



# **The impact of inadequate off-loading facilities in commercial office buildings. Upon freight efficiency and security in urban areas**

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## **Abstract**

Substantial impediments to freight efficiency and security exist in the “last mile” of the logistics supply chain in New York City’s Central Business District (CBD). The “last mile,” a largely invisible obstacle in the transportation infrastructure, is a euphemism for the activity that takes place in close proximity to the destination, or delivery point, of product ranging from pharmaceuticals to copy paper. The challenges shippers face in moving products and services to small and large business in New York City are representative of the freight mobility problems that occur in congested urban areas worldwide.

In focus groups and interviews, carrier and shipper representatives repeatedly reported that inadequate off-loading facilities in commercial office buildings (COBs) were a major barrier to freight efficiency in New York’s CBD. These findings were supported in surveys completed by 82 property managers who provided information on their buildings’ age, size, composition of tenancy by industry, number and size of loading bays and the number and capacity of freight elevators. Time and motion studies of vehicular deliveries to loading docks at six COBs with floors ranging from 25-64 were carried out to determine dwell times and truck size.

Despite a 300% increase in truck deliveries to COBs located in the CBD over the past twenty-five years, New York City has not revised zoning regulations for off-loading facilities since 1972. To that end, requirements for the number and size of loading bays and freight elevators in five major American cities were compared with those of New York City. It was found that loading bay requirements for New York City were the lowest of the cities surveyed. There were no requirements for freight elevators in the cities under study.

Following the terrorist attacks of September 11, 2001, loading dock security, which was always a concern, became a major issue for COB property managers. This has led to the imposition of more rigorous security procedures at many off-loading facilities that have increased the cost of moving goods into the CBD and doing business in New York.

The formulation of guidelines for an appropriate number and size of loading bays and sufficient freight elevators and the development of strategies for retrofitting existing off-loading facilities will offer broad societal benefits that will increase freight efficiency and security and decrease energy consumption, on-street congestion and air pollution.

*Keywords:* Freight efficiency; Security; Off-loading facilities; Loading bays; Freight elevators.

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