# City of Minneapolis
# Urban Forest Policy

**Contents:**



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| Brief Description | The policy contains standards, guidelines, and recommended practices that help protect, maintain, and manage the City's urban forest and green infrastructure |
| Applies to | All departments, developers, contractors |
| History: Approval date, effective date, revisions | City Council Approval on 2/27/04; Effective date: 3/6/04 (publication date) |
| Related mandates | Amendments to Section 427.10 and Chapter 347 of the Minneapolis Code of Ordinances |
| Links: procedures, forms, flow chart | To be drafted |

**Preamble**
The urban forest is an integral part of the City's green infrastructure. Properly planned and managed, the urban forest provides significant ecological, social, and economic benefits. These include: improved air and water quality, reduced erosion and storm water runoff, conserved energy, improved health, enhanced livability, traffic calming, reduced noise, and increased property values.

Until now, the departments that comprise the City of Minneapolis have lacked a comprehensive urban forestry policy. The City Council finds that the standards and guidelines in this Policy are necessary to ensure the continued protection, maintenance, replacement, and management of the City's urban forest. Adopting these standards and guidelines will serve to protect the health, safety, and general welfare of the citizens of Minneapolis.

## Section 1. Background, Process

### 1.1 Background

In response to public complaints about the adverse impacts of sidewalk repair and replacement on boulevard trees and their root systems, the Sidewalks Division of Minneapolis Public Works Department (PW) and the Forestry Division of the Minneapolis Park & Recreation Board (MPRB) began collaborating in 2001 to address the complaints. PW is charged with replacing and repairing streets and sidewalks, which can involve conflicts with tree roots. The MPRB is charged with the care and management of public boulevard trees. It became evident that an urban forest policy was necessary to help bridge the gap between those agencies that impact the urban forest and those that can help to enhance it.

This dialogue has since broadened to include the impact that other city departments, private developers, tree care companies, utilities, Minneapolis Public Schools, etc., have on components of the City's urban forest. The dialogue has led to improved specifications in City contracts and improved communication among City departments and other public and private entities.

### 1.2 Policy Development Process

In late 2002, Council Members Paul Ostrow, Dan Niziolek, Sandra Colvin-Roy, and Dean Zimmermann convened a meeting of stakeholders (Section 6) to identify the challenges to the city's urban forest and to make policy recommendations for its protection and preservation. The stakeholders met several times in 2003 and worked collaboratively to identify problems and corresponding solutions.

### 1.3 How the *Minneapolis Plan* Pertains

The "Natural Ecology" Section of the ***Minneapolis Plan*** provides:

> *An important aspect of overall improvements to the quality of air, water, neighborhoods, and public spaces is the presence of mature, healthy trees in the city. The urban forest provides many pleasures and serves many purposes, and*

*includes gardens and wetlands as well as trees planted on street boulevards and in parks and other public places. Strategic tree planting is a proven complementary approach to conserving energy because trees and other foliage provide shade and form windbreaks. The planting and maintenance of shade trees should be considered by all city departments as an investment in public infrastructure.*

*There are other purposes and pleasures provided by the urban forest, gardens, and wetlands. Plants, particularly trees, wetland species and native prairie grasses play a significant role in flood control by intercepting, filtering and storing water, and slowing the rate and volume of runoff. They clean the air as they transform and render harmless many pollutants and convert carbon dioxide into oxygen. Mature trees provide a leafy canopy over city streets for three seasons of the year, calming traffic, buffering noise and beautifying the city in simple and effective ways.* ***Minneapolis will encourage the planting and preservation of trees and other vegetation*****.**

**1.3.1 Some Implementation Steps Identified in the Minneapolis Plan:**

- *Encourage the planting and replacement of trees on public and private property.*
- *Encourage the use of plant communities native to the Twin Cities which achieve native biodiversity and wildlife habitat (particularly for resident and migratory songbirds and waterfowl).*
- *Develop protection measures for unique ecosystems including remaining areas of native vegetation (particularly oaks and wetland vegetation).*
- *Continue to invest in the health of the urban forest by avoiding tree monocultures and planting a variety of native and other hardy non-invasive species.*

## 2. Purpose, Goals, Values

### 2.1 Purpose

The purpose of this Policy is to preserve, protect, and improve the health and general welfare of the public by promoting the public benefit of saving, maintaining, and planting trees. This purpose will be accomplished by providing standards, guidelines, and recommended practices that result in a safe, healthy urban forest that contributes to a quality environment instead of creating problems.

### 2.2. Policy Goals

- Establish an urban forest policy that promotes and facilitates the communication and coordination of City Departments, Minneapolis Park & Recreation Board, University of Minnesota, the Minneapolis Public Schools, developers, contractors, public utilities, and non-government organizations in their respective interactions affecting public trees and the urban forest.

- Establish guiding principles, standards, and recommended practices for city staff, agencies, contractors, and others doing business in Minneapolis.

- Mitigate tree loss and tree damage caused by construction activities, improper pruning practices, and tree diseases and pests.

- Promote sustainable, green streetscapes that provide an amenable pedestrian environment.

- Explore cost-effective options to increase and sustain the tree canopy in Minneapolis.

- Explore the possibility of green easements that allow public trees to be planted in private lawns adjacent to the public property.

### 2.3.Values

2.3.1 Tree cover and green space benefit and enhance the community.

2.3.2 When people work together to create a healthy urban forest, they develop neighborhood and community partnerships that benefit participants both sociologically and psychologically.

2.3.3 Proper management of the urban forest can lessen the impacts of drought, tree diseases and insect pests, construction, and storm damage.

2.3.4 Good stewardship of trees and green space on both public and private property benefits the entire community.

2.3.5 The ecological integrity of watersheds and the Mississippi River is benefited by preserving and protecting the City's green infrastructure.

2.3.6 Pervious paving, pavers, and unpaved boulevards help to mitigate stormwater runoff issues

2.3.7 Planting the right tree in the right place can avoid future tree health and management problems.

2.3.8 Creating proper planting environments for urban trees.

2.3.9 Trees are good for business. Consumers respond positively to shopping environments having a healthy urban forest, according to University of Washington research.

## 3. Guidelines, Standards, and Recommended Practices

The following guidelines, standards, and recommended practices will help protect and preserve the Minneapolis urban forest:

### 3.1 Avoid conflicts between trees and public sidewalks or rights-of-way

3.1.1. Public Works specifications will include removable sections of sidewalk to accommodate tree roots without having to replace an entire sidewalk panel.

3.1.2. According to Public Works specifications, no living trees shall be removed without written permission of the Minneapolis Park and Recreation Board (612) 370-4900. Root removal for the purpose of installing sidewalks at the proper grade is subject to inspection and approval by the Park Board forester. The contractor may remove all roots within the area defined as six and one half (6-1/2) inches below the top of the new finished sidewalk grade, by severing them off cleanly with a sharp axe, or by grinding them off using a root grinding machine, instead of breaking them off with a backhoe or similar equipment. .

3.1.3. Public Works specifications will include parameters for rings (aka arcs) around trees in boulevards and/or adjacent to sidewalks and rights-of-way.

3.1.4. Contractors shall follow specifications and policy and be held responsible for violating them.

3.1.5. The standard width for boulevard tree-planting space shall be 5.5 feet, with a minimum of four feet. Planted medians shall be a minimum of ten feet for tree planting. The MPRB already has discretion to refuse to plant or maintain a tree in a boulevard or median that does not meet an adequate width.

3.1.6. Public Works shall provide the Park Board Forester with a copy of the sidewalk improvement plan annually, prior to the commencement of construction of sidewalk improvements.

### 3.2 In accordance with Section 427.10 of the Minneapolis Code of Ordinances, open boulevards shall not be paved.

3.2.1 Developers and site plan proponents must obtain paving permits and encroachment permits in conformance with the City Code. [**Note**: Sections 3.1 and 3.2 involve amendments to Section 427.10 of the Minneapolis Code of Ordinances.]

### 3.3 Tree grates are strongly discouraged. After the adoption of this Policy, tree grates may be installed, with the mutual consent of the MPRB/Forestry Division and Public Works, in the downtown Central Business District or within a full block east-and-west or a half block north-and-south of areas where community corridors intersect with commercials corridors or where

**commercial corridors intersect with one another. However, an open boulevard or alternatives to tree grates shall be considered first.**

**3.4 An applicant for a Tree Servicing license in Minneapolis must provide proof that at least one employee of the tree servicing business is currently recognized by the International Society of Arboriculture (ISA) as a Certified Arborist at the time of their license application or renewal.** [Chapter 347 of the Minneapolis Code of Ordinances.]

3.4.1 Tree servicing companies must comply with American National Standards Institute (ANSI) Standard A300 when pruning or otherwise servicing trees on public or private property.

3.4.2 The practices of tree-topping and using spikes for anything other than tree removals or emergency rescues are prohibited as tree care practices on public or private trees.

3.4.3. This requirement shall be phased in through the year 2006 so as to allow tree-servicing companies time to budget for and obtain the Certified Arborist credentials. **[Note**: this requires an amendment to Chapter 347 of the Minneapolis Code of Ordinances.]

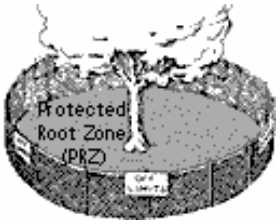
**3.5 Avoid construction damage to trees and their root systems.**

3.5.1. Developers, other government entities, and contractors should have a pre-construction meeting that includes a representative from MPRB/Forestry, in addition to appropriate City staff. If there is any impact on existing trees, projects managed by the City will be handled by internal communications between the City and the MPRB. For projects built by the City, the MPRB will be notified.

3.5.2. Effective tree preservation must be integrated into site/design plans during the design and land development process.
*"Field Guide: A Resource for Builders and Developers to Follow When Preserving, Protecting, and Restoring Trees."*

3.5.3. For projects that require major site plan review, contractors/subcontractors, MPRB/Forestry, and others subject to site plan review are encouraged to enter into a Memorandum of Understanding (MOU) that establishes, at a minimum and where practical:

- a Tree Protection Plan with text and/or graphic illustrations indicating the methods that will be used to protect existing trees during construction;
- location of the protected root zone (PRZ) around each tree where construction equipment and materials cannot be placed or piled, to avoid soil compaction;



- location and installation of protective barriers, fences, and signage to designate the construction-free zone(s) near trees;
- depth of wood chip mulch in and around each impacted tree;
- geotextile fabric barriers shall be used to trap concrete debris;
- cement/concrete mixers, paint containers, and solvent containers shall not be rinsed out in the PRZ;
- construction debris shall not be deposited or left within a PRZ;
- no cars, other vehicles, or temporary structures shall be parked or placed on unpaved surfaces within a PRZ, excluding street or parking pavement areas;
- amount of the fine for each violation of the MOU, pursuant to MPRB specifications and ordinances.

3.5.4. Appropriate MPRB/Forestry personnel shall be allowed in the construction site at any stage of the construction project to monitor the work's impact on the trees that are within the MPRB's jurisdiction.

**3.6 Structural or engineered soil should be used in planting pits, continuous trenches, and in other areas as necessary in order to provide a sustainable growing environment for public trees**. [Planting pits and continuous trenches are defined in the Glossary section of this policy.]

3.6.1. Exceptions to using structural or engineered soil and the volume of soil for trees on public property may be approved by the MPRB Forestry Section.

3.7 The recommended size of an in-ground planting pit shall be a minimum of 300 cubic feet (*e.g.*, 10 feet x 10 feet x 3 feet deep).

3.7.1 The surface opening shall be no less than 5' x 5' or the size obtained in Section 3.1.5 of this report (meaning that paving can go up to the surface opening, leaving the surface opening smaller than the width and length of the pit underneath.).

3.7.2. Shared planting trenches for trees are encouraged, forming a copse of trees, provided that the 300-cubic-foot minimum is met for each tree.

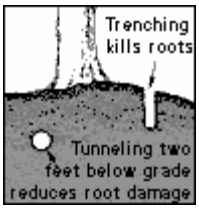
**3.8 Development proposals that are subject to Site Plan Review shall submit landscaping management plans as part of the Site Plan Review process.**

3.8.1. The landscaping management plan will detail how trees, turf, and other landscape features shall be watered and maintained for the first five years after installation.

3.8.2. The use of structural or engineered soil or other healthy growing media in planting islands in parking lots is encouraged for the long-term vitality of trees and other plant materials, heat-island mitigation, and stormwater-runoff reduction.

3.8.3. The use of salt- and heat-tolerant plants in parking lots is encouraged.

**3.9 Whenever below-grade conduit work is performed in the vicinity of trees, contractors and city staff are encouraged to use directional boring at a minimum depth of 24 inches instead of trenching procedures by tree roots.**




3.9.1 During excavations, when it becomes necessary to expose or cut tree roots that are greater than one (1) inch in diameter or are within the PRZ of any tree, the contractor has a duty to protect the roots in accordance with City and MPRB policies and specifications.

3.9.2 Any exception to the use of directional boring by a private contractor must have the permission of the MPRB Forestry Section. Excavators shall consult with the MPRB regarding the feasibility of alternatives to directional boring.

3.9.3 The contractor is subject to the MPRB ordinances that pertain to tree protection.

3.9.4 For notification purposes, Public Works shall provide the MPRB with a copy of its underground utility and conduit installation and/or maintenance plans for areas in the PRZ 2 weeks prior to construction.

3.9.5. Public Works shall install its utility and conduit installations as close to the curbside edge of the boulevard as possible, in order to leave maximum open boulevard space for plantings.

**3.10 Public Works is encouraged to look for cost-effective ice- and snow-melting products or methods that will minimize the impact to trees, turf, and other vegetation.**

**3.11 Residents and property owners are encouraged to plant and maintain trees on their own private property, but especially in areas where public boulevards are too narrow (*i.e.,* under 4 feet wide) to sustain a mature shade tree.**

3.12. **Site Plans shall be stamped with a notice that requires the owner and/or contractor to contact the MPRB Forestry Section prior to the start of any on-site construction that may have a tree-related impact.**

3.12.1 All applicable permits are required from the MPRB, pursuant to Chapter 10 of Park Board ordinances. Failure to obtain such permits may subject the owner and/or contractor to monetary penalties.

3.13. **The City's Housing Inspection Services Division shall maintain a process for identifying high-risk trees on private property. High-risk trees on public property are monitored by the Minneapolis Park and Recreation Board.**

**3.14 Public Works is encouraged to contact the MPRB Forestry Division prior to planning street-lighting projects, in order to coordinate tree-planting/spacing standards with lighting designs and layouts in boulevards and public rights-of-way.**

3.15. **The Fire Department is encouraged to continue assisting with watering public trees, as this activity was very beneficial to the urban forest during the drought of 2003 and is also a useful training activity for firefighters.**

**4. Targets for the Future (performance measures)**

4.1.Reduce the number of instances of sidewalk/tree conflicts.

4.2 The MPRB is striving to complete an inventory of the boulevard trees in Minneapolis by the end of 2005, followed by an inventory or park trees and other public trees managed by the MPRB. This information will be included as a layer in the City's GIS databases.

4.3 By 2007, the City will have established a Coordinated Emergency Storm Response Team for storms and will have identified two sites (one north and one south) as staging areas for storm recovery and tree debris.

4.4. By 2005 an Invasive Insect Pest Emergency Response Plan will be established to coordinate MPRB and the City's Environmental Services Division efforts regarding education and public awareness for potential infestations, and City ordinances will be examined to determine if they should be amended to broaden the definition of "public nuisances" to include not only Dutch elm disease, but also Emerald Ash Borer, Asian Long-horned Beetle, Gypsy Moth, Sudden Oak Death, or other potential tree pests or diseases.

4.5. By January 1, 2007, applicants for tree servicing licenses will meet the provisions of Section 3.4 above.

4.6. Public Works, in consultation with the MPRB, will explore, investigate, and determine types of pervious paving/pavers as alternatives to impervious paving.

4.7. Public Works, in consultation with MPRB Forestry Division, via site plan review and routine inspection, shall pursue improperly paved boulevards when encountered.

4.8. This policy will be reviewed at least every other year after its initial adoption to update and revise it as needed, starting in February 2006 and subsequently in February in even-numbered years.

4.9. By July 2004, post this Policy on the City of Minneapolis web site, with links to pertinent code provisions and resource materials.

## Section 5. Glossary of Terms

**5.1.** Boulevard, for the purpose of this policy, is that part of all streets and avenues lying between the sidewalk and the property line and between the sidewalk and the roadway, excluding the curb.

5.2. Continuous trench is a shared planting pit that accommodates several trees and their root systems in a streetscape design. It is sometimes called a tree strip.

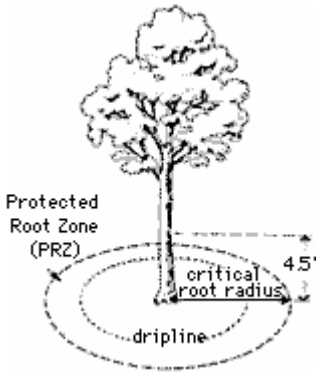

Using space under the sidewalk for root growth is the only place for trees to find adequate soil.

5.3 Diameter (dbh) is a tree's diameter in inches measured at 4 ½ feet above the ground. On trees with multiple trunks, the diameter shall be equivalent to the sum of trunk areas measured at 4 ½ feet above the ground.

5.4 High Risk Tree (sometimes called a Hazardous Tree) is a tree with a combination of defect or disease and a proximity to people or property.

5.5 Protected Area is all real property within and surrounding the Protected Root Zone of the trees that are being protected.

5.6 Protected Root Zone (PRZ) is the area in which the tree's roots are located and the minimum areas beneath a tree that must be left undisturbed to preserve a sufficient root mass to give a tree a reasonable chance of survival. To determine the zone, measure the tree diameter in inches at breast height (dbh) or 4.5 feet above the ground. Then multiply that number by 1.5



or 1.0. Express the result in feet.
*Example:* dbh=8 inches; 8 x 1.5 =12(feet).

5.7. Planting pit is a tree-planting site that is surrounded on all sides by paved surfaces. A typical planting pit is an opening in the sidewalk of an otherwise paved boulevard or plaza. It may be raised, sunken, or at the same level as the surrounding pavement.

5.8. Site Plan Review shall have the meaning described in Chapter 530 of the Minneapolis Code of Ordinances.

5.9. Structural Soil (also known as "engineered soil") is a highly compactable medium that retains a high level of porosity, allowing for better infiltration of water and higher oxygen levels than typical sub-grades used under pavement. Structural or engineered soils are used under pavement and in planting pits. Structural or engineered soils consist of a controlled mixture of angular-shaped aggregate of similar size, topsoil, sometimes with the addition of porous aggregate, fertilizer, and a soil stabilizer. It provides a continuous base course under pavements while providing a medium for tree root growth. Cornell University patented its structural soil, called "CU-Soil."
http://www.hort.cornell.edu/department/faculty/bassuk/uhi/outreach/csc/

5.10. Urban Forestry is the art and science of planning, managing, and protecting natural and planted vegetation in urban areas.

**6. List of Policy Collaborators:**

- Minneapolis City Council Members Paul Ostrow, Dan Niziolek, Dean Zimmermann, and Sandra Colvin-Roy
- Minneapolis City Council Aides, Gay Noble, Natalie Collins, Lorrie Stromme
- Minneapolis Fire Department
- Minneapolis Park & Recreation Board Commissioner John Erwin
- Minneapolis Park & Recreation Board, Mike Schmidt, Assistant Superintendent
- Minneapolis Park & Recreation Board, Forestry Division
- Minneapolis Public Schools, Facilities Management
- Minnesota Department of Natural Resources, Forestry
- Minnesota Department of Transportation, Forestry
- Private arborists: George Welles and Katie Himanga
- Representatives from the following Minneapolis Departments, Divisions, and Commissions:
  - Public Works, Planning, Regulatory Services, Environmental Services, Neighborhood Revitalization Program, Committee on Urban Environment
- SchaferRichardson, Inc., developer
- Tree Trust, St. Paul, MN
- University of Minnesota
- Don Willeke, private citizen
- Xcel Energy

**Section 7 – Effective Date**

The effective date of this Policy is March 6, 2004

**Section 8 – Cross References: Pertinent City and Park Board Ordinances**

Minneapolis City Code:

- Chapter 1, Article II, Section 7 – Tree-trimming (Cable Companies)
- Chapter 16 – Parks and Parkways; authority of Park Board relative to trees
- 47.190 – Public nuisance prohibition and abatement
- 52.100 – Erosion Control
- 74.20 – Attachment of animals to trees
- 173.450 – Chrismas trees (Fire Code precautions)
- 227.90 – Offensive conditions and vegetation
- 229.10 – Pest & Vermin Control ("Rubbish"definition includes tree branches)
- 230.10 – Definitions/Pest Control (see "Lawn")
- 244.1580 – Weeds, dead trees, other vegetation
- Chapter 279 – Christmas tree dealers
- Chapter 347 – Tree servicing (licensing)
- Chapter 399 – Dutch Elm Disease and Abatement of Public Nuisances
- 427.10 – Boulevards
- 427.200 – Destruction of trees, posts; attachment of objects prohibited
- 427.280 – Obstructing Driver's View of Traffic
- 437.20 – Permit for Sidewalk, Curb, Gutter Pavement
- 451.100 - Newsstands
- Chapter 530 – Site Plan Review
- 530.150 – General Landscaping & Screening
- 530.160 – Parking and Loading Landscaping & Screening
- 535.300 – Protection of Natural Features
- 551.310 – Linden Hills Overlay District Site Plan Review Requirements
- 551.490 and .500 - Shoreland Overlay Districts
- 551.700 – Mississippi River Critical Area Overlay District
- 555.460 – "Clear Cutting" definition
- Chapter 593 – Special Act relating to planting, care, protection, etc. of trees
- 598.100 – Protection of Natural Features, Land Subdivision Regulations

Minneapolis Park & Recreation Board Ordinances

- PB 2-2 – Molesting vegetation
- PB 2-7 – Bill posting
- PB Chapter 10-1 *et seq.* – Tree Protection, Nuisances, etc.
- PB 13-5 - Utility encroachment application procedures
- Park Board Specs Section 02050, Parts 2 and 3 – Fines for Tree Damage
- Park Board Specs Section 02059 – Tree Protection; Memorandum of Understanding

Minneapolis Plan -
http://www.ci.minneapolis.mn.us/planning/planpubs/mplsplan/plan.html

American National Standards Institute (ANSI) A300 Tree Care Standards - http://www.ansi.org/news_publications/media_tips/tree_care.aspx?menuid=7