

# Cambridge UFMP Taskforce Handout

## Snapshot of Policy Options

### Change the definition of “Significant Trees”

**Summary:** For projects requiring a special permit from the Planning Board or development projects subject to large project review (25,000 sq. ft. or more), the city’s tree protection ordinance provides certain protections. These protections only apply to “Significant Trees,” which are defined as trees greater than 8” DBH.

**Analysis:** It is unclear how the city determined the DBH threshold for significant trees but other cities and towns locally and across the country offer protections for trees with a lower DBH. In particular, protections for trees with 6” DBH or greater is common. Bartlett’s inventory of Cambridge’s tree canopy found that of 4,118 trees inventoried, 41 percent measured greater than 8 inch DBH versus 60 percent which measured 6” DBH or greater. If the city were to redefine Significant Trees as 6” DBH or greater, this would increase the number of trees captured under the ordinance for the purposes of new or redevelopment by about 49 percent.

**Pros:**

- Increases the number of trees protected by the provisions of the ordinance
- Primary burden placed on developers rather than individual residents or the city

**Cons:**

- Would apply to more proposed development projects and thus require additional city resources to review and approve associated tree studies, mitigation, and protection plans
- May require more city resources for enforcement because of the increased number of sites

**Precedents:** Atlanta, GA; Seattle WA; Oakland, FL; Anna, TX; Miami, FL (national); Concord, MA; Lexington, MA; Brookline, MA (local)

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### Create an “Exceptional Tree” category

**Summary:** The addition of an “Exceptional Tree” category in the City’s Tree Protection Ordinance would allow for a more stringent set of protections than those currently applied to Significant Trees in order to protect the city’s most valuable trees. An Exceptional Tree designation could be based on unique size, age, species, cultural, horticultural, or historic value. The conditions for these trees could also include additional protective measures for maintenance or during construction.

**Analysis:** The city can use the addition of Exceptional Trees to implement more stringent standards without applying these standards broadly to all significant trees. The city can justify the stringency of the standards based on the unique nature of trees meeting this designation criteria. While this would not increase the city’s jurisdiction or the number of trees under the tree protection ordinance, it would help protect the city’s most valuable trees. The city would need to determine how stringent of requirements they want to apply to this new category. In some cities, Exceptional Trees cannot be removed unless they are diseased or hazardous. In other cities, they simply require greater mitigation or demonstration that preserving the tree is infeasible.

#### **Pros:**

- Protects the city’s most valuable trees
- States explicit statutory preference for certain characteristics (size, age, species, etc.)
- Depending on stringency of standard, could help to curb canopy loss

#### **Cons:**

- Does not increase the number of trees under the jurisdiction of the tree protection ordinance
- Depending on stringency of standards, may not do much to curb canopy loss
- May require additional city resources for tracking and enforcement

**Precedents:** Seattle, WA; Washington, DC; Atlanta, GA; Arlington, VA; Savannah, GA; Charleston County, SC; Pasadena, CA; Miami, FL; Anna, TX (national); Wareham, MA (local)\*

\*Note that some of these cities use a different term than “Exceptional” tree but the concept is the same.

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### Change mitigation requirements under tree protection ordinance

**Summary:** Under the current Tree Protection Ordinance, a developer proposing to remove a Significant Tree must either replace the tree on site or pay into the Tree Replacement Fund. The current formula for payments into the Tree Replacement Fund is based on the average cost of a 2-inch caliper tree multiplied by a factor of 4 for installation, maintenance, and potential replacement over a five-year period (about \$1,000/tree) plus additional maintenance costs associated with watering and pruning (about \$300/tree).

**Analysis:** There is little incentive under the current system for a developer to minimize tree removal or replant on site. Strengthening the mitigation requirements and providing an incentive for developers to preserve trees could aid the city in its efforts to curb canopy loss. This can be done through a number of mechanisms including developing more stringent requirements for replacing trees on site and developing a more robust valuation process for off-site mitigation. Landscape value may contribute from seven to 20-percent of the real estate property value. The city could employ the International Society of Arboriculture's (ISA) Trunk Formula Method, which calculates tree replacement by trunk area rather than by diameter. This would dramatically increase the replacement value.

#### **Pros:**

- Would dramatically increase the replacement value
- Could be an incentive for developers to preserve trees on site

#### **Cons:**

- Higher replacement cost could reduce reporting of tree removals
- Due to the above, could require more resources to enforce

**Precedents:** Many other cities and towns use the ISA Trunk Formula Method for appraising costs; however, not all are tied to tree protection ordinances and mitigation. Seattle, WA (fines for violation); Palo Alto, CA; Boulder, CO; New York, NY

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### Enhance the role of the Committee on Public Planting

**Summary:** The Cambridge Committee on Public Planting is established under Chapter 2 of the City Code of Ordinances. The stated purpose of the Committee is to promote and improve the quality and diversity of public plantings throughout all areas of the City. Specifically, the Committee is charged with advising the city administration, Public Works Commissioner and other departments on public planting matters including effective maintenance; to serve as a local resource for public planting programs and ideas; to review planting plans for public works in the City for the appropriateness of plants, placement, and maintenance concerns; to provide support for the City Arborist and Tree Warden; to encourage the public's interest in plantings across all neighborhoods; and to undertake any other activities in line with the Committee's purpose.

**Analysis:** The Committee serves in an advisory capacity. However, for Residential Zone C-2B (single- and two-family detached dwellings, townhouse dwellings, multi-family dwellings (apartments and condos), and some institutional uses), the Committee on Public Planting is required to review and approve plans for landscaping and maintenance pursuant to Article 5 of the City's Zoning Ordinance.

As the Committee is an existing, city-sanctioned body its advisory role could be enhanced to assist with interpreting recommendations, updating analysis based on current research, reviewing pilot projects, and reviewing/monitoring progress toward targets. An example could include workshops on advances in urban forestry practices, and participation in annual/bi-annual meetings with the bicycle, pedestrian, transit and disability committees to discuss policies relative to the public right of way.

**Pros:**

- Enables specific advocacy for urban forest within City planning process

**Cons:**

- Could be resource-intensive resulting in high administrative costs for the city

**Precedents:** Chicago, IL

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### Expand tree protections to private properties

**Summary:** The City of Cambridge currently has no jurisdiction or requirements for the removal of trees on private property if removal happens outside of a new development project.

**Analysis:** Many cities locally and across the country have expanded the jurisdiction of local governments through tree protection ordinances by requiring a removal permit for all trees, regardless of whether they are on public or private property. Circumstances under which the city approves a tree removal permit vary in stringency but could range from approving every request to prohibiting removal of any healthy tree. However, the success of this approach has not been well established.

#### **Pros:**

- Could help curb canopy loss on private residences
- Could generate revenue to offset administrative costs associated with the permit program and enforcement efforts
- Raises awareness and reinforces the city's commitment to canopy preservation

#### **Cons:**

- Could be a cost burden/bureaucratic inconvenience for city residents
- May act as a disincentive for property owners to plant new trees on their lots
- Could be resource-intensive and difficult to monitor and enforce, resulting in high administrative costs for the city

**Precedents:** Nashville, TN; Dallas, TX; Atlanta, GA; Seattle, WA; Portland, OR; Washington, DC; Providence, RI (national); Concord, MA; Brookline, MA; Lexington, MA; Arlington, MA (local)

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## Snapshot of Policy Options

### Earmark Tree Replacement Fund dollars for community grants

**Summary:** The city is limited in its ability to encourage tree planting on private property outside of the development process. The current Back of Sidewalk program utilizes the authority under the State's Public Shade Tree law to plant shade trees within 20 feet of the public right-of-way with the property owner's consent, but the program does not go far enough.

**Analysis:** Given the legal constraints of the State's Public Shade Tree law and the current Back of Sidewalk Program, the primary strategy available to the city to encourage planting is voluntary programs that assist property owners in obtaining, planting, and/or paying for new trees. The city could earmark some of the funds in the Tree Replacement Fund for community-based grant making that could help fund operations to encourage planting on private property. This could be modelled off of Portland's "Neighborhood Planting Days," where the non-governmental organization Friend of Trees organizes a planting day, trains volunteers, and notifies residents of the availability of trees.

#### Pros:

- Can serve multiple purposes including planting, education, and community building
- Could increase the capacity of residents to plant trees in under-served neighborhoods by subsidizing costs and offering technical assistance
- Could increase the canopy in neighborhoods where residents take advantage of the program/planting day
- Outside of the grant process, the program would not require city administration, staffing, or resources

#### Cons:

- Could be difficult to implement in neighborhoods where residents are not interested in or opposed to tree planting
- Program is opt-in and depending on the residents who choose to take advantage of the services (including subsidies) it could further exacerbate inequitable distribution of canopy across the city

**Precedents:** Portland, OR; San Francisco, CA; Los Angeles, CA; Denver, CO; Washington, DC (national); Somerville, MA (local)

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### Align planting protocols with city's commitment to equity

**Summary:** Cambridge does not currently have a formal policy that governs the location or prioritization of new plantings, or how resources for planting are allocated across the city's neighborhoods.

**Analysis:** Tree canopy plays a major role in mitigating the urban heat island effect and green infrastructure forms an essential part of stormwater management systems, yet at the these ecosystem services are often inequitably distributed across the city. There is already some indication that Cambridge's tree canopy has an inequitable distribution. A 2017 Cambridge Today report that showed tree canopy coverage in neighborhoods such as East Cambridge and Area 2/MIT are lower than in comparatively wealthier neighborhoods. The city can address this inequity by establishing a formal protocol for new plantings that is based on tree survey data and prioritizes areas with poor canopy coverage and/or environmental justice communities that are likely to experience disparate extreme heat impacts.

#### **Pros:**

- Prioritizes new trees in areas of the city that are in the most need
- Helps to better mitigate climate impacts for vulnerable populations
- Protocol is formal and based on data
- Allows city to reinforce its commitment to equity

#### **Cons:**

- Could be resource-intensive resulting in high administrative costs for the city

**Precedents:** New York, NY; Cleveland, OH; Boston, MA (for sidewalk replacement);

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### Require City Arborist inspection prior to occupancy

**Summary:** Cambridge's City Arborist does not currently verify that Replacement Trees have been planted at construction sites in accordance with the requirements of the Tree Protection Ordinance. As such, compliance is hard to track and it is currently unclear to the Department of Public Works how often proponents are meeting their requirements.

**Analysis:** Amending the Tree Protection Ordinance to include a verification requirement could increase compliance and also improve DPW's ability to collect data/information on compliance for projects across the city. Arborist verification can take many forms, from basic adherence to review of the location, soil suitability, tree depth and pit size to ensure that the planting of trees is consistent with city guidelines and practices. This review could be expanded even further to include a "performance guarantee" held in case standards are not met. This is the practice in Concord, MA where all replacement trees must be planted within 90 days, otherwise the city requires a performance guarantee in an amount equal to the mitigation cost.

#### Pros:

- Verifying tree replacement and preservation prior to issuance of a Certificate of Occupancy will incentivize developers to submit landscape plans that are achievable and appropriate for the lot
- A formal process for City Arborist inspection will likely increase compliance with the provisions of the Tree Protection Ordinance and allow DPW to collect better data/information on compliance

#### Cons:

- Requiring City Arborist inspection prior to every Certificate of Occupancy could be time and cost-intensive for the city
- It could be logistically challenging to determine how the City Arborist fits into the existing inspection process and would need to be coordinated with other city departments
- Could be resource-intensive and difficult to monitor and enforce, resulting in high administrative costs for the city

**Precedents:** Dallas, TX; Frisco, TX; Miami-Dade County, FL; Portland, OR; Atlanta, GA: (national) Concord, MA; (local

)\*\*Not all final inspections are required to be performed by the City Arborist – some require the building commissioner or the Director of Planning to verify that tree requirements have been met.



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### Strengthen zoning ordinance requirements

**Summary:** Various tree-related requirements and landscape mandates are currently scattered throughout city zoning. Most of these requirements are tied to specific site uses (such as parking facilities or townhouses) and districts (such as the Parkway and Prospect Street Overlay Districts). The Zoning Ordinance also include requirements for setbacks and open space, which have implications for the amount of area available for planting on sites.

**Analysis:** Cambridge could explore amendments to the Zoning Ordinance to better reflect development trends and city priorities by consolidating and strengthening existing requirements. Landscaping mandates can be effective in urban areas with high level of new development, since new construction triggers adherence to new zoning and construction requirements. There are a number of options available to the city to achieve this. Below are general pros and cons for strengthening and consolidating zoning requirements. Specific options including precedents are discussed individually.

#### **Pros:**

- May create more consistency and predictability for developers
- May increase enforcement and compliance
- Could increase flexibility for meeting standards (for green factor option)

#### **Cons:**

- Would require amendments to zoning which is likely to be a time- and resource-intensive process
- Could be perceived as a cost burden for developers
- May require additional city staff and resources for enforcement
- May conflict with existing requirements or require the city to reevaluate existing overlay districts, and may conflict with other city policies and goals

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### Strengthen zoning ordinance requirements (continued)

**Options:** There are various options for the city in strengthening zoning requirements. A few are discussed here and precedents for each approach are included individually:

- Option 1: Establish canopy coverage requirements across the city

The city could amend the Zoning Ordinance to require a certain canopy coverage percentage for different types of land use or districts. This could be tied to areas the city has determined to be “high priority” for planting or preservation or could apply citywide. If it were applied to priority areas, it would most likely be accomplished through an overlay district. If it were to apply citywide, it could be incorporated into the existing requirements/standards for open space or established as a separate minimum requirement alongside the existing setback and open space requirements for different zoning districts.

Precedents for Option 1: Chapel Hill, NC; Providence, RI; Manassass, VA; Augusta, GA

- Option 2: Increase ratios for trees to parking spaces and/or dwelling units

The city could require either a certain number of trees or a certain canopy coverage based on the number of parking spaces or dwelling units on a development site. Articles 6 and 11 of the Zoning Ordinance already establish some standards for tree planting for off-street and on grade, open parking facilities. The current standard is one tree for every ten parking spaces. However, it is unclear whether the definition of “on grade, open parking facility” includes above ground parking garage structures. If not, the city could also consider extending requirements to those facilities.

Precedents for Option 2: Plano, CA; Montgomery County, MD; Washington, DC; Frisco, TX (national); Fitchburg, MA (local)

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### Strengthen zoning ordinance requirements (continued)

- Option 3: Increase setback and open space requirements in priority areas

The City of Cambridge could increase the minimum setback and open space requirements for all or certain zoning districts to increase the amount of space available for planting on lots. While many of the city's residential districts have substantial requirements, most industrial and business districts in the city have little or no setback and open space requirements. This would not require the implementation of a new concept; rather it would simply involve a revision to the existing minimum requirements. The city could coordinate increased requirements to match the areas designated as "high priority" for planting and preservation.

Precedents for Option 3: Baltimore, MD\*; Austin, TX\*

\*Note that we were not able to find examples of cities that have increased setbacks and open space requirements for the sole purpose of facilitating planting in high priority areas but the two precedent cities listed above use sociodemographic and other factors to determine high priority planting areas.

- Option 4: Establish a flexible landscape mandate like the Green Factor of Green Area Ratio

The city currently has separate definitions for the following areas: (1) open space, green area; (2) open space, permeable; (3) open space, public; (4) open space, publicly beneficial; (5) open space, private. Some of the zoning articles also refer to the term "landscaped green area," and state that this definition is defined in article 2 of the zoning ordinance but it is not. It is likely that these articles are referring to the "open space, green area" definition but this could be amended and clarified. Similar to parking/tree requirements, landscaping requirements are sprinkled throughout the zoning articles and differ based on zoning district and other characteristics. Implementing a system similar to Seattle's Green Factor or Washington DC's green area ratio could help to consolidate these landscape requirements, making them more consistent across the city and flexible for property owners.

Precedents for Option 4: Washington, DC; Seattle, WA