a 5 percent drop in 2009. Furthermore, tragic construction accidents in the city have heightened awareness of the dangers of unsafe construction practices. This report looks at the extent to which the budget increases have led to increased inspections staff and what effect staffing changes have had on the number of inspections. IBO's main findings are:

- Construction inspector staffing increased by 64 percent from 2002 to 2008, with 222 construction inspectors at the end of 2008, of which 22 were part of the newly created Special Enforcement Plan (SEP). Staffing was fairly steady in 2009; the department ended 2009 with 220 construction inspectors.
- The department conducted 242,000 construction inspections in 2009, a 45 percent increase since 2002.
- The number of inspectors rose faster than the number of inspections performed so that inspectors averaged 9.5 inspections per day in 2009, down from 13.0 per day in 2004.
- Construction inspections in response to complaints increased dramatically, while proactive construction monitoring inspections declined through 2008. With a slowdown in construction activity in 2009, the trend reversed, with inspections in response to complaints down by 7 percent while construction monitoring inspections increased by 17 percent.
- The Special Enforcement Plan (SEP) was launched in 2007 to provide greater oversight and target resources to specific construction activities that can be especially dangerous, such as

excavations or gut renovations. When fully staffed in 2010, the SEP would add 105 positions to the buildings department, of which 49 would be inspectors.

Background. One of the department’s tools for construction oversight is inspections. The Department of Buildings inspects properties to ensure safe and lawful use of existing properties and buildings in the city, as well as those under construction. The department conducts inspections on plumbing, electrical, hoists and derricks, elevators, and general construction. In fiscal year 2009, DOB conducted 242,000 general construction inspections.



The city uses general construction inspections as part of its overall construction oversight policy to deter and catch operations that are dangerous or illegal. The department conducts three main types of general construction inspections—construction monitoring, complaint review, and certificate of occupancy.

Construction monitoring inspections are conducted on properties with open permits; sites are largely selected at random, although the location of other inspection activity that day also factors in. When a property is chosen to be inspected under construction monitoring, the property is inspected multiple times, and each time the inspectors check the site for safety, examine the construction plans and ensure that work is proceeding according to the plans. By checking the plans and inspecting the site, the department aims to prevent illegal or dangerous behavior before it occurs or catch these activities while they are ongoing. If the inspections cover enough properties, they could act as a deterrent to others who might seek to violate the building code.

The department also conducts construction inspections in response to complaints. Complaints are made through the city’s 311 call center and are categorized as priority A emergency or priorities B, C, or D

nonemergency. Generally, complaints are categorized based on the level and immediacy of the potential danger. Priority A complaints are emergency situations. Some examples of priority A complaints include falling debris, inadequate structural supports, or accidents (construction, elevator, boiler, etc). From 2006 to 2008, between 17 percent and 18 percent of all complaints were classified as priority A. Almost two-thirds of complaints are classified as priority B; these complaints are non-emergency hazardous situations. Priority B complaints include illegal after hours work, inadequate sidewalk sheds, illegal conversion, and defective systems (elevators, boilers, electrical). Priority C and D complaints—situations that have an adverse impact on quality of life without being hazardous—are less frequent¹; together, they account for about 18 percent of complaints (priority C is roughly twice as common as priority D). Examples of priority C and D complaints are open and unguarded vacant building (C), or illegal curb cuts (D).

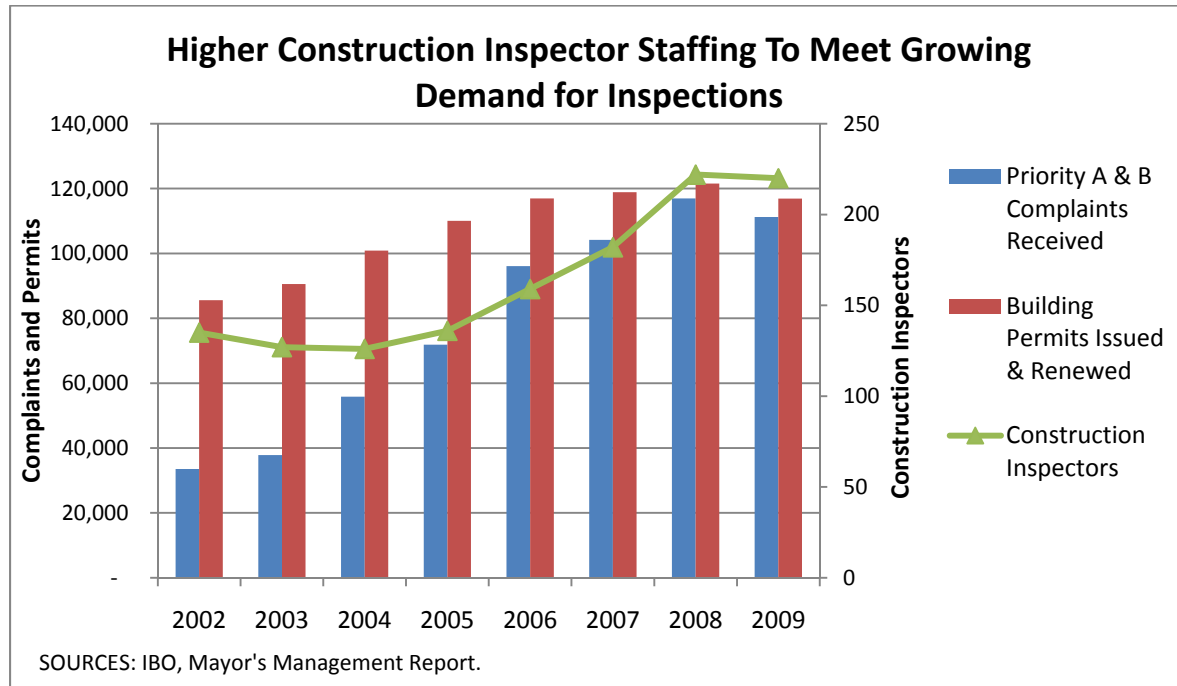
When responding to a complaint, the inspector will investigate the specific complaint as well as look for other dangerous or illegal activities. Complaints from the public have the potential to focus the city's resources where problems exist. These inspections could also have a deterrent effect as builders will know that the public will report illegal or noxious behavior. Whether these inspections actually act as a deterrent depends on how quickly the department is able to respond to complaints as well as the ability of the public to identify and report illegal behavior.

Finally, the department conducts inspections prior to issuing certificates of occupancy. These inspections occur by appointment after construction is complete. The inspections focus on exterior items including fire egress, fire doors, ensuring the whole building is complete, and that the building fits within the zoning code. It is preferable to catch problems before this stage, given the difficulty in identifying some problems and challenges in correcting problems once construction is complete.

Increase in Number of Inspectors. The buildings department had increased construction inspector staffing 64 percent from 2002 to 2008, including new inspectors hired as part of the Special Enforcement Plan. The increase was at least in part a response to growing demand for inspections as building permits increased by 42 percent, complaints to the department grew by 250, and major construction accidents in the city raised public awareness of the dangers of construction activity. In 2009, staffing held steady, with DOB ending the year with 220 inspectors, while complaints and building permit issuance began to decline.

The Department of Buildings hires inspectors to conduct oversight of boilers, elevators, hoists and rigging, electrical, plumbing, and construction. The buildings department had increased total inspector staffing by 52 percent since 2002. At the end of 2008, the department had 348 active inspectors, down to 344 on June 30, 2009. As of that date, nearly two out of every three inspectors were assigned to monitor construction. Construction inspectors at the department are responsible for oversight of construction in the city (excluding inspection of electrical, plumbing, and HVAC systems). They perform half of all inspections done by the department, including all construction monitoring inspections and inspections in response to complaints. The department increased the number of construction inspectors by 64 percent from 2002 through 2008 to a total of 222. Construction inspector staffing has been stable this past year, with 220 inspectors at the end of 2009.

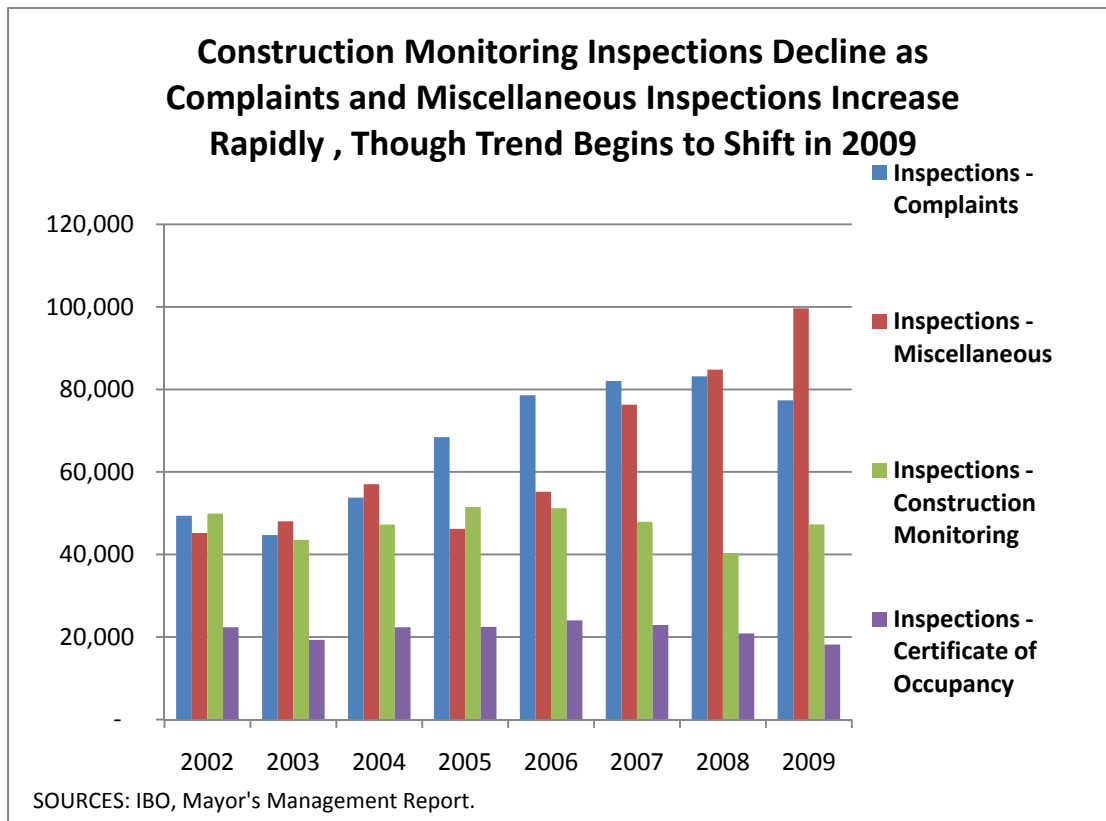
Increases in the number of construction inspectors had been driven by increases in the number of properties under construction, a rise in the number complaints, and greater public awareness of the dangers of construction. First, the city experienced a significant construction boom – the number of building permits issued and renewed each year increased by 42 percent between 2002 and 2008 – and, therefore, the number of projects the buildings department needed to oversee had increased.



Second, the number of Priority A and B complaints had increased by 250 percent from 2002 to 2008. IBO's analysis considered only Priority A and B complaints because those represent the more serious complaints and because some summarized historical data include only those two categories. As noted above, over 80 percent of complaints are classified as potentially dangerous priority A or B situations. While the boom in construction activity in the city had contributed to the increases in complaints, the main driver of the increase, at least in the first years of our analysis, appears to be the creation of the 311 Customer Service Center. The 311 call center opened in March of 2003, and its first full year of operation was fiscal year 2004. The number of complaints that the Department of Buildings received increased by 48 percent between 2003 and 2004 while the number of permits only increased by 11 percent during that time. This trend continued, with complaints increasing 29 percent in 2005 and 34 percent in 2006, while permits increased by 9 percent and 6 percent. This increase in the number of complaints had slowed to 8 percent in 2007 and 12 percent in 2008, followed by a 5 percent decline in 2009.

Third, it is likely that high-profile accidents at construction sites and construction worker deaths in the city, including the deadly East Side crane collapse in March 2008, increased public awareness of dangers of construction. This awareness and attention to construction activity applied further pressure on the buildings department to inspect construction sites, as well as potentially increasing complaints from the public.

General Construction Inspections. With the increase in general construction inspectors, the department has been able to increase the number of construction inspections performed. Between 2002 and 2009 the number of construction inspections increased by 45 percent, from 167,000 performed in 2002 to 242,000 in 2009. Inspections resulting from complaints increased through 2008 and declined in 2009, while construction monitoring inspections had declined from 2005 to 2008, before increasing in 2009. Miscellaneous inspections have been increasing each year. Furthermore, the increase in inspectors exceeded the increase in inspections, resulting in fewer inspections per inspector.



The department's top two priorities when allocating construction inspection staff are inspections in response to complaints and inspections to grant Certificates of Occupancy. While the department responds to all complaints, it prioritizes responses by complaint priority code and has specific targets for response times for each priority code. The extent to which the department can conduct construction monitoring inspections depends on the amount of time remaining after inspectors have responded to complaints and conducted scheduled Certificate of Occupancy inspections.

As the department increased inspectors from 2002 through 2008, much of the increase in resources went towards responding to complaints, driving down complaint response time for priority B complaints, which are the most common. The number of inspections responding to complaints had grown by 68 percent from 2002 to 2008. In 2008, the department responded to 92 percent of priority B (nonemergency) complaints within 40 days according to the Mayor's Management Report, up from 71 percent in 2004. The average response time for priority B complaints in 2008 was 13.6 days (comparable data not available for 2004). Response time for priority A (emergency) complaints was relatively

constant over that time – roughly 95 percent responded to within 1.5 days and an average response time of roughly a half-day.

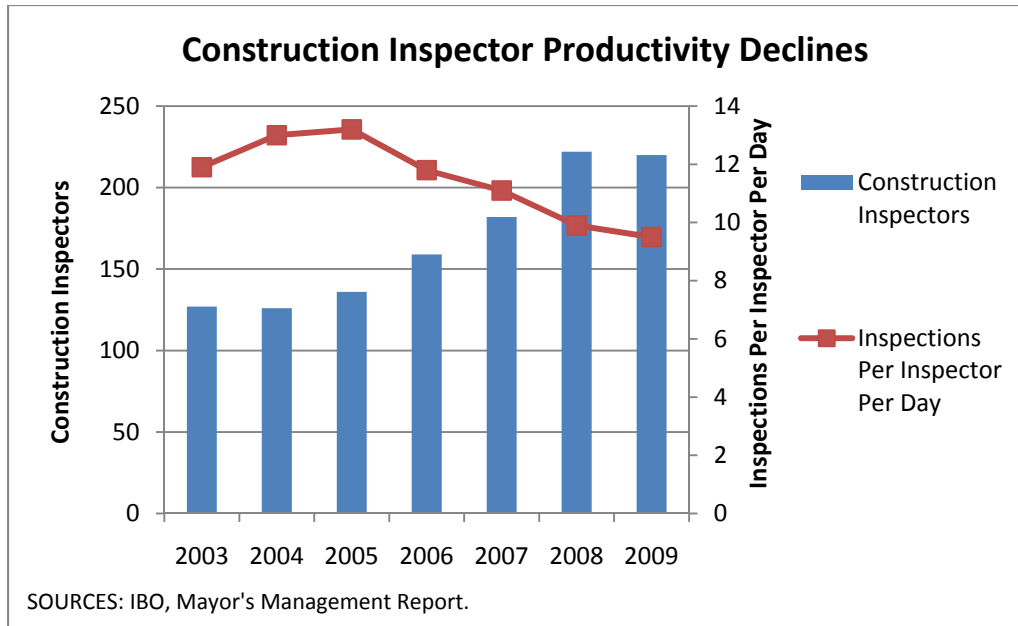
The decline in complaints in 2009 allowed DOB to further improve response times. The department responded to 97 percent of priority A complaints within 1.5 days and 94 percent of priority B complaints within 40 days. Average time to respond did not change for priority A complaints in 2009, but improved by 3.1 days for priority B complaints, to 10.5 days.

Also, as mentioned above, the extent to which complaints are an effective tool for oversight depends on how well complaints accurately capture illegal activity. If complaints generally don't result in violations, it could signal that the complaints are not capturing illegal or dangerous activity and are instead using valuable department resources inefficiently. In fiscal year 2008, IBO found that no violation was warranted after inspection for 56 percent (13,825/24,857) of priority A complaints. This figure has been fairly steady over time—59 percent and 56 percent of priority A complaints received no violation following inspection in 2006 and 2007, respectively.

The department also increased the number of miscellaneous inspections by 120 percent since 2002; in 2008 and 2009, miscellaneous was the single largest category of inspections. The department has not been able to identify why the miscellaneous inspections increased or what types of inspections represent the bulk of this category. Inspections to issue Certificates of Occupancy have decreased slightly, by 19 percent.

As the department dedicated more of its inspection resources to responding to complaints and miscellaneous inspections, it conducted fewer construction monitoring inspections. From 2002 to 2008, when complaints were increasing, monitoring inspections decreased by 19 percent. With the increase in construction permits, the decrease in total construction monitoring inspections also meant even less monitoring on a per project basis. In 2002, the department was conducting an average of 58 monitoring inspections for every 100 permits. By 2008 this had decreased to 33 monitoring inspections for every 100 permits, a 43 percent decline. With more monitoring inspections and fewer permits in 2009, the department conducted 40 monitoring inspections for every 100 permits.

Inspector Productivity Declines. While the department has increased both inspectors and inspections, productivity has decreased as the increase in inspectors outpaced the increase in inspections. The Mayor's Management Report indicated that each inspector performed an average of 13.0 inspections per day in fiscal year 2004. In 2009 that figure decreased to 9.5 inspections per inspector per day. The report attributes the decline to "the expansion of more time-consuming specialized inspections and a new rotation program to serve as an integrity safeguard."



Special Enforcement Plan and Continued Staffing Increases. The Special Enforcement Plan (SEP) announced in June 2007, is a three-phase program that targets additional resources to improve oversight and enforcement. The additional resources are being used to expand proactive inspections with a focus on high risk areas of construction in the city. The plan creates a number of units which are expected to conduct monitoring inspections during construction activity.

Because of how DOB's budget and spending information is presented it is difficult to track all of the resources being dedicated to SEP, but with SEP staff hired more slowly than anticipated, actual spending appears to have lagged budgeted amounts. The total SEP budget was \$6.7 million in 2008 and \$10.3 million in 2009 Actual spending (as reflected in the city's on-line financial system) for SEP staff was around \$1.6 million in 2008, increasing to \$5.4 million in 2009. One reason for lower than budgeted spending is difficulty staffing up the new SEP units. According to the buildings department, these new positions require technical skills and have been hard to fill. By the end of 2008, DOB had hired 52 SEP staff of the announced 67 positions² which included administration, inspection, plan examination, and engineering staff. At the end of 2009, there were 89 SEP staff members, of a budgeted 144 positions.

Due to spending reductions across city agencies, the SEP budget for 2010 has been reduced to \$7.3 million. The budgeted headcount for 2010 is now 105 positions The reduction in headcount is to be completed by cutting vacant lines. DOB has indicated that the agency is currently reviewing its staffing and may restore some of the planned SEP positions by shifting existing resources.

Special Enforcement Plan (SEP) Budget, 2008-2010

Dollars in thousands

	2008	2009	2010
Personal Services (PS)			
Professional Certification Review and Inspections	\$2,000	\$3,095	\$2,310
Excavation Inspections	1,260	2,285	1,400
Special Enforcement Team	1,370	1,370	1,305
Construction Progress Inspections		835	370
Certificate of Correction Follow-Up Inspections		525	145
Gut Renovations Plan Review and Inspections	235	470	470
Pre-Qualify Professional Certification	132	445	445
Low Rise Safety Inspections Program	195	390	390
After-Hours Inspection Team	303	303	303
Sidewalk Shed Lighting Inspections		130	130
Personal Services Subtotal	\$5,495	\$9,848	\$7,268
Other than Personal Services (OTPS)			
Facilities	\$587	\$0	
Vehicles	440	257	
Supplies	187	196	
Other than Personal Services Subtotal	\$1,214	\$453	\$0
TOTAL	\$6,709	\$10,301	\$7,268

SOURCE: Department of Buildings.

NOTE: There is no dedicated OTPS budget for 2010; the Department of Buildings will fund OTPS needs centrally.

The New Units in SEP. The largest unit is Professional Certification Review and Inspection, which oversees construction sites whose plans were certified by a registered architect or professional engineer instead of being reviewed by department plan examiners. This unit is budgeted at \$3.1 million in 2009, reduced to \$2.3 in 2010. In 2010, it is budgeted to have 33 staff (14 inspectors).

The excavation unit is budgeted at \$1.4 million in 2010 with 19 staff including ten inspectors, a reduction from the 2009 budget of \$2.3 million and 32 staff. Excavation operations, if done incorrectly, can cause injuries to construction workers as well as destabilize the surrounding properties.

The new gut renovations, or interior demolitions, unit consists of six positions including two inspectors, with a budget of \$470,000 for 2009. Gut renovations include removing of structural members or floors and if done improperly can make the building structurally unsound. Due to the increase in the number of low-rise sites (buildings between 6 and 14 stories, located mainly outside of Manhattan), DOB established a low-rise safety inspection unit of six inspectors with a 2009 budget of \$390,000. Neither unit saw a budget or headcount reduction for 2010.

Special Enforcement Plan, Budgeted and Actual Staffing, By Unit, 2008-2010					
Unit	2008		2009		2010
	Budgeted Headcount	Headcount, as of 6/30/08	Budgeted Headcount	Headcount, as of 6/30/09	Budgeted Headcount
Professional Certification Review and Inspections	29	25	45	32	33
Excavation Inspections	17	15	32	19	19
Special Enforcement Team	21	12	21	18	20
Construction Progress Inspections			12	2	5
Certificate of Correction Follow-Up Inspections			8	1	2
Gut Renovations Plan Review and Inspections			6	3	6
Pre-Qualify Professional Certification			6	3	6
Low Rise Safety Inspections Program			6	4	6
After-Hours Inspection Team			6	6	6
Sidewalk Shed Lighting Inspections			2	1	2
TOTAL, Special Enforcement Plan	67	52	144	89	105
SOURCES: IBO, Department of Buildings.					
NOTE: Staff counts include administrative, plan examination, engineering, and inspection staff.					

The new construction progress inspections unit consists of five positions including two inspectors and a 2010 budget of \$370,000, a significant reduction from 12 budgeted positions in 2009. This unit conducts multiple inspections during the construction process of new buildings and major alterations to verify that construction activity matches with the approved plans.

SEP also includes six positions to pre-qualify architects and engineers to professionally certify projects, six positions for monitoring after-hours construction activity (which is a significant source of complaints), and two inspectors for sidewalk shed lighting inspections.

The plan also added resources to focus more on enforcement. The Special Enforcement Team, consisting of 20 positions in 2010 including six inspectors, monitors developers with a history of unsafe or illegal activity. Additionally, there will be two positions to reinspect sites where violations were issued but have not been certified as corrected, a major reduction from the eight positions that were planned for 2009.

Prospects for the Future. With both the volume of complaints and construction activity declining, data from 2009 suggest that the department is positioned to provide more extensive oversight of construction projects, assuming the increase in inspection staff is maintained in 2010.

When complaint volume was increasing, the department reallocated its inspection staff— reducing other inspection activity and/or responding to complaints more slowly. However, the pressure of increasing complaint volume on inspection activity appears to have reversed. The rate of increase in

complaints first slowed in 2007 and 2008, growing by 8 percent and 12 percent, respectively. It then declined by 5 percent in 2009, compared to increases of 30 percent or more in 2004, 2005, and 2006, the first few years of 311.

A slowdown in construction activity has also reduced the total number of projects DOB is responsible for overseeing. From January to May 2009 (the most recent data available), the number of new permits issued (excluding renewals) was down 9 percent. However, the decline is much steeper for permits for new construction and major alterations, which were down 49 percent and 16 percent, respectively, than for minor alterations which declined by 7 percent (minor alterations are often interior work by property owners and less responsive to economic conditions). Also, to the extent that complaints are spurred by construction activity, less construction is probably leading to fewer complaints.

Although the Department of Buildings hired new inspectors for the SEP program in 2009, preliminary analysis of end of year data suggests that DOB was simultaneously eliminating vacant positions across the agency. Given the continuing fiscal challenges facing the city, DOB's ability to maintain or further increase inspector staffing in the near term is uncertain.

With a slowdown in construction, the recent increase in inspection staff—if it can be maintained in 2010—may allow DOB to increase construction monitoring inspections, as it did in 2009. However, the slowdown in construction has also created a new challenge: monitoring stalled construction sites to ensure that safety is maintained.

¹ Descriptions of priority categories from NYC Comptroller's May 26, 2004 audit: *Audit Report on the Effectiveness of the Department of Buildings in Investigating Safety-Related Complaints in a Timely Manner (MJ03-093A)*." Available online at http://www.comptroller.nyc.gov/bureaus/audit/05-26-04_MJ03-093A.shtm

² NYC Mayor's Office. July 3, 2007. "Mayor Michael Bloomberg and Buildings Commissioner Patricia Lancaster Announce Landmark Measures to Modernize Buildings Department Operations." Available online at http://www.nyc.gov/portal/site/nycgov/menuitem.c0935b9a57bb4ef3daf2f1c701c789a0/index.jsp?pageID=mayor_press_release&catID=1194&doc_name=http%3A%2F%2Fwww.nyc.gov%2Fhtml%2Fom%2Fhtml%2F2007b%2Fpr230-07.html&cc=unused1978&rc=1194&ndi=1