



APPENDIX E: START OF STUDY LETTER

This appendix includes all information regarding the Start of Study letters, distribution list, and the comments received as a result of those letters. These documents include:

E-1: Start of Study Letter

E-2: Summary of comments received on the Start of Study letters



E-1: Start of Study Letter



PAT McCRORY
Governor

NICHOLAS J. TENNYSON
Secretary

October 27, 2015

<<TITLE>>
<<AGENCY>>
<<ADDR1>>
<<CITYSTATEZIP>>

Dear <<SAL>>:

SUBJECT: Start of Study for C.F. Harvey Parkway Extension, Four-Lane Divided Freeway on New Location, Lenoir County, WBS Number 46375.1.1, STIP No. R-5703

The North Carolina Department of Transportation (NCDOT) Division 2 is starting the project development, environmental, and engineering studies for the proposed new location route northeast of the City of Kinston, which will extend NC 148 (C.F. Harvey Parkway) from NC 58 to NC 11 (in Lenoir County). The project is included in the NCDOT 2016-2025 State Transportation Improvement Program (STIP) as Project Number R-5703, and is scheduled for right of way in fiscal year 2020 and construction in 2022. It is anticipated that a state funded Environmental Assessment will be prepared for this project. This document will be prepared in accordance with the State Environmental Policy Act.

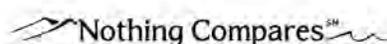
Attached for your review and comments are the scoping information sheets for the proposed project (see attached map for the project location). We would appreciate any information you might have that would be helpful in evaluating potential environmental impacts of the project. If applicable, please identify any permits or approvals that may be required by your agency. Please provide your comments by December 4, 2015 to Maria Rogerson, Project Manager, of NCDOT Division 2. Comments can be mailed to the address listed on this letterhead or via email to marogerson@ncdot.gov.

If you have any questions concerning the project, please contact Maria Rogerson, Project Manager, of NCDOT Division 2 at (252) 439-2830. Please include the STIP Project Number R-5703 in all correspondence and comments.

Sincerely,

John W. Rouse, PE, Division Engineer
NCDOT Division 2

Attachment



PROJECT DATA SHEET

Date: 7/3/10
Rev.: 9/24/12

TIP No.: R-5703	County: Lenoir County
Federal-aid No.: NA	WBS No.: 46375.1.1
NCDOT Division: 2	Scoping Meeting Date: NA

Project Description:

- Length: Alternative 1 = approximately 4 miles, Alternative 2 = approximately 6 miles
- Termini (US Hwy / SR): NC 58 and NC 11
- MPO / RPO: Eastern Carolina Rural Planning Organization
- NEPA / 404 Merger Candidate? Yes No Unknown
- General Description of Project:

C.F. Harvey Parkway Extension (NC 148) would extend the C.F. Harvey Parkway from its current terminus at NC 58 to NC 11 as a four-lane, median-divided freeway with full control of access northeast of the City of Kinston in Lenoir County, North Carolina.

Design Data (Existing Conditions):

- Functional Classification: Freeway
- Strategic Highway Corridor: No
- CTP Designation (Facility Type): Freeway
- Type of Access Control: Full Control
- Typical Section: Four-lane, median-divided
- Right of Way: 300 feet
- Posted Speed: 70 mph

- Structure Inventory (bridges, RCBC, Walls, etc):

NA

- Other TIP Projects in the Area

- B-4926
- B-4565
- B-5619
- B-4566
- B-4569
- R-5702

- Railroad Involvement:

The project will likely cross the CSX Railroad that is located adjacent to NC 11.

Long Range Plan History:

The project is included on the 2011 City of Kinston Comprehensive Transportation Plan (CTP) and also identified on the 2007 CTP Highway Map for Kinston. Earlier iterations of the project were included on previous transportation planning documents.

Through the application of North Carolina’s Strategic Transportation Investment law, it was determined that R-5703 is a high priority transportation project. This project received maximum points at both the Division and Regional levels due to the projected improvements to mobility and increased freight from GTP. Also, the project has been prioritized as the first choice for Lenoir County and the Eastern Carolina RPO.

Traffic Data (AADT):

Current Year	2012 Build	4,500 – 4,600 vpd	4% dual	5% TTST
Design Year	2040 Build	9,500 – 12,000 vpd	4% dual	6% TTST
Source of Traffic Data:		FS-1102A, NC 148		

Cost Estimates:

	Construction	Right-of-Way	Total
TIP Estimate	56,886,000	5,972,000	62,858,000

Project Schedule:

Environmental Document	2016
Right-of-Way	2020
Let	2022

Initial Scoping Comments:

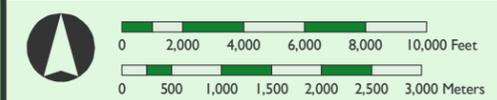
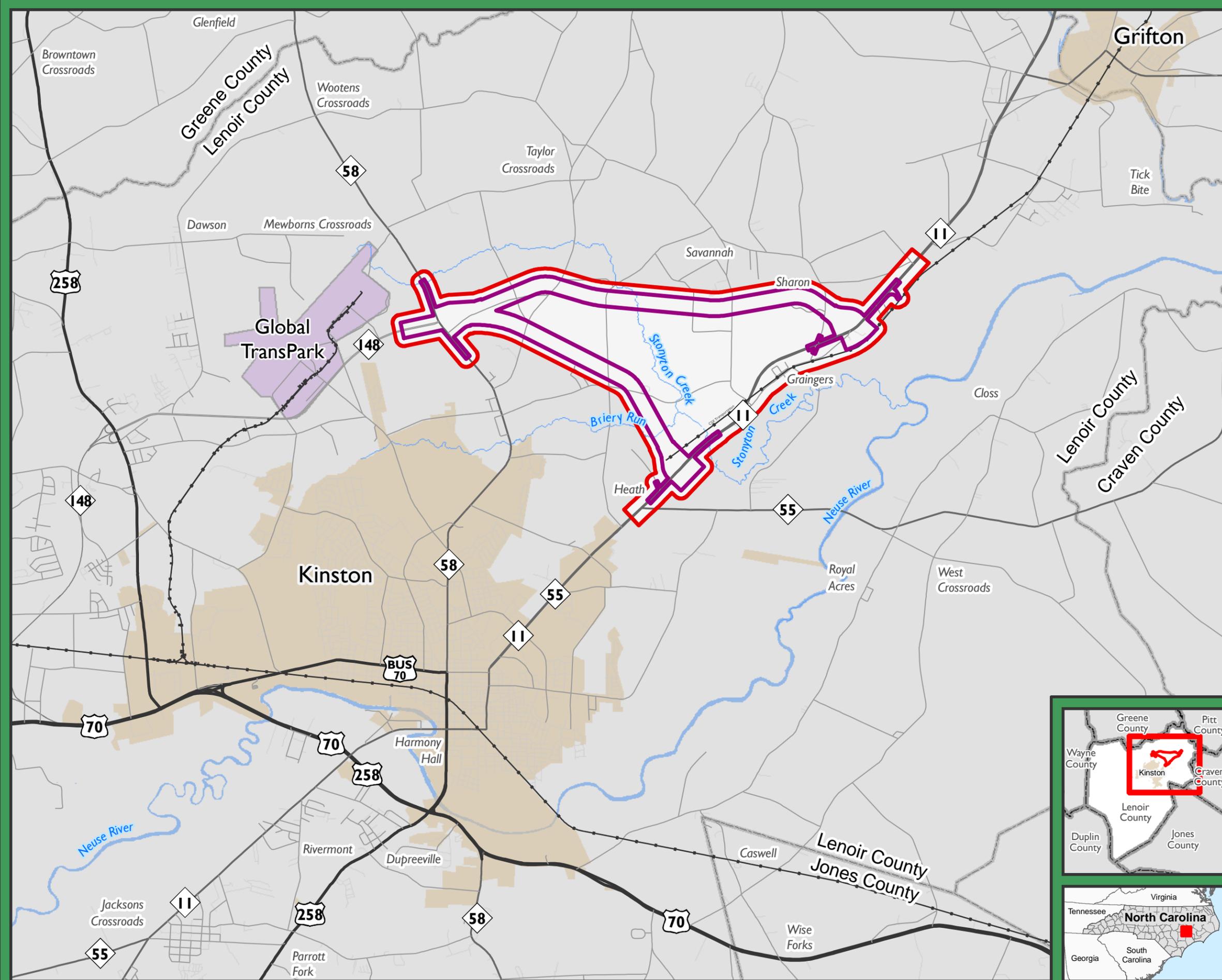
Figure 1: Project Vicinity Map

**148 C. F. Harvey Parkway
STIP Project No. R-5703**

Figure 1
Project Vicinity Map

Legend

-  Corridor Alignment
-  Project Study Area
-  US Highway
-  NC Highway
-  State Road
-  Local Road
-  Railroad
-  County
-  Global TransPark (GTP)
-  Municipal Area
-  River



This map is for reference only.
Sources: NCDOT, NCDENR, CGIA, NCSHPO, NRCS, NCWRC, Lenoir County, USFWS, EPA, USDA, NCDOT, City of Kinston, NCEM, DWQ, NCOneMap, ESRI and AECOM.

Purpose and Need Data:

The North Carolina Department of Transportation (NCDOT) is proposing to extend NC 148 (C.F. Harvey Parkway) as a four-lane, median-divided freeway with full control of access in Lenoir County, North Carolina. The project extends from NC 58 to NC 11 in Lenoir County, north of the City of Kinston. The proposed action is listed in the NCDOT 2016-2025 State Transportation Improvement Program (STIP) as Project Number R-5703. Through the application of North Carolina's Strategic Transportation Investment law, it was determined that R-5703 is a high priority transportation project. This project received maximum points at both the Division and Regional levels due to the projected improvements to mobility and increased freight from GTP. Also, the project has been prioritized as the first choice for Lenoir County and the Eastern Carolina RPO. The project is included in the 2011 City of Kinston Comprehensive Transportation Plan (CTP) and also identified on the 2007 CTP Highway Map for Kinston.

Draft Project Need:

The primary need for the proposed action is:

- i A lack of direct connectivity exists between US 70 and NC 11 to adjacent regional and area activity centers north of Kinston including Global TransPark (GTP); the Kinston Regional Jetport; the US 70 Industrial Park; industrial facilities along NC 11; shopping centers along US 70; the ECU Medical Center; and the communities of Grifton, Ayden, Winterville, and Greenville.

Draft Project Purpose:

The primary purpose of the proposed action is:

- i Improve regional and area connectivity in Northern Kinston between US 70, NC 58, NC 148, and NC 11

In addition to addressing the primary need, the potential exists for additional benefits as a result of the proposed action as follows:

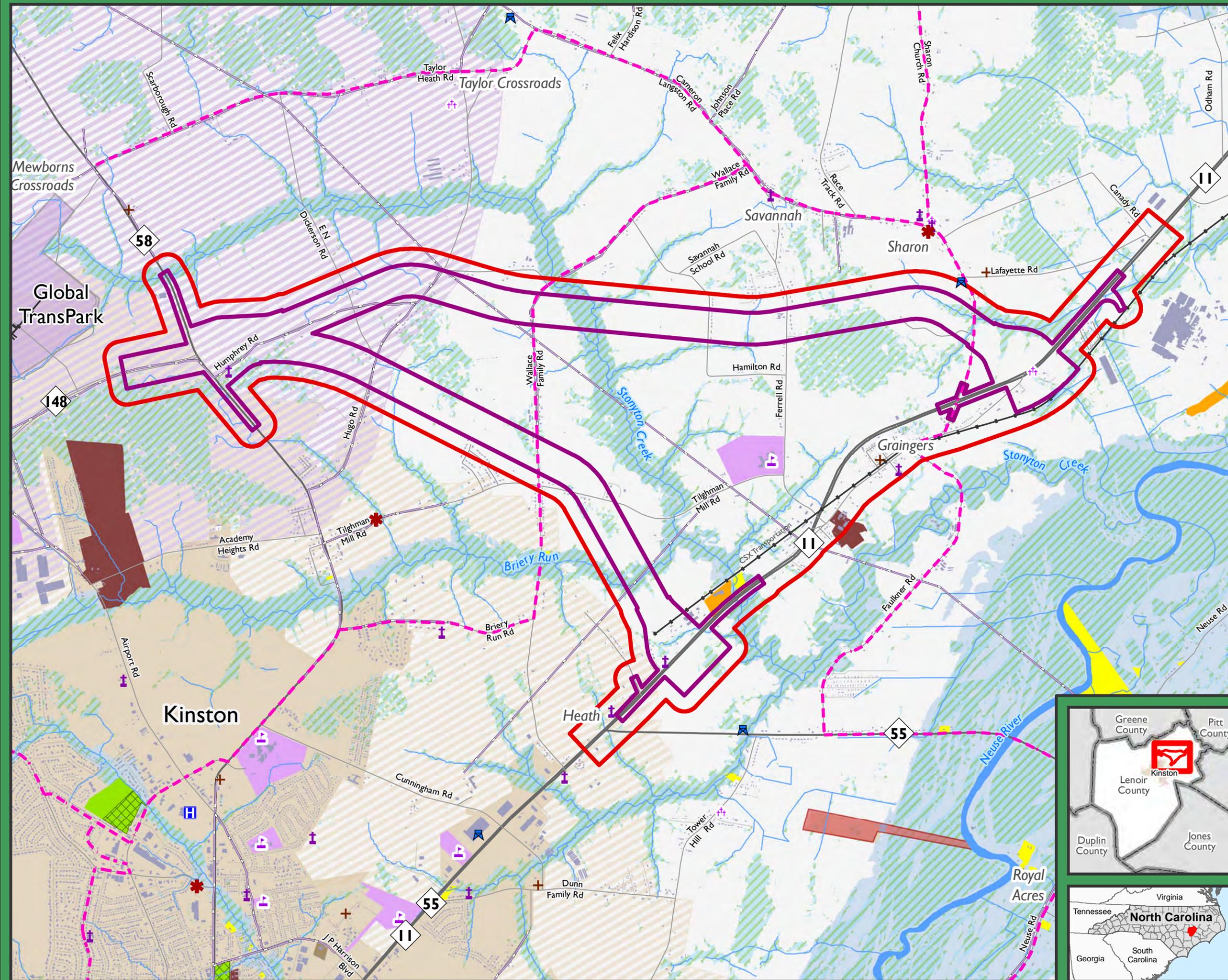
- i Increase access to northern Kinston and GTP with commercial centers and businesses that are located northeast of Kinston along NC 11, as well as residential and agricultural areas
- i Support growth objectives at GTP, which depends on direct highway access for its overall operation

Figure 2: Environmental Features Map



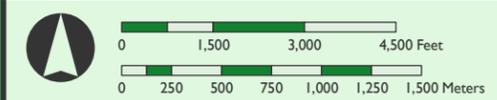
**C. F. Harvey Parkway
STIP Project No. R-5703**

Figure 2
Environmental Features Map



Legend

- Corridor Alignment
- Project Study Area
- US Highway
- NC Highway
- State Road
- Local Road
- Railroad
- Bike Route
- Swine Lagoon
- Building Footprint
- Cemetery
- Church
- Fire Station
- Global TransPark (GTP)
- GTP Complex Boundary
- Hazard Mitigation Property
- Hazardous Site
- Historic Property
- Historic Property
- Historic Property Boundary
- Hospital
- Kinston Extraterritorial Jurisdiction (ETJ)
- Natural Gas Line
- Other State Owned Land
- Park
- Section 6F Property
- School
- School Parcel
- Water Tank
- Wastewater Treatment Plant Parcel
- Floodplain
- River
- Stream
- Wetland



This map is for reference only.
Sources: NCDOT, NCDENR, CGIA, NCSHPO, NRCS, NCWRC, Lenoir County, USFWS, EPA, USDA, NCDOT, City of Kinston, NCEM, DWQ, NCOneMap, ESRI and AECOM.



Alternatives Previously Considered:

Design Data (Proposed Conditions):

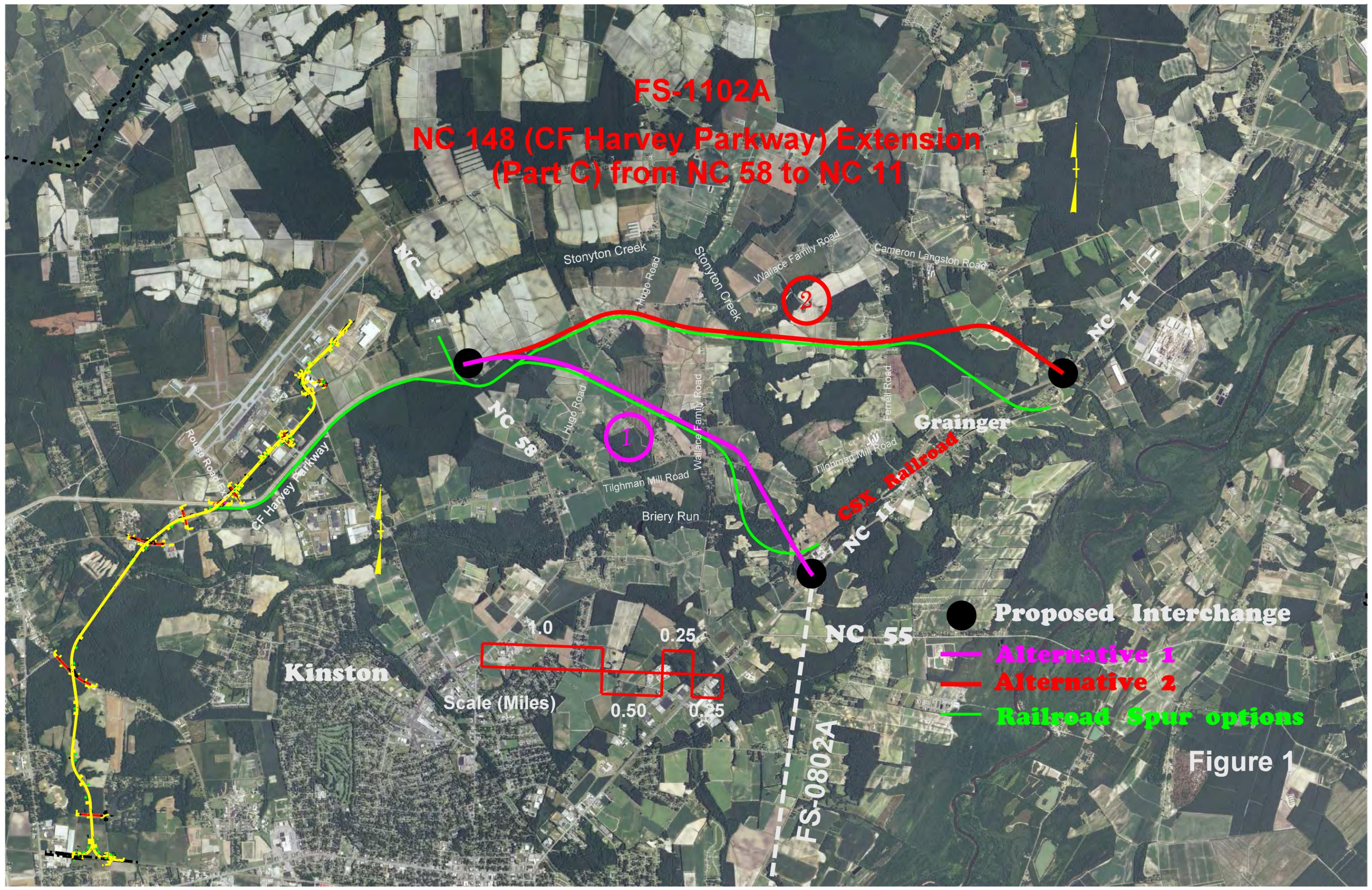
- CTP Designation (Facility Type): Freeway
- Type of Access Control: Full
- Typical Section: Four-lane, divided freeway with 46' depressed medians with 12 foot travel lanes and appropriate paved shoulders
- Right of Way: 300 foot right of way for roadway and an additional 100 foot right of way for the railroad spur
- Posted Speed: 70 mph

The following initial alternatives have been developed by NCDOT:

SEE ATTACHED MAP FROM FEASIBILITY STUDY

FS-1102A

**NC 148 (CF Harvey Parkway) Extension
(Part C) from NC 58 to NC 11**



- **Proposed Interchange**
- **Alternative 1**
- **Alternative 2**
- **Railroad Spur options**

Figure 1

Preliminary Corridor Resources Inventory Table

Resource/Measure	Alternative 1	Alternative 2
Length of project (to tenth of miles)	4	6.5
Potential for Interchanges or RR crossings (#)	2 (interchanges), 1 (RR)	2 (interchanges), 0 (RR)
Other Infrastructure (# of Wastewater treatment plants, transmission pipelines, etc.)	3 natural gas lines	2 natural gas lines
Suspected/known Hazardous Material sites (#)	0	0
National Register or eligible sites, districts, or other historic properties (#)	0	0
Community facilities such and hospitals, nursing homes, churches, schools, cemeteries, etc.) (#)	1-church	2-churches, 1-cemetery
Potentially Affected Residential Properties	18	42
Potentially Affected Business Properties	0	1
Wetlands (est. acres rounded to whole acre)	74	108
Major Streams (# of streams/total linear feet)**	2/1,353	2/4,810
Critical Water Supply Watersheds (rounded to nearest acre)	0	0
Riparian Buffer rules apply (yes/no/part)***	Yes	Yes
Area in active agriculture (nearest acre)****	448	662
Parks, Greenways, Game Lands, Land and Water Conservation Fund Properties, etc.) (#)	0	0
Identified Critical habitat/species under ESA (yes/no/part)	No	No
FEMA Buyout Properties	0	0
Other known/suspected resources or issues: (identify; e.g. Low-income or minority community)	Low Income, Minority, and LEP	Low Income, Minority, and LEP

* New Location Estimates based on 1,000-foot corridor.

Widening Estimates based on 500-foot corridor.

** Unnamed tributaries may be impacted and will be assessed for impacts.

*** Buffer impacts assumed to be proportional to the stream impacts.

**** Agricultural impacts based on parcels with active agricultural operations.

NOTE: This table is to be used in conjunction with the Environmental Features Map for the purposes of evaluating the feasibility of potential corridors. Use of the table without the aid of mapping may lead to misinformed decisions.

Agency Mailing List

First	Last	Organization	Address 1	Address 2	City	State	Zip	Email
Renee	Gledhill-Earley	State Historic Preservation Office	4617 Mail Service Center		Raleigh	NC	27699-461	renee.gledhill-earley@ncdcr.gov
Garcy	Ward	NC Division of Water Resources	943 Washington Square Mall		Washington	NC	27889	garcy.ward@ncdenr.gov
Gary	Jordan	US Fish and Wildlife Service	P.O. Box 33726		Raleigh	NC	27636-372	gary_jordan@fws.gov
Terry	Knowles	US Coast Guard	431 Crawford Street		Portsmouth	VA	23704-500	Terrance.A.Knowles@uscg.mil ;
Patrick	Flanagan	Eastern Carolina RPO	PO Box 1717		New Bern	NC	28563	pflanagan@eccog.org
Tom	Steffens	US Army Corps of Engineers	2407 West 5th Street		Washington	NC	27889-100	Thomas.A.Steffens@usace.army.mil ;
Travis	Wilson	NC Wildlife Resource Commission	1718 Hwy. 56 West		Creedmoor	NC	27522	travis.wilson@ncwildlife.org ;
Cynthia	Van Der Wiele	US Environmental Protection Agency	715 Sheperd St		Durham	NC	27701	vanderwiele.cynthia@epa.gov
Karen	Compton	US Forest Service	160 Zillicoa Street, Suite A	Suite A	Asheville	NC	28801	kcompton@fs.fed.us
Fritz	Rohde	National Marine Fisheries Service	101 Pivers Island Road		Beaufort	NC	28516	fritz.rohde@noaa.gov
		NC Department of Administration	1301 Mail Service Center		Raleigh	NC	27699-130	state.clearinghouse@doa.nc.gov
Shane	Staples	NC DENR - Division of Coastal Management	943 Washington Square Mall		Washington	NC	27889	shane.staples@ncdenr.gov

NCDOT Board Member Mailing List

First	Last	Organization	Address 1	Address 2	City	State	Zip	Email
Hugh	Overholt	NCDOT Board Member	Ward and Smith	1001 College Court	New Bern	NC	28562	hoverholt@ncdot.gov
Ferrell	Blount	NCDOT Board Member	PO Box 850		Bethel	NC	27812	fblount@ncdot.gov

NCDOT Start of Study Mailing List

Name	Position	Email
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Mr. Brian Hanks, PE	Assist. State Structures Eng. - Program/Policy	bhanks@ncdot.gov
Mr. Tom Koch, PE	Structures Management Unit	tkoch@ncdot.gov
Mr. John Twisdale	Hydraulics Unit - Region Manager	jtwsdale@ncdot.gov
Mr. John L. Philipchuk, LG, PE	Geotechnical Unit	jphilipchuk@ncdot.gov
Mr. Cyrus Parker	GeoEnvironmental Supervisor	cfparker@ncdot.com
Mr. J.S. Kite, PE	Regional Project Engineers - WZTC	skite@ncdot.gov
Ronald Wilkins, PE	State Utilities Manager	rbwilkins@ncdot.gov
Mr. Robert Memory	State Utility Agent	rmemory@ncdot.gov
Mr. Roger Worthington	Utilities Section Engineer	rworthington@ncdot.gov
Ms. Lauren Blackburn, AICP	Division of Bicycle & Pedestrian Transportation	lablackburn2@ncdot.gov
Mr. John Vine-Hodge, PE	Division of Bicycle & Pedestrian Transportation	jvinehodge@ncdot.gov
Mr. James B. Harris, PE	Engineering Manager - NCDOT Rail Division	jbharris@ncdot.gov
Mr. Greg Smith, PE	PDEA - HES/Noise & Air	gasmith@ncdot.gov
Mr. Jamille Robbins	PDEA - HES/PICS	jarobbins@ncdot.gov
Mr. Drew Joyner	PDEA- HES Section Head	djoyner@ncdot.gov
Mr. Harrison Marshall	PDEA - HES/Community Studies	hmarshall@ncdot.gov
Mr. Phil Harris, PE	PDEA - NES Section Head	pharris@ncdot.gov
Mr. Colin Mellor	PDEA - NES/Proj. Mg. Supervisor	cmellor@ncdot.gov
Mr. Neil Medlin	PDEA - NES / Biological Surveys	knmedlin@ncdot.gov
Mr. Doug Lane	Contract Standards and Development	dlane@ncdot.gov
Mr. Stuart Bourne, PE	Traffic Management Unit	sbourne@ncdot.gov
Mr. John Rouse, PE	Division Engineer	jwrouse@ncdot.gov
Mr. Ed Eatmon, PE	Division Construction Engineer	beatmon@ncdot.gov
Mr. Jeff Cabaniss, PE	Div. Planning Engineer	jcabaniss@ncdot.gov
Mr. Steve Hamilton, PE	Division Traffic Engineer	shamilton@ncdot.gov
Mr. Preston Hunter, PE	Division Maintenance Engineer	phunter@ncdot.gov
Mr. Leonard White, PE	Lenoir County Maintenance Engineer	lenwhite@ncdot.gov
Ms. Betty Ann Caldwell, PE	Division Project Manager	bacaldwell@ncdot.gov
Ms. Maria Rogerson, PE	Division Bridge Program Manager	marogerson@ncdot.gov
Mr. Robert Hanson, PE	PDEA Regional Section Head	rhanson@ncdot.gov
Mr. Brian Yamamoto, PE	PDEA Group Leader	byamamoto@ncdot.gov
Mr. Patrick Flanagan	Eastern Carolina RPO Coordinator	pflanagan@eccog.org
Mr. Travis Marshall, PE	TPB Regional Group Supervisor	tmarshall@ncdot.gov
Ms. Kerry Morrow	TPB SHC Coordinator	kmorrow@ncdot.gov
Mr. Calvin Leggett, PE	Program Development TIP Regional Manager	cleggett@ncdot.gov
Mr. Brian G. Murphy, PE	Safety Planning Engineer	bgmurphy@ncdot.gov
Mr. Neal Strickland	Right of Way Branch	nstrickland@ncdot.gov
Mr. Doug Askew	Division ROW Agent	daskew@ncdot.gov
Mr. James Dunlop, PE	Congestion Management Regional Engineer	jdunlop@ncdot.gov
Ms. Sharon Lipscomb	Office of Civil Rights	slipscomb@ncdot.gov



E-2: Summary of comments received on the Start of Study letters

I. AGENCY COMMENTS ON START OF STUDY LETTER

NCDOT Division of Bicycle and Pedestrian Transportation (November 23, 2015)
In reviewing the project location, we noted that existing bicycle routes, and a planned greenway/riverwalk, could be impacted by the project alternatives.
Alternative 1 could impact Bicycle Route 44, the Oak Tree Spoke, of the Bicycling Lenoir County Map (https://xfer.services.ncdot.gov/gisdot/DOTBikeMaps/Lenoir/lenoir.pdf).
This is an existing regional bicycle route which travels on SR 1732, and forms part of an interconnected regional network. Alternative 1 could also impact the planned Riverwalk/Greenway depicted in the Kinston Comprehensive Pedestrian Plan, a facility planned to connect in a loop around Kinston, utilizing Neuse River utility right of way, and abandoned railroad right of way, connecting a variety of community facilities.
Alternative 2 could impact Bicycle Route 44 listed above, as well as Bicycle Route 40, the County Loop, which is also an existing regional bicycle route which travelling on SR 1720, and forms part of an interconnected regional network.
Accordingly, the Division of Bicycle and Pedestrian Transportation recommends that the project team consider these existing and proposed facilities as it studies the project alternatives for project R-5703. We further recommend that the project team consult with the City of Kinston and Lenoir County in the assessment of potential impacts to these multi-modal facilities, and in making any decisions regarding accommodation of these facilities within the project.
United States Fish and Wildlife (November 17, 2015)
The Service does not have any specific concerns for this project at this time, but we recommend the following general conservation measures to avoid or minimize impacts to fish and wildlife.
1. Wetland, forest and designated riparian buffer impacts should be avoided and minimized to the maximum extent practical. Areas exhibiting high biodiversity or ecological value important to the watershed or region should be avoided. Highway projects should be aligned or adjacent to existing roadways, utility corridors or other previously disturbed areas in order to minimize habitat loss and fragmentation. Highway shoulder and median widths should be reduced through wetland areas.
2. If unavoidable wetland or stream impacts are proposed, a plan for compensatory mitigation to offset unavoidable impacts should be provided early in the planning process.
3. Crossings of streams and associated wetland systems should use existing crossings and/or occur on a bridge structure wherever feasible. Bridges should be long enough to allow for sufficient wildlife passage along stream corridors. Where bridging is not feasible, culvert structures that maintain natural water flow and hydraulic regimes without scouring or impeding fish and wildlife passage should be employed.
4. In streams utilized by anadromous fish, NCDOT policy entitled "Stream Crossing Guidelines for Anadromous Fish Passage" should be implemented.
5. Where possible, avoid the use of riprap on the top of the bank and under bridges to allow for wildlife passage under the bridge.
6. "Best Management Practices (BMP) for Construction and Maintenance Activities" should be implemented.

7. Bridge designs should include provisions for roadbed and deck drainage to flow through a vegetated buffer prior to reaching the affected stream. This buffer should be large enough to alleviate any potential effects from run-off of storm water and pollutants.

8. Bridge designs should not alter the natural stream and stream-bank morphology or impede fish passage. To the extent possible, piers and bents should be placed outside the bank-full width of the stream.

9. Bridges and approaches should be designed to avoid any fill that will result in damming or constriction of the channel or floodplain. If spanning is not feasible, culverts should be installed in the flood plain portion of the approach to restore some of the hydrological functions of the flood plain and reduce high velocities of flood waters within the affected area.

Section 7(a)(2) of the Endangered Species Act requires that all federal action agencies (or their designated non-federal representatives), in consultation with that Service, insure that any action federally authorized, funded, or carried out by such an agency is not likely to jeopardize the continued existence of any federally threatened or endangered species. To assist you, a county-by-county list of federally protected species known to occur in North Carolina and information on their life histories and habitats can be found on our page at:

http://www.fws.gov/raleigh/species/cntylist/nc_counties.html

Although the North Carolina Natural Heritage Program (NCNHP) database does not indicate any known occurrences of listed species near the project vicinity, use of the NCNHP data should not be substituted for actual field surveys if suitable habitat occurs near the project site. The NCNHP database only indicates the presence of known occurrences of listed species and does not necessarily mean that such species are not present. It may simply mean that the area has not been surveyed. If suitable habitat occurs within the project vicinity for any listed species, surveys should be conducted to determine presence or absence of the species.

If you determine that the proposed action may affect (i.e. likely to adversely affect or not likely to adversely affect) a listed species, you should notify this office with your determination, the results of your surveys, survey methodologies and an analysis of the effects of the action on the listed species, including consideration of direct, indirect and cumulative effects, before conducting any activities that might affect the species. If you determine that the proposed action will have no effect (i.e. no beneficial or adverse, direct or indirect effect) on listed species, then you are not required to contact our office for concurrence.

United States Environmental Protection Agency (December 2, 2015)

The NEPA program is concerned with impacts to both the human and natural environment. I used NEPAassist to examine whether or not USEPA has any hazardous waste, TRI, TSCA, Superfund, etc. types of sites in the project area. I also used the USEPA's EJScreen Tool to identify potential environmental justice (EJ) issues. The project proposes a 4-lane divided highway on new location in order to increase mobility and freight. The project study area includes potential impacts to streams, wetlands, and EJ communities (including census block groups with minority population, low income, less than HS education, and > 64 years of age).

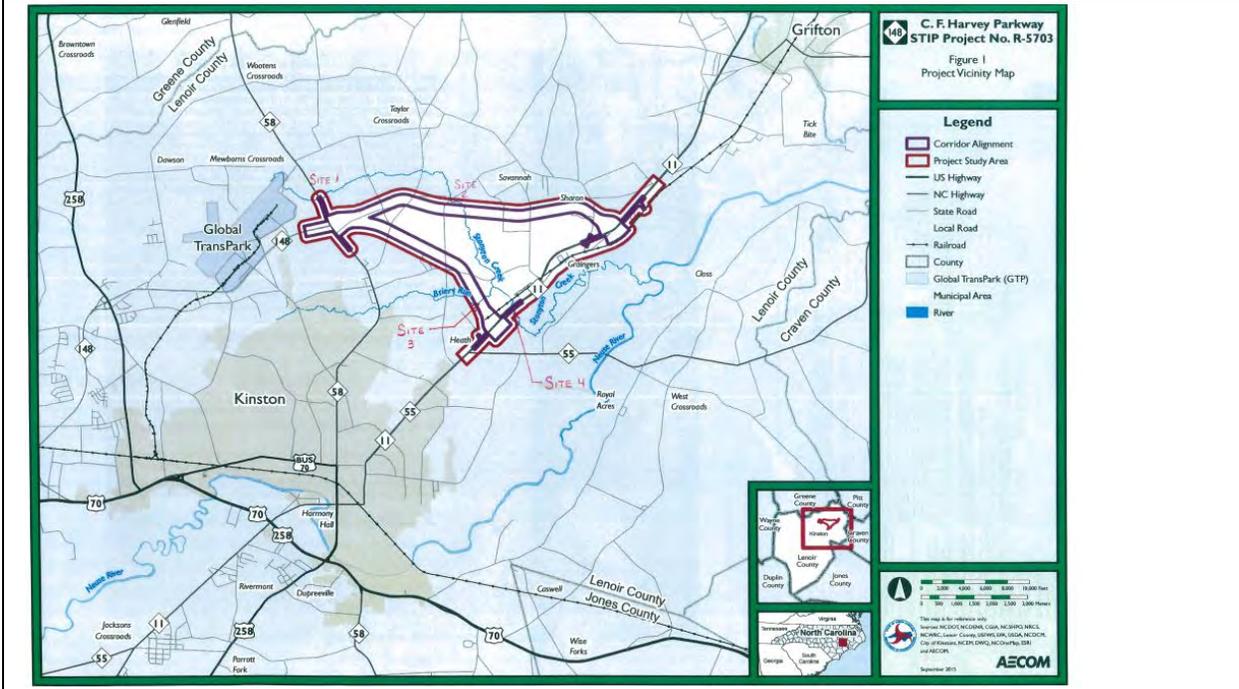
The USEPA is concerned about impacts to aquatic resources, EJ communities, and the potential for deleterious health impacts to residents within the study area. The USEPA would encourage the inclusion of a community health impact study, climate change impacts on the proposed freeway (e.g., the impact of increased severity and frequency of storm events and its impact on roadway flooding and bridge/culvert design), and the identification of wildlife hotspots as a 4 – lane divided highway will increase the likelihood of animal morality and vehicular crash rates in developing alternative and in preparing the SEPA document.

USEPA would encourage the inclusion of this new location project in the NCDOT 404/NEPA Merger Process. In addition, please send a copy of the Environmental Assessment.

NCDOT Hydraulics Unit (December 3, 2015)

It appears we have a total of 4 crossings of FEMA- regulated floodplains within the corridor, 3 with Alt.1 and 2 with Alt. 2 (one is common to both). Approx. locations are indicated on the attached.

My only comment on the Start of Study packet is it’s hard to distinguish where the floodplains are under the wetlands since the light blue portion of the wetland hatching is almost the same shade as for the floodplains.



NC Division of Water Resources (December 4, 2015)

Reference your correspondence dated October 27, 2015 in which you requested comments for the referenced projects. Preliminary analysis of the project reveals the potential for multiple impacts to streams and jurisdictional wetlands in the project area. More specifically, impacts to:

Stream Name	River Basin	Stream Classification(s)	Stream Index Number	303(d) Listing
Stonyton Creek	Neuse	C;Sw,NSW	27-81	No
Briery Run	Neuse	C;Sw,NSW	27-81-1	No

Further investigation at a higher resolution should be undertaken to verify the presence of other streams and/or jurisdictional wetlands in the area. In the event that any jurisdictional areas are identified, the Division of Water Resources requests that NCDOT consider the following environmental issues for the proposed project:

1. Stonyton Creek and Briery Run are class C; NSW waters of the State. The NCDWR is very concerned with sediment and erosion impacts that could result from this project. The NCDWR recommends that highly protective sediment and erosion control BMPs be implemented to reduce the risk of nutrient runoff to Stonyton Creek and Briery Run. Additionally, to meet the requirements of NCDOT’s NPDES permit NCS0000250, the NCDWR request that road design plans provide treatment of the storm water runoff through best management practices as detailed in the most recent version of the North Carolina Department of Transportation Stormwater Best Management Practices Toolbox manual.

2. This project is within the Neuse River Basin. Riparian buffer impacts shall be avoided and minimized to the greatest extent possible pursuant to 12A NCAC 2B.0233. New development activities located in the projected 50-foot wide riparian areas within the basin shall be limited to “uses” identified within and constructed in accordance with 15A NCAC .02B .0295. Buffer mitigation may be required for buffer impacts resulting from activities classified as “allowable with mitigation” within the “Table of Uses” section of the Buffer Rules or require a variance under the Buffer Rules. A buffer mitigation plan, including use of the North Carolina Division of Mitigation Services, must be provided to the NCDWR prior to the approval of the Water Quality Certification. Buffer mitigation may be required from buffer impacts resulting from activities classified as “allowable with mitigation” within the “Table of Uses” section of the Buffer Rules or require a variance under the Buffer Rules. A buffer mitigation plan, coordinated with the North Carolina Division of Mitigation Services, must be provided to the NCDWR prior to approval of the Water Quality Certification.

1. The environmental document should provide a detailed and itemized presentation of the proposal impacts to wetlands and streams with corresponding mapping. If mitigation is necessary as required by 15A NCAC 2H.0506 (h), it is preferable to present a conceptual (if not finalized) mitigation plan with the environmental documentation. Appropriate mitigation plans will be required prior to issuance of a 401 Water Quality Certification.

2. Environmental impact statement alternatives shall consider design criteria that reduce the impact to streams and wetlands from storm water runoff. These alternatives shall include road designs that allow for treatment of the storm water runoff through best management practices as detailed in the most recent version of NCDWR’s Stormwater Best Management Practices Manual, July 2007, such as grassed swales, buffer areas, preformed scour holes, retention basins, etc.

3. After the selection of the preferred alternative and prior to an issuance of the 401 Water Quality Certification, the NCDOT is respectfully reminded that they will need to demonstrate the avoidance and minimization of the impacts to wetlands (and streams) to the maximum extent practical. In accordance with the Environmental Management Commission's Rules (15A NCAC 2H.0506[h]), mitigation will be required for impacts of greater than 1 acre to wetlands. In the event that mitigation is required, the mitigation plan shall be designed to replace appropriate lost functions and values. North Carolina Division of Mitigation Services may be available for assistance with wetland mitigation.
4. In accordance with the Environmental Management Commission's Rules (15 A NCAC 2H.0506[h]), mitigation will be required for impacts of greater than 150 linear feet to any single stream. In the event that mitigation is required, the mitigation plan shall be designed to replace appropriate last functions and values. The North Carolina Division of Mitigation Services may be available for assistance with stream mitigation.
5. Future documentation, including the 401 Water Quality Certification Applications, shall continue to include an itemized listing of the proposed wetland and stream impacts with corresponding mapping.
6. The NCDWR is very concerned with sediment and erosion impacts that could result from this project. The NCDOT shall address these concerns by describing the potential impacts that may occur to the aquatic environments and any mitigating factors that would reduce the impacts.
7. An analysis of cumulative and secondary impacts anticipated as a result of the project is required. The type and detail of analysis shall conform to the NC Division of Water Resource Policy on the assessment of secondary and cumulative impacts dated April 10, 2004.
8. The NCDOT is respectfully reminded that all impacts, including but not limited to, bridging, fill, excavation and clearing, and rip rap to jurisdictional wetlands, streams, and riparian buffers need to be included in the final impact calculations. These impacts, in addition to any construction impacts, temporary or otherwise, also need to be included as part of the 401 Water Quality Certification Application.
9. Where streams must be crossed, the NCDWR prefers bridges be used in lieu of culverts. However, we realize that economic considerations often require the use of culverts. Please be advised that culverts should be countersunk to allow unimpeded passage by fish and other aquatic organisms. Moreover, in areas where high quality wetlands or streams are impacted, a bridge may prove preferable. When applicable, the NCDOT should not install the bridge bents in the creek, to the maximum extent possible.
10. Whenever possible, the NCDWR prefers spanning structures. Spanning structures usually do not require work within the stream or grubbing of the stream banks and do not require stream channel realignment. The horizontal and vertical clearances provided by bridges shall allow for human and wildlife passage beneath the structure. Fish passage and navigation by canoeists and boaters shall not be blocked. Bridge supports (bents) should not be placed in the stream when possible.
11. Bridge deck drains shall not discharge directly into the stream. Stormwater shall be directed across the bridge and pre-treated through site-appropriate means (grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream. Please refer to the most current version of NCDWR's Stormwater Best Management Practices.
12. Sediment and erosion control measures should not be placed in wetlands or streams.

13. Borrow/waste areas should avoid wetlands to the maximum extent practical. Impacts to wetlands in borrow/waste areas will need to be presented in the 401 Water Quality Certification and could precipitate compensatory mitigation.

14. The 401 Water Quality Certification application will need to specifically address the proposed methods for stormwater management. More specifically, stormwater shall not be permitted to discharge directly into streams or surface waters.

15. Based on the information presented in the document, the magnitude of impacts to wetlands and streams may require an Individual Permit (IP) application to the Corps of Engineers and corresponding 401 Water Quality Certification. Please be advised that a 401 Water Quality Certification requires satisfactory protection of water quality to ensure that water quality standards are met and no wetland or stream uses are lost. Final permit authorization will require the submittal of a formal application by the NCDOT and written concurrence from the NCDWR. Please be aware that any approval will be contingent on appropriate avoidance and minimization of wetland and stream impacts to the maximum extent practical, the development of an acceptable stormwater management plan, and the inclusion of appropriate mitigation plans where appropriate.

16. If concrete is used during construction, a dry work area shall be maintained to prevent direct contact between curing concrete and stream water. Water that inadvertently contacts uncured concrete shall not be discharged to surface waters due to the potential for elevated pH and possible aquatic life and fish kills.

17. If temporary access roads or detours are constructed, the site shall be graded to its preconstruction contours and elevations. Disturbed areas shall be seeded or mulched to stabilize the soil and appropriate native woody species shall be planted. When using temporary structures the area shall be cleared but not grubbed. Clearing the area with chainsaws, mowers, brush-hogs, or other mechanized equipment and leaving the stumps and root mat intact allows the area to re-vegetate naturally and minimizes soil disturbance.

18. Unless otherwise authorized, placement of culverts and other structures in waters and streams shall be placed below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20 percent of the culvert diameter for culverts having a diameter less than 48 inches, to allow low flow passage of water and aquatic life. Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in dis-equilibrium of wetlands or streambeds or banks, adjacent to or upstream and downstream of the above structures. This applicant is required to provide evidence that the equilibrium is being maintained if requested in writing by the NCDWR. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact the NCDWR for guidance on how to proceed and to determine whether or not a permit modification will be required.

19. If multiple pipes or barrels are required, they shall be designed to mimic natural stream cross section as closely as possible including pipes or barrels at flood plain elevation, flood plain benches, and/or sills may be required where appropriate. Widening the stream channel should be avoided. Stream channel widening at the inlet or outlet end of structures typically decreases water velocity causing sediment deposition that requires increased maintenance and disrupts aquatic life passage.

20. If foundation test borings are necessary; it shall be noted in the document. Geotechnical work is approved under General 401 Certification Number 3883/Nationwide Permit No. 6 for Survey Activities.

21. Sediment and erosion control measures sufficient to protect water resources must be implemented and maintained in accordance with the most recent version of North Carolina Sediment and Erosion Control Planning and Design Manual and the most recent version of NCS000250.

22. All work in or adjacent to stream water shall be conducted in a dry work area. Approved BMP measures from the most current version of the NCDOT Construction and Maintenance Activities manual such as sandbags, rock berms, cofferdams and other diversion structures shall be used to prevent excavation in flowing water.

23. While the use of National Wetland Inventory (NWI) maps, NC Coastal Region Evaluation of Wetland Significance (NC-CREWS) maps and soil survey maps are useful tools, their inherent inaccuracies require that qualified personnel perform onsite wetland delineations prior to permit approval.

24. Heavy equipment should be operated from the bank rather than in stream channels in order to minimize sedimentation and reduce the likelihood of introducing other pollutants into streams. This equipment shall be inspected daily and maintained to prevent contamination of surface waters from leaking fuels, lubricants, hydraulic fluids, or other toxic materials.

25. Riprap shall not be placed in the active thalweg channel or placed in the streambed in a manner that precludes aquatic life passage. Bioengineering boulders or structures should be properly designed, sized and installed.

26. Riparian vegetation (native trees and shrubs) shall be preserved to the maximum extent possible. Riparian vegetation must be reestablished within the construction limits of the project by the end of the growing season following completion of construction.

North Carolina Wildlife Resources Commission (December 2, 2015)

Biologists on the staff of the N. C. Wildlife Resources Commission (NCWRC) have reviewed the proposed improvements. Our comments are provided in accordance with certain provisions of the National Environmental Policy Act (42 U.S.C. 4332(2)(c)) and the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661-667d).

At this time we do not have any specific concerns related to this project; however, to help facilitate document preparation and the review process our general informational needs are outlined below:

1. Description of fishery and wildlife resources within the project area, including a listing of federally or state designated threatened, endangered, or special concern species. Potential borrow areas to be used for project construction should be included in the inventories. A listing of designated plant species can be developed through consultation with:

NC Natural Heritage Program

Dept. of Environment & Natural Resources 1601 Mail Service Center

Raleigh, NC 27699-1601.

www.ncnhp.org

And

NCDA Plant Conservation Program

P. O. Box 27647 Raleigh, N. C. 27611 (919) 733-3610

2. Description of any streams or wetlands affected by the project. The need for channelizing or relocating portions of streams crossed and the extent of such activities

3. Cover type maps showing wetland acreages impacted by the project. Wetland acreages should include all project-related areas that may undergo hydrologic change as a result of ditching, other drainage, or filling for project construction. Wetland identification may be accomplished through coordination with the U. S. Army Corps of Engineers (COE). If the COE is not consulted, the person delineating wetlands should be identified and criteria listed.

4. Cover type maps showing acreages of upland wildlife habitat impacted by the proposed project. Potential borrow sites should be included.

5. The extent to which the project will result in loss, degradation, or fragmentation of wildlife habitat (wetlands or uplands).

6. Mitigation for avoiding, minimizing or compensating for direct and indirect degradation in habitat quality as well as quantitative losses.

7. A cumulative impact assessment section which analyzes the environmental effects of highway construction and quantifies the contribution of this individual project to environmental degradation.

8. A discussion of the probable impacts on natural resources which will result from secondary development facilitated by the improved road access.

9. If construction of this facility is to be coordinated with other state, municipal, or private development projects, a description of these projects should be included in the environmental document, and all project sponsors should be identified.

NCDOT Rail Division (January 5, 2016)

The existing rail line (that is parallel to NC 11) on the eastern side of R-5703 belongs to CSX. This CSX line runs from Parmele, NC southward to Elmer, NC. It is known as CSX's AA-line with mileposts increasing from north to south. The rail line dead-ends at Elmer, milepost AA 173.5. CSX provides rail service to a customer at the end of the line. The railroad right-of-way (ROW) is 130 feet wide (65 feet each side the centerline of track) as shown on the attached CSX valuation (or ROW) maps. At one time the rail line extended approximately four (4) miles farther southward and connected with the North Carolina Railroad's (NCR) east/west rail line from Goldsboro to Morehead City. The limits of the eastern edge of the R-5703's study area encompasses CSX's AA-line from approximately milepost AA 169.7 to milepost AA 173.5 and approximately 0.8 miles of the abandoned track to former milepost AA 174.3. Ownership of the abandoned property is unknown. Two to four freight trains per day operate over the AA-line at speeds up to 40 mph with no passenger trains now or planned in the future.

The north/south rail line located west of NC 58 and just outside the western edge of the R-5703 study area is the recently completed GTP spur. The south end of the GTP spur connects with the NCR's east/west rail line and runs 5 miles into GTP where it dead-ends. No freight trains currently operate over the track but the rail line has been recently leased to a rail operator to market, operate, inspect, and maintain the line. It is anticipated maximum freight train operating speeds will be 25 mph on this track with no passenger trains

It has been proposed to connect the northern end of the GTP spur with the CSX AA-line to provide dual rail company access to GTP. The Rail Division will shortly begin a study to better quantify the economic benefits, conceptual alignment options, and costs of the rail line extension. As part of that study and the R-5703 environmental document, it is very much desired to coordinate with Division of Highways and determine if it is feasible (and if there are any advantages) to include the rail line and the highway extensions within the same right-of-way. A previous feasibility study for the highway extension to NC 11 included such a possibility but further design and coordination will be necessary. At the least it is desired to ensure that the design/construction of the roadway extension will not preclude the extension of the rail line (and vice versa) or options for grade separating the highway from the rail line.

The southernmost alternative for the roadway extension may require crossing the CSX AA-line to connect with NC 11 but the crossing appears more likely to be over the northern end of the AA-line that has been abandoned (just south of milepost AA 173.5). 'Rail Grade Separation Guidelines' have been developed that provide recommendations on when a grade separated versus at-grade crossing should be pursued over active tracks. Attached is a copy of the guidelines. Based on the AADT shown in the scoping materials and CSX's current train traffic, the exposure index exceeds the amount that requires a grade separated structure be pursued. For safety reasons, the Rail Division highly recommends a grade separation be pursued, if feasible, and if the roadway extension is over an active track. Kevin Fischer, PE, Structures Management Unit, (919) 707-6514, should be contacted to coordinate issues associated with any structures required over CSX's track. Based on CSX's current rail traffic on the AA-line, it does not appear (in the Rail Division's opinion) that any highway bridge over CSX needs to provide space for a future track.

If the roadway extension crosses over the abandoned portion of the rail line, ownership of the right-of-way will need to be determined. Any issues in regard to encroachment on CSX right-of-way should be coordinated with Meredith McLamb, Rail Division's Surfaces & Encroachments Manager, at (919) 715-0955.

The northernmost alternative for the roadway extension could require widening of NC 11 parallel to the CSX AA-line. Any improvements required to NC 11 to accommodate a new intersection or interchange with the roadway extension should not encroach upon CSX's right-of-way. If encroachments are unavoidable, Ms. McLamb should be involved.

All of the above could be impacted by whether or not the GTP connection track to the AA-line is pursued and where that connection would occur on the AA-line.

The Rail Division's Planning & Development and Design & Construction Branches will need to be involved to coordinate the proposed GTP connection track alignment with the R-5703 highway extension project. Ms. Sandra Stepney, PE, CPM, Rail Division's Planning &

Development Manager, (919) 707-4713, should be contacted to coordinate the planning and environmental work associated with the rail line. Any preliminary design work associated with the rail line will be included and coordinated as part of the environmental work to be performed.

You have extensive wetland and stream issues in the area.*

I would highly encourage anyone involved in this project to make contact as soon as possible with the USACE office in Washington, NC. Tracey Wheeler was our contact in charge of the GTP permitting, and may still have that role. Communications early and often were our keys to success on the Rail Spur project. *

It appears that you will be impacting at least some of the area permitted under the Global TransPark master permit boundary. That permit was done at the onset of the GTP, and basically allows for the construction and disturbance of land within the boundary. The GTP also provided its own mitigation. Any change to the permit and/or boundary would have to be done as a permit modification under the jurisdiction of the USACE in conjunction with the GTP.*

As a condition of the GTP master permit, there is a very large conservation easement to the east of the GTP. It appears the proposed lines are near that conservation easement, if not on it. Again, it would be good to have the USACE's input on this early in the process.*

While it appears that AECOM is doing this project, it may be in your best interest to get Jerry McCrain's (at M&N) input. He was deeply involved in the GTP permit work, and was the sole person allowed to modify the permit in the past. He no longer is responsible for that, but has vast background in it. There is no one who knows more about it than Jerry.*

NCDOT Geotechnical Engineering Unit (January 11, 2016)

There is no geotechnical preference for either alternate.

NCDOT Congestion Management (December 29, 2015)

There appears to be 2 sets of Traffic forecast in the report, one with added turning movements. To expedite the review process, it would be helpful to combine them to one single set of Traffic Forecast Diagrams. Each volume breakout diagram should be identified to a node (intersection/interchange) in a specific Traffic Forecast Diagram.

*Comments made by Marc L. Hamel, Rail Project Development and Environmental Engineer, Rail Division, NCDOT