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**BUILDINGS COMMISSIONER ROBERT LIMANDRI DELIVERS TESTIMONY
BEFORE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
ON PROPOSED CRANE REGULATIONS**

The following is the text of Buildings Commissioner Robert LiMandri's Testimony as prepared

“My name is Robert LiMandri, and I am the Commissioner of the New York City Department of Buildings. I am here today with Stephen Kramer, senior counsel, and Jason Ocharsky, P.E., who is head of the Department’s Cranes division. Thank you for this opportunity to supplement our written submissions with these comments on OSHA’s proposed amendments to its crane regulations.

“New York City has more skyscrapers over 500 feet tall and is more densely populated than any other city in the United States. The cranes that build these skyscrapers tower over adjacent buildings, streets and sidewalks that are typically occupied by hundreds of people. Because of the obvious dangers that improper crane assembly and use pose, New York City has for decades regulated this segment of the construction industry. The City licenses the riggers who oversee crane assembly; we license the operators who lift the concrete, steel, building materials and equipment into those skyscrapers; we review the plans submitted by engineers for crane erection and use. And perhaps most importantly, New York City has inspectors on the City’s streets and at construction sites who are empowered to issue Stop Work Orders and issue violations when cranes are being operated unsafely.

“While many of the provisions of the C-DAC proposal before us today are a welcome modernization of OSHA’s 40 year old crane rules, the published draft states that it will explicitly pre-empt state and local regulation of this critical field. Jurisdictions like New York, which has a highly trained staff of both engineers to review crane design and inspectors to inspect cranes and crane operations, will be precluded from protecting the public from unsafe cranes. Since OSHA has no full time staff dedicated to construction inspections in New York City – indeed it has only a handful of inspectors for all industries for the entire metropolitan region – C-DAC will as a practical matter deregulate the 35 tower cranes and 250 crawler and mobile cranes that operate on the City’s streets each day.

“Reliance on this industry to regulate itself would be a fundamental mistake. Certainly in New York City, the construction industry needs a police force and the cranes and rigging subset is no exception. City inspectors are needed on the street to ensure that equipment is being operated in compliance with basic safety rules. City engineers are needed to peer review crane plans for proper engineering.

“C-DAC, as is typical with OSHA regulations, imposes the primary substantive responsibility on industry to comply with its requirements. We have no quarrel with this. The primary obligation for safety at a construction site must always lie with the construction manager and the construction crew. However, this is not the time to de-regulate the construction industry and remove the City’s building inspectors who function as the day to day ground force to police compliance with safety rules.

“One year ago last Sunday, the nation was reminded of the devastating consequences when basic safety precautions are not followed. On March 15, 2008, a tower crane being jumped on East 51st Street in Manhattan collapsed. Six construction workers were killed as well as a 28 year old woman who was in a brownstone a full block away from the crane on 50th Street. The brownstone was entirely demolished by the falling crane and the lot remains vacant today. On the ground floor of the brownstone was a bar that would soon have been filled with hundreds of revelers celebrating the upcoming St. Patrick’s Day.

“In addition to the tragic loss of life that this accident caused, innumerable lives were disrupted. Workers and civilians were injured; eighteen buildings had to be fully vacated, including three multi-story apartment buildings and several hundred families. A year later, three buildings remain vacated due to outstanding repair work required to make them safe for occupancy.

“While OSHA has issued violations in connection with that accident, clearly reliance on industry to follow OSHA’s rules was not enough to protect the public. After conferring with industry members in this field, the Department quickly moved to strengthen oversight of tower crane assembly and adopted rules that were passed virtually without dissent:

1. Synthetic slings, identified as a possible factor in the collapse, were prohibited unless the manufacturer recommends their use.
2. A professional engineer was required to submit a detailed rigging and assembly plan to the Department prior to tower crane erection or jumps so that our inspectors in the field can confirm that the plan is followed.
3. The rigger and the members of the assembly crew were required to be identified and to meet and review the approved plan on site before the jump to discuss roles and inspect equipment.

4. All members of the assembly crew were required to take a 30 hour safety course in crane assembly and disassembly. All members of the industry should have completed that course by July 1 and our inspectors can check for that course by requiring filing of the crew's certificates before crane assembly.

“These rules do not conflict with OSHA's existing or proposed rules – rather, they represent an immediate local response to a problem we isolated and identified: insufficient knowledge of the manufacturer's rigging directions by the rigger and his crew. While these rules reach a level of granularity that is perhaps greater than OSHA wishes to require nationally, they demonstrate the propriety of allowing localities to act in this field. Our crane division can ensure that the rigging plans are filed, that the identified members of the trained rigging crew have an opportunity to review those plans, and that the job will be stopped if the inspector finds that the plans are not being followed. When a locality has a regulatory system in place that is fully consistent with and supplements federal rules, that regulatory system should not be pre-empted.

“Unfortunately, neither OSHA's regulations nor the City's regulatory scheme were enough to prevent another very serious crane accident in New York in 2008. A few months after the accident on 51st Street, two more construction workers were killed in a second collapse on 91st Street. OSHA issued no violations in connection with that accident. While the Manhattan District Attorney's investigation of that accident, as well as our own, are still on-going, initial reports indicate that the accident was caused by a faulty crane part.

“To make sure that the abysmal safety record of 2008 is not repeated, the City took additional immediate steps to strengthen its enforcement force in the field that supplemented the new rules I outlined above. First, the Department hosted a conference of crane manufacturers that represented 70% of the cranes in use in New York City. In addition to discussing new safety equipment, tracking of crane components, and better crane maintenance logs, a critical problem was identified: manufacturers indicated that they are not being contacted when crane components are being damaged and repaired. Hence a crane can be repaired inconsistent with the manufacturer's engineering standards and transferred to an unknowing operator. Second we held a conference attended by 50 crane construction and safety experts from jurisdictions around the world, including representatives from Chicago, Houston, London, Toronto and OSHA. While permitting requirements vary widely, there was universal agreement that crane maintenance and repair standards need to be improved and that better tracking of critical components is necessary.

“Third, the Department's Crane and Derricks division was completely revamped and strengthened. Today the division is headed by two licensed professional engineers and has a dedicated staff of 6 plan examiners and 11 full-time highly trained inspectors with more being hired. They have completed on average 170 hours of specialized training in the past year. The checklist they use to inspect cranes has been overhauled and today includes over 200 specific items. These inspectors will soon be able to enter inspection reports into handheld computers that can be synchronized with our office

mainframe to track inspections and equipment far more closely. And our crane inspectors are supplemented by our 400 construction inspectors, who provide additional eyes and ears for the crane unit.

“Last year the Department’s crane inspectors conducted 5600 crane inspections. In spite of the heightened awareness caused by the accidents and our increased inspector presence in the field, we did not find uniform compliance with safety requirements. Our inspectors had to issue over 400 stop work orders. Typical problems included tower crane foundation bolts bent out of alignment; bolts improperly tightened; wire rope crimped around sharp edges; hoisting over occupied buildings or streets; mobile cranes improperly set up; and cranes that showed significant wear and tear. These inspection results demonstrate the unequivocal need for constant vigilance over the crane industry.

“A change in culture must come to this industry, and we are already seeing positive signs. For example, last month Department inspectors performed a citywide safety sweep of all tower cranes undergoing jumping operations. Of the 18 jumps performed, all were in compliance with the City’s crane safety regulations. But what we have learned from other safety initiatives is that change comes slowly in the construction industry. Lasting change will occur only when the industry recognizes three things:

1. That someone is watching them;
2. That following the law saves them time and money;
3. That strict enforcement will be taken when shortcuts put people at risk.

“C-DAC, as currently written, displaces local inspectors and relies on the industry to police itself. OSHA does not have the manpower to duplicate or replace the Department’s inspectors and no authority over safety violations that threaten public safety, not worker safety. Indeed OSHA does not have the legal authority to issue Stop Work Orders at all. Yet the Stop Work Order is the most effective tool we have. OSHA must not take this tool away. When a Stop Work Order is issued, everyone on the site -- the property owner, the construction manager, the sub-contractors and the workers -- are made immediately aware of the consequences of breaking safety rules. Paychecks stop. Construction schedules are delayed. The message gets through.

“C-DAC is a welcome step forward in that it will mandate a review of ground conditions prior to crane use, and requires the manufacturer or an engineer to design tower crane foundations and tie-in connections – items New York City has required for decades. However, our experience in New York City demonstrates that this is not enough. Last year our crane plan examiners regularly found significant deficiencies in submitted plans. Typical problems included insufficient accounting for ground conditions, subway tunnels, and utilities under streets and sidewalks; improper outrigger positioning for mobile cranes; designs calculations for tower crane foundations and tie-in connections that are not structurally sound; and the proposed use of cranes in excess of their rated capacity. This is not the time to displace local plan examiners or inspectors. Provisions must be made within the rules to allow local government to exercise their functions consistent with broad national rules.

“Last spring, to ensure a thorough review of high-risk construction operations in New York City – including cranes, hoists, excavation, and concrete operations – Mayor Michael Bloomberg allocated \$4 million to the Department to conduct a High Risk Construction Oversight study. Our consultants’ report is nearing completion, and I will submit it to OSHA for formal consideration as 16 of the 41 specific recommendations are directly related to cranes and would, we believe, be best addressed at the federal level. But I would like to share with you a few of their most critical observations.

“First, with, there is a clear need for more control of critical crane components. OSHA should mandate a uniform labeling system for critical crane parts, and these labels should travel with the cranes as they move from state to state.

“Second, equipment age was identified by our consultants as an important safety factor that must be taken into account in the inspection protocols. A recent audit of tower cranes in New York City revealed that 1 in 4 is between 30 and 40 years old. In Australia a crane’s mechanical systems are required to be stripped apart and inspected every 10 years, and every 25 years for its structural components. In Singapore, cranes older than 20 years are banned from use. C-DAC does not contain any guidelines for dealing with cranes as they age. National guidelines should be adopted here, and high tech “black boxes” measuring the operational history of crane use should be mandated on all new cranes so that useful life may be more accurately determined.

“In closing, I want to re-emphasize the potential risk to public safety posed by improper crane design, installation, repair, or operation – especially in a city as dense and complex as New York. There are no natural safety zones in New York City – particularly in the well-developed canyons of Manhattan where over 80% of the city’s tower cranes are located, and where many of the larger mobile cranes are also found. The industry needs more oversight, not less.

“C-DAC must be amended to provide for a continued local role. In New York City, we have successfully partnered with OSHA to provide several additional layers of oversight to the crane industry. To remove the City’s engineers and inspectors from involvement in this high risk area of the City’s construction industry would be a grave mistake. OSHA and industry cannot do the job alone. Public safety requires the daily presence of a team of local inspectors on the streets to ensure that basic safety rules are being observed. Public safety requires a team of plan examiners to review crane design to ensure proper engineering. This is not an area where public safety should be compromised by displacing the local policing authority.

“I look forward to continuing to work with OSHA on this important topic.

“Thank you for this opportunity to comment.”