

FEASIBILITY STUDY

SR 2179 (New Garden Road)
From SR 2136 (Fleming Road) to Brassfield Road
Greensboro, Guilford County
U-2914

Prepared by
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I. GENERAL DESCRIPTION

This preliminary study describes proposed improvements to SR 2179 (New Garden Road) in Greensboro. It is proposed to widen two segments on New Garden Road as follows: 1) From SR 2136 (Fleming Road) to approximately 0.4 miles southwest of Will-Doskey Road, and 2) From approximately 300 feet northeast of Will-Doskey Road to Brassfield Road, a total construction length of approximately 2.1 miles. New Garden Road between these two segments is currently being widened to a 5-lane cross section, for a distance of approximately 0.45 mile, under project U-510 (Bryan Boulevard Extension). Please see Figure 1 for the project location.

A 5-lane curb and gutter section (64 feet face to face) with two travel lanes in each direction and a center turn lane is proposed for the entire length of each segment of this project. The proposed right of way width is 100 feet. The existing right of way width is believed to vary from 60 to 70 feet.

The widening will retain and utilize the existing roadway alignment to the extent possible.

It is estimated that there will be no residences or businesses relocated as a result of this project.

The total cost for right of way and construction is estimated to be \$ 4,800,000.

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 the study is to describe the problem, recommend a treatment including costs, and identify potential problem areas that may require consideration in the planning and design phases.

II. NEED FOR PROJECT

The purpose of this project is to improve the traffic carrying capacity and accident experience of New Garden Road from Fleming Road to Brassfield Road.

New Garden Road is designated a minor thoroughfare on the Greensboro Urban Area Thoroughfare Plan. It is classified a Minor Arterial in the North Carolina Statewide Functional Classification System.

The project route is located in a rural setting consisting of farm lands, pasture, and wooded lands with light density residential development.

New Garden Road is generally a 2-lane, 2-way, shoulder section with 6 foot wide soil shoulders. The roadway width generally varies from 24 feet to 36 feet.

The western project terminal, at Fleming Road, is a signalized intersection. The north leg of Fleming Road is a 5-lane curb and gutter section (68 feet face to face) and consists of one combination thru-right lane, one thru lane, one left turn lane, and two lanes exiting the intersection. The south leg on New Garden Road is a 6-lane curb and gutter section (76 feet wide from face to face of curbs) consisting of one right turn lane, two thru lanes, one left turn lane, and two lanes exiting the intersection. The east leg on New Garden Road has been widened at this intersection to provide one right turn lane, one thru lane, two left turn lanes, and two lanes exiting the intersection. The west leg of this intersection, Ballinger Road, consists of one left turn lane, one thru lane, one right turn lane, and one lane exiting the intersection.

In addition to the intersection at the western project terminal, the intersections with SR 2182 (Horse Pen Creek Road) and SR 2177 (Jefferson Road) are signalized.

The eastern project terminal is just west of Brassfield Road where the existing cross section is a 5-lane curb and gutter section (58 feet face to face) for a distance of approximately 500 feet east and west of Brassfield Road.

There is a 2-lane bridge located on New Garden Road at approximately 0.15 miles northeast of SR 2177 (Jefferson Road). This bridge was constructed in 1969, is 31 feet long with a deck width of 36.6 feet, and has a sufficiency rating of 59.9 out of a possible 100 points. It is recommended that this bridge be replaced.

The Average Daily Traffic (ADT) on New Garden Road was 10,500 vehicles per day (vpd) in 1991. The design year (2015) volume is estimated to be 23,300 vpd.

The Level Of Service (LOS) on New Garden Road is estimated to currently be at a level D. With the proposed improvements the LOS is expected to improve to a level B and reach a level C by the design year (2015). Without the proposed improvements, the level of service is expected to reach a level E before the design year.

During the period from January 1, 1989 through May 31, 1992, there were 114 accidents reported on New Garden Road between Fleming Road and Brassfield Road.

(Acc/100MVM) compared to a statewide average of 308.7 Acc/100 MVM for all urban secondary routes during 1992. There were two fatalities reported during the period, and 53 of the accidents resulted in injuries. The most prevalent accident types were ran off road (28.07%), rear end (27.2%), and left turn (16.7%). The wider cross section with center turn lane proposed will reduce the potential for these types of accidents.

III. RECOMMENDATIONS

It is proposed to widen two segments on New Garden Road as follows: 1) From SR 2136 (Fleming Road) to approximately 0.4 miles southwest of Will-Doskey Road, and 2) From approximately 300 feet northeast of Will-Doskey Road to Brassfield Road, a total construction length of approximately 2.1 miles. New Garden Road between these two segments is currently being widened to a 5-lane cross section, for a distance of approximately 0.45 mile, under project U-510. Please see Figure 1 for the project location.

A 5-lane curb and gutter section (64 feet face to face) with two travel lanes in each direction and a center turn lane is proposed for the entire length of each segment of this project. The proposed right of way width is 100 feet. The existing right of way width is believed to vary from 60 to 70 feet.

The widening will retain and utilize the existing roadway alignment to the extent possible.

It is also recommended that the 2-lane bridge located northeast of SR 2177 (Jefferson Road) be replaced with a new bridge with a 72 foot wide clear deck width.

It is estimated that there will be no residences or businesses relocated as a result of this project.

At the western project terminal the project should tie into the 6-lane curb and gutter section just east of Fleming Road. At the eastern project terminal the project should tie into the existing 58 foot wide section immediately west of Brassfield Road. Both project segments will tie into the 5-lane cross section being constructed under Project U-510.

The total cost for right of way and construction is estimated to be \$ 4,800,000 as follows:

Right of Way -----	\$ 1,600.000
Construction -----	3,200,000

Total Cost -----	\$ 4,800,000

V. OTHER COMMENTS

The Office of Bicycle and Pedestrian Transportation has identified New Garden Road as a road with the potential for significant bicycle use, and has requested that differential lane striping be employed on this project to provide outside lanes 13 feet wide, two inside lanes each 11 feet wide, and a center, two-way turn lane 12 feet wide. Also, in the design phase, techniques and ideas should be explored with regard to lane configurations in the Bryan Boulevard interchange area, to protect bicyclists from the heavy turning movements to and from Bryan Boulevard.

The City of Greensboro plans to widen New Garden Road from Brassfield Road to US 220 (Battleground Road) in 1994. The proposed cross section is a 5-lane curb and gutter section (58 feet face to face).

Between the two roadway segments recommended for improvement under this project, and for a distance of approximately 0.45 miles, New Garden Road has been widened as part of projects U-510 (Bryan Boulevard Extension). The widened section begins approximately 0.4 miles Southwest of Will-Doskey Road and extends eastwardly to approximately 275 feet on the east side of Will-Doskey Road. This widened section is a 5-lane median divided shoulder section (68 feet edge of pavement to edge of pavement) from 0.4 miles southwest of Will-Doskey Road to Horse Pen Creek Road and a 5-lane curb and gutter divided section (68 feet face to face) from Horse Pen Creek Road to Will-Doskey Road. A new bridge (75 feet clear deck width) and interchange ramps have also been constructed in this area.

An environmental screening was not conducted for this study.

