

NEW YORK CITY FIRE DEPARTMENT

NEW YORK CITY
SOLAR SUMMIT
JUNE 8, 2010

NYC FIRE CODE
ROOFTOP ACCESS
REQUIREMENTS

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ENACTMENT OF NYC FIRE CODE

- New York City Fire Code enacted in 2008.
 - Took effect on July 1, 2008.
 - First comprehensive revision in a century.
 - Based on International Fire Code, a model code adopted by jurisdictions throughout United States.
 - Addressed longstanding firefighting concerns arising from increasing use of rooftops for telecommunications, air conditioning and emergency power installations, and other purposes.



ROOFTOP FIREFIGHTING OPERATIONS

- Standard operating procedure for firefighters responding to a fire to access roof.
- Roof access is used for “ventilation” and for surveillance and rescue operations in rear yards and courtyards.



ROOFTOP FIREFIGHTING OPERATIONS



- Ventilation involves “opening” the roof bulkhead door, scuttle, and skylights, and, if necessary, cutting 3’ x 6’ roof openings.
- Ventilation serves to vent heat and smoke to facilitate interior firefighting by FDNY personnel.
- Ventilation also serves to prevent explosions and control the horizontal spread of the fire.



NYC FIRE CODE REGULATION OF ROOFTOP ACCESS AND OBSTRUCTIONS

- Rooftop Access and Obstructions (FC504.4)
 - Applies to buildings 100' or less in height with flat roofs (20° or less).
 - Requires roof access - 6' wide openings for every 12 linear feet of accessible exposure, connected to clear path (perimeter access).
 - Requires clear path (6' wide and 9' high) from front to back, side to side.
 - Color coding of electric, natural gas, compressed gas and fuel oil piping (new and existing).
 - Telecommunication transmitter markings (new and existing).



NYC FIRE CODE REGULATION OF ROOFTOP ACCESS AND OBSTRUCTIONS

- A roof of a bulkhead or penthouse would generally need not comply with the requirements of FC504.4 when:
 - it is not accessible from the frontage space of the building or any other exposure accessible to fire apparatus access (i.e., where the roof is set well back from the perimeter of the building); or
 - its location and size is such that access would not be required for firefighting operations.



NYC FIRE CODE REGULATION OF ROOFTOP ACCESS AND OBSTRUCTIONS

■ Clear Path Requirements

- Prefer straight route from front of building and from one side to the other.
- When a straight path is impracticable, clear path may “jog” around a bulkhead or other rooftop obstruction, provided that the path is still “clear” and not confusing or dangerous. Multiple turns in the path should be avoided, and, if excessive, may result in FDNY determining that the route does not satisfy clear path requirement.



IMPACT OF NYC FIRE CODE ON EXISTING BUILDINGS

- Lawfully existing installations are not required to comply with the provisions of FC504.4, except with respect to operational requirements (signage and markings).
- Maintenance and repair (including in-kind replacement) of existing lawful installations do not trigger obligation to comply with FC504.4.
- Obligation to comply with FC504.4 triggered by any alteration to rooftop or a rooftop installation, including any new rooftop installation, such as a solar array.



IMPACT OF NYC FIRE CODE ON EXISTING BUILDINGS

- New rooftop installation or other rooftop alteration does not require Fire Department permit or other approval if the rooftop design is consistent with requirements of FC504.4.
- Department of Buildings submission should include a rooftop plan with roof access and clear path clearly demarcated, and professional certification that plan complies with requirements of FC504.4.



MODIFICATION OF FIRE CODE REQUIREMENTS

- If it is impracticable to comply with Fire Code requirements, application can be made pursuant to FC104.8 for a modification of FC504.4 requirements.
- Submit modification application to Technology Management Unit, FDNY Bureau of Fire Prevention. Use required modification form (available on FDNY website under "Fire Prevention/Fire Prevention Documents/Modifications (Variances)), and include required fee.



MODIFICATION OF FIRE CODE REQUIREMENTS

- FDNY will review modification applications to ensure adequate access to all rooftop areas that FDNY would need to access for firefighting operations.
- Critical considerations include:
 - adequate size and location of access openings to ensure that firefighters can safely traverse parapets from fire apparatus ladders.
 - ability to safely traverse roof to all necessary areas of roof, including bulkheads, rear and side walls, and fire escapes.



MODIFICATION OF FIRE CODE REQUIREMENTS

- FDNY-approved rooftop plan, showing modified rooftop access points and clear path, should be filed with Department of Buildings.
- FDNY is seeking to arrange BIS entry identifying FDNY-approved rooftop plan for convenient reference by future applicants.



COMPLIANCE ISSUES ARISING FROM ROOFTOP SOLAR INSTALLATIONS

- Roof coverage – substantial coverage required for small buildings, making it difficult to comply with rooftop access and clear path, and making it difficult to cut rooftop openings for ventilation.
- Solar panel placement – Placing panels in center of roof to avoid shadows from walls results in use of building perimeter for access, which is inconsistent with firefighting operations and firefighter safety.



FUTURE FIRE CODE DEVELOPMENTS

- New York City Fire Code Revision – next cycle commencing Fall 2010. Consideration of solar issues on agenda.
- Regulation of solar photovoltaic installations approved by International Code Council for 2012 International Fire Code:
 - Roof access requirements to “ensure access to the roof; provide pathways to specific areas of the roof; provide for smoke ventilation operations; and to provide emergency egress from the roof.”



FUTURE FIRE CODE DEVELOPMENTS

- One-family and two-family residential buildings: one or two 3' "clear access pathways"
 - Other occupancies: 4' or 6' perimeter access, with clear path to skylights and roof hatches.
 - Power disconnect switches
 - Marking of circuits (energized electrical lines)
- 2012 International Fire Code will also regulate obstructions arising from rooftop gardens.



FDNY WEBSITE

- Internet Address: www.nyc.gov/fdny
 - Quick links to “Fire Code” and “FDNY Rules”
- Complete text of Fire Code (including 2009 Local Laws) and new FDNY Rules
- Frequently Asked Questions
 - Official interpretations of Fire Code and rules
 - Interim guidelines
- Fire Code Public Inquiry Form
- New/Old Fire Code and FDNY Rule cross-reference tables
- Rulemaking Notification Request Form





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