

ing or destroying all or parts of an infected tree constitute control by eradication. Destruction of diseased trees, removal of alternate hosts, and chemical therapy are procedures that may be used to control some of the infectious diseases we have in urban situations. Eradication of a canker disease on an individual infected tree is often the primary means of control; however, it may fail if the infectious organism has progressed into the trunk, or if the tree is weakened and subject to multiple infections throughout the branches and twigs. Control of Dutch elm disease by eradication of diseased elm trees has contributed to the significant decrease in annual loss in most communities that also spray to control the insect vector. Control of chestnut blight by eradication has not been effective, and all such efforts to lessen tree losses have failed.

Removal of alternate hosts to rusts has not proved practical in ur-

*Continued on page 44*

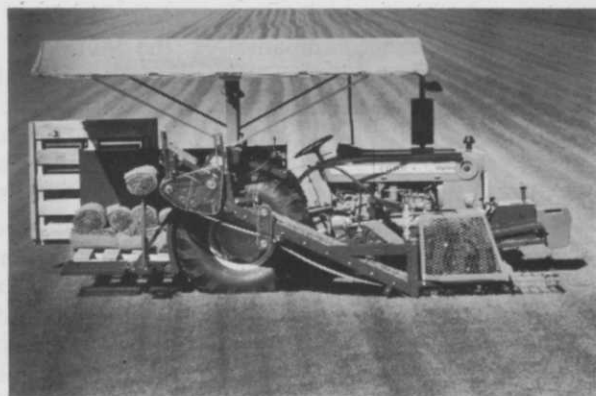


*Sycamore anthracnose leaf diseases such as this tend to devalue the home from the presence of a denuded tree.*

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OCTOBER 1977/WEEDS TREES & TURF 21



## Maryland Landmark Appraised by Professional Arborists

Most property owners, while fully appreciating the esthetic worth of their landscape, are unaware that established trees and other plantings have monetary value that is recognized by insurance companies, real estate specialists and even the Internal Revenue Service. However, an appraisal by a qualified professional is required in order to establish the validity of any claim, and guidelines have been laid down for conducting the appraisal.

Appraisers were recently asked to set a dollar value on the 400-year-old Wye Oak in Wye Mills, Maryland. Located on Maryland's eastern shore of the Chesapeake Bay, the famous tree is probably the oldest living white oak in this country and is truly a cherished American landmark.

The magnificent giant oak is a sight of such spectacular proportions as to almost defy measurement. It rises to a lofty 95 feet and has a crown span of 165 feet, more than half the length of a football field. At about nine feet above the ground, the trunk measures eight feet in diameter, and at a height of four-and-a-half feet, its circumference is 27 feet eight inches.

A sturdy picket fence encompasses the tree at approximately the dimension of its outer branch spread. The tree sits, along State

Highway 622, between a well-kept residence and an original one-room schoolhouse established in 1720. The tree is owned by the State of Maryland and is well maintained by the Maryland Park Service.

So what value did the consulting arborists place on this mighty oak? In a meticulously prepared official document, Fred Micha, writing for the arborists, stated in part:

Having carefully considered information and data pertinent to this tree's size, species, condition, location and other arboricultural factors, it is our opinion that the value of this tree is:

THIRTY-FIVE  
THOUSAND DOLLARS  
..... \$35,000.00

The document also described the tree as being in "fair condition."

It has a center core heartwood rot pocket. Thus it may be susceptible to wind throw and trunk breakage. It has had a constant maintenance program, being pruned and fertilized every two years. Its cabling system is extensive and properly done. One problem does arise in that it may become too top heavy and collapse at some future time. Possibly ground cables should be installed to prevent this type of destruction or damage. □

The appraisal went on to state that the tree had received constant maintenance for the past 25 years at an approximate cost of \$55 per year, thus increasing its value by \$12,500.

The report concludes by stating that this species of tree is capable of living to a thousand years and that the Wye Oak, with an established maintenance program, can probably be preserved for another 200 years.

"Such an appraisal as this can be objectively undertaken because of the professional guidelines that have been established," said Ray Gustin, Jr., a 50-year veteran of the tree service and nursery business in Silver Spring, Md. "These guidelines have been adopted by the American Society of Consulting Arborists, the American Association of Nurserymen, the Associated Landscape Contractors of America, the International Society of Arboriculture, and the National Arborist Association." (Representatives from each of these comprise the Council of Tree and Landscape Appraisers.)

"The guidelines take into consideration species of plant, size, age, general health, location, site factors and individual professional judgment." Gustin worked with Micha and Dr. L. C. Chadwick in appraising the Wye Oak.

While the Wye Oak appraisal is a unique case, the practice of appraising trees and other landscape plantings is quite common. Property owners, recognizing the monetary value of their landscape, are increasingly calling in qualified tree and landscape professionals to make appraisals, which can be used in filing insurance claims and in taking income tax deductions in case of damage to their trees or other plants. These professionals can also help the owner by seeing things he might miss, helping to correct the damage and prescribing remedies the owner may be able to do himself. The savings which the landscape appraiser may effect can far outweigh the nominal cost of an inspection.

For further information on tree and landscape values, write The Council of Tree and Landscape Appraisers, 232 Southern Building, Washington, D.C. 20005. □

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# Esthetic Considerations in the Selection and Use of Urban Trees

By William R. Nelson, Jr.

Esthetics and function are equally important in the selection of trees that strengthen, reinforce and add beauty to urban space. The basic structure of a tree, its pattern of lines, the contour outline of its form and its basic habit of growth provide a basis for determining which types are suitable for which settings.

## Line and Form

Line and form are the most predictable and most permanent qualities of trees. They are either straight or curved, vertical, horizontal or oblique. The trunk and main branches determine the line and mass of a tree, the shadow patterns both internally and externally and the character and personality of the tree.

Horizontal lines emphasize extent and are restful; vertical lines are severe and provide a feeling of height; oblique lines suggest movement.

Form is the mass or volume of a tree. The extremes of form, from rigidly erect to weeping, provide a wide palette of materials to choose from.

Columnar forms of trees have either rounded or pointed tops and provide contrast. Rounded forms usually have dense crowns. Vase-shaped forms branch high so there is

usable ground space below, are compatible with most plant forms, and blend well with architecture. Pyramidal forms accent the spire top, provide strong contrast, are difficult to harmonize with other plants, but are effective as specimen plants. Irregular forms provide both interest and contrast to architectural masses because of variable outline. Weeping forms are unique, lead attention to the ground area, and are effective against hard lines of architecture.

## Color

Flowers, fruit, twigs, bark and foliage are the sources of color in trees. Because flower and fruit colors are seasonal and of short duration, they cannot be considered as primary design elements. Twig color becomes a major factor during winter months if deciduous materials are being used. But leaf color in both subtropical and temperate plant regions is an important consideration.

All colors in the landscape are subject to the variation between true local color and the color perceived as a result of atmospheric interferences between the light source (the sun) and the objects. For example, at sunrise and sunset, the sun turns to crimson, the sky to gold, and

clouds to rose and lilac. This produces significant changes in color which are more difficult to grasp intuitively as compared to form, which is not subject to atmospheric variations.

## Texture

The arrangement and character of the component visual qualities of trees result in a texture effect. Plant textures vary according to the distance from which the plant is viewed. In the near view, texture is the result of size and spacing of



*Trees can provide a sense of movement and eliminate confusion.*



leaves and twigs, shape and surface quality of leaves, and length and stiffness of petioles. In the far view, texture depends on the same qualities listed in the near view. However, as the individual detail is lost, texture results from the light and shadow of the plant or plant masses.

Texture can be divided into five classes: fine, medium-fine, medium, medium-coarse, and coarse. Fine textures are delicate and airy, provide a refined appearance, complement smooth surfaces, and soften and blend with harsh surfaces and lines of architectural masses. Coarse textures blend well with rugged, heavy materials, are dominant and effective even when viewed from a distance, but tend to dwarf areas.

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## Esthetics

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All other classes are gradational between these two extremes.

### Design Context

The speed of the observer in motion becomes a critical factor in evaluating visual impact of the physical qualities. At a high rate of speed, form has the greatest impact, followed by line and color, and texture is the weakest. If the observer is walking at a rate of two or three miles per hour, the distances between the observer and the object will determine which of the three physical qualities will have the greatest impact.

In any design there are three compositional scales: near-view, middle-view and far-view.

The near-view space is that close to the viewer. Closeness allows the details of building materials and trees to be seen. At this scale, the intricate structure of line in twig and branching will produce a strong sculptural pattern in space and a three-dimensional filigree pattern against architectural structures. Form is important only when the

total tree can be perceived by the viewer. Only small trees will be totally visible and must have an interesting silhouette and sculptural shape. The color of bark, twigs, foliage, flowers and fruit have strong impact, as does texture. Both must be carefully planned and patterned to avoid overuse and jarring results.

The middle-view scale is the transition between the close-up detailing of the near-view and the overall general composition of the far-view. All of the physical qualities come into play, but form will have greater strength.

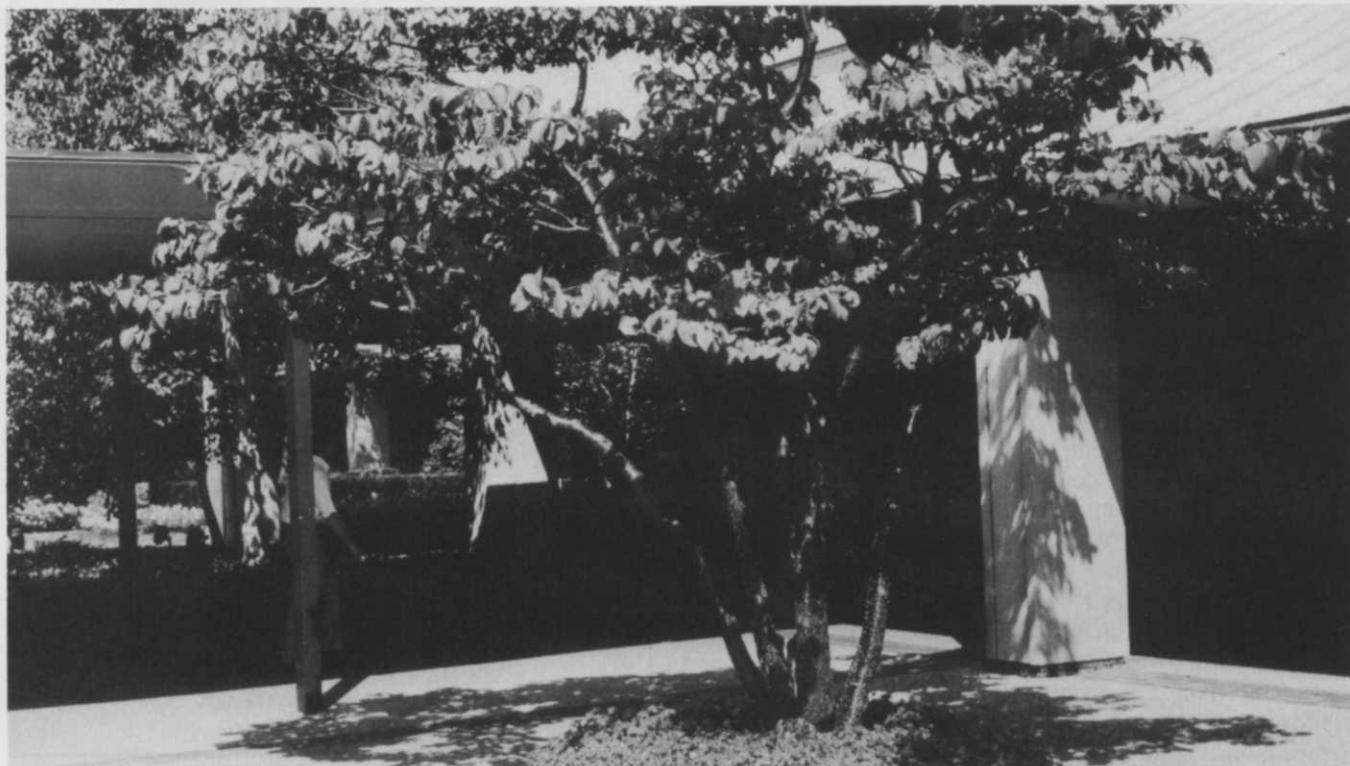
Far-view is the basic structure and framework of the composition and is a greater distance from the viewer. Although it will already be structured by surrounding urban elements — buildings, roads, signs, walls, etc. — the trees should mold, define, and reinforce the volume of space contained within the composition. In this situation, line is evident only as a contour outline of the tree's form or as the result of several trees combined as a mass. Color has minimal impact except for the general impression of green without the subtle variations noted earlier. Texture, however, is somewhat more important because it is per-

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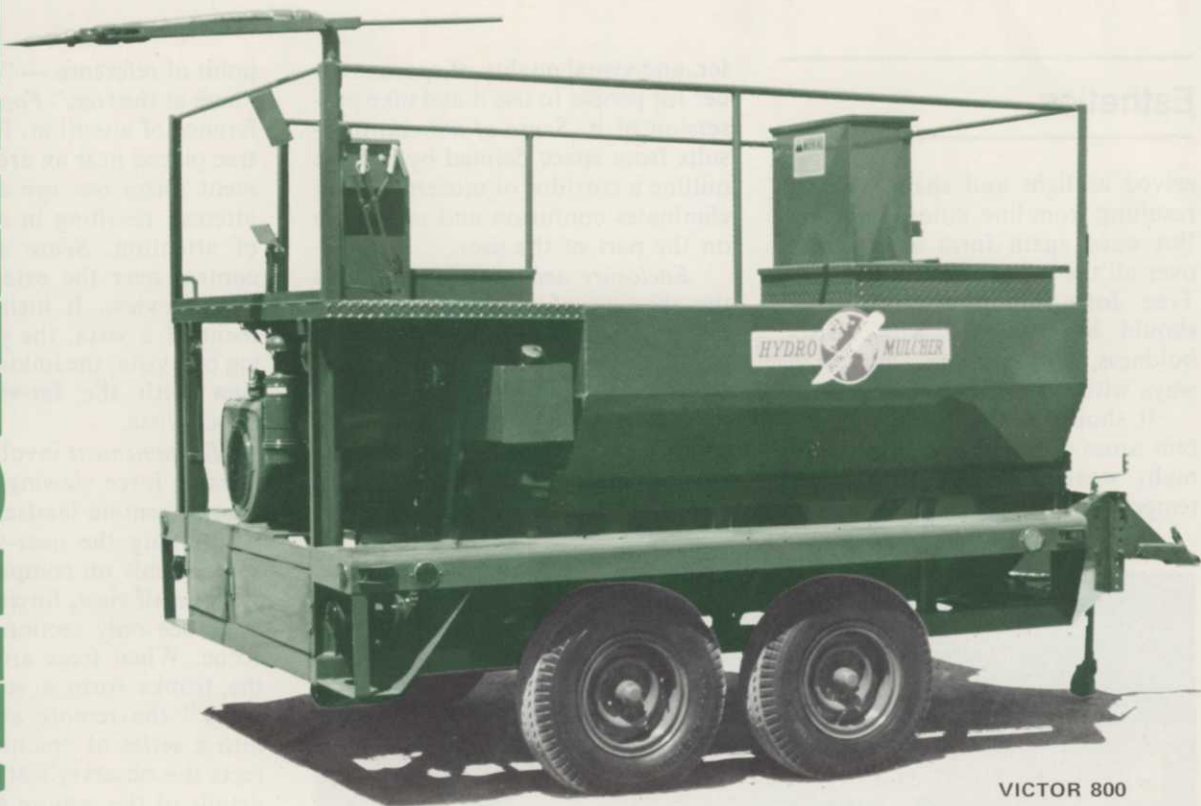
## Varying shades of Green Foliage

1. **Dark green** appears somber but combines well with architecture.
  2. **Light green** is effective in expanding apparent size of space and lightening low-light areas.
  3. **Gray-green** is also effective in expanding apparent size of space, combines well with vivid colors of buildings but conveys a cold feeling.
  4. **Blue-green** combines well with other foliage colors, suggests coolness and calmness.
  5. **Red-green** offers a spark of vitality and feeling of warmth to an area but reduces its apparent size.
  6. **Yellow-green** blends well with other colors, brightens shadowy areas and offers a cheerful effect.
  7. **Black-green** seems somber and formal but combines well with other foliage colors and with architecture.
- 

*A silhouette can be dynamic and expressive as well as appealing and satisfying.*



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## Esthetics

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ceived as light and shadow effects resulting from line, color, and form. But once again form asserts itself over all the other physical qualities. Tree forms in the background should be presented with clarity, boldness, and strength — and yet always with simplicity.

It should be noted that, at certain times of the day or year, a normally weaker element can assume temporary strength to the point

ter, and visual quality of space in order for people to use it and take possession of it. *Sense of movement* results from space defined by trees to outline a corridor of movement that eliminates confusion and indecision on the part of the user.

*Enclosure and space definition* is the shaping of outdoor spaces by utilizing trees. Enclosures created by trees are rarely total and complete. Trees function more on the basis of suggestion rather than by providing complete visual stops. In the near-view, tree trunks provide a colonnade that defines space and implies

point of reference — “over there” or “here at the tree.” *Focus* is the transference of attention. For example, a tree placed near an architectural element seizes our eye and holds our interest, resulting in a strong focus of attention. *Sense of direction* is control over the extent of the observer's view. It includes enframement of a vista, the partial screening of a vista, the linking of the near-view with the far-view, and the closed vista.

*Enframement* involves the use of trees to force viewing a special feature or remote landscape.

Linking the near-view with the far depends on compartmentalizing the overall view, forcing the observer to see only sections of the total scene. When trees are arranged so the trunks form a series of “windows,” the remote area is framed into a series of “pictures.” This directs the observer's attention to the details of the remote scene.

Partial screening of a feature or vista utilizes the crown of a tree to withhold the total view until the observer has moved past the tree. This technique works well when the feature is large enough to be partially viewed over or around the screening tree. This introduces intrigue and curiosity that is climaxed by the dramatic impact of the full-view once one has passed the tree.

Finally, a blocked vista limits the observer's view to the immediate space he presently occupies. The result is added interest in the immediate environment.

Trees selected for screening or blocking of vistas should have strong form and be relatively dense. At the same time they should have interesting details for the nearby observer.

*Truncation* is the use of trees to mask the upper portion of buildings so that the building is not seen in its entirety. This break of the vertical mass directs attention to the space at eye level (the area below the tree's crown). The immediate space is no longer overwhelming to a person because the dwarfing influence of architecture is reduced by truncation.

*The dramatic* involves incidence, sequence, anticipation, infinity, and illusion. Establishing an

*Continued on page 34*



*A tree can add drama to an otherwise ordinary scene.*

where it dominates the scene. For example, seasonal floral displays or spectacular fall color could overpower from at any scale.

### Emotional Qualities Affecting Esthetics

*Space identification* results from trees being used to establish a feeling or sense of place, possession, and movement. *Sense of place* is an encounter between the individual and place that is dramatic, simple, and impressive — space in which a person is emotionally secure. *Sense of possession* involves shade, shel-

tainment, yet the gaps between trunks reveal what is beyond. In the far view the combination of trunks and foliage tend to merge, suggesting a total and complete enclosure.

The details of line and form, color, and texture of the trees used for enclosure have importance at a distance of 40 feet or less. Beyond 40 feet the composite effect of the total mass assumes importance.

Orientation, focus, and sense of direction are attributes of visual control through the use of trees. *Orientation* is the use of trees to stimulate a reaction such as “I am enclosed” or “I am exposed.” Trees are also obvious devices to serve as a



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