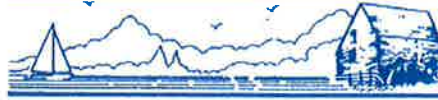


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# *The Village of Port Washington North Village Tree Policy*



*November, 2005*

## *A Message From The Mayor*

I am proud to present to you Port Washington North's first Village Tree Policy. The Board and I believe it will serve as an important tool in helping us understand and manage one of our most beautiful and important assets; our trees.

This policy comes at an opportune time and coordinates well with other initiatives our Village is undertaking, such as reclaiming and developing our waterfront, acquiring large parcels of land for open space and recreational use, and developing a smart growth strategy for development. All of these require, in some form or another, a tree policy to reference if they are to be implemented successfully.

Our Tree Policy speaks of preserving trees, planting more trees than are felled, and understanding the challenges our Village must face when trees and infrastructure collide. We face some very difficult decisions about our Village street trees when it comes to sidewalk, curb and road damage, utility and sewer encroachment, and the health and well being of these trees.

The efforts of the Village Tree Policy will help to guide us forward with a plan that involves understanding the issues at hand, a process to tackle the problems that exist, and most importantly, to enlighten the residential community and our commercial land and business owners with respect to any action being taken. The Village recognizes how important our trees are for our well being, our property values, and our environment.

I am aware of the previous issues that surfaced when the Village proposed, and ultimately, followed through with the removal of numerous trees in our Village when new roads were being constructed. I am also aware of the many residents who have called to have trees removed because of lifting sidewalks and problems with roots entering their sewer lines. It is clear that there are many opinions as to what should be done with our mature Village street trees. This Policy will hopefully put to rest any questions as to how these issues are decided.

What the Village needs more than anything is the support of the entire Port Washington North community and its commitment to abide by this Policy to ensure a beautiful and green future for our Village.

Sincerely,



Bob Weitzner  
Mayor of Port Washington North



What does he plant who plants a tree?  
He plants the friend of sun and sky;  
He plants the flag of breezes free;  
The shaft of beauty, towering high;  
He plants a home to heaven anigh  
For song and mother-croon of bird  
In hushed and happy twilight heard -  
The treble of heaven's harmony  
These things he plants who plants a tree.

*Henry Cyler Bunner, (The Heart of the Tree)*

"I cut it down, because it blocked the light:  
And now the sunshine streams into the room  
At noonday; but, at closing in of night,  
I hear a ghostly murmur in the gloom -

A ghostly wind that stirs the spectral tree  
To scornful whispering of phantasmal boughs -  
O foolish man, who thought to murder me;  
My live roots still run under your frail house"

*Wilfrid Gibson (The Tree)*



# Table of Contents

<i>Forward.....</i>	<i>2</i>
 <i>Chapter 1</i>	
Our Village Trees.....	3
o Benefits of Trees.....	3
 <i>Chapter 2</i>	
Why Do We Need a Village Tree Policy.....	5
 <i>Chapter 3</i>	
Village Street Trees and Sidewalk Repair.....	6
 <i>Chapter 4</i>	
History.....	7
 <i>Chapter 5</i>	
Street Trees and Sidewalk Village Code.....	8
 <i>Chapter 6</i>	
Problem Issues Regarding Street Trees.....	9
 <i>Chapter 7</i>	
Village Tree Planning Steps and Policy Statements.....	10
o Step 1- Village street tree inventory.....	10
o Step 2- Policy/protocol for cutting trees.....	10
o Step 3- Criteria for planting new trees.....	12
o Step 4- Maintenance plan.....	17
o Step 5- Ways to protect trees when repairing sidewalks and at construction and utility work sites.....	17
o Step 6- Hazard tree risk reduction program and policy.....	19
o Step 7- Establish a tree/sidewalk repair policy including methods to repair sidewalks.....	21
o Step 8- Budgeting for trees and sidewalks.....	27
o Step 9- Public funding sources for tree inventory and planting.....	28
o Step 10-Public awareness and adoption of local laws.....	29
 <i>Chapter 8</i>	
Conclusion.....	31
 <i>Appendix.....</i>	 32



## *Forward*

Sometimes we take things for granted. It was not long ago that the Village was surrounded by trees no younger than 40 years of age, standing tall and creating the canopy that lined our streets that gave our Village character. Then the harsh realities set in when trees and infrastructure collided. On one side, we had residents resisting even the notion of these old friends being felled over its losing battle with sidewalks and roads. Then we had those who viewed the trees as a nuisance, and demanded they come down. How could people who live so close to each other share such different views?

It appears only now do we begin to understand how attached we are to our trees. Our trees are a vital part of our Village and our lives. We need to nurture and protect them. They add personality and charm to our community. Yet this comes at a cost. We need to come up with a solution on how to protect our trees, while at the same time mitigate the havoc they create regarding our streets, sidewalks, and sewer lines.

The following is our Village Tree Policy. In it is the blueprint for how the Village will deal with preserving our trees and our infrastructure. It is our vision for the future. It is intended for everyone, elected officials, municipal employees, residents, commercial owners, etc. Our trees deserve protection; the right to grow, and the right to be planted. But our sidewalks need to be safe for our residents, especially our children and the elderly. Hopefully the instituting of a Village Tree Policy will accomplish both.



## *Chapter 1*

### Our Village Trees

Our trees play an essential role in our Village. Trees give us beauty, a welcome relief from hard streets and sidewalks. They give us childhood memories. We often relate to trees; they mesmerize us in their ability to bend but not brake. They are born, they grow, and they die. They have life cycles and vital needs. Either they must adapt to their surrounds of human influence and activity, or we must adapt or adjust to them.

There is a price to pay to give our trees the attention, care, and respect they deserve. And our Village must be prepared to pay it.

#### **Benefits of Trees:**

##### **Facts**

- One mature tree provides four individuals with their daily ration of oxygen (Tree Canada Foundation).
- The presence of 2 single trees in close proximity to a house or building can reduce air conditioning demand by up to 30% (Michigan State University Urban Forestry).
- Trees, when located in residential areas, can increase property values by over 18% (US Forest Service).

##### **Trees improve the quality of our environment.**

- Trees clean the air by producing oxygen and taking in carbon dioxide generated by vehicles.
- They release water vapor, cooling the air.
- They control runoff and stabilize the soil.
- They provide habitat for wildlife.
- They provide shade and absorb sound.

##### **Trees improve our quality of life**

- Enhances the quality and identity of our Village.
- Forms natural barriers between lands with different purposes.
- Provides privacy with our neighbors.
- Provides a tranquil area to meet and reflect.



### **Trees improve our property values**

- Tend to increase the value of our homes.
- Attract businesses looking for a more tranquil setting for their employees.
- Potentially reduce home operating costs through lower air conditioning usage.

It's not just about having trees, it's also about planting new trees

### **15 Reasons why we should plant trees\***

1. Trees store carbon and clean the atmosphere. In 50 years, one tree generates \$30,000 in oxygen, recycles \$35,000 of water, and removes \$60,000 of air pollution.
2. Tree shade reduces air conditioning costs in residential and commercial buildings by 15-50 percent.
3. Properly placed and cared for trees and shrubs significantly increase residential and commercial property values.
4. Trees provide habitat for a large variety of wildlife.
5. Trees connect us with nature and reinforce spiritual and cultural values.
6. Trees prevent or reduce water pollution in Manhasset Bay.
7. Trees prevent or reduce soil erosion.
8. Trees help recharge ground water and sustain stream flow.
9. Properly placed screens of trees and shrubs decrease traffic noise along busy streets and roadways.
10. Trees screen unsightly views and provide privacy for our homeowners.
11. Trees make life more pleasant by softening harsh outlines of buildings.
12. Trees add beauty and grace to any community setting. They make life more enjoyable, peaceful, and relaxing.
13. Research shows that trees help reduce stress in the workplace and speed hospital patients' recovery.
14. Trees provide a multitude of recreation opportunities.
15. Trees, planted as memorials, leave a valuable gift for future generations.

\*Taken from Ridgewood Park, NJ. See Appendix B



## *Chapter 2*

### Why Do We Need a Village Tree Policy?

The Village faces many challenges ahead as our trees grow. This holds especially true for our street trees. Street trees are defined as any tree or part of a tree, existing or new planting, including the canopy and root system, that lies on or has grown onto or over public property, or in public “right of way” owned by a public entity. Specifically, these are the trees that line our streets, which lie in the grassy utility strip between the street curb and sidewalks. As street trees continue to grow, they continue to encroach on our sidewalks, curbs, streets, and utility services. The outcome has led to sidewalks cracking and lifting, curbs cracking, and sewer and utility lines being invaded. Or sometimes our trees just grow old and begin to die an old age, becoming a dangerous situation for our Village residents. A policy must be established to determine what course of action should be taken.

Our Village is also aggressively acquiring open space to be used for recreation and parkland. Nothing is more important to parks than trees. We must think ahead and make sure our efforts include the proper decisions regarding the planting of trees for our Village’s open space.

There are 4 major objectives that should be achieved through developing a tree policy. They are:

1. Develop and provide the tools necessary for defining a long term vision.
2. Establish rules and practices relating to the protection, management and appropriate maintenance of our Village Street Trees and sidewalks.
3. Increase the number of trees planted based on the principle of replacing diseased and felled trees, and planting trees in the right location.
4. Step up information, publications and awareness initiatives with a view to involving everyone- residents, municipal employees and elected officials, commercial property and business owners, large land owners, and concerned special interest groups.





## *Chapter 3*

### Village Street Trees and Sidewalk Repair

The Village has determined that much of the damage being caused to our sidewalks is a direct result of trees, and specifically tree roots. Even 2 to 3 year old sidewalk flags, in perfect condition, can rise 1-2 inches causing a potential tripping hazard because of expanding tree roots. Every time a sidewalk of this nature is fixed by cutting tree roots to remove the source of the lifting, the problem can resurface in a few years. So what we decide to do with our sidewalks is almost always directly associated with what we should do with our street trees. Our growing trees and sidewalk are on a collision course, and something must be done to save both.

Our code is clear that the responsibility and liability of sidewalks is that of the adjacent property owner. (See **Village Code, Chapter 143, Appendix A**) Two issues arise from this practice when it relates to our Village street trees:

- To what degree should the Village be responsible for protecting its street trees by replacing sidewalks damaged by tree roots rather than the property owner to insure the health of the affected tree?
- How does the Village control the methods and quality of sidewalk construction around its trees? Certainly the Village does not want to see to replaced sidewalk become damaged in a short period of time due to continued tree root growth. And the Village doesn't want various types and quality of construction to occur around its street trees.

A well defined Sidewalk Repair Policy should spell out specifically how the Village plans to address these issues going forward.

It is ironic that both trees and sidewalks ordinances are found in the same section of our Village code.



## *Chapter 4*

### History

Our Village was incorporated in 1932. Once the cow pastures disappeared, boating manufacturing ceased to exist, and the sand mines winded down, it was time to start developing open space. The 50's brought the Soundview Gardens/Wildwood Gardens apartments, and the 70's started the Soundview community that exists today.

History has it that the Village street trees were planted by the developers of our residential communities, not the Village itself. Once planted, they laid the foundation for steady growth and beauty. For years they grew free and unhindered, maintained by the Village, residing on Village property.

Sidewalks have always been the responsibility of the resident or commercial property owner adjacent to the sidewalks. For many years, our sidewalks were smooth and free of cracks and lifting. Then came the 90's.

After 30-40 years of growth, the trees began to canopy our Village streets. They also started to lift our sidewalks, dislodge and crumble our curbs, and infiltrate our roads and sewer lines. Keep in mind, it's not the tree itself, but its roots, always longing for water and searching with its feelers for more water. Methods to manage this dilemma included doing nothing, cutting out roots and replacing sidewalk, or removing the tree, stump and all, and replacing them with 6-8 foot pear trees. It has been the practice, not the direct obligation, of the Village to replace sidewalks damaged by street trees. This practice goes completely against our own Village code, which unconditionally makes the repairing and replacing of sidewalks the responsibility of the adjacent property owner. Past Village practices also included felling healthy trees that were clogging sewer lines.

When Fisherman, Boat and Seaview were repaved, almost all the trees went with it, and most of the sidewalks were replaced at the Village's expense. What ensued were residents feeling betrayed and sad they had lost their old friends, the trees right in front of their houses. Many felt they weren't notified, other felt they didn't have the opportunity to voice their opinion. In the end, many of the trees their children grew up with were gone, replaced with pear trees that paled in comparison.

Currently, the problems of sidewalk/curb/road/sewer damage still exist. To date, no tree inventory has been performed, so it is difficult to determine what types of trees are doing the damage, how old, how many, and what the alternatives are. It appears that we have taken more trees down than we have replanted. Most of our mature trees are Pin Oaks and Sycamores. Only one species of tree, in the Callery pear family (*Pyrus calleryana*), was chosen to replace the felled trees. Today we are left with what remains of our mature oaks and sycamores, pear trees, and empty holes where trees once existed. More roads need to be resurfacing, and the lack of any policy makes it difficult to move forward.



## *Chapter 5*

### Street Trees and Sidewalk Village Code

Village street trees are those trees that are planted in the 3 foot wide utility strip that exists between the street curb and the sidewalk. Sidewalks are defined as those sidewalks that are adjacent to the property owner that is usually located some 3 feet from the curb. Officially, the adjacent property owner is responsible for all up keep and maintenance of the sidewalk, including repairs and replacements for any reason. Residents are not allowed to disturb Village trees without written permission. There are currently no provisions for residents needing a permit to take down trees on private property.

Excerpts of Chapter 143: Streets and Sidewalks, Article II code references to both trees and sidewalks are listed below. **(Complete Chapter 143 is located in Appendix A)**

#### **Chapter 143: STREETS AND SIDEWALKS ( as of October, 2005)**

Code: **ARTICLE II Sidewalks, Curbs, Curb Cuts and Trees [Adopted by Ord. No. XIV]**

##### **§ 143-15. Permit required for installation of trees, shrubs and structures.**

No person shall install or locate or plant any trees, shrubs or structures in any street in the Village of Port Washington North without the prior written permission of the Village.

##### **§ 143-16. Protection of vegetation on public land.**

No person shall injure, deface, mutilate, or destroy trees, shrubs or grass plots in streets or public places, and no person shall cut down or remove any such tree, shrub or grass plot except as otherwise required or permitted by this article.

##### **§ 143-18. Responsibility for sidewalk maintenance; snow, ice and debris removal; repair. [Amended 4-14-2003 by L.L. No. 1-2003]**

Every owner and occupant of any building or land in the Village of Port Washington North abutting upon a sidewalk on any street in said Village shall keep and maintain such sidewalk in good condition and free from cracks or defects.

No person shall remove any sidewalk or portion of sidewalk, or injure, deface or damage any sidewalk or portion thereof, or dump or place or cause to be deposited upon any sidewalk or portion thereof, any dirt, rubbish, garbage, debris, litter, vegetation and other obstructions.



## Chapter 6

### Problem Issues Regarding Street Trees

- a- Roots lifting or cracking sidewalks- Causes displacement of flags know as stub-toe. Other instances involve the cracking of the flag.
- b- Roots destroying curbs and roads- Roots penetrate through the curb, cracking it. Roots also go below the surface of the road into the substrate, lifting the asphalt and creating mounds. This damages roads and interferes with proper water drainage.
- c- Roots entering sewer lines- Roots find their way into sewer lines, usually at weak joints, and block sewage from homes.
- d- Disease, injuries- Trees become diseased, or are injured during construction, through foul play, or human contact.
- e- Unjust Felling- Trees are taken down due to a problem that is determined not to exist.
- f- Overgrown and in need of pruning.
- g- Replanting of removed trees- Trees die or are removed and are not replaced. More trees are going down then are being planted. Clear cutting of woods for development with no formula for replanting, including saving of noteworthy trees.
- h- Potential for major infestation- Due to lack of biodiversity, our trees could be subject to major infestation, wiping out a large population of species. ( Dutch elm disease in the mid 20's killed hundreds of thousands of elm trees)
- i- Invasion of public infrastructure- Public infrastructure (electric, natural gas, cable, water mains, sewers, telephone lines, street lighting, road signs, etc. are installed without proper allowance for trees and their vital needs.
- j- Non-recognition of noteworthy trees- Noteworthy trees are those which are deemed to be exceptional trees due to size, shape, location and species that are not appropriately recognized and protected.
- k- Determination of the condition of a tree, if it is safe or hazardous, and makes recommendations as to its outcome.

In the past, the certified arborist hired by the Village acted as the sole person who determined what trees were to be cut, got paid to cut them, determined what trees were to be planted, and was also hired to plant them. Currently, the Village has expanded the process, deciding to hire an independent certified arborist for the sole purpose of reporting to the board his unbiased and objective findings regarding the condition of our Village Street Trees, and recommendations for replacement. The board can then take these finding to our own certified arborist for additional comment and final determination. We will then have our arborist remove trees that were approved by the Board of Trustees, and replant new trees in its place.



## Chapter 7

### Village Tree Plan and Policy Statement

A 10 step process establishing policy using short and long range planning:  
(Excerpts taken from Montreal Tree Policy, Appendix G. Also see Appendix N on planning)

#### Step 1- Perform a Village Tree Inventory

Trees are identified by location, species, health and vigor. Each tree receives arborist's evaluation and care recommendations. Properties can be mapped and data stored in databases for easy retrieval. Inventory programs assist municipalities in recognizing the importance of creating maintenance budgets associated with their property to ensure the maximum benefit of their tree assets. It also identifies noteworthy trees. Kinds of inventory methods include:

- a- Specific Problem- i.e., search for Elm Disease or specific tree hazards.
- b- Sampling Method- Surveying 10% of the trees randomly as your data.
- c- Windshield Survey- Data collected by car, less accurate than complete.
- d- Complete Inventory- all street trees are inventoried.

Hiring a certified arborist to perform a Village street tree inventory depends on the extent of services that need to be performed. Estimates range from \$5,000 for sampling, \$20,000 to \$30,000 (\$20-\$25 per tree) for a complete inventory.

#### POLICY

The Village should strongly consider performing some type of tree inventory to assess the diversity and conditions of its trees. This will aid in identifying potential safety issues and hazards, and will also significantly help in the budgeting process of caring for our trees. Funding for inventory should be done through park funds and/or through grant requests if possible.

#### Step 2- Design a policy to determine which and how Village street trees and private trees should be felled or root cut, and penalties for illegal felling.

Characteristics needed to determine if Village street trees are being felled, having roots removed, it noteworthy, etc.

- Tree type- What type of tree is it
- Tree size- How large the tree is measured by the size of trunk
- Tree condition- is it diseased, dying, hazardous



- Tree location- Where is the tree and what defining characteristics exist. Are there utility lines, signs, etc.
- Tree spacing- Are the trees spaced correctly for healthy growth.
- Noteworthiness- Is the tree of a unique species, or special significance to the street or community. If so, should it be felled?

## POLICY

Course of action options for each incident:

- a. Cut roots- Cutting Village tree roots allows the sidewalks to retain its natural even slope. However, it also weakens the tree. If too many roots are cut, it could lead to a dangerous situation, where the tree does not have enough stability. Root cutting should be discouraged wherever possible. Certified Arborist will approve any root cutting deemed safe to complete sidewalk work.
- b. Remove tree- Permits must be applied for to the Building Inspector and issued for any resident cutting private trees over 6" caliper in the Village. This will enable us to determine whether the tree is noteworthy, what the specific reason is for the tree coming down, and who it may affect. Fee will be \$75 for one tree to be removed, \$50 for the second, and \$25 thereafter. No Village Street Tree shall be cut or disturbed by a resident. Penalties for illegal felling will be up to \$5000. Noteworthy trees should be saved if possible.
- c. Sewer Lines-The homeowner is responsible for repairing any damage to their **sewer lines**, for whatever reason cited. Trees will not be felled to remedy such situations. We will work with the homeowner to determine if removing root while repairing the sewer line is acceptable. If, after all reasonable actions have been taken to remedy the situation (**See sewer line report Appendix O**), it is deemed that the cause of the problem is the tree itself and felling is a final option, the following procedures will take place:
  - 1- The Village must receive an affidavit by the owner of property of tree in question a description of the problem, cause for considering removal of tree, and any receipts indicating that owner complied with request to attempt to remedy the situation as described above.
  - 2- The Village must receive an affidavit by a licensed sewer line expert, detailed description of what the problem is and all work done on premises to remedy the situation.
  - 3- The Village will have a markout of said location performed by contacting the Sewer District.
  - 4- The Superintendent of public works will inspect the location to determine whether the tree in question is the direct cause of sewer line problem and that the only feasible solution is to remove the tree.
  - 5- If it determined that the tree in question is the direct cause of sewer line problem, and that the only feasible solution is to



remove the tree, the Superintendent will bring his findings to the Board of Trustees for a vote to remove the tree.

- 6- If the Superintendent is not able to determine that a direct cause exists with the tree in question, the Village, at their expense, will hire a licensed sewer expert to inspect the location and give us his findings. If it is then determined that there is no direct issue with the tree itself, no action will be taken by the Village.

**Step 3- Establish criteria for new plantings. Determine proper species list that will help reduce sidewalk/road damage. Determine prohibited species list. Determine whether spacing of trees is appropriate and adequate for our Village.**

**POLICY**

The village has mostly Pin Oaks , Sycamores, and Callery Pears. Any future trees being planted should be of a different variety and its characteristics should conform to the situation at hand (disease resistant, drought resistant, deep rooted to avoid sidewalk lifts, etc.) (See **Appendix K**). Biodiversity also adds volume, structure, color and texture to our streets. It reduces the risk of a disaster in the event of an epidemic. One particular cultivar, species, or group of species should not comprise more than ten percent respectively of the total tree population. On a single project, one species should not exceed 50 percent for plantings of less than 80 trees and 30 percent for plantings over 80 trees. Street tree designs that use only one or two species can be unhealthy and are susceptible to insects, disease and blight. Choice of tree depends on planting area. (See **Appendix U**)

The Village will replace any tree it removes. Property owner must be made aware that in many cases, new trees cannot be replanted in same location as removed tree. This is due to root system that still exists at said location. Even though grinding is done, it only goes down 3-6 inches. New trees need at least 1 foot of depth for successful planting.

If a property owner wishes to plant a tree in an area where a tree once existed, and pay for it; we will provide the property owner with the list of trees the Village deems suitable for the area and photos of each tree from which they can choose a tree of their liking. That tree then becomes their responsibility. Village will prune only in emergencies or where deemed necessary over roads or endangering homeowners.

Furthermore: (**Excerpts taken from Lebanon Tree Policy, Appendix F**)

1. No curb or open drainage next to the street- In areas with no curb the right-of-way is often used for both drainage and as a parking area. Street tree planting in these areas is not recommended, as it is not compatible with existing uses. Tree planting in open areas of private property visible from the street is encouraged.



2. Curb only or curb and sidewalk with no planting strip- In open planting areas where the street has only a curb or the curb and the sidewalk are adjacent with no planting strip, planting should be restricted. In this situation the planting area must be located between the sidewalk and the property line or on private property. A benefit to this planting design is that it allows a much greater area for the tree roots to spread and reduces the risk of damage to the curb and sidewalk. Trees should be located within one and one half to four feet of the curb or sidewalk depending on species and as specified in the approved street tree list.
3. Utility Strip- The space between the curb and the sidewalk is often referred to as the utility or planting strip. Planting areas that divide lanes of traffic are referred to as median or parkway strips. To accommodate large trees, planting strips should be a minimum of 8 feet wide, for medium sized trees it should be a minimum of 5 feet wide, for small trees it should be a minimum of 3 feet wide (the Permitted Street Tree List provides a list for trees suitable for a utility strip). Trees grown in spaces that are too small will have reduced life spans, develop insect and disease problems, and become stunted by the limited growing space. Tree roots can also cause damage to sidewalks, curbs, foundations, and utility infrastructure if confined to small areas. Trees selected for planting between the curb and sidewalk should be selected to attain as large a mature size as space for planting makes possible. (See **Recommended Street Trees by size from NY ReLeaf, Appendix U**)
4. Tree Wells or Sidewalk Cutouts- business districts can benefit greatly from this type of design. In these areas, sections of the walkway must be cut and removed prior to planting. Sidewalk cutouts should be a minimum of 16 square feet in area. It is important to take into account underground utility line locations, overhead utilities and store signs, signs, entrances, and parking when locating planting spaces.
5. Planting Island or Bulb-Out Planting- A planting island or bulb-out planting is an area 6 by 8 feet or larger which has been designed for the planting of trees and shrubs. This area usually extends out into the street. Planting islands have the advantage of being more visible and making a greater impact on the overall streetscape. Larger plants can also be used and seating areas can be incorporated into the landscape design. Space for planting islands should be designed into street construction.
6. Replacement of Trees- Any tree removed must be replaced with an approved species of no less than a 2 1/2 inch caliper. For clear cutting, an inventory will be taken of trees being felled, and that amount must be replanted and designated on the site plan or building plan. Noteworthy trees will be designated and preserved where possible.

#### Spacing

1. Width of Planting Area- Tree planting should not be permitted in areas where the distance between the curb and the sidewalk is less than three feet.
2. Distance from Sidewalk- Trees should be centered in the planting strip when the distance from curb to sidewalk is less than six feet. If no





sidewalk exists or the sidewalk and curb are attached the tree planting should be no closer than three feet from the street edge or the back of the sidewalk.

3. Distance From Alley or Drive- Trees should be planted to allow for a minimum of 10 feet between the trunk of the tree and any alley or drive.
4. Distance from Crosswalks- Trees should be planted no closer than six feet to a cross-walkway, except when the tree is one that has a mature height of less than 35 feet. In the case of such small trees, they may be planted no less than four feet from a cross-walkway.
5. Sight Triangle- At the intersection of roadways or vehicular access point, no plant material with a mature height greater than 30 inches shall be planted within a sight triangle measuring 20 feet along the boundary of each of the intersecting roadways, measured from the point of intersecting curb lines. Existing plants within this area should be trimmed up to at least eight feet to allow a direct line of vision for cars and trucks.
6. Distance to Stop Signs and Traffic Signals- Thirty to fifty feet should be allowed for a clear line of site for stop signs and traffic signals.
7. Spacing Between Trees- Spacing between trees shall be at least  $\frac{1}{2}$  the sum of the mature crown spreads. Generally, large trees should be spaced 40 to 60 feet apart, medium trees 30 to 50 feet apart, and small trees 30 feet apart.
8. Distance to Underground Utilities- The location and type of underground utilities will be determined during the planning and design process. Tree selection should be based on the needed space for a tree's root system. The minimum horizontal and vertical distance from a water meter or sewer service line shall be six feet unless the tree's mature height is less than 35 feet, then the minimum distance shall be no less than four feet. (No street trees shall be planted within 3 feet of an underground water, storm or sewer line that is less than 5 feet below the surface.)
9. Distance to Overhead Electrical Utility- No tree should be planted within 25 feet of any overhead electric utility, except service lines, unless it is a species, which attains a mature height of 25 feet or less. (**Appendix K**)
10. Distance to Buildings- Trees should not be planted within 8 feet of any building for very small trees and a larger distance for most species.
11. Sidewalk Cutouts- Tree planting made in sidewalks must have a minimum 16 square feet of area. The tree must be set back from the face of the curb at least two feet.
- 12- Distance From Fire Hydrant- Trees should be planted to allow for a minimum of 15 feet between the trunk of the tree and any fire hydrant.

### **Street Tree Planting and Replacement Specifications**

**PURPOSE:** To ensure quality tree materials are used and that new plantings are acceptably established in their new environment in order to ensure the tree's longevity and to minimize potential maintenance problems in the future.



- 1- Permitted street tree planting list- A list should be created that addresses biodiversity, as well as what species and variety of tree will best suit our Village, and in what location. Street trees and park/recreational trees should be identified. (See Appendix K)
2. Prohibited street tree planting list- Our Village should be informed of the trees that under no circumstances should be planted in our village. Specific attention should be made with respect to Village Street Trees. (See Appendix L)
3. Trees shall have normal, well-developed branches and root systems. They shall be healthy, vigorous trees, free from decay, defects, sunscald injuries, and abrasions of the bark, insect pests, and all forms of infestations or objectionable disfigurements.
4. Balled and burlapped trees shall have solid balls of size at least meeting the American Nursery Association Standard, the balls shall be securely wrapped with burlap or canvas, tightly bound with rope, wire, or twine. Plastic wrapping material is not permitted.
5. A minimum of 2 1/2 " caliper tree diameter, at 6 " above the ground (above the root flair), is required of all stock planted as street trees and highly encouraged for other public trees. Individual homeowners of single - family dwellings may plant approved street trees that are a minimum of 2 " diameter or greater at 6 " above the ground (above the root flair). The reasoning behind the decision to allow a smaller tree diameter for homeowners is that they take long -term ownership of the tree and provide the necessary high level of maintenance needed for the health of the tree during the establishment period and beyond.
6. Trees should not be excessively pruned at, or directly before, the time of planting.
7. Planting Methods
  - a. All planting work shall be performed using sound horticultural practices approved by the National Arborist Association and/or the International Society of Arboriculture. (See also LIPA Appendix W)
  - b. No Street Tree shall be planted without first obtaining a Right of Way – Encroachment permit (Tree Permit) from the Village.
  - c. Trees shall be set plumb. All trees shall be set so that, after settlement, they are at the same level as when growing in the nursery. Trees shall be watered in at the time of planting to eliminate air pockets. The person/s planting street trees shall remove excess soil.
  - d. Balled and burlapped trees may be placed with the wrapping in place if all materials are untreated and biodegradable. When burlap is left around trees, any string shall be removed and the burlap folded down from the top half of the root ball.
  - e. No plant pit shall be dug or approved until all underground utilities have been marked. Utility locates may be obtained by calling One Call at 1 -800-272-4480.
  - f. Tree spacing must conform to the "Minimum Street Tree Planting



Distances” as suggested in this Policy. The Superintendent of Public Works / or his designee, in conjunction with the Village arborist shall approve the spacing before planting will proceed. At any time minimum distances have been altered without previous approval, the Contractor or property owner will be responsible to move the tree.

- g. Planting sites will be mulched with an approved mulch material with neither more nor less than 4 inches of wood chips, fibrous bark, or composted wood debris after planting is completed. When practical, the mulch will be extended beyond the drip zone of the tree, and cover an area no less than the width of the planting hole. The trunk of the tree should be left uncovered.
- h. Every planting pit shall be at least 50% wider and at least the depth of the soil ball or the full extent of the root system of bare-rooted trees. In the process of digging the hole, “glazing”, a hard glossy finish on the sides of the hole, will not be accepted.
- i. For all balled and burlapped, bare rooted, and container grown trees, the backfill will be of desirable structure, texture, and pH to support vigorous tree growth. When planting in the Public Right of Way, the Superintendent of Public Works/ or his designee will approve the existing soil conditions at each location to decide whether the soil is adequate to use in backfill or if new soil will have to be introduced.
- j. Root barriers should be considered where roots and sidewalks, curbs/streets conflict only if ample room permits (8 ft. diameter hole). If root barriers are required they must be approved by the Superintendent of Public Works / or his designee, before installation.
- k. Wherever possible a watering berm shall be constructed around every tree or shrub.
- l. When planting a tree that will be surrounded by an impervious surface, there shall be a minimum of 16 square feet of porous surface, (with no dimension less than 3 feet), maintained around the trunk. Whenever possible, 40 square feet of porous surface should be maintained around the trunk. In the case of contracted projects, this area must be kept free of any competing grasses, weeds, or other debris throughout the length of the approved establishment period or throughout the length of the contract, whichever is greater.
- m. All trees must be staked with material as approved by the Village. The tree will be secured to the stakes with an approved rubber or approved other, adjustable, chain-lock “ tree tie, ” no less than 1 ” wide and secured at no less than two points along the tree.
- n. Trees will be protected at all times during handling, shipping, storage, and planting. Trees shall be protected from windburn during transit, extreme weather conditions, and drying of roots or root balls. Any trees showing substantial damage, as determined by the Superintendent of Public Works/ or his designee, will be rejected and replaced by the Contractor or property owner at their own expense.



#### **Step 4- Establish a maintenance plan**

For newly planted trees- Watering, visual inspection, warranty

For mature street trees- Pruning, lifting, visual inspection, leaf removal.

( See LIPA Tree Talk, Directional Pruning, Appendix W)

For new park and public areas- Create landscape plan to determine proper species, size and placement. (See Appendix N, Tech Guide)

#### **POLICY**

1. The Village shall consult with a certified arborist to determine the extent of maintenance needed for our trees. Attention will focus on hazard or safety issues, street light sensors and specific complaints.
2. The Village shall formulate a budget to complete work and schedule the work within said budget.
3. The Village, with the help of the certified arborist, shall determine the proper cycle for performing maintenance for trees and leaf removal.

#### **Step 5- Establish a better way of protecting trees regarding sidewalk repair, construction and utility work.**

**Tree Protection Purpose:** This section is intended to aid in the protection and preservation of trees while maintaining existing facilities or new construction activities and to provide technical assistance by describing methods for tree protection during these activities. The following requirements are mandatory for Street Trees but are highly recommended for potential street trees and all other trees.

#### **POLICY**

1. Careful selection of trees. Only trees on the Village's recommendation list should be chosen. These possess characteristics of trees that will stay small and not spread roots.
2. Utilities should use tunneling where possible to avoid damage to tree roots. On average, tunneling should be at least 36 inches below surface, and at least 10 feet away from center of tree.
3. Roots should be protected. They should be cut only as last resort, and with the approval of Village's Certified Arborist. If roots are to be cut, they must be sharp cuts. Open roots should be kept moist and covered with soil as soon as possible.
4. Restrict stripping of topsoil around trees. Woody vegetation to be removed adjacent to trees should be cut at ground level and not pulled out by equipment, or root injury to remaining trees may result.
5. Use of root barriers where possible. These come as solid barriers with herbicide-impregnated fabric that prevent root growth. No danger to tree or environment. Impenetrable barriers such as inverted plastic garbage cans, metal, or particleboard can redirect roots away from problem areas such as sewer lines, utility lines, and sidewalks.



6. Use retaining walls with discontinuous footings to maintain natural grade as far as possible from trees. Excavate to finish grade by hand, cut exposed roots with a saw to avoid wrenching and shattering from equipment. Spoil beyond cut face can be removed by equipment sitting outside the dripline of the tree.
7. Removal of soil or excavation under the drip line of any Street Tree is not permitted. In some instances special permission may be granted by the Superintendent of Public Works / or his designee. Written request for excavation under the drip line must be submitted and approved prior to disturbance of any facility, ground cover or soil.
8. Coordinate utility trench locations with installation contractors. Consolidate utility trenches. Excavate trenches by hand in areas with roots larger than (2 inch) diameter. Tunnel under woody roots larger than (4 inch) diameter rather than cutting them. If necessary, equipment should operate on double, overlapping, thick plywood sheets within the dripline.
9. Compaction can be minimized by spreading a 4 – 6 inch layer of foam rubber or small round rock around the root zone of the tree(s) being worked around. Normally, the root zone extends beyond the canopy spread, but compaction should be limited to the drip zone.
10. Fencing material should be used to incorporate low branches and protect the tree's trunk. Report all tree injuries to the Village so that it can be treated promptly.
11. Prune to height requirements prior to construction. Consider maximum height requirements of construction equipment and emergency vehicles over roads. All pruning must be done by a Certified Arborist or licensed tree service, not construction personnel.
12. Fence trees to keep traffic and storage from within the dripline of trees. Provide a storage yard and traffic areas for construction activities well away from trees. Protect soil surface from traffic compaction with thick mulch or double, overlapping, thick plywood sheets.
13. Dumping of waste from job sites is prohibited around the base of the tree(s).
14. Maintain the original ground level around trees.
15. When root cutting for sidewalk replacement, no roots from any given tree will be removed without the consultation of the Commissioner of Public Works / or his designee who may require written approval of a I.S.A Certified Arborist.
16. Guidelines and tunneling under trees will be based on A.N.S.I. Z60.1 Nursery Standards, latest addition, which state that for each inch of trunk diameter the tree needs a root ball of at least one foot in diameter.



## **Step 6- Establish a Hazard Tree Risk Reduction Program and Policy**

This policy should be developed after carefully assessing not only the vegetation you manage, but your fiscal, equipment, and personnel resources. A clear policy should state its goals, the parameters in which the goals are defined, and who will administer the policy.

### **How to determine if a tree is hazardous**

Looking for hazards in trees is something that needs to be kept foremost in mind as trees are cleaned up after a storm. Some hazards have a high immediate potential for serious injury or property damage if the branch or tree were to fall. Others may have a lower immediate potential, but the long-term risk of significant injury or damage may still be too great to allow the questionable branch or tree to remain.

Hazards in trees need to be eliminated by either the removal of the tree or the affected branches, or by some kind of corrective treatment. The following describes the kinds of hazards that are common in trees damaged by storms and what can be done about them.

### **Electrical Hazards**

Branches hanging over power lines are a major safety hazard from the standpoint of the person working in the tree. Special training is needed to prune branches over power lines safely. Homeowners who have branches that rub or that may break power lines should contact their local power company or arborist trained in power line clearance to have the branches removed.

### **Structural Hazards**

Trees and branches are hazards if they have a good potential for falling and causing personal injury or property damage. For many hazards, the only practical solution is to remove the damaged branch or tree. Cabling and bracing are sometimes used to strengthen high-value trees, but these techniques are not routinely recommended, and they should be done only by trained arborists.

Following a severe storm, homeowners should check their trees for several kinds of hazardous defects that commonly occur:

- **Loose or broken branches** -- These should be removed before they fall.

**Split trunks** -- Trees with split trunks will likely fail completely in a later storm. They should be removed, or they can be cabled and braced if they have especially high value.



- **Trunks or branches with more than a third of their circumference lost** -- This occurs on the trunk or a large branch where a branch was pulled out. The tree has a high risk for breaking at this point in a later storm. This kind of damage cannot be adequately strengthened, and the tree or branch should be removed.
- **Leaning trees** -- If a tree did not lean before a storm, a new lean indicates a major root failure has occurred. Even a slight lean with a small area of raised soil at the base can mean a significant potential exists for additional failure. Trees leaning from the result of a storm should be removed.

### What NOT to Do

- Don't do any corrective pruning that cannot be done from the ground. Trees too large for this should be pruned only by professional arborists.
- Don't try to support a damaged tree with rope, cable, wire, bolts, or similar materials. The effort will probably NOT increase the safety of the tree. If cabling and bracing are necessary, they should be done only by a trained arborist.
- Don't try to save a tree that was pushed over by a storm unless it was recently planted. The tree's roots will likely never develop well enough to adequately support the tree again.
- Don't top trees. Over the years, this will make trees even more of a hazard.
- Don't use paint or wound dressing to cover wounds. These actually interfere with the tree's natural wound sealing process.
- Don't fertilize damaged trees. The use of nitrogen can make a stressed tree even more susceptible to insect pests and diseases and reduce the ability of the tree to deal with the damage that has occurred.

### POLICY

The Village of Port Washington North has an active policy to maintain the safety of public lands from potentially hazardous trees. The Village will strive to eliminate, in a timely fashion, any tree deemed hazardous. When available human resources limit the ability of the Village to remove high risk trees, priority shall be placed on trees deemed to carry the highest risk. The standard for rating the hazardousness of a tree will be determined by the selected certified arborist and the Board of Trustees will administer this program and have final judgment in all matters concerning the mitigation measures taken for any tree deemed hazardous, except in emergencies. In emergencies, the Superintendent of Public Works will have the authority to act, with the notification of the Mayor. (See Appendix H, Mark Duntemann Tree Risk article)



## Step 7- Establishing a Village Tree/Sidewalk Repair Policy

a- Defining the policy.

**Purpose-** The purpose of this policy is to protect the public health, safety and welfare of the citizens and inhabitants of the Village by preventing and eliminating tripping, hazards on the public sidewalks to pedestrians, by repairing and/or replacement of required sections of sidewalks, to achieve, as close as possible, a uniform grade. Public sidewalk- "Public sidewalk" means any main or approach sidewalk, between the curb line and private property line. Currently the liability of sidewalk repair rests solely with the adjacent property owner.

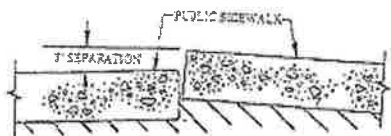
b- Why repair sidewalks?

**Responsibility-** Every owner of any lot or parcel of land situated within the Village shall keep, repair and maintain the sidewalk along all public streets, avenues, courts adjoining such lot or parcel. The cost of such keeping, repairing and maintaining shall be the responsibility of

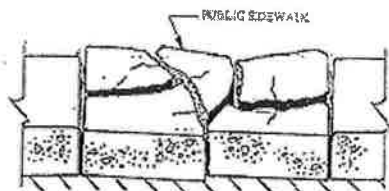
the adjacent property owner. (Chapter 143, section 143-18 Appendix A). Sidewalk sections which extend from existing sidewalks to the curb to facilitate the crossing of streets are the responsibility of the Village.

c- Who determines the condition of sidewalks and makes recommendations?

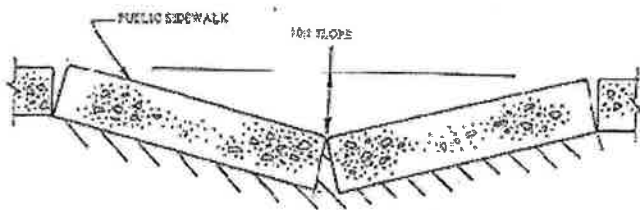
**Determination factor-** (All drawings taken from City of Perrysburg sidewalk repair policy, see Appendix I). A public sidewalk is required to be repaired or replaced when a section(s) has a separation of one (1/4 ") inch or greater in the surface elevation which creates a tripping hazard (See sketch A). Also, a section(s) which have cracks or separations which create an uneven surface and are large enough to create either a tripping hazard or a possible ankle turning situation must be replaced (See sketch B). Sidewalk sections, which meet with several slopes or rises, greater than 10: 1, shall be repaired as required (See sketch C). Sidewalk sections which separation of one (1/4 ") inch or greater in the surface elevation which creates a tripping hazard caused by tree roots must also be replaced (See sketch D). Inspection of sidewalks to identify sidewalks which require repair and/or replacement will be done by walking the designated area and using a one inch template, to measure the amount of separation. Sidewalks with manholes in them will be inspected and if the grade of the casting can be altered, the Village will make an attempt to do so, however, repair or replacement of the sidewalk around the manhole shall be the responsibility of the property owner.



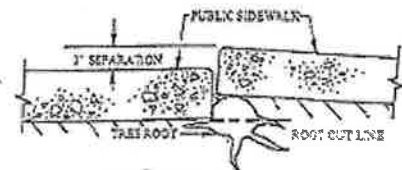
SKETCH A



SKETCH B



SKETCH C



SKETCH D





d- Determine financial responsibility

The Village can adhere to its current Code and make the responsibility of sidewalk repair that of the adjacent property owner.

The Village can assume responsibility for replacing sidewalks that are damaged due to tree related issues.

The Village can repair sidewalk one time, after which property owner officially assumes full responsibility for future repairs.

The Village resident can request for the Village to fix their sidewalks, at the resident's expense. This makes it easier for resident to have small repairs done at reduced cost, and insures Village quality control.

e- Establishing a budget

Typically, when a root lifts or cracks a sidewalk, there are usually at least 2 flags involved. Each 4x4 foot flag costs about \$100 to replace. If an apron is involved, the cost is about \$350. Curb repair runs about \$15/linear ft. (11/05)

f- Other possible sidewalk repair solutions to help protect tree roots and reduce felling of trees.

New innovations in repairing or replacing sidewalks and curbs can reduce damage to street trees by accommodating, rather than ignoring, tree roots. Construction techniques to repair or replace sidewalks and curbs usually involve cutting or severing tree roots. The following describes different techniques that may be used when repairing or replacing sidewalks and curbs to minimize the amount of damage to the tree.

## SIDEWALK REPAIR AND REPLACEMENT

Sidewalks often need to be repaired or replaced when they become cracked or displaced creating safety concerns. The presence of large, lateral support roots under and near the sidewalk in these areas highlights the need to exercise caution while repairing sidewalks. Techniques for repairing cracked or displaced sidewalks such as the asphalt wedge, landscape pavers, concrete ramp, asphalt ramp, concrete ramp and flexible sidewalk are used when the sidewalk needs to be replaced. (**See Appendix J, New York City Tree & Sidewalk Design Solutions**) Below describes various methods that can be used to repair damaged sidewalks. The method chosen depends on the specific type of damage and the location of the sidewalk.



### **Asphalt Wedge**

This repair is usually considered temporary, but it is one of the simplest ways of repairing a displaced slab, or “stub-toe.” In this repair an asphalt wedge is applied between the upper and lower slab of the walk (fig. 1). Such repairs rarely correct the problem.

### **Grinding**

Another simple, low-cost alternative for repairing a displaced sidewalk is the use of a mechanical grinder to wear down the raised edges of the slab. Grinding is generally limited to concrete slabs with less than 1 inch of displacement. It may be possible to grind away edges with 2-inch displacement; however, if 50 percent of the slab thickness is removed, the structural integrity of the concrete may be lost.

### **Landscape Pavers**

Removing the damaged sidewalk and installing landscape pavers is a very attractive option, but the high unit cost can prohibit this type of repair in most communities. In addition, as roots begin to expand, individual pavers could easily be displaced and would require repair.

### **Curving Sidewalk**

When a tree's roots and trunk begin to either protrude onto the sidewalk, or raise it, the damaged sidewalk is removed and new concrete sidewalk is created in an arc around the tree. The sidewalk may be curved beyond the linear edge of adjacent sidewalk if kept within the public right-of-way, and would require notification of property owner. Given the fact that if said tree is felled, a new tree could not be replaced in the curved section, this method is not recommended.

### **Concrete Ramp**

Another option is to remove the damaged sidewalk and install a concrete ramp. The concrete is then poured over the top of uncut roots to create a ramp. Unit cost and material durability are reasonable; however concrete is a stiff material that can be expected to lift as individual tree roots expand.

### **Asphalt Ramp**

This option involves removing the displaced slabs and installing asphalt over the top of exposed tree roots. Criticisms of this method range from questions of material durability to debris deposited by foot traffic. Aesthetically, it is somewhat unattractive. The Village will not permit such an option on our sidewalks.



### **Reinforced Sidewalk**

Concrete sidewalks can be reinforced with steel fabric, for increased strength in anticipation of future root expansion below ground.

### **Ramped Sidewalk**

This solution also incorporates reinforced sidewalk concrete, but the sidewalk is sloped over the root system to avoid cutting the root. This slope may not exceed 8% as specified by the American with Disabilities Act but Village will not allow more than 4% grade, due to esthetic reasons. (See Appendix P)

### **Flexible Sidewalk**

This version of the ramped sidewalk uses steel bar reinforcement between sidewalk flags rather than steel fabric. The goal is that when roots grow, adjacent sidewalk flags will be lifted in unison rather than separately, minimizing a potential vertical edge tripping hazard. The steel bars are inset within a sleeve to provide for future movement. Styrofoam is installed between flags to maintain a seal as the flags shift. (See Appendix Q)

### **Rubber sidewalks**

Rubbersidewalks, Inc. were invented by Richard Valeriano, Public Works Inspector for the city of Santa Monica, California and tested in that city for over three years. Originally conceived as a solution that would take advantage of rubber's flexibility and allow the sidewalk to bend when the tree roots grew, it was discovered that tree roots exhibited a different growth pattern under rubber sidewalks than under concrete. The growth rate of roots was slower and roots grew in small tender offshoots that could be easily and safely trimmed. Rubber is lighter and more resilient than concrete, and tree roots were getting sufficient water and oxygen through the paver seams.

- Rubber sidewalks reduce the need for chronic and costly concrete repair and replacement.

Rubber sidewalks can be lifted for periodic tree root trimming and replaced at a fraction of the cost of concrete repairs and replacement

- Rubber sidewalks allow long-term sidewalk/tree root maintenance
- Rubber sidewalks introduce the concept of modularity
- Tripping on uplifted concrete can cause injury and lawsuits

(See Rubbersidewalks Inc. website pages Appendix C)



See: **THE JOURNAL NEWS** September 24, 2004  
**New Rochelle hopes rubber will help bring a truce of sorts**  
by Len Maniace (see Appendix D)

## **CURB REPLACEMENT**

Curbs are often replaced during road resurfacing, especially if the curbs are cracked, leaning, or insufficient in height. For most road resurfacing projects, the height of the curb must be at least 3 inches above the asphalt. If curb height is less than 3 inches, then curb replacement is required. Since resurfacing roads usually requires the application of 2 inches of new asphalt to the roadway, curbs are often replaced. There are techniques that can be used to minimize the amount of root damage when repairing or replacing curbs.

### **Replacement of Curbing Outside Tree Root Area**

If the existing curb is sound and the height is at least 3 inches, then it is possible to establish a protective zone around the tree, which leaves the curb near the trunk undisturbed. This protective zone varies from approximately 3 feet on either side of a tree less than 12 inches in diameter at breast height, or 6 feet on either side of a tree that is more than 12 inches in diameter at 4 ½ foot height. New curbing on both sides of the protective zone is sloped to meet the old curbing. Some critics suggest that streets with this type of curbing lack the uniformity of streets where 100 percent of the curbing has been replaced. Also, a concern may be the movement of water over these low curb areas from the tree lawn into the street, creating a possible erosion problem. However, removing all trees from a street in order to accommodate such uniform curbing may negatively impact the continuity and the value of the properties in the neighborhood.

### **Road Cut**

Another curb replacement technique, the road cut, can greatly reduce root damage to a tree. This technique involves cutting a narrow section of pavement adjacent to the curb with a concrete saw and removing the curb and the pavement. A small amount of hand digging may be required for installing the new curb. A section of pavement measuring at least 2 by 10 feet must be removed each time this method is used in order to insure stability of the roadway.

Each of the above construction alternatives, while unique in their individual method and application, can reduce the amount of root damage during the replacement or repairing of sidewalks and curbs. All of these methods should be evaluated, both on applicability and cost and the extent of municipal involvement in sidewalk replacement. Street trees are important to a flourishing community as well as to properly maintained streets and sidewalks. Use of the techniques presented here can help insure that residents have both "safe streets" and "healthy urban forests." (SEE Appendix E, Urban community forest #5)



## POLICY

- a. The Village will pursue any and all alternatives available before trees are felled due to sidewalks, using options available such as those listed in this publication.
- b. The Village will pursue any and all alternatives to cutting tree roots for road and sidewalk repairs.
- c. The Village will pursue any and all alternatives to replacing sidewalks, if such alternatives exist and are cost effective.
- d. The responsibility to keep sidewalks in good repair remains the obligation of the adjacent property owner. However, where the maintenance or repair of the sidewalk (or piece of the sidewalk) may affect the health of a Village (street) tree and or its root system, or may in anyway in the judgment of the Village through the Board of Trustees, the Building Inspector, the Department of Public Works or any authorized village contractors responsible to the Board of Trustees, have the potential of impacting the survival or health of a Village tree, the Board of Trustees reserves the right to replace or repair the sidewalk at its own expense and/or direct the replacement or repair of the sidewalk at the expense of the adjacent property owner. The Board shall not need the approval of the adjacent property owner to replace or repair sidewalks but will, to the extent feasible and practicable, notify adjacent property owners of its intentions in this matter. (See Appendix T, NY City Parks and Recreation pilot program)
- e. Any property owner wishing to have their sidewalk replaced, at their expense, by the Village, may request so in writing. The Village will respond back with the cost. If acceptable, resident will sign voucher, and their sidewalk will be put on a schedule for replacement. Any hazardous sidewalks should be replaced as soon as possible by property owner. The Village will not assume liability for any injury caused by defects or hazards that may exist in sidewalk that adjacent property owner's are asking the Village to replace.
- f. If a homeowner wishes to repair their own sidewalk, (adjacent to Village trees), it shall be the responsibility of the adjacent property owner to notify the Board of Trustees of its intention to repair a sidewalk through a permitting procedure defined by the building department and prior to the issuing of the permit, the Village may at the sole discretion of the Board of Trustees or its designee, opt to replace or repair or may specify sidewalk replacement or repair procedures for the preservation of its trees. In the interest of safety, the Board will not unduly delay in the issuance of repair permits.



Nothing contained herein nor any past or future action of the Village replacing or repairing sidewalks in order to preserve its street trees shall be taken to relieve the adjacent property owner of legal liability to keep the sidewalk in good and proper condition. Nor shall any Village action past or future be taken as to relinquish the Village's right to assess the property owner of the full cost in the maintenance of the sidewalk adjacent to their property.

## Step 8- Establishing a budget

Costs associated with this program are the following:

- a- Hiring a certified arborist to perform a Village street tree inventory to determine the extent of services that need to be performed. Estimates range from \$5,000 to \$30,000, depending on type of inventory).
- b- Determine the cost to remove trees depending on the caliper of the tree. Atypical method to determine the cost of tree removal is using unit measure. 1 unit equals a 6 inch tree trunk measured at 4 ½ feet from the ground. 1 unit can cost approx. \$140 (as of 7/05). Thus we can create the following cost estimates:

1 unit	= 6 inch trunk	= \$140
2 units	= 12 inch trunk	= \$280
3 units	= 18 inch trunk	= \$420
4 units	= 24 inch trunk	= \$560
Over 4 units		= up to \$1,000

A method of reducing cost is to lump tree removals together and work on a daily rate basis. This rate is approx. \$1,600/day. Additional fees include grind stumps and tipping fees to remove debris is approx. \$90 per tree.

- c- Determine the cost to replant trees where possible and necessary, depending on species and size chosen. Tree replacement cost range from \$400-\$500 depending on the type and size and are usually guaranteed for 1 year.
- d- Determine and define responsibility of current cost and future financial responsibility relating to new trees planted.
- e- Determine the cost of sidewalk/apron/curb damaged by trees. As we have stated before, a tree or root removal often involves the sidewalks adjacent to it. Thus it is vital that we have costs associated with repairing such damage. Typically, when a root lifts or cracks a sidewalk, there are usually at least 2 flags about \$100 to replace (\$6/sq/ft). If an apron is involved, the cost is about \$350 (\$7/sq/ft). Curb repair runs about \$25/linear ft. and usually involved, and in many cases it is 4 flags. Each 4x4 foot flag costs require replacing about 10 feet of curb. Thus, a typical bi-product of felling or removing roots to fix a sidewalk is about \$400. Apron and curb add another \$525, for a total of about \$1,000. (Use of flexible, reinforced, or ramping of sidewalk will increase cost



due to using 4 flags per incident and additional materials and labor. Specific costs for these methods should be established.)

## **POLICY**

The Village will consider engaging the services of a certified arborist to conduct some type of tree survey to use as a tool to establish a budget. Furthermore, the Superintendent of Public Works will present the Board of Trustees a budget for sidewalk replacement that is a result of tree damage. With this information, the Board of Trustees will establish a 5 year budget to finance the addressed expenses.

### **Step 9- Identifying funding sources for tree inventory, removal, and planting.**

In 2005, \$250,000 was made available in applicants from smaller cities, all villages and townships. The NYS Dept. of Environmental Conservation is now preparing application materials for the competitive distribution of the new EPF funds, plus some money remaining from last year's appropriation. In addition, money from the USDA Forest Service is available, primarily for tree-planting. Frank Dunstan, Urban Forestry Coordinator for the DEC, is hoping that the total of about \$500,000 will be open for applications. Applications for 2006 should be similar to those of 2005 (**SEE APPENDIX R and S**)

LIPA will give the Village \$25 per tree for using their Wire Friendly Trees recommendation list when planting trees below electrical lines. (**See Appendix U**)

Tree City USA awards are available for those municipalities that have shown 4 standards:

- (1) Tree board or department
- (2) Tree care ordinance designed to meet the needs of a particular community.
- (3) Forestry program demonstrating annual expenditure of \$2 per capital on trees. ( That's \$6,000 for our Village)
- (4) Arbor Day proclamation and observance.

(**See Appendix X, Tree City USA Bulletin**)

## **POLICY**

The Village will reach out and explore funding opportunities, including grants and private donations. NYSDEC grant opportunities should be thoroughly



investigated and considered. We would expect to apply for funding for the 2006 grant year. We will also record any trees planted under electric lines, using the LIPA Friendly Trees list for reimbursement of \$25 per tree. We will become recognized as a Tree City USA member, by adhering to the 4 standards mentioned to become eligible for grants.

**Step 10- Create public awareness program, enhance citizen awareness, and adopt local laws that support plan and policy.**

How do residents get notified? Which residents get notified?  
What is the time frame? How can residents respond to pending decision or action?

The Village of Port Washington North shall increase information and awareness activities with a view of securing the commitment of everyone; residents, municipalities, special interest groups, large property owners, commercial property owners and businesses, etc.

Our residents are the ultimate stakeholders in the development and conservation of our Village street trees. We will enhance the visibility of this policy.

We will advise residents of their responsibilities through the use of communication such as mailers and our Village newsletter.

We strive to communicate our actions regarding the treatment of our Village street trees through mailers, phone calls, or through public assembly.

Our public awareness policy should leave nobody behind. Every individual who may be affected by a decision involving a neighboring Village street tree has the right to be informed of our decision, and to comment before action is taken.

**POLICY**

The Village will provide 30 days' written notification prior to any street tree being felled (except in cases of emergencies, where notification will still be given, but trees will be felled as soon as possible). The Village will give written notice, return receipt requested, to the affected property owner. Typically this is the 2 houses on either side of the affected resident, and the 3 residents facing them across the street, or within 100 feet of affected homeowner. All residents will then have the opportunity to call the Village, write a letter, or appear at a scheduled Board meeting to discuss the decision. Trees will be tagged stating the nature of the discussion to consider removal and the time of the next board meeting. When the board determines a tree is to be removed, notice will be put on the tree as to the time of the removal and to clear area of cars at that time.





The Village will periodically inform the residents of important information or legislation regarding our Tree Policy by including such information in our Newsletter and on our website, [www.portwashingtonnorth.org](http://www.portwashingtonnorth.org) or [www.portnorth.com](http://www.portnorth.com) . The Village, from time to time, will make modifications of the Village Tree Policy, create and amend laws relating to this policy, and will inform the public of such changes



## *Chapter 8*

### **Conclusion**

We wish to thank all those who have helped produce this valuable and necessary document. The Village will strive to implement the Village Tree Plan, and adhere to our Village Street Tree Policy to insure the future of our trees, and the beauty of our community. Trees should be a source of beauty, solace and a backdrop to gather our community in peace and tranquility, not a source of division and anger. The Village will continue to monitor its policy, and improve it as years pass. We must all work together to embrace our tree policy, for the betterment of the Village of Port Washington North and the entire Port Washington Peninsula.



## *Appendix*

- A- Code of the Village of Port Washington North: Chapter 143, Streets & Sidewalks
- B- [www.ridgefieldpark.org/content/50/83/default.aspx](http://www.ridgefieldpark.org/content/50/83/default.aspx). Ridgefield Park, NJ. "15 Reasons We Should Plant Trees". Sidewalk Repair Policy.
- C- [www.rubbersidewalks.com](http://www.rubbersidewalks.com), Why rubbersidewalks work
- D- [www.thejournalnews.com](http://www.thejournalnews.com), New Rochelle hopes rubber will help bring a truce of sorts. September 24, 2004
- E- Urban & Community Forestry Assistance Program Technology Bulletin 5  
How to protect tree roots while replacing sidewalks and curbs. June 1998
- F- City of Lebanon, Oregon Public Works Dept. Street Tree and Potential Street Tree Guide. Revised 11/30/02
- G- Tree Policy of Montreal, 2<sup>nd</sup> Quarter, 2005.
- H- "The Politics of Risk", By Mark Duntemann. Natural Path Urban Forestry Consultants, August, 1996
- I- City of Perrysburg Sidewalk Repair Policy
- J- New York City Tree & Sidewalk Design Solutions
- K- Permitted Village Street Tree Planting list, Richard Gibney 2005
- L- Prohibited Village Street Tree Planting list, Richard Gibney 2005
- M- Village Noteworthy Tree List
- N- A Technical Guide to Urban and Community Forestry, World Forestry Center, Portland, Oregon. March, 1999
- O- Tri-County Sewer and Drain Company. Report on sewer blockage caused by tree roots
- P- Ramping of sidewalk over tree root illustration, NYC Parks and Recreation
- Q- Flexible Sidewalk illustration, NYC Parks and Recreation
- R- DEC Small Community Cost-Share Urban Forestry Grant Application 2005
- S- DEC Tree Planting Urban Forestry Grant Application 2005
- T- New York City Parks and Recreation Release, "Mayor Bloomberg announces Tree and Sidewalk Repair Program", March 2005
- U- New York ReLeaf recommended street trees for Long Island, 2000. (Please note that this document provides a reference listing different tree sizes for various planting situations. This list is only to be used when cross referencing with the Permitted Village Street Tree Planting list, Appendix K.)
- V- Wire Friendly Trees, LIPA
- W- LIPA presents: Tree Talk. Pruning and Planting guide, March 2003
- X- - Tree City USA Bulletin, 2004 Annual Report



# *Appendix A*

## **Chapter 143: STREETS AND SIDEWALKS**

[HISTORY: Adopted by the Board of Trustees of the Village of Port Washington North as indicated in article histories. Amendments noted where applicable.]

### **GENERAL REFERENCES**

Building construction — See Ch. 68.

Noise — See Ch. 116.

Property maintenance — See Ch. 128.

Topsoil removal and other excavations — See Ch. 151.

Zoning — See Ch. 176.

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## **ARTICLE I Excavations in Streets, Highways and Sidewalks [Adopted by Ord. No. V]**

### **§ 143-1. Permit required for street and sidewalk excavations.**

No person, firm or corporation, public service, water, light or power company shall excavate in any street, highway or sidewalk in the Village for any purpose without first obtaining a permit from the Village Clerk as hereinafter provided.

### **§ 143-2. Application for permit; security deposit; insurance requirements; bond. [Amended 12-4-1978 by L.L. No. 6-1978; 11-3-1980 by L.L. No. 5-1980]**

- A. Upon application, in writing, filed with the Village Clerk, stating the purpose, extent and location and nature of a proposed excavation or other disturbance of a street or highway in the Village, the Village Clerk may grant or refuse a permit therefor. Except where such excavation or disturbance shall be directly authorized by law, the Village Clerk shall require the applicant to deposit with the Village Clerk a sum of money which shall be deemed by him to be adequate to pay all of the expenses to which the Village will be put to replace the street, highway or sidewalk, pavement, curb or gutter in proper condition. Every application for a permit hereunder shall be accompanied by certificates of insurance, in a form approved by the Village Clerk and issued by an insurance company authorized to do business within the state, evidencing the existence of the following insurance coverage:
- (1) Comprehensive general liability insurance including the Incorporated Village of Port Washington North as an additional insured.
    - (a) Said insurance shall provide minimum limits of \$500,000 personal injury per occurrence and \$100,000 property damage per occurrence, or a combined single limit of \$500,000. The policy shall also include coverage for completed operations and broad-form property damage.
    - (b) In addition, the policy shall contain a provision that any aggregate limit contained in the policy shall not apply to the additional insured Incorporated Village of Port Washington North, or, in lieu thereof, a separate owner's protective policy shall be issued or endorsed to the existing policy with the Incorporated Village of Port Washington North as the named insured.

- (2) Worker's compensation insurance.
- (3) New York State disability benefits insurance.
- B. All evidence of insurance shall provide a thirty-day notice of cancellation or change of coverage to be furnished to the Incorporated Village of Port Washington North.
- C. In the event that any applicant is a self-insurer, information regarding his insurance program should be submitted to the Village. The applicant will be advised of the requirements of the Village as determined by the Board of Trustees.

**§ 143-3. (Reserved)** Editor's Note: Former § 143-3, Fees, as amended 4-14-2003 by L.L. No. 1-2003, was repealed 6-14-2004 by L.L. No. 4-2004.

**§ 143-4. Notice to public utilities.**

No work shall be commenced under any permit granted pursuant to this article unless or until such notice as shall be directed by the Village Clerk shall have been given to public service corporations having lines, mains or other property in the streets for the protection of their property.

**§ 143-5. Protective barriers and lighting required.**

All excavations in streets or sidewalks shall be surrounded by suitable barriers or guards for the protection of persons using the streets in the daytime and, in addition thereto, by lights or flares from twilight continuously until daylight. Such barriers and lights shall conform in kind and numbers to the requirements of the Village Clerk. Failure to provide barriers and lights conforming to the requirements of the Village Clerk shall be prima facie evidence of a failure to provide suitable barriers and lights.

**§ 143-6. Protection of property.**

All permits granted for Village street, highway or sidewalk excavations for any purpose shall be conditioned upon the adequate protection, at the expense of the applicant, to the property, to the Village and to public service corporations. All excavations shall be backfilled properly upon completion and a written notice thereof given to the Village Clerk. All excavations shall be maintained for six months after such notice of completion has been given.

**§ 143-7. Penalties for offenses. [Amended 4-14-2003 by L.L. No. 1-2003]**

Any person violating the provisions of this article shall be liable to a fine or penalty of not more than \$250 and/or 15 days' imprisonment for each offense.

**§ 143-8. Title.**

This article shall be known and may be cited as "An Ordinance Regulating Excavations in Streets or Highways in the Incorporated Village of Port Washington North."

**§ 143-9. Materials on streets and sidewalks; permit required; renewal; fee.**

- A. No person shall leave or deposit any material of any kind for building or other purposes in or upon any public road, street, highway, parkway, sidewalk (whether paved or unpaved) or other public place in the Village of Port Washington North, or remove or cause or permit to be removed therefrom any earth, stone, sand or gravel, or move or cause or permit to be moved any building or structure upon, along or across any road, street, parkway, highway, sidewalk or public place without first having obtained from the Village Clerk a written permit for that

purpose. Such permit shall be conditioned upon said work being performed in such manner that a sufficient and safe passageway for pedestrians and vehicular traffic will be kept clear at all times, upon the proper guarding of same both by night and day so as to avoid accidents and danger, and upon the complete restoration of said road, street, highway, parkway, sidewalk or public place to its original condition.

- B. All such permits shall be issued for a period of one year and may be renewed, at the discretion of the Village Clerk, for additional periods of one year each upon the payment of a renewal fee as set from time to time by resolution of the Board of Trustees. **[Amended 4-14-2003 by L.L. No. 1-2003; 6-14-2004 by L.L. No. 4-2004]**

**§ 143-10. Relocation of structures; fee; bond; permit. [Amended 4-14-2003 by L.L. No. 1-2003; 6-14-2004 by L.L. No. 4-2004]**

Each applicant for a permit to move or cause to be moved any dwelling, house, barn, garage, outbuilding or other structure from one place to another upon, along or across any road, street, parkway, highway, sidewalk or public place in the Village of Port Washington North shall pay a fee as set from time to time by resolution of the Board of Trustees, in addition to meeting the requirement of posting the bond referred to hereafter in § 143-13 of Article I to secure the proper restoration and indemnity for liability from injury, loss or damage as specified therein, and shall also notify and secure the permission of the applicable public utilities organizations and other agencies having jurisdiction or interest therein.

**§ 143-11. Responsibility for backfilling openings and restoration of streets and sidewalks.**

If any person to whom a permit to open a street, road, highway, parkway, sidewalk or public place in the Village of Port Washington North shall fail, neglect or refuse promptly to backfill or cause any such opening to be backfilled and covered with pavement and restored to its original condition, such opening may be backfilled, covered with pavement and restored to its original condition by the Village of Port Washington North, and such person shall pay for such backfill, pavement and restoration, and the Village Clerk may deduct the amount of money necessary to discharge said payment from any moneys deposited by the applicant with the Village Clerk, or if there be not sufficient moneys on deposit, the Village may pursue such other remedies as are provided by law.

**§ 143-12. (Reserved)** Editor's Note: Former § 143-12, Fee for deposit of material on streets and sidewalks, as amended, 4-14-2003 by L.L. No. 1-2003, was repealed 6-14-2004 by L.L. No. 4-2004. See Ch. 91, Fees, Deposits and Insurance.

**§ 143-13. Bond in lieu of security deposit.**

The Village Clerk may, in his discretion, in lieu of requiring a deposit of money from the applicant, condition the issuance of any such permit provided for herein upon the making of a bond, made by the applicant as principal, with the surety or insurance company, duly authorized and licensed to do business in the State of New York, as surety, in such amount as the Village Clerk may direct, that the applicant will save and hold harmless from and will indemnify the Village of Port Washington North from any liability for any and all injury, loss or damage to person or property either of the Village of Port Washington North or others, resulting from any cause, by any act or omission of the applicant, his agents, servants, employees, nominees or any contractor employed by the applicant or the agents, servants, employees or nominees of such contractor. In the event that the issuance of the permit was conditioned upon the making and filing of a bond, and in the event an expired permit is renewed for an additional period or periods, the said bond must be similarly renewed, and the Village Clerk shall take such lawful steps as are necessary on his part to effect such renewal of the said bond.

**§ 143-14. Applicability.**

This article shall apply to all applicants for permits hereunder, whether persons, unincorporated associations, partnerships, private corporations, public agencies, public utilities, municipal corporation and other types of instrumentality or organization.

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## **ARTICLE II Sidewalks, Curbs, Curb Cuts and Trees [Adopted by Ord. No. XIV]**

### **§ 143-15. Permit required for installation of trees, shrubs and structures.**

No person shall install or locate or plant any trees, shrubs or structures in any street in the Village of Port Washington North without the prior written permission of the Village.

### **§ 143-16. Protection of vegetation on public land.**

No person shall injure, deface, mutilate, or destroy trees, shrubs or grass plots in streets or public places, and no person shall cut down or remove any such tree, shrub or grass plot except as otherwise required or permitted by this article.

### **§ 143-17. Maintenance of property abutting public streets. [Amended 4-14-2003 by L.L. No. 1-2003]**

Every owner and occupant of any building or land in the Village of Port Washington North abutting on any street in said Village shall cut and remove all grass or weeds growing in the unpaved portions of said street abutting said building or land at least once each month from May to October, inclusive. In the event said grass or weeds are not cut and removed as aforesaid, the Village may, on 10 days' written notice to the owner or occupant of the abutting land, cause said grass and weeds to be cut and removed and may assess the expense thereof upon the owners or occupants of the abutting land.

### **§ 143-18. Responsibility for sidewalk maintenance; snow, ice and debris removal; repair. [Amended 4-14-2003 by L.L. No. 1-2003]**

- A. Every owner and occupant of any building or land in the Village of Port Washington North abutting upon a sidewalk on any street in said Village shall, within 12 hours after the cessation of every fall of snow or the formation of any ice on the sidewalk abutting said building or land, remove or cause the said snow or ice to be removed or cleared entirely from the said sidewalk abutting said building or land; provided, however, that the time between the hours of 7:00 p.m. and 7:00 a.m. shall not be included in the above period of 12 hours.
- B. Every owner and occupant of any building or land in the Village of Port Washington North abutting upon a sidewalk on any street in said Village shall keep and maintain such sidewalk in good condition and free from cracks or defects.
- C. Every owner and occupant of any building or land in the Village of Port Washington North abutting upon a sidewalk on any street in said Village shall keep the sidewalks in front of said premises free and clear of dirt, rubbish, garbage, debris, litter and other obstructions.
- D. Every owner and occupant of any building or land in the Village of Port Washington North abutting on any street in said Village shall keep and maintain the area in the unpaved portions of said street abutting said building or land free and clear of dirt, rubbish, garbage, debris, litter and other obstructions.
- E. No person shall remove any sidewalk or portion of sidewalk, or injure, deface or damage any sidewalk or portion thereof, or dump or place or cause to be deposited upon any sidewalk or portion thereof, any dirt, rubbish, garbage, debris, litter, vegetation and other obstructions.
- F. In the event of any violation of the provisions of Subsection A, B, C, or D above, then and in

that event, the Village may forthwith proceed to clean, clear, or repair the sidewalk and/or the unpaved portions of such street as required of the owner and occupant by this article, and the cost and expense of doing such work shall be ascertained and a report thereof shall be forthwith filed in the office of the Village Clerk. The Village Clerk shall thereupon present said report to the Board of Trustees. The amount of such cost and expense shall be determined and audited by the Board of Trustees and notice of such amount shall be given by the Village Clerk to the owner of the property abutting such sidewalk and/or the unpaved portions of such street. In the event that such amount is not paid to the Village within 30 days of such notice, the amount of such cost and expense shall be levied and assessed against the land abutting such sidewalk and/or such unpaved portions of such streets as an assessment for an improvement to be included in the next succeeding assessment roll of the Village to be thereafter prepared. **[Amended 5-10-2004 by L.L. No. 2-2004]**

- G. In the event that an injury to any person or property shall result from the negligence or other failure of any person to comply with the provisions of this § 143-18, such person shall be liable to those who are injured or whose property is damaged as a result of such negligence or noncompliance. Editor's Note: Original Subsection (f) was repealed 1-6-1975 by L.L. No. 1-1975, and Sections 5 and 6 of Ord. XIV, which immediately followed this subsection, were repealed 12-8-1969. **[Added 6-13-1988 by L.L. No. 3-1988]**

**§ 143-19. Authority to determine materials specifications and standards.**

Heretofore, by resolution, the Board of Trustees of the Village of Port Washington North has delegated to the Village Engineer and the Road Superintendent, jointly, the duty to determine materials specifications and standards for all Village roads, sidewalks, curbs, curb cuts and driveway aprons and to modify the same from time to time and to waive the provisions thereof, and such delegation of authority is hereby reaffirmed.

**§ 143-20. Construction and reconstruction of sidewalks, curbs, curb cuts and driveway aprons.**

- A. No person, firm or corporation shall construct or reconstruct any sidewalk, curb, curb cut or driveway apron on land which has been dedicated to the Village of Port Washington North, whether or not such dedication has been accepted, unless same be constructed of concrete and in accordance with the specifications in effect at the time.
- B. No person, firm or corporation shall construct or reconstruct any sidewalk, curb, curb cut or driveway apron on land which has been dedicated to the Village of Port Washington North, whether or not such dedication has been accepted, unless said person, firm or corporation has been issued a permit, upon application therefor as provided in Subsection C hereof.
- C. Permits to construct or reconstruct the sidewalks, curbs, curb cuts, and driveway aprons shall be issued by the Village Clerk or Road Superintendent on application therefore as follows:
- (1) Only one permit shall be required to construct or reconstruct all the sidewalks, curbs, curb cuts and driveway aprons adjacent to one building, and one application shall suffice to secure a permit to do all of them or such of them as are contemplated to be done at the time of the application; but a separate permit shall be required for each curb cut more than the first.
  - (2) The applications shall state the number of feet of curb to be constructed or reconstructed, if any; the size of the driveway apron to be constructed, if any to be constructed or reconstructed; the size of the curb cut to be constructed or reconstructed, if any; the number of other curb cuts serving the premises, if any; and the number of feet of sidewalk to be constructed or reconstructed, if any. A rough sketch shall also be submitted, showing the approximate location of all such work for which the permit is being sought. The application shall also state the zoning classification of the property and the use. The application shall also state that the applicant is familiar with the applicable specifications of the Village of Port Washington North for the contemplated



work and shall be accompanied by a fee as set from time to time by resolution of the Board of Trustees. **[Amended 4-14-2003 by L.L. No. 1-2003; 6-14-2004 by L.L. No. 4-2004]**

- (3) If it shall appear from the application that no curb cut is to be constructed or that only one curb cut of a width of not more than 20 feet is sought to serve one dwelling house in a Residence A-1, B, or C Zone, said permit shall be issued forthwith.
- (4) Where it appears from the application that the applicant seeks a curb cut or curb cuts in an Apartment, Business, or Industrial Zone or that he seeks a curb cut greater than 20 feet in width in a Residence A-1, B or C Zone or that more than one curb cut is sought to serve one dwelling house in such a Residence A-1, B or C Zone, said application or applications shall be referred to the Road Superintendent who shall have the right to issue or refuse to issue the curb cut permit or permits, or issue one or more and refuse the balance, or order that the location of one or more curb cuts be changed, or order the location of previously constructed curb cuts changed or order them closed as a condition to the granting of the permits, after consideration of the applicants needs, the effect on traffic on Village streets, curbside parking facilities, safety, proximity to other curb cuts, and the type of vehicles which will be using the premises. The Road Superintendent shall issue or refuse each permit applied for within 30 days after application therefor. Should he refuse the permit or order the permit issued in different form than applied for, he shall give his reasons therefor in writing.
- (5) Certificate of insurance. Editor's Note: Original Subsection (e) was repealed 4-4-1977 by L.L. No. 1-1977. **[Added 12-4-1978 by L.L. No. 5-1978; amended 11-30-1980 by L.L. No. 5-1980]**
  - (a) Every application for a permit hereunder shall be accompanied by a certificate of insurance, in a form approved by the Village Clerk and issued by an insurance company authorized to do business within the state, evidencing the existence of the following insurance coverage:
    - [1] Comprehensive general liability insurance including the Incorporated Village of Port Washington North as an additional insured.
      - [a] Said insurance shall provide minimum limits of \$500,000 personal injury per occurrence and \$100,000 property damage per occurrence or a combined single limit of \$500,000. The policy shall also include coverage for completed operations and broad form property damage.
      - [b] In addition, the policy shall contain a provision that any aggregate limit contained in the policy shall not apply to the additional insured Incorporated Village of Port Washington North, or, in lieu thereof, a separate owner's protective policy shall be issued or endorsed to the existing policy, with the Incorporated Village of Port Washington North as the named insured.
    - [2] Worker's compensation insurance.
    - [3] New York State disability benefits insurance.
  - (b) All evidence of insurance shall provide a thirty-day notice of cancellation or change of coverage to be furnished to the Incorporated Village of Port Washington North.
  - (c) In the event that any applicant is a self-insurer, information regarding his insurance program should be submitted to the Village. The applicant will be advised of the requirements of the Village as determined by the Board of Trustees.

#### **§ 143-21. Penalties for offenses.**

Any person violating any provisions of this article shall be liable to a penalty of not more than \$250. Said penalty shall be in addition to all other sums hereinabove provided to be paid. Each day of such violation shall constitute a separate offense.

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## **ARTICLE III Notification of Defects [Adopted 4-14-2003 by L.L. No. 1-2003]**

### **§ 143-22. Prior notice required.**

Pursuant to Article 6, § 6-628 of the New York State Village Law, no civil action shall be maintained against the Village for damages or injuries to persons or property sustained in consequence of any street, highway, bridge, culvert, sidewalk or crosswalk being defective, out of repair, unsafe, dangerous or obstructed or for damages or injuries to persons or property solely in consequence of the existence of snow or ice upon any sidewalk, crosswalk, street, highway, bridge or culvert, unless written notice of the defective, unsafe, dangerous or obstructed condition or of the existence of snow or ice, relating to the particular place, was actually given to the Village Clerk and there was a failure or neglect within a reasonable time after the receipt of such notice to repair or remove the defect, danger or obstruction complained of, or to cause the snow or ice to be removed, or to make the place otherwise safe.

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## **ARTICLE IV Miscellaneous Regulations [Adopted 7-14-2003 by L.L. No. 4-2003]**

### **§ 143-23. Definitions.**

For the purpose of this chapter and for all other chapters of the Village Code, unless with regard to such other chapters such terms are otherwise defined or unless the context clearly implies a different definition, the following definitions shall apply:

**BUSINESS STREET** — A municipal street adjoining property zoned primarily for business, commercial, or industrial use.

**DRIVEWAY** — A private road within the Village connecting a house, garage, or other building with a street.

**MOTORCYCLE** — A motorcycle as defined in the Vehicle and Traffic Law of the State of New York.

**MUNICIPAL STREET** — A street that a municipality owns and/or maintains on a regular basis by deed, easement, acceptance of dedication, or prescription. Municipal streets include Village streets.

**PAVEMENT** — With regard to streets, includes macadam, asphalt, brick, concrete, or other similarly improved roadbed.

**PRIVATE STREET** — A street that is not a public street.

**PUBLIC PLACE** — A public street, municipal parking field, and any culvert, crosswalk, square, and other place, used to any degree by the general public.

**PUBLIC STREET** — A street that the public has the right to use. Public streets include municipal streets.

**SIDEWALK** — A sidewalk within or adjacent to a public street or that the public otherwise has the right to use.

**STREET** — A highway, boulevard, concourse, road, avenue, lane, alley, court, cul-de-sac, drive, or thoroughfare within the Village more than 20 feet in width, excluding driveways.

**VILLAGE** — The Village of Port Washington North.

**VILLAGE STREET** — A street that the Village owns and/or maintains on a regular basis by deed, easement, acceptance of dedication, or prescription.

**§ 143-24. Covered vehicles prohibited. [Amended 11-10-2003 by L.L. No. 9-2003]**

- A. No person shall cover, or tolerate or permit the covering of, a vehicle, excluding a motorcycle, parked on a public street within the Village, unless a currently valid permit has been issued for the use of said cover on said vehicle by the Board of Trustees as set forth in Subsection D hereof.
- B. For the purposes of this section, a "cover" shall be defined as any material or materials, which, together, cover substantially all of the roof and the windows of the vehicle.
- C. In any prosecution under this section, it shall be an affirmative defense that a currently valid permit has been issued for the use of said cover on said vehicle by the Board of Trustees as set forth in Subsection D hereof, and there shall be a conclusive presumption that the registered owner of the vehicle tolerated or permitted the covering of the vehicle.
- D. The Board of Trustees may issue a permit to use a cover on a vehicle parked on a public street within the Village upon the following conditions:
  - (1) A signed, written application shall be made to the Board of Trustees setting forth the following information, with the required documentation:
    - (a) Name, address, and telephone number of the applicant.
    - (b) Manufacturer, model, color, and license plate number of the vehicle to be covered.
    - (c) Copies of the current vehicle registration certificate and insurance card.
    - (d) Sufficient detail of the proposed cover, by manufacturer's brochure, photographs, or actually bringing in the proposed cover, for the Board of Trustees to review it.
    - (e) Sufficient reasons as to why the vehicle to be covered cannot be parked, when covered, upon the applicant's property.
  - (2) All such covers shall meet the following requirements, unless for good cause waived by the Board of Trustees:
    - (a) No cover shall be permitted to cover the registration and inspection stickers on the windshield, nor the license plates on the front and rear of the vehicle.
    - (b) All covers shall be securely affixed to the vehicles so that they do not blow around in windy weather.
    - (c) All covers shall be kept clean, in good condition, and aesthetically pleasing so as not to be eyesores to the community.
  - (3) Any permit issued hereunder shall only be valid until the expiration of the registration and insurance card exhibited to the Board of Trustees. The Board may permit renewals thereof by the Village Clerk, upon proof of renewal of such registration and insurance.
  - (4) No permit issued hereunder shall be valid for longer than two years from the date of issuance or such lesser period as may be set by the Board of Trustees at the time the permit is issued.
  - (5) The following restrictions shall apply to all such permits:
    - (a) Such covers may not be used after March 15 or before November 15.
    - (b) Such covers may only be used from four hours before until four hours following a snowfall of two inches or more. Notwithstanding the foregoing, in the event that a snowfall of two inches or more shall occur between 6:00 p.m. and 8:00 a.m., such covers also may be used from 6:00 p.m. before such snowfall until 8:00 a.m. following such snowfall.

- (c) The requirement that the permit issued hereunder be affixed to the cover.
  - (d) The requirement that the inside of the vehicle be visible.
  - (e) Such additional conditions as the Board of Trustees may, by resolution, from time to time find appropriate.
- (6) Any permit granted herein may be revoked by the Board of Trustees, upon notice, for any violation of the provisions of this section or the conditions imposed by the Board of Trustees.
  - (7) The Board of Trustees, by resolution, may adopt a resolution requiring a permit fee for such applications.

**§ 143-25. Commercial use of streets prohibited. [Added 7-12-2004 by L.L. No. 7-2004]**

- A. No person shall utilize the public streets or sidewalks in connection with or in furtherance of a commercial use. This section shall not be construed so as to prohibit the use of a public street or sidewalk for access to a business or for such other purpose, such as loading, stopping, standing or parking, as may be specifically permitted by applicable law. By way of illustration, without limitation, the prohibition in this section shall apply to, among other things, the repairing of automobiles in the street by a gasoline service station or repair shop, the cleaning or drying of cars in a street by a car wash and the storage of vehicles on the street by a leasing company.
- B. Exemptions; affirmative defense.
  - (1) Notwithstanding anything in this section to the contrary, the following shall be permitted:
    - (a) The use of the public streets by the holder of a valid unexpired license issued by the Village Clerk pursuant to Chapter 124, Peddling, of this Code, for the uses permitted pursuant to said license.
    - (b) Emergency repair service for disabled vehicles, so long as such service is performed where the vehicle became disabled and is solely for the purpose of either performing the necessary repairs so that the disabled vehicle may be able to be sufficiently operated to remove it from the street or preparing such vehicle to be towed or otherwise removed from the street.
    - (c) Commercial vehicles necessarily involved with the performing of services or repairs at premises which are legally being utilized as a one- or two-family dwelling, so long as such vehicles are parked within 150 feet of the premises upon which such dwelling is located and the services or repairs are actively being performed at the time. Such vehicles are intended to include, for example, without limitation, landscaping trucks, furniture moving trucks and household repair vans.
  - (2) In any prosecution of any violation of this section, it shall be an affirmative defense that the alleged violation was exempted pursuant to the provisions of this Subsection B.

Village of **Ridgely Park**Bergen County, NJ  
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[15 Reasons to Plant Trees](#)   [FAQ](#)   [Sidewalk Repair Program](#)

**15 REASONS WHY WE SHOULD PLANT TREES**

1. Trees store carbon and clean the atmosphere. In 50 years, one tree generates \$30,000 in oxygen, recycles \$35,000 of water, and removes \$60,000 of air pollution.
2. Tree shade reduces air conditioning costs in residential and commercial buildings by 15-50 percent. Do you need a tree planted to the South or West of your house?
3. Properly placed and cared for trees and shrubs significantly increase residential and commercial property values. Would you like a new tree for your property?
4. Trees provide habitat for a large variety of wildlife. Do you like bird songs?
5. Trees connect us with nature and reinforce spiritual and cultural values.
6. Trees prevent or reduce water pollution in NJ's streams, rivers, darts, and estuaries.
7. Trees prevent or reduce soil erosion.
8. Trees help recharge ground water and sustain stream flow.
9. Properly placed screens of trees and shrubs decrease traffic noise along NJ's busy streets and highways. Do you have a site that needs a tree along Rt. 46?
10. Trees screen unsightly views and provide privacy for NJ homeowners.
11. Trees make life more pleasant by softening harsh outlines of

**News****10/17/**[SWEATS F](#)**10/21/**[Ridgely Exam](#)**11/1/2**[Fire Depar Needed](#)**Events****10/31/**[Board of R](#)**11/3/2**[Library Evi](#)

buildings.

12. Trees add beauty and grace to any community setting. They make life more enjoyable, peaceful, and relaxing. Do you enjoy walking through Ridgefield Park?
13. Research shows that trees help reduce stress in the workplace and speed hospital patients' recovery. Do you hear the sighs of relief on NYC buses as they reach RP?
14. Trees provide a multitude of recreation opportunities.
15. Trees, planted as memorials, leave a valuable gift for future generations.

### Frequently Asked Questions

Homeowners often ask for assistance with trees that are on their own private property. We manage only the public trees, but we can provide a list of New Jersey Certified Tree Experts with whom we have contact.

The attached document suggests guidelines for selecting an Arborist.

The Shade Tree Commission's sidewalk program is still available for homeowners who wish to repair or replace their sidewalks. Through this program, a homeowner can be reimbursed for some expense incurred due to damage by street trees. Applications are available at the municipal building or by calling 201-641-4950, extension 640.

Mulch can protect a tree by conserving moisture and preventing grass and weeds from growing too close to the trunk. But too much mulch smothers the tree just the same as it smothers the weeds. Mulch belongs around the tree but not against it.

PUT MULCH ON THE  
GROUND

### TREES HAVE FLARE

LIKE A SKIRT  
ABOVE THE ROOT

THE TRUNK FLARE BELONGS ABOVE  
THE GROUND. LET IT SHOW ABOVE  
THE MULCH.



- SHOW THE FLARE -  
- SAVE THE TREE -



**UGH!**

**DON'T LET THAT DOG SPRAY ON ME!**

**IT JUST BURNS ME UP WHEN YOU LET  
YOUR DOG USE ME THAT WAY!**

**THANK GOODNESS FOR  
GATOR BAGS!**

**Just fill them up  
and they'll keep my roots moist all  
week.**



**I'M JUST NUTS ABOUT TREES**



**SAVE MY HOME AND I'LL STAY OUT OF YOURS**

**Sidewalk Repair Program**

**Instructions:**

- **The Property Owner completes and signs the**

**Sidewalk Repair Program Request Form and delivers it to the Ridgefield Park Shade Tree Commission (RPSTC) at the Village Clerk's Office.**

- **A Shade Tree Commission Member will inspect the site and designate what repairs are reimbursable (i.e. caused by Village shade trees).**
- **The RPSTC Member will leave the authorization/reimbursement form and instructions with the Homeowner.**
- **The Homeowner is responsible for contacting a contractor who has been approved by the Shade Tree Commission to schedule the repairs. Homeowners may use the approved contractor for additional sidewalk repairs at the negotiated rate; however, the Village will reimburse homeowners only for damage to sidewalks caused by Village shade trees. All reimbursable work must be pre approved by a member of the RPSTC. All additional repairs are the responsibility of the Homeowner.**
- **Once the contractor has completed the repairs, the Homeowner is responsible for payment to the contractor. A copy of the paid invoices should be submitted to the RPSTC at the Village Clerk's Office.**
- **A RPSTC Member will review and inspect the repairs and submit a payment voucher to the Village Board of Commissioners.**

**The Village Board of Commissioners will approve payment to the Homeowner. Please allow approximately six weeks for payment following submission of invoices.**

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#### REQUEST FORM

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# Appendix C



Home Why Rubbersidewalks? Product Info Specifications Press An

## Why Rubbersidewalks Work

### The Big Discovery

Rubbersidewalks were invented by Richard Valeriano, Public Works Inspector for the Santa Monica, California and tested in that city for over three years. Originally conceived as a solution that would take advantage of rubber's flexibility and allow the sidewalk to move when the tree roots grew, it was discovered that tree roots exhibited a different growth pattern under Rubbersidewalks than under concrete. The growth rate of roots was slower and roots grew in small tender offshoots that could be easily and safely trimmed. Rubber is lighter and more resilient than concrete, and tree roots were getting sufficient water and oxygen through the paver seams.

Rubbersidewalks opened, exposed roots and root growth under concrete.



Modularity and the unique relationship between Rubbersidewalks and tree roots result in maintainable sidewalks and a flourishing urban forest.

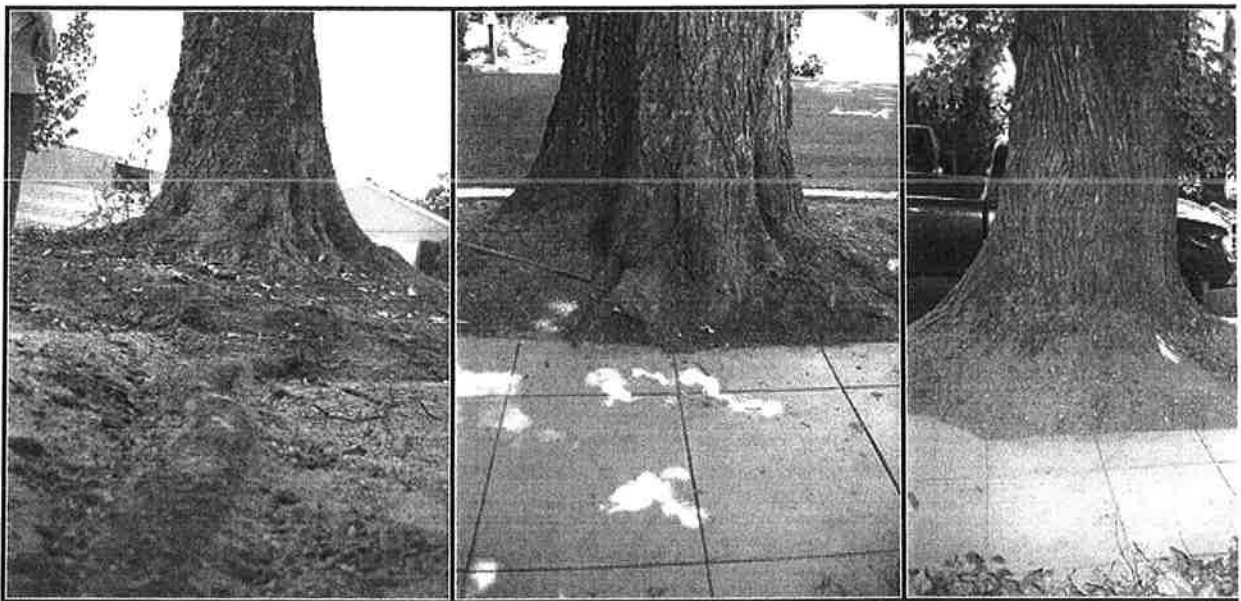
*The resources of the earth are limited. Recycling is limited only by our imagination and effort.*

[Rubbersidewalks@aol.com](mailto:Rubbersidewalks@aol.com)  
2622 West 157<sup>th</sup> Street • Gardena, CA 90249  
Phone: (310) 515-5814



## Rubbersidewalks Saves Trees

### Every Tree Matters



- Trees clean the air
- Trees fight global warming
- Trees enhance the beauty of the neighborhood
- Trees cool the air in summer and conserve warmth in winter
- Trees bring songbirds to the neighborhood
- Trees increase property values by 15%
- Tree roots retain water and keep it from the waste stream

Rubbersidewalks eliminates the need to remove trees due to invasive root growth. Each 20 foot installation of Rubbersidewalks saves a tree from removal. Rubbersidewalks allows tree be trimmed in a way that doesn't jeopardize health or stability of tree. Rubbersidewalks sav urban forest which benefits the environment, quality of life and property values.

*Rubbersidewalks introduces modularity and tree root management*

Rubbersidewalks introduces modularity and tree root management

Unlike concrete, Rubbersidewalks' pavers can be lifted for tree root trimming then replaced. can easily trim tree roots every 2 or 3 years while roots are still in the offshoot stage. There damage to the health or stability of the tree.

---

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## Interesting Facts




In Milwaukee, where urban trees cover about 16 per cent of the city, trees reduce stormwater flows by 22 per cent. The city saves an estimated \$15.4 million by avoiding the construction of additional retention capacity. In Austin, heavy rains make stormwater management a priority issue. Austin's tree canopy, almost twice that of Milwaukee's at approximately 30 per cent, reduced stormwater flow by 28 per cent, providing the city with an estimated \$122 million in savings (MacDonald, 1996).




Several investigators have documented dramatic (30 - 50%) differences in cooling-energy use between houses on landscaped and un-landscaped sites (Akbari, 2002).




Hurricane Hugo devastated Charleston, South Carolina, in 1989. Little was spared: homes, churches, power lines, and the urban forest were all heavily damaged or destroyed. 200 residents were asked to identify the single most special physical feature of Charleston damaged or destroyed by Hugo. People identified the urban forest more often than any other aspect of Charleston (i.e. more than churches, historic buildings or homes) (Vigo, 1990).




Computer simulations using standard building and tree configurations for cities across the U.S. indicate that shade from a single well-placed, mature tree (about 25-ft crown diameter) reduces annual air conditioning use 2 to 8 percent and peak cooling demand 2 to 10 percent (Simpson and McPherson, 1996).



A major study of Chicago estimated that trees in that city annually removed 15 metric tons of carbon monoxide, 84 tons of sulfur dioxide, 89 tons of nitrogen dioxide, 191 tons of ozone and 212 tons of small particulates. The estimated value of this pollution removal was \$1 million for trees in the city itself and \$9.2 million for the entire Chicago area (Nowak, 1994).



The ambient air temperature difference between an urban heat island and a vegetated area can be as much as 2-10 degrees F. The temperature measured directly above man-made surfaces can be as much as 25 degrees F hotter than the air temperature beneath a forested area (Akbari et. al., 1992; Simpson and McPherson, 1996).



Using the city of Davis, California as a model, existing data on the benefits and costs of municipal trees were applied to the results of a sample inventory of the city's public and private street trees. Results indicate that Davis maintained nearly 24,000 public street trees that provided \$1.2 million in net annual environmental and property value benefits, with a benefit to cost ratio of 3.8:1 (Maco and McPherson, 2003).

From: <http://www.treelink.org>



One acre of forest absorbs six tons of carbon dioxide and puts out four tons of oxygen is enough to meet the annual needs of 18 people. -U.S. Department of Agriculture

There are about 60-to 200- million spaces along our city streets where trees could be planted. This translates to the potential to absorb 33 million more tons of CO2 every year saving \$4 billion in energy costs. -National Wildlife Federation

Trees properly placed around buildings can reduce air conditioning needs by 30 percent can save 20 - 50 percent in energy used for heating. -USDA Forest Service

Trees can be a stimulus to economic development, attracting new business and tourism. Commercial retail areas are more attractive to shoppers, apartments rent more quickly, they stay longer, and space in a wooded setting is more valuable to sell or rent. -The National Day Foundation

The planting of trees means improved water quality, resulting in less runoff and erosion. This allows more recharging of the ground water supply. Wooded areas help prevent the transport of sediment and chemicals into streams. -USDA Forest Service

In laboratory research, visual exposure to settings with trees has produced significant recovery from stress within five minutes, as indicated by changes in blood pressure and heart rate. -Dr. Roger S. Ulrich Texas A&M University

A tree can grow to manufacture five pounds of pure oxygen per day, consume carbon dioxide to fight the "greenhouse effect" that threatens our survival, and provide the cooling equivalent of ten room-size air conditioning units.

From: <http://www.arborday.org/trees/benefits.cfm>

## LINKS

### **TreeLink: The Urban Forestry Resource -**

<http://www.treelink.org/>

A fabulous source for information and networking about urban trees that offers a search engine to find specific information from over 2000 resources. It has a fun format with changing tree factoids, tree care tips, a tutorial on applying for grants



and a Kid's Corner.

**TreeLink New York** - <http://www.treelink.org/linx/?navLocationRef=33>

**Center for Urban Forest Research, Pacific Southwest Research Station, UC Davis**  
<http://cufr.ucdavis.edu>

This is the most comprehensive and well-researched web resource. It offers helpful online presentations, Powerpoint presentations and handbooks designed to persuade local elected leaders to value the urban forest. The Center is in the process of developing easy-to-use computer programs to help communities assess the benefits of street trees and help homeowners evaluate the economic trade-offs of different landscape choices.

**Sacramento Tree Foundation** - <http://www.sactree.com>

Resources, information and news for the Central California region. Offers download of free NeighborWoods Guide handbook. Includes Sacramento Regional Urban Forest Framework elected leaders with link to helpful Tree Toolkit.

**University of Washington, College of Forest Resources, Research Programs** -

<http://www.cfr.washington.edu/research.envmind/>

Lots of hard facts about the financial and social benefits of trees in cities from research by Kathleen L. Wolf, Ph.D. This is a good source of ammunition for convincing skeptics who only look at the bottom line.

**Trees New York** - <http://www.treesny.com/index.html>

News and information specifically for the five boroughs and surrounding region.

**Virginia State University, Virginia Cooperative Extension** -

<http://www.ext.vt.edu/pubs/trees/430-028/430-028.html>

Specific detailed information about landscaping with trees for parking lots and paved areas

**The National Arbor Day Foundation** -

<http://www.arborday.org/Index.cfm>

Everything you ever wanted to know about specific trees. Site includes online tree identification guides, great graphic presentations about the benefits of trees, a store for purchasing climate/region specific trees and information about the Tree City USA program. You can even get 10 free trees by joining the National Arbor Day Foundation.

**Society of Municipal Arborists** - <http://www.urban-forestry.com/>

Browse the online issues of City Trees magazine and check out the helpful list of links.



**Colorado Tree Coalition** - <http://www.coloradotrees.org/benefits.htm>  
Offers detailed articles on benefits of trees.

**E: The Environmental Magazine** - [http://www.enn.com/news/2004-08-31/s\\_26621.as](http://www.enn.com/news/2004-08-31/s_26621.as)  
Article on "Do urban trees really help reduce pollution and clean air?", Tuesday, August 3:

**American Forests.org** - <http://www.americanforests.org/>

To add your tree-related link to this page, please email us at [Rubbersidewalks@aol.com](mailto:Rubbersidewalks@aol.com).

*All photos on this page were provided by*  
**Walter Warriner**  
**Consulting Arborist**

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### New Rochelle hopes rubber will help bring a truce of sorts

By **LEN MANIACE**  
THE JOURNAL NEWS  
(Original publication: September 24, 2004)

**NEW ROCHELLE** — The sidewalks in front of the century-old homes on Sutton Manor Road don't much resemble the smooth surfaces where generations of kids learned to roller-skate.

They look more like a science project on plate tectonics in which the Earth's crust thrusts upward to create a series of miniature mountain ranges. Instead of a concrete sidewalk, the pavement is an obstacle course of 4-inch cliffs and broken terrain heaved up by roots from ancient-looking linden trees.

"Around here, no one walks on the sidewalks. We all walk in the street," said Terry Gargan, a 70-year-old maritime lawyer who has lived in a house on the street since 1972.

In that time, the sidewalk outside Gargan's home at 146 Sutton Manor Road has needed repaving three or four times because of the relentless growth of the much-loved trees. And that was before a city contractor started replacing the sidewalks last week.

But instead of another repaving job, New Rochelle is experimenting with a new idea that just might lead to a truce in the struggle between humans and the forces of nature. The city is replacing the concrete sidewalk with one made from recycled tires, a product that is supposed to flex as the trees grow and be immune to winter cycles of freezing and thawing that can reduce concrete to sand and stone.

City officials hope rubber sidewalks will not only cut sidewalk paving costs — New Rochelle is responsible for replacing walks damaged by city trees — but improve the health of trees and reduce the city's vulnerability to lawsuits triggered when pedestrians trip on faulty sidewalks.

And with one tire going into each square foot of rubber sidewalk, the product could provide a use for some of the 225 million tires disposed of yearly in the United States.

"I don't see this replacing all sidewalks, but it would have a place where you are trying to keep the conflict between roots and sidewalks to a minimum," said James Maxwell, New Rochelle's public works commissioner.

The new sidewalks are a product of a Southern California company, Rubbersidewalks Inc. So far, the sidewalks have been installed in 40 cities, all of them across the southern United

#### More News

- Flood relief plan in Clarkstown waiting for permits
- New Rochelle hopes rubber will help bring a truce of sorts
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- Croton mayor says control of waste plant more important than money
- Suffern pay raises didn't materialize
- Fixing a hole
- Clash looms between council and mayor over cars
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- 10 county police chiefs back village on suit
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States, including Los Angeles and Savannah, Ga.

But none of these cities is subject to freezing temperatures or the extensive chemical and physical assault of snow and ice that occurs each winter in the North, so New Rochelle is starting small, with the 400-square-foot strip on Sutton Manor Road.

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The product was successfully tested in a lab earlier this year, withstanding subfreezing temperatures and de-icing chemicals, Rubbersidewalk chief Lindsay Smith said.

But real life is the only true test, New Rochelle officials said.

"Lab tests are lab tests," Maxwell said. "I don't think there is any better way to try something out for winter weather than the Northeast, where the weather is very variable."

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Plans are under way for additional tests of the rubber sidewalks at an office park in Hawthorne and a shopping center in Greenburgh.

Durability is the main concern, but Maxwell said he wanted to see if the sidewalks shifted during the freeze-thaw cycles and whether they proved slippery.

Smith said the rubber sidewalks are not slippery and they exceed Americans with Disabilities Act standards.

**WEEKLIES**

**The Item**  
**The Patent Trader**  
**Review Press**  
**Standard Star**  
**The Star**  
**The Times**

New Rochelle is spending \$8,400 for the sidewalks and installation, or \$20 per square foot, much higher than the city's cost of \$7 per square foot for concrete.

But Smith and city officials said the Sutton Manor Road installation is small, and volume and continued improvements in the technology will significantly bring down prices.

**OPINION**

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- The Pulitzer Prize

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- Arthur Gunther
- Laurie Nikolski
- Phil Reisman

The true cost would be even cheaper, officials said, if the rubber sidewalks don't need to be repeatedly replaced.

Meanwhile, Gargan and his neighbors seemed enthusiastic about the experiment. Gargan placed gag posters along the street inviting neighbors to "experience the rubber sidewalks, admission 50 cents."

The rubber sidewalks feel firm underfoot, but not as hard as concrete. They are a medium gray, which at a glance resembles slate or bluestone, although the product comes in many colors. Upon close inspection, tiny rubber grains are visible as are occasional white flecks from whitewalls.

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Earlier this week, Gargan's neighbor, actress Frances Sternhagen, who has lived on the block since 1959, said she appreciated the experiment because it seemed likely to benefit to the street's towering lindens.

"We really do like these trees," Sternhagen said. "It's so wonderful when when you look down the street and you see this roof created by branches."

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And then Sternhagen looked a little wistfully at Gargan's smooth sidewalk and the craggy pavement in front of her home.

"I sure wish they would have gone all the way to here," she said.

Send e-mail to [Len.Maniace@thejournalnews.com](mailto:Len.Maniace@thejournalnews.com) or 914-637-2244. Reach Len [Maniace@thejournalnews.com](mailto:Maniace@thejournalnews.com) or 914-637-2244.



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### HOW TO PROTECT TREE ROOTS WHILE REPLACING SIDEWALKS AND CURBS

New innovations in repairing or replacing sidewalks and curbs can reduce damage to street trees by accommodating, rather than ignoring, tree roots. Construction techniques to repair or replace sidewalks and curbs usually involve cutting or severing tree roots. Research suggests that injury to the buttress roots of a tree could predispose that tree to decline (Hamilton 1988; 1984; Kessler 1992) or possible windthrow (Hamilton 1988; 1984; Helliwell 1989; Smiley and Fraedrich 1991). In 1990, a triple fatality in Toledo, Ohio, was associated with a falling tree whose roots were cut during sidewalk reconstruction. This bulletin describes different techniques that may be used when repairing or replacing sidewalks and curbs to minimize the amount of damage to the tree.

### SIDEWALK REPAIR AND REPLACEMENT

Sidewalks often need to be repaired or replaced when they become cracked or displaced creating safety concerns. The presence of large, lateral support roots under and near the sidewalk in these areas highlights the need to exercise caution while repairing sidewalks. Two techniques for repairing cracked or displaced sidewalks are the asphalt wedge and grinding. Landscape pavers, concrete ramp, and asphalt ramp are techniques that can be used when the sidewalk needs to be replaced.

#### Asphalt Wedge

This repair is usually considered temporary, but it is one of the simplest ways of repairing a displaced slab, or "stub-toe." In this repair an asphalt wedge is applied between the upper and lower slab of the walk (fig. 1). Such repairs rarely correct the prob-

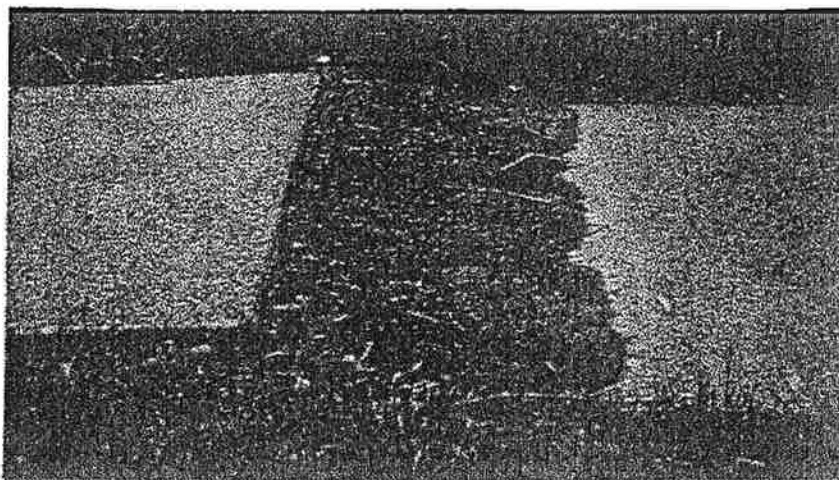


Figure 1. Asphalt wedge

Patrick O' Brien  
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Staff Engineer  
City of Toledo, Division  
of Water Distribution  
401 S. Erie St.  
Toledo, OH 43602  
(419) 936-2847

## How to Protect Tree Roots While Replacing Sidewalks and Curbs



NORTHEASTERN AREA STATE AND PRIVATE FORESTRY  
URBAN FORESTRY CENTER FOR THE MIDWESTERN STATES  
845 CHICAGO AVENUE, SUITE 225 EVANSTON, ILLINOIS 60202



SOUTHERN REGION URBAN FORESTRY  
TECHNICAL SERVICE CENTER

Barbara Colony  
Chief Construction Engineer  
City of Toledo, Department  
of Transportation  
1 Government Center, Suite 1720  
Toledo, OH 43604

lem, but they do reduce the danger to pedestrian traffic.

### **Grinding**

Another simple, low-cost alternative for repairing a displaced sidewalk is the use of a mechanical grinder to wear down the raised edges of the slab (fig. 2). Grinding is generally limited to concrete slabs with less than 1 inch of displacement. It may be possible to grind away edges with 2-inch displacement; however, if 50 percent of the slab thickness is removed, the structural integrity of the concrete may be lost.

### **Landscape Pavers**

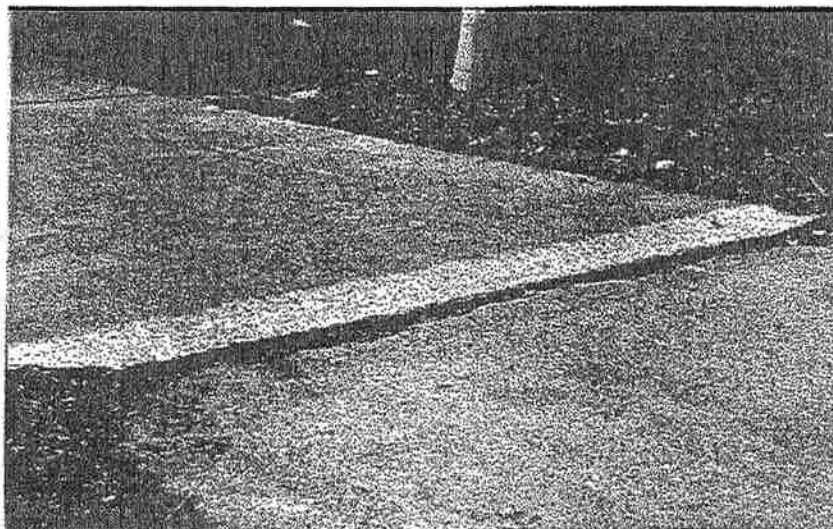
Removing the damaged sidewalk and installing landscape pavers is a very attractive option, but the high unit cost can prohibit this type of repair in most communities (fig. 3). In addition, as roots begin to expand, individual pavers could easily be displaced and would require repair.

### **Concrete Ramp**

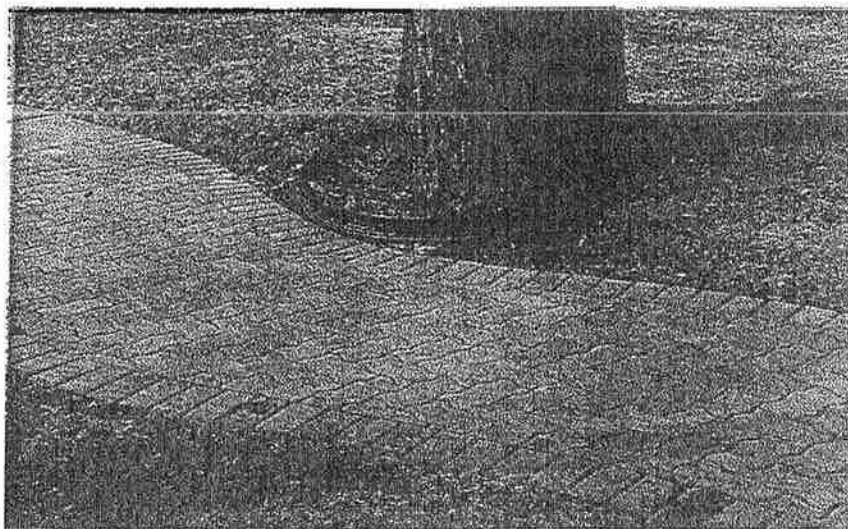
Another option is to remove the damaged sidewalk and install a concrete ramp. The concrete is then poured over the top of uncut roots to create a ramp (fig. 4). Unit cost and material durability are reasonable; however, concrete is a stiff material that can be expected to lift as individual tree roots expand.

### **Asphalt Ramp**

This option involves removing the displaced slabs and installing asphalt over the top of exposed tree roots (fig. 5). Criticisms of this method range from questions of material durability to debris deposited by foot traffic. However, because the unit cost of asphalt is nearly half that of concrete it may be worthwhile to look at this as an option. Since asphalt is both flexible and plastic, displacement from root expansion would likely occur only in the area of the root itself rather than over the entire repaired sidewalk section. Cracks or ridges in the slab could be sealed or repaired by reapplying asphalt to extend the life of the ramp. Issues related to coloration and debris



*Figure 2. Mechanical grinding*



*Figure 3. Landscape pavers*



*Figure 4. Concrete ramp*

tracking could be addressed, perhaps through the application of sealers or traffic paint.

### **CURB REPLACEMENT**

Curbs are often replaced during road resurfacing, especially if the curbs are cracked, leaning, or insufficient in height. For most road resurfacing projects, the height of the curb must be at least 3 inches above the asphalt. If curb height is less than 3 inches, then curb replacement is required. Since resurfacing roads usually requires the application of 2 inches of new asphalt to the roadway, curbs are often replaced. There are techniques that can be used to minimize the amount of root damage when repairing or replacing curbs.



Figure 5. Asphalt ramp

### Adaptations of the Excavation Bucket

When a wide (2 to 3 foot) excavation bucket is used to remove curbing there is an unusually large amount of disturbance to the tree lawn area. In reality, only a 1- to 1.5- foot wide trench is needed behind the old curb to set forms or run a curb machine, which would reduce the amount of root damage (fig. 6). Specialized teeth or appendages can also be welded to the excavation bucket (fig. 7) and used to pry out individual sections of curb (fig. 8). Minimal root disturbance occurs with this technique, and you have an option of either pouring concrete back into the recently made mold or doing a small

amount of hand digging to place a backform for the concrete. This procedure works extremely well for removing sections of sandstone curb.

### Replacement of Curbing Outside Tree Root Area

If the existing curb is sound and the height is at least 3 inches, then it is possible to establish a protective zone around the tree, which leaves the curb near the trunk undisturbed. This protective zone varies from approximately 3 feet on either side of a tree less than 12 inches in diameter at breast height, or 6 feet on either side of a tree that is more than 12 inches in diameter at breast height. New curbing on both sides of the protective zone is sloped to meet the old

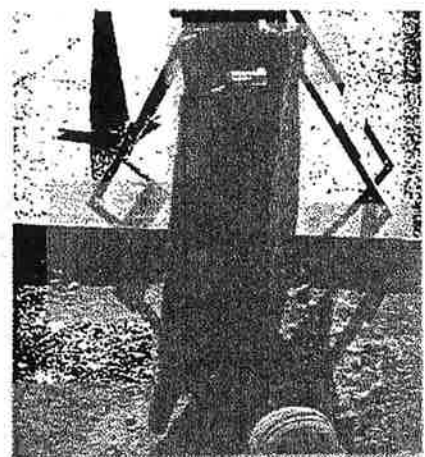


Figure 6. Small bucket



Figure 7. Bucket with appendage

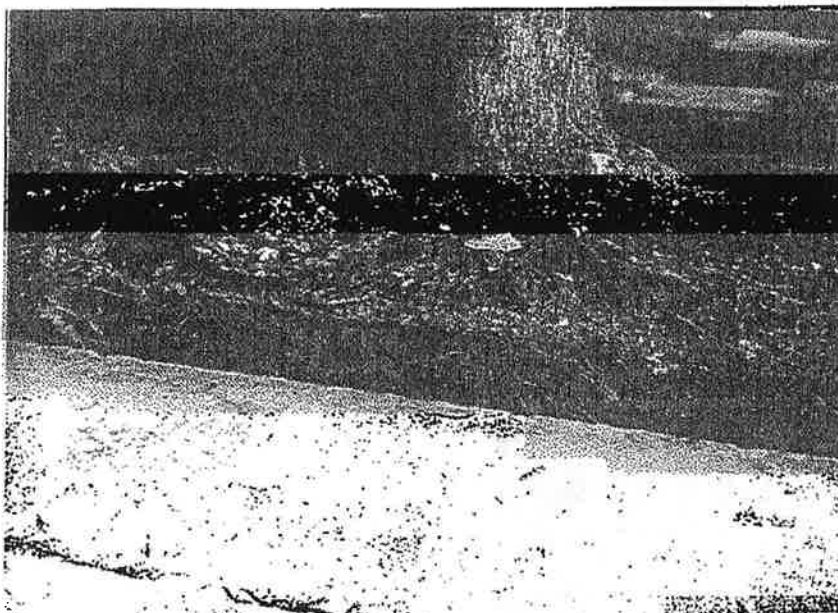


Figure 8. Removed curb

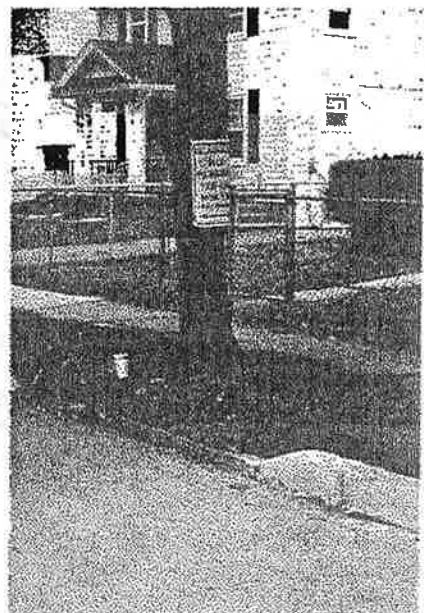


Figure 9. Sloped curb





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1720 PEACHTREE RD., NW  
ATLANTA, GA 30367

SOUTHERN RESEARCH STATION  
320 GREEN STREET  
ATHENS, GA 30602



Figure 10. Removed asphalt

curbing (fig. 9). Some critics suggest that streets with this type of curbing lack the uniformity of streets where 100 percent of the curbing has been replaced. Also, a concern may be the movement of water over these low curb areas from the tree lawn into the street, creating a possible erosion problem. However, removing all trees from a street in order to accommodate such uniform curbing may negatively impact the continuity and the value of the properties in the neighborhood.

### Road Cut

Another curb replacement technique, the road cut, can greatly reduce root

damage to a tree. This technique involves cutting a narrow section of pavement adjacent to the curb with a concrete saw and removing the curb and the pavement (fig. 10). A small amount of hand digging may be required for installing the new curb. A section of pavement measuring at least 2 by 10 feet must be removed each time this method is used in order to insure stability of the roadway.

Each of the above construction alternatives, while unique in their individual method and application, can reduce the amount of root damage during the replacement or repairing of sidewalks and curbs. All of these methods should be evaluated, both on applicability and cost (table 1) and the extent of municipal involvement in sidewalk replacement. Street trees are important to a flourishing community as well as to properly maintained streets and sidewalks. Use of the techniques presented here can help insure that residents have both "safe streets" and "healthy urban forests."

Table 1. Costs associated with construction alternatives for sidewalk and curb replacement around street trees

Type of construction	Construction option	Average unit cost*	Minimum expenditure per location
Sidewalk removal/replacement	Asphalt wedges	\$40.00/site	\$40.00/site
	Grinding	\$7.00/ft <sup>2</sup>	Variable
	Landscape pavers	\$15.00/ft <sup>2</sup>	\$600.00§
	Concrete ramp	\$4.50/ft <sup>2</sup>	\$180.00§
	Asphalt ramp	\$2.40/ft <sup>2</sup>	\$96.00§
Curb removal/replacement†	Straight curb (no trees)	\$12.00/linear ft	Variable
	Pry curb	\$12.00/linear ft	Variable
	Road cut	\$35.00/linear ft	\$350.00‡

\* Figures based on construction bids received by the City of Toledo, OH in 1995 or from private solicitation.

† No additional costs are assumed by the vendee for use of a 1-foot wide excavation bucket or to leave existing curb.

‡ A minimum replacement length of 10 feet is required to stabilize pavement.

§ Replacement of 40 ft is often required to achieve the grade restriction of 1/2 inch or rise per 1 inch of run.

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*Appendix F*

# **Street Tree Policy And Potential Street Tree Guide**



REVISED 11/30/02

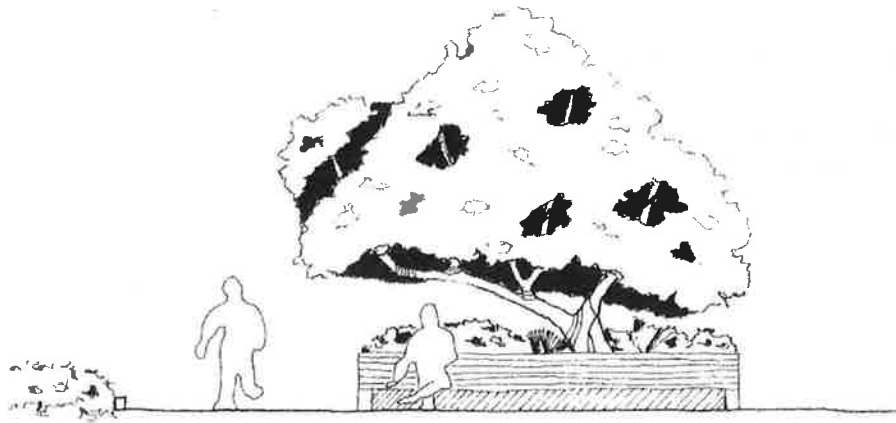
## **Benefits of Trees**

### **1. Strengthen Community Image**

Trees are an important element of the urban forest, including native or introduced trees and related vegetation that grow along streets, in parks, around homes, in natural areas, and on other public and private properties. Lebanon's streets and public right-of-ways provide the major means of transportation for City residents. These areas represent the most viewed public areas within the City and provide a strong image for residents, visitors, or those passing through. Well-planned and maintained street trees can provide an element of beauty and comfort that will be strongly reflected in the community image. Trees can filter air, provide wind protection, create habitat for birds and small mammals, increase property values, and camouflage blighted areas. These advantages can translate into psychological benefits that help citizens enjoy and take pride in their community.

### **2. Encourage Pedestrian Activity**

Street trees can provide shade, cover from the weather, a barrier from traffic, and can reduce both noise and increase pedestrian safety. Comfortable pedestrian spaces should be developed to encourage pedestrian activity, provide space for public interaction, and attract people to adjacent businesses.





**3. Provide Cleaner More Comfortable Environment**

Trees play an important role in eliminating man made pollutants from the environment. Ground water is cleaned and storm water quantities are significantly reduced by uptake into the trees and release of moisture through transpiration.

People tend to treat their surrounding environment as it appears. A clean, beautiful street is more likely to be well maintained by homeowners and passing pedestrians and drivers.

**4. Improve livability**

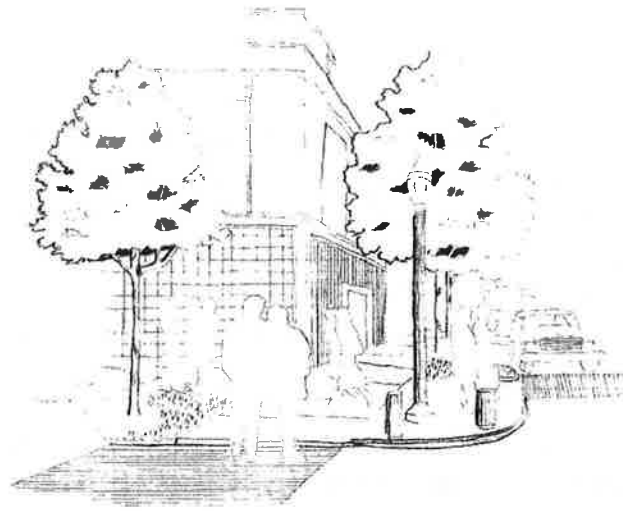
Community livability is greatly improved when street trees are incorporated into traffic calming techniques. These traffic-calming techniques effectively slow the flow of traffic.

**5. Enhance Buildings, Entryways, and Entrance Corridors**

Trees and landscaping can help to enhance the visual appeal of vehicle and pedestrian entranceways to the downtown, subdivisions, streets, and historical areas. Entranceways to Lebanon's downtown could be greatly enhanced by additional trees and landscaping. Entries, as first impressions, contribute significantly to the image of a place or business. To generate a sense of welcome and arrival an entryway must focus one's attention, mark the change between that which is outside and inside, and suggest the tempting experience to come.

To strengthen an entry it is important to:

1. Improve the approach
2. Accent the threshold
3. Connect the entry to the core

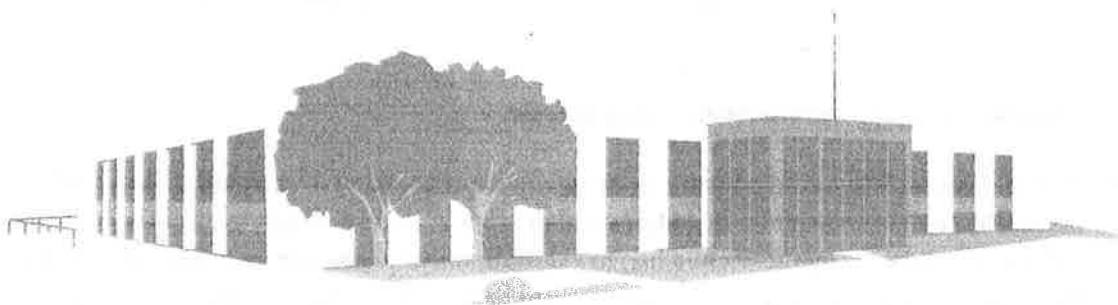


## **6. Enhance Downtown Environment**

Lebanon has a unique downtown core that has a number of interesting visual features, and contains a unique architectural and historic character. Street trees and landscaping can be used to highlight current features and to block undesirable views. Trees and landscaping also provide a number of benefits to pedestrians that can increase foot traffic and business in the downtown (See section 2 above).

## **7. Mitigate Negative Visual Impacts**

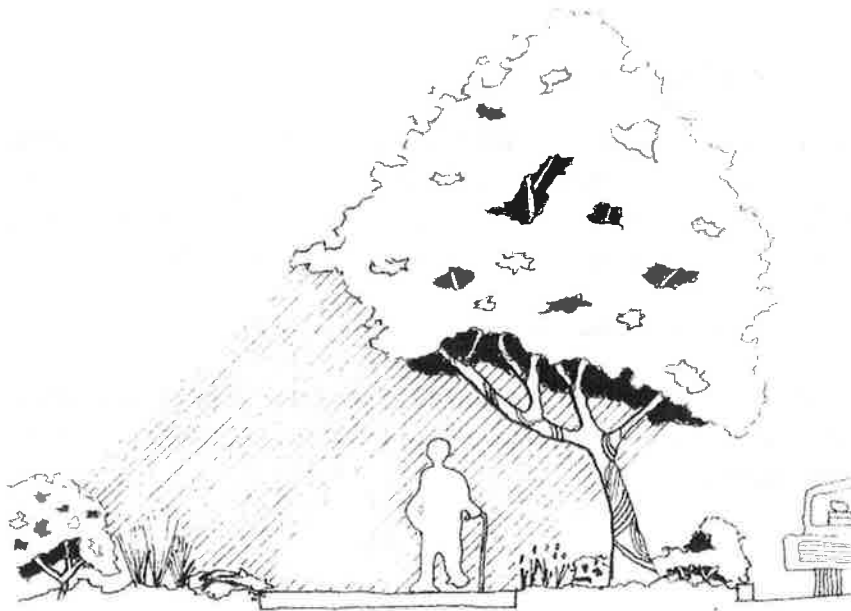
Trees and landscaping can be used to obstruct less attractive but necessary aspects of the community. Unsightly views of trash dumpsters, parking lots, and fences can be mitigated through tree plantings and strategic landscaping.



## 8. Increase Visual Interest

This is important especially in areas where there is heavy pedestrian traffic, or there is a desire to create a pedestrian friendly environment. Pedestrian interest is maintained by variety and detail in the surrounding environment. The human eye visually encompasses three objects every second. A pedestrian traveling 3 mph can, therefore, distinguish and comprehend 21 different objects in a distance of 30 feet. A driver traveling at 25 mph can only distinguish two or three objects over the distance of 30 feet. Over the last forty years much of our built environment has become oriented toward the automobile, and street designs have been simplified in part as a response to the drivers capacity to observe.

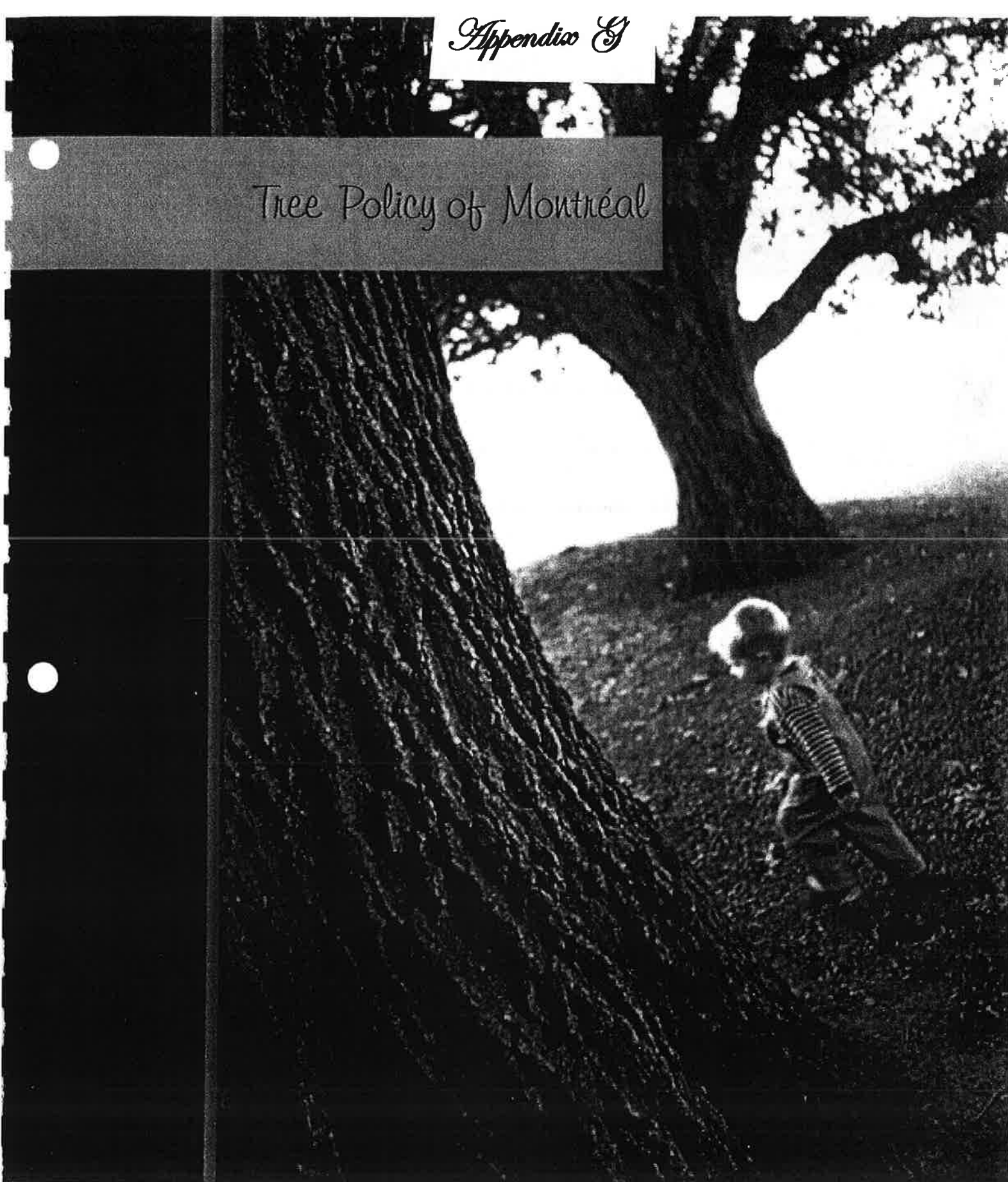
Increasing visual variety and complexity in pedestrian oriented environments is important, and the inclusion of street trees and landscaping can contribute greatly to achieving this goal.



## 9. Develop Inviting Public and Pedestrian Spaces

People in urban settings are drawn to places with interesting and diverse visual displays, places that provide protection from the sun and rain and places that provide a sense of separation from noise and traffic. A simple planter strip can transform a barren sidewalk into a pleasant, safe and comfortable place for pedestrian traffic. Other planting and design techniques can be utilized to transform public spaces into a more inviting environment.

*Tree Policy of Montréal*



### A few salient facts

- One mature tree provides four individuals with their daily ration of oxygen (Tree Canada Foundation - TCF).
- One average-sized tree absorbs some 2.5 kg of carbon per year (TCF).
- During an average growing season, one sugar maple about 30 cm in diameter removes an impressive quantity of heavy metals from the soil: 60 mg of cadmium, 140 mg of chrome, 820 mg of nickel and 5200 mg of lead (Georgia University).
- One healthy tree can trap 7000 suspended particles per litre of air (TCF).
- One mature tree can draw over 450 litres of water from the soil which is then released into the atmosphere in the form of water vapour (FCA).
- The presence of 2 single trees in close proximity to a house or building can reduce air conditioning demand by up to 30% (Michigan State University, Urban Forestry).
- Trees, when located in residential areas, can increase property values by over 18% (US Forest Service).
- The City of Montréal, excluding the municipalities reconstituted in 2006, includes some 675 000 public trees (along streets and in City woodlots and parks – excluding the nature parks). These trees are valued at an aggregate total of some \$700 million.

### Trees come replete with abundant benefits

Urban trees provide abundant benefits for the human beings who share their living space with them. These benefits include as follows:

#### Trees structure the landscape

- Enhance buildings
- Enrich the architecture of monuments and sculptures
- Lend character to City arteries
- Facilitate citizen orientation

#### Trees improve the quality of the environment

- Clean the air by producing oxygen and absorbing carbon dioxide generated by vehicle traffic, heating and factory operations
- Release water vapour, thereby cooling the ambient air
- Control runoff and stabilize the soil
- Provide habitat for a diversity of wildlife
- Provide shade and absorb sound
- Act as sound barriers along busy thoroughfares
- Decrease reflected light by intercepting the rays of the sun and glare caused by streetlights and vehicle headlamps
- Impact air circulation (breeze vs wind)
- Trap dust particles

#### Trees improve community life

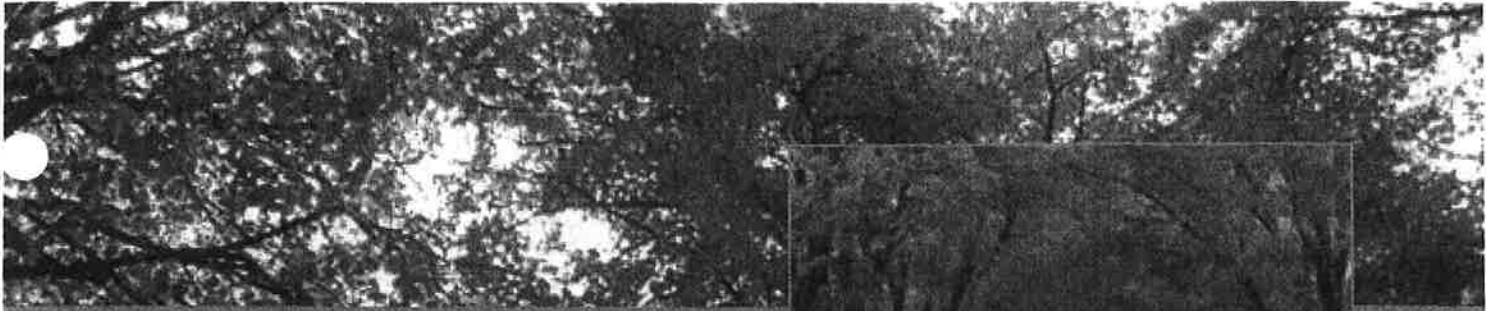
- Enhance the quality and identity of City districts
- Constitute intermediaries between people and tall buildings
- Form natural barriers between tracts of land used for different purposes
- Provide privacy
- Increase quality of life and sensation of tranquillity
- Contribute positively to social interaction and stress reduction – two factors which lead indirectly to a decline in criminality in underprivileged areas
- Attract new residents
- Provide a source of inspiration and creation

#### Trees impart economic value

- Lend value to properties
- Attract businesses seeking a quality working environment for employees
- Provide for savings from the dual standpoint of heating and air conditioning

#### Trees play a role in City heritage

- Owing to age or location, stand as a testimony to the City's cultural and historic heritage and identity
- Remind the citizenry of chapters in the City's history



# 1. Trees in the City

## Treasured companions



### What is meant by urban trees and arboreal heritage?

Urban trees are trees found in natural wooded areas, in planned clumps or stand-alone plantings.

Montréal's arboreal heritage includes as follows:

- Trees under municipal jurisdiction situated alongside City streets and in City parks and public squares.
- Trees located on private land owned by City residents, businesses, institutions and industries.



### Our trees speak volumes about us...

- The Canadian flag is adorned with a maple leaf, symbol of strength and unity.
- Montréal's coat of arms is bordered by a scroll of paper maple leaves which symbolizes the peaceful coexistence of the city's cultural communities.

*Trees play an essential role in the City. They provide a natural, poetic backdrop to a chiefly concrete and stone environment. Moreover, they furnish us with the assurance that harmonious development is possible in an urban setting.*

### Trees are symbols of life...

Urban trees symbolize life in all its strength and vulnerability. The natural lifecycles of trees mark the passage of the seasons and represent the ever-changing nature of life as we know it.

Trees of life, family trees, national symbols, childhood remembrances... trees also form a part of our individual and collective imagination. They fit into a human landscape steeped in history and memories. Accordingly, they form an integral part of our architectural, landscape and cultural heritage.

Trees are also powerfully poetic symbols. We take pleasure in comparing ourselves with trees. We admire their ability to bend and sway in the wind, to sustain the wrath of storms and to withstand the ravages of time. And whenever a tree falls, we are provided with first-hand evidence that trees, like ourselves, however strong and tall, must sometimes yield to forces greater than they.

### ...and living beings!

Trees are living beings, not merely pieces of urban furniture. This explains why it is so heart-breaking to see a tree felled.

Trees are born, live and die. Like other living beings, they can fall prey to disease, even mistreatment. They have life cycles and vital needs. They must adapt to their surroundings. In the city, they must cope head-on with human influence and activity.

To remain in good health, trees must be incorporated into a hospitable environment. But above all, they must receive the attention, care and respect they deserve. Such is the price Montréalers must be willing to pay to preserve and develop their arboreal heritage.