

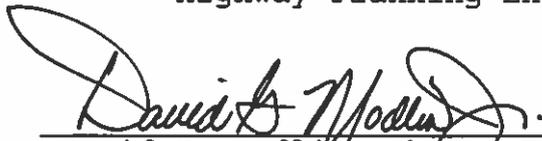
FEASIBILITY STUDY

Thomasville
Railroad/Highway Grade Separation
Peace Street/Baptist Childrens Home Road (SR 2085)
over
Southern Railway
Davidson County
U-3122

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



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Date

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I. GENERAL DESCRIPTION

This feasibility study describes a proposed new railroad/highway grade separation, and related improvements, in Thomasville, Davidson County. It is proposed to raise the grade of Peace Street and Baptist Childrens Home Road (SR 2085) to carry the roadway over the Southern Railway. The roadway and the railroad currently intersect at grade. The project location is shown on Figure 1 and a design sketch of the proposed improvements is shown as Figure 2. Related improvements include connecting West Main Street (also SR 2085) with the raised grade of Baptist Childrens Home Road immediately south of the railroad, and relocation of Railroad Avenue to provide access to Peace Street. Further, it is proposed to close the at-grade railroad crossings at Peace Street, Boyles Street, and Loflin Street. Figure 3 shows the location of the three crossings proposed for closing. It is estimated there will be five residencies and one business relocated due to this project. The total cost including construction and right-of-way is estimated to be \$ 2,100,000.

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 proposed project including costs, and identify potential problems that may require consideration in the planning and design phases.

II. NEED FOR PROJECT

The purpose of this project is to provide improved access between western Thomasville north of the Southern Railway and western Thomasville south of the railroad. Community General Hospital, a medical complex, and a fire station are located north of the railroad and approximately

2000 feet (609.8 m) west of the project corridor. The Martin Luther King Drive /Peace Street/Baptist Childrens Home Road Corridor is an important connection between I-85 Business and Lexington Avenue north of the railroad and I-85 south of the railroad, and is shown on the High Point Urban Area Thoroughfare Plan as a major thoroughfare. West Main Street is also shown on the thoroughfare plan as a major thoroughfare. West Main Street, Peace Street, and Baptist Childrens Home Road are listed as Urban Minor Arterials on the North Carolina Functional Classification System.

This project was requested by the City of Thomasville and is supported by the Public Transportation and Rail Division of the North Carolina Department of Transportation. The railroad at this location is part of a Raleigh-to-Charlotte corridor that has been designated a high speed corridor by the Public Transportation and Rail Division.

The existing offset between Peace Street and Martin Luther King Drive at Lexington Avenue will be eliminated by a project currently being developed by NCDOT's Division Nine Office. The project is not funded at this time, but is expected to be built with Small Urban Funds.

Development on Peace Street, in the immediate project area between Clay Street and the railroad, is primarily single family residential, with two commercial properties near the north project terminal. There is an apartment building on Railroad Avenue. Railroad Avenue and Peace Street are non-system (city) streets.

Development on Baptist Childrens Home Road, south of the railroad, is primarily residential and institutional. The Baptist Childrens Home is located in the southeast quadrant of the West Main Street/Baptist Childrens Home Road intersection. The west side of Baptist Childrens Home Road in the project area is mostly undeveloped with some single family residential development.

The 1994 Average Daily Traffic (ADT) on Peace Street is estimated to be 4,500 vehicles per day (vpd). The 1994 traffic volumes on Baptist Childrens Home Road and West Main Street are estimated to be 6,000 vpd and 2,300 vpd respectively.

For the design year (2015) the estimated traffic volumes on Peace Street, Baptist Childrens Home Road, and West Main Street are 8,400 vpd, 11,000 vpd, and 4,300 vpd respectively.

Currently there are 20 to 24 trains per day passing the Peace Street Crossing. The crossing is protected with gates, flashing beacons, and bells. There are two tracks at this location. The exposure index for this crossing is estimated to be approximately 90,000. A value of 30,000 or greater is considered a warrant for a grade separation structure.

Peace Street is a two-lane, two-way facility that is 32 feet (9.8 m) wide from face to face of curbs. The existing right-of-way width on Peace Street is approximately 33 feet (10.1 m) wide. Baptist Childrens Home Road is a two-lane, two-way, roadway with a pavement approximately 24 feet (7.3 m) wide and turf shoulders approximately 6 feet (1.8 m) wide. The existing right-of-way on Baptist Childrens Home Road is approximately 50 feet (15.2 m) wide. The alignment of Baptist Childrens Home Road is skewed slightly to the southwest with respect to Peace Street. West Main Street runs parallel to and approximately 35 feet (10.7 m) south of the Southern Railway tracks and forms a T intersection with Baptist Childrens Home Road. West Main Street is a two-way, two-lane, street with a pavement approximately 20 feet (6.1 m) wide and turf shoulders approximately 10 feet (3.0 m) wide on the north side and approximately 6 feet (1.8 m) wide on the south side. West Main Street is within the right-of-way of the Southern Railroad. Both Peace Street and Baptist Childrens Home Road have negative grades in the direction approaching the railroad tracks.

III. RECOMMENDATIONS

It is recommended to close the at-grade railroad/highway grade crossing on Peace Street and construct a railroad/highway grade separation, raising the grade of Peace Street/Baptist Childrens Home Road to carry the roadway over the Southern Railway. It is recommended to connect West Main Street with the raised grade of Baptist Childrens Home Road immediately south of the railroad, and relocate Railroad Avenue to provide access to Peace Street. Further, it is recommended to close the at-grade railroad crossings at Boyles Street and Loflin Street. Figure 2 is a design sketch of the recommended improvements and Figure 3 shows the location of the three crossings proposed for closing.

The south approach to the grade separation begins at a point on Baptist Childrens Home Road approximately 600 feet (182.9 m) south of the railroad. The north approach begins

at a point on Peace Street approximately 450 feet (137.2 m) north of the railroad. The structure will have a clear deck width of 33 feet (10.1 m) including a 5-foot (1.5-m) wide sidewalk. The bridge will be approximately 180 feet (54.9 m) in length. The cross-section for both approaches to the new structure will be 28 feet (8.5 m) wide from face to face of curbs with berms 8 feet (2.4 m) wide. The curb and gutter will extend for a distance of approximately 300 feet (91.5 m) both north and south of the new bridge. Right-of-way requirements are shown on Figure 4.

It is recommended to connect West Main Street to Baptist Childrens Home Road by extending it west, under the new structure, then south to tie into Baptist Childrens Home Road near the south project terminal as shown on Figure 2. This connection will be a two-lane, two-way roadway, with a pavement 28 feet (8.5 m) wide, and soil shoulders approximately 10 feet (3.0 m) wide. This connection will serve traffic from West Main Street bound either north on Peace Street or south on Baptist Childrens Home Road, and will also serve south-bound Peace Street traffic desiring to go east on West Main Street. The intersection formed by the extension of West Main Street and Ray Street will be controlled with a stop sign on Ray Street.

It is recommended to construct a connection between Baptist Childrens Home Road and West Main Street for north-bound traffic on Baptist Childrens Home Road desiring to go east on West Main Street. This will be a one-way, one-lane, ramp with an 18-foot (5.5-m) wide pavement with soil shoulders approximately 10 feet (3.0 m) wide. This is shown on Figure 2.

Further, closing the at-grade railroad crossings at Boyles Street and Loflin Street will not impede cross-town traffic flow after the Peace Street grade separation is open to traffic.

It is estimated there will be five residencies and one business relocated due to this project. The total cost including construction and right-of-way is estimated to be \$ 2,100,000 as follows.

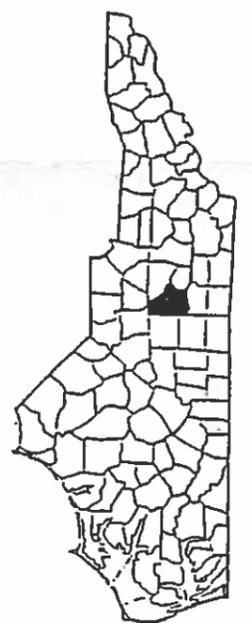
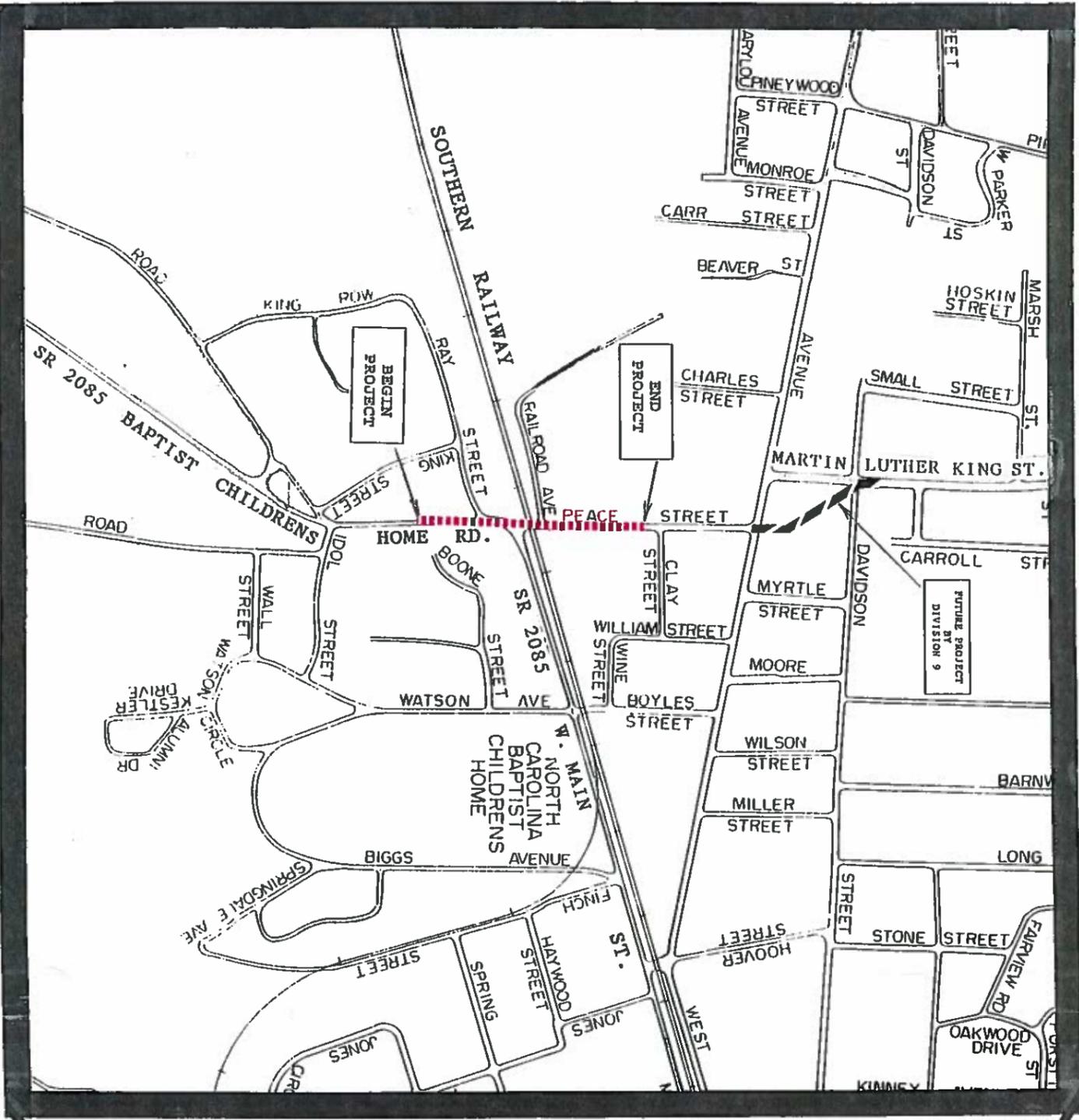
Construction	\$ 1,300,000
Right-of-Way	800,000
Total Cost	\$ 2,100,000

V. OTHER COMMENTS

An environmental screening was not conducted for this study.

No special accommodation for bicycles is recommended on this project.

It is recommended that the City of Thomasville, through the project municipal agreement, be responsible for closing the at-grade railroad crossings at Peace Street, Boyles Street, and Loflin Street.



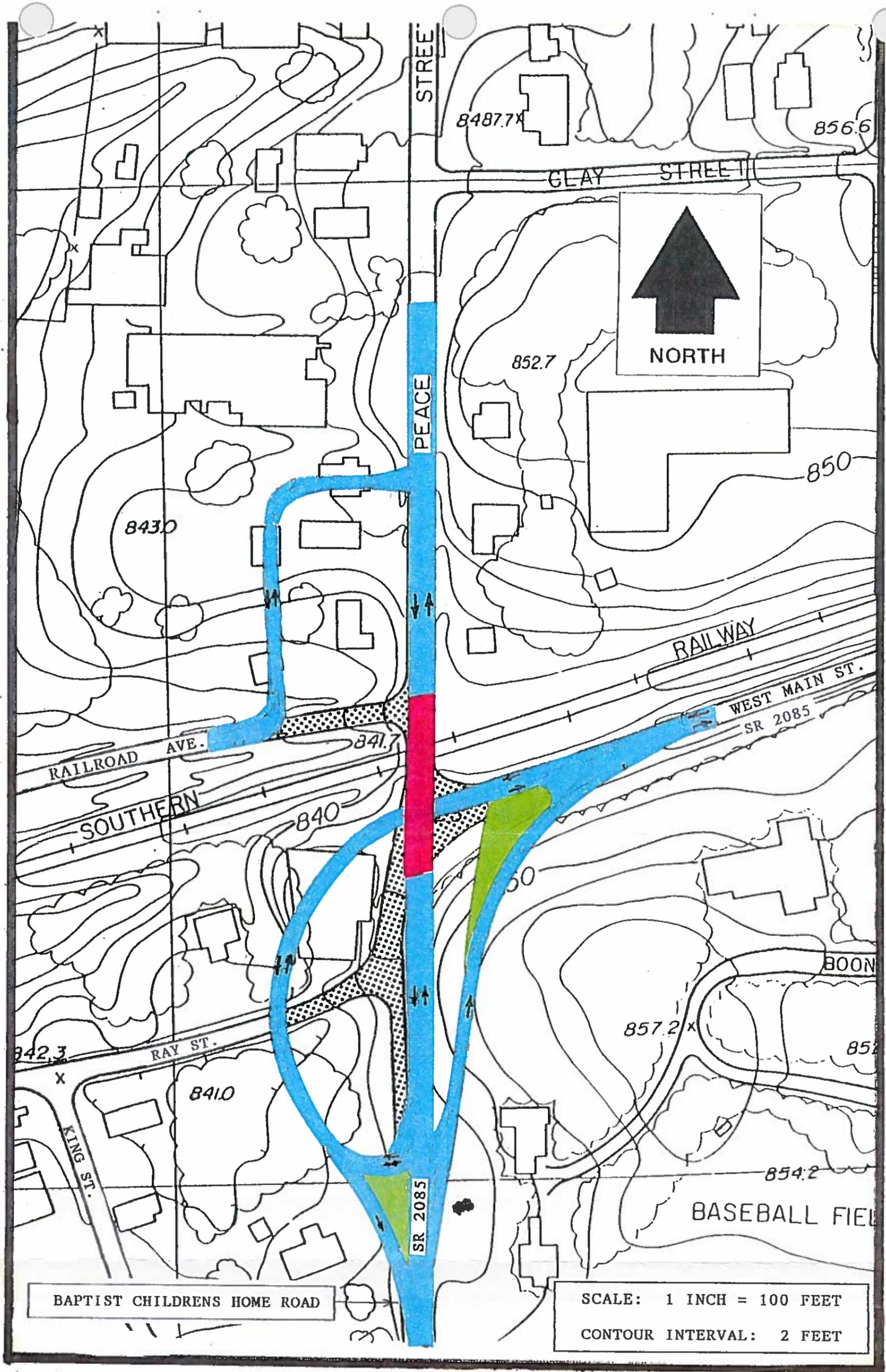
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FIGURE 1. PROJECT LOCATION

RAILWAY/HIGHWAY GRADE SEPERATION
PEACE ST./BAPTIST CHILDRENS HOME RD.
OVER
SOUTHERN RAILWAY

THOMASVILLE DAVIDSON COUNTY

DIV. 9 U-3122 FIGURE 1.

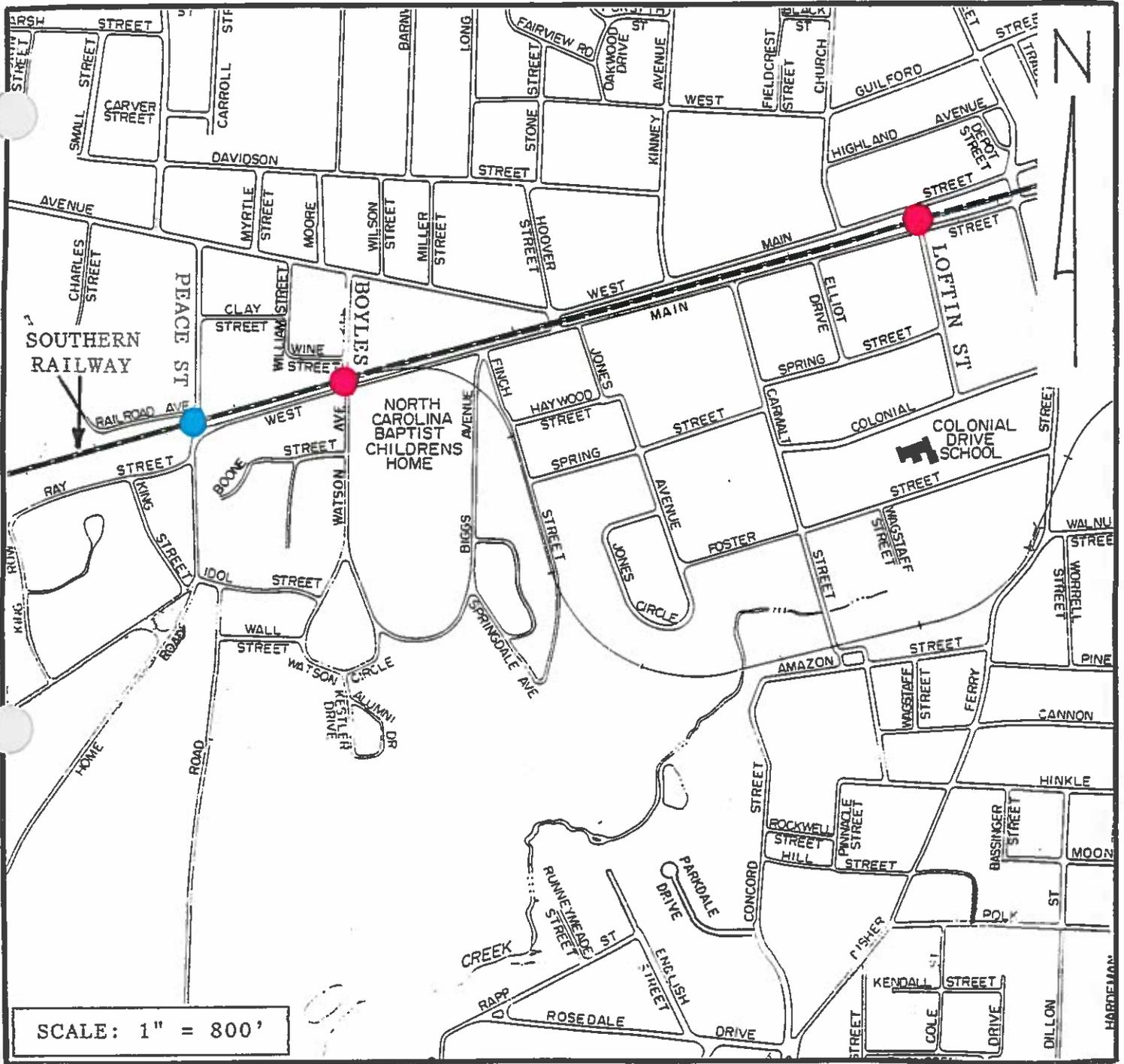


BAPTIST CHILDRENS HOME ROAD

SCALE: 1 INCH = 100 FEET
 CONTOUR INTERVAL: 2 FEET

LEGEND	
 NEW ROADWAY
 NEW STRUCTURE
 CHANNELIZING ISLAND
 PAVEMENT REMOVAL

FEASIBILITY STUDIES UNIT		
FIGURE 2. DESIGN SKETCH		
RAILWAY/HIGHWAY GRADE SEPERATION PEACE ST./BAPTIST CHILDRENS HOME RD. OVER SOUTHERN RAILWAY		
THOMASVILLE	DAVIDSON COUNTY	
DIV. 9	U-3122	FIGURE 2.



SCALE: 1" = 800'

LEGEND



PROPOSED GRADE CROSSING REMOVAL



PROPOSED GRADE CROSSING REMOVAL AND GRADE SEPERATION

FEASIBILITY STUDIES UNIT

FIG. 3. LOCATION OF PROPOSED AT-GRADE RR CROSSING REMOVALS

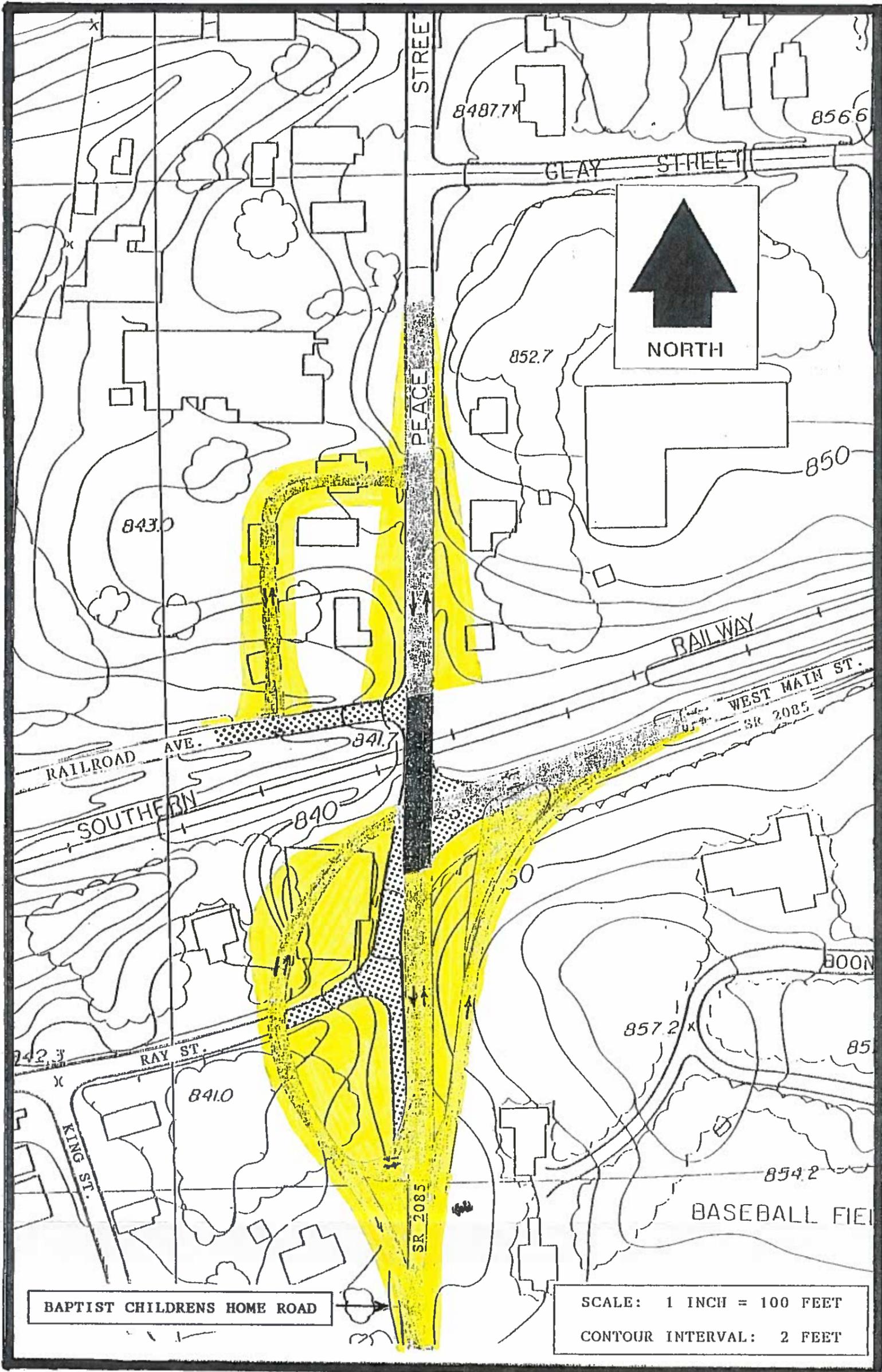
THOMASVILLE

DAVIDSON COUNTY

DIV. 9

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FIG. 3



LEGEND	
 NEW RIGHT-OF-WAY

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FIGURE 4. SKETCH OF APPROXIMATE REQUIRED NEW RIGHT-OF-WAY	
RAILWAY/HIGHWAY GRADE SEPERATION PEACE ST./BAPTIST CHILDRENS HOME RD. OVER SOUTHERN RAILWAY	
THOMASVILLE	DAVIDSON COUNTY