

Tree lights at night. Photo: Steve Cothrel.

Rob Crouch Natural Services Program Coordinator, Portland OR, Parks and Recreation

Ornamental lights have been in Portland street trees for more than ten years. The number of lighted trees was limited until four years ago when the major downtown business association decided to put lights in more than 700 trees. While pruning trees along the Transit Mall last year, we noticed that many lights had begun to girdle branches. Some London plane tree branches had completely engulfed the light strings.

During the past year, we crafted a policy for tree lights, including a fee structure for lights that are left in trees year-round to recover some of the expense of sending certified arborists out to inspect the trees in question. The proposed fee structure would request a \$35 permit per year per business, along with \$1 per tree. The business owner is responsible for proper hanging and adjustment of the year-round lights, but inspection is necessary to ensure proper practices are followed.

A seasonal lighting permit allows lights to be installed in permitted trees for up to 120 days. Increasingly, however, many businesses are interested in year-round lighting. At present, we have approximately 1,000 downtown trees affected by tree lighting. We ask that lights are draped over rather than wrapped around branches, and that lights are installed only on branches 1" diameter or greater to reduce breakage. We are trying out having the lights attached with stretchable nursery tape. We ask the business owner to put the lights on a three-year rotation—that is, to remove a third of the lights each year, so that the expense of replacement is spread out.

Dave Gamstetter Supervisor of Urban Forestry, Cincinnati Park Board

It is difficult to create a policy that allows businesses to attach seasonal lighting to trees while meeting the regulations that govern the use of the right-of-way, the use of power lines and utility poles, and the biological needs of the tree. In Cincinnati, the utility and City Department of Transportation are the permitting agencies for the light installation, while the Park Board is the permitting agency for attaching the lights to the tree.

Business owners often complain about the bureaucracy of having to get three permits to install lights, but after the first installation they understand the process and subsequent years go by much more smoothly. The difficulty for our arborists is explaining why we require screw eyes to be put into the tree instead of allowing the wires to be wrapped around the trunk and limbs. This requires a quick lesson in biology and an explanation that while it may be more time consuming to install the screw eyes and lights the first year, it is much faster to remove them and reinstall them the following years.

We don't require a fee for our tree permit unless the cost of the work is over \$500. We do not accept any responsibility for lights that are damaged as a result of us pruning or removing trees that have lights attached beyond the holiday season. If lights are improperly attached and damage trees, we have the right to bill the business owner for the value of the tree.

Tami Sadonoja Urban Forestry Technician City of Hamilton, Ontario, Canada

Within the City of Hamilton all decorative tree lighting for municipally owned trees requires approvals from the Planning and Economic Development Department, the Forestry Section and the City's Electrical Instrumentation Technologist to ensure that the trees are protected and installation and maintenance conforms

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## Sample Tree Lights Policy: Portland, OR

# From: "Guidelines for Affixing Ornamental Lighting in Trees"

For the complete text, please contact Natural Services Program Coordinator Rob Crouch: rcrouch@ci.portland.or.us

Under no circumstances shall pruning of branches be permitted to accommodate the installation and/or the removal of electrical wires or lights. If any trees, tree trunks, branches, or limbs on trees within the right-of-way are cut, pruned, or damaged as the result of the lighting activity, the permit applicant shall be assessed for damages. The City shall be compensated the lost value of the tree based on the International Society of Arboriculture publication Guide to Plant Appraisal or actual cost of tree replacement, whichever is less.

The City shall provide notice to the permit holder prior to scheduling any required tree maintenance activities to permitted trees. If electrical lights, wires, connectors, or other devices are found on permitted trees after thirty-days notice has been given, they may be removed and discarded by the City.

## Standards for Non-seasonal Lighting

Non-seasonal lighting includes all lighting in place longer than 120 days but not to exceed three years. Prior to the issuance of a non-seasonal lighting permit, a certified arborist shall conduct an initial survey of the trees to identify any tree defects or failure risks and ensure the tree's suitability. Tree defects that require pruning shall be approved by the City Nature's Urban Forestry Program before any work is performed. The permit holder shall provide an arborist or elect to have an arborist from the City Nature's Urban Forestry Program. The Urban Forestry staff will conduct the inspection for a fee.

- Strands shall be installed at a height that does not impair or otherwise impede pedestrian traffic. When overhead power lines are involved in the tree, the strands shall not overhang sidewalks below eight feet, per the National Electric Safety Code.
- 2. The Urban Forestry Program shall approve all lighting devices before installation. Examples of acceptable lights include C9, C7, mini lights, or LED cord lights.
- 3. Lights and related components such as attachments and electric cords shall be limited to those that blend in with the color of the tree bark and branches. The use of orange or red cords or attachments is not allowed.
- 4. Installation of seasonal lights shall be done in a manner that does not harm the trees. The preferred method of installation is "draping" or "tracing." These methods have been found to be the least harmful to trees.
- i. The draping method may be used throughout the canopy, and light strings shall be adequately secured and hung only on branches one inch in diameter or larger, to minimize breakage.

- ii. When using the tracing method for attaching lights, the strands shall be attached to the branch using stretchable nursery or grow tape. Lights may also be hung with tree ties so long as there is at least one-half-inch gap to allow adequate room for seasonal growth. All material used for attaching lights shall first be approved by the Urban Forestry Program of the City Nature Department. Examples of approved light attachments include "Prolock1/2" poly chain lock, Tyton nylon ties (max. 50 lb tensile strength), plant tie ribbon, or nursery grafting tape.
- 5. Wrapping the light strings around the stem and branches is acceptable only under the following conditions:
- i. The strands shall be loosely wrapped to ensure there is no girdling or potential damage to the tree at any time. Adequate space shall be given between the branch and the strand to allow for branch sway during normal anticipated wind. Any lights found not having adequate space or otherwise causing damage to the tree shall be loosened or removed and replaced.
- ii. An inspection of each tree for adequate spacing between the strands and the branches shall be performed annually before the growing season begins (typically before March 1). A checklist report for each inspection shall be sent to the City Nature's Urban Forestry Program within 30 days after the inspection, or elect to have an arborist from the City Nature's Urban Forestry Program conduct the inspection for a fee. If the Urban Forestry Program does not receive a report, it shall contact the permit holder and then use its discretion to decide if an inspection is needed and may perform the inspection and bill the permit holder for the cost of the inspection.
- 6. If at any time the lighting devices or their components become a safety hazard, they shall be removed.
- 7. All work on the lighting shall be performed while the trees are dormant. In general, work in the trees shall NOT be performed from March 1 through May 30 to prevent bark damage and to avoid injury to the developing leaf buds.
- 8. All old and non-functioning light strands shall be removed from the trees before new light strands are installed. If, within the permitted period, lighting devices or their components become a safety hazard, they shall be removed. After a major storm event where tree damage may have occurred, the permit holder shall inspect the trees for damage and alert the City of any problems found.
- 9. Lights may be kept in City-owned trees on an ongoing basis, so long as the proper permits are secured and regulations are followed to ensure the health of the tree, public safety, and compliance with applicable building codes. Urban Forestry staff will perform an annual visual inspection of all trees covered under the permit for the purpose of ensuring public safety and tree health.
- 10. Damage bond. A bond from the permit holder per program shall be held to cover damages that may occur during the permit duration.

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## Sample Tree Lights Policy: Cincinnati, Ohio

# City of Cincinnati Tree Light Installation Policy

### A. City Requirements:

- 1. Lights or displays must be eight feet or higher above the sidewalk
- 2. No cords, wires, displays, etc on or near the ground
- 3. No lights or displays over the street
- 4. Must get approval from Traffic division if attaching to traffic signal poles
- 5. Lights must be UL-approved
- 6. Lights must be temporary and erected and removed between Nov 15 and Jan 15
- 7. Traffic Engineer reserves the right to remove displays if they distract traffic
- 8. Displays must be covered by liability insurance coverage of \$1 million dollars

## **B. Park Board Requirements:**

- 1. Must obtain Public Tree Work Permit
- 2. Must attach lights to tree using one-inch-long screw eyes screwed into scaffold branches
- 3. Must attach wires with plastic ties to screw eyes; wires must not be wrapped around branches or trunk
- 4. Applicant assumes all maintenance for lights, even if they are damaged by the Cincinnati Park Board while in the act of performing emergency or routine pruning, tree removal, or tree stump removal

#### C. Energy Provider Requirements:

- Cinergy [local power provider] will install temporary "power disconnects" on utility poles for a fee. Each user has to get a temporary receptacle wired into the disconnect.
- Service off the poles across sidewalks must be served by metered service through conduit. This requires installation permits and the permission of the property owners, including the City if the conduit passes through right-of-way.



Cincinnati requires screw eyes to be placed throughout the tree, and lights are attached to screw eyes. Photo: Steve Sandfort

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Improperly attached lights can rapidly girdle and kill trees plus render pruning impossible.

Photo: Steve Sandfort

to all City and hydro utility standards. Approvals are generally granted to all tree-lighting projects within the downtown core and within the Business Improvement Districts of the City.

Parks Maintenance staff is responsible for maintaining the tree lighting in the downtown core. Lighting is generally draped over tree branches and secured with plastic tie wraps, which are annually checked and replaced as needed to avoid branch girdling. Forestry Operations staff coordinates necessary tree maintenance during this time. The lights are on during the Christmas season only, from 6:00 p.m. to 2:00 a.m. Staff is presently looking at changing over to LED lighting, which is more energy and cost efficient.

Decorative tree lighting in other areas of the City is coordinated through the Business Improvement Associations (BIAs). Once approvals have been provided, it is the responsibility of the BIAs to purchase the lights and arrange for a contractor to install them at their cost. Lighting must be removed within ten business days upon notification from the Forestry Section during tree maintenance operations. Individual lights and/or strings must be replaced as necessary to keep the lighting aesthetically pleasing and in good working order.



Cord scars on Zelkova bark. Photo: Steve Cothrel



Rope lights on Ginkgo trunk. Photo: Steve Cothrel

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