



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY  
GOVERNOR

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

W. LYNDO TIPPETT  
SECRETARY

July 29, 2002

**MEMORANDUM TO:** Mr. Marion A. Cowell, Jr., Member, Board of Transportation  
Mr. Benton Payne, P.E., Division Engineer, Division 10  
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. Van Argabright, P.E.  
Mr. Doug Lane  
Mr. Omar Sultan  
Mr. Lee Myers, Mecklenburg-Union M.P.O.  
Mr. Ralph Messera, Matthews Town Manager

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**FROM:**

Ms. Nicole M. Hackler  
Feasibility Studies Unit

*Nicole M. Hackler*

**SUBJECT:**

Feasibility Study FS-0110C; McKee Road Extension from Pleasant Plains Road (SR 3448) to Campus Ridge Road (SR 3457) in Matthews; Mecklenburg 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 Matthews

McKee Road Extension from Pleasant Plains Road (SR 3448) to  
Campus Ridge Road (SR 3457)

Mecklenburg County

Division 10

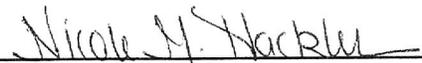
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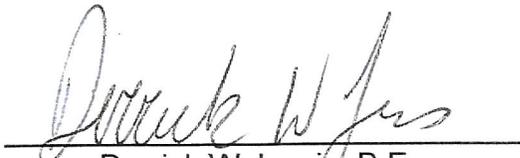
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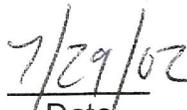


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Prepared by the  
Program Development Branch  
Division of Highways  
N. C. Department of Transportation

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

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

  
\_\_\_\_\_  
Date

**McKee Road Extension from Pleasant Plains Road (SR 3448) to  
Campus Ridge Road (SR 3457) in Matthews  
Mecklenburg County  
FS-0110C**

**I. General Description**

This feasibility study describes extending McKee Road from Pleasant Plains Road (SR 3448) to Campus Ridge Road (SR 3457) in Matthews, a distance of approximately 1.1 miles. The project location is shown on Figure 1. As part of this study a two-lane cross section was investigated. The details are as follows:

- ◆ Two lane section asymmetrically placed on 100' right of way, which will allow for future widening to a four-lane divided section with a raised grassed median.

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 provide improved access to the Central Piedmont Community College South Campus (CPCC). This new corridor will relieve congestion and help increase safety on the surrounding roadways, as well as improve access to both John Street (SR 1009) and Pleasant Plains Road (SR 3448) in the Town of Matthews. The extension of McKee Road is also anticipated to promote community interconnectivity by providing an alternate route to the Charlotte Outer Loop (I-485).

Two new traffic signals may be needed on the McKee Road extension, one at McKee Road and Pleasant Plains Road (SR 3448) and the other at McKee Road and John Street (SR 1009).

The estimated 2001 Average Daily Traffic (ADT) along the new section of roadway is 3700 vehicles per day (vpd). For the design year 2025, the estimated traffic volumes on McKee Road will be up to 9600 vpd. Truck traffic is estimated to make up approximately three percent of the daily traffic. Based on the projected design year traffic volume, the proposed facility is expected to function

at a Level of Service (LOS) C or better in the current year, and with the proposed two-lane cross section, the facility is expected to operate at a LOS D or better in the 2025 design year. In order to further improve traffic operations additional intersection improvements have been included in this project.

### III. Description of Project

It is proposed to extend McKee Road from Pleasant Plains Road (SR 3448) to Campus Ridge Road (SR 3457) in Matthews, a distance of approximately 1.1 miles. The project location is shown on Figure 1. A two-lane cross section was investigated for this extension, the details of which are below:

Two-lane asymmetrical section with shoulder on the south side, and curb and gutter on the north side. This section will be 28' from edge of pavement to face of curb, with a 10' berm on the north side. The proposed right of way width is 100'. Should the ultimate section be desired in the future (a four-lane divided curb and gutter section with a raised grassed median), the asymmetrical placement of the proposed two-lane section will allow for ease in retrofitting to the south.

With the proposed two-lane cross-section, it is anticipated there will be 11 (eleven) residences and 1 (one) businesses relocated due to this project. The total cost of this alternative, including construction and right-of-way, is estimated to be \$ 9,500,000. Please note the construction cost below includes necessary widening/improvements at the intersections of McKee Road and Pleasant Plains Road (SR 3448) and McKee Road and John Street (SR 1009), in order to accommodate new turning lanes at these locations.

Construction.....	\$ 3,900,000
Right-of-Way.....	\$ 5,600,000

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Total Project Cost .....\$ 9,500,000

A separate cost for a 5' sidewalk on the north side of McKee Road for the entire length of the project was estimated to add an additional \$100,000 to the project cost.

As requested by Mecklenburg-Union Metropolitan Planning Organization, the cost for an additional 2' of pavement on each side of McKee Road was also investigated. This pavement would be sufficient to accommodate bicycle lanes on both sides, and was estimated to add an additional \$200,000 to the project cost.

#### **IV. Recommendations**

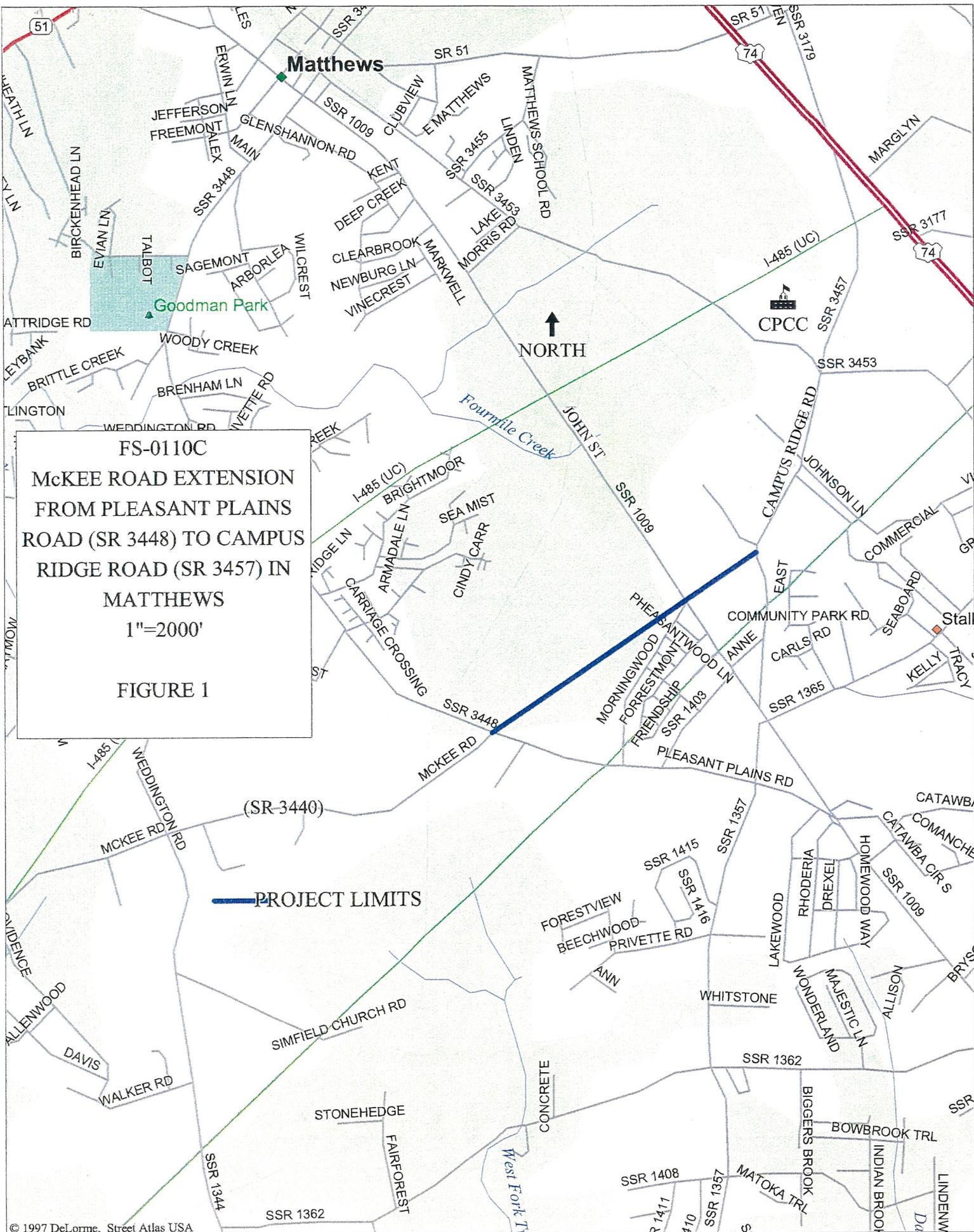
The analysis for the two-lane section showed it would be able to adequately accommodate the projected 2025 design year volumes with an acceptable level of service. For this reason, the two-lane section was selected as the recommended option. Further, should improvements to McKee Road extension be desired after Design Year 2025, widening from the two-lane section to a four-lane section would be uncomplicated. The proposed asymmetrical alignment of this project would provide ease of construction to the south for any future widening.

The total project cost, including the proposed extension of McKee Road from Pleasant Plains Road (SR 3448) to Campus Ridge Road (SR 3457), sidewalk and bicycle accommodations, as well as intersection improvements at both McKee Road and Pleasant Plains Road (SR 3448) and McKee Road and John Street (SR 1009) is \$ 9,800,000.

#### **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.



FS-0110C  
 McKEE ROAD EXTENSION  
 FROM PLEASANT PLAINS  
 ROAD (SR 3448) TO CAMPUS  
 RIDGE ROAD (SR 3457) IN  
 MATTHEWS  
 1"=2000'  
 FIGURE 1

— PROJECT LIMITS