

ENVIRONMENTAL IMPACT CASE STUDY

PROJECT 0100-077-105, C-501

DUBLIN, VIRGINIA

by

Environmental Team

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Highway Research Analysts

Virginia Highway Research Council
(A Cooperative Organization Sponsored Jointly by the Virginia
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BACKGROUND

At the request of the Environmental Quality Division of the Virginia Department of Highways, the Environmental and Economics Section of the Virginia Highway Research Council conducted a study to determine the probable socioeconomic and environmental impact of the proposed improvement of Route 100 north of Dublin. This evaluation was a part of the Department's effort to ensure in the proposal stage that projects will complement the environment they traverse.

METHODOLOGY

The methodology employed evolved from an eighteen-month study conducted by the Research Council, as modified by experiences in practical field applications. The Council approach utilizes an interdisciplinary team (representing the fields of sociology, economics, and ecology) to measure local values. Team members interviewed selected inhabitants of the area to be affected. In the New River Valley, team members conversed with local residents, elected and appointed officials, businessmen, and community leaders (see attachment 1). In addition, the team examined the Pulaski County property tax records to determine the probable impact of the proposed taking on the tax base of the county. A windshield survey supplemented by a walking tour of the project area familiarized the team with its distinctive features.

PROPOSED MODIFICATIONS

Adoption of the following recommendations should result in the least harmful impact of the proposed highway project on the area.

1. The proposed improvement should be begun as soon as practicable. The ill effects of the existing facility in such areas as safety and education can multiply over time.

2. The Dublin Wayside should be replaced, in the same general location. It can be moved to the Station 320 area, or to the Station 375 area. If policy allows a wayside could be constructed on the median in the area of Station 320. The Station 375 area provides a view of the colonial Back Creek Farm buildings as well as a rest area at the foot of the Alleghenies.
3. The Virginia Conservation and Development Commission marker at Dublin Wayside should be replaced in the new wayside.

ENVIRONMENTAL IMPACT

The potential socioeconomic and environmental effects of the proposed improvement were evaluated in accordance with the Federal Highway Administration guidelines set forth in PPM 20-8. The probable environmental impact is considered to be as given in the following subsections of the report.

Fast, Safe, and Efficient Transportation

Route 100 north of Dublin has been steadily but belatedly improved to accommodate the increasingly heavy traffic utilizing it. Though this stretch of highway has often been a point of discussion in political campaigns, Route 77 to the south and Route 460 to the north have seen far more improvement than has this direct link between the Giles County labor supply area and the industrializing New River Valley. The increased propensity of people to travel, the construction of the New River Community College at Dublin, the activities of the New River Valley Fairgrounds, the sawmills that draw in timber from West Virginia, and the expansion of the airport have all greatly overtaxed the ability of existing Route 100 to provide fast, safe, and efficient travel between the towns of Pulaski and Dublin and points north and west. Even recognizing that many of the state's roads require periodic upgrades, it must be stated that this highway between Giles and Pulaski Counties is in dire need of immediate improvement. In spite of the improved roads to the north and south, truckers, travelers, and commuters alike prefer the shortest distance between two points, which Route 100 provides.

National Defense

The improvement would facilitate faster and safer movement of defense traffic by reducing potential delays. The improvement will have a direct impact on the transportation needs of the Radford Army -- Hercules Inc. complex. Much of the cargo generated there falls under the general category of "Dangerous Articles", the safe handling of which is made simpler by improved transportation networks. In the event of a national emergency, it is realistic to project that Hercules and the other defense-related industries in the area will expand their operations, and thus put a heavier load on Route 100 as a conveyor of commuters to work and cargo to destination.

Economic Activity

The proposed construction will take a portion of the apron fronting the single pump service station at Station 396, but not so much that business will be disrupted. Along with the truck stop on the east side of Route 100 near this station, the biggest problem will be the erratic movement of the converging traffic at the temporary connection of the four-lane road with the two-lane road. A crossover has been provided for the restaurant and telephone booth at Station 389, so these services will not be disrupted. The proposed construction will not disrupt the agricultural activity of the abutting farms, and no outstanding timber growth area will be disturbed. Pulaski County houses numerous interstate trucking operations, which feed the trailers onto the West Virginia Turnpike via Route 100. It is possible that the delayed improvement of Route 100 may shift these activities to Route 77.

Employment

No adverse impact on employment in the area is expected, as no business firms are to be taken. Those people presently commuting over Route 100 will find their travel safer and simpler. If the study proposed by the New River Valley Planning District Commission indicates the feasibility of developing the New River Valley Airport vicinity as an industrial park, 70% of the residents of Giles County will be within reasonable commuting distance of this development. The condition of Route 100 will influence industry's consideration of this area, in the manpower planning phase. The proposed improvement, while not a prerequisite to industrial growth, should make industrial expansion more feasible and relieve commuting problems. Driving conditions on the road are such that they always cause inconvenience and often make it impossible to commute across Cloyd's Mountain.

Recreation and Parks

Dublin Wayside, located at Station 325, provides a rest area and a chance to absorb a bit of the local history from the Virginia Conservation and Development Commission marker. The Wayside should be retained, and expanded to greater acreage. It offers a pleasant vista of the Jefferson National Forest to the north, and might be used by local residents as a picnic area in the future. If the Wayside cannot be left in its present location, it could be moved to Station 320 (median) or to the foot of the mountains near Station 375, on the Farris property. An interview with the Director of the New River Valley Regional Planning District revealed that the area residents view the proposed development at Captain Cleburne's grave as an addition to and not a replacement for the wayside taken by the proposed construction. This plot near the New River Valley Airport does not represent a suitable replacement of the existing Dublin Wayside. In the light of Pulaski County's industrial growth and present effort to attract industry, it is necessary to assume that a wayside in this location would not satisfy the traveler in the same sense that a verdant area in a more remote area would.

The upgrading will definitely benefit movement to and from such recreation areas as Claytor Lake State Park and the Jefferson National Forest. The New River Valley Fairgrounds south of the proposed construction also draws large crowds down Route 100 from the north, although its activities are infrequent.

Fire Protection

The four-laning of the highway will allow faster and safer movement of firefighting equipment from Pulaski, Dublin and Newbern.

Aesthetics

With the added lanes so closely approximating the existing ones, the construction will not significantly alter the quiet country atmosphere of this area. The replacement of the steeply sloped cuts with more gentle ones and the addition of a median strip will add to the aesthetics of the highway right-of-way. It is possible that the improvement of the route structure may lead to more intensive residential development, but this consequence remains under the control of the abutting land-owners. The nearby town of Dublin is expanding in other directions as well as this one.

The acorn-topped stone pillars at the Back Creek Farm driveway will be made more visible to the traveling public, a consequential aesthetic benefit of the proposed construction. Local residents place a high aesthetic value on the Dublin Wayside.

Public Utilities

The power poles of the Appalachian Power Company (Roanoke) and the telephone poles of the Chesapeake and Potomac Telephone Company (Roanoke) will be affected by the proposed construction. Due to the proximity of the area to the town of Dublin, and the favorable topography of the intervening distance, there is a strong possibility that the abutting land may be developed residentially, and lead to the public water and sewage services being extended out Route 100. Dublin now buys its water from Pulaski but in the light of its potential expansion might well upgrade its sewage system and waterworks.

Public Health and Safety

While existing Route 100 is not critically unsafe, the upgrade should reduce the high accident rate chronicled by the route charts at the State Police Headquarters in Dublin. The Rescue Squads from Dublin and Pulaski serve the area, and will be able to more rapidly transport the sick and injured to the medical facilities to the north and south of Route 100. The high percentage of heavy truck traffic on Route 100 makes for more difficult driving for passenger cars than that on other roads in the vicinity. Route 100 was the scene of the only serious school bus accident in the county in recent times, a fact that is mentioned to the school authorities on occasion.

Residential and Neighborhood Character and Location

No living areas or work areas are to be taken, and the nature of the upgrade is such that the communities on the east and west sides of the present route will be no more separate than at present. The area is beginning to develop residentially, and is thus changing in character. The proposed construction will likely speed up this change. The area around the airport is being considered for industrial expansion, which the four-laning can only abet. A conversation with L. E. Ward, Jr., Executive Director of the New River Valley Industrial Commission, confirmed that both sides of Route 100 near the airport are possible industrial parks. The residential area near Station 365 is also in a stage of extensive development. The topography and sylvan setting of the land abutting the proposed subdivision near Station 317 lend themselves to reestablishing this projected development a few hundred feet west.

Religious Institutions and Practices

The activities of such local religious institutions as Fellowship Baptist and Highland Church should not be adversely affected by the proposed improvement.

Conduct and Financing of Government

The tax base data secured at the Pulaski County Courthouse show an estimated tax loss of \$50.10 (see attachment 2). Experience has shown that when highways are improved, the added usability of the road allows more intensive development of the land. This has caused an increase in revenues from property taxes.

Conservation

The most noticeable loss from the conservation standpoint will be the nearly full-grown stand of hickory and oak on the Doby's property near Station 317. This area was to be developed residentially, so the loss is more aesthetic than economic. The young forest of mixed hardwoods and pine leading into the Jefferson National Forest is not significant from the standpoint of a conservation loss. The wildlife species in this area have been able to take refuge in the National Forest when human activity has disrupted their lives, but this haven will be only marginally reduced by the extension of the improvement over Cloyd's Mountain. The edge of the right-of-way has traditionally been a "safe area" for trees — when a road is improved, some older trees must always be lost. Perusal of the Army Corps of Engineers' Kanawha Basin Comprehensive Study might be appropriate prior to designing the section linking Giles and Pulaski Counties.

Natural and Historic Landmarks

The state historical marker (which refers to a battle in the War Between the States) at Station 325 will be displaced by the proposed construction, and should be replaced. A plaque (commemorating Col. Edwin H. Harmon) has been removed from the Wayside by vandals.

Noise, Air, and Water Pollution

The environmental team used the computer program developed by the National Cooperative Highway Research Program to simulate the noise that will result from the proposed improvement. Actual readings taken at two locations were as follows:

Station 294 63 dbA
Station 302 76 dbA

Based on a comparison of the computer estimates and the actual readings it is projected that the vehicle noise on the proposed improvement will be no greater than at present.

Air pollution does not appear to be of any major consequence in this area. The improved route structure should allow more efficient engine operation, with resulting lower emissions per vehicle mile.

Water pollution should not be a problem on this project if the construction of the bridge over Back Creek is integrated with an effort to minimize siltation. The numerous small streams flowing down from Little Walker Mountain cause the velocity and volume of water in Back Creek to vary seasonally, which must be taken into consideration in the effort to avoid siltation during the construction phase.

Property Values

The improved access should enhance the general property values in the area. The most noticeably affected is the Dobyns' surveyed subdivision (no construction), which would be sliced into by the proposed construction. The plat lends itself to a resurvey pushing the subdivided parcels to the west, so the take should be compensable. The improved transportation facility might well lead to industrial expansion into the larger tracts abutting the route, as the power supply is more than adequate and the New River Airport is close by.

Multiple Use of Space

If the median strip is used for the Dublin Wayside, this will reflect a multiple use of space. The VDH sand and gravel storage area along Route 100 north of the project might also be used for the displaced wayside since the foul weather activities at this installation would not usually coincide with travelers' usage of it.

Replacement of Housing

No housing will be taken.

Education

Students from this area will soon be bused to the consolidated high school between Dublin and Pulaski County, with a possible doubling of school bus traffic on Route 100 due to the new location. The upgrade of the highway facility should allow safer transport of children to and from educational facilities. The year-old New River Community College, which serves the city of Radford and Montgomery, Floyd, Pulaski and Giles Counties, notices a lower percentage of Giles County students attending than might be expected, particularly in the winter months. The college will not be able to provide Giles County with appropriate and equal service until Route 100 is upgraded to a four-lane facility. The college presently serves 800 students, with a planned expansion to 1,800 by 1980. The industries already in the area, and those the area would like to attract, require a skill level provided by the two-year vocational training program at the college. The residents of Giles County will not have an equal opportunity to gain this training until they can use a transportation facility that they can count on traversing regularly. The condition of the road has a direct effect on educational opportunities, which in turn directly affects job opportunities in this increasingly automated work environment.

Displacement of Families and Businesses

No families or businesses will be displaced. Activities of the Cloyd's Mountain Truck Stop will be unhampered as a crossover is provided for southbound traffic. This business serves as an informal communication center for the truckers plying this route.

ATTACHMENT 1

LOCAL RESIDENTS INTERVIEWED

NOT FOR PUBLIC CONSUMPTION

L. E. Ward, Jr. -- New River Valley Industrial Commission
Glenn H. Reynolds -- Appalachian Power Company
Dr. Sullins -- New River Valley Community College
Dr. David B. Stanley -- Vice Mayor, Town of Dublin
(Leo Jackson, Mayor of Dublin, was hospitalized.)
Mr. C. E. Free -- Dublin Hardware Co.
Jim Tolbert -- Trucking
Ted Hannah -- Hercules, Inc./Radford Army
Mrs. J. B. Collins -- Local Resident
Mr. and Mrs. George Farris, Local Residents
Mrs. Jean M. King -- Pulaski Chamber of Commerce
Mr. Vernon Newman -- Pulaski County School Board
Mr. R. S. Sutherland -- Lawyer
State Police Headquarters Personnel
Piedmont Airlines Personnel

NOT FOR PUBLIC CONSUMPTION

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ATTACHMENT 2

ENVIRONMENTAL FIELD REPORT

PROJECT DublinPROPOSAL NUMBER 0100-077-105

Parcel No.	Acre		Value (\$)		Total Tax	Take (\$)		Ta Lo
	Total	Take	Land	Improve		Land	Improve	
001	703.61	1.19	16,600	1,410	954.53	1.48	N	
002	2.32	.18	230	820	55.65	.95	O	
003	15.68	.25	450	0	23.85	.38	N	
004	61.42	3.12	1,840	210	108.65	4.96	E	
005	252.60	.37	7,550	5,220	676.81	.59		
006	15.60	1.06	900	2,550	182.85	3.24	T	
007	513.98	4.42	9,020	4,330	707.55	4.11	A	
008	12.54	3.80	1,350	0	71.55	21.62	K	
009	1.85	.44	340	0	18.02	4.29	E	
010	684.28	11.87	8,230	3,710	631.82	7.55	N	
011	8.57	.31	230	240	24.91	.44		
012	1.18	.12	90	450	28.62	.49		
TOTAL		27.13						

Pulaski County -- 1970 Data

Assessment Ratio: 15.2%

Rate: \$5.30