

10 DEVELOPMENT STANDARDS

10.1	ACCESSORY STRUCTURES.....	479	10.8	SIGNS	494
	General	479		Purpose	494
	Accessory Structures	479		Applicability	494
10.2	FENCES & WALLS	482		Development Review	494
	Fences	482		Address Signs	494
	Retaining Walls	482		Exempt Signs	494
10.3	GREEN FACTOR	483		Prohibited Signs	494
	Overview	483		Temporary Signs	495
	Calculation	483		Sign Maintenance	495
	Eligibility	483		Removal	495
	Measurement	483		Sign Illumination	495
10.4	LANDSCAPING	484		Blade Sign	496
	Purpose	484		Wall Sign	497
	Applicability	484		Awning / Canopy Sign	498
	Landscape Installation	484		Suspended Sign	499
	Landscape Maintenance	484		Sidewalk Sign	500
	Site Landscaping	484		Window Sign	501
	Landscape Buffers	485		Display Case	502
	Parking Lot Landscaping	486		Vertical Blade / Banner Sign	503
	Tree Protection	486		Yard Sign	504
10.5	OUTDOOR CAFE SEATING.....	487	10.9	SUSTAINABLE DEVELOPMENT	507
	Applicability	487		Green Buildings	507
	General	487		Green Roofs & Storm Water Management	507
	Cafe Area Dimensions	487		Roof Albedo	507
	Furniture	487		Environmental Performance	507
	Weather Protection	488	10.10	WIRELESS COMMUNICATION.....	508
	Enclosures	488		Purpose	508
10.6	OUTDOOR LIGHTING	489		Applicability	508
	Intent	489		Development Review	508
	Purpose	489		Wireless Communication Towers	508
	Applicability	489		Wireless Communication Antennas	508
	Lighting Standards	489		Ancillary Structures	509
10.7	SCREENING.....	493		Design Guidelines	509
	Loading Facilities	493		Abandonment	509
	Service Areas	493			
	Mechanical Equipment	493			

10.1 ACCESSORY STRUCTURES

1. General

- a. Unless otherwise specified, the development of an accessory structures requires the submittal of a development review application to the Building Official.
- b. Accessory structures may not be constructed prior to the following:
 - i. construction of a principal building type; or
 - ii. issuance of a special permit for an accessory use, as applicable.
- c. The Building Official shall determine when a structure is accessory to the principal building of a lot. To determine that a structure is accessory, the Building Official must find that the structure:
 - i. is customarily found in association with a permitted accessory use;
 - ii. is clearly incidental and subordinate to the principal building in terms of area, size, function, and location;
 - iii. is operated and maintained under the same ownership and on the same site as the principal building; and
 - iv. not attached to a principal structure.
- d. Unless otherwise specified, accessory structures are permitted to encroach any side or rear setback, provided that at least three (3) feet is maintained from the vertical plane of any lot line.
- e. Accessory structures are not permitted to encroach any maximum front setback.

2. Accessory Structures

- a. Amateur Radio Equipment
Antennas located on ground-mounted towers and roof-mounted support structures used to broadcast an amateur (ham) radio station licensed by the Federal Communications Commission (FCC). The following standards apply:
 - i. Ground-mounted towers are permitted only in the rear yard and must be located a minimum of ten feet from any lot line and any overhead electric distribution or transmission lines. The tower must be fully enclosed by a fence or wall of at least four feet in height.
 - ii. Ground-mounted towers may not exceed thirty-five (35) feet, measured from the base of the supporting tower to its tallest point.
 - iii. A roof-mounted antenna, when fully extended, is limited to a maximum height of ten feet above the height of the structure to which it is mounted.
 - iv. No more than one antenna, whether ground-mounted or roof-mounted, is permitted per lot.
- b. Apiary
A structure for the keeping of honeybees. The following

standards apply:

- i. Apiaries and other beekeeping supplies are not permitted within twenty (20) feet of a front lot line.
- c. Arbor
A structure with an open frame, freestanding or attached to another structure, with horizontal or vertical latticework often used as a support for ornamental vines and/or climbing plants. The following standards apply:
 - i. Arbor are not permitted to exceed eight (8) feet in height.
- d. Carport
A covered structure that provides protection to motor vehicles from the elements. The following standards apply:
 - i. A carport must be set back at least 20 feet from any front lot line.
 - ii. Where an improved alley is available, carport access must take place from the alley.
 - iii. A carport is limited to fifteen (15) feet in height and a width and depth of no more than 24 feet.
 - iv. A carport must be setback a minimum of three (3) feet from any side or rear lot line unless constructed of fireproof materials.
- e. Chicken Coop (Hen House)
A structure for the keeping of chickens, with nest boxes for egg-laying and perches where the birds can sleep. The following standards apply:
 - i. Chicken coops are not permitted within 20 feet of a front lot line.
- f. Cold Frame
An unheated outdoor structure built close to the ground, typically consisting of, but not limited to, a wooden or concrete frame and a top of grass or clear plastic used for protecting seedlings and plants from cold weather. The following standards apply:
 - i. A cold frame is limited to six and one-half (6.5) feet in height.
 - ii. Any plastic covering of a cold frame must be removed and stored when plant cultivation is not in process.
- g. Compost Bin
An outdoor container in which garden refuse and other organic waste is deposited in order to produce compost. The following standards apply:
 - i. Compost bins must have a ground gate and pest proof lids.
- h. Construction Trailer or Office
A temporary structure providing office space for project management at a construction site. The following standards apply:
 - i. Construction trailers and/or offices must comply with the setbacks applicable to principal buildings for the appropriate district.

10. DEVELOPMENT STANDARDS

Accessory Structures

- i. Donation Box
A container, usually made of metal, with a one-way drop to allow donation of household items. The following standards apply:
 - i. Donation boxes are not permitted in the Neighborhood Residence or Urban Residence districts.
 - ii. Only one (1) donation box is permitted per lot.
 - iii. Containers must be watertight and secured to the ground.
- j. Farm Stand
A temporary structure for the display and sale of clean, whole, unprocessed produce, eggs, or honey cultivated on site. The following standards apply:
 - i. One (1) farm stand is permitted per lot.
 - ii. Product display & area for retail sales is not permitted to exceed fifty (50) square feet.
 - iii. The farm stand, associated product display, and signage must be stored out of sight when not in use.
- k. Gazebo
A detached structure covered by a roof, occasionally enclosed with screening, and intended for outdoor recreational use.
- l. Greenhouse
A structure, primarily of transparent material, in which temperature and humidity can be controlled for the cultivation or protection of plants or other horticultural products.
 - i. Green houses on the roofs of buildings must be located at least five (5) feet from the edge of the roof and are limited to a maximum of eighteen (18) feet in height above the surface of the roof.
- m. Hoop House
A temporary structure typically made of, but not limited to, piping or other material covered with a translucent material for the purpose of growing food or ornamental crops. The following standards apply:
 - i. A hoop house is limited to six and one-half (6.5) feet in height.
 - ii. The covering of a hoop house must be removed and stored when plant cultivation is not in process.
- n. Market Stand
A partially-enclosed structure used for outdoor retail sales.
- o. Outbuilding
A fully-enclosed structure, whether attached to or detached from a principal building, used for overnight parking of up to two (2) motor vehicles, a home occupation, or as a playroom for children. The following standards apply:
 - i. One (1) outbuilding is permitted per lot.
 - ii. A garage, whether attached or detached, must be set back at least twenty (20) feet from any front lot line.
 - iii. When a lot abuts an improved alley, vehicular access to an outbuilding used as a garage must be provided from the alley.
 - iv. An outbuilding is limited to fifteen (15) feet in height and a width and depth of no more than twenty four (24) feet.
 - v. An outbuilding must be setback a minimum of three (3) feet from any side or rear lot line unless constructed of fireproof materials.
- p. Pergola
A structure consisting of parallel colonnades supporting an open roof or girders and cross rafters, often shading an outdoor amenity area.
- q. Pool or Hot Tub
A structure filled with water used for recreation or physical therapy. The following standards apply:
 - i. Pools and hot tubs must be setback at least five (5) feet from a side or rear lot line, ten (10) feet from a front lot line, and five (5) feet from any principal structure in residential use.
 - ii. Uncontrolled access to pools or hot tubs must be prevented using a wall, fence, or other acceptable means.
- r. Real Estate Trailer or Office
A temporary structure providing office space for the sale or rental of real estate at a construction site. The following standards apply:
 - i. Real Estate trailers and/or offices must comply with the setbacks applicable to principal buildings for the appropriate district.
 - ii. Sleeping and cooking facilities are prohibited.
- s. Satellite Dish
A dish antenna for transmitting signals to a receiver or receiving station or for receiving television, radio, data, communication, or other signals from other antennas, satellites, or services. Small satellite dish antennas are one meter or less in diameter and large satellite dish antennas exceed one meter in diameter. The following standards apply:
 - i. One (1) satellite dish is permitted per unit.
 - ii. Satellite dish antennas must be permanently installed as building-mounted or ground-mounted structures and must not be portable or movable.
 - iii. Building-mounted satellite dishes may not be installed on any facade unless such placement is required for reception of an acceptable signal, according to a written statement from a licensed, authorized installer on company letterhead that includes the installer's signature.
 - iv. Roof-mounted satellite dish antennas must be located a minimum of five feet from any roof edge.
 - v. Large satellite dish antennas are permitted only in rear yards, and must be set back from all lot lines

a distance that is at least equal to the height of the dish, or five feet, whichever is less.

- t. Shed
A roofed structure used as a storage space. The following standards apply:
 - i. Sheds larger and one hundred and twenty (120) square feet and fifteen (15) feet in height are prohibited.
- u. Solar Collector
Any of a variety of structures designed to absorb solar radiation for the purpose of heating water or buildings or the producing electricity.
- v. Temporary Shelter
A trailer or mobile structure used as a residence. The following standards apply:
 - i. Use is restricted to up to twelve (12) consecutive months during the rebuild of a principal building after a fire or catastrophe.
- w. Trellis
A framework of latticework that is at least 50% open, typically made of bars of wood or metal crossed over each other, and chiefly used as a support for vines, fruit trees, or climbing plants. The following standards apply:
 - i. A trellis is limited to a maximum height of eight (8) feet.

10. DEVELOPMENT STANDARDS

Fences & Walls

10.2 FENCES & WALLS

1. Fences

- a. General
 - i. Fences may be placed up to and along any lot line.
 - ii. Fences installed directly onto a shared side or rear lot line require consent of the abutting property owner.
 - iii. Fences do not require a Building Permit and are erected at the owners risk.
 - iv. Fence posts or supporting rails must face inward toward the property being fenced and the finished face must be oriented towards the adjacent property.
- b. Interior Lots (see Fig. 10.2 (a))
 - i. Fences located in the private frontage of a lot may be a maximum of four (4) feet in height and no more than fifty percent (50%) opaque.
 - ii. Fences located behind the private frontage, internal to the lot, may be a maximum of six (6) feet in height, unless required as screening (see §10.7 Screening).
- c. Corner Lots (see Fig. 10.2 (b))
 - i. Fences located in the private frontage of a lot, for both the primary and secondary frontage, may be a maximum of four (4) feet in height and no more than fifty percent (50%) opaque.
 - ii. Fences located behind the private frontage, internal to a lot, may be a maximum of six (6) feet in height, unless required as screening (see §10.7 Screening).
- d. Architectural Fence Features
 - i. Fence and gate posts that are architectural features

integrated into the design of a fence are permitted up to four and one half (4.5) feet for fences in the private frontage and up to six and one half (6.5) feet in height for fences behind the private frontage.

- e. Restrictions
 - i. Fences are prohibited within any existing or required drainage or utility easement.
 - ii. Fences within four (4) feet of windows on abutting properties may not be less than seventy percent (70%) opaque without written permission from the abutting property owners.
 - iii. Barbed wire and concertina wire are prohibited.
- f. Privacy Fencing
 - i. The Review Board may require fences located behind the private frontage, internal to a lot, to be a maximum of eight (8) feet in height as a condition of the issuance of a Special Permit or Site Plan Approval to address privacy concerns of neighbors.

2. Retaining Walls

- a. Any portion of a retaining wall that exists above the ground level of a higher grade must comply with the requirements for fences (see §10.2.1 Fences above).
- b. When provided, retaining walls located in the private frontage may be a maximum of four (4) feet in height and successive walls must be built with a minimum horizontal separation distance of four (4) feet.
- c. Retaining walls may be built to any height behind the private frontage.

FIGURE 10.2 (a) Fencing - Interior Lots

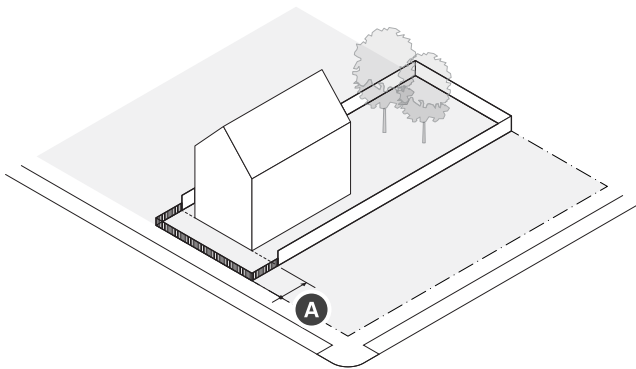
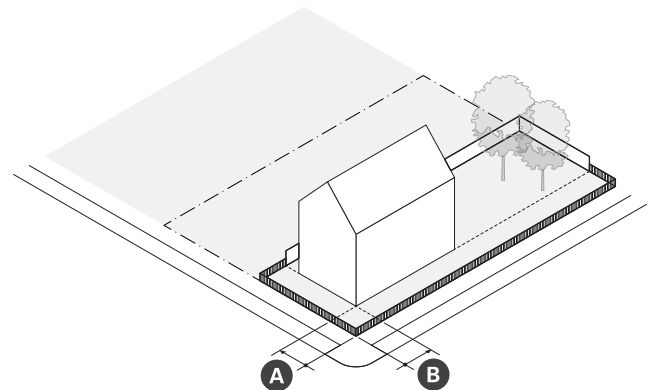


FIGURE 10.2 (b) Fencing - Corner Lots



10.3 GREEN FACTOR

1. Overview

- a. The green factor of a property is measured as a ratio of the weighted value of all landscape elements to the total land area (in square feet) of a lot.
- b. Calculation of the green factor uses a value based system to prioritize landscape elements and site design that contributes to the reduction of storm water runoff, the improvement of urban air quality, mitigation of the urban heat island effect, and improved well-being of residents and visitors.
- c. The result of the green factor calculation relates to an increase in the environmental performance and quality of urban landscape features.

2. Calculation

- a. The green factor score is calculated as follows:
 - i. Determine total lot area.
 - ii. Calculate the area of each proposed landscape element for each category identified in the first column of Table 10.3 (a). Certain types of plantings use the number of individual plants multiplied by an equivalent square footage when indicated.
 - iii. Multiply the area in square feet, or the equivalent square footage, of each landscape element by the assigned multiplier identified in the second column of Table 10.3 (a) to determine its weighted square footage.
 - iv. Add the weighted square footage of all landscape elements together.
 - v. Divide the resulting sum by the area of the lot to determine the Green Factor score.
- b. Review Boards may establish one (1) or more additional bonuses with a multiplier up to one-tenth (0.1) for each bonus to achieve other city policy objectives based on the recommendations of the Director of Transportation & Infrastructure.

3. Eligibility

- a. All landscape elements must meet eligibility and quality standards established by the Director of Transportation & Infrastructure to ensure the long-term health, viability, and coverage of plantings.

4. Measurement

- a. If multiple landscape elements identified in the first column of Table 10.3 (a) occupy the same area, for example groundcover under a tree, the full square footage or equivalent square footage of each element is counted.
- b. For trees, large shrubs, and large perennials, use the equivalent square footage indicated on Table 10.3 (a).
- c. For vegetated walls, the area calculated is the

height times the width of the area to be covered by vegetation.

- d. For all elements other than trees, large shrubs, large perennials, and vegetated walls, square footage is calculated as the area of a horizontal plane that is over the landscape element.
- e. Landscape elements may qualify for bonus credits in addition to the standard green factor categories used to determine the green factor score.

TABLE 10.3 (a) Green Factor Calculation

	Multiplier
Ground/Underground	
Green space with a soil depth of less than 24 inches	0.3
Green space with a soil depth of 24 inches or more	0.6
Pervious Paving (depth < 24 inches)	0.2
Pervious Paving (depth > 24 inches)	0.5
Bioswale/Bioretenion	0.1
Vegetation/Green Space	
Grass, mulch, and other organic and inorganic plant or earthen material ground covers; plants less than two (2) feet tall at maturity	0.1
Large shrubs or large perennials at least two (2) feet tall at maturity	0.3
Small Tree	0.6
Large Tree	0.6
Preserved Tree	0.8
Vegetated Wall	0.7
Green Roof (depth < 10 inches)	0.3
Green Roof (depth > 10 inches)	0.6
Bonus Credits	
Landscape Visible from Adjacent Thoroughfares or Civic Spaces	0.1
Native Species	0.1
Perennial Ground Cover (excluding trees, bushes, shrubs, & grass)	0.1

10. DEVELOPMENT STANDARDS

Landscaping

10.4 LANDSCAPING

1. Purpose

- a. To ensure vegetation is properly planted and installed in a timely manner.
- b. To increase the compatibility of development in adjacent zoning districts, minimize the potential adverse impacts of adjacent land uses, increase privacy, and minimize the trespass of undue sound and light between adjacent properties.
- c. To protect existing trees and expand the city's mature tree canopy in order to enhance the quality of life within Somerville.
- d. To promote a healthy urban forest.

2. Applicability

- a. This section is applicable to all development involving the construction of a new principal building, site improvements, or the construction or reconstruction of a surface parking lot or civic space.
- b. Modifications to an existing principal building type, the addition of permitted building components and frontages to an existing principal building type, changes in use, and the construction of a new accessory structures are permitted without triggering the standards of this section.
- c. Normal maintenance of a existing principal building type including, but not limited to painting, roof replacement, re-siding, window replacement, and other improvements deemed to be cosmetic in nature by the Building Official, is permitted without triggering the standards of this section.
- d. Resealing or re-stripping of a parking lot, which does not entail paving, resurfacing, or replacement of the asphalt, concrete, or other surface paving material, is permitted without triggering the standards of this section.
- e. When compliance is triggered for an existing surface parking lot, the landscape standards of this section take precedence over parking standards found elsewhere in this Ordinance.

3. Landscape Installation

- a. National Standards
 - i. Landscape must be installed in accordance with the latest edition of the American Standard for Nursery Stock published by American Hort.
- b. Installation Prior to Occupancy
 - i. All landscape required by this Ordinance must be installed prior to the issuance of a Certificate of Occupancy by the Building Official.
 - ii. If seasonal or abnormally inclement weather conditions preclude complete installation, the Building Official may grant a Certificate of

Occupancy if the applicant provides a bond or other security equal in value the remaining work to be completed as estimated by an accredited landscape professional.

- iii. Complete installation is required within nine (9) months of the issuance of the Certificate of Occupancy or the bond will be forfeited.

4. Landscape Maintenance

- a. All landscape must be maintained in healthy, growing condition at all times by the property owner(s) or their designated agent(s).
- b. Lawns must be mowed and edged; planting beds must mulched, groomed, weeded, and kept free of litter; all trees, hedges, bushes, shrubs, and other vegetation must be trimmed to prevent encroachment by growth that obstructs use of the sidewalk of any public thoroughfare by pedestrians in any way.
- c. Vegetation that is significantly damaged, missing, infested, disease-ridden, or dead must be replaced within one (1) year or by the next planting season, whichever occurs first.
- d. Landscape that is deemed hazardous or unsafe or interferes with public utilities must be abated by the property owner as soon as practicable or within thirty (30) days of notice by the Building Official.
- e. The Building Official may remove any landscape that is an immediate peril to persons or property summarily, without notice, and at the property owner's expense.

5. Site Landscaping

- a. Lot Coverage
 - i. All non-paved and non-built areas of a site must be stabilized and covered by LANDSCAPING to reduce storm water runoff, prevent soil erosion, and promote water retention, with the exception of the following areas:
 - a). Land area dedicated to urban agricultural activities;
 - b). Trails;
 - c). Naturally occurring stream beds, rock outcroppings, and similar features typically lacking in vegetation;
 - d). Clay or sand surfaces associated with athletic fields; and
 - e). Water features.
 - ii. Constructed water features such as fountains and ponds that operate with water recirculation systems must be designed to prevent seepage and leaks.
- b. Trees
 - i. New trees must have a minimum height of ten (10) feet or be three (3) inches in caliper when planted.
 - ii. For trees less than four (4) inches in diameter,

10. DEVELOPMENT STANDARDS

Landscaping

- caliper is measured six (6) inches from the ground. For trees between four (4) inches and twelve (12) inches in diameter, caliper is measured twelve (12) inches from the ground.
- iii. The root flare of new trees must be exposed and planted at grade.
- iv. New trees may not have a significant negative impact on any abutting properties when fully grown, such as shading a solar collector existing at the time the tree is planted.
- c. Soils
 - i. Vegetation must be planted in soil of sufficient volume, composition, and nutrient balance to sustain health growth.
 - ii. Soils must be appreciably free of gravel, stones, rubble, or trash.
 - iii. All compacted soil, contaminated soil, or road base fill must be removed.
- d. Spacing
 - i. The spacing and placement of plants must be adequate and appropriate for the typical size, shape, and habit of the plant species at maturity.
- e. Weather Protection
 - i. Landscape areas within six (6) feet of a paved vehicular parking area or roadway of a thoroughfare must be raised or protected by curbing or edging at least six (6) inches in elevation above the finished pavement to protect plantings from traffic, de-icing salts, and snow plowing operations common to the winter season.
- f. Restrictions
 - i. Invasive plant species to the State of Massachusetts must be removed.
 - ii. Vegetation with spines, thorns, or needles that may present hazards to pedestrians are prohibited from within two (2) feet of any front lot line.
 - iii. Nothing but ground cover less than six (6) inches in height may be planted or installed within any underground or overhead utility or drainage easement without consent of the utility provider or easement holder and the City of Somerville.
 - iv. Nothing but ground cover less than six (6) inches in height may be planted or installed within three (3) feet of any fire protection system.
 - v. Artificial plants and artificial turf are prohibited, excluding athletic fields that are subject to intense use and soil compaction that prohibits the establishment of turf grass, and where paving or grass paving systems will not suffice given the area's purpose and level of use.

6. Landscape Buffers

- a. General
 - i. Any lot abutting the side or rear lot line of a lot in

the NR district must be screened by a landscape buffer.

- b. Type
 - i. Landscape buffers must be designed as a Type A or Type B buffer in accordance with Table 10.4 (a).

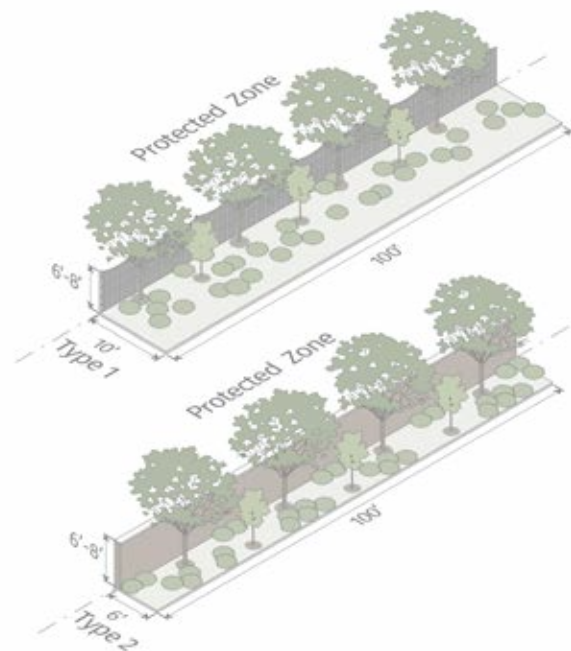


TABLE 10.4 (a) Landscape Buffers

	Type A	Type B
Depth (min)	6 feet	6 feet
Fence/Wall Type	n/a	Fully Closed
Fence/Wall Height (min)	n/a	6 feet
Large Trees (min per 100 ft)	3	n/a
Shrubs (min per 100 ft)	33	33

- c. Buffer Design Standards
 - i. Landscape buffers must be located along the outer perimeter of the lot, parallel to and extending along one hundred percent (100%) of the length of the shared lot line.
 - ii. Three (3) ornamental trees with a minimum caliper of one and one-half (1.5) inches may be substituted for each required large tree.
 - iii. Shrubs must be of at least a five (5) gallon container size when planted and at least seventy five percent (75%) of all shrubs must be evergreen.
 - iv. Required trees and shrubs may be installed at varying distances to create a naturalistic landscape design, so long as the per linear foot requirement is applied as an average, and the landscape is arranged to provide sufficient screening.
 - v. Fences and walls must be positioned exterior

10. DEVELOPMENT STANDARDS

Landscaping

to required landscaping and are subject to the provisions of §6.E. Fences & Walls.

- vi. Preexisting, substantially equivalent vegetation that is preserved within the landscape buffer may substitute for any required landscape buffer plantings provided that the preexisting vegetation is healthy and growing.
- vii. Water, sanitary sewer, electrical, telephone, natural gas, cable, storm drainage, or other service lines are permitted within landscape buffers.
- viii. Surface parking is prohibited within a required landscape buffer.

7. Parking Lot Landscaping

- a. General
 - i. The landscape standards of this section take precedence over parking standards found elsewhere in this Ordinance.
- b. Perimeter Planting
 - i. Surface parking must be screened from view along any lot line abutting a public thoroughfare, excluding and alley, using one of the following landscape buffers:
 - a). Landscape Strip with Shrubs
 - i). A minimum six (6) foot wide landscape strip planted with a continuous row of shrubs and one (1) tree per thirty (30) feet of lot line.
 - ii). Shrubs must be of at least a five (5) gallon container size when planted and at least seventy five percent (75%) of all shrubs must be evergreen.
 - iii). Breaks for vehicular and pedestrian access are permitted.
 - b). Landscape Strip with Fence
 - i). A minimum six (6) foot wide landscape strip planted with a minimum three (3) foot tall fence and one (1) tree per thirty (30) feet of lot line.
 - ii). Fencing must be generally designed as metal fence panels between masonry pillars and constructed of permanent, durable materials, such as brick, stone, iron, steel, or aluminum.
 - iii). Breaks for vehicular and pedestrian access are permitted.
- c. Landscape Islands
 - i. A landscape island must be provided every five (5) parking spaces and at the end of every row of parking spaces.
 - ii. Landscape islands may be consolidated and intervals may be adjusted as necessary to preserve existing trees or facilitate stormwater management.

- iii. Landscape islands abutting a single row of parking spaces must be at least eight (8) feet in width and the same length as the parking spaces. Each island must include one (1) large tree.
- iv. Landscape islands abutting a double row of parking spaces must be at least eight (8) feet in width and the same length as the parking spaces. Each island must include two (2) large trees.

8. Tree Protection

- a. Applicability
 - i. This section is applicable to all real property in the Neighborhood Residence and Urban Residence districts.
- b. Significant Trees
 - i. Any tree with a trunk that is six (6) inches or more in diameter at breast height (DBH) is considered a significant tree, unless the City Arborist determines that the tree is unhealthy.
 - ii. The City Arborist may designate significant trees based on a tree's age, species, health, meaning within the community, historical importance, and similar factors.
 - iii. Significant trees may only be removed by Special Permit.
 - a). In it's discretion to approve or deny a special permit authorizing the removal of a significant tree, the review board shall consider the following:
 - i). The health of the tree as it relates to damage, disease, or as a threat to public health or safety.
 - iv. As a condition of any Special Permit authorizing the removal of a significant tree, the review board shall require one of the following:
 - a). The planting of new trees equal to two (2) times the diameter of the tree lost in total caliper; or
 - b). A payment in lieu of planting new trees equal to the cost of the above.
- c. Protection During Construction
 - i. The preservation of existing, on-site trees is preferred to the planting of new trees.
 - ii. Existing trees must be protected according to the tree protection standards of the City Arborist.
 - iii. In cases of accidental damage during construction activities to any tree designated for preservation, the damaged tree must be replaced with trees equal to two (2) times the diameter of the tree lost in total caliper.

10.5 OUTDOOR CAFE SEATING

1. Applicability

- a. This section is applicable to all outdoor cafe seating located in a frontage area or on a public sidewalk.

2. General

- a. Outdoor cafe seating is permitted as an ancillary activity of any Eating & Drinking Establishment.
- b. The operator of the outdoor cafe seating is responsible for the proper maintenance of the cafe area at all times, including proper disposal of all trash generated.

3. Cafe Area Dimensions

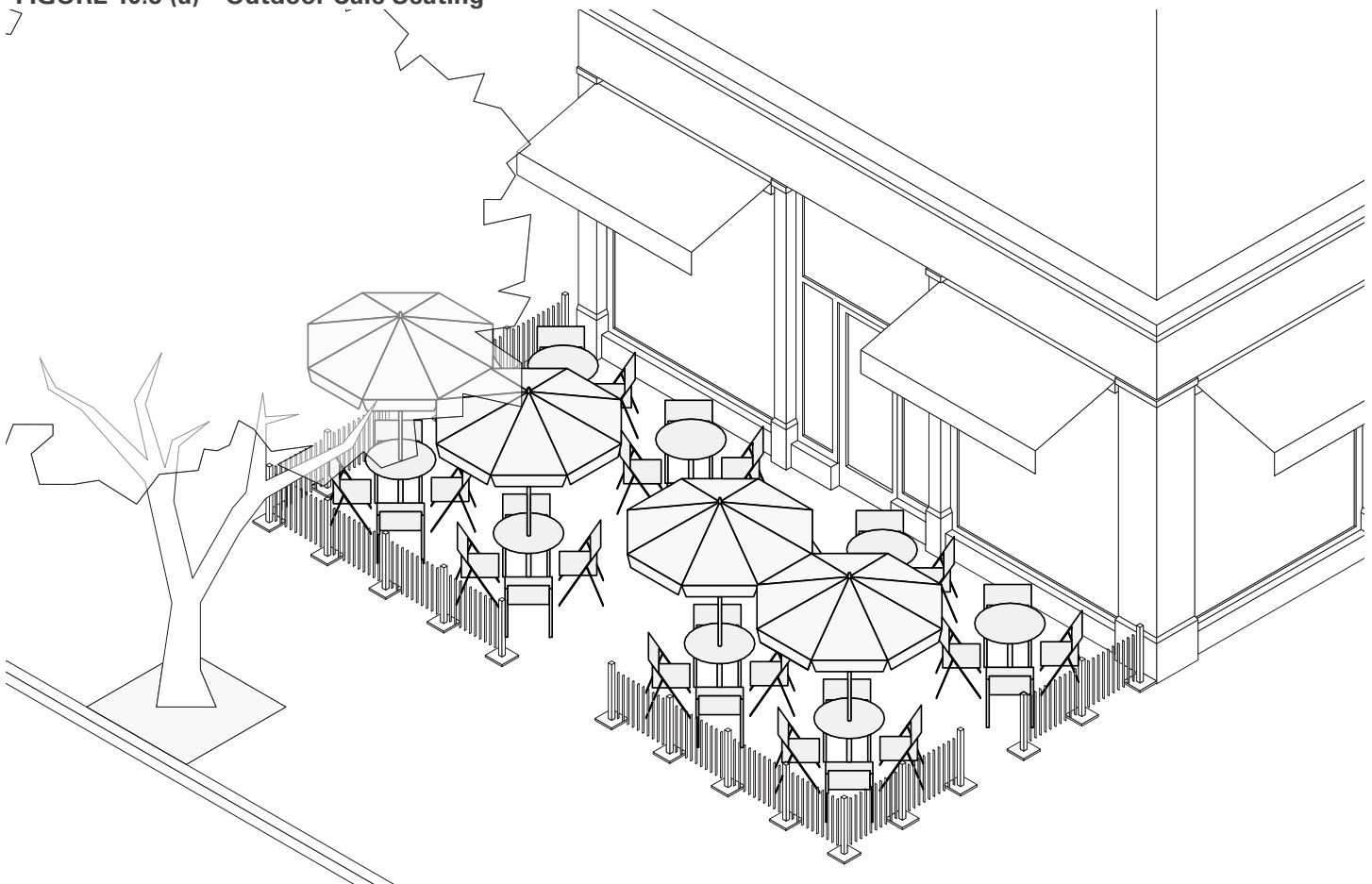
- a. Outdoor cafe seating areas must be between six (6) feet and fifteen (15) feet in depth from the facade the building.
- b. A minimum four (4) foot wide clear path of access must be maintained to the principal entrance.
- c. Outdoor cafe seating must be located adjacent to and may not extend beyond the establishment it serves.
- d. Outdoor cafe seating areas must comply with the

sidewalk standards of Article 8 Public Realm Standards.

4. Furniture

- a. Furnishings may only consist of moveable tables, moveable chairs, moveable umbrellas, required enclosures, and portable or mounted heaters.
- b. All furnishing must be commercial grade and manufactured for outdoor use of safe, sturdy, and durable materials, such as wood, steel, or wrought iron.
- c. When not intended for use during the winter months, outdoor cafe furnishings must be removed and stored indoors.
- d. Tables and chairs for each establishment must match in material and style.
- e. Tables larger than three (3) feet six (6) inches in width or diameter are not permitted.
- f. Standing or stooled table ledges, if provided, must be eighteen (18) inches in depth.
- g. Heaters are encouraged to extend the use of outdoor cafe seating during colder weather. The following standards apply:

FIGURE 10.5 (a) Outdoor Cafe Seating



10. DEVELOPMENT STANDARDS

Outdoor Cafe Seating

- i. Heating fixtures require approval by the Fire Department.
 - ii. Heaters may be freestanding or mounted to the underside of an awning.
 - iii. Portable heaters must be stored indoors when the business is closed.
- h. Host stands should complement the chairs and tables in material and style.

5. Weather Protection

- a. Awnings or individual table umbrellas are encouraged to provide protection from the weather.
- i. Awnings must be secured to a storefront or other exterior wall of a building.
 - ii. Awnings and umbrellas should be canvas or other non-vinyl material.
 - iii. Awnings and umbrellas should provided shade for at least fifty percent (50%) of the outdoor cafe seating when provided.
- b. Vertical wind breaks may be provided on each end of the cafe area, provided that the wind break is attached to and fits completely under an awning.
- c. Any necessary frames or supports for awnings or windbreaks are permitted.

6. Enclosures

- a. The perimeter of outdoor cafe seating areas must be defined and enclosed on all sides by any combination of metal fencing, bollards and chain, or planters.
- b. Metal Fencing
- i. Fencing must be thirty-six (36) inches or less in height.
 - ii. The maximum gap permitted between fence segments is four (4) inches.
- c. Bollards & Chain
- i. Metal or wooden bollards must be thirty-six (36) inches or less in height.
 - ii. Bollards may be linked with rope or chain that hangs no less than thirty (30) inches from the ground at its lowest point.
- d. Planter Boxes
- i. Planters or planter enclosures must be between eighteen (18) inches and twenty-four (24) inches in height.
 - ii. The combined height of planters and live plants must not exceed four (4) feet from sidewalk grade.
 - iii. Healthy, living plants are required.
 - iv. Planters and flower boxes must be made of safe, durable materials manufactured for outdoor use.

10.6 OUTDOOR LIGHTING

1. Intent

- a. To increase night sky visibility, improve nighttime vision and the color rendition of outdoor light, and reduce the impacts of outdoor lighting for people and wildlife.
- b. To conserve energy and reduce the consumption of electricity for lighting purposes.

2. Purpose

- a. To reduce light pollution and glare from outdoor lighting fixtures and reduce excessive light levels as existing fixtures are replaced over time.
- b. To permit the use of outdoor lighting that does not exceed the minimum levels specified by recommended practices of the Illuminating Engineering Society (IES) for night-time safety, utility, security, productivity, enjoyment, and commerce.
- c. To minimize adverse impacts of lighting such as light trespass, obtrusive light spillover, and harmful glare.
- d. To curtail light pollution, reduce sky-glow, and improve the nighttime environment.

3. Applicability

- a. This section is applicable to all outdoor lighting fixtures, except for the following:
 - i. Lighting within rights-of-way or easements for the principal purpose of illuminating streets, alleys, mid-block passages, or civic spaces;
 - ii. Sign lighting (see §10.8. Signs);
 - iii. Lighting for public monuments and statuary;
 - iv. Holiday lighting;
 - v. Outdoor lighting used for emergency equipment and work conducted in the interest of law enforcement or for public health, safety, or welfare;
 - vi. Underwater lighting;
 - vii. Temporary lighting for theatrical, television, performance areas and construction sites; and
 - viii. Low voltage landscape lighting controlled by an automatic device that is set to turn the lights off at one hour after the site is closed to the public.

4. Lighting Standards

- a. General
 - i. Outdoor lighting is regulated by the amount of light emitted, the color temperature of light, and the design of light fixtures to achieve certain desired environmental characteristics.
- b. Amount of Light Emitted
 - i. The following standards are applicable for all permitted building types in the NR district and all permitted building types, excluding Apartment Buildings, in the UR district:
 - a). At installation, individual luminaires may not

exceed the lumen limits specified on Table 10.6 (a) Permitted Lumens.

- ii. The following standards are applicable to all other buildings types in all districts:
 - a). At installation, the total lumens of all outdoor lighting may not exceed the lumen limits specified on Table 10.6 (a) Permitted Lumens.
- c. Color
 - i. All luminaires in all districts must have light sources with a color temperature or correlated color temperature (CCT) of 3000 Kelvin or less.
 - ii. The color rendering index of all luminaires in all districts must be sixty-five (65) or higher.
- d. Light Fixtures
 - i. The following standards are applicable for all permitted building types in the NR district and all permitted building types, excluding Apartment Buildings, in the UR district:
 - a). All outdoor luminaires must be full cutoff or fully shielded to emit no light above horizontal (ninety degrees (90°) above nadir), with the following exceptions:
 - i). Up to two partly shielded or unshielded luminaires at any principal entrance.
 - ii). Low voltage lighting that does not project onto adjacent properties.
 - iii). Shielded directional flood lighting that is aimed so that direct glare is not visible from adjacent properties.
 - iv). Open flame gas lamps.
 - v). Lighting installed with a vacancy sensor, which extinguishes the lights no more than fifteen (15) minutes after the area is vacated.
 - b). Luminaires with the International Dark-Sky Association's Fixture Seal of Approval are recommended.
 - ii. The following standards are applicable to all other buildings types in all districts:
 - a). All luminaires must be rated and installed according to Table 10.6 (b), which identifies the maximum backlight (B), upright (U), and glare (G), as rated by the luminaire manufacturer, allowed in each zoning district.
 - b). BUG rating limits are based on the internal and external design of a luminaire, its aiming, and the initial lumens. The BUG ratings permitted by Table 10.6 (b) differ based on the distance the luminaire is installed from the property line, in multiples of the mounting height of the luminaire.
 - c). Luminaires equipped with adjustable mounting devices permitting alteration of luminaire aiming are prohibited.

10. DEVELOPMENT STANDARDS

Outdoor Lighting

TABLE 10.6 (a) Permitted Lumens

	NR	UR	MR3	MR4	MR5	MR6	HR	FAB
Individual Luminaires								
Unshielded Luminaires at Principal Entrances	630 lumens	630 lumens	--	--	--	--	--	--
Unshielded Luminaires, any other locations	315 lumens	315 lumens	--	--	--	--	--	--
Fully Shielded Luminaires	1,260 lumens	1,260 lumens	--	--	--	--	--	--
Landscape Lighting (total)	1,050 lumens	1,050 lumens	--	--	--	--	--	--
Landscape Lighting, Low Voltage (total)	525 lumens	525 lumens	--	--	--	--	--	--
Shielded Directional Flood Lighting	1,260 lumens	1,260 lumens	--	--	--	--	--	--
Total Site Lumens ¹								
Lumens/sf Impervious Surface Area (per square foot of illuminated area)	2.50 lumens	2.50 lumens	2.50 lumens	2.50 lumens	5.00 lumens	5.00 lumens	5.00 lumens	5.00 lumens
Building Entrances/Exits (per door, installed within twenty (20) feet of the door)	+2,000 lumens	+2,000 lumens	+2,000 lumens	+2,000 lumens	+4,000 lumens	+4,000 lumens	+4,000 lumens	+4,000 lumens
Building Facades (per square foot of illuminated facade, for luminaries aimed at the facade)	+8/sf	+8/sf	+8/sf	+8/sf	+16/sf	+16/sf	+16/sf	+16/sf
Outdoor Cafes (per square foot of cafe area, within two (2) mounting heights of the luminaries)	+5/sf	+5/sf	+5/sf	+5/sf	+10/sf	+10/sf	+10/sf	+10/sf
Outdoor Displays (per square foot of outdoor sales area, within two (2) mounting heights of the luminaries)	+8/sf	+8/sf	+8/sf	+8/sf	+16/sf	+16/sf	+16/sf	+16/sf

¹ In the NR & UR districts, total site lumens is applicable only to Apartment Buildings and non conforming buildings

10. DEVELOPMENT STANDARDS

Outdoor Lighting

TABLE 10.6 (a) Permitted Lumens

	CC	CI	CB	CIV	ASQ	NP	PSR	TU
Individual Luminaires								
Unshielded Luminaires at Principal Entrances	--	--	--	--	--	--	--	--
Unshielded Luminaires, any other locations	--	--	--	--	--	--	--	--
Fully Shielded Luminaires	--	--	--	--	--	--	--	--
Landscape Lighting	--	--	--	--	--	--	--	--
Landscape Lighting, Low Voltage (total)	--	--	--	--	--	--	--	--
Shielded Directional Flood Lighting	--	--	--	--	--	--	--	--
Total Site Lumens ¹								
Lumens/sf Impervious Surface Area (per square foot of illuminated area)	5.00 lumens	5.00 lumens	5.00 lumens	2.50 lumens	5.00 lumens	5.00 lumens	5.00 lumens	5.00 lumens
Building Entrances/Exits (per door, installed within twenty (20) feet of the door)	+4,000 lumens	+4,000 lumens	+4,000 lumens	+2,000 lumens	+4,000 lumens	+4,000 lumens	+4,000 lumens	+4,000 lumens
Building Facades (per square foot of illuminated facade, for luminaries aimed at the facade)	+16/sf	+16/sf	+16/sf	+8/sf	+16/sf	+16/sf	+16/sf	+16/sf
Outdoor Cafes (per square foot of cafe area, within two (2) mounting heights of the luminaries)	+10/sf	+10/sf	+10/sf	+5/sf	+10/sf	+10/sf	+10/sf	+10/sf
Outdoor Displays (per square foot of outdoor sales area, within two (2) mounting heights of the luminaries)	+16/sf	+16/sf	+16/sf	+8/sf	+16/sf	+16/sf	+16/sf	+16/sf

¹ In the NR & UR districts, total site lumens is applicable only to Apartment Buildings and non conforming buildings

10. DEVELOPMENT STANDARDS

Outdoor Lighting

TABLE 10.6 (b) Maximum Backlight, Uplight and Glare (BUG) Ratings

	NR	UR	MR3	MR4	MR5	MR6	HR	FAB	CC	CI	CB	CIV	ASQ	NP	PSR	TU
Backlight ¹																
Greater than 2 mounting heights from property line.	B4	B4	B4	B4	B5	B5	B5	B5	B5	B5	B5	B5	B5	B5	B5	B5
One (1) to less than two (2) mounting heights from property line ² and ideally oriented.	B3	B3	B3	B3	B4	B4	B4	B4	B4	B4	B4	B4	B4	B4	B4	B4
0.5 to 1 mounting heights from property line ² and ideally oriented.	B3	B3	B3	B3	B3	B3	B3	B3	B3	B3	B3	B3	B3	B3	B3	B3
Less than 0.5 mounting height to property line ² and ideally oriented.	B0	B0	B0	B0	B1	B1	B1	B1	B1	B1	B1	B1	B1	B1	B1	B1
Uplight																
Allowed uplighting rating	U2	U2	U2	U2	U3	U3	U3	U3	U3	U3	U3	U3	U3	U3	U3	U3
Allowed percentage light emission above 90 degrees for street or area lighting.	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Glare ¹																
Allowed Glare Rating	G2	G2	G2	G2	G3	G3	G3	G3	G3	G3	G3	G2	G3	G3	G3	G3
Any luminaire not ideally oriented with 1 to less than 2 mounting heights to any property line ² of concern.	G1	G1	G1	G1	G1	G1	G1	G1	G1	G1	G1	G1	G1	G1	G1	G1
Any luminaire not ideally oriented with 0.5 to less than 1 mounting heights to any property line ² of concern.	G0	G0	G0	G0	G1	G1	G1	G1	G1	G1	G1	G1	G1	G1	G1	G1
Any luminaire not ideally oriented with less than 0.5 mounting heights to any property line ² of concern.	G0	G0	G0	G0	G0	G0	G0	G0	G0	G0	G0	G0	G0	G0	G0	G0

¹ An 'ideally oriented' luminaire must be mounted with its backlight portion of the light output oriented perpendicular and towards the property line of concern.

² An additional five (5) feet may be added to this calculation for any property line abutting a civic space. Any property line abutting a thoroughfare may be considered to be located at the centerline of the thoroughfare for the purpose of determining compliance with maximum BUG ratings.

10.7 SCREENING

1. Loading Facilities

- a. Outdoor loading facilities, including all docks and areas used for the storage and staging of materials must be screened from view by a wall or fully closed fence between six (6) and twelve (12) feet in height, as necessary to sufficiently screen delivery vehicles, and constructed of materials that are compatible with the principal building in terms of texture, quality, and color.
- b. Exterior entrances and access to loading facilities that are fully enclosed within a building must have an opaque, self closing door constructed of materials that are compatible with the principal building in terms of texture, quality, and color.
- c. Bay Loading facility doors are only permitted to be opened during loading and unloading activities.

2. Service Areas

- a. Trash collection, trash compaction, recycling collection and other similar service areas must be fully enclosed within a building or located to the side or rear of the buildings.
- b. Exterior entrances and access to service areas that are fully enclosed within a building must have an opaque, self closing door constructed of materials that are compatible with the principal building in terms of texture, quality, and color.
- c. Outdoor service areas that is visible from a public thoroughfare (excluding an alley), civic space, or abutting properties in the NR zoning district must be fully screened by a wall or fully closed fence at least six (6) feet in height with self-closing access doors and constructed of materials that are compatible with the principal building in terms of texture, quality, and color.

3. Mechanical Equipment

- a. Roof-Mounted
 - i. Mechanical equipment, except roof-mounted sustainable energy systems, and elevator/stairwell penthouses must be set back at least ten (10) feet from the edge of the exterior wall of a building.
 - ii. New buildings must provide a parapet wall or other architectural element constructed of materials that are compatible with the principal building in terms of texture, quality, and color that screens the visibility of roof-mounted mechanical equipment from any a public thoroughfare (excluding an alley) or civic space.
- b. Wall-Mounted
 - i. Mechanical equipment is not permitted on any facade.
 - ii. Mechanical equipment on any surface that is visible from a public thoroughfare (excluding

an alley) or civic space must be screened by landscaping or an opaque screen constructed of materials that are compatible with the principal building in terms of texture, quality, and color.

c. Ground-Mounted

- i. Mechanical equipment that is visible from a public thoroughfare (excluding an alley) or civic space must be screened by landscaping, a fence, or a wall constructed of materials that are compatible with the principal building in terms of texture, quality, and color.
- ii. Screening must be of a height equal to or greater than the height of the mechanical equipment being screened.

10. DEVELOPMENT STANDARDS

Signs

10.8 SIGNS

1. Purpose

- a. To provide property owners and tenants reasonable and effective means for identifying street address, business name, goods sold or produced, and services provided to the public.
- b. To regulate the size, location, and physical design of temporary and permanent signs.
- c. To preserve the cultural significance of architectural resources for the enjoyment and enrichment of the community.
- d. To protect against the adverse impacts of visual clutter and excessive and/or confusing signs.
- e. To promote legibility of the urban environment.

2. Applicability

- a. Nothing contained in this Section shall be construed as the content-based regulation of sign messages prohibited by the federal or state constitution, statutes, or court decisions.
- b. Nothing contained in this Section shall be construed to conflict with M.G.L. Chapter 85, Section 8 & 9 or M.G.L. Chapter 93, Sections 29 through 33, as amended.

3. Development Review

- a. General
 - i. Sign types identified in 10.8.11 through 10.8.22 are permitted only for non-residential uses.
 - ii. Signs types not identified in this Section are prohibited.
- b. Development Review
 - i. Signs permitted by Special Permit require a special permit as a prerequisite to a the issuance of a zoning permit. See §10.D.1. Special Permit for more information.
 - a). In its discretion to approve or deny a special permit to authorize a ground sign or roof / skyline sign, the review board shall consider the following:
 - ii). Design of the sign as an effective means of communication.
 - iii). Compatibility with the visual character of the surrounding area.
 - iv). Appropriate sizing for the location.
 - v). The potential for adverse effects on nearby properties and pedestrian and traffic safety.

4. Address Signs

- a. A sign, individual numerals or letters, or a nonelectrical nameplate identifying the property address is required for all real property as follows:
 - i. Each ground story non-residential use must identify

the street address either on the principal entrance door or above or beside the principal entrance of the use.

- ii. All residential building types must identify the street address either on the principal entrance door, above or beside the principal entrance, or on a mailbox.
- b. Address signs must be made easily visible through the use of colors or materials that contrast with the background material they are attached to and must be conspicuously located to provide visibility from the thoroughfare that the building faces.
- c. Address signs must be twelve (12) inches in height or less and may include the name of the occupant.

5. Exempt Signs

- a. The following signs are exempt from regulation under this Section:
 - i. A public notice or informational sign required by federal, state, or local law, regulation, or ordinance and any special event, directional, or other sign erected by a government agency or public utility in the performance of public duty;
 - ii. Names of buildings, dates of erection, commemorative tablets and the like when carved into stone, made of cast metal, or other permanent type of material;
 - iii. Credit card, trading stamp, or trade association signs not exceeding one-half (0.5) square feet each and not exceeding ten per establishment;
 - iv. A clock, thermometer, barbershop pole or similar device not part of a permanent sign;
 - v. The flag of any nation, state, or City if displayed in a manner conforming to the Flag Code (4 USC §5 (2011) et seq.);
 - vi. Historic building identification;
 - vii. Holiday signs and/or decorations, yard sale & garage sale signs;
 - viii. Elections signs; and
 - ix. Any sculpture, statue, relief, mosaic, or mural that is a work of art or otherwise decorative and does not include a commercial message or symbol.

6. Prohibited Signs

- a. The following signs are prohibited:
 - i. Any sign that flashes, moves, blinks, rotates, simulates motion, features electronic sign copy, or has illumination that changes intensity over time;
 - ii. Signs that emit audible sounds, odors, or visible matter;
 - iii. Signs attached to nature or landscape elements, including trees, rocks, and fences;
 - iv. The tacking, posting or otherwise affixing of signs to the exterior walls of buildings and structures;

- v. Signs that interfere with free passage from or obstructs any fire escape, downspout, window, door, stairways, ladder, or opening intended as a means of ingress or egress or to provide light or air;
- vi. Billboards or signs advertising goods or services not provided on the premises;
- vii. Any sign and/or sign structure that obstructs the view of, is confusing with, or imitates official traffic sign, signal, or device;
- viii. Inflatable signs, such as balloons and other gas inflated objects;
- ix. Sign structures that no longer contain signs;
- x. Signs mounted to motor-vehicles that are not in operation, including motor-vehicles painted or skinned to function as a sign; and
- xi. Outdoor advertising signs that are not compliant with M.G.L. Chapter 93, Section 29-33.

7. Temporary Signs

- a. Unless otherwise specified, temporary signs are permitted for a maximum of thirty (30) total days, subject to the following standards:
 - i. Banner: A temporary sign that is printed or displayed upon flexible material with or without frames, that identifies a new business or advertises a special sale, event, or activity.
 - a). One (1) banner sign no greater than forty (40) square feet is permitted per lot frontage.
 - b). Banners must be secured to a building facade along all four sides at all times.
 - ii. Construction Sign: A temporary sign intended to provide information about current construction on a site and the parties involved in the project.
 - a). One (1) construction sign no greater than thirty-two (32) square feet per side is permitted per development site.
 - b). A construction sign may be erected only after issuance of a building permit, and must be removed within two (2) days of issuance of a certificate of occupancy.
 - iii. Real Estate Sign:
 - a). One (1) real estate sign no greater than twelve (12) square feet is permitted per lot frontage.
 - b). A real estate sign that advertises property for lease or sale may be posted only for the duration the property is offered for lease or sale, and must be removed within seven days of lease or closing.

8. Sign Maintenance

- a. All signs, including nonconforming signs, together with any supports, braces, anchors, and other supporting hardware, must be maintained in good condition. Any

damage to or deterioration of a sign must be repaired within 30 days of receipt of notice from the Building Official.

- b. When an existing sign is removed, replaced, or repaired, all supports, braces, anchors, and other supporting hardware that is not longer required must be removed, and any surfaces baring evidence of attachment must be repaired.

9. Removal

- a. Signs must be removed within 30 days of a user vacating a property.

10. Sign Illumination

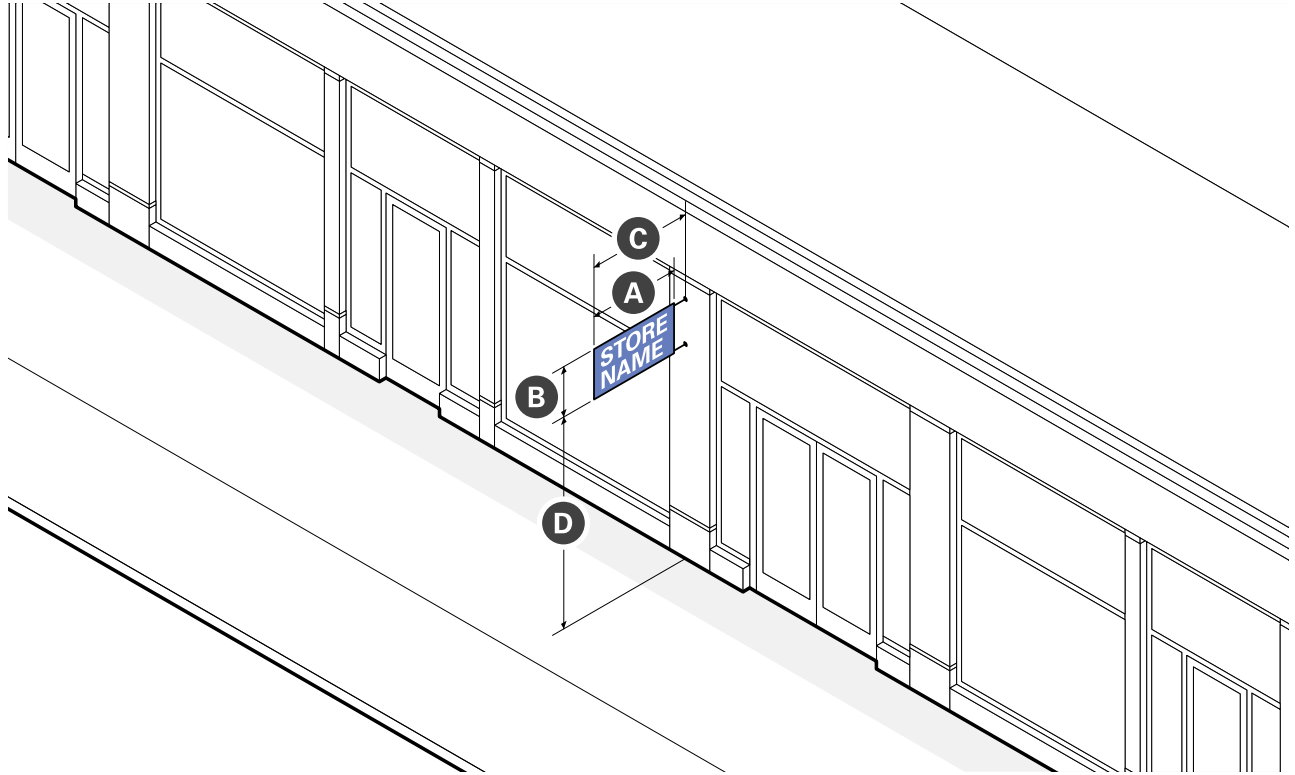
- a. Conforming signs may be illuminated according to the following:
 - i. General
 - a). Illuminated signs indicating if a business is open must be turned off except during the hours of operation.
 - ii. External Illumination
 - a). An externally illuminated sign is characterized by the use of artificial light reflected off the surface of a sign.
 - b). External light sources must be shielded so that they illuminate only the face of the sign and do not shine directly onto a public right-of-way or onto adjacent properties.
 - c). Light fixtures that project from the facade of a building for externally illuminated signs are exempt from setback requirements, but should be simple and unobtrusive in design and not obscure the sign content.
 - iii. Internal Illumination
 - a). An internally illuminated sign is characterized by the use of artificial light projecting through or from behind the surface of a sign.
 - b). Channel letters may be internally lit or back-lit.
 - c). Blade signs may be internally lit if the background is opaque or of a darker color than the message of the sign and the lettering is no more than 50% of the surface area of the sign
 - d). Exposed neon is only permitted for wall or windows signs.
 - iv. Raceways
 - a). If a raceway is necessary, it cannot extend in width or height beyond the area of the sign.
 - b). A raceway must be finished to match the background wall or canopy or integrated into the overall design of the sign.

10. DEVELOPMENT STANDARDS

Signs

11. Blade Sign

- a. A small, two-sided sign that is attached to and projecting perpendicularly from the facade of a building that identifies a commercial establishment. Blade signs are intended to be viewed by pedestrians on the same side of the street.



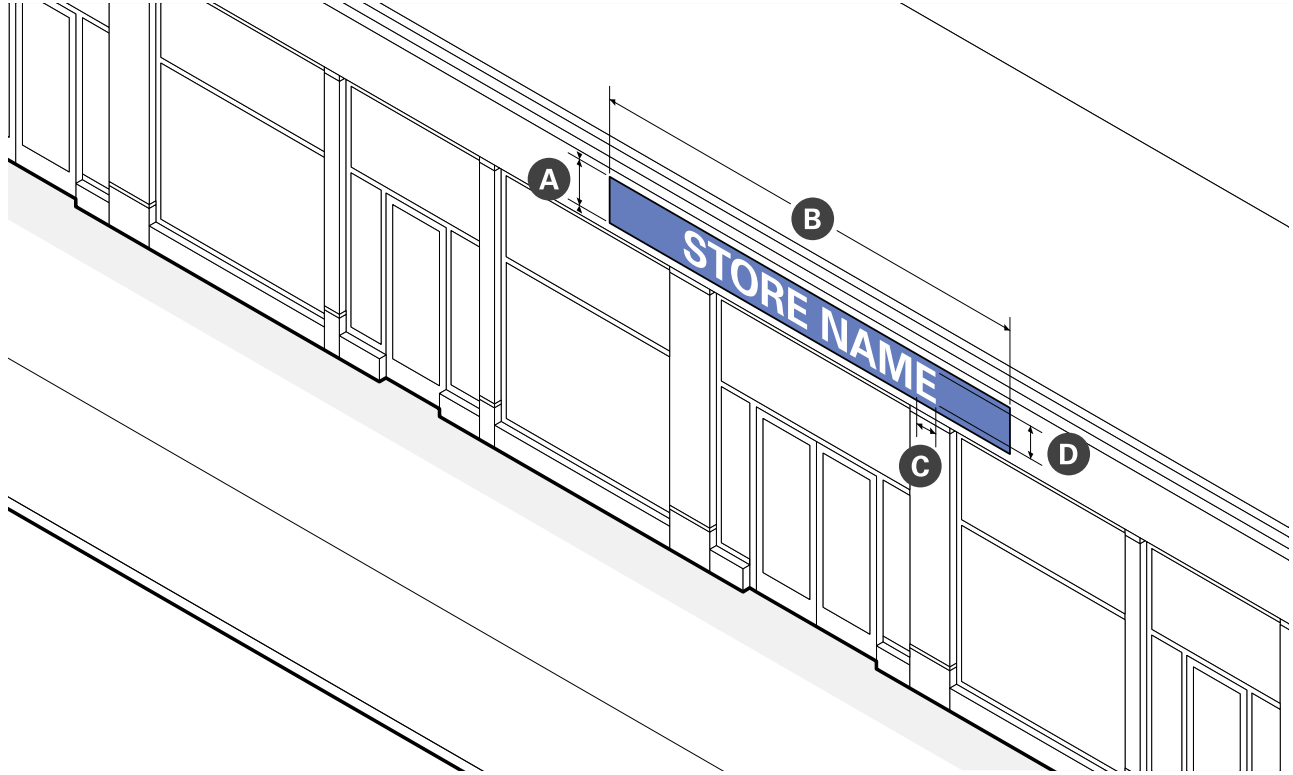
Size	
Area (max.)	6 sq. ft. / side
Width (max.)	4 ft
Height (max.)	3 ft
Thickness (max.)	6 inches

Location	
Clear Height over Sidewalk (min.)	8 ft
Projection from Facade (max.)	4 ft
Number of Signs	1 per Tenant

- b. Standards
- i. Blade signs are prohibited for upper story businesses.
 - ii. A blade sign must be located within ten (10) feet of the principal entrance for the business it identifies.
 - iii. A blade sign, including any support hardware, must be mounted below the sills of the second story windows of multi-story buildings or below the roof line, parapet wall, or cornice of a single-story building.
 - iv. Any supports, braces, anchors, and other supporting hardware must be integral to the design of the sign.
 - v. Information type is limited to business name and logo. Additional information is prohibited.

12. Wall Sign

- a. A sign attached flat or mounted parallel to the facade of a building that identifies a commercial establishment. Wall signs are intended to be viewed by pedestrians on the opposite side of street.



Size	
Area (max.)	40 sq. ft.
Height (min/max)	1 ft 4 ft
Width (max.)	90% of facade width

Lettering	
Width (max.)	75% of sign width
Height (max.)	75% of sign height
Projection from Facade (max.)	6 inches
Raceway Height (max.)	50% of Letter Height

Location	
Number of Signs	1 per Tenant (2 per Corner Tenant)

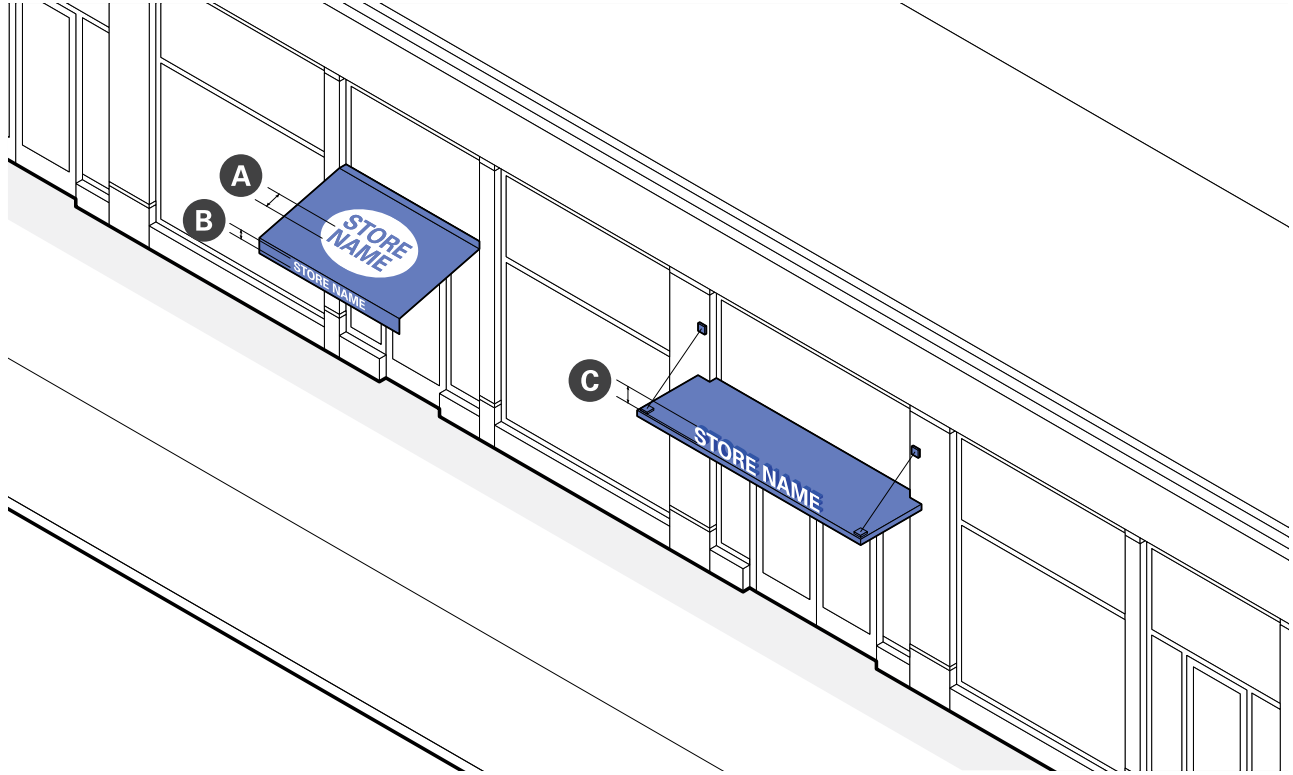
- b. Standards
- i. Wall signs are only permitted for ground story businesses.
 - ii. Internally illuminated sign cabinets are prohibited.
 - iii. Wall signs are prohibited from covering windows or architectural details.
 - iv. No portion of a wall sign is permitted to extend above the lower eave line of a building with a pitched roof.
 - v. No portion of a wall sign is permitted to extend above the roof line or parapet wall of a flat roofed building.
 - vi. No portion of a wall sign is permitted to extend above the cornice or expression line of the base of a building.
 - vii. Information type is limited to business name and logo. Additional information is prohibited.

10. DEVELOPMENT STANDARDS

Signs

13. Awning / Canopy Sign

- a. A sign that is painted, screen printed, sewn, or adhered onto the surface of an awning or attached above, below, or to the face of an entry canopy that identifies a commercial establishment. Awning/canopy signs are intended to be viewed by pedestrians on the opposite side of street.



Size	
Area	--
Located on Valance (max.)	50% coverage
Located on Awning Slope (max.)	25% coverage
Projecting from Canopy (max.)	1 sf. per width of canopy

Lettering	
Height	--
Valance (max)	8 in
Awning Slope (max)	18 in
Projecting from Canopy (max)	12 in

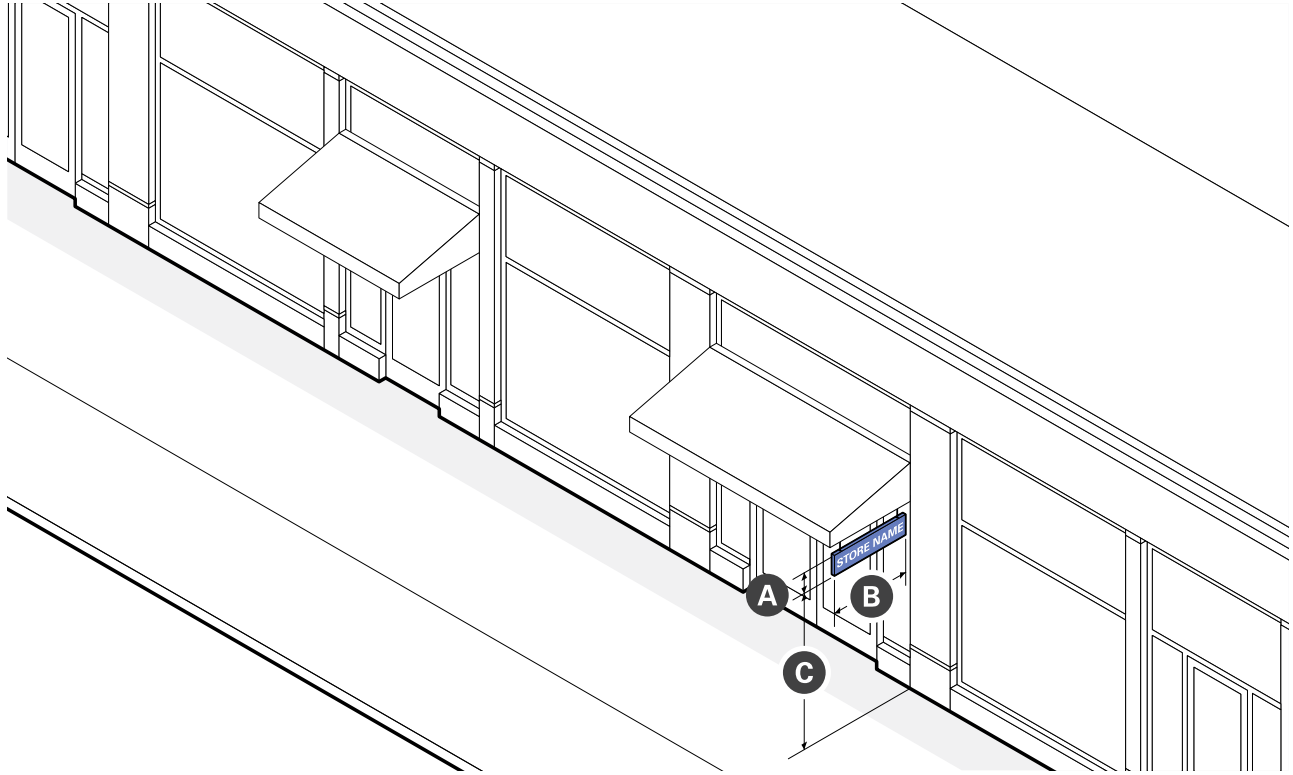
Location	
Number of Signs per Awning	1
Number of Signs per Canopy	1

b. Standards

- i. Signs are not permitted on awnings or canopies that do not conform to the provisions for each type of building component. See §3.D. Building Components for more information.
- ii. Signage located on the sloping portion of an awning is only permitted for storefronts where the typical area for a wall sign is missing.
- iii. Signage is prohibited on upper story awnings and on the side of awnings with closed ends.
- iv. Information type is limited to business name, logo, and address. Additional information is prohibited.

14. Suspended Sign

- a. A small, two-sided sign mounted to the underside of an awning, canopy, or roof of a porch that identifies a commercial establishment. Suspended signs are intended to be viewed by pedestrians at close range on the same side of the street.



Size	
Area (max.)	4 sq. ft. / side
Width (max.)	3 feet
Height (max.)	3 feet

Location	
Clear Height over Sidewalk/Porch (min.)	7 feet
Number of Signs	1 per Tenant

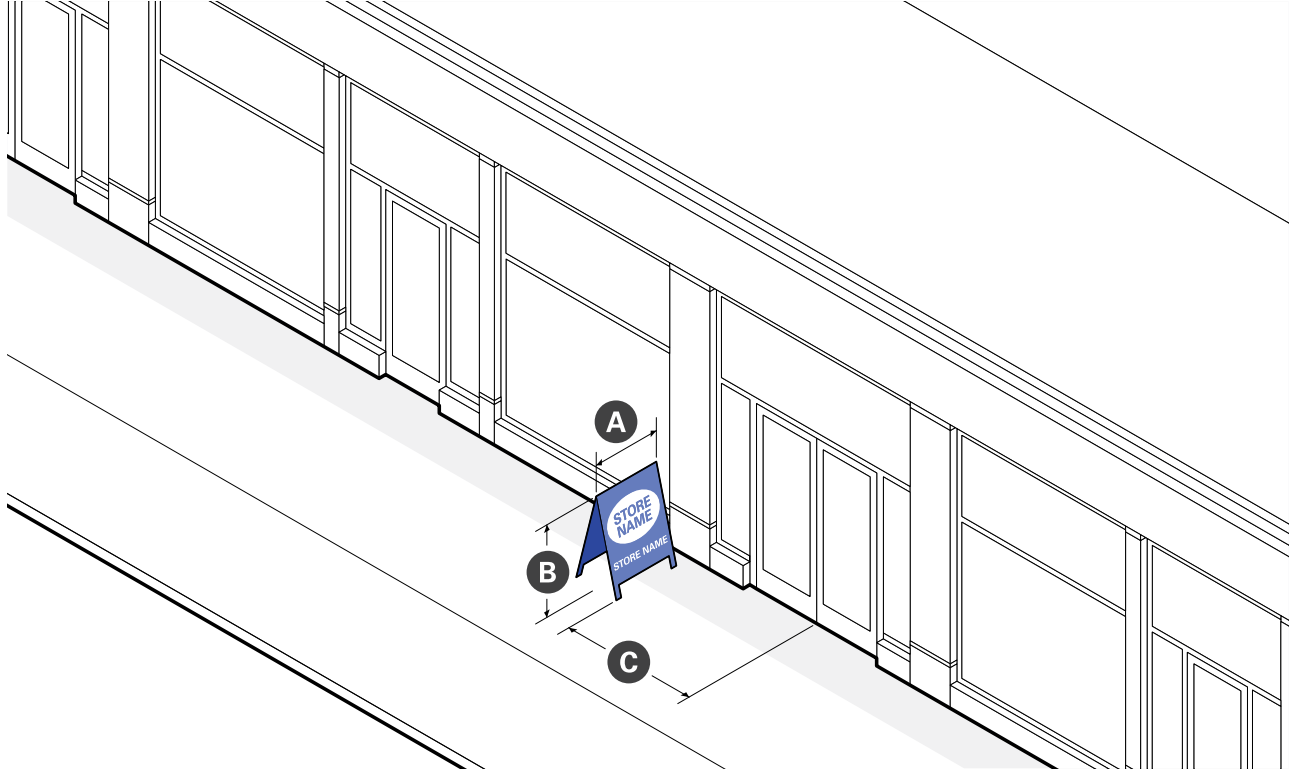
- b. Standards
- i. A suspended sign may not extend beyond the edge of the awning or canopy it is mounted below.
 - ii. Information type is limited to business name or logo. Additional information is prohibited.

10. DEVELOPMENT STANDARDS

Signs

15. Sidewalk Sign

- a. A portable, two-sided sign that is placed on the sidewalk to identify a commercial establishment or advertise daily specials or sales. Sidewalk signs are intended to be viewed at close range by pedestrians on the same side of the street.



Size	
Area (max.)	6 sq. ft. / side
Width (max.)	2 feet
Height (max.)	3 feet

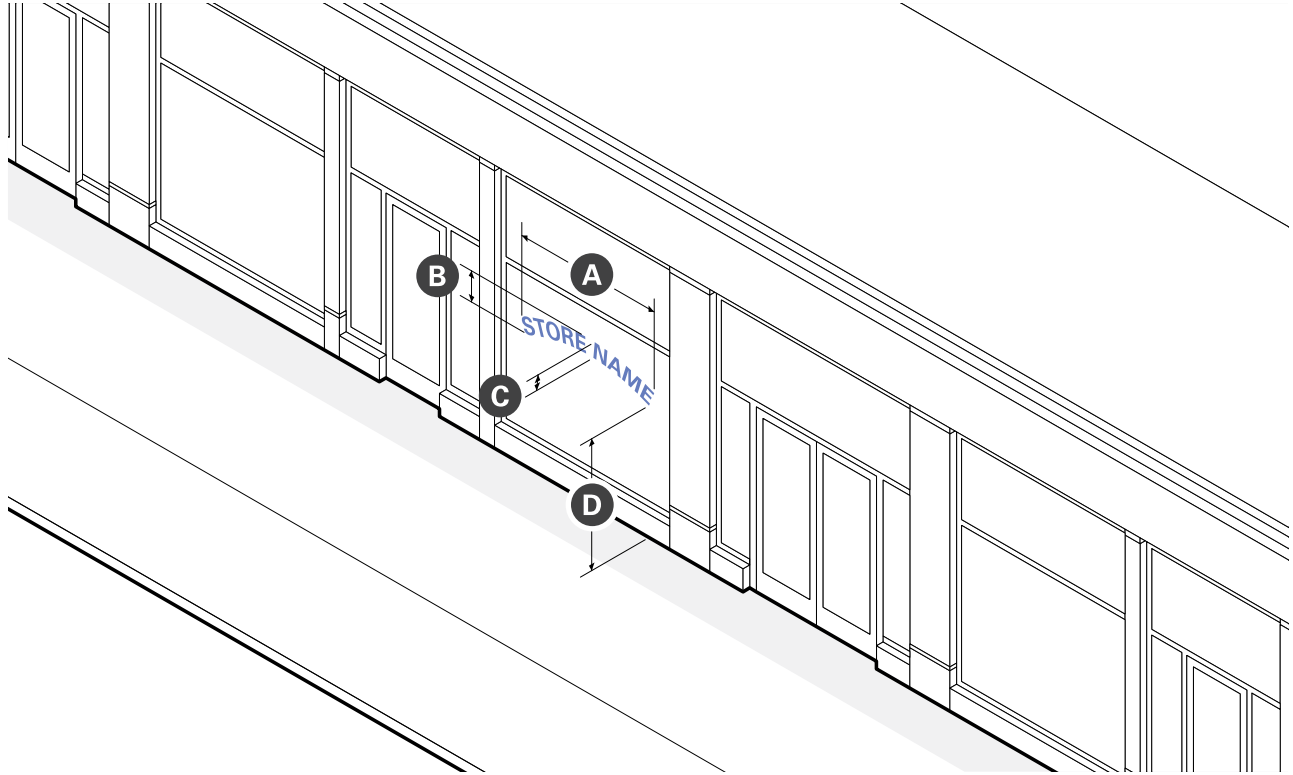
Location	
Distance from Principal Entrance (max.)	8 feet
Number of Signs	1 per Tenant

b. Standards

- i. One (1) Sidewalk sign is permitted per ground story tenant.
- ii. Sidewalk signs may be placed outdoors on site or on a public sidewalk during business hours and must be removed when the business is closed.
- iii. Sidewalks signs displayed on a public sidewalk are prohibited from encroaching into the walkway of the sidewalk or interfering with pedestrian travel in any way.
- iv. A sidewalk sign must be vertically oriented, with a height greater than its width and made of wood, metal, or slate (chalkboard).
- v. A sidewalk sign is not permitted to be illuminated or contain any electronic components.
- vi. A sidewalk sign may not be placed outdoors when high winds, heavy rain, or heavy snow conditions are present. The Department Public Works may remove a sidewalk sign during snow removal operations, and is not liable for damage to a sidewalk sign caused by snow removal operations.

16. Window Sign

- a. Individual letters, numerals, or a logo applied directly to the inside of a window or door to identify a commercial establishment. Window signs are intended to be viewed at close range by pedestrians.



Size	
Area (max. of total window glass)	20%
Width (max.)	5 feet
Height (max.)	3 feet

Lettering	
Height (max.)	18 inches

Location	
Height above Sidewalk (min.)	5 feet
Number of Signs	1 per Window

b. Standards

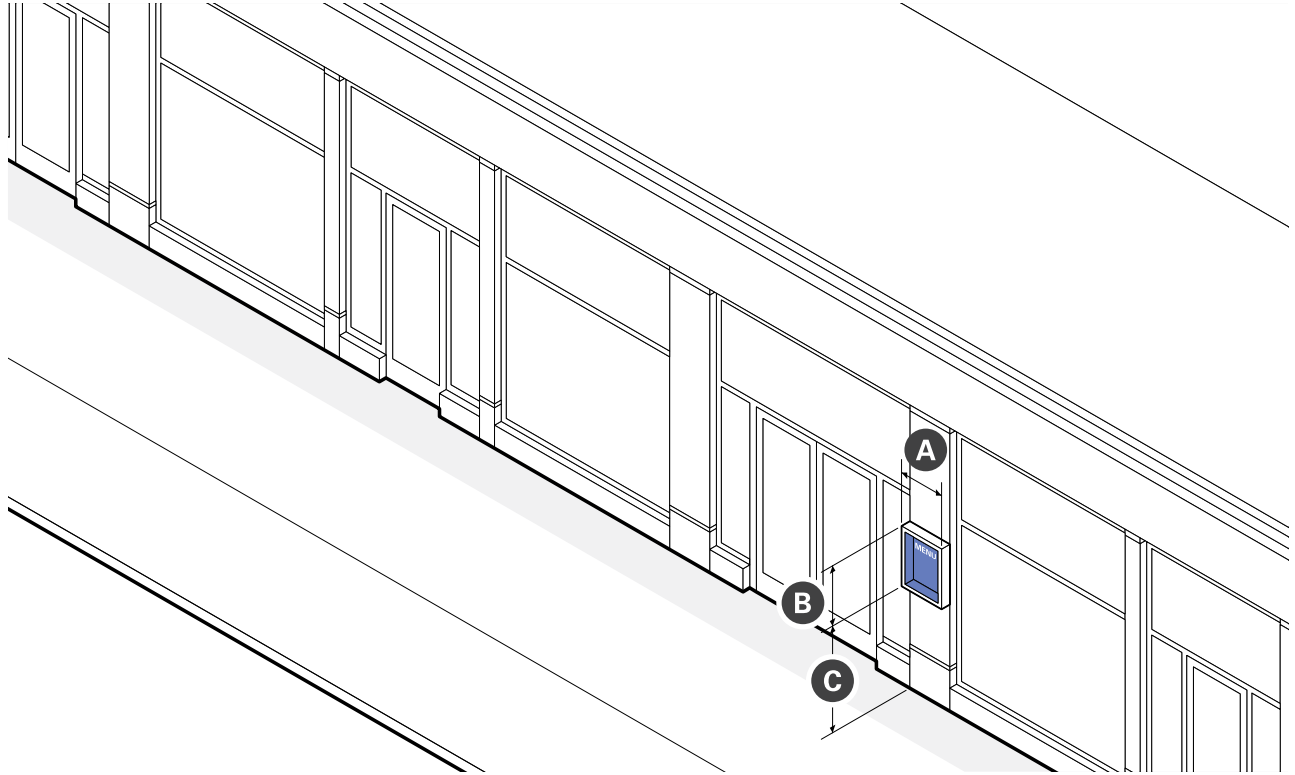
- i. Windows signs must be applied directly to inside of the windows glass, at or above eye level, and have a transparent background.
- ii. Information type is limited to business name, logo, hours of operations, and product types. Additional information is prohibited.

10. DEVELOPMENT STANDARDS

Signs

17. Display Case

- a. A wall mounted, lockable, framed cabinet with a transparent window to display a changeable menu or list of event showtimes. Display cases are intended to be viewed at close range by pedestrians.



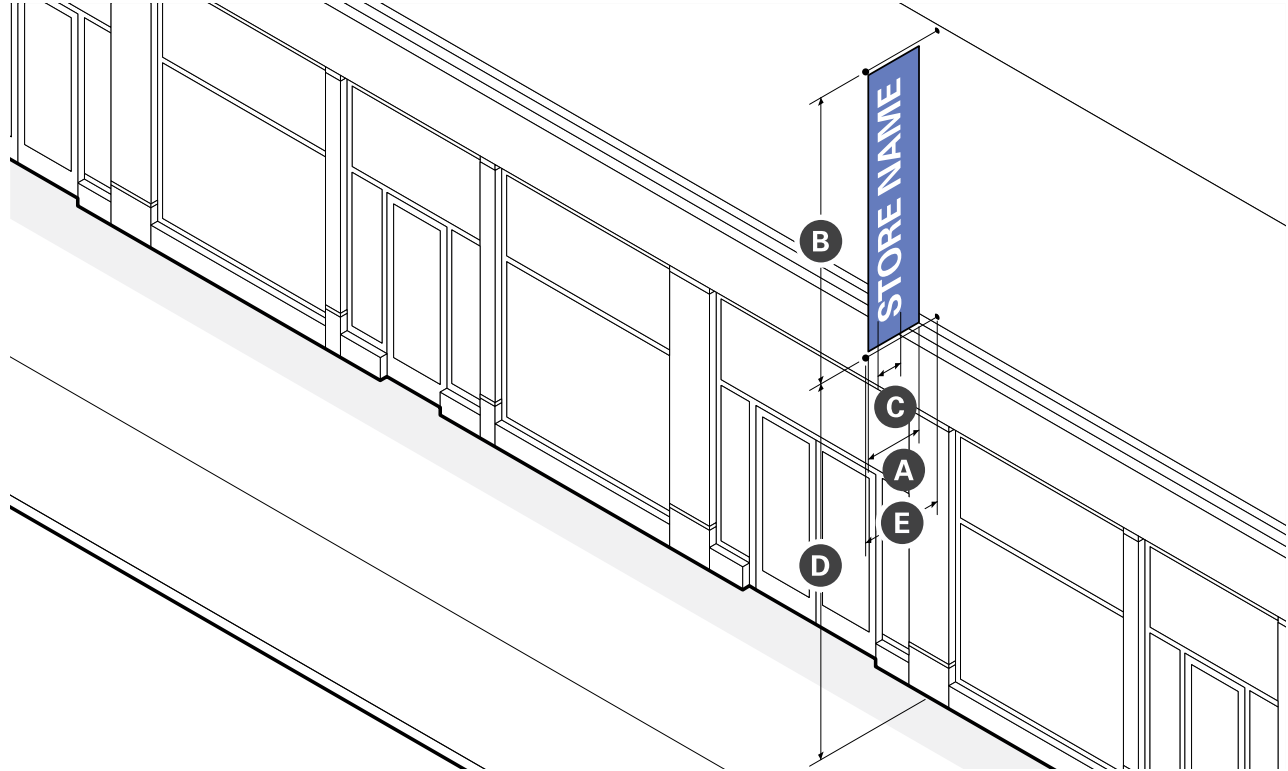
Size	
Area	6 sq. ft.
Width (max.)	3 feet
Height (max.)	3 feet

Location	
Height above Sidewalk (min.)	4 feet
Number of Signs	1 per Tenant

- b. Standards
 - i. Display cases must be attached to the facade or wall of a recessed storefront entrance.
 - ii. Display cases may be internally or externally illuminated.

18. Vertical Blade / Banner Sign

- a. A tall, narrow, two-sided sign that is attached to and projecting perpendicularly from the facade of a building that identifies a commercial establishment. Vertical blade/banner signs are intended to be viewed by pedestrians and motorists from a distance.



Size	
Width (max.)	4 feet
Height (max.)	10 feet
Thickness (max.)	10 inches

Lettering	
Width	75% of Sign Width

Location	
Clear Height over Sidewalk (min.)	above 1 st Story
Projection from Facade (max.)	6 feet
Number of Signs	1 per 15 feet of Facade Width (4 max.)

b. Standards

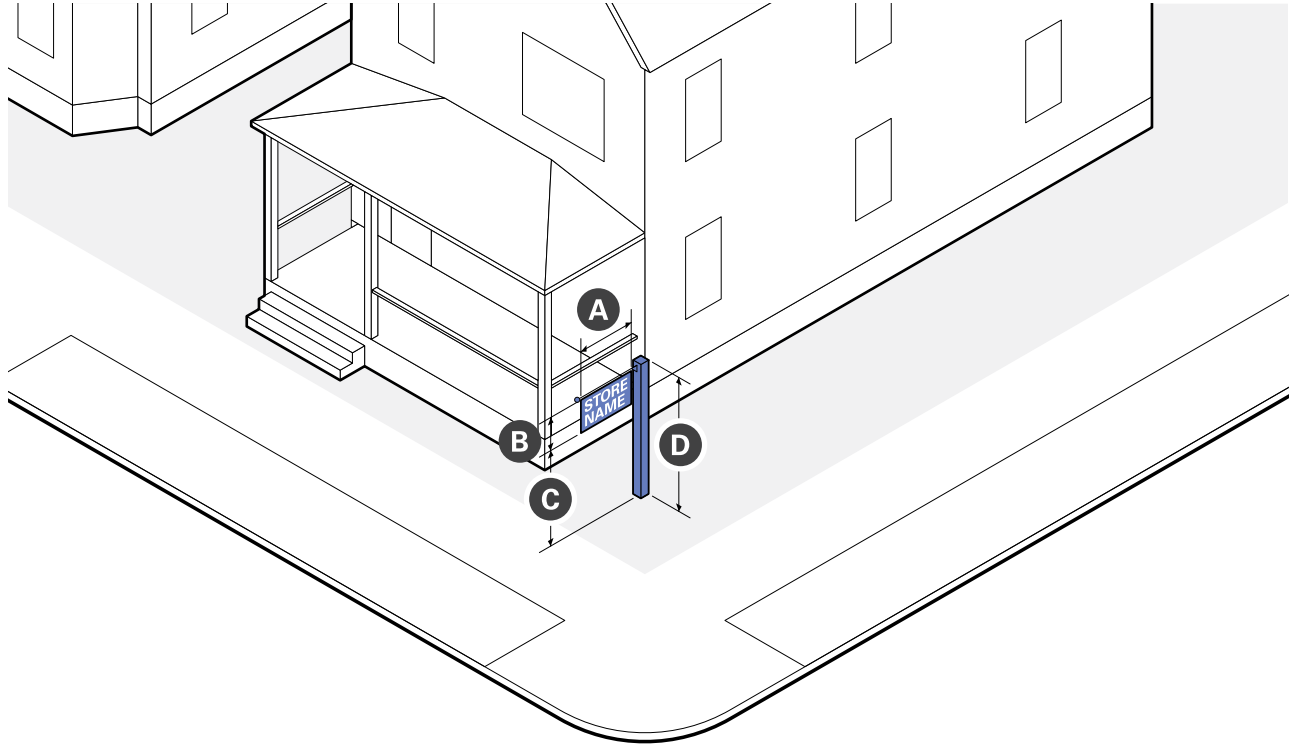
- i. No portion of the sign may project above the roof-line of the facade to which it is attached.
- ii. Information type is limited to business name and logo. Additional information is prohibited.

10. DEVELOPMENT STANDARDS

Signs

19. Yard Sign

- a. A two-sided sign suspended from support hardware and mounted in a front yard between the front lot line and the building facade. Yard signs are intended to be viewed at close range by pedestrians on the same side of the street and motorists.



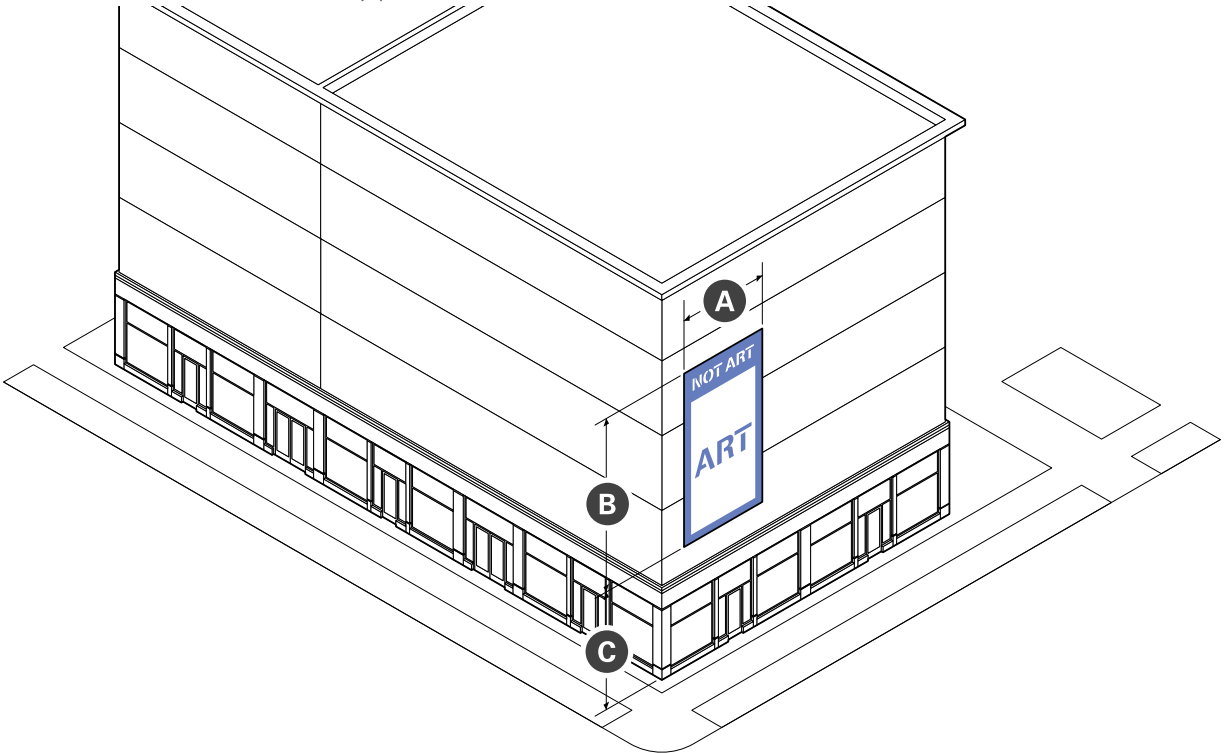
Size	
Area (max.)	6 sq. ft. / side
Width (max.)	3 feet
Height (max.)	3 feet

Location	
Clear Height above Yard (min.)	12 inches
Overall Height (max.)	5 feet
Number of Signs	1 per Lot

- b. Standards
 - i. Yard signs work well for home based or commercial businesses operating in residential building types in mixed use districts.
 - ii. Information type is limited to business name, logo, and address. Additional information is prohibited.

20. Wall Mural

- a. A sign that is directly painted on to the exterior wall of a building or screen printed, sewn, or adhered onto a canvas-like material that is mounted flush with the facade of a building that identifies a commercial establishment. Wall murals are intended to be viewed by pedestrians and motor vehicles from a distance.



Size	
Area (max.)	1,000 sq. ft.
Width (max.)	50 feet
Height (max.)	50 feet

Location	
Height above Ground (min.)	1 Story
Number of Signs	1 per Building

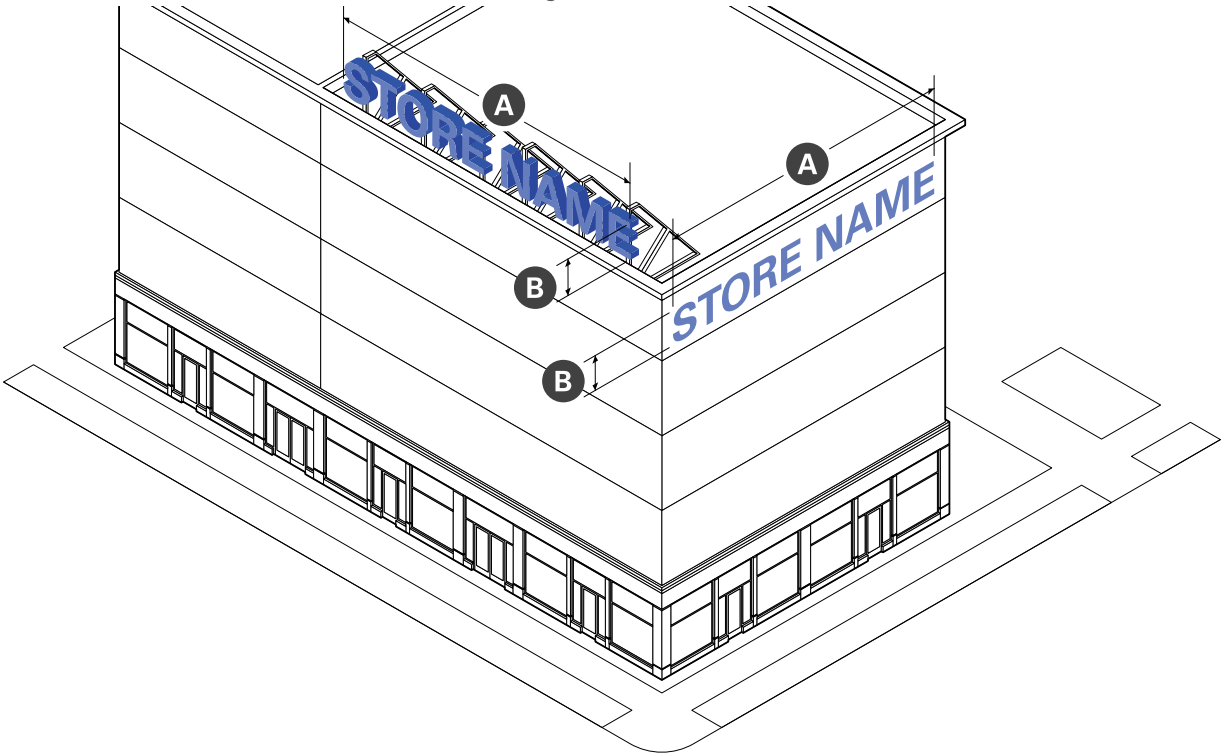
- b. Standards
- i. Lettering or logos must be limited to no more than twenty percent (20%) of the surface area of the wall mural.
 - ii. Only external illumination is permitted.

10. DEVELOPMENT STANDARDS

Signs

21. Roof / Skyline Sign

- a. A sign erected on the roof or mounted to the uppermost horizontal architectural band of a building to identify the name of the building or primary tenant. Roof/skyline signs are intended to be viewed by pedestrians and motorists from a distance and serve as an icon for the building.



Size	
Area (max.)	250 sq. ft.
Width (max. % of facade width)	75%
Height (max.)	15 feet
Raceway Height (max.)	50% of Letter Height

Location	
Number of Signs	1 per Building

- b. Standards
- i. Roof/skyline signs are only permitted on high-rise buildings.
 - ii. No portion of a roof/skyline sign is permitted to extend below the start of highest story of a building or above the roof line, parapet wall, or cornice of the top portion of a facade and is prohibited from covering windows or architectural details.
 - iii. Only internal illumination is permitted.
 - iv. Information type is limited to building or primary tenant name. Additional information is prohibited.

10.9 SUSTAINABLE DEVELOPMENT

1. Green Buildings

- a. New construction or alterations between 25,000 and 50,000 SF of gross floor area must be LEED Silver certifiable.
- b. New construction or alterations greater than 50,000 SF of gross floor area must be LEED Gold certifiable.
- c. Development subject to the provisions of this Section must meet the standards of the most current LEED building rating system. During the twelve (12) month time period after the adoption of a new version of LEED, permit applications may be submitted demonstrating compliance to either the immediately previous or newly adopted version of the LEED building rating system.
- d. The following submittal materials must be included with a development review application required for development subject to the provisions of this Section:
 - i. A completed LEED checklist for the appropriate LEED building standard to demonstrate how the proposed development is anticipated to meet the standards of this Section.
 - ii. A narrative indicating the mechanisms proposed to achieve each of the credits and prerequisites of the appropriate LEED building standard and demonstrating the anticipated methods by which compliance with the requirements of this Section will be achieved at the time of construction.
 - iii. An affidavit by a LEED-Accredited Professional (LEED-AP) Project Manager or by appropriate consultants stating that to the best of their knowledge, the project has been designed to achieve the stated LEED building standard.
- e. Prior to the issuance of the first Building Permit and prior to the issuance of the first Certificate of Occupancy, the LEED checklist and narrative description outlining compliance with the certification level required by this Section must be updated to identify any design changes made subsequent to Site Plan Approval and submitted to the Building Official accompanied by an affidavit by a LEED-AP Project Manager or appropriate consultants stating that, to the best of their knowledge, the project has been designed to achieve the stated LEED building standard.

2. Green Roofs & Storm Water Management

- a. To every extent practicable, storm water should be reused on-site for irrigation and other purposes where appropriate.
- b. The Planning Board may authorize the City Engineer to grant a credit to properties, against which any storm water impact fees are imposed, equivalent to the quantity of storm water that is removed from entering

the system through the use of green roofs or other on-site storm water management practices.

3. Roof Albedo

- a. Flat roofs and roofs pitched at or below nine and one-half degrees (9.5°; 2:12) must have a minimum solar reflectance index rating of seventy-eight (78) for a minimum of seventy-five percent (75%) of the roof surface.
- b. Roofs pitched above nine and one-half degrees (9.5°; 2:12) must have a minimum solar reflectance index rating of twenty-nine (29) for a minimum of seventy-five percent (75%) of the roof surface.

4. Environmental Performance

- a. The review boards shall establish submittal requirements for development review applications to ensure the following:
 - i. That shadows cast by high-rise buildings do not substantially and adversely limit ground level access to sunlight on sidewalks and Civic Spaces.
 - ii. That by high-rise buildings pedestrian level wind velocities do not exceed acceptable levels for various activities existing or proposed at particular locations.
 - iii. That buildings do not cause visual impairment or discomfort due to reflective spot glare and solar heat buildup in any nearby buildings.

10. DEVELOPMENT STANDARDS

Wireless Communication

10.10 WIRELESS COMMUNICATION

1. Purpose

- a. To facilitate effective and efficient telecommunication services throughout the city.
- b. To encourage the co-location and joint use of new and existing wireless communication towers and wireless communication antenna locations.
- c. To minimize the total number of towers throughout the community.
- d. To encourage the mounting of antennas to existing structures.
- e. To ensure towers and antennas are configured in a way that minimizes adverse visual impacts and reduces the impact of telecommunications structures on public health and safety.
- f. To avoid potential damage to adjacent properties from tower and antenna failure.

2. Applicability

- a. This section regulates all wireless communication towers, wireless communication antennas, and ancillary structures consistent with **Sections 253 and 332(c)(7) of the Communications Act of 1934, as amended, and section 6409(a) of the Middle Class Tax Relief and Job Creation Act of 2012.**
- b. Wireless communication towers, wireless communication antennas, and ancillary structures are considered structures and not regulated as a land use.

3. Development Review

- a. All development requires the submittal of a development review application to the Building Official.
- b. The development or modification of a wireless communication tower, wireless communication antenna, or ancillary structure requires a Special Permit in accordance with the provisions of §10.2.1. Special Permit, except as follows:
 - i. The development or modification of eligible facilities below the thresholds of Section 6409(a) of the Middle Class Tax Relief Act of 2012 requires only a pre-submittal meeting in accordance with the provisions of §10.1.1. Pre-Submittal Meeting, but does not require any further development review. Upon completion of the review of required application materials, a Certificate of Zoning Compliance shall be issued by the Building Official to certify compliance with the provisions and procedures of this Ordinance.
- c. The development or modification of a wireless communication tower, wireless communication antenna, or ancillary structure requires a special permit according to the provisions of §10.2.1. Special Permit.
- d. The Zoning Board of Appeals is the review board

for the development or modification of all wireless communication towers, wireless communication antennas, and their ancillary structures.

- e. Applicants must submit a rendering or computer-simulated photograph illustrating the view of any proposed wireless communications tower or antenna from at least three (3) prominent locations along the surrounding public thoroughfares.
- f. In its discretion to approve or deny a Special Permit authorizing a wireless communication tower, wireless communication antenna, and any ancillary structure, the review board shall consider the following:
 - i. Suitability of nearby, existing sites and/or the feasibility of alternative technologies.
 - ii. Height and design of proposed tower or antenna, with particular concern for design solutions that reduce or eliminate visual impact.
 - iii. Compatibility with the uses associated with surrounding properties and proximity of the proposed tower or antenna to properties in residential use.
 - iv. Topography, on-site vegetation, and the prominence of proposed facility.
 - v. Proposed ingress and egress for maintenance.

4. Wireless Communication Towers

- a. Wireless communication towers approved according to the provisions of this section may be built prior to or independent of any principal building type on a lot.
- b. Development Standards
 - i. Wireless communication towers are not permitted to exceed the tallest building type permitted for the district where they are located.
 - ii. Lighting is prohibited, except as required by the Federal Aviation Administration.
 - iii. Signs are prohibited, except as follows:
 - a). signs required by the FAA, FCC, or other applicable authority;
 - b). no trespassing signs or other notifications that alert the public to potential safety concerns; or
 - c). a nameplate or sign identifying the name and phone number of the owner or operator.
 - iv. Wireless communication towers must be setback from any property line a distance equal to their height.

5. Wireless Communication Antennas

- a. Development Standards
 - i. Roof mounted antennas:
 - a). are not permitted to exceed ten (10) feet in height;
 - b). must be setback at least ten (10) feet from the edge of the roof; and
 - c). are not permitted to project above a plane

- inclined at a forty-five degree (45°) angle from vertical, beginning at edge of the roof.
- ii. Wall or tower mounted antennas:
 - a). must be flush-mounted below any roof line of the structure they are attached to,
 - b). must be at least forty (40) feet above the average grade of the lot, measured from the ground to the base of the antenna; and
 - c). must be painted or otherwise screened in a way to match the colors or simulate the materials of the building or tower on which they are mounted.
- iii. Lighting is prohibited, except as required by the Federal Aviation Administration.
- iv. Signs are prohibited, except as follows:
 - a). signs required by the FAA, FCC, or other applicable authority;
 - b). no trespassing signs or other notifications that alert the public to potential safety concerns; or
 - c). a nameplate or sign identifying the name and phone number of the owner or operator.

6. Ancillary Structures

- a. Structures serving or being used in conjunction with a wireless communication tower or antenna are considered ancillary. Examples include utility or transmission equipment storage sheds or cabinets.
- b. An ancillary structure for wireless communications does not require separate development review when installed in conjunction with an approved wireless communication tower or antenna.
- c. Any buildings, cabinets, or shelters may house only equipment and supplies for operation of the wireless communication tower or antenna.
- d. Any equipment not used in direct support of such operation must not be stored on the site.
- e. The structure must be un-staffed.
- f. Signs are prohibited, except as follows:
 - i. signs required by the FAA, FCC, or other applicable authority;
 - ii. no trespassing signs or other notifications that alert the public to potential safety concerns; or
 - iii. a nameplate or sign identifying the name and phone number of the owner or operator.

7. Design Guidelines

- a. Towers should only be used in circumstances where no alternative building-mounted options are available.
- b. Towers facilities should be designed to structurally accommodate the maximum number of foreseeable users.
- c. Towers and antennas should be located as follows:
 - i. on properties owned or managed by the City of Somerville or the Somerville Housing Authority;

- ii. on properties located in the fabrication, commercial industry, or any mixed-use district;
- d. When antennas for multiple service providers are located on a single site, the antennas should be co-located to reduce visual impact.
- e. Antennas should be interior-mounted so that they are concealed from public view (e.g., inside church steeples, cupolas, bell-towers, or penthouses), or side-mounting onto existing structures in the least obtrusive location feasible, preferably with limited visibility from abutting streets.
- f. Where existing antennas have been installed in stealth enclosures, new equipment should be installed in stealth enclosures designed to match those already on the site.
- g. Locations should be chosen with a sensitivity to the surrounding topography and predominant view corridors.
- h. Antenna technology should be chosen to minimize the visual effect of “massing” panels on a rooftop.
- i. To every extent possible, new co-located equipment should meet the same conditions applied to any original special permit authorizing the wireless communication tower or antenna on the site.
- j. Existing on-site vegetation should be preserved to the maximum extent practical.
- k. All network interconnections from the communications site should be via underground lines.

8. Abandonment

- a. If the owner of any wireless communications tower or antenna communicates an intent to discontinue use or if any tower or antenna is not operated for a continuous period of twelve (12) months, the tower or antenna, and any ancillary structures and equipment must be removed by the owner of the tower or antenna within ninety (90) days.

10. DEVELOPMENT STANDARDS

Wireless Communication