

CHAPTER 33

SITE WORK, DEMOLITION AND CONSTRUCTION

780 CMR 3301.0 GENERAL

3301.1 Scope: The provisions of 780 CMR 33 shall apply to all construction in connection with work requiring a permit for structures in accordance with 780 CMR.

3301.2 Other laws: Nothing herein contained shall be construed to nullify any rules, regulations or statutes of state or federal agencies governing the protection of the public or workers from health or other hazards.

When not covered by the provisions of 780 CMR, 454 CMR 10.00: Construction Industry Rules and Regulations, shall apply.

3301.3 Combustible and explosive hazards: The provisions of 780 CMR which apply to the storage, use or transportation of *explosives*, highly *flammable* and combustible substances, gases and chemicals shall be construed as supplemental to the requirements of the federal laws, the regulations of the Department of Transportation (DOTn) and **527 CMR 13.00, Keeping, Storage, Use, Manufacture, Sale, Handling, and Transportation of Explosives, as listed in Appendix A.**

780 CMR 3302.0 CONSTRUCTION DOCUMENTS AND SPECIAL PERMITS

3302.1 Temporary construction: Before any construction operation is started, *construction documents* shall be filed with the code official showing the design and construction of all sidewalk sheds, temporary vehicular passageways, trestles, foot bridges, guard fences and other similar devices required in the operation. Approval shall be secured from the *code official* before the commencement of any work.

3302.2 Special permits: All special licenses and permits for the storage of materials on sidewalks and highways, for the use of water or other public facilities and for the storage and handling of *explosives*, shall be secured from the administrative authorities having jurisdiction.

3302.3 Temporary encroachments: Sidewalk sheds, underpinning and other temporary protective guards and devices shall not project beyond the *interior* and *street lot lines* except where required to insure the safety of the adjoining property and the public, subject to approval. Where necessary, the

consent of the adjoining property owner shall be obtained.

780 CMR 3303.0 TESTS

3303.1 Loading: It shall be unlawful to *load* any structure, temporary support, sidewalk bridge or sidewalk shed or any other device during the construction or demolition of any building or structure in excess of its safe working capacity as provided for in 780 CMR 16 for allowable *loads* and working stresses.

780 CMR 3304.0 PROTECTION OF PUBLIC

3304.1 General: Wherever a building or structure is erected, *altered*, repaired, removed or demolished, the operation shall be conducted in a safe manner and suitable protection for the general public shall be provided.

3304.2 Fences: Every excavation or area of construction on a site located five feet (1524 mm) or less from the *street lot line* shall be enclosed with a barrier not less than six feet (1829 mm) high to prevent the entry of unauthorized persons. Where located more than five feet (1524 mm) from the *street lot line*, a barrier shall be erected where required by the code official. All barriers shall be of adequate strength to resist wind pressure as specified in 780 CMR 1611.0.

3304.3 Sidewalk bridge: Wherever the ground is excavated under the sidewalk, a sidewalk bridge shall be constructed at least four feet (1219 mm) wide, or a protected walkway of equal width shall be erected in the street, provided that the required permit for such walkway is obtained from the administrative authority.

3304.4 Sidewalk shed: Sidewalk sheds shall be as provided for in accordance with 780 CMR 3304.4.1 through 3304.4.4 except where sidewalks are closed by the authority having jurisdiction.

3304.4.1 Within ten feet of street lot line: Where any building or part thereof which is located within ten feet (3048 mm) of the *street lot line* is to be erected or raised to exceed 40 feet (12192 mm) in *height*, or wherever a building which is more than 40 feet (12192 mm) in *height* and is within ten feet (3048 mm) of the *street lot line* is to be demolished, a sidewalk shed shall be erected

THE MASSACHUSETTS STATE BUILDING CODE

and maintained for the full length of the building on all street fronts for the entire time that work is

3304.4.2 Within 20 feet of street lot line: Where the building being demolished or erected is located within 20 feet (6096 mm) of the *street lot line* and is more than 40 feet (12192 mm) in *height*, exterior flare fans or catch platforms shall be erected at vertical intervals of not more than two stories.

3304.4.3 Buildings higher than six stories: Where the building being demolished or erected is more than six stories or 75 feet (22860 mm) in *height*, unless set back from the *street lot line* a distance of more than ½ of the height of the building, a sidewalk shed shall be provided.

3304.4.4 Walkway: An adequately lighted walkway at least four feet (1219 mm) wide and eight feet (2438 mm) high in the clear shall be maintained under all sidewalk sheds for pedestrians. Where ramps are required, the ramps shall conform to the provisions of 780 CMR 33 and 780 CMR 1016.0.

3304.5 Thrust-out platforms: Thrust-out platforms or other substitute protection in lieu of sidewalk sheds shall not be used unless approved and deemed adequate to insure the public safety. Thrust-out platforms shall not be used for the storage of materials.

3304.6 Watchman: Wherever a building is being demolished, erected or *altered*, a watchman shall be employed to warn the general public when intermittent hazardous operations are conducted across the sidewalk or walkway.

780 CMR 3305.0 FIRE HAZARDS

3305.1 General: The provisions of 780 CMR and of the *527 CMR: the Massachusetts State Board of Fire Prevention Regulations*, listed in *Appendix A* shall be strictly observed to safeguard against all fire hazards attendant upon construction operations.

3305.2 Portable fire extinguishers: All buildings under construction, *alteration* or demolition shall be provided with at least one portable fire extinguisher with a minimum 2-A:20-B:C rating at each *exit* on all floor levels where combustible materials have accumulated. A portable fire extinguisher with a minimum 2-A:20-B:C rating shall also be provided in every storage and construction shed. Additionally, at least one portable fire extinguisher shall be provided in accordance with the *527 CMR: the Massachusetts State Board of Fire Prevention Regulations*, listed in *Appendix A* where special hazards, such as *flammable* or *combustible liquid* storage, exist.

performed on the exterior of the building.

3305.2.1 Steam boilers: *All temporary or permanent high-pressure steam boilers shall be operated, or be in charge of an individual in possession of a current engineers or firemans license in accordance with the provisions of M.G.L. c. 146 and 522 CMR the Board of Boiler Rules as listed in Appendix A. When such boilers are located within a building or within ten feet thereof, all such boilers shall be enclosed with approved noncombustible construction.*

3305.3 Standpipes: *Standpipes* required in buildings by 780 CMR 914.0 shall be installed when the work of the building progresses more than 40 feet (12192 mm) above the lowest level of fire department vehicle access. The *standpipes* shall be either temporary or permanent in nature, and with or without a *water supply*, provided that such *standpipes* conform to the requirements of 780 CMR 914.0 as to number of risers, capacity, outlets and materials. Access from the street to such *standpipes* shall be maintained at all times.

3305.3.1 Height: The *standpipe system* shall be carried up with each floor and shall be installed and ready for use as each floor progresses. *Standpipes* shall be extended as construction progresses to within one floor of the highest point of construction having secured decking or flooring.

3305.3.2 Outlets: Hose outlets shall be provided with caps and attachment chains.

3305.3.3 Fire department connections: For each temporary or permanent *standpipe* installation, there shall be provided, at the street level, one or more two-way fire department inlet connections. Access shall be provided to fire department inlet connections at all times, and such connections shall be prominently marked (see 780 CMR 915.8).

3305.3.4 Buildings under demolition: Where a building is being demolished and a *standpipe* is existing within such a building, such *standpipe* shall be maintained in an operable condition so as to be available for use by the fire department. Such *standpipe* shall be demolished with the building but shall not be demolished more than one floor below the floor being demolished.

780 CMR 3306.0 MAINTENANCE

3306.1 General: It shall be unlawful to remove or render inoperative any structural, fire protection or sanitary safeguard or device herein required except

where necessary for the actual installation and prosecution of the work.

780 CMR 3307.0 HEALTH HAZARDS

3307.1 General: Every construction or maintenance operation which results in the diffusion of dust,

3307.2 Removal of dust: Dust, sand blasts or other harmful agents which are used or which occur in construction operations shall be disposed of at or near the point of origin to prevent diffusion over adjoining premises or streets.

3307.3 Protective equipment: Facilities shall be provided in approved closed containers for housing the necessary vision, respiratory and protective equipment required in welding operations, and in accordance with the regulations of the administrative authority.

780 CMR 3308.0 PROTECTION OF ADJOINING PROPERTY

3308.1 General: Adjoining property shall be completely protected from any damage caused by the construction of a structure when the owner of the adjoining property permits free access to the structure at all reasonable times to provide the necessary safeguards in accordance with 780 CMR 3310.0.

780 CMR 3309.0 EXISTING BUILDINGS

3309.1 Protection: All adjoining public and private property shall be protected from damage caused by construction.

3309.2 Chimney, soil and vent stacks: Wherever a new building or structure is erected to greater or lesser *heights* than an adjoining building, the construction and extension of new or existing chimneys shall conform to the provisions of the mechanical code listed in *Appendix A*, and the construction and extension of soil and vent stacks and the location of window openings shall comply with the provisions of **248 CMR**.

3309.3 Adjoining walls: The owner of the new or *altered* structure shall preserve all adjoining independent and party walls from damage as provided for herein. The owner shall underpin where necessary and support the adjoining building or structure by proper foundations to comply with 780 CMR 3310.0.

3309.3.1 Maintenance: In case an existing party wall is intended to be used by the person who causes an excavation to be made, and such party wall is in good condition and sufficient for the use of both the existing and proposed building, such

stone and other small particles, toxic gases or other harmful substances in quantities hazardous to health shall be safeguarded by means of local *ventilation* or other protective devices to insure the safety of the public as required by the regulations of the administrative authority.

person shall preserve the party wall from injury and shall support the party wall by proper foundations at said person's own expense, so that the wall is and remains as safe and useful as the party wall was before the excavation was commenced. During the demolition, the party wall shall be maintained weatherproof and structurally safe by adequate bracing until such time as the permanent structural supports have been provided.

3309.3.2 Beam holes: Where a structure involving a party wall is being demolished, the owner of the demolished structure shall, at his or her own expense, bend over all wall anchors at the beam ends of the standing wall and shall brick up all open beam holes and otherwise maintain the safety and usefulness of the wall.

3309.3.3 Party wall exits: A party wall balcony or *horizontal exit* shall not be destroyed unless and until a substitute *means of egress* has been provided and approved.

3309.4 Adjoining roofs: Where a new building or demolition of an existing building is being conducted at a greater *height*, the roof, roof outlets and roof structures of adjoining buildings shall be protected against damage with adequate safeguards by the person doing the work.

780 CMR 3310.0 DEMOLITION AND EXCAVATION

3310.1 Notice of intent: The person intending to cause a demolition or an excavation shall deliver *written* notice of such intent to the owner of each potentially affected adjoining *lot*, building or structure at least one week prior to the commencement of work. The notice shall request license to enter the potentially affected *lot*, building or structure prior to the commencement of work and at reasonable intervals during the work to inspect and preserve the *lot*, building or structure from damage.

3310.2 Protection of adjoining property: If afforded the necessary license to enter the adjoining *lot*, building or structure, the person causing the demolition or excavation to be made shall at all times and at his or her own expense preserve and protect the *lot*, building or structure from damage or injury. If the necessary license is not afforded, it shall be the duty of the owner of the adjoining *lot*,

THE MASSACHUSETTS STATE BUILDING CODE

building or structure to make safe his or her own property, for the prosecution of which said owner shall be granted the necessary license to enter the premises of the demolition or excavation.

3310.2.1 Removal of debris: All waste materials shall be removed in a manner which prevents injury or damage to persons, adjoining properties and public rights-of-way.

3310.4 Grading of lot: Where a structure has been demolished or removed and a building permit has not been approved, the vacant *lot* shall be filled, graded and maintained in conformity to the established elevation of the street grade at curb level nearest to the point of demolition or excavation. Provision shall be made to prevent the accumulation of water or damage to any foundations on the premises or the adjoining property.

3310.5 Utility connections: All service utility connections shall be discontinued and capped in accordance with the *approved rules* and the requirements of the authority having jurisdiction.

780 CMR 3311.0 RETAINING WALLS AND PARTITION FENCES

3311.1 General: Where the adjoining grade is not higher than the legal level, the person causing an excavation to be made shall erect, where necessary, a retaining wall at his or her own expense and on his or her own land. Such wall shall be built to a height sufficient to retain the adjoining earth, shall be properly coped as required in 780 CMR 1825.0 and shall be provided with a guardrail or fence not less than 42 inches (1067 mm) in height.

780 CMR 3312.0 STORAGE OF MATERIALS AND CONSTRUCTION EQUIPMENT

3312.1 General: The term "construction equipment" shall mean the machinery, tools, derricks, hoists, scaffolds, platforms, runways, ladders and all material-handling equipment, safeguards and protective devices used in construction operations. The term "runway" shall mean an aisle or walkway constructed or maintained as a temporary passageway for pedestrians or vehicles. All construction materials and equipment required for the permitted construction shall be stored and placed so as not to endanger the public, the workers or adjoining property.

3312.2 Design capacity: Construction materials and equipment stored within the building, or on sidewalks or sheds, shall be placed so as not to overload any part of the construction beyond the

3310.3 Notice to the code official: If the person causing a demolition or excavation to be made is not afforded license to enter an adjoining structure, that person shall immediately notify in *writing* both the code official and the owner of the adjoining property that the responsibility of providing support to the adjoining *lot* building or structure has become the exclusive responsibility of the owner of the adjoining property.

design capacity, nor interfere with the safe prosecution of the work.

3312.3 Pedestrian walkways: Construction materials and equipment shall not be stored on the street without a permit issued by the administrative authority having jurisdiction. Where so stored, such materials or equipment shall not unduly interfere with vehicular traffic or the orderly travel of pedestrians on the highway or street. The piles shall be arranged to maintain a safe walkway not less than four feet (1219 mm) wide, unobstructed for its full length, and adequately lighted at night and at all necessary times for the use of the Public.

3312.4 Obstructions: Construction materials and equipment shall not be placed or stored so as to obstruct access to fire hydrants, *standpipes*, fire or police alarm boxes, utility boxes, catch basins or manholes, nor shall such material and equipment be located within 20 feet (6096 mm) of a street intersection, or placed so as to obstruct normal observations of traffic signals or to hinder the use of public transit loading platforms.

780 CMR 3313.0 REMOVAL OF WASTE MATERIAL

3313.1 General: Material shall not be dropped by gravity or thrown outside the exterior walls of a building during demolition or erection. Wood or metal chutes shall be provided for the removal of such materials. Where the removal of any material will cause an excessive amount of dust, such material shall be wet down to prevent the creation of a nuisance.

780 CMR 3314.0 STAIRWAYS

3314.1 Temporary stairways: Where a building has been constructed to a *height* greater than 50 feet (15240 mm) or four stories, or where an existing building exceeding 50 feet (15240 mm) in *height* is *altered*, at least one temporary lighted stairway shall be provided unless one or more of the permanent stairways are erected as the construction progresses.

780 CMR 3315.0 LIGHTING

3315.1 General: All *stairways* and parts of buildings under demolition, erection or repair shall be adequately lighted while persons are engaged at work, in accordance with the provisions of 780 CMR 1024.0 and **527 CMR 12.00**.