

FEASIBILITY STUDY

Clayton

Front Street Extension
From Central Street to SR 2022 (Old NC 42)
Johnston County

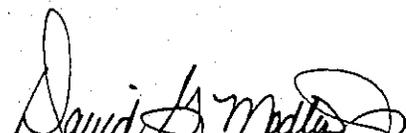
Division 4

U-3605

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



William J. Watson, P.E.
Highway Planning Engineer



David G. Modlin, Jr., Ph.D., P.E.
Head of Feasibility Studies

2/21/97
Date

Clayton
Front Street Extension
From Central Street to SR 2022 (Old NC 42)
Johnston County
U-3605

I. GENERAL DESCRIPTION

This preliminary study describes the proposed extension, on new location, of Front Street from Central Street to SR 2022 (Old NC 42) in Clayton. Two routes were studied, as shown on Figure 1. The proposed cross-section, for the first 800 feet (244 m), is a 2-lane, curb-and-gutter section, 32 feet (8.8 m) wide from face-to-face of curbs. The cross-section for the remainder of the project is a 24-foot (7.3 m) wide pavement with 4-foot (1.2 m) wide paved shoulders. A need for bicycle accommodation has been identified for this project and these cross-sections will provide such accommodation. The total project length for the recommended alternate is approximately 4,500 feet (1,370 m). The required right-of-way width is 100 feet (30.5 m).

The recommended alignment is Alternate 1. Alternate 1 is estimated to be approximately \$200,000 more costly than Alternate 2; however, Alternate 1 avoids a potentially toxic waste site and avoids the relocation of a business. The waste site was identified by the Town of Clayton as the former site of an agricultural chemical sales company.

This project (Alternate 1) will likely require no business or residential relocations. The total cost including construction and right-of-way is estimated to be \$1,500,000.

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 needs, recommend a treatment including costs, and identify potential problem areas that require consideration in the planning and design phases.

II. NEED FOR PROJECT

The purpose of this project is to enhance current and future east-west traffic flow in Clayton. The extension of Front Street will provide a direct connection between the Clayton Central Business District (CBD) and NC 42 east of Clayton. The connection provided by this project will enhance traffic flow for area motorists including emergency vehicles. This project was requested by the Town of Clayton and appears to have strong local support. Front Street is a not on the State Highway System and is not classified in the North Carolina Statewide Functional Classification System.

Front Street is a Minor Thoroughfare on the Clayton Thoroughfare Plan. Land along the project corridor is mostly undeveloped.

Existing Front Street is a 2-lane, curb-and-gutter section, approximately 30 feet (9.1 m) wide from face-to-face of curbs.

Traffic volume estimates for Front Street Extension, between Central Street and Old NC 42, for the years 1996 and 2020 are 900 vehicles per day (vpd) and 3,400 vpd respectively. The Level of Service (LOS) based on the years 1996 and 2020 respectively are LOS B and LOS C.

III. RECOMMENDATIONS

It is proposed to extend Front Street from Central Street to SR 2022 (Old NC 42) in Clayton. The recommended alignment is Alternate 1. Alternate 1 is estimated to be approximately \$200,000 more costly than Alternate 2, however, Alternate 1 avoids a potentially toxic waste site, and avoids the relocation of a business. The proposed cross-section, for the first 800 feet (244 m), is a 2-lane, curb-and-gutter section, 32 feet (9.8 m) wide from face-to-face of curbs. The cross-section for the remainder of the project is a 24-foot (7.3-m) wide pavement with 4-foot (1.2-m) wide paved shoulders. A need for bicycle accommodation has been identified for this project and these cross-sections will provide such accommodation. The total project length for the recommended alternate is approximately 4,500 feet (1,370 m). The required right-of-way width is 100 feet (30.5 m).

This project (Alternate 1) will likely require no business or residential relocations. The total cost including construction and right-of-way is estimated to be \$1,500,000 as follows:

Right-of-Way	\$ 200,000
Construction	<u>1,300,000</u>
Total Cost	\$1,500,000

IV. OTHER COMMENTS

An environmental screening was not conducted for this study. Some wetlands and the possibility of a toxic waste site were identified, by the Town of Clayton, on the alignment for Alternate 2. The waste site was identified by the Town of Clayton as the former site of an agricultural chemical sales company.

The NCDOT Office of Bicycle and Pedestrian Transportation recommends bicycle accommodations for this project, and the Town of Clayton has requested such accommodation, and is currently in the process of developing a master plan which includes a bicycling element. The recommended cross-sections will provide 14-foot (4.2-m) wide lanes in the curb-and-gutter section, and 4-foot (1.2-m) wide paved shoulders in the shoulder section to provide the requested accommodation. The estimated cost is \$150,000.

The railroad shown on Figure 1 has a 200-foot (61-m) wide right-of-way width. Either of the alternates discussed above can be built without requiring railroad right-of-way.

