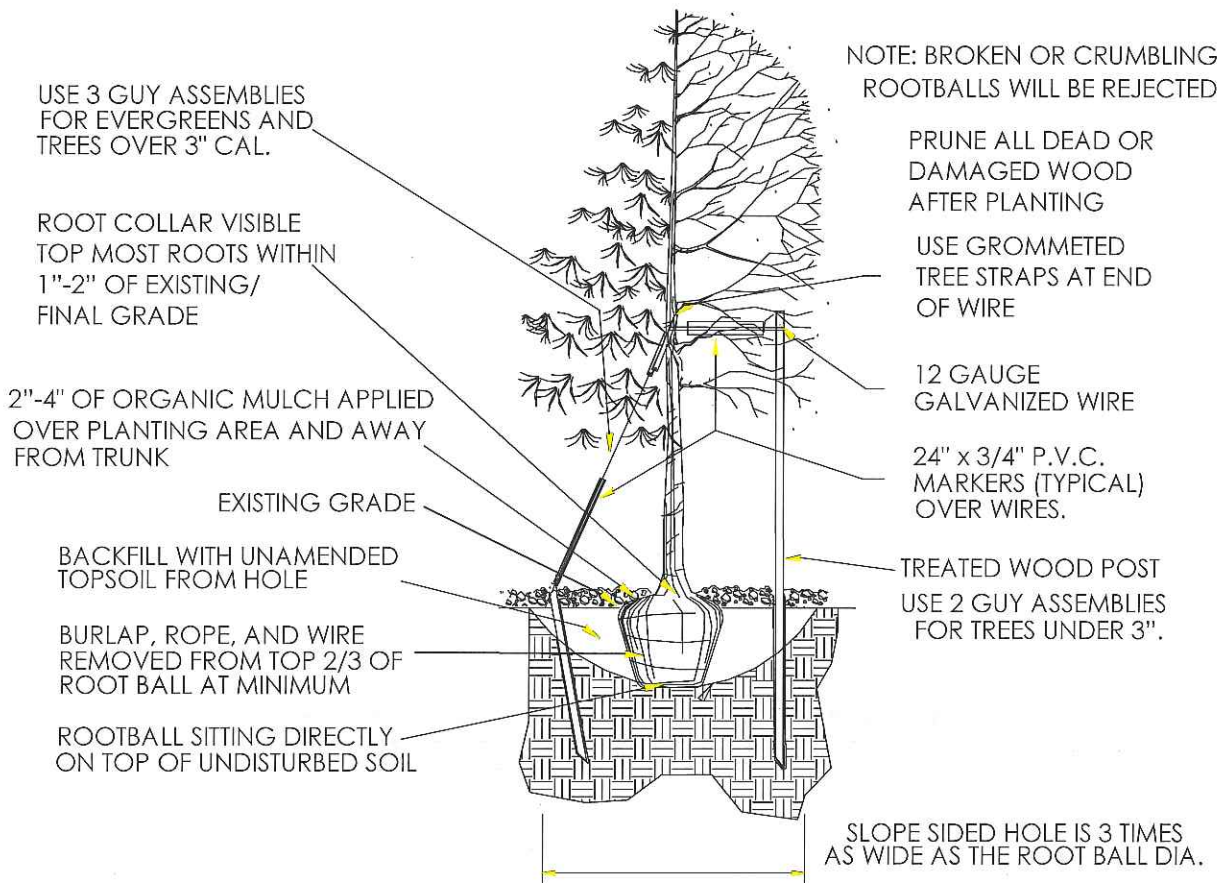


PLANTING STANDARDS

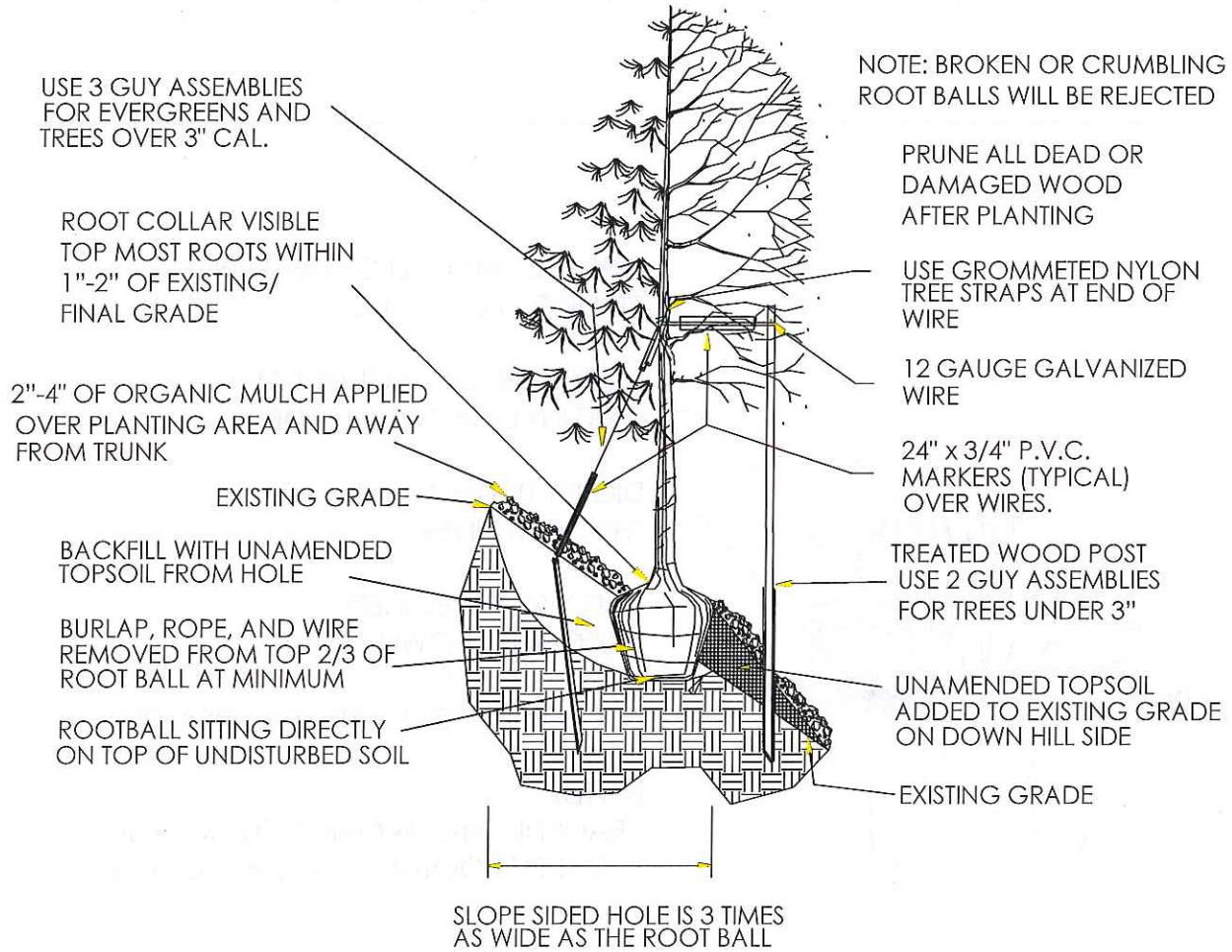
TOWN OF PARKER PLANTING STANDARDS



- Excavate planting holes with sloping sides. Make excavations at least three times as wide as the root ball diameter and no deeper than the distance from the top most roots in the root ball to the bottom of the root ball to allow for settling. Do not disturb soil at bottom of planting holes, but do score the sides of the planting hole. The planting area shall be loosened and aerated at least three times the diameter of the root ball. Backfill shall consist of existing on site topsoil – no amendments shall be used unless otherwise specified.
- Trees shall be planted with the root collar/flare visible above grade AND two or more structural roots located within the top 1" to 2" of the root ball/finished grade measured 3" to 4" from trunk. This includes trees that are set on slopes (see slope planting detail). Trees that do not have a visible root collar shall be rejected. Do not cover the root ball with soil.
- When root ball will remain intact, cut off bottom $\frac{1}{4}$ of wire basket before placing tree in hole, cut off remainder of basket AFTER tree is set in hole, remove basket completely. At a minimum, the top 2/3 of the burlap and basket shall be removed from the root ball on all trees. Remove all nylon ties, twine, rope and burlap. Remove unnecessary packing material.
- Form soil into a 3" to 5" tall watering ring (saucer) around planting area. This is not necessary in irrigated turf areas. Apply 2" to 4" depth of specified mulch over planting area and inside saucers, away from trunk.
- Staking and guying of trees is optional in most planting situations. In areas of extreme winds, or on steep slopes, staking may be required to stabilize trees. Staking and guying must be removed within 1 year of planting date.
- Tree wrap is *not* to be used on any new plantings, except in late fall planting situations, and only then after consultation with the Town Arborist.
- Resetting of improperly planted trees will only be allowed if it is determined that doing so will in no way compromise the root ball, and shall only be done with approval of the Town Arborist.

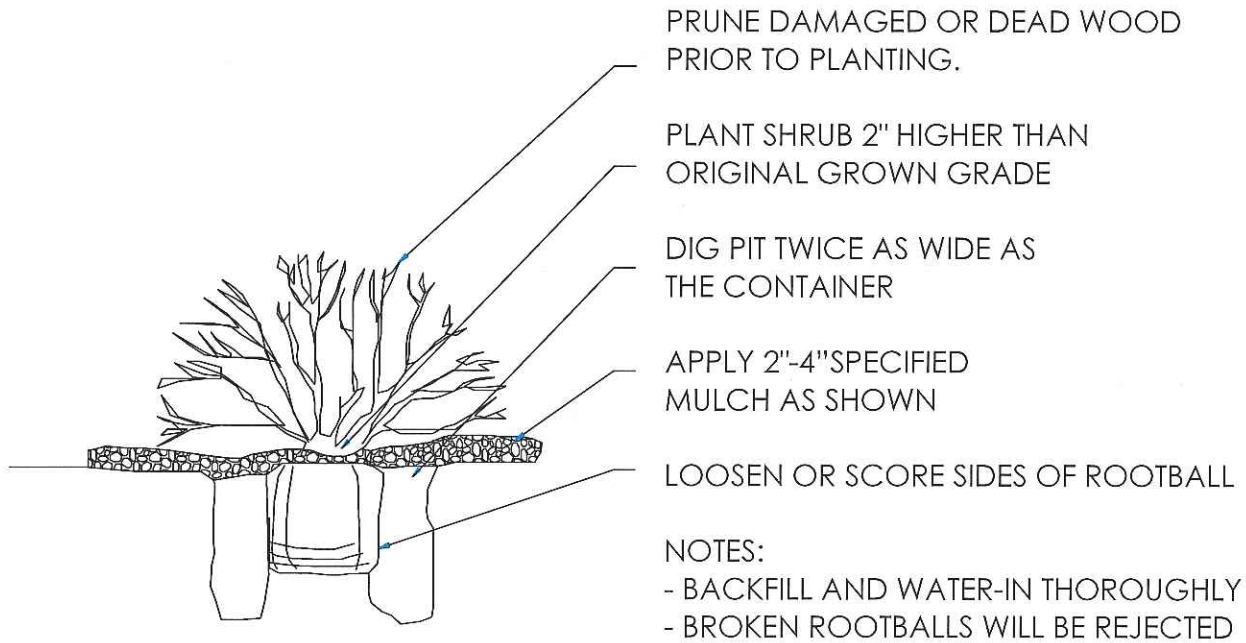
TOWN OF PARKER PLANTING STANDARDS

TOWN OF PARKER TREE PLANTING DETAIL - SLOPES



TOWN OF PARKER PLANTING STANDARDS

TOWN OF PARKER PLANTING DETAIL – SHRUBS



CU STRUCTURAL SOIL

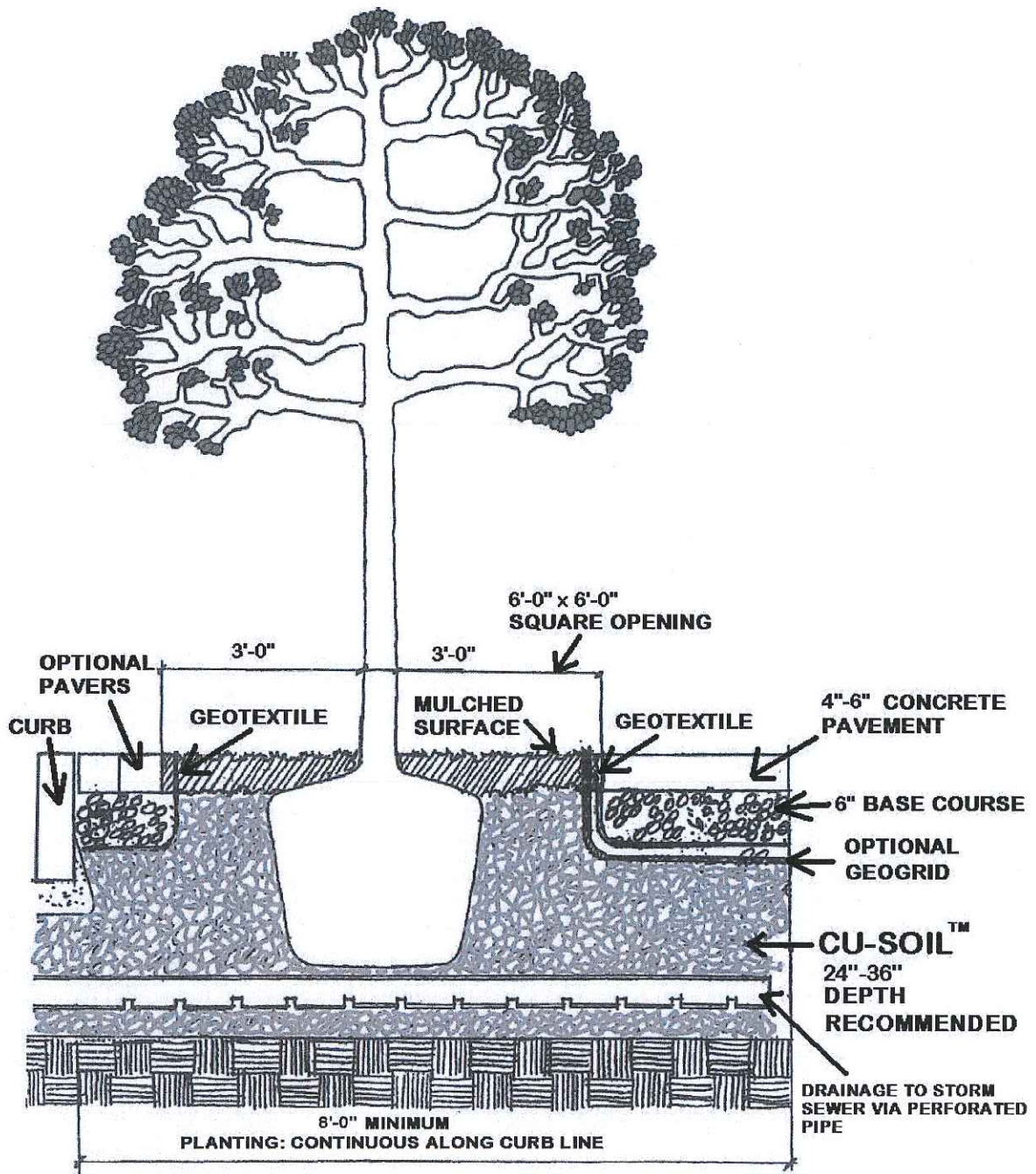
CU Structural Soil is a designed medium which can meet or exceed pavement design and installation requirements while remaining root penetrable and supportive for tree growth. It consists of gap-graded gravels which are made up of crushed stone, clay loam, and a hydrogel stabilizing agent. The materials can be compacted to meet all relevant pavement design requirements yet allow for sustainable root growth. This system essentially forms a rigid, load-bearing stone lattice and partially fills the lattice voids with soil. Structural soil provides a continuous base course under pavements while providing material for tree root growth, shifting design away from individual tree pits, to a designed, root penetrable, high strength, pavement system. An added advantage of using this material is its ability to allow roots to grow away from the wearing surface, thus reducing the potential for sidewalk heaving as well as providing for healthier, long-lived trees.

This system consists of a four to six inch rigid pavement surface, with a pavement opening large enough to accommodate a 40 year or older tree. The opening could be concentric rings of pavers designed for removal as the buttress roots lift them. Below that a six inch base course could be installed and compacted with the material meeting normal regional pavement specifications for the traffic they are expected to experience. The base acts as a root exclusion zone from the pavements surface. A geotextile (weed barrier) segregates the base course from the subbase and extends as an apron emerging around the edges of the concrete. A gap-graded, structural soil material demonstrated to allow root penetration when compacted would be the subbase and area for subsequent tree root growth. This material would be compacted to not less than 95% Proctor density (AASHTO T-99) and possess a California Bearing Ratio greater than 40. The subbase thickness would depend on the depth of sub grade or to a proposed target of 36 inches. This is negotiable, but a 24 inch minimum would be encouraged for the root zone. The sub grade should be excavated to parallel the final grade. Under-drainage must be provided under the structural soil material conforming to approved engineering standard for that region.

The three components of the Structural Soil are mixed in the following proportions by weight:

Crushed Stone (granite or limestone, graded $\frac{3}{4}$ to $1\frac{1}{2}$ ", highly angular, with no fines) – 100
Clay Loam – 20
Hydrogel – 0.03

In a typical street tree installation of such a structural soil, the potential rooting zone could extend from the building face to curb, running the entire length of the street. This would ensure an adequate volume of soil to meet the long term needs of the tree. Where this entire excavation is not feasible, a trench, running parallel to the curb, eight feet wide and three feet deep would be minimally adequate. Since this profile has adapted the standard surface and base specifications generally in use, less hesitation for engineering approval may result.



There will be a need to ensure moisture recharge and free gas exchange throughout the root zone which is not the entire subbase. The challenge is met by the installation of a three dimensional geo-composite (a geo-grid wrapped in textile one inch thick by eight inches wide) which could be laid above the subbase as spokes radiating from the trunk flair opening. This form of passive irrigation is currently in the testing stage. Other previous surface treatments could also provide additional moisture recharge, as could traditional irrigation.