

Median Planting for Headlight-Glare Screening And Traffic Guidance

OLIVER A. DEAKIN, Parkway and Landscape Engineer,
New Jersey State Highway Department

Many improvements in highway design and construction have occurred since work was started on the 41,000-mi Interstate and Defense Highway System in 1956. A variety of median plantings for headlight-glare screening and for traffic guidance have been designed and installed.

LOCATION AND USE OF PLANT MATERIALS

Most planting has been used on changing horizontal alignments to help guide traffic safely over the main roadways and to screen out the headlight glare of opposing traffic. Many plantings have been installed between ramps at interchanges to help guide traffic in making the proper turning movements, especially at night when visibility is restricted. Plantings in the median have been used to reduce illegal crossings that are a traffic safety hazard.

Varieties of Plant Material

In the median of New Jersey Route 29, near Flemington, 400 to 3- to 4-ft *Viburnum prunifolium* (Blackhaw) were planted in 2 rows on 4-ft staggered centers for the purpose of indicating the changing roadway alignment. This same planting helps screen out headlight glare.

In the 14-ft width of the median on the Columbus By-Pass, Route 39, 615 4- to 5-ft *Lonicera ruprechtiana* (Manchurian Honeysuckle) were used. Plants were placed in a single row on 6-ft centers (Fig. 1).



Figure 1. Hedge planting of 4- to 5-ft Manchurian honeysuckle on Columbus By-Pass, N. J. Route 39.

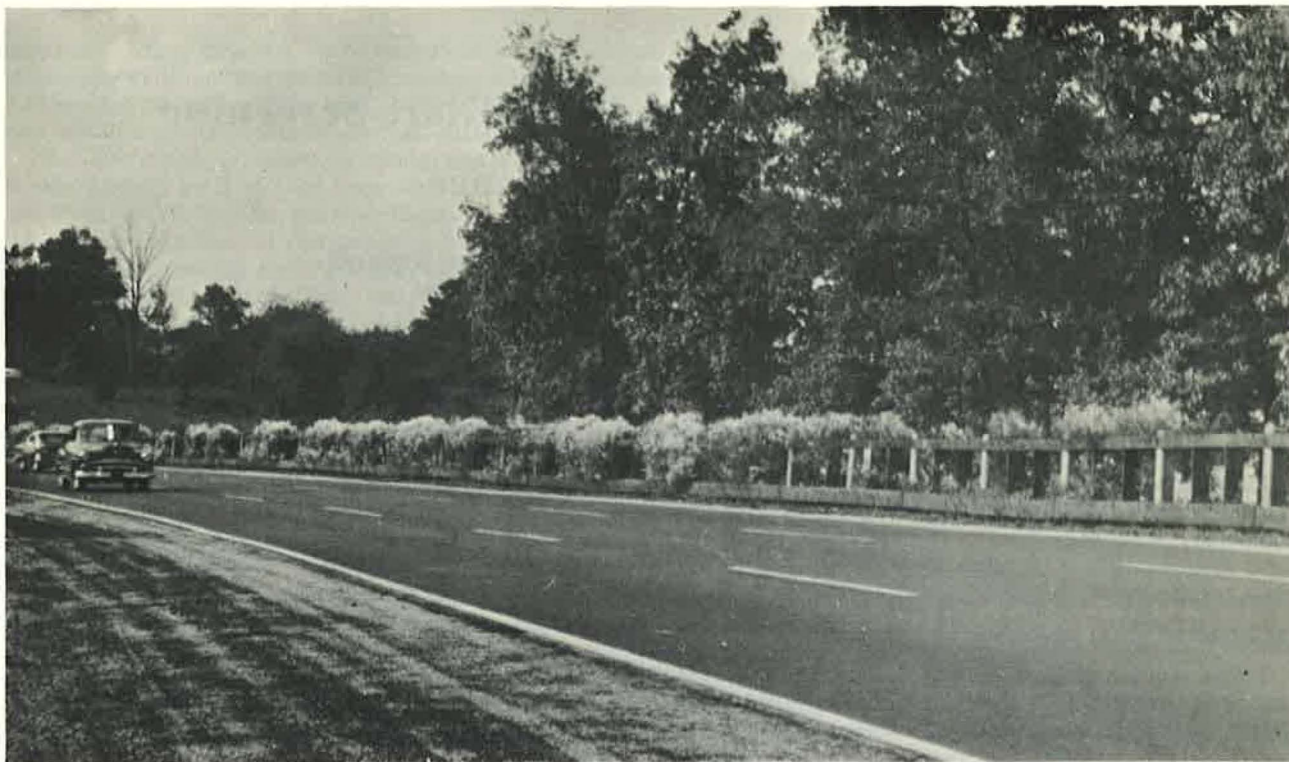


Figure 2. Chinese fleece vine in bloom on wooden structure erected in median on Garden State Parkway to help reduce headlight glare from opposing traffic.

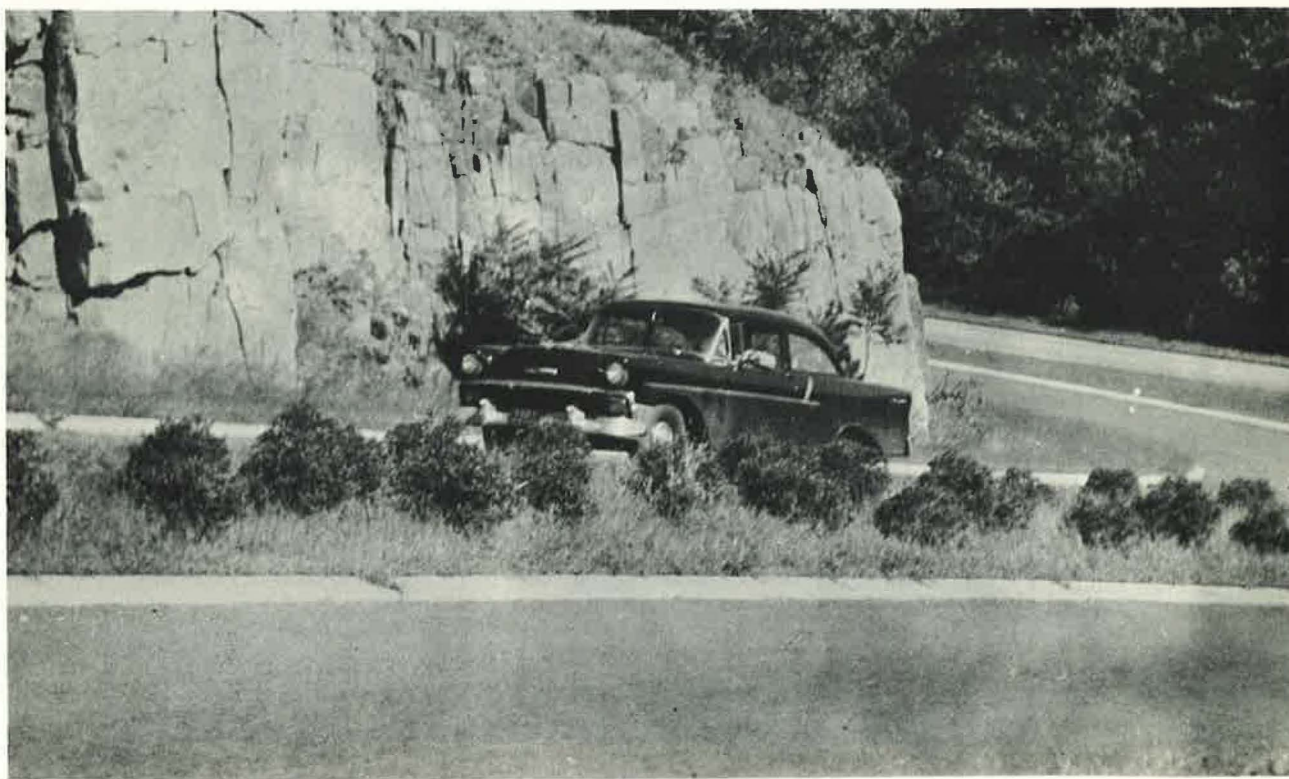


Figure 3. Planting of *Ilex glabra* (inkberry) in narrow median on interchange ramp of Palisades Interstate Parkway to guide traffic as well as screen out headlight glare.

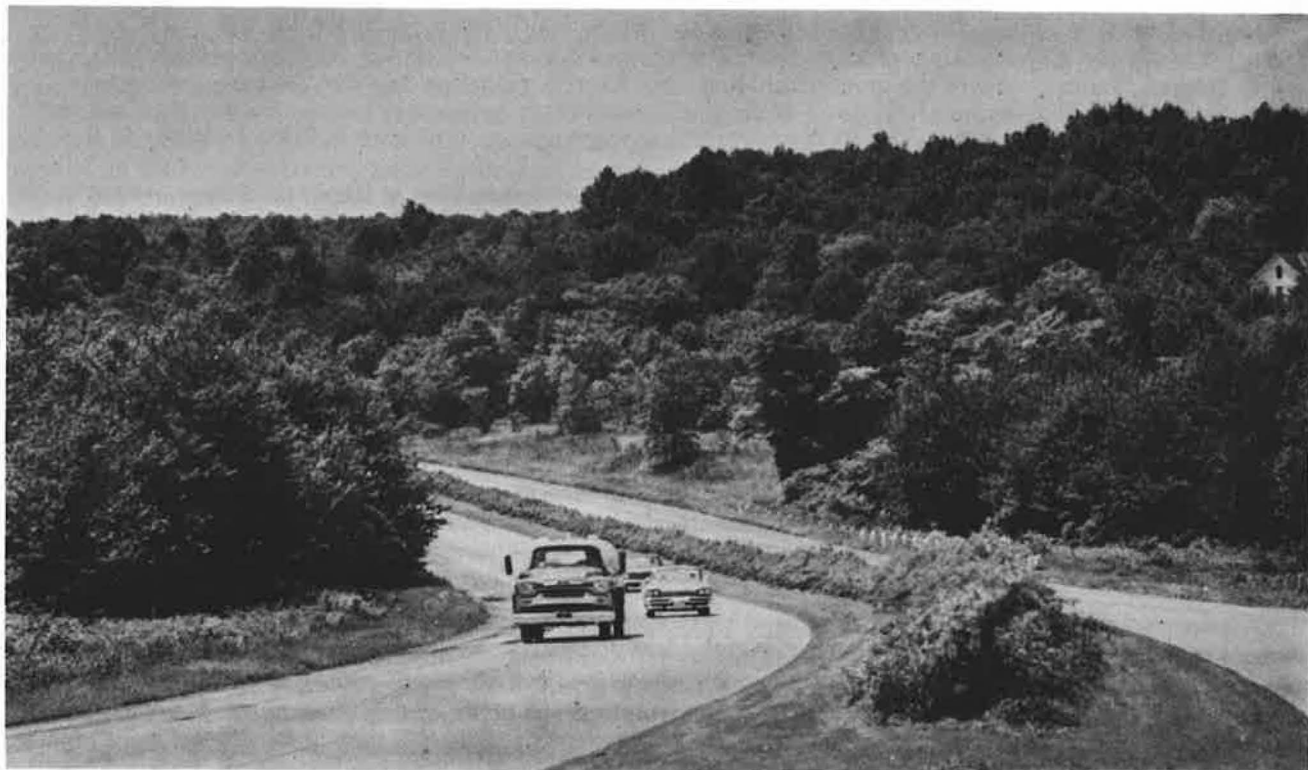


Figure 4A. Planting of *Rosa multiflora* (Japanese rose) on a 22-ft median helps delineate horizontal curve in alignment of N.J. Route 10.



Figure 4B. Close-up shows how effective Japanese rose planting screens traffic from view of vehicles traveling in opposite direction.

The New Jersey Highway Authority let a contract for median planting on the northern section of the parkway in Bergen County. One of the most promising and effective plantings was 328 *Juniperus chinensis* *glauca* *hetzi* (Hetz Blue Juniper) 2½- to 3-ft spaced 6 ft on center in a single hedge-like row 12 ft off the edge of the shoulder. Medians were 30 ft wide. The evergreens were planted in October 1957 and the authority's records show only two plants have died.

Plantings of Halls Honeysuckle and Chinese Fleece Vine in combination or separately have proven to be desirable for covering farm-type hinge-joint wire fence and a wooden structure designed and erected to reduce headlight glare on the Garden State Parkway. Both plantings are very attractive when in bloom (Fig. 2).

Use of *Ilex glabra* (Inkberry) as a broadleaf evergreen in the median between two ramps on the Palisades Interstate Parkway (New Jersey Section) has been satisfactory as well as attractive throughout the year. There has been, however, some winter kill and breakage when ice and snow are plowed into the median. In spite of the damage, the plant material has made a good recovery during this past summer. Plants were planted in a double row on 4-ft centers. The narrowest section of median is 12 ft. Plant material was placed 6 ft beyond the curb (Fig. 3).

An earth mound constructed for the purpose of eliminating headlight glare and preventing illegal crossing of the median on the Garden State Parkway has proven very satisfactory. After three years growth, Halls Japanese Honeysuckle is covering the mound effectively. To encourage rapid growth, honeysuckle should be fertilized for the first three or four years with a complete commercial fertilizer. If the honeysuckle requires mowing, cut at a height of 8 to 10 in. If mowed at a lower height, growth will be retarded greatly because most of the new runners will be cut off. Continual close mowing will kill the honeysuckle.

Ligustrum obtusifolium *regelianum* (Regels Privet) should prove to be an excellent shrub to use for headlight-glare screening because it grows rather dense and maintains its shape with very little trimming. It is attractive throughout all seasons of the year.

On Route 29 Freeway, Trenton, New Jersey, informal groups of *Viburnum setigerum* (Tea Viburnum), *Viburnum trilobum* (American Cranberrybush) and *Crataegus crusgalli* (Cockspur Hawthorn) were planted in a 16-ft median.

On N.J. Route 10, 1,000 1½- to 2-ft *Rosa multiflora* (Japanese Rose) were planted in 1955 as a barrier hedge to keep vehicles from crossing the island. The plants were placed on approximately 1½-ft centers in the middle of a 22-ft median. This hedge has grown very well and is providing a fine barrier as well as



Figure 5. Use of wide median on Palisades Interstate Parkway made it possible to preserve existing native groups of trees and shrubs, which not only eliminate much headlight glare, but also reduce maintenance cost of mowing large grass areas.

a headlight-glare screen. The planting is also located on a long curve in the highway. This planting helps to delineate the changing alignment. Such plantings increase safety of travel as well as improving the appearance of the highway (Figs. 4A and 4B).

Most effective treatment of the median between roadways occurs where the highway is designed and constructed with a wide variable width median and most of the existing native growth preserved and improved by whatever selective thinning may be necessary. More careful study should be given to this type of median design as the result is more effective and in most locations may be obtained at a lower cost (Fig. 5).

REFERENCES

1. Oliver A. Deakin, "Median Planting for Headlight Glare Screening." Roadside Development 1956.
2. Oliver A. Deakin, "Progress Reprint on Planting for Screening Headlight Glare and for Traffic Guidance." Roadside Development 1957.

Discussion

Hottenstein: How do you manage to control the growth of grass and weeds in narrow medians where shrubs are planted? Our experience has shown that where medians are used for the storage of snow in which there may be brine, we cannot maintain shrub plantings. So, we do not use shrubs, and thus far we have received no criticism.

Deakin: We use continuous shrub plantings primarily for the control of headlight glare. We partially control weeds by using a mulch, either salt hay or wood chips, and herbicides. Shrub plantings have been arranged so that mowing equipment has clear paths to follow. Some areas we do not mow but encourage volunteer growth to become established.

Hottenstein: My question referred only to medians where we believed that the area should be kept clear because of maintenance.

Deakin: We hope ultimately to get a solid planting effect and eliminate some maintenance. Incidentally, we have experienced no trouble with the effects of salt brine, snow, or ice on shrub plantings. *Ilex glabra* (Inkberry) seems to exhibit a tolerance to salt brine. On wide medians we are planning to only mow a 12- to 20-ft strip on each side adjacent to shoulder or pavement.