TREE PROTECTION STANDARDS

Background: Trees are a valuable asset in the city landscape. Their shade makes summer living more pleasant and can significantly reduce air conditioning costs. Their leaves act as air cleaners, filtering dust and removing airborne pollutants. Trees shelter wildlife, slow rainfall runoff, muffles noise and provides privacy. The City of Fort Wayne Parks & Recreation Department has the responsibility for and authority over, trees planted in the right of way and the trees in the parks.

Purpose: The City of Fort Wayne recognizes the substantial economic, environmental and aesthetic importance of trees and plantings within the community. Trees are an invaluable part of the fabric that makes Fort Wayne unique and attractive. Trees are a fragile public resource and may be damaged or destroyed through malicious, careless, or even well-intentioned actions. It will be the City of Fort Wayne's policy to utilize applicable methods, techniques and procedures to preserve trees and canopy cover when feasible. Other city departments will be required to include tree protection notes and details, provided by Parks Department landscape architect, on construction documents for all projects on Parks Department owned property.

How Trees are Damaged During Construction: Construction equipment can injure the above ground portion of a tree by breaking branches, tearing the bark, and wounding the trunk. These injuries are permanent and, if extensive, can be fatal.

Digging and trenching will likely sever a portion of roots of many trees in the area. It is easy to appreciate the potential for damage if you understand where roots grow. The roots of a tree are found mostly in the upper 12-18 inches of the soil. Severing one major root can cause the loss of 5 to 20 percent of the root system. Another problem that may result from root loss caused by digging and trenching is that the potential for the trees to fall over is increased. The roots play a critical role in anchoring a tree. If the major support roots are cut on one side of a tree, the tree may fall or blow over.

Heavy equipment used in construction compacts the soil and can dramatically reduce the amount of pore space. This compaction not only inhibits root growths and penetration but also decreases oxygen in the soil that is essential to the growth and function of the roots. Piling soil over the root system or increasing the grade smothers the roots. It takes only a few inches of added soil to kill a sensitive mature tree.

TREE PROTECTION PLAN

1. Tree protection should be done before any land clearing, construction, or grading practices are done.

2. A construction fence must be installed around trees to be protected to keep vehicles and equipment away from trees. Permitted fence material would include snow fence, chain link or wooden fence. Extend fence or barrier as far out as the branch spread of the trees (drip line). This area will be termed **TREE PROTECTION ZONE.**

3. In the event that trees are close to proposed buildings, erect the fence no closer to than 6 feet to the building (see modified tree protection detail). When there are severe space constraints due to tract size, or other special requirements, contact the Parks Department landscape architect to discuss alternatives.

4. Place **TREE PROTECTION** signs on fence/barriers.

5. DO NOT pile or leave fill in or near the **TREE PROTECTION ZONE.**

6. No equipment fueling, chemical mixing, or disposal of construction debris such as paints, plasters, cement, or chemical solutions should be done within the **TREE PROTECTION ZONE.**

7. Any required trenching which has options as to the trench path should be routed in such a manner as to minimize root damage, such as, trenching around **TREE PROTECTION ZONES** or combining utilities.

8. No excavating or trenching is permitted within the **TREE PROTECTION ZONE.** Only directional tunneling or boring is permitted within the **TREE PROTECTION ZONE.**
9. An inspection of tree protection measures by the Parks Department Landscape Architect or City Arborist must be performed before construction may begin.

10. All exposed roots must be pruned with a sharp saw or pruning tool to provide a clean cut.

11. All exposed roots must be backfill as soon as possible to existing grade.

12. No parking of vehicles or equipment will be permitted in the drip line of **any** trees unless on pavement.

13. If construction activity necessitates tree removal, the contractor or the utility company will be required to remove such trees at their own expense, but only with the approval, and under the supervision of the City Arborist or Park Forester. Notification of adjacent property owners concerning the removal of any trees will be done by the project engineer.

14. Every effort to avoid damage to limbs, branches, tree trunks and roots should be taken. Any work necessary to correct damage or make the tree safe will be done in a manner that conforms to standards as set by the International Society of Arboriculture. Such work will be paid for by the contractor.

15. After construction, fertilize trees using Mauget Micro-Injection tree capsules according to manufacturer's specifications. When the fertilizer capsules have been installed, the Park Department's Arborist or Park Forester should be notified for his inspection and approval. After the capsules are empty, they shall be removed and disposed of properly.

16. The preceding notes apply specifically to trees within City Parks. Street trees, while owned and maintained by the Parks Department, by the nature of their placement adjacent to sidewalks, driveways, roads, etc., require some flexibility in their protection. Coordinate projects impacting street trees directly with the City Arborist, Parks Forester, and Landscape Architect.

17. **Street Tree Guidelines:** Where curbs or walks are being replaced within the **TREE PROTECTION ZONE:**
    *Remove masonry work carefully and replace with as little disturbance as possible to existing roots.
    *Where necessary, route construction around existing major tree roots to avoid root damage.
    *Roots within six inches of masonry to be replaced may be removed with a saw or pruning tool, however major scaffold roots may be cut only with approval of the City Arborist.
    *Use the narrowest possible trenching tool or hand form to stay as far away from the trunk as possible.
    *Any branches broken in the course of construction must be cleanly cut and wounds trimmed. Where necessary to operate near tree canopies, tie branches back to prevent damage.

Prohibited practices:

*Nailing, bolting, using trees as anchorage for ropes, power lines, cables, etc.

*Cutting/breaking, skinning and abrasion of roots, branches and bark.

*Damage or removal of the tree protection fencing.

*Unauthorized filling, excavating, trenching or auguring within "**TREE PROTECTION ZONE**".

*Compaction, driving, parking over the "**TREE PROTECTION ZONE**".

*Storage of any materials or vehicles within the "**TREE PROTECTION ZONE**".

*Dumping of construction waste or material (including liquids) within the "**TREE PROTECTION ZONE".**

*Unauthorized removal or relocation of trees.

*Trees protected by the city may not be removed, injured or destroyed in any way without written authorization from the city.

REPLACEMENTS OF TREES

When a city tree(s) is removed for construction projects, they will be replaced with new trees. The number of tree replacements will be determined by a formula based on five to one replacement. For example, if two trees are removed to facilitate construction, they will be replaced with ten two inch diameter trees. An exception to this formula is street trees. Street trees shall be replaced one to one. One three inch caliper tree replaces each street tree removed. The location and species of trees to be replaced will be determined by the Fort Wayne Parks Department Landscape Architect, City Arborist, or Landscape Supervisor. The utility or contractor shall purchase and plant the trees in accordance with department standards and specifications, and under the supervision of this department. All plants shall be guaranteed to remain alive and healthy for one full year.

DAMAGE ASSESSMENT

A Parks Department representative will make periodic site visits. Damage to city trees will be assessed using the latest appraisal formula by the International Society of Arboriculture and the amount of damage will be charged.

Damage to city trees will also include any of the prohibited practices listed above and will be determined by the city's arborist.

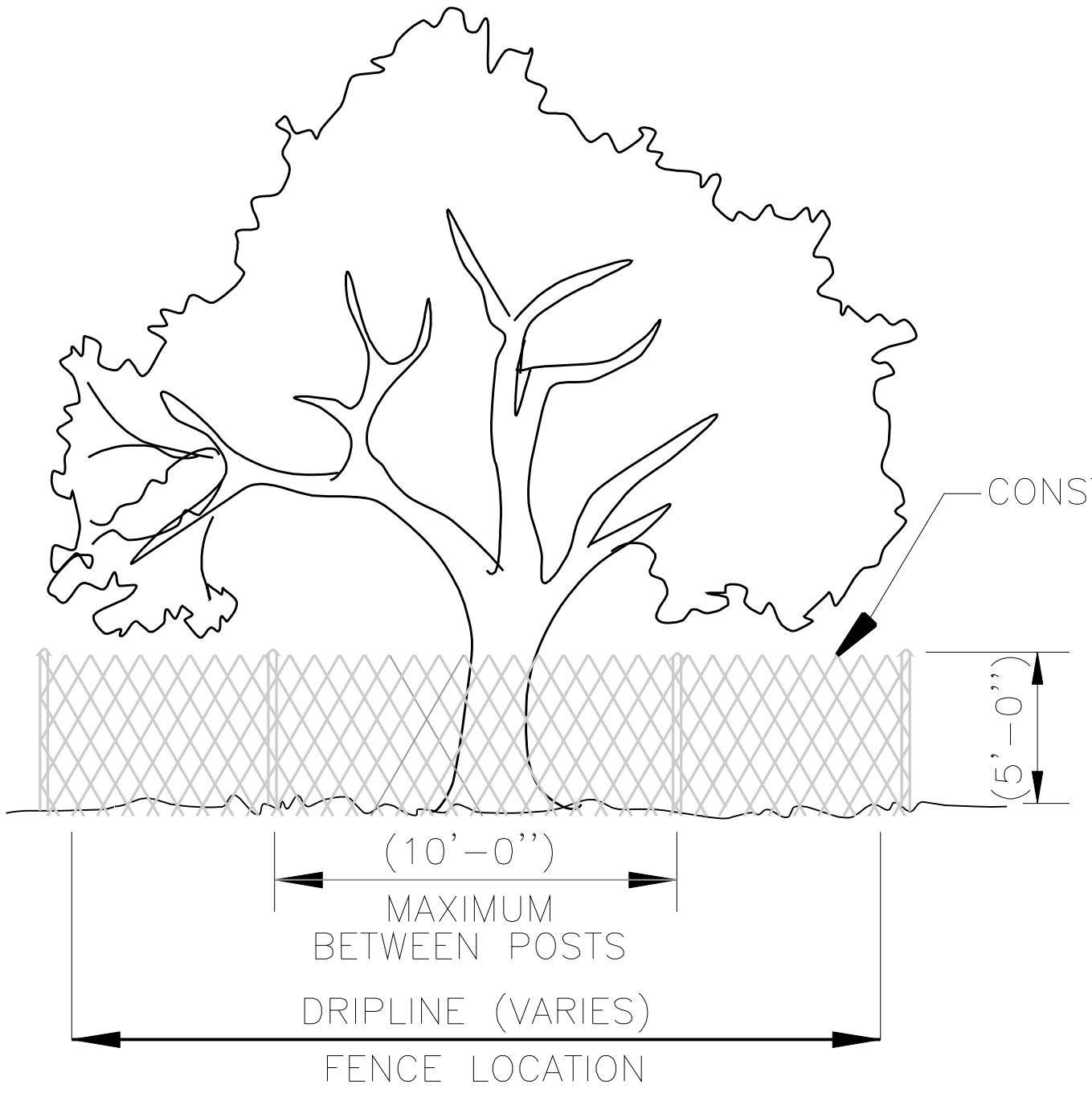
Committee:

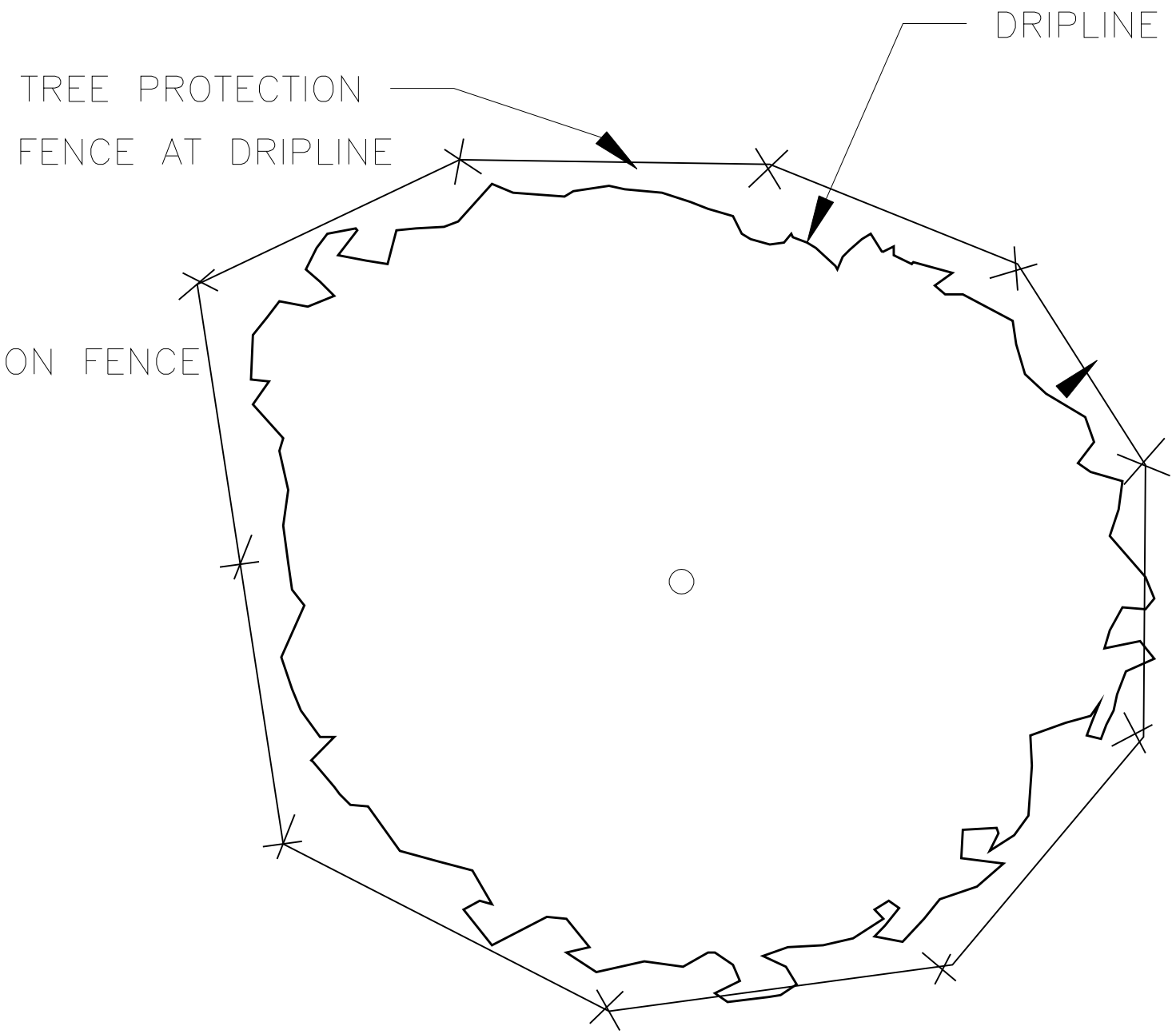
Steve Goodwin

Bill Diedrichs

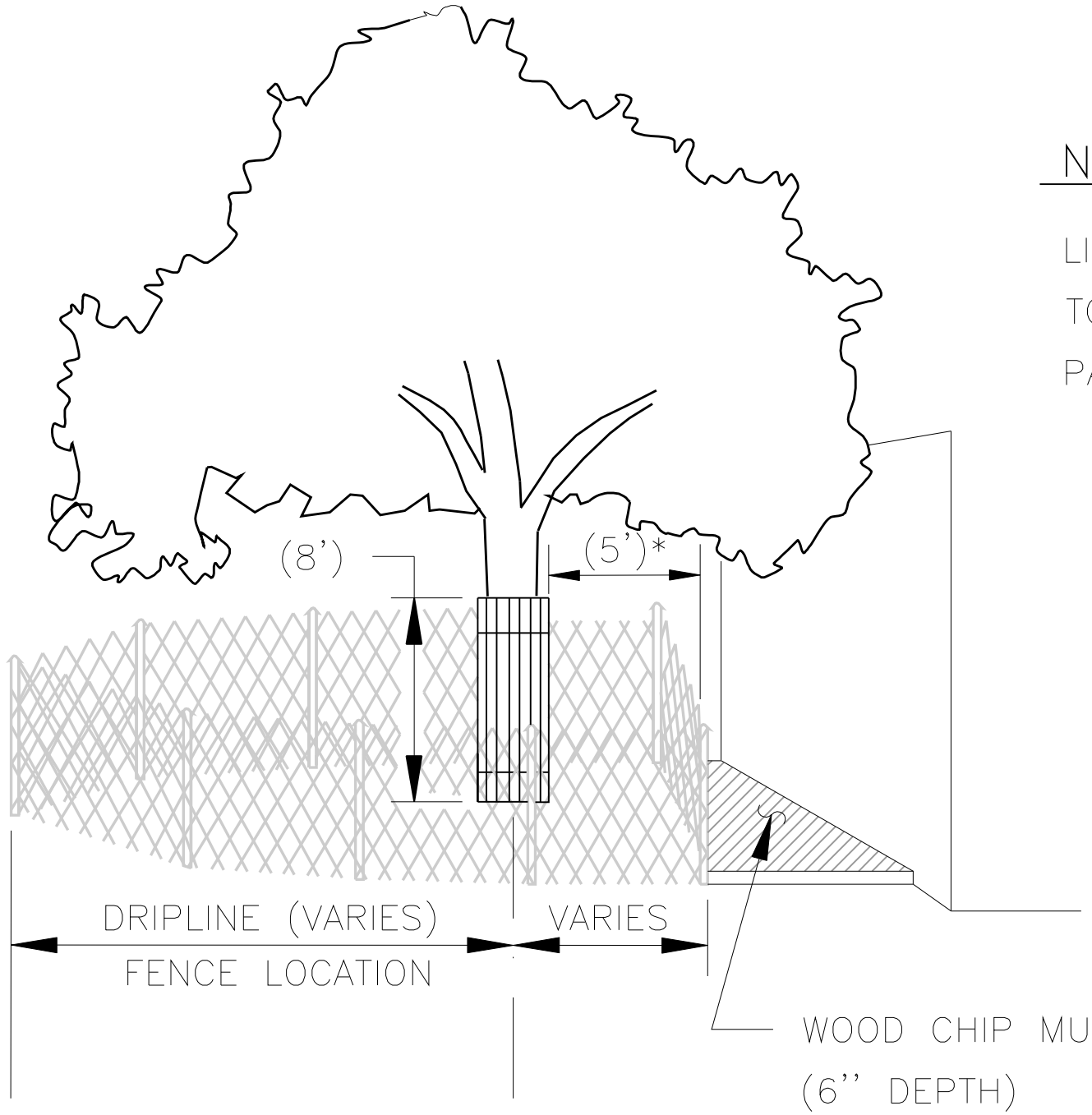
Lynda Heavrin

Alec Johnson





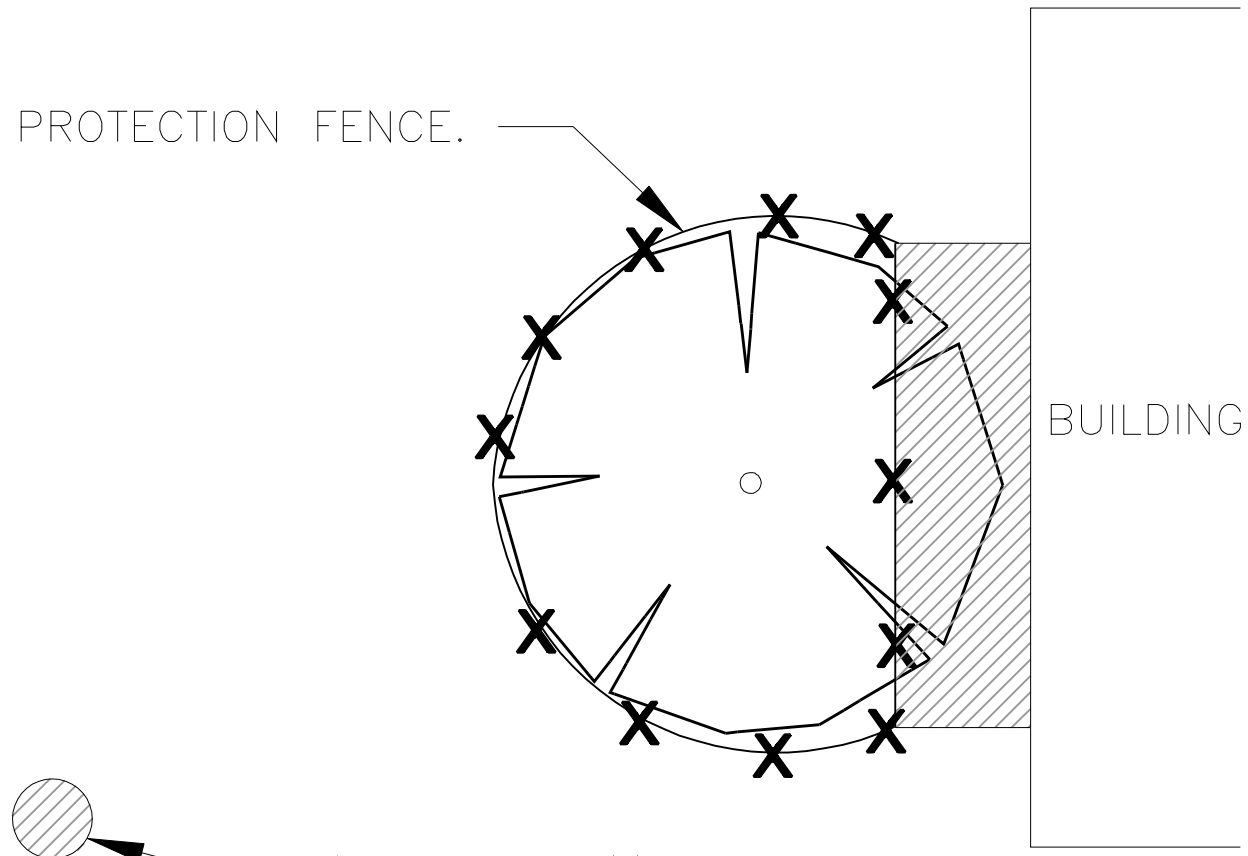
TREE PROTECTION FENCE



*AS NEEDED TO PROVIDE NECESSARY WORK SPACE.
IF LESS THAN 5', THEN ADD BOARDS STRAPPED TO TRUNK.

NOTE:

LIMITS OF WOOD CHIP MULCH AREA AND DISTANCE FROM TRUNK TO WORK AREA SHALL BE SUBJECT TO THE APPROVAL OF THE PARKS DEPARTMENT LANDSCAPE ARCHITECT.



TREE PROTECTION FENCE (MODIFIED)