

FEASIBILITY STUDY

**New Route (Balfour Parkway)
From US 64 to NC 191**


Henderson County

Division 14

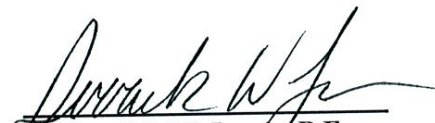
FS-1214B



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



Lynnise M. Hawes, P.E.
Feasibility Studies Engineer



Derrick W. Lewis, P.E.
Feasibility Studies Unit Head



Date

New Route (Balfour Parkway)
from US 64 to NC 191

Henderson County
FS-1214B

I. General Description

This feasibility study describes the proposed new route (Balfour Parkway) from US 64 to NC 191, a distance of approximately 4.6 miles. The project location is shown on Figure 1. As part of the study, several different cross-sections were investigated, the details of which are as follows:

- ◆ Four-lane divided expressway section on 250 feet of right of way.
- ◆ Four-lane divided rural parkway section on 250 feet of right of way.

This 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 cost, 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 traffic operations through the City of Hendersonville by providing an alternate route for traffic.

The French Broad River Metropolitan Planning Organization's and the City of Hendersonville's Comprehensive Transportation Plan identify the Balfour Parkway as an expressway facility.

The following State Transportation Improvement Program (STIP) projects are located within the project corridor:

- I-4400: Widen I-26 to add additional lanes from US 25 (Exit 54) to NC 280 (Exit 40).
- R-5207: Upgrade SR 1539 (Howard Gap Road) from SR 1539 (Jackson Road) to US 64.
- W-5506: Upgrade NC 191 to a three-lane section from SR 1381 (Mountain Road) to north of SR 1365 (North Rugby Road). Extend right turn lane into school, revise and install guardrail, and construct paved shoulders.

There are several existing bridges in the project study area. Please see Table 2 for detailed bridge information.

It is anticipated that this project will have railroad impacts, since the proposed improvements will intersect the Watco Transportation Services Railway. At this location there is one track that carries approximately two trains per day.

III. Traffic and Safety

An existing traffic signal is located at the intersection of NC 191 and SR 1381 (Mountain Road)/SR 1444 (Leverette Drive).

The estimated current year Average Daily Traffic (ADT) along the Balfour Parkway ranges from 10,100 vehicles per day (vpd) to 23,100 vpd. For the design year 2035, the traffic volume along the Balfour Parkway is estimated to range between 15,600 vpd to 30,200 vpd. Truck traffic is estimated to be up to 6 percent of the daily traffic.

The Balfour Parkway is projected to operate at a level of service (LOS) D or better under the estimated design year 2035 traffic volumes.

IV. Description of Alternatives

It is proposed to construct a new route (Balfour Parkway) from US 64 to NC 191, a distance of approximately 4.6 miles. The project location is shown on Figure 1. Included in the costs shown below are new dual bridges over Clear Creek, the realignment of Greystone Drive, the realignment of SR 1513 (Clear Creek Road), a new interchange at the junction with I-26, the removal of existing Bridge No. 217 over I-26, the realignment of Hyder Farm Road, new dual bridges over Mud Creek, and a new interchange at the junction with US 25.

ALTERNATIVE 1: Four-lane divided expressway section, 114 feet from edge of pavement to edge of pavement, with 12-foot travel lanes, a 46-foot depressed median, 4-foot paved inside shoulders, and 10-foot paved outside shoulders on 250 feet of right of way.

With this proposed cross-section, it is anticipated that there will be forty (40) residences and five (5) businesses relocated due to this project. The total cost of this alternative, including right of way, utility relocation, and construction, is estimated to be \$141,200,000.

Right-of-way.....	\$26,300,000
Utility Relocation.....	\$900,000
Construction.....	\$114,000,000
Total Cost (Alternative 1).....	\$141,200,000

ALTERNATIVE 2: Four-lane divided rural parkway section, 102 feet from edge of pavement to edge of pavement, with 12-foot travel lanes, a 46-foot depressed median, 4-foot paved inside shoulders, 8-foot outside shoulders of which 4 feet are paved, and 10-foot multi-use paths on 250 feet of right of way.

With this proposed cross-section, it is anticipated that there will be forty (40) residences and five (5) businesses relocated due to this project. The total cost of this alternative, including right of way, utility relocation, and construction, is estimated to be \$156,200,000.

Right-of-way.....	\$26,300,000
Utility Relocation.....	\$900,000
Construction.....	\$129,000,000
Total Cost (Alternative 2).....	\$156,200,000

If a 30-foot raised grass median is used instead of a 46-foot depressed median the total project cost for each alternative will be reduced by \$4,000,000.

V. Community Issues

A detailed investigation was not conducted for this feasibility study. No impacts to community facilities are anticipated with this project.

Maps at the Survey and Planning Branch of the North Carolina State Historic Preservation Office were used to determine if any historic properties on the National Register of Historic Places (NRHP) or state study lists exist within the proposed project corridor. The Sholtz-Cantrell Estate was found to be potentially historic property.

VI. Natural Environment Issues

The following is a preliminary review of environmental issues that might have a potential impact to the project. The information obtained for the environmental screening is from a Geographic Information System (GIS) database. The purpose of the environmental screening is to identify potential environmental issues early in the process.

Stream Classification

The proposed project study area is located in the French Broad River Basin. The Balfour Parkway crosses several water bodies in the project corridor. Clear Creek and Mud Creek have a stream classification of C. These water bodies will likely need to be surveyed and have the appropriate coordination with the North Carolina Department of

Environment and Natural Resources (NCDENR) and the U.S. Army Corps of Engineers (USACE) during any environmental document study.

Wetlands

The Balfour Parkway crosses wetlands associated with Clear Creek and Mud Creek. Permitting with the U.S. Army Corps of Engineers (USACE) will likely need to be obtained before construction of the project, and appropriate mitigation measures should be taken if deemed necessary. A portion of the project study area is located in a water supply watershed. A portion of the project study area is located in a 100 and 500-year floodplains.

Threatened and Endangered Species

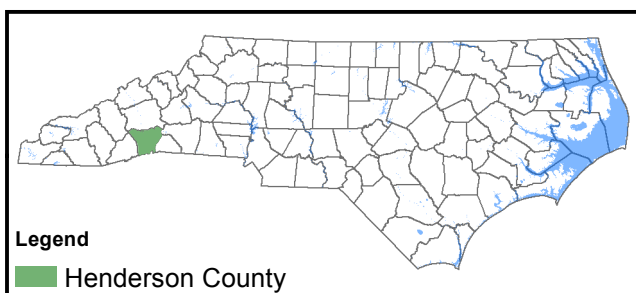
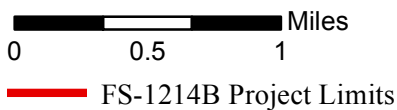
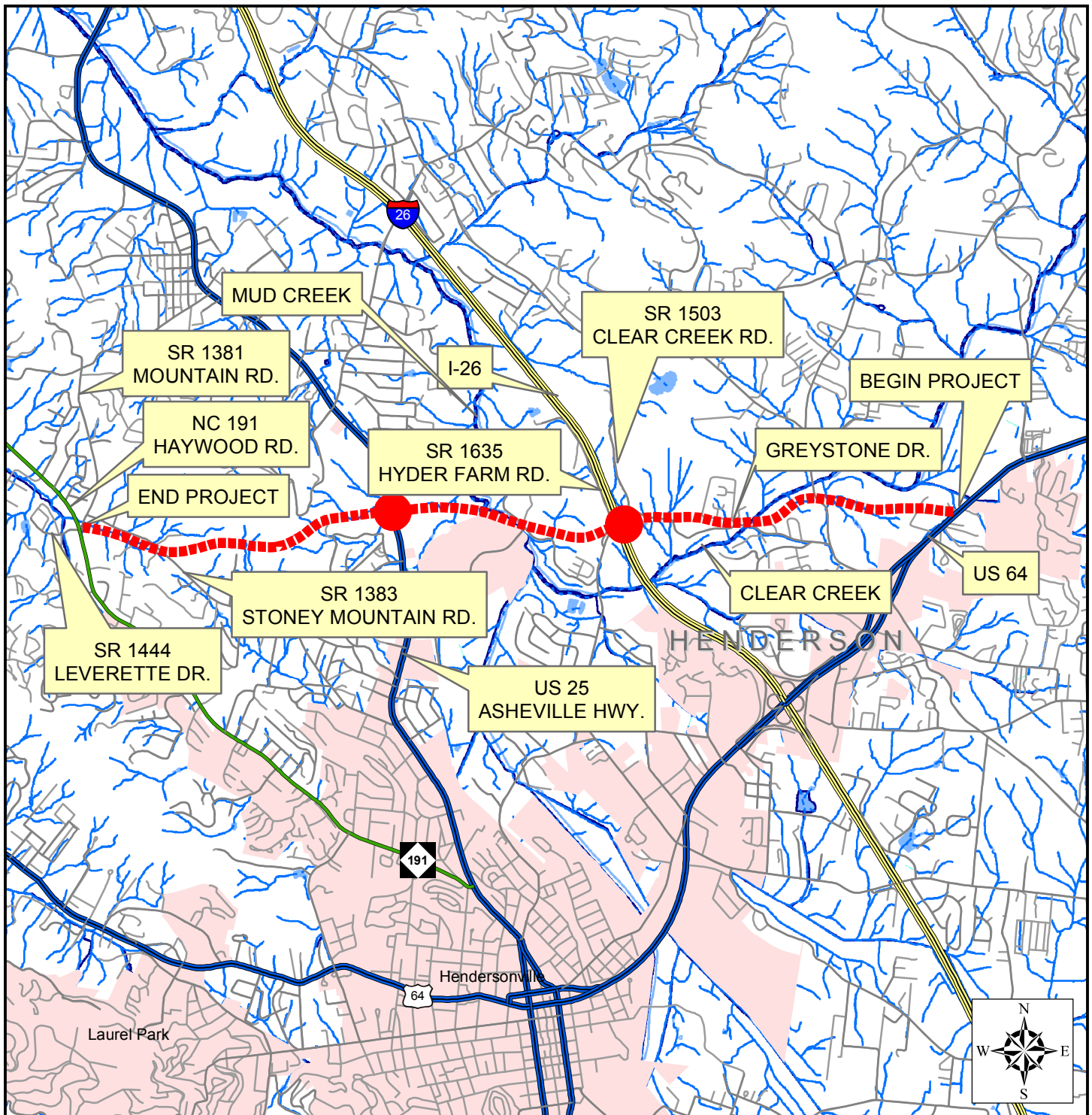
Carolina Sunrose was identified as a potential endangered species within the project study area.

VII. Recommendations

Alternatives 1 and 2: It was found that the four-lane divided shoulder section would be able to accommodate the projected 2035 design year traffic volumes at an acceptable level of service. See Table 1 for total estimated project costs for each alternative.

Table 1: Estimated Project Costs

Alternative	Right of way Cost	Utility Relocation Cost	Construction Cost	Total Cost	Res. Relocated	Bus. Relocated
1	\$26,300,000	\$900,000	\$114,000,000	\$141,200,000	40	5
2	\$26,300,000	\$900,000	\$129,000,000	\$156,200,000	40	5



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
 PROGRAM DEVELOPMENT BRANCH
 FEASIBILITY STUDIES UNIT

**Project Location Map
 FS-1214B**

New Route (Balfour Parkway)
 from US 64 to NC 191

Henderson County Division 14