

PUBLIC PROPERTY TREE PRESERVATION

by John Houde

Abstract. Preservation of trees on public property is becoming an important issue with demolition of existing houses and the construction of new homes on existing house lots. In the Chicago area, Glencoe, Highland Park, Park Ridge, Winnetka and others have experienced this redevelopment process. Glencoe as a case study offers us an insight into steps that can be taken to preserve established parkway trees from construction damage. This article describes how to structure the bureaucracy of municipal government to successfully preserve street trees in older established towns or neighborhoods.

The mature parkway tree makes up an important visual element of the desirable urban landscape. Many of these trees are 50 to 100 years old. Current residents place a priority on maintaining the appearance of their community in terms of the mature urban forest and neighboring homes.

However, as existing homes and lots are redeveloped, trees in public parkways may be damaged or removed. This redevelopment is principally of two types; the first is the demolition of an existing (often smaller home) for the construction of a new home. This type of project requires underground sewer and water line replacements between the new house and the main lines, and can involve relocation of the driveway. The second is construction of a major addition to an existing house. This work rarely involves underground sewer or water line replacements or driveway changes on public property. The municipal arborist must be proactive to save these established trees from being removed or damaged. In the Chicago metropolitan region there has been increasing redevelopment of single family

properties in the communities of Glencoe, Winnetka, Hinsdale, Park Ridge, Highland Park among others. These increasingly desirable suburban areas are often of interest to prospective residents and developers because of high quality schools, optimum geographical locations, quality municipal services, mature urban forests and landscaping, proximity to urban centers, and other features.

The municipal government has many tools at its disposal to minimize damage to its urban parkway trees. Because the parkway is most often public property, the urban arborist or forester has an important function in tree preservation. The arborist's work must be in partnership with other players in the urban development process including the community development, building and engineering departments, as well as property owners and their contractors. In Glencoe, these tools include: 1) restricting placement of new



Figure 1. Heavy equipment parked on parkway compacts parkway tree root zone area and can injure the tree trunk.

Table 1. Public tree preservation process in Glencoe, Illinois.

PROJECT PHASE	TREE PRESERVATION MEASURE
Initial contact with applicant or representative	Municipality provides information on tree preservation including requirements for snow fencing, driveways, trees located on plans, etc.
Plans Submitted	In-house review of grading and utility plans by engineering staff. Plan then routed to forestry staff for their review to evaluate existing tree locations and protection measures and required new tree plantings on parkways. Plan sent back to applicant's engineer for revisions.
Revised Plan Submitted	Revised plan checked by engineering and forestry staff for final sign-off. Plan forwarded to building division for inclusion with building permit when issued. Owner advised to install snow fencing per plan before permit can be issued.
Building Permit Issued	Building or forestry staff has verified installation of snow fence before releasing building permit to applicant.
Construction Commences	Snow fence condition monitored for both placement and prohibited storage within.
Final Inspection Request	Forestry staff signs off with building department after final inspection verifying all work completed according to plan prior to issuance of certificate of occupancy.

all or fail to provide adequate space for tree preservation.

The municipal departments that are likely to receive this first contact are the zoning, community development, engineering, public works, water, sewer, or street departments. It is important that **all** informational handouts that staff use to disseminate information in each of these departments include items on tree preservation requirements and guidelines for public property. Even if a community does not have ordinance guidelines for tree preservation, it is the responsibility of the municipal official to clarify the town's interest in protecting its public property for the benefit of all its residents. This includes trees as well as those other elements of the public works structure (sidewalks, streets, curbing, street lights, hydrants, etc.). Table 1 summarizes the public tree preservation process in Glencoe.

driveways, 2) requiring tree protection fencing, and 3) reviewing plans for locating underground house water and sewer service lines. In addition, Glencoe allows for field enforcement by building and forestry department staff of fence locations. Where the root zones of trees on public property were formerly not protected during construction, valuable 50-150 year old oak and other types of trees often died within the first 6 months to 3 years of construction. (Figure 1)

The process of public tree preservation begins with an initial contact with the resident or their representative (landscape architect, builder, architect, underground sewer/water contractor, driveway paving contractor). In Glencoe's experience, most plans prepared for redevelopment fail to consider parkway trees at

Since there are a variety of municipal departments that may be the first contact point for the property owner or applicant, it is critical that staff in each department be aware of the requirements for tree preservation during redevelopment. In Glencoe this issue was addressed by preparing an internal document on tree preservation and distributing it to all departments. Additionally, information handouts for each department include parkway tree preservation on their checklists. Those staff members that provide preliminary information on the telephone need to be briefed on general requirements for tree preservation so that accurate information can be disseminated to the public.

In Glencoe, a Plan Review Checklist provided by the community development division to all

architects' inquiries and used in-house for plan reviews includes the following item:

"Driveways on public parkways must be 10 to 15 feet from the base of established trees depending on tree diameter size. Review with staff in preliminary stage."

Also on the Plan Review Checklist is an item which anticipates the potential future site contractor traveling over a different area of the parkway (other than the driveway for temporary access for trucks, supplies, etc.) to permit staff to keep parkway tree roots from being damaged. This travel area is rarely shown on plan submittal.

"Show contractor's equipment access to the construction area. If over public property, this requires a separate permit."

In Glencoe all new house construction and major redevelopment requires an engineer-signed site grade and underground utility plan to be reviewed and approved **prior** to building permit issuance. The engineering division's handout also addresses municipal concerns on parkway trees with the following items from its written checklist.

"Exact tree locations and tree diameters are to be identified that are on public property. A three inch diameter parkway tree (type to be selected by Village Arborist) is to be planted every 30 feet where no trees or an inadequate amount of trees exist on the public parkway."

"Plan will show protected tree areas to be surrounded with wood snow fencing to protect the tree root system from vehicle compaction and damage from underground

utility work. This snow fencing to be installed prior to building permit issuance."

Building permits for new houses typically are not issued until the general contractor has first installed wood snow fencing as shown on the Village approved grade plan. Snow fencing is required to be installed according to recommended distances from the National Arborist Association Standards. (Figure 2)

DIAMETER OF TREE

4 in.	(<10cm)
4 to 10 in.	(10 to 25 cm)
10 to 15 in.	(25 to 37.5cm)
15 to 20 in.	(37.5-50 cm)
>20 in.	(>50 cm)

DISTANCE OF FACE OF TREE TO PAVING MATERIALS

5 ft. (1.5 m)
8 ft. (2.4 m)
10 ft. (3 m)
12 ft. (3.6 m)
15 ft. (4.5 m)

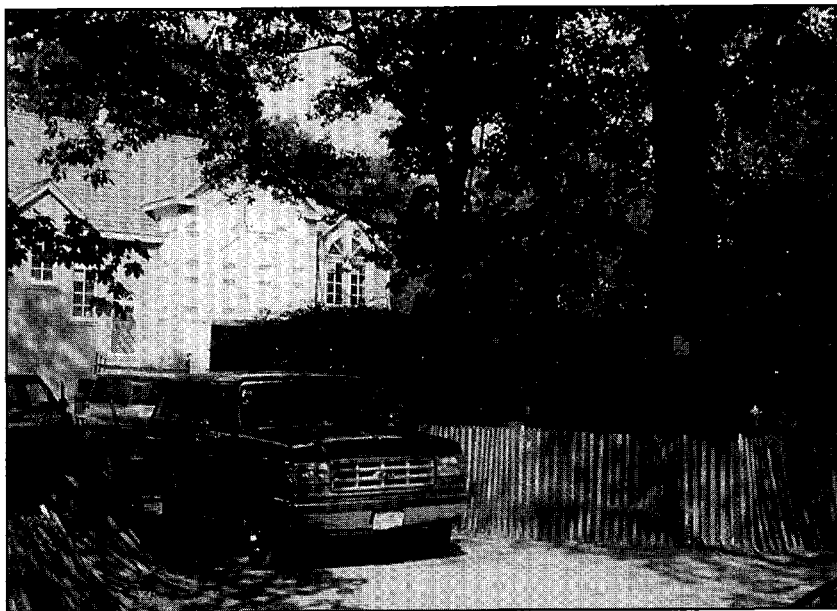


Figure 2. Wood snow fencing to protect parkway tree root zone.

Ongoing Monitoring

It is important for municipal staff to monitor the condition of protective fencing and to verify that no storage has been placed in the protected tree root zone area. This can be done during regular field inspection visits by the municipal engineer, underground sewer/water line inspectors, foundation inspector, etc. These field people can serve as additional eyes for the municipal arborist who may not be able to be at every construction site on a daily basis. Similarly the municipal arborist can assist other departments in advising them of any unusual observations he or she sees in the field. It is important for field staff to understand the importance for an approved grade plan or other plan to be followed in the installation of underground utilities (typically sewer and water require the widest and deepest trenches especially in the northern states).

Conclusion

Through the coordinated and cooperative effort of the entire municipal staff team, optimum conditions for public property tree preservation can be secured and maintained. As with all tree preservation programs, information must reach the person working in the field. With redevelopment on a lot completed, existing mature parkway trees can be expected to remain undisturbed for another 40 years or more. These mature trees will continue to provide aesthetic benefits that could not be visible in newly planted trees for 25 years or more.

Village Arborist/Deputy Director
of Public Works
Village of Glencoe
675 Village Court
Glencoe, IL 60022

Résumé. La préservation des arbres du domaine public est devenue une question importante au fur et à mesure que les vieilles municipalités de banlieue commencent à se reconstruire dans les vieux quartiers. La ville de Glencoe en Illinois a été sélectionnée comme cas-type afin d'offrir un aperçu sur les étapes à suivre pour conserver un lot d'arbres situés dans un stationnement contre les dommages liées aux travaux de reconstruction.

Zusammenfassung. Öffentlicher Baumschutz wird ein wichtiges Thema in angenehmen älteren und suburbanen Gemeinden, wo bereits existierende Wohneinheiten umgestaltet werden. Der Ort Glencoe, Illinois wird in einer Feldstudie untersucht, um Einsichten in die Schritte zu gewinnen, die zu unternehmen sind, den bestehenden Baumbestand vor Eingriffen durch die Bautätigkeit zu schützen.

ERRATUM

An omission of author occurred in the November issue of the *Journal of Arboriculture* for the following article:

Jason Grabosky and Nina Bassuk: Testing of Structural Urban Tree Soil Materials for Use Under Pavement to Increase Street Tree Rooting Volumes. *Journal of Arboriculture*. Vol. 22(6): 255-263.

Should read:

Jason Grabosky, Nina Bassuk, and Harold von Es: Testing of Structural Urban Tree Soil Materials for Use Under Pavement to Increase Street Tree Rooting Volumes. *Journal of Arboriculture*. Vol. 22(6): 255-263.