

NATIONAL PARKWAY CONCEPTS AND PRINCIPLES

This article by Dudley C. Bayliss is from a paper presented at the January, 1961 Annual Meeting of the Highway Research Board.

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The National Park Service entered headlong into a new and hitherto unexplored field of park development—National Parkways—late in 1933. Announcement was made by the then Secretary of the Interior, Harold L. Ickes that \$16,000,000 of Public Works funds had been made available for development of a national parkway to connect Shenandoah and Great Smoky Mountains National Parks, almost 500 miles apart in Virginia and North Carolina. With completion now in sight by 1967, the Blue Ridge Parkway is that pioneer national parkway project, and over a period of almost 30 years has served as a proving ground for many concepts and principles now firmly established and being followed on succeeding national parkways.

As now defined by the National Park Service, a national parkway is a federally owned, elongated park featuring a road designed for pleasure travel, and embracing scenic, recreational or historic features of national significance. Access from adjoining properties is limited, and commercial traffic is not permitted. A national parkway has sufficient merit and character to make it a national attraction and not merely a means of travel from one region to another. National Parkways are authorized by special act of the Congress for administration pursuant to the Act of August 25, 1916 (39 Stat. 535), as amended and supplemented. Under MISSION 66, the National Park Service's ten-year program which has as its target the completion by 1966 of development and staffing of the 188 parks, parkways, and other units of the National Park System, there are nine national parkway projects totaling 1,097 miles in various stages of completion in a program totaling about \$342,200,000 including funds appropriated prior to MISSION 66. This program includes other major national parkways such as the Natchez Trace Parkway, 450 miles in length through portions of Tennessee, Alabama, and Mississippi; the Foothills Parkway, 72 miles long paralleling the northern boundary of Great Smoky Mountains National Park in Tennessee; the Colonial Parkway, most recently completed, 22 miles in length connecting Jamestown, Williamsburg and Yorktown, Virginia; and the George Washington Memorial Parkway, 47 miles long linking Mount Vernon and Great Falls, Virginia, and Fort Washington and Great Falls, Maryland, on both sides of the Potomac River near Washington, D.C.

Over two-thirds of the total mileage (819 miles) have been completed or are underway within an annual authorization of \$16,000,000 in the Federal-Aid Highway Act. The general policy is that the states through which the parkway passes acquire and deed to the United States the lands necessary for the parkway road including interchanges with highways, parallel service roads, and protective buffer areas, plus adjoining

park where recreational developments such as campgrounds, picnic areas, scenic overlooks, historic or archeological sites and nature trails as well as necessary public service and maintenance facilities are provided. All of these integral parkway features may be accommodated within a varying width averaging 125 acres per mile.

Over a period of many years, the ratio of cost, with the States acquiring the land and the Federal Government building the road and other facilities, is ten percent State and 90 percent Federal.

From the very beginning, the National Park Service has been fortunate in being able to utilize the engineering services of the Bureau of Public Roads by means of an interbureau agreement, called the Road Regulations, which cover not only the national parkways but all major road projects in the national parks and other units of the National Park System. The Bureau has assigned many of its best engineers to the special requirements of national park and parkway work, handled through the Bureau's Regional Offices and the Park Service's Eastern, Western, and National Capital Offices of Design and Construction. The landscape architects and architects of the Park Service, and engineers of the Bureau work together as a team in all phases of the reconnaissance, location, design and construction of the parkway road. Following completion of construction contracts, the various units are taken over for maintenance by the National Park Service. As in the national parks, the administration of each parkway is under the direction of a superintendent with a staff sufficient to handle protection, maintenance, and interpretation requirements.

Location and design are based on careful map, stereoscopic aerial photo study and ground reconnaissance. Working closely with the engineer, the landscape architect familiarizes himself with, and strives for, a location having points of scenic, historic, architectural, or archeological interest. Local agricultural practices, forest culture, and wildlife refuges also contribute to the visual or inspirational pleasure of the visitor.

If possible, the location includes a variety of scenic as well as educational features interwoven with parks of several hundred or several thousand acres where campgrounds, picnic areas, trails, lakes and fishing streams may be found.



The whole parkway is considered as an elongated park to accommodate moving rather than static visitors. This ride-awhile, stop-awhile characteristic governs (1) the location of the park widenings for recreational facilities at 30 - 60 miles along the way, (2) the provision of necessary overnight, food service, and maintenance units, (3) the design of the road with frequent turnouts and parking overlooks as well as vistas to be observed while in motion, and exhibits of nature, pioneer life and current land uses.

These elements are not the result of happenstance. They are conceived and planned well in advance of the initial land acquisition and embodied

in a combined set of drawings and narrative sections known as a Master Plan.

In designing the main parkway road, the safety of the parkway motorist is a prime consideration. Good sight distance consistent with the topography is important. Grade separation structures at railroads and highways, guardrail, center striping, standard traffic signs and markers and mileposts to relate the traveler to points described in the parkway folder are standard provisions. Access points are limited and parallel local roads are provided where necessary.

Since the parkway is primarily a recreational facility, the road design is based on moderate rather than high speed. A top speed limit of 45 miles per hour is used on the Blue Ridge Parkway, for example, with curves of lower safe speed suitably marked.

The combination of these design and safety standards plus comparatively low speed and freedom from trucks and large buses makes it possible for the parkway traveler to forget the tensions of highway or turnpike driving and really enjoy his parkway experience. He can even make some reasonable observance of the scenic beauty of the countryside while en route. Of course, the frequent overlooks provide opportunities for a more leisurely look-see.

Following this brief description of the overall program, there are described some of the distinguishing national parkway characteristics and principles. Most of the examples used are from the Blue Ridge Parkway. The principles described, however, apply to all national parkways.

In setting the parkway land boundaries, the landscape architect strives to be another Thurston—a magician who creates an illusion, if possible, that the horizon is the only visible boundary. This might be accomplished in several ways.

1. In mountainous or hilly country by setting the fee simple or scenic easement line just over the nearest ridge or military crest to ensure permanent protection of the nearby mountain with its varying pattern of foliage, rocky formations and waterfalls.
2. In wooded country by including sufficient width to allow "seeing into" the forest floor occasionally. Views of a pleasant open woods stimulate interest in following short self-guiding nature or scenic trails from convenient parking areas.
3. In agricultural country by bringing the crop right up to the road on parkway lands leased back to the adjoining owner. Colorful scenes, varying from season to season, display the fruits and uses of the land to the traveler with no cost to the Government for maintenance.

In places orchards become roadside temptations though they are protected by the honor system. Here and there open meadows, whose boundaries are predetermined, are leased for hay production and haystacks are carefully located as part of the roadside picture.

Pasturelands, similarly located in the early parkway land determinations, enhance the rural scene. Fences are kept close to the road and the parkway boundaries are invisible since the fee simple line lies along a nearby stream for example, and the scenic easement line along the far side of the field beyond the stream. The trick is to try to create

the impression that no boundary exists but at the same time protect against commercial or other distractions. This is difficult at highway crossings where we have learned that an ample zone of protection is a necessity.

Design and construction elements are worked out individually and collaboratively by the landscape architects, engineers, and architects.



The main parkway road is located to take full advantage of the adjoining scenery and is fitted closely to the ground. In rugged topography, for example, the result is graceful curvilinear alignment with only occasional justification for a long tangent. To sustain interest, variety is provided by alternating stretches of open valley with ridge top or escarpment location.

Vistas must not only be planned but maintained both at the overlooks and along the road and are generally designed to be seen while in motion, such as a canopy vista, where the lower branches are removed so that motorist may see under and through the shade to the scene beyond. At the overlooks, signs mark prominent features for more leisurely viewing.

As part of the land acquisition, the landscape architect studies the problem of adjusting local roads to the new parkway location and together with the engineer selects locations for highway or agricultural grade separation structures, power and telephone line relocations and service roads. All of these are shown on the land acquisition plans for use by the State.

Slopes are laid back and rounded to a natural degree and are finished and seeded as the grading progresses. This results in quicker healing of scars at lower cost than if the seeding is done as the final part of the grading contract.



In the eastern part of the country, where all of the present national parkways are located, the comparatively close-shaven or barren appearance of new sections does not last long. Judicious planting of broadleaf evergreens, pine, dogwood and other native plant materials according to careful plans, is supplemented with natural regeneration to produce a mature appearance in very few years.

Specimen trees and unusual rock formations are protected during construction for later exhibits.

Rock cuts or slopes offer opportunities for imaginative treatment. Here again, variation is sought from

a monotonous constant slope—in some cases by removing loose dirt and rock carefully to expose the formation—in other cases by providing planting pockets for the colorful Virginia creeper vine, or preserving free standing monoliths having interesting shapes.

Tunnels are often more economical than through cuts and, in locations such as at Craggy Gardens on the Blue Ridge Parkway, avoid inexcusable visual damage to a whole mountaintop covered with purple rhododendron. Stone portals help tie the structure into its surroundings.

Paved overlooks and turnouts are balconies from which to observe nature's "Spectaculars" and convenient takeoff points for short hikes to waterfalls, and other natural, historic or archeological exhibits.

Water features are infrequent so wherever old mill ponds are found they are restored and displayed. Small lakes cover up channel changes and are popular with the fisher folk. Open bridge rails permit good vision at river crossings, such as the James River and its historic gorge through the Blue Ridge Mountains.

At Mabry Mill, early local industry such as the restored mill and the wheelwright shop can form the nucleus of a popular exhibit of bygone mountain living. Water-ground cornmeal and buckwheat flour may be sold locally, and as hotcakes in nearby restaurants.

A group of restored buildings at Humpback Rocks, as another example, gives the visitor an accurate and colorful picture of early mountain farm life with the cabin, corncrib, springhouse, bear-proof pigeon, bee gum, and all the other accessories. Original pioneer homes and cabins should be preserved and exhibited along a parkway.



Rail fences are not only decorative—they serve as reminders of the early days in their varied forms and they bring the grazing cattle and sheep right up to the road's edge. The entire adjoining field should be in fee simple or scenic easement so the living picture of rural mountain life may be permanently preserved. Land use plans are prepared by the landscape architect to show the maintenance crew mowing limits, fields and vistas to be kept open and lands designated for pasture or crops.

Stone guard walls should be used where stone is available, particularly near rock cuts. In other locations, a sturdy pressure-treated hewn timber type of rail can be used.

Weathered chestnut signs, map folders, and informational leaflets can be designed to make the parkway largely self-guiding, thereby reducing the need for interpretive personnel. Mileposts would be referenced to the parkway map and information on food and shelter provided in special racks at visitor centers.

The nineteen Blue Ridge park enlargements varying between several hundred and several thousand acres are marked by large hanging signs bearing the "Lonesome Pine" emblem. They provide for campgrounds, trail systems, and other public facilities requiring more space than the normal parkway right-of-way affords. Here are located picnic areas,

visitor centers, lodge accommodations (when they are not available nearby through private ownership off the parkway), coffee shops, gasoline stations, shelters, and comfort stations. The buildings are designed in architectural harmony with the simple pioneer mountain structures with stone chimneys, board and batten or weatherboarded walls, and shake roofs.

Management units in the parks provide working space for the maintenance personnel and rangers. As you can imagine, a 469 mile parkway road, plus 19 parks and more than 100 overlooks means a big road maintenance operation alone. The administration of the Blue Ridge Parkway is under the direction of a superintendent whose headquarters are in Roanoke, Virginia. He has short-wave radio communication to all points along the parkway. The value of this means of communication is apparent when land slides occur or when other circumstances require immediate actions.

The entire philosophy of a national parkway such as the Blue Ridge is to give each traveler the opportunity to see, feel, and enjoy the mountains in a leisurely visit. He sets his own pace and pauses where his interests lie—perhaps to listen to the murmur of a clear mountain stream or the throaty roar of a waterfall. He has many glimpses of rural farming scenes mixed in with splashes of fall color or spring bloom. He, or she, can stroll along a trail, and if the spirit moves him, climb to a rugged outpost of the ancient Appalachian range. In quieter mood he may gaze over a Persian carpet to far away places or marvel at the endless patterns of leaves against the sky.



Who can estimate the appreciation of nature and love of country that may be awakened by such a succession of ever-changing panoramas along the parkway? In simple terms isn't it a new form of the old Sunday Drive? To those of us who were fortunate enough to enjoy those weekly excursions each bend in the road brought some fascinating sight or experience. Here they are restored again for you and millions of others to enjoy in this quiet way through a living section of the scenic southern highlands.

The theory that parkways are for pleasure—and to serve as spiritual stimuli—rather than just additional arteries of travel, is well founded.