



CITY OF BOSTON • MASSACHUSETTS

OFFICE OF THE MAYOR  
MARTIN J. WALSH

September 8, 2014

**TO THE CITY COUNCIL**

Dear Councilors:

I transmit herewith an Ordinance to Protect Vulnerable Road Users in the City of Boston. This ordinance establishes requirements for protection equipment to be installed on vehicles contracted by the City of Boston, to be constructed and/or equipped as to offer effective protection to unprotected road users against the risk of falling under the sides of the vehicle and being caught under the wheels. In 2013, the City of Boston - a collaboration between the Mayor's Office of New Urban Mechanics and the Public Works Department - undertook the largest municipal pilot of truck side guards in the nation. After over a year of testing several different types of side guards in the field on 16 vehicles, data from studies and our own field observations have led to this ordinance.

This ordinance will implement safety protections allowing drivers of large trucks to see in the areas in front of them where children and cyclists are invisible to the driver, and also to be able to see the sides better, reducing the risk of incidents involving cyclists, making Boston a safer place for all road users.

I urge your Honorable Body to act favorably on the proposed amendment.

Sincerely,

Martin J. Walsh  
Mayor of Boston

SEP 10 2014  
CITY OF BOSTON

# CITY OF BOSTON

## IN CITY COUNCIL

*Be it ordained by the City Council of Boston, as follows that the City of Boston Code be amended by adding the following ordinance:*

SECTION 1. City of Boston Code, Ordinances, Chapter IV is hereby amended by inserting after Section 4-7 the following new section:--

### 4-8 AN ORDINANCE REQUIRING CITY VENDORS TO SAFEGUARD UNPROTECTED ROAD USERS.

#### 4-8.1 Purpose.

Vehicles covered by this ordinance shall be so constructed and/or equipped as to offer effective protection to unprotected road users against the risk of falling under the sides of the vehicle and being caught under the wheels.

#### 4-8.2 Definitions.

The words defined in this ordinance shall have the meanings set forth below whenever they appear in this section unless the context in which they are used clearly requires a different meaning, or a different definition is prescribed for a particular paragraph or provision.

- (i) *Approval of a vehicle* means the approval of a complete vehicle type with regard to its lateral protection.
- (ii) *City* means the City of Boston.
- (iii) *Department(s)* shall mean those City of Boston Departments, Authorities, Agencies, Commissions and any other instrumentality acting on behalf of another ("Awarding Authorities") under the supervision of the Mayor or persons appointed by him/her.
- (iv) *Contract* means the contract between a Vendor and a Department resulting from a request for proposals or an invitation for bids issued by the City to do any work or to make any purchase.
- (v) *Gross weight* means the sum of the weights transmitted to the road surface by all the wheels of the vehicle.
- (vi) *Large vehicle* means a motor vehicle with a gross weight exceeding 10,000 lbs; or a trailer with an unladen mass exceeding 10,000 lbs; or a semi-trailer with a gross weight exceeding 26,000 lbs.
- (vii) *Lateral protective device* means an apparatus installed on large vehicles between the front and rear wheels to help prevent injuries to unprotected road users, particularly from falling underneath the vehicle.
- (viii) *Mayor* shall mean the Mayor or persons designated by him/her.
- (ix) *Otherwise qualified* means any Vendor that meets all other criteria for the award of a Contract.

- (x) *Unladen mass* means the weight of the vehicle in running order, unoccupied and unloaded, but complete with fuel, coolant, lubricant, tools, and spare wheel, if supplied by the vehicle manufacturer as standard equipment.
- (xi) *Unprotected road users* mean pedestrians, cyclists, or motorcyclists using the road in such a way that they are liable to fall under the sides of the vehicle and to be caught under the wheels.
- (xii) *Vendor* means any firm, vendor, contractor, or supplier of goods and/or services to the City of Boston, and any of its subcontractors.

#### **4-8.3 Requirements for Large Vehicles.**

When any officer or board in charge of a Department or other awarding agency of the City issues requests for proposals or invitations for bids to do any work or make any purchase, said officer or board shall contract with a responsible and eligible Vendor that has also installed, or that demonstrates that it will install, side under-ride guards, convex mirrors, and appropriate warning signage on all large vehicles it uses or will use within the City of Boston in connection with the Contract in preference of otherwise qualified Vendors.

#### **4-8.4 Policy Implementation.**

Every Large vehicle or a conventional cab configuration in which more than half of the engine length is forward of the foremost point of the windshield base and the steering wheel hub is in the forward quarter of the vehicle length used by a Vendor in connection with a Contract shall be equipped with convex mirrors, cross-over mirrors, decals, and side under-ride guards affixed to the sides of such vehicles in a manner consistent this section and with rules and regulations further promulgated by the Boston Transportation Department, the Boston Police Department, and the Inspectional Service Department.

#### **4-8.5 Technical Specifications for the Equipment of Lateral Protective Devices, Convex Mirrors and Convex Cross-over Mirrors, and Safety Decals**

##### **(a) Lateral Protective Devices**

Large vehicles must be constructed or equipped in such a way as to offer, throughout their length, effective protection to unprotected road users against the risk of falling under the side of the vehicle and being caught under the wheels. This requirement will be considered satisfied either

1. If the vehicle is equipped with a special lateral protective device (side under-ride guard) in accordance with the requirements of Section 4-8.5b
2. If the vehicle is so designed and/or equipped at the side that, by virtue of their shape and characteristics, its component parts can be incorporated and/or regarded as replacing the lateral protective device. Components whose combined function satisfies the requirements set out in Section 4-8.5b below are considered to form a lateral protective device.

##### **(ii) Technical Specifications**

The lateral protective device can use horizontal rails or a continuous flat surface that meets the following dimensional requirements:

1. The lower edge of the lateral protective device shall at no point be more than 21.5 inches above the ground
2. The upper edge of the lateral protective device shall not be more than 14 inches below that part of the structure of the vehicle, cut or contracted by a

vertical plane tangential to the outer surface of the tires, excluding any bulging close to the ground

3. Not more than 12 inches to the rear of the vertical plane perpendicular to the longitudinal plane of the vehicle and tangential to the outer surface of the tire on the wheel immediately forward of the guard
4. The rearward edge of the lateral protective device shall not be more than 12 inches forward of the vertical plane perpendicular to the longitudinal plane of the vehicle and tangential to the outer surface of the tire on the wheel immediately to the rear
5. The lateral protective device shall not increase the overall width of the large vehicle and the main part of its outer surface shall not be more than 5 inches inboard from the outermost plane (maximum width) of the vehicle.
6. Every lateral protective device shall be essentially rigid and securely mounted. They shall not be liable to loosening due to vibration in normal use of the vehicle. The lateral protective device shall be considered suitable if it is capable of withstanding a force of 440 pounds applied perpendicularly to any part of its surface by the center of a ram the face of which is circular and not more than 8.5 inches in diameter, and during such application
7. No part of the side under-ride guard shall be deflected by more than 6 inches; and,
8. No part of the side under-ride guard which is less than 10 inches from its rearmost part shall be deflected by more than 1.25 inches.

**(iii) Convex Mirrors**

Large vehicles must be equipped with convex mirrors to enable the operator of the large vehicle to see all points on an imaginary horizontal line which:

1. Is three feet above the road;
2. Is one foot directly forward from the midpoint of the front of such large vehicle; and extends the full width of such large vehicle

**(iv) Cross-Over Mirrors**

Large vehicles must be equipped with convex cross-over mirror on the front of the vehicle to enable the operator of the large vehicle with a conventional cab configuration in which at least more than half of the engine length is forward of the foremost point of the windshield base and the steering wheel hub is in the forward quarter of the vehicle length to allow the driver to see:

1. Any person or object at least three feet tall passing in front of the vehicle.
2. The area from the front bumper to where direct vision is possible.

**(v) Safety Decals**

Large vehicles must be equipped with a minimum of two (3) safety decals on the rear and sides that warn pedestrians and cyclists of blind spots:

1. Decals should be 'safety yellow' in color
2. Decals should include language or images warning of the blind spot locations on the vehicle.

3. Decals should be placed, when possible, on or near the lateral protection devices.

#### **4-8.6 Compliance and Enforcement.**

- (a) Non-compliance with the provisions of this section 4-8 by a Vendor shall be grounds for
  1. A fine of \$100 for the first offense on a Contract, escalating to \$150 for the second offense, and \$200 for the third offense.
  2. Termination of the Contract.
- (b) This section 4-8 shall be enforced by the Inspectional Services Department's Weights and Measures Division and the Boston Police Department. The Boston Police Department and The Inspectional Services Department shall determine non-compliance with the provisions of this section 4-8 and any applicable regulations and may make recommendations, if any, to the contracting Department.
- (c) The Inspectional Services Department shall issue, for a Vendor's large vehicles, a compliance certification through a vehicle inspection of convex mirrors, lateral protective devices, and decals prior to the date Vendor begins work on a Contract. A fee to cover the costs associated with inspection will be determined by the Commissioner of the Inspectional Services Department and passed on to the Vendor.
- (d) Vehicle compliance will be certified with a sticker denoting the year of inspection. Inspections must be updated Biennially.
- (e) Vendors may file for a waiver as stipulated in section 4-8.7. Waiver applications must be made in writing at the time of contract bid to the Commissioner of Inspectional Services, the Department requesting services, and the Commissioner of Transportation. Waiver applications filed after contract bids will not be considered.
- (f) Inspectional Services Department shall issue an annual report to be filed with the Mayor and the City Clerk and transmitted by the Clerk to the City Council on the actions undertaken by the Inspectional Services Department on enforcement of this ordinance no later than May 31<sup>st</sup> of each year. The annual written report shall include, but not be limited to, the following items for the twelve (12) month period prior to the report's due date:
  1. Any financial costs to the City associated with this ordinance
  2. The number of vehicles this ordinance applied to
  3. The number of vehicle exemptions, if any
  4. The total number of inspections performed by inspectors and any subsequent violations of this ordinance

#### **4-8.7 Waiver.**

- (a) If a Vendor or Department determines that extenuating circumstances exist which prevent the Vendor from complying with this section 4-8, then such Vendor or

Department may request an exemption from compliance to the City of Boston with its provisions. Waivers are issued at the sole discretion of the City of Boston.

- (b) This ordinance does not apply to
  - (i) A motor vehicle which has a maximum speed not exceeding 15 mph
  - (ii) An agricultural trailer
  - (iii) A fire engine
  - (iv) An emergency medical vehicle
  - (v) A vehicle which is being driven or towed to a place where by previous arrangement a side under-ride guard is to be fitted so that it complies with this section 4-8
  - (vi) Vehicles used solely for the purpose of snow removal.
  - (vii) Street sweeper vehicles
  - (viii) City of Boston Fleet Vehicles purchased before July 1, 2014

**4-8.8 Conformity with Existing State and Federal Law.**

This section shall be implemented in conformity with state and federal law.

**4-8.9 Severability.**

The provisions of this section are severable and if any provision, or portion thereof, should be held to be unconstitutional or otherwise invalid by any court of competent jurisdiction, such unconstitutionality or invalidity shall not affect the remaining provisions, which shall remain in full force and effect.

**4-8.10 Effective Date.**

- (a) This section shall take effect one hundred and eighty days after passage and shall apply to all new Contracts awarded and to all renewal terms of existing Contracts executed after that date.
- (b) City of Boston fleet vehicles purchased after July 1, 2014 that are Large Vehicles as defined herein will be required to comply with the provisions of this section.
- (c) The Inspectional Services Department, Boston Police Department, and the Transportation Department shall issue rules and regulations to implement the provisions of this section within ninety days of the date it takes effect.

I HEREBY CERTIFY THAT  
THE FOREGOING, IF PASSED IN  
THE ABOVE FORM, WILL BE IN  
ACCORDANCE WITH LAW

BY

  
EUGENE L. O'FLAHERTY  
CORPORATION COUNSEL

*ANC*