

FEASIBILITY STUDY

Winston-Salem
US 158 (Stratford Road)
Between New I-40 Bypass and Clemmonsville Road (SR 1120)
Forsyth County
U-2311

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The subject project is included in the 1988-1996 Transportation Improvement Program (TIP) for feasibility study and/or right of way protection. This study considers alternative improvements and recommends the most feasible alternative. The project is not currently funded, however, the City of Winston-Salem is interested in protecting right of way in this corridor for construction of the recommended improvements.

I. GENERAL DESCRIPTION

The proposed project consists of widening US 158 (Stratford Road) from Frontis Street to Clemmons Road (see Figure 1), a distance of 2.8 miles. Provision of an urban five-lane facility is proposed at a total estimated cost of \$_____.

II. EXISTING CONDITIONS

Stratford Road is designated as a major thoroughfare by the mutually adopted Winston-Salem Thoroughfare Plan and functions as a principle arterial according to the Statewide Functional Classification Plan. The route is a part of the federal-aid urban system FAU-7533 and provides access between Winston-Salem and Clemmons.

The northern terminal of the studied project adjoins project I-900 AB (I-40, from US 421 to Kernersville, see Figure 1). Construction began on this project in late May 1987 and the projected final completion is currently scheduled for 1995. Part of the roadway within the South Stratford Road area may be completed by 1992. The southern terminal of the subject project will likely adjoin project R-2247 (Winston-Salem Northern Beltway, see Figure 1). No schedule has been set for construction of this project.

The subject route currently carries approximately 12,300 vehicles per day (VPD) projected to increase to 22,800 VPD by the year 2008 (see Figure 3). These volumes include 4% dual-tired trucks, 2% truck tractor, semi-trailers and a 10% design hour volume. The route is currently operating at a level of service C, however, it will be operating at a level of service E by the year 2008 without the proposed improvements. By the end of the planning period, the Clemmons Road and Stratford Road intersection will be operating at a level of service F. Level of service F is used to define forced or breakdown flow.

Development along the studied project is moderate in intensity and includes commercial, industrial, office and residential uses. Most of the industrial development is on the east side of the project and includes Stratford Industrial Park, located near the middle of the proposed

project. The majority of the residential development is west of Stratford Road.

Existing Stratford Road is a 22-foot two lane facility with variable 4 to 10-foot unpaved shoulders on both sides. The road is paralleled by one track of the Southern Railroad (see Figure 2) which is used by one train per day. The cross-section of Stratford Road is contained within an existing 100-foot railroad right-of-way to the east and a variable 30 to 50-foot highway right-of-way to the west. The posted speed limit along the studied segment of Stratford Road is 50 MPH with a 45 MPH posted advisory adjacent to the Stratford Industrial Park entrance.

III. RECOMMENDED IMPROVEMENTS

The Winston-Salem thoroughfare plan calls for widening Stratford Road to five lanes in highly developed areas and to four lanes in the less developed areas. Widening Stratford Road to a multi-lane facility will be needed and will be a highly desirable improvement. A five-lane urban facility is also desired by the City-County Planning Board of Forsyth County and Winston-Salem.

Upon completion of the new I-40 interchange, adjacent land along the subject portion of Stratford Road will likely develop resulting in an increased demand for a turning lane. The proposed five-lane section will provide a center turn lane to accommodate this turning traffic. Widening of the facility is proposed on the west side of the existing roadway due to the Southern Railroad tracks which parallel US 158 on the east. Generally, railroad companies will not allow any encroachments within 25 feet of the center of their tracks. Construction of curb and gutter, however, would be allowed on the existing roadway as long as the curb is set at or near the existing edge of pavement. A right-of-way width of 90 feet plus easements would be required to accommodate the proposed cross-section.

The subject portion of US 158 is a part of the bikeways plan for the City of Winston-Salem. At the request of the Bicycle Unit of NCDOT, consideration should be given to paint striping the outside lanes to accommodate bicycle traffic (This does not require additional pavement width only that the inside lane width be narrowed to widen the outside lanes).

The estimated cost for this alternative is \$ _____, including \$3,600,000 for construction and \$ _____ for right-of-way acquisition.

IV. ALTERNATIVES

Widening Stratford Road to a four-lane curb and gutter section was also considered. Based on future traffic demands and the likely increase in turning volumes, a four-lane roadway would effectively operate as two through lanes and two turning lanes resulting in reduced capacity.

V. POSSIBLE ENVIRONMENTAL IMPACTS

The most significant environmental consequence would be the relocation of approximately homes and businesses and the inconvenience to motorists due to construction. There is also the possibility of proximity damage to several of the dwellings along the road. No other significant impacts have been identified.

VI. SCOPE OF STUDY

Construction cost estimates, furnished by the Roadway Design Unit of the NCDOT were based on a 1"=400' contour map and a field review of the project. The Right of Way Branch used the same contour map to furnish right of way estimates.

GB/LS/plr

SR 1120 / US 158
INTERSECTION



SOUTHERN RAILROAD
RUNNING PARALLEL TO
US 158



EXAMPLE OF TIGHT
RIGHT OF WAY
CONSTRAINTS



FIGURE 2

ESTIMATED TRAFFIC VOLUMES SR 2973 TO SR 1120

$$\frac{1988}{2008} = \frac{0000}{0000}$$

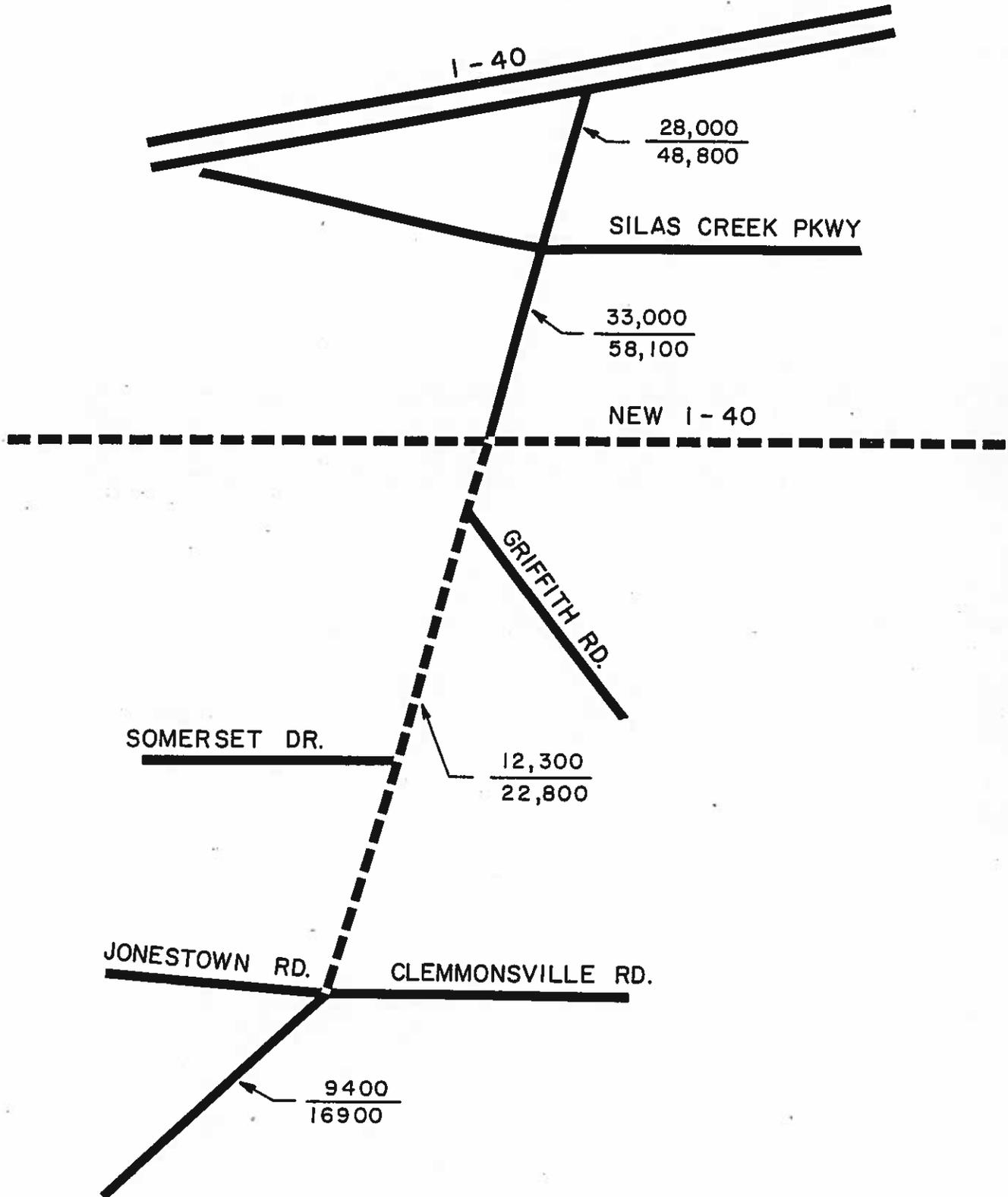


FIGURE 3