NORTH CAROLINA DIVISION FINAL NATIONWIDE SECTION 4(f) EVALUATION AND APPROVAL FOR FEDERALLY-AIDED HIGHWAY PROJECTS THAT NECESSITATE THE USE OF HISTORIC BRIDGES

F. A. Project
W.B.S. No.
TIP No.

NHF- 85-3(164)80
34156; (Formerly Project No. 8.1631403)
I-2304A

Description:

I-85, from north of SR 2120 (Exit 81 - Long Ferry Road) in Rowan County to US 29-52-70/I-85
Business (Exit 87) in Davidson County. Bridge No. 392, constructed in 1951, will be replaced
in place, with a new structure conveying one lane of US 29-US 70 in each direction.

in pla	ce, with a new structure conveying one lane of US 29-US /C	in each	No No
1.	Is the bridge to be replaced or rehabilitated with Federal funds?	X	
2.	Does the project require the use of a historic bridge structure which is on or eligible for listing on the National Register of Historic Places?	<u>X</u>	
3.	Is the bridge a National Historic Landmark?		X
4.	Has agreement been reached among the FHWA, the State Historic Preservation Officer (SHPO), and the Advisory Council on Historic Preservation (ACHP) through procedures pursuant to Section 106 of the National Historic Preservation Act (NHPA)?	<u>X</u>	
ALTE	ERNATIVES CONSIDERED AND FOUND NOT TO BE F	EASIB	LE AND PRUDENT
	be feasible and prudent:		
1.	<u>Do nothing</u>		
	Does the "do nothing" alternative:_	Yes	No
	(a) correct the problem situation that caused the bridge to be considered deficient?		<u>X</u>
	(b) pose serious and unacceptable safety hazards?	<u>X</u>	
2.	Build a new structure at a different location without affecting the historic	Yes X	<u>No</u>

integrity of the structure.

- (a) The following reasons were reviewed: (circle, as appropriate)
- (i) The present bridge has already been located at the only feasible and prudent site
- and/or (ii) Adverse social, environmental, or economic impacts were noted
- and/o (iii) Cost and engineering difficulties reach extraordinary magnitude
- and/of (iv) The existing bridge cannot be preserved due to the extent of rehabilitation, because no responsible party will maintain and preserve the historic bridge, or the permitting authority requires removal or demolition.
- 3. Rehabilitate the historic bridge without affecting the historic integrity of the structure.
 - (a) The following reasons were reviewed: (circle, as appropriate)
 - (i) The bridge is so structurally deficient that it cannot be rehabilitated to meet the acceptable load requirements and meet National Register criteria

and/or (ii) The bridge is seriously deficient geometrically and cannot be widened to meet the required capacity and meet National Register criteria

MINIMIZATION OF HARM

- 1. The project includes all possible planning to minimize harm.
- 2. Measures to minimize harm include the following: (circle, as appropriate)

Yes No

 \mathbf{X}

 $\frac{\text{Yes}}{\mathbf{X}}$ No

- a. For bridges that are to be rehabilitated, the historic integrity of the bridge is preserved to the greatest extent possible, consistent with unavoidable transportation needs, safety, and load requirements.
- b. For bridges that are to be rehabilitated to the point that the historic integrity is affected or that are to be removed or demolished, the FHWA ensures that, in accordance with the Historic American Engineering Record (HAER) standards, or other suitable means developed through consultation, fully adequate records are made of the bridge.
 - c. For bridges that are to be replaced, the existing bridge is made available for an alternative use, provided a responsible party agrees to maintain and preserve the bridge.
- d. For bridges that are adversely affected, agreement among the SHPO, ACHP, and FHWA is reached through the Section 106 process of the NHPA on measures to minimize harm and those measures are incorporated into the project.
- 3. Specific measures to minimize harm are discussed below:

A photo record of the existing bridge will be performed and submitted for official record.

NCDOT will provide the public with information about the historical and cultural significance of the Yadkin River Crossings Historic District. NCDOT will design and produce a custom kiosk at a location specified by the SHPO (with input from the Counties of Davidson and Rowan and the Trading Ford Historic District Preservation Association) within one (1) year of the completion of construction of the Undertaking. This informational kiosk will be designed and constructed, along with a small area for visitors to park their vehicles, as stipulated in the attached Section 106 Memorandum of Agreement.

The FHWA and the NCDOT shall ensure that the measures in the attached Section 106 Memorandum of Agreement are carried out.

COORDINATION

The proposed project has been coordinated with the following (attach correspondence):

a.	State Historic Preservation Officer	01-14-2009
b.	Advisory Council on Historic Preservation	02-17-2009
c.	Local/State/Federal Agencies	01-14-2009
d.	US Coast Guard	N/A
	(for bridges requiring bridge permits)	

SUMMARY AND APPROVAL

The project meets all criteria included in the programmatic 4(f) evaluation approved on December 23, 1986.

All required alternatives have been evaluated and the findings made are clearly applicable to this project.

Bridge No. 392 accommodates northbound US 29-70-150 traffic over the Yadkin River between Rowan and Davidson Counties. (See Figures 1, 2 and 3.) This bridge was built in 1951 and is a contributing member of the Yadkin River Crossings Historic District. (See Bridge 46, Bridge 392 and Railroad Bridge Photograph and refer to the Yadkin River Crossings Historic District Map.) Currently, Bridge 392 has a sufficiency rating of 51.1 and 10 years of remaining life. The concrete and steel superstructure of Bridge No. 392 is fracture critical, in that the failure of one bridge element will result in the failure of the entire bridge. The Federal Highway Administration (FHWA) is in the process of eliminating fracture critical bridges on the national highway system. The FHWA will not participate in funding the rehabilitation of existing fracture critical bridges, except in certain rare situations.

Additionally, this bridge is in such deteriorated condition, that rehabilitation is not cost effective. Bridge No. 392 cannot be widened to meet the required capacity, due to its fracture critical nature. Due to the required environmental protection measures, the existence of lead paint on the existing structural steel complicates any rehabilitation of this bridge. For these reasons, the rehabilitation of Bridge No. 392 is not recommended. This structure will be replaced in place as shown on the public hearing map. (See Figure 3.)

There are no feasible and prudent alternatives to the use of the historic bridge. The project includes all possible planning to minimize harm, and there are assurances that the measures to minimize harm will be incorporated in the project.

All appropriate coordination has been successfully completed.

Approved:

Gregory J. Thorpe, PhD.
Manager, Project Development and Environmental Analysis Branch

Division Administrator, FHWA

NORTH CAROLINA DIVISION FINAL NATIONWIDE SECTION 4(f) EVALUATION AND APPROVAL FOR FEDERALLY-AIDED HIGHWAY PROJECTS THAT NECESSITATE THE USE OF HISTORIC BRIDGES

F. A. Project NHF- 85-3(164)80 W.B.S. No. 34156; (8.1631403) TIP No. I-2304A

Description:

I-85 from north of SR 2120 (Exit 81 - Long Ferry Road) in Rowan County to US 29-52-70/I-85 Business (Exit 87) in Davidson County. **Bridge No. 46**, known as the Wil-Cox Bridge, was constructed in 1922. In the event that the NCDOT cannot find a new owner for the bridge, it will be demolished and a new bridge constructed in the current location of existing Bridge No. 392, just south of the Wil-Cox Bridge. The proposed bridge will convey one lane of US 29-US 70 in each direction.

_	irection.	ey one	Tane of US 29-US 70
		<u>Yes</u>	No
1.	Is the bridge to be replaced or rehabilitated with Federal funds?	<u>X</u>	
2.	Does the project require the use of a historic bridge structure which is on or eligible for listing on the National Register of Historic Places?	_X	
3.	Is the bridge a National Historic Landmark?		X
4.	Has agreement been reached among the FHWA, the State Historic Preservation Officer (SHPO), and the Advisory Council on Historic Preservation (ACHP) through procedures pursuant to Section 106 of the National Historic Preservation Act (NHPA)?	<u>X</u>	
ALTE	RNATIVES CONSIDERED AND FOUND NOT TO BE FI	EASIB	LE AND PRUDENT
	llowing alternatives were evaluated and found be feasible and prudent:		
1.	Do nothing		
	Does the "do nothing" alternative:	Yes	<u>No</u>
	(a) correct the problem situation that caused the bridge to be considered deficient?		<u>X</u>
	(b) pose serious and unacceptable safety hazards?	<u>X</u>	

2. Build a new structure at a different X location without affecting the historic integrity of the structure. (a) The following reasons were reviewed: (circle, as appropriate) (i) The present bridge has already been located at the only feasible and prudent site and/or (ii) Adverse social, environmental, or economic impacts were noted and/of Cost and engineering difficulties reach extraordinary magnitude The existing bridge cannot be and/of preserved due to the extent of rehabilitation, because no responsible party will maintain and preserve the historic bridge, or the permitting authority requires removal or demolition. Yes No 3. Rehabilitate the historic bridge without X affecting the historic integrity of the structure. (a) The following reasons were reviewed: (circle, as appropriate) (i) The bridge is so structurally deficient that it cannot be rehabilitated to meet the acceptable load requirements and meet National Register criteria and/or (ii) The bridge is seriously deficient geometrically and cannot be widened to meet the required capacity and meet National Register criteria MINIMIZATION OF HARM

Yes

No

No

The project includes all possible planning

Measures to minimize harm include the

to minimize harm.

1.

2.

following: (circle, as appropriate)

- a. For bridges that are to be rehabilitated, the historic integrity of the bridge is preserved to the greatest extent possible, consistent with unavoidable transportation needs, safety, and load requirements.
- b. For bridges that are to be rehabilitated to the point that the historic integrity is affected or that are to be removed or demolished, the FHWA ensures that, in accordance with the Historic American Engineering Record (HAER) standards, or other suitable means developed through consultation, fully adequate records are made of the bridge.
- c. For bridges that are to be replaced, the existing bridge is made available for an alternative use, provided a responsible party agrees to maintain and preserve the bridge.
- d. For bridges that are adversely affected, agreement among the HPO, ACHP, and FHWA is reached through the Section 106 process of the NHPA on measures to minimize harm and those measures are incorporated into the project.
- 3. Specific measures to minimize harm are discussed below:

A photo record of the existing bridge will be performed and submitted for official record.

As stipulated in the attached Section 106 Memorandum of Agreement, in the event that the Wil-Cox Bridge is removed, NCDOT shall provide a sidewalk and pedestrian-safe railing on the replacement bridge so that pedestrians may safely cross the Yadkin River.

NCDOT will provide the public with information about the historical and cultural significance of the Yadkin River Crossings Historic District. NCDOT will design and produce a custom kiosk at a location specified by the SHPO (with input from the Counties of Davidson and Rowan and the Trading Ford Historic District Preservation Association) within one (1) year of the completion of construction of the Undertaking. This informational kiosk will be designed and constructed, along with a small area for visitors to park their vehicles, as stipulated in the attached Section 106 Memorandum of Agreement.

The FHWA and the NCDOT shall ensure that the measures, listed in the attached Section 106 Memorandum of Agreement, are carried out.

COORDINATION

The proposed project has been coordinated with the following (attach correspondence):

a. State Historic Preservation Officer	_01-14-2009
b. Advisory Council on Historic Preservation	01-14-2009, 02-17-2009
c. Local/State/Federal Agencies	01-14-2009
d. US Coast Guard	N/A

d. US Coast Guard
(for bridges requiring bridge permits)

SUMMARY AND APPROVAL

The project meets all criteria included in the programmatic 4(f) evaluation approved on December 23, 1986.

All required alternatives have been evaluated and the findings made are clearly applicable to this project. The Wil-Cox Bridge will remain in use for pedestrian and bicycle traffic only, should a new owner be identified that will assume liability and maintenance responsibilities for this structure. This action will have an adverse effect on the Yadkin River Crossings Historic District.

Bridge No. 46 (Wil-Cox Bridge) currently conveys US 29-US 70 over the Yadkin River from Davidson County to Rowan County via two lanes in the southbound direction. (See Figures 1, 2 and 3.) Since it was constructed in 1922 and embodies the distinctive characteristics of an open spandrel concrete bridge, the Wil-Cox Bridge is considered eligible for listing in the National Register of Historic Places. (See Bridge 46, Bridge 392 and Railroad Bridge Photograph). The Wil-Cox Bridge is also a contributing member of the Yadkin River Crossings Historic District. (Refer to the Yadkin River Crossings Historic District Map.)

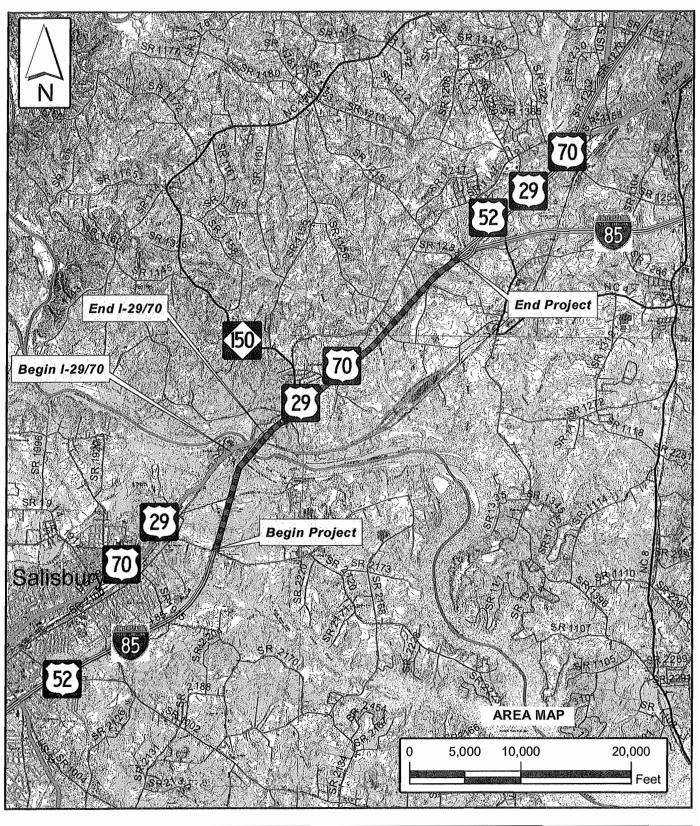
Bridge No. 46 has ten years of remaining life and a sufficiency rating of 30.8. In light of its design and current condition, rehabilitation of this bridge is not an option. Although the Wil-Cox Bridge will be closed to vehicular traffic, NCDOT is continuing good-faith discussions with Davidson County Commissioners to determine the interest of the county in accepting the ownership, maintenance and liabilities of this structure, so that it remains in place to serve pedestrian and bicycle traffic. Rowan County Commissioners have declined to assume any rehabilitation, preservation or maintenance responsibilities of the Wil-Cox Bridge for future pedestrian or bicycle uses. The closing or demolition of this structure to vehicular traffic will be an adverse affect to the Yadkin River Crossings Historic District, as concurred by the North Carolina Department of Transportation, the Federal Highway Administration and the North Carolina State Historic Preservation Office on January 14, 2009.

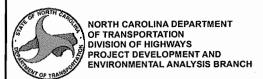
Bridge No. 46 is scheduled to be replaced with a new structure in the location of existing Bridge No. 392. Bridge No. 392, just to the south of the Wil-Cox Bridge, currently conveys US 29-US 70 over the Yadkin River, via two lanes in the northbound direction.

There are no feasible and prudent alternatives to the use of this historic bridge. The project includes all possible planning to minimize harm and there are assurances that the measures to minimize harm will be incorporated in the project.

All appropriate coordination has been successfully completed.

Approved:	
5/1/09	Cind !!
Date L.	Gregory J. Thorpe, PhD. Manager, Project Development and Environmental Analysis Branch
FOR	Manager, Project Development and Environmental Analysis Branch
5116109	Fily Q'il
Date 60	John F. Sullivan, III
R	Division Administrator, FHWA





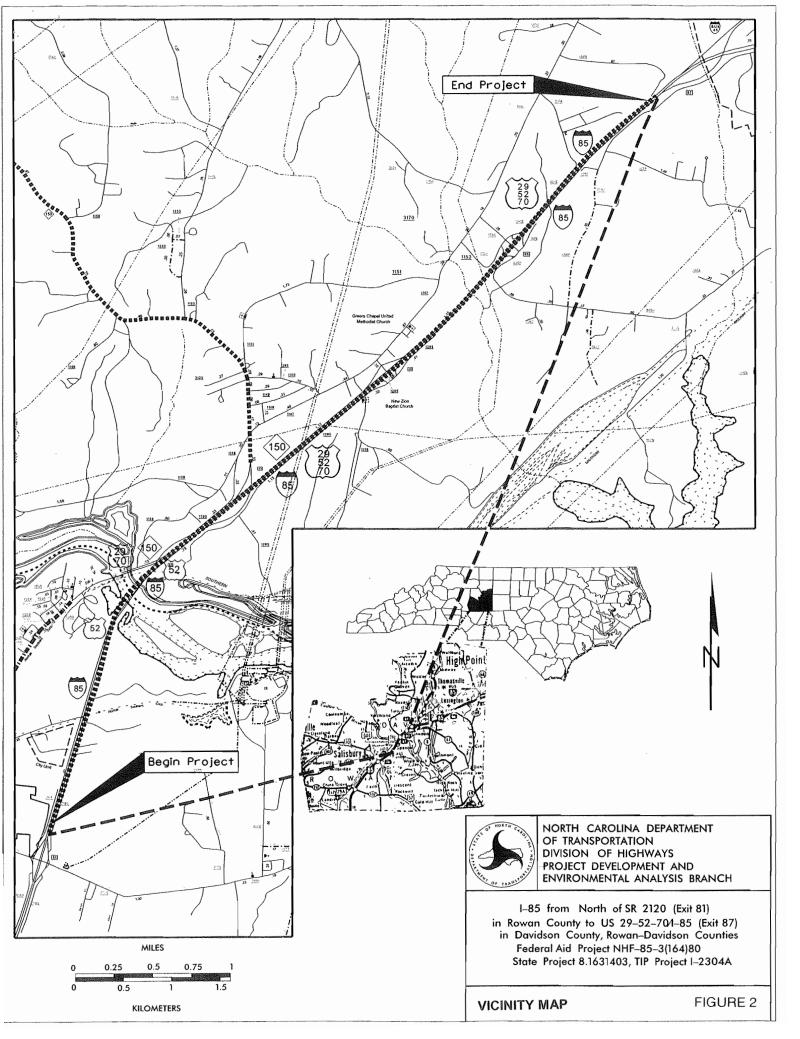
I-85 from North of SR 2120 to US 29-52-70/I-85

DAVIDSON AND ROWAN COUNTIES TIP PROJECT I-2304A

County:Da	County:Davidson/Rowan		
Div: 9	TIP# I-2304A		
WBS:	34156		
Date:	2/10/09		

Figure

1



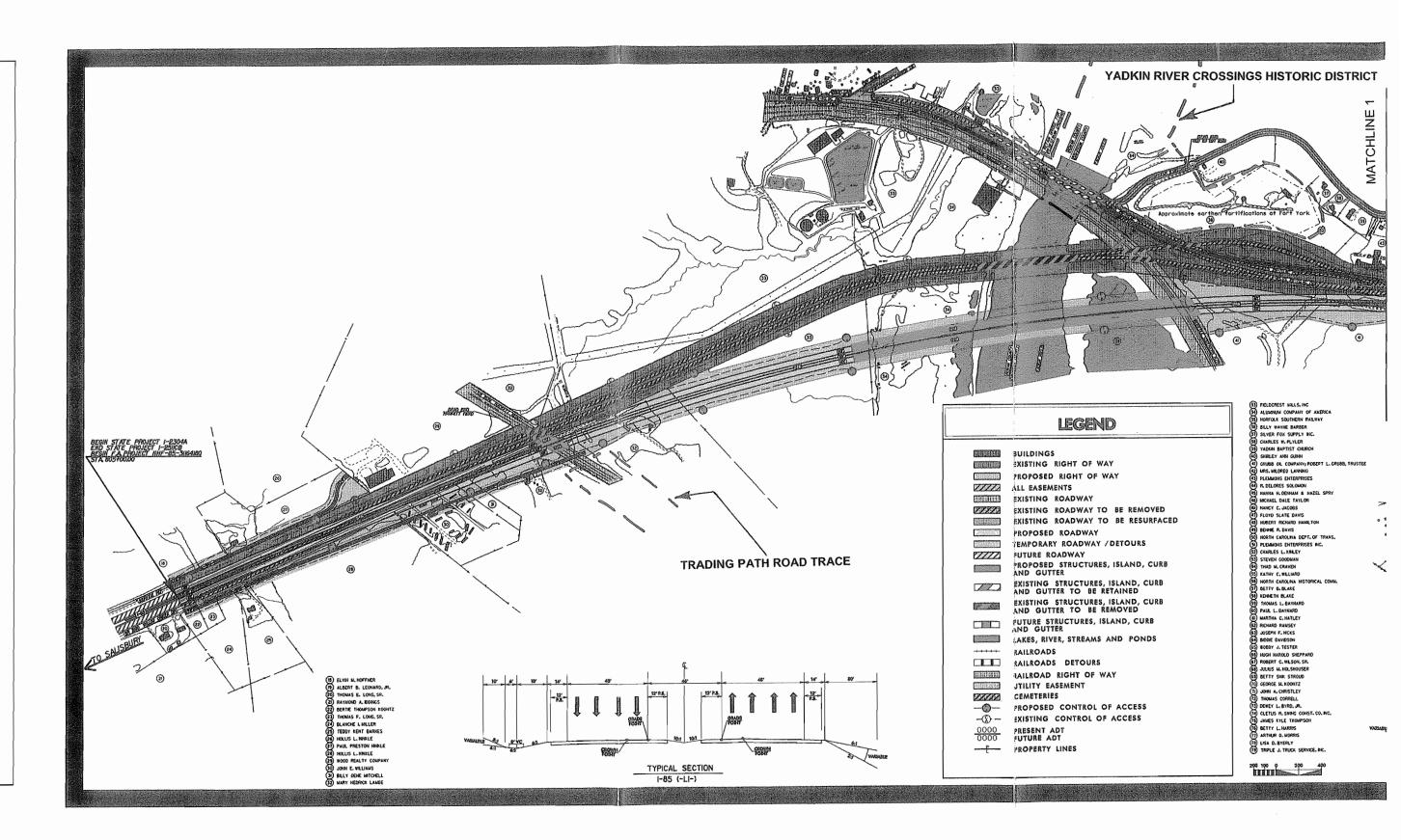
COMBINED PUBLIC HEARING MAP

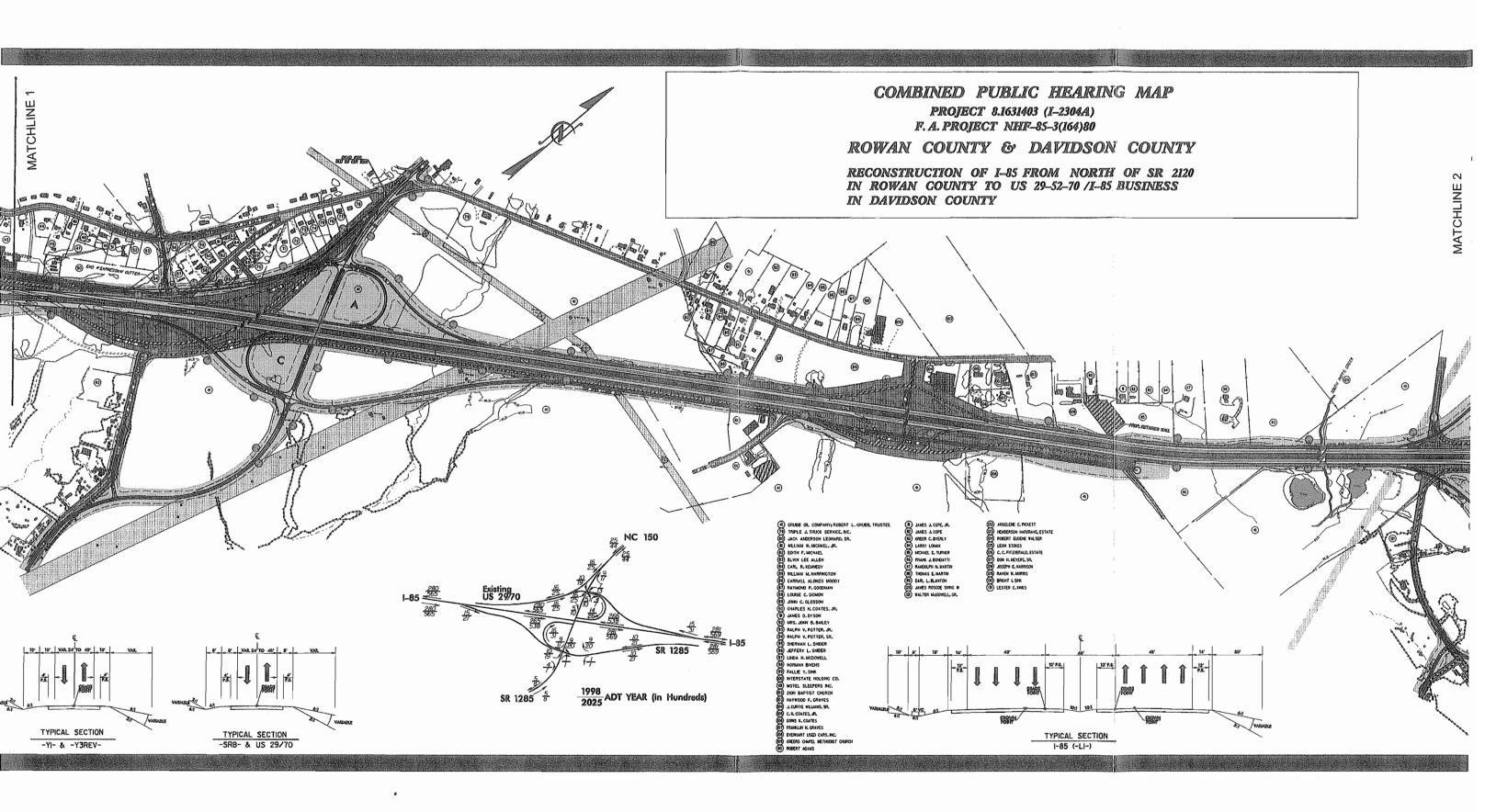
PROJECT \$1631403 (1-2304A)

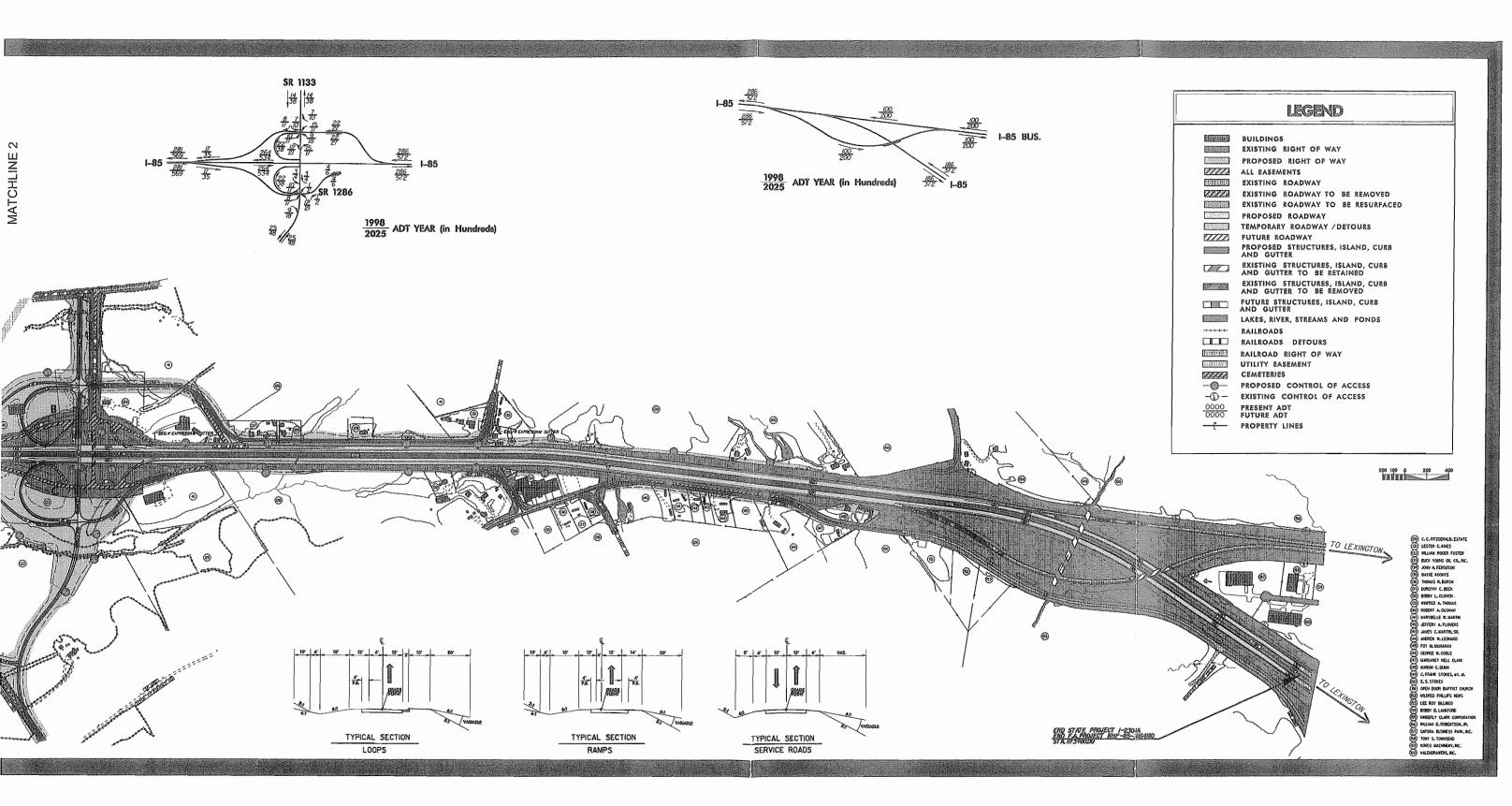
F. A. PROJECT NHF-85-3(164)80

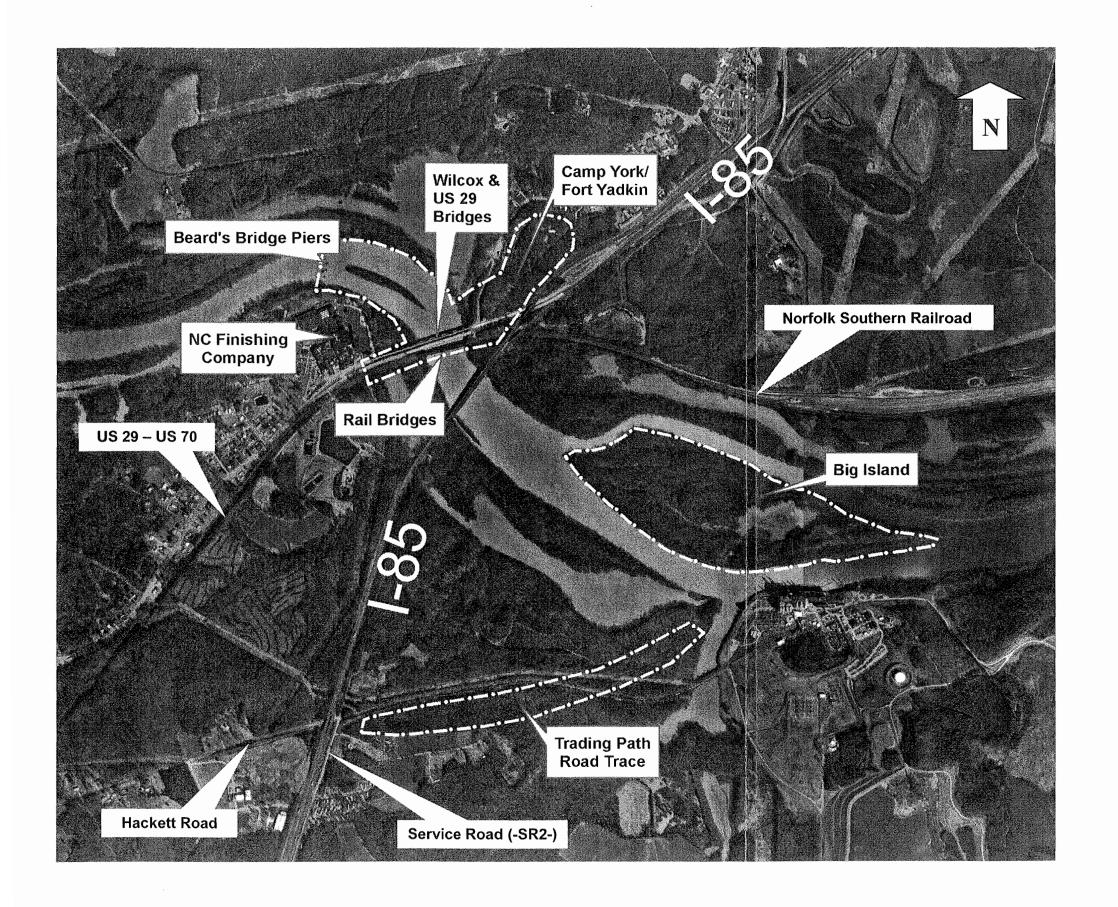
ROWAN COUNTY & DAVIDSON COUNTY

RECONSTRUCTION OF 1-85 FROM NORTH OF SR 2120
IN ROWAN COUNTY TO US 29-52-70 /1-85 BUSINESS
IN DAVIDSON COUNTY









I-2314A

Yadkin River Crossings Historic District

(National Register Eligible District)

