



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

1534 MAIL SERVICE CENTER, RALEIGH, N.C. 27699-1534

W. LYNDO TIPPETT  
SECRETARY

June 4, 2002

**MEMORANDUM TO:** Mr. D. M. Campbell, Jr., Member, Board of Transportation  
Mr. Terry Gibson, P.E., Division Engineer, Division 6  
Mr. David King  
Mr. Calvin Leggett, P.E.  
Mr. Troy Peoples, P.E. (3) Attention: Jim Dunlop, P.E.  
Mr. John Williamson  
Mr. Bill Gilmore, P.E. (2)  
Ms. Deborah Barbour, P.E.  
Mr. Jay Bennett, P.E.  
Mr. Blake Norwood, P.E.  
Mr. A. L. Avant  
Mr. J. M. McIntyre, P.E.  
Mr. Doug Lane  
Mr. Burt Tasaico, P.E., Attention: Omar S. Sultan  
Mr. Rick Heicksen, Secretary, Fayetteville Urban Area M.P.O.

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**FROM:** Ms. Nicole M. Hackler *Nicole M. Hackler*  
Feasibility Studies Unit

**SUBJECT:** Feasibility Study FS-0106A; SR 1112 (Rockfish Road) from SR 1115 (Golfview Road) to NC 59 (Main Street). Evaluate the need to widen the existing roadway in Hope Mills; Cumberland County.

Our staff has completed a feasibility study for the proposed project referenced above. This brief analysis suggests improvements that would be logical if the project were to be funded. A copy of our report is attached for your information.

NMH/nmh

Attachment

cc: Mr. Len Hill, P.E.  
Mr. Len Sanderson, P.E.

# FEASIBILITY STUDY

**Town of Hope Mills**

**SR 1112 (Rockfish Road) from SR 1115 (Golfview Road)  
to NC 59 (Main Street) in Hope Mills**

**Cumberland County**

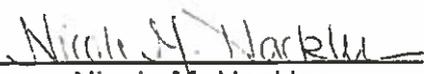
**Division 6**

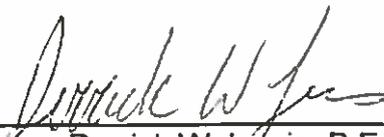
**FS-0106 A**

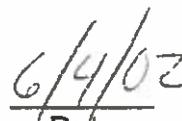


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Prepared by the  
Program Development Branch  
Division of Highways  
N. C. Department of Transportation

  
\_\_\_\_\_  
Nicole M. Hackler  
Feasibility Studies Engineer

  
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Derrick W. Lewis, P.E.  
Feasibility Studies Engineer

  
\_\_\_\_\_  
Date

**SR 1112 (Rockfish Road) from SR 1115 (Golfview Road)  
to NC 59 (Main Street) in Hope Mills  
Cumberland County  
FS-0106 A**

**I. General Description**

This feasibility study describes upgrading SR 1112 (Rockfish Road) from SR 1115 (Golfview Road) to NC 59 (Main Street) in Hope Mills, a distance of approximately 0.7 miles. The project location is shown on Figure 1. As part of this study three different cross-sections were investigated. The details of each are as follows:

- ◆ **ALTERNATIVE #1:** Three-lane curb and gutter section on a combination of 100- and 120-feet of right-of-way.
- ◆ **ALTERNATIVE #2:** Five-lane curb and gutter section on a combination of 100- and 120-feet of right-of-way.
- ◆ **ALTERNATIVE #3:** Four-lane divided curb and gutter section on a combination of 100- and 120-feet of right-of-way.

This study is the initial step in the planning and design process for this project and is not the product of exhaustive environmental or design investigations. The purpose of this study is to describe the proposed project including costs, and to identify potential problems that may require consideration in the planning and design phases.

**II. Background**

The purpose of this project is to increase the traffic carrying capacity and safety of SR 1112 (Rockfish Road), as well as provide improved multilane access to both NC 59 (Main Street) and SR 1115 (Golfview Road) in Hope Mills.

SR 1112 (Rockfish Road) is designated as a minor arterial in the North Carolina Statewide Functional Classification System. SR 1112 is currently a two-lane shoulder section, 24 feet wide from edge of pavement to edge of pavement. The development along this road is a combination of residential, institutional development (Rockfish Road Elementary School), municipal (police station, fire department, town hall, Veterans' Memorial and a recreational park which is encircled by a memorial bikeway) and commercial development at the intersection of NC 59 (Main Street).

There are two existing traffic signals on Rockfish Road, one at the intersection of SR 1115 (Golfview Road) and the other at the intersection of NC 59 (Main Street).

The current year Average Daily Traffic (ADT) along SR 1112 (Rockfish Road) within the project limits is 11,000 vehicles per day (vpd). For the design year 2025, the estimated traffic volumes on SR 1112 will be 18,600 vpd. Truck traffic is estimated to make up approximately three percent of the daily traffic.

Currently the intersections along this section of Rockfish Road operate at Level of Service (LOS) "B" at SR 1115 (Golfview Road) and LOS "D" at NC 59 (Main Street). If no improvements are made, both of these intersections will be operating at an LOS "F" in the design year 2025. In order to further improve traffic operations, additional intersection improvements have been included in this project.

During the three-year period from January 1998 to December of 2000, there were 42 accidents reported within the project limits. There were 15 injuries reported as a result of these incidents with no fatalities. The accident rate for this short 0.7-mile roadway is 561.89 accidents per 100 million vehicle miles of travel (acc/100mvm). However, due to the very short section and high number of accidents, a comparison with a statewide accident rate is not valid.

### III. Description of Project

It is proposed to widen SR 1112 (Rockfish Road) from SR 1115 (Golfview Road) to NC 59 (Main Street), a distance of 0.7 miles. The project location is shown on Figure 1. Three cross-sections were proposed for this project and are as follows:

**ALTERNATIVE #1:** Three-lane curb and gutter section, 40' wide face to face of curbs, with 10-foot berms. The proposed right of way width for this section is a combination of 100- and 120-feet, which will permit future widening along Rockfish Road in order to accommodate traffic volumes as they increase.

With this proposed cross-section, it is anticipated there will be 0 (zero) residences and 0 (zero) businesses relocated due to this project. The total cost of this alternative, including construction and right-of-way, is estimated to be \$ 3,050,000.

Construction.....	\$ 1,800,000
Right-of-Way.....	\$ 1,250,000

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Total Project Cost (Alternative 1).....	\$ 3,050,000
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**ALTERNATIVE #2:** Five-lane curb and gutter section, 64' wide face to face of curbs, with 10-foot berms. The proposed right of way width for this section is a combination of 100- and 120-feet.

With this proposed cross-section, it is anticipated there will be 0 (zero) residences and 0 (zero) businesses relocated due to this project. The total cost of this alternative, including construction and right-of way, is estimated to be \$ 3,950,000.

Construction.....	\$ 2,700,000
Right-of-Way.....	\$ 1,250,000

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Total Project Cost (Alternative 2).....\$ 3,950,000

**ALTERNATIVE #3:** Four-lane divided curb and gutter section, 70-foot wide face to face of curbs, with an 18-foot raised grassed median and 10-foot berms. The proposed right of way width for this section is a combination of 100- and 120-feet.

With this proposed cross-section, it is anticipated there will be 0 (zero) residences and 0 (zero) businesses relocated due to this project. The total cost of this alternative, including construction and right-of way, is estimated to be \$ 4,750,000.

Construction.....	\$ 3,500,000
Right-of-Way.....	\$ 1,250,000

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Total Project Cost (Alternative 3).....\$ 4,750,000

In addition to the alternatives listed above, it was necessary to include road improvements on NC 59 (Main Street) at the intersection of Rockfish Road. These improvements include widening the existing four-lane section to a five-lane curb and gutter section, 64-feet wide face to face of curbs with 10-foot berms. This section would accommodate the proposed dual left turn lanes from NC 59 onto Rockfish Road, as well as provide two westbound through lanes on NC 59. The costs associated with these improvements to NC 59 were estimated to be \$ 2,450,000.

Construction.....	\$ 1,600,000
Right-of-Way.....	\$ 850,000

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Total Cost (NC 59 Improvements).....\$ 2,450,000

In order to get full utilization of the above-listed improvements, NC 59 (Main Street) will need to be widened to a multilane facility, which is beyond the scope of this project.

It should also be noted that two bicycle alternatives were investigated for this project. The first was a "Share the Road" alternative, which includes two additional feet of unmarked pavement on each side of the roadway. The cost for this option would add an additional \$150,000 to the project cost.

The second bicycle alternative investigated was a four-foot marked bicycle lane on each side of the roadway. This option would add an additional \$300,000 to the project cost.

#### IV. Recommendations

**ALTERNATIVE #1:** The analysis for the three-lane curb and gutter section showed it would not be able to accommodate the projected 2025 design year volumes with an acceptable level of service. For this reason, Alternative #1 was not selected as the recommended option.

**ALTERNATIVE #2 & ALTERNATIVE #3:** It was found that both the five-lane curb and gutter section (Alternative #2) and the four-lane divided curb and gutter section (Alternative #3) would be able to accommodate design year 2025 volumes. However, five-lane sections tend to promote strip development and indiscriminate left turn movements, while four-lane divided sections minimize strip development, prevent indiscriminate left turn movements and allow pedestrian refuge if needed. ***Because of these factors, Alternative #3 would be the preferred option for the proposed SR 1112 (Rockfish Road) widening.***

The total cost of the preferred alternative, including the proposed widening of Rockfish Road, intersection improvements on NC 59 (Main Street) and a "Share the Road" bicycle configuration is \$ 7,350,000.

#### V. Additional Comments

A detailed environmental study was not conducted for this feasibility study. However, existing information available for this area has been screened for environmental and historic concerns, and no impacts to historic properties or wetlands are anticipated.

Based on maps at the Department of Environment, Health & Natural Resources and Natural Heritage Section, impacts to threatened or endangered species are not anticipated in the project area.

It should be noted that due to extensive public facilities within the limits of this project, conflicts with Section 4F are anticipated.

