

FEASIBILITY STUDY

NC 11
Pink Hill to I-40
Lenoir-Duplin Counties
R-2204

Prepared by
Planning and Research Branch
Division of Highways
N. C. Department of Transportation

September, 1987

NC 11
Pink Hill to I-40
Lenoir-Duplin Counties
R-2204

The subject project is included in the 1987-1995 Transportation Improvement Program for feasibility study and/or right-of-way protection. This report provides a brief, initial analysis of possible improvements. The project is not currently funded.

I. GENERAL DESCRIPTION

The proposed project consists of improving NC 11 from Pink Hill to I-40 along the corridor shown in Figures 1 and 2. Improvements should be along the existing alignment except for bypasses of Kenansville and Pink Hill. Provision of a four-lane divided facility (with a 30-foot median) is desirable throughout the studied corridor.

II. PURPOSE OF PROJECT

NC 11 is classified as a major collector route in the North Carolina Functional Classification System. In the studied area NC 11 connects Kinston with Wallace and passes through Kenansville and Pink Hill. NC 11 coincides with NC 24 for a short distance within Kenansville.

Improvements outlined in this report follow a corridor described as follows (see Figure 2):

1. Existing NC 11 from Pink Hill to Kenansville
2. New location (bypass) around the south side of Kenansville, connecting to I-40
3. New location (bypass) around the north side of Pink Hill.

As a result of proposed improvements, NC 11 would be rerouted south of Kenansville (along the proposed bypass). NC 11 would follow the general corridor of NC 903 to connect directly with I-40. NC 24 would also be rerouted along the proposed bypass, to I-40.

The purpose of the project is to provide increased capacity and a higher level of service for NC 11 traffic. Provision of additional lanes would improve traffic flow. The proposed bypasses would provide a higher level of service for through traffic.

The project is compatible with long range plans by NCDOT to upgrade the level of traffic service from the Greenville-Kinston area to I-40. The proposed four lane highway and connector to I-40 will enhance the economic growth potential of this area and also improve the safety for the increasing traffic volumes.

An additional NC 11 project (R-2001) (See Figure 1) is contained in the Transportation Improvement Program. This programmed project would improve NC 11 to a multi-lane facility from Pink Hill to NC 55 near Kinston. Construction is scheduled for fiscal year 1993. Provision of this programmed project, along with the improvements recommended in this report, would result in a multi-lane facility from Kinston to I-40.

III. EXISTING CONDITIONS

A description of existing roadways within the studied corridor is as follows:

NC 11, from Pink Hill to Kenansville, is a two-lane facility, consisting of a 22-foot pavement within a 100-foot right-of-way. Current traffic volumes range from 2800 vpd to 3400 vpd, resulting in Level of Service B. Horizontal alignment is generally good. Vertical alignment is flat. Approximately 50 percent of the route has a passing sight distance greater than 1500 feet.

Within Pink Hill, NC 11 is a two-lane facility, with a left turn lane at NC 241. The current traffic volume ranges from 1800 VPD to 4000 VPD.

Within Kenansville, NC 11 is a two and three lane curb and gutter facility. The current traffic volume is 9100 VPD, resulting in Level of Service D. The posted speed limit within Kenansville is 35 MPH. Development is full-density commercial, industrial, and residential. Widening of the existing route through town is prohibited by the presence of historical properties.

NC 903, southwest of Kenansville is a two-lane rural facility with a current traffic volume of 2100 VPD. NC 903 consists of a 20-foot pavement within a 60-foot right-of-way. Although the alignment is good, pavement condition is poor.

Seven structures are located on the studied segment of NC 11. The characteristics of these bridges are shown below:

	Bridge No. 59	Bridge No. 69	Bridge No. 72	Bridge No. 77	Bridge No. 79	Bridge No. 81	Bridge No. 82
Width (feet)	26.0	24.0	26.0	26.3	26.0	30.0	26.0
Length (feet)	96	53	127	127	112	137	65
Sufficiency Rating	76.7	58.2	69.0	72.5	77.9	93.4	62.6
Date Constructed	1922	1922	1922	1922	1922	1987	1922
Remaining Life (years)	15	15	20	20	20	50	20
Weight Limit	None						

On the rural segment of the studied route, a total of 64 accidents were reported in a recent 3½-year period. This resulted in an accident

rate of 1.36 accidents per 100 million vehicle miles, which is somewhat lower than the statewide average of 197.7 accidents per 100 million vehicle miles for two-lane NC routes.

IV. RECOMMENDATIONS

Provision of a four-lane divided facility throughout the studied corridor is desirable. This can best be accomplished by implementing the following improvements:

1. Construct a new bypass south and east of Kenansville along the corridor shown in Figure 2. Provision of a four-lane divided facility with a 30-foot median is recommended. A right-of-way width of approximately 225 feet will be required. Full control of access should be acquired. Estimated cost is approximately \$14,000,000.
2. Construct a new bypass north of Pink Hill along the corridor shown in Figure 2. Provision of a four-lane divided facility with a 30-foot median is recommended. A right-of-way width of approximately 225 feet will be required. Full control of access should be acquired. Estimated cost is approximately \$3,700,000.
3. Widen existing NC 11 from Pink Hill to Kenansville. Provision of a four-lane divided facility with a 30-foot median is recommended. The two new lanes should transition from south side to north side to minimize property disruption. The existing lanes are to be resurfaced. Paved shoulders should be added. Approximately 50 feet of additional right-of-way will be required on the side to be widened. Estimated cost is approximately \$18,700,000.

The improvement of NC 24 from Beulaville to I-40 is also included in the 1987-1995 Transportation Improvement Program (for feasibility study and/or right-of-way protection) as project R-2211. The proposed Kenansville bypass (recommended in this subject report) will also be recommended in the feasibility study for R-2211. This facility will serve as a bypass for NC 24, NC 11, and NC 903.

Traffic volumes along the proposed improvement are shown in Figure 2 and are summarized as follows:

	<u>Initial (1987)</u>	<u>Projected (2007)</u>
NC 11, Kenansville to Pink Hill	2800-3400 VPD	5100-6200 VPD
Kenansville Bypass, South of NC 24	3600 VPD	5900 VPD
Kenansville Bypass, North of NC 24	2400 VPD	4400 VPD
NC 903	3300 VPD	6000 VPD

Additional studies will be necessary to determine the feasibility of acquiring rights-of-way (at major intersecting routes) to accommodate future interchanges.

In view of the rather low volumes projected for the Pink Hill bypass, it may be feasible to construct two lanes (initially) on four-lane right-of-way.

V. ESTIMATED COSTS

The estimated cost of recommended improvements is as follows:

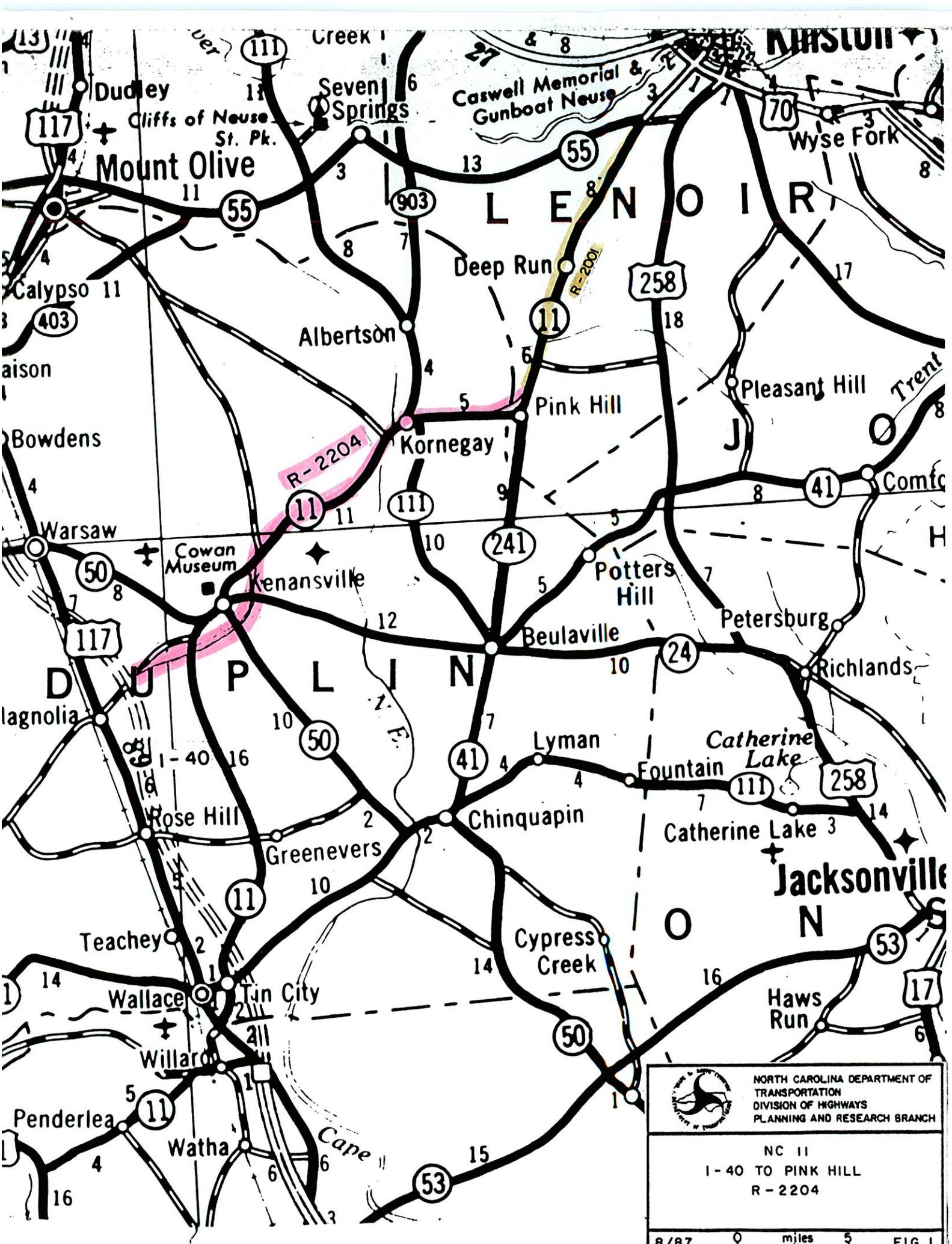
	<u>Existing NC 11 Kenansville to Pink Hill</u>	<u>Proposed Kenansville Bypass</u>	<u>Proposed Pink Hill Bypass</u>
Construction	\$12,750,000	\$10,000,000	\$2,950,000
Right-of-Way	<u>\$ 5,950,000</u>	<u>\$ 4,000,000</u>	<u>\$ 750,000</u>
TOTAL	\$18,700,000	\$14,000,000	\$3,700,000

VI. ENVIRONMENTAL IMPACT

The most significant environmental impact is the relocation of approximately 67 families and 4 businesses. Other impacts include some increase in noise levels, the possible loss of some wetlands at stream crossings, and the conversion of farmland to highway purposes.

If the project is to be implemented at a future date, all feasible alternatives and their associated impacts should be evaluated in a planning and environmental document prior to that time, and a final decision made as to the most appropriate improvement.

WE/wp




 NORTH CAROLINA DEPARTMENT OF
 TRANSPORTATION
 DIVISION OF HIGHWAYS
 PLANNING AND RESEARCH BRANCH

NC 11
 I-40 TO PINK HILL
 R-2204

8/87 0 miles 5 FIG. 1

